

ESPON project 3.4.2  
 'Territorial impacts of  
 EU economic policies  
 and location of  
 economic activities'  
 Final Report  
 October 2006

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and location of economic activities'

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Volume 1  
Executive summary



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This report represents intermediate results of a research project conducted within the framework of the ESPON 2000-2006 programme, partly financed through the INTERREG programme.

The partnership behind the ESPON programme consists of the EU Commission and the Member States of the EU25, plus Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

This report does not necessarily reflect the opinion of the members of the Monitoring Committee.

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ISBN 2-9600467-1-4

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# Volume 1

## Table of Contents

<b>1</b>	<b>Executive Summary</b> .....	<b>8</b>
1.1	Always changing and still the same: the economic geography of Europe .....	8
1.2	From regional production to regional disposable wealth .....	11
1.3	Regions embedded in nation-states.....	17
1.4	Towards complementary indicators of regional economic regulation .....	19
1.5	Small is beautiful: Regional Policies.....	28
1.6	So what is regional competitiveness? : a concluding concept discussion.....	29
1.7	Policy recommendations .....	31
<b>2</b>	<b>Scientific summary</b> .....	<b>38</b>
2.1	Main concepts .....	38
2.2	Methodologies .....	39
2.3	Typologies .....	43
2.4	Indicators used/developed .....	44
<b>3</b>	<b>Networking</b> .....	<b>46</b>
<b>4</b>	<b>Further research issues and data gaps to overcome</b> .....	<b>46</b>

## List of Figures

Figure 1	GDP growth 1995-2002, NUTS2.....	10
Figure 2	Economic typology of European regions in 2002, 7 types .....	13
Figure 3	Economic specificities of European regions in 2002 .....	16
Figure 4	Development and regulation.....	18
Figure 5	Accumulation rate (2002) .....	23
Figure 6	Case 1 : an expansive fiscal policy (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario).....	26
Figure 7	Case 2 : a restrictive fiscal policy (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario) .....	27
Figure 8	Conceptualising Regional Competitive Performance .....	30

## List of abbreviations

Acs	accession countries
Aas	Assisted Areas
BIC	Business Innovation Centre
CEECs	Central and Eastern European Countries
CESR	Regional Economic and Social Council
CPE	Contact Points for Entrepreneurs
DTC	Danish Trade Council
DTI	Department of Trade and Industry
EAGGF	European Agricultural Guidance and Guarantee Fund
EBITDA	Earning before interest tax depreciation and amortization
EBN	European Business & Innovation Centres Network
ECB	European Central Bank
EMU	European Monetary Union
ERDF	European Regional Development Fund
ESF	European Social Fund
ESPON	European Spatial Planning Observation Network
FDI	Foreign direct investment
FDI	foreign direct investment
FUAs	Functional Urban Areas
GDP	Gross Domestic Product
GFC	Gross Fixed Capital
GLA	Greater London Authority
GLC	Greater London Council
GNP	Gross National Product
GOs	Government Offices for the Regions
GRP	Gross Regional Product
GVA	Gross Value Added
ICTs	Information and communication technologies
INCLUDE	Industrial Cluster Development
IROP	Integrated Regional Operational Programme
IT	Information and Technology
LDA	London Development Agency
LFEPA	London Fire and Emergency Planning Authority
LFS	Labour Force Survey
MASST	Macroeconomic, Social, Sectoral and Territorial
MEBA	(Danish) Ministry of Economic and Business Affairs
MEGAs	Metropolitan European Growth Areas
MNCs	p.160
MPA	Metropolitan Police Authority
n.e.c.	not elsewhere classified
NACE	Nomenclature générale des Activités économiques dans la Communauté européenne
NAEH	National Agency for Enterprise and Housing (Denmark)
NMS	New Member State
NUTS	Nomenclature of territorial units for statistics
NVQ	National Vocational Qualification
OCA	optimal currency area
OECD	Organisation for Economic Cooperation and Development
OEF	Oxford Economic Forecasting
PCA	Principal Component Analysis
PIA	Polycentric Integration Area

PNR	Program for National Recovery
PRUSST	plan for urban renewal for a sustainable development of the territory
PUSH	Potential Urban Strategic Horizon
R&D	Research and Development
RBDI	Regional Business Development Initiatives
RDAs	Regional Development Agencies
REP	Regional Economic Performance
RGA	Regional Growth Alliances
RIPA	Regional Investment Promotion Agency
RIS	Regional Innovation Systems
RSA	Regional Selective Assistance
SAU	Superficie Agricola Utilizzata (used agricultural surface)
SBS	Structural Business Statistics
SEK	Swedish Krona (currency of Sweden)
SEZ	Special Economic Zone
SF	structural funds
SI	Specialisation index
SMEs	Small and Medium Enterprises
SPD	Single Programming documents???
TfL	Transport for London
TIC	Technology Information Centre
ToR	terms of reference
TPG	Transnational Project Group
UNCTAD	United Nations Conference on Trade and Development

# 1 Executive Summary

## Introduction

In current European policy debates, dominated by the Lisbon/Gothenburg agenda, regional economic development is a prime policy issue. It touches upon two of the major policy goals defined across the continent: cohesion and competitiveness.

However, regional development is a highly complex topic, with strongly disputed ideas, especially at regional scale. Within this field, the term of 'regional competitiveness' has gained a special status as main policy-defining framework, without any clear scientific definition of its nature and determinants.

In this report, we explore some of these issues, with the goal of trying to reach a better understanding of what it is that drives regional development and the convergence or divergence of it across the European territory.

We begin by setting the scene through an analysis of the past and current economic geography of Europe using different indicators in order to get a good grip of what is actually happening on the ground. From there we study some of the possible paths of explanation for this geography, of both theoretical and empirical nature. Finally, we attempt to shed some light on the influence of policy on the structures and evolutions of regional economies, before we enter the realm of policy recommendations.

### 1.1 Always changing and still the same: the economic geography of Europe

#### - GDP growth

In spite of dramatic structural evolutions of the European economy as a whole since the Sixties, the spatial pattern of the European economy remains very strongly characterised by a centre – periphery structure and even the relative structural position of the different kinds of regions remains quite similar during the last two or three decades.

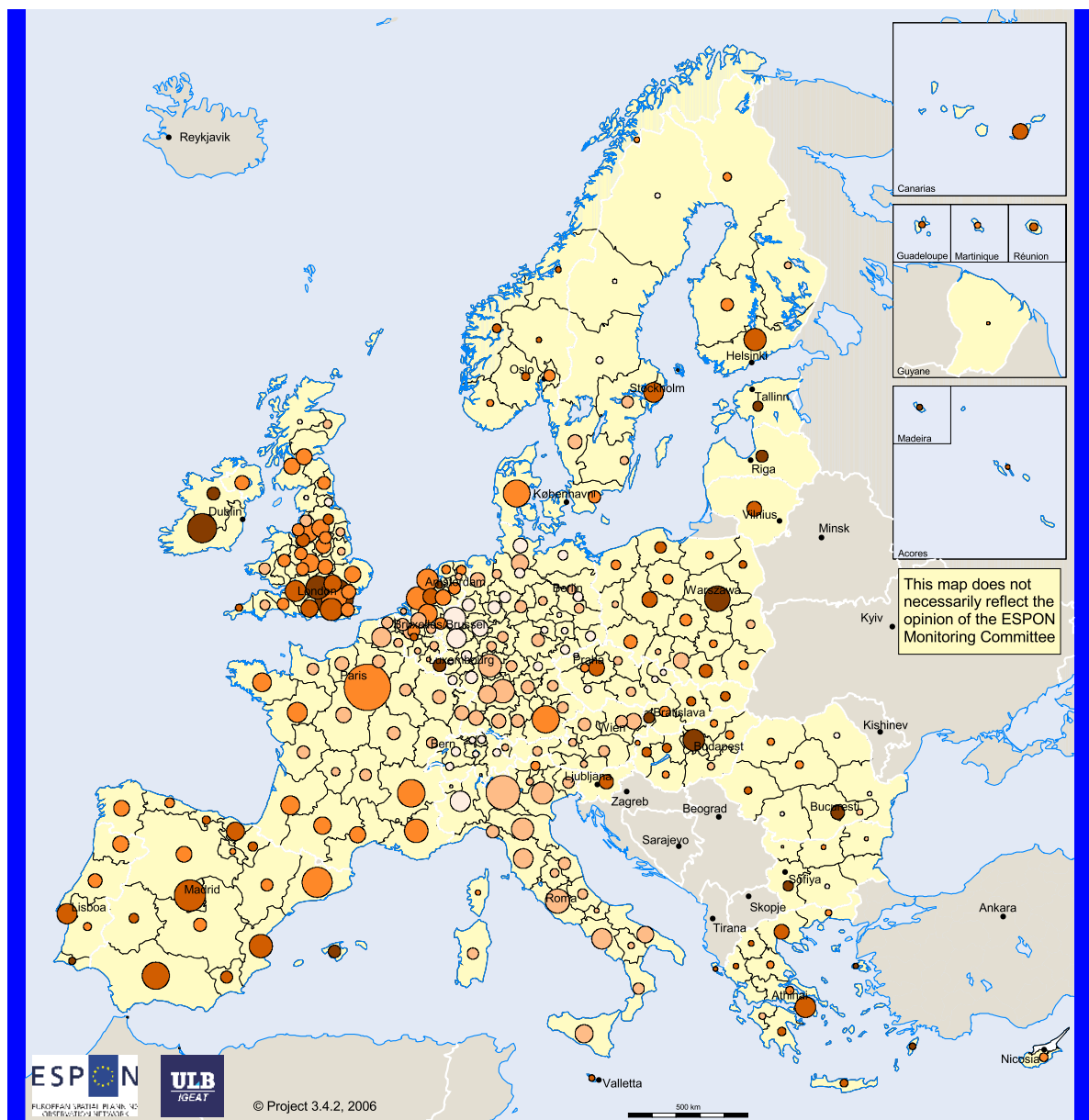
The European metropolitan regions are becoming more and more the nodes of the world network of the advanced services economy. Most of the metropolitan regions are now performing better than the rest of their national economy, at the reverse of what happened during the 1960s.



This process benefits much more to the metropolitan areas in the pentagon (London, Paris, Brussels, Amsterdam, Hamburg, Frankfurt, Munich), than to those which are more peripheral and less well integrated in the global economic networks. However, the peripheral metropolitan areas also improve their position in relation to the average of their national economy.

The dismantling of the socialist economy during the Nineties and the recovering in the beginning of this century led to a very quick growth of the intra-national disparities in the Eastern European countries. Capital cities reinforced their position significantly, even if it was already strong in the centralised planned economy as centres of the national bureaucracy. Western regions generally fared better than the Eastern regions, mainly in the countries near the borders of the 'Old Europe', from which investments or subcontracting is coming, in the search of the advantages of a cheap well trained manufacturing manpower. The worse situation is in the early heavy industrial regions and in the rural areas of the Eastern parts of these countries.

GDP Growth 1995 - 2002



$$(((\text{GDP 2002} / \text{GDP 1995})^{1/7}) - 1) * 100$$

- 1.196 - 3.427
- 3.427 - 4.835
- 4.835 - 6.196
- 6.196 - 7.761
- 7.761 - 12.323
- No data

GDP 2002 - GDP 1995



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 Norway and Switzerland : National Statistical Offices.

Bulgaria, Norway, Romania and Switzerland only 1998 - 2002

Figure 1 GDP growth 1995-2002, NUTS2

Figure 1 shows economic growth at NUTS 2 level in both absolute and relative terms. The absolute figure clearly underlines the weight of main national economic poles and of central Europe in the total growth in Europe. The growth rate puts into the fore the national differences in economic growth, for example between Germany and Italy, on one hand, and the United Kingdom and the Eastern countries, on the other hand.

## 1.2 From regional production to regional disposable wealth

GDP per capita measures the production of a region, normalised by the resident population of the same region, even if it is not necessarily this population that does the actual work, or that comes home with the income generated by this production.

In an attempt to understand regional development in a large sense, not limited to the sole measurement of GDP per capita, nor to that of disposable household income, we have decided to apply an experimental methodology developed by Axel Behrens from Eurostat (Behrens, 2003). This consists in going through the following algorithm:

- take net national disposable income of all sectors (households, firms, state), i.e. GDP 'corrected' for
- subtract from this the total of net disposable income of private households and distribute it between the regions according to the available data on regional distribution of private households
- distribute the rest of the national disposable income (i.e. the sum of state and firms) between the regions according to regional population

As a result we see an estimation of the amount of money actually flowing to the region (see Figure 26). The comparison between this indicator and classical GDP highlights two main mechanisms leading to the smoothing out of differences between regions:

- transfers from metropolitan areas to their surroundings
- transfers from richer regions to poorer regions (e.g. West to East Germany, North to South Italy).

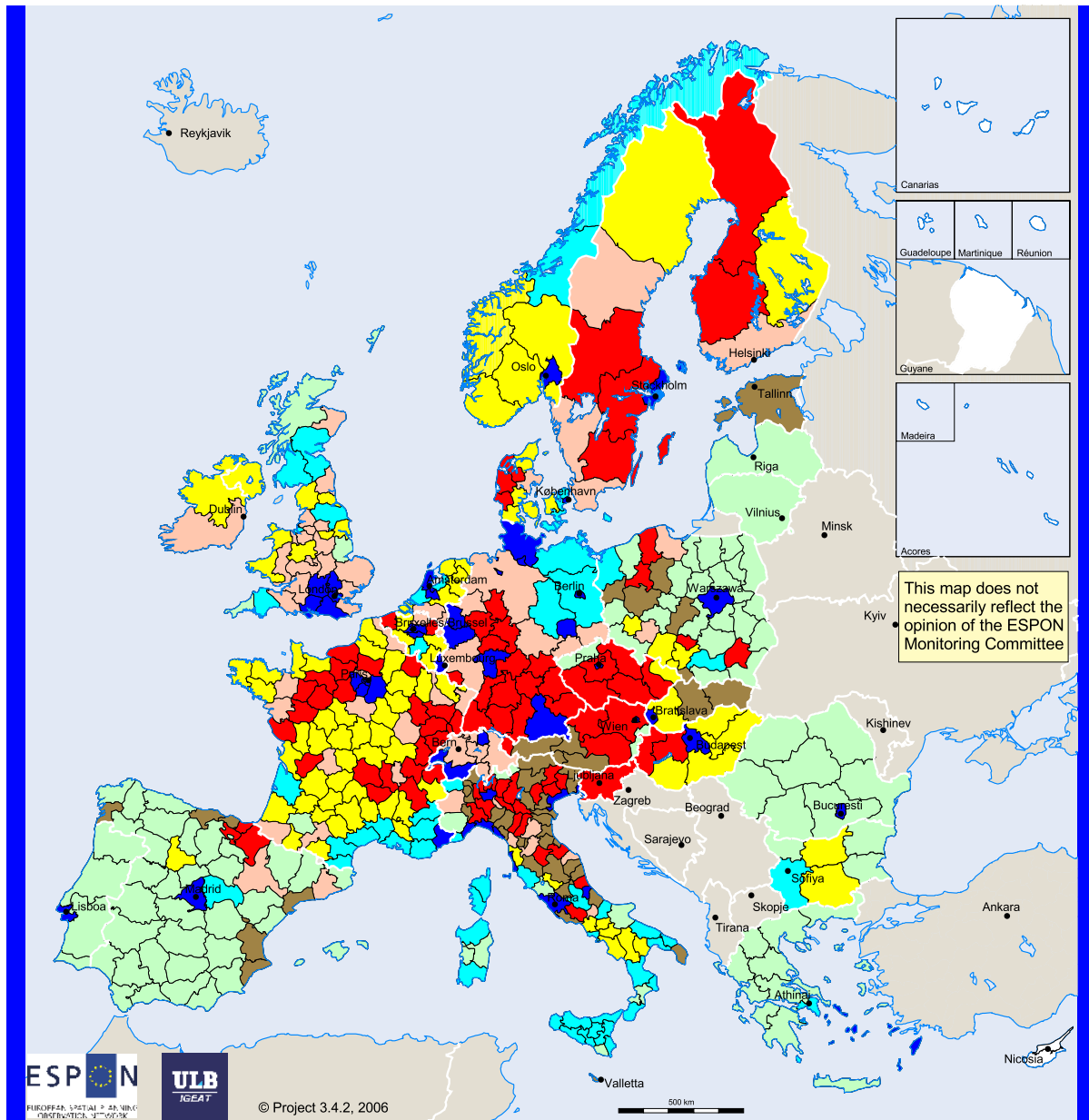
This indicator raises the question what constitutes *territorial cohesion*: the equalisation of production across European regions or the equalisation of flows of material wealth ? It obviously also implies possible conflicts between those regions that pay and those that receive, even though these roles have changed throughout history.

### **1.2.1 Sectoral structures of Europe's regions**

In order to understand the regional dynamics and to develop a more differentiated and adapted approach to regional development than a 'one-size-fits-all' policy, we collected data on the regional sectoral structures, represented by value added divided into 25 economic sectors of activity.

Through a combination of principal component analysis and hierarchical clustering, we elaborated two typologies, one of 20 types, offering a detailed view of European regions, and one of 7 types, synthesising the information even more. In order to evaluate the general significance of these types, we crossed them with a series of indicators, thus summarising their overall economic 'performance', as can be seen in table10.

**Economic typology of European regions in 2002, 7 types**



- 7 TYPES**
- 1
  - 2
  - 3
  - 4
  - 5
  - 6
  - 7
  - No data

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 Origin of data: EU 25, CC's and CH, NO : Eurostat, National Statistical Offices.

**Figure 2 Economic typology of European regions in 2002, 7 types**

TYPE	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6	Type 7	Total
	Non-market services, agriculture & light industry	MEGAs Advanced services : Finances & Business	High & medium technological industry	Textile personal market services	Agriculture Non-market services Trade Hotels & Restaurants Industry (construction & light)	Market & non-market personal services Weak in industry	Neutral Central without big cities	
Proportion of European GDP (%)	10,7	28,1	17,0	5,0	9,0	8,9	21,1	100
Proportion of European population (%)	12,9	19,0	16,2	5,3	17,9	10,1	18,6	100
GDP/cap 2002 (EU=100)	83,1	147,9	105,3	94,5	50,5	88,2	113,5	100
Evolution of GDP 2002-1995 (°)	-6,9	2,0	-6,1	-2,2	6,2	0,0	1,6	
Agriculture, Fisheries, Construction (A-B+F)	133	60	99	136	205	112	95	7,7
Light industries (DA->DD+DI+DN)	135	47	141	169	159	84	99	5,4
Technological industries (DK+DL+DM)	84	74	190	77	39	52	115	6,1
Trade, Hotels and Restaurants (G-H)	94	97	87	132	133	104	98	14,7
Financial and other business services (J-K)	73	136	83	79	61	93	97	27,4
Non-market services (L-N)	127	88	93	82	101	133	99	17,5
Unemployment rate (Unemployed/Actif pop.)	107	78	74	117	141	141	76	7,9
Activity rate (°)	92,6	104,3	96,9	97,9	101,3	95,4	105,3	100
Migratory balance 96-99 (‰)	0.6	1.1	1.6	4.5	2.0	0.6	1.7	1,5
Mean annual population growth	0.93	0.32	0.35	0.66	-0.03	0.11	0.30	0,33
(°) Activity rate = (Actif population + unemployed)/Total population (EU=100) (‰) compared to average EU evolution								

**Type 2** (big metropolitan areas), with the most advanced services in the financial and other services sectors, represents in itself between a quarter and a third of the European GDP. Its growth rate is above the European average, its unemployment level and migration rate respectively lower by 20 and 30%.

**Type 7** has a central location, though outside metropolitan areas. Its economic structure is globally neutral (very close to the average EU economic structure), except a slight specificity in high and medium technology, and it represents one fifth of the European GDP. Together with type 2, type 7 represents the dynamic core of EU economy.

Next to this economic core, **type 3** is characterized by a specificity in high and medium technology. Its growth rate is inferior to the EU average. These areas are strongly dependent on the conjunction of industrial cycles and their structures are in need of stabilizing tertiary activities.

Next to this dynamic core, **type 1** occupies an intermediary position. It is characterized by specificities in agriculture-fisheries-building, light industries and non market services sectors. Growth rate is clearly inferior to the European mean and is most certainly the result of an apathetic economic structure.

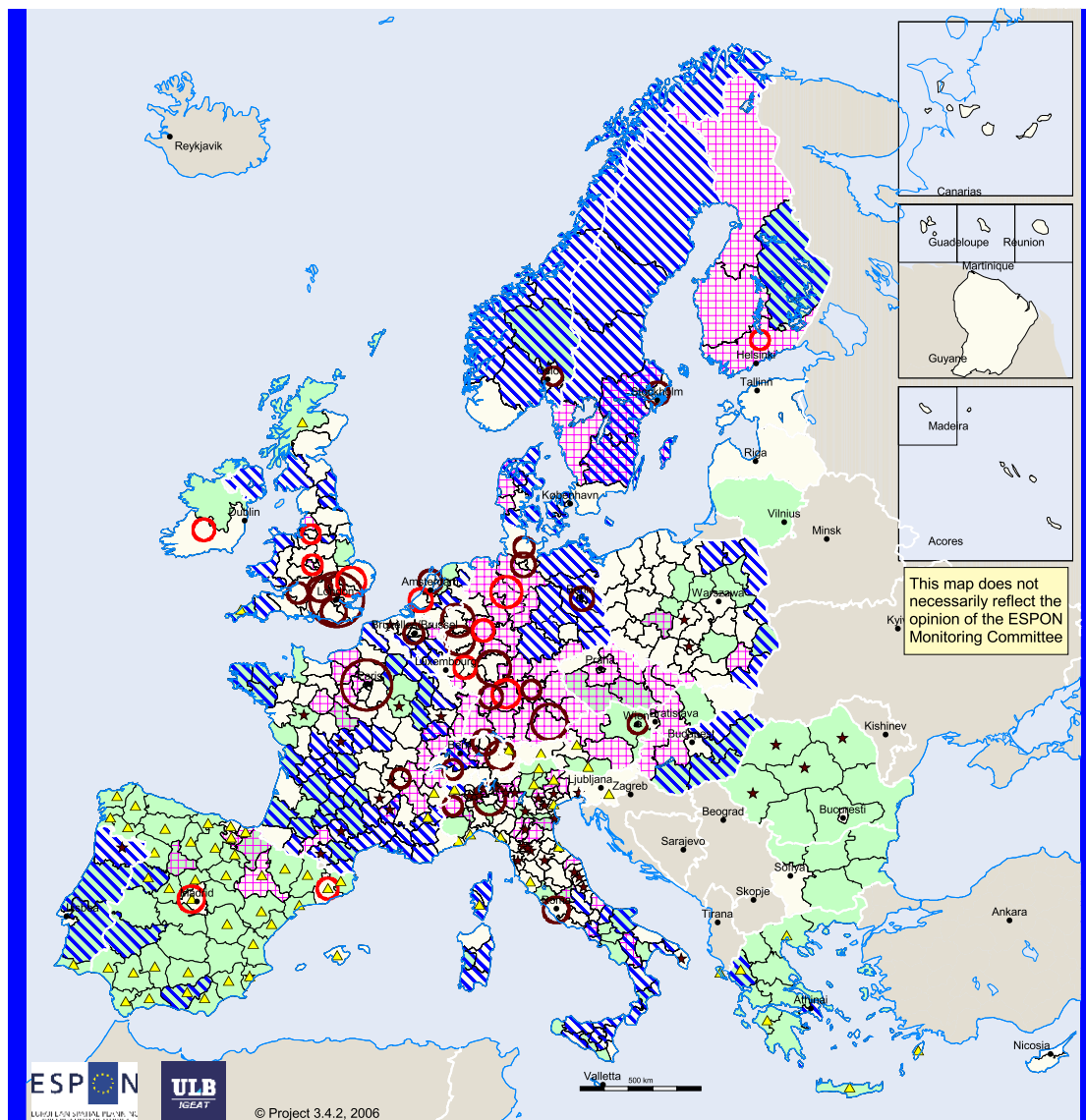
**Type 5** is one of the 2 more peripheral types, characterized by a clear specificity in the agriculture-fisheries-building, light industries and tourism sectors, and an under-specificity in high technological industries and financial and other services. The unemployment rate is by 40% higher than the European average, but GDP growth higher, which is most certainly due to the presence of the tourist sector in the West and to light industry restructuring in the East.

Together with the previous type, **type 6** is the second clearly peripheral type. These areas show a growth rate similar to the EU average and have a slight agricultural specificity but mainly characterized by the presence of non market services. The geographical composition is definitely less homogeneous since this type regroups tourist Mediterranean areas and the former East Germany or even Bulgaria's capital.

Finally, **type 4** is very much characterized by the dominance of light industries (esp. textile), agriculture-fisheries-building and hotels-bars-restaurants. This type shows a growth rate inferior to the EU average, probably as a result of the impact of globalisation on this type of economic structure.

In order to provide a different vision based only on raw data, we also elaborated a map using those sectors of activity which provide the strongest differentiation between region (as indicated by the results of the principal component analysis).

**Economic specificities of European regions in 2002**



Financial and business services (JK)  
Only regions above 15 billions euro of JK added value

Added value (M euro)	Share (%)
100000	0 - 30
50000	> 30
25000	

Non market services (I, M, N, %)  
22 - 43.79

High technological level industry (DK, DL, DM, %)  
8 - 19.14

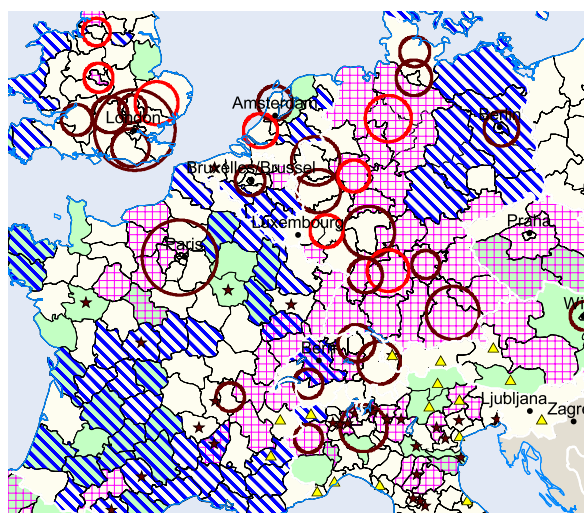
Agriculture and building industry (A, B, F, %)  
> 12

Catering (%)  
6 - 25.03

Textile industry (%)  
> 3.5

□ Non specific region  
□ No data

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Origin of data: EU 25, CC's and CH, NO : Eurostat, National Statistical Offices.



**Figure 3 Economic specificities of European regions in 2002**



The first indicator (the volume and share in financial and business services) shows the leading role of the metropolitan regions. The second indicator is the share of electric and electronic equipments allowing to isolate regions with high or middle technological industry, of machine-tools industry and of transportation industry. The third indicator is the share of administration, education and health in the economy highlighting countries with a high share of non-market services as well as peripheral regions of some countries where non-market services are present by the lack of other activities. Our fourth indicator focuses on agriculture and building industry, clear peripheral activities. Finally, we isolate two sectors which indicate some very specific structures: the textile industry and the catering (hotels and restaurants) sector, the latter being typical of the tourism industry.

Sectoral structures have a high level of inertia and, thus, these analyses give us some ideas of the long-term development factors relevant for each region.

### **1.3 Regions embedded in nation-states**

As the map clearly shows, an important part of regional GDP growth is explained by the respective national levels. This is confirmed by analysing the share of variance of GDP growth between regions at different scales which shows that when taking NUTS3 regions as basic units almost half of the variance is explained by the variance between countries (another 30% being explained by the variances of NUTS3 regions within NUTS2 regions – quite probably the differences inside metropolitan or urban areas), while when conducting the analysis with NUTS2 regions as basic units, the inter-country variance accounts for two-thirds of the total variance. Thus, it is impossible to understand regional differences without also taking into account national differences.<sup>1</sup>

In order to get an idea of this national context within which regions develop, we have elaborated a typology of economic regulation at national level, again based on a principal component analysis, treating the following themes: income inequalities; economic performances, economic structures, Lisbon strategy, type of economic command, regulation and governance, social performances, environmental performances. The complete list of indicators can be found in Vol. 2 (p. 57).

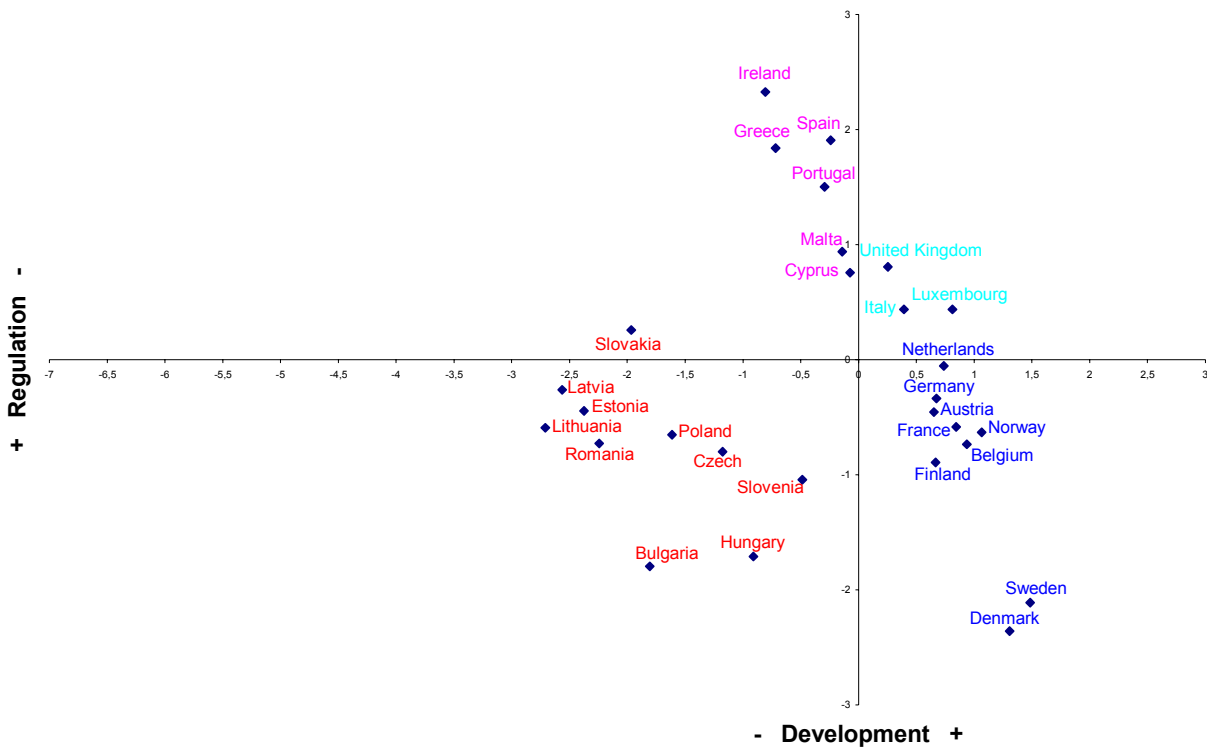
From the results it is possible to define four distinct groups (represented by four different colours on the graph). Indeed, the first component opposes rich countries of Western Europe on the right with poor countries of Eastern Europe on the left. Mediterranean countries such as Spain, Portugal, Malta, Cyprus, Greece and Slovenia have intermediary positions. The left position of Ireland, despite its high standard of living, is related to some

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<sup>1</sup> The MASST model is also built on this principle since it estimate national growth rates and then the regional differentials to these growth rates.

structural weaknesses, relatively bad social indicators and a high level of foreign investments (comparable to those in Eastern countries).

The second component clearly opposes Scandinavian countries with high state regulation and low social inequalities, with some western peripheral countries where the weight of state is low and social inequalities are high. While especially UK, but also Italy, are close to the second model because of intense deregulation in the last 25 years, France, Belgium, Austria and Germany have kept a relatively strong redistribution system. In Eastern countries, social inequalities remain relatively low but the weight of state regulation has become relatively low, especially for Baltic countries, and still with the exception of Hungary.



**Figure 4 Development and regulation**

- The position of Romania, Bulgaria and Norway should be considered as very approximative since some indicators are missing for those countries.

## 1.4 Towards complementary indicators of regional economic regulation

In direct line with the above typology, we have attempted to work out at *regional* level the same indicators that reveal *national* level regulations. Due to data limitations, the only indicators we have been able to construct were: productivity (GDP/employments), share of wages (wages /GDP), the margin rate ( $[\text{GDP-wages}]/\text{GDP}$ ), and, finally, the accumulation rate (investments/GDP). Figure 29 shows the latter.

Indeed, the map shows a very general metropolitan effect with investment rates systematically high or higher than their environment (Lisbon, Madrid, Paris, London, Rome, Prague, Bratislava, Vienna), with exception of Dublin, Stockholm and Helsinki. Finally, some regional contrasts are strong or relatively strong, for example between the north and the rest of England (except London and the southwest), between south and north of Italy, between central Spain and the rest of the country. Obviously, investment shows a marked regional component, and this is quite surely one of the levers regional policies can efficiently impact on.

### 1.4.1 But why?: Elements of explanation of the state and evolution of the localisation of activities

#### **It's the economy, stupid!: The shifting economic, technological and political context of regional development**

In light of the fact that national performances are important determinants for regional performances, **it is important to understand the current macro-economic developments in order to understand regional development.** The slow-down in productivity growth and the consequent dismantling of a system of redistribution of productivity gains has led to an increased use of externalities which can be seen as one of the most important factors determining current economic geography. Firms invest less (thus reducing firm consumption) and the proportion of GDP going to wages (and thus to private consumption) decreases.

## **Now you're talkin': Shifting theoretical perspectives on regional growth and competitiveness**

If we want to understand the differentiation of the European territory in terms of economic activities, it is of prime concern to understand how and why firms compete by means of their location. The competitiveness of a firm is dependent on the environment, including the relations firms have with other firms and institutions in their surroundings, hence regional development and regional competitiveness are strongly linked to the behaviour and interdependencies of firms. In the chapter we have a closer look at agglomeration economies, as we investigate those arguments in the literature relating in particular to re-concentration and re-metropolisation.

Competitiveness, and indeed regional competitiveness, is far more complex than it is generally believed. Focusing on regional competitiveness it becomes clear that it differs from both national competitiveness and competitiveness at the level of the firm. In order to distinguish between the various components of regional competitiveness the 'pyramidal model' of regional competitiveness' suggested by Martin (2005) is used. Hereby it is possible to distinguish between the sources of competitiveness, the 'revealed' competitiveness, i.e. the performance of regions that can be measured by various indicators, and the target outcomes, the aim of rising quality of life and standard of living.

In the debate on the localisation of economic activities, and in the literature on territorial development, industrial (re-)organisation and issues related to regional and economic competitiveness, such as innovation and technological development, it is clear that orthodox perspectives, e.g. the paradigmatic status of Weberian locational theory, have been increasingly challenged in the last 10-20 years by a plethora of heterodox perspectives (Storper, 1997). Most notably the orthodox perspectives include application of neo-classical economics while discussing the issue of regional development. Within this framework, the processes of equilibrium will work in the direction of regional convergence at all scales, although various hindrances to convergence can be detected, and dealt with theoretically.

The concept of 'competitiveness' has received considerable amount of criticism. Krugman denounces it as a 'dangerous obsession' (Krugman, 1994). He argues that it is wrong to draw an analogy between individual firms and national economy, and that if competitiveness has any meaning then it is simply 'productivity'. Even Michael Porter, whose work played a key role in transferring the notion into economics and public policy (Martin, 2005) prefers the notion of 'competitive advantage' instead, and also claims that 'true competitiveness is measured by productivity'.

Camagni (2002) points to the fact that if a region display a higher competitiveness on a longer term basis then it is most likely based upon absolute competitive advantages rather than comparative advantages. A successful region is then to be thought of as possessing superior technological, social, infrastructural assets that are external to but which benefits individual firms to a degree that prevents geographical redistribution of economic activities to take place.

Drivers and the resulting 'competitiveness' can be seen as linear concepts, but they are much more efficiently understood as 'an evolving complex circular process, in which some outputs themselves become inputs, and thus influence future outputs' (Martin, 2005).

One important aspect, especially in the potential advent of a 'new economy' is the capacity to innovate. However, just as with the entire system of drivers identified above, in recent years the concept of innovation as a driver of economic growth has shifted away from that of an individualistic 'linear' technology transfer process, towards an incremental, endogenous, group activity. Innovations are not necessarily based on high or new technology, and new products and new processes often originate within the manufacturing sector, or from an interaction between producers and their customers/suppliers. Innovation, therefore, depends not solely on technology transfer arrangements, or the presence of individual 'innovators', but upon the characteristics of the entire local economy; the various actors, the relationships between them, and the environment within which they operate.

#### **1.4.2 Spinning the globe: factors of localisation of firms**

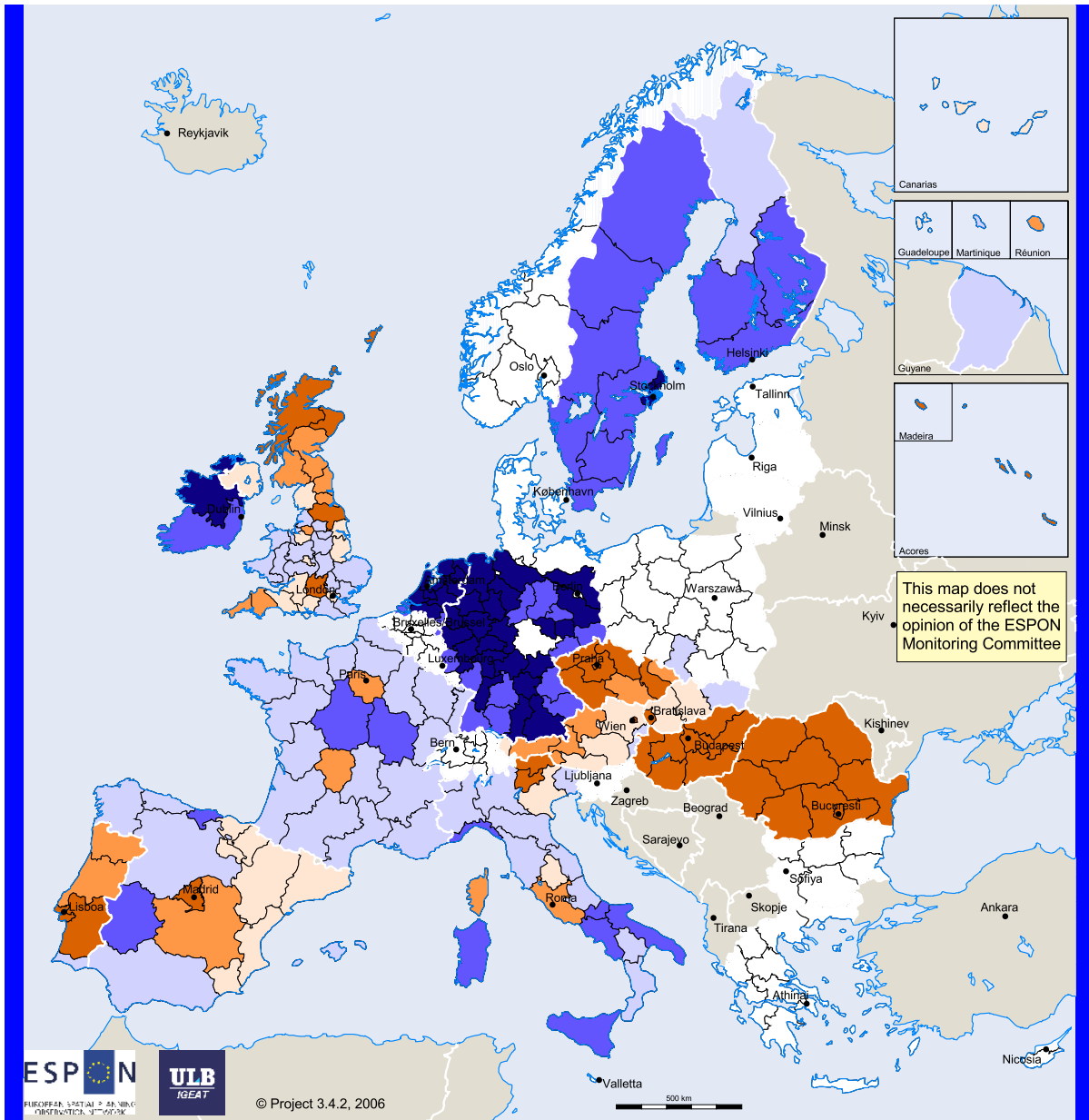
This section provides an overview of the main results in the so called entry and exit literature with special attention on to what extend local characteristics affect new firm formation (entry) and firm death (exit) within a geographically well-defined area. From a policy perspective the issue of what factors are important determinants of new firm formation is of interest since up to 50-percent (in some branches up to 85-percent) of all new jobs are created within new firms which means that new firm formation is one important component in the struggle against unemployment. High rates of entry are also often associated with high rates of innovation and increases in efficiency. However, even though the entry of new firms is common there are substantial differences across regions with more entry in urban areas.

Most new firms serve the local market and a general finding in the literature is that there is a positive correlation between the creation of new firms and the local demand. This suggest that in-migration, income growth, and increased public spending tend to have a positive impact on the creation of new firms which implies that public policy could make a difference. However, empirical results indicate that measures of explicit government actions tend to have a low effect on new firm formation. This could be due to the fact that most of these policies have not had the persistence or the power it takes to make a difference.

The survival rate among new firms is in general low even though large scale entry tends to have higher survival rates. Large scale entry is also found to correlate with skills as highly skilled tend to start larger firms. From a strict economic perspective, the close-down of inefficient firms is something positive as production resources are released that could, and in the long run will, be used in the production of other goods and services. From the employees' perspective, the loss of a job due to a close-down may be the starting point of something new and a chance to take advantage of new opportunities. However, the ability to take advantages of new opportunities is not equal across individuals as individuals differ with respect to their skills and ability to adjust, which in some cases lead to long term unemployment and personal tragedies.

A policy designed to equalize new firm formation rates, survival rates and/or closedown rates across regions need to include components to reduce regional disparities and natural advantages for firm formation and survival most frequently found in urban areas. This means that, among other things, local demand in terms of private- and public consumption, private income levels and formal education as well as on the job training need to be equalized (not necessarily equal) across regions. Such policies would constrain or at least discourage migration across regions as resources are forced to be in places they would not be in if the policy was not undertaken. More generally, the cost, political and financial, of achieving equality across regions in firm birth rates and economic well being and growth may be substantial and only the political process can value to what extend such extra costs are desirability.

**Accumulationrate (2002)**



**invest/gdp**

	0.011 - 0.037
	0.037 - 0.091
	0.091 - 0.126
	0.126 - 0.145
	0.145 - 0.183
	0.183 - 0.534
	No data

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 Origin of data: EU 15 and CC's : Eurostat,  
 Norway and Switzerland : National Statistical Offices.

**Figure 5 Accumulation rate (2002)**

## **Oh no, don't press that button! : How macro-economic policies (might) affect regional development**

Although macro-economic policies such as the monetary policy performed by the ECB are not foremost concerned with regional development, they may have significant effects on regional economies. The main question is which types of regions benefit most from EU wide policies and which regions benefit less? An identification of such region types could contribute to the definition of 'competitive regions'.

A central theme in this chapter is European integration and regional industry structures. Regional specialisation trends in Europe are important to follow for several reasons. The implementation of the EMU has highlighted the importance of flexibility in national as well as regional economies since exchange rate adjustments and national monetary policies are no longer available to handle asymmetric shocks. In this aspect a diversified industry structure is important since it may reduce the risk for asymmetric shocks or smoothes out regional differences in policy impacts. Previous empirical studies, as well as the present analysis, have found support for the hypothesis that regional industry structures can explain regional differences in responses to monetary policy.

Empirical research has not provided clear results so far and it is difficult to identify regional 'winners' and 'losers' in the context of EU-level macro-economic policies. However, one might argue, at least from a theoretical point of view, that a diversified industry structures and a high mobility of the labour force should be enhanced by EU policies. This is especially important if the underlying forces of European integration drive regional specialisation. However, there are no clear evidence that the European integration, e.g. through the introduction of the common market, enhances regional specialisation.

Two new approaches to the assessment of economic policies are presented in this report:

- The first is a very simple ex-post estimation, evaluating the impact of interest-rate changes for different regions and evaluating the role that sectoral structure plays in determining these impacts. Although the results are very preliminary and the empirical analysis should merely be considered as an illustration, the results presented seem reasonable, e.g. that *Real estate, renting and business activities* is an interest rate sensitive sector and that *Public Administration* and *Manufacturing of food products* are less sensitive in relation to the other sectors.
- The second is an application of the MASST (Macroeconomic, Social, Sectoral and Territorial) model from ESPON project 3.2 in order to simulate the impacts of a series of isolated policies. Each simulation is generated with the aim to understand the regional effects of *one single external shock at the time*, coming alternatively from:
  - single macroeconomic policies (fiscal policies, interest rates policies),
  - direct and indirect macroeconomic decisions linked to macroeconomic trends (exchange rates movements),



- effects of combined supply side policies / fiscal policies / macroeconomic trends (cost competitiveness variations),
- macroeconomic trends, allowed by macroeconomic policies (inflation).

No effort is made to include complementary policies addressed towards general consistency of macroeconomic equilibrium (e.g. expansive fiscal policies accompanied by restrictive monetary policies and rising interest rates), as:

- the MASST model is not designed to model these consistencies,
- the general effect would depend on the relative intensity of the different policies, difficult to determine on the basis of the existing literature, and
- the two opposite policy elements would counterbalance each other in terms of spatial effects, generating a regional pattern difficult to interpret.

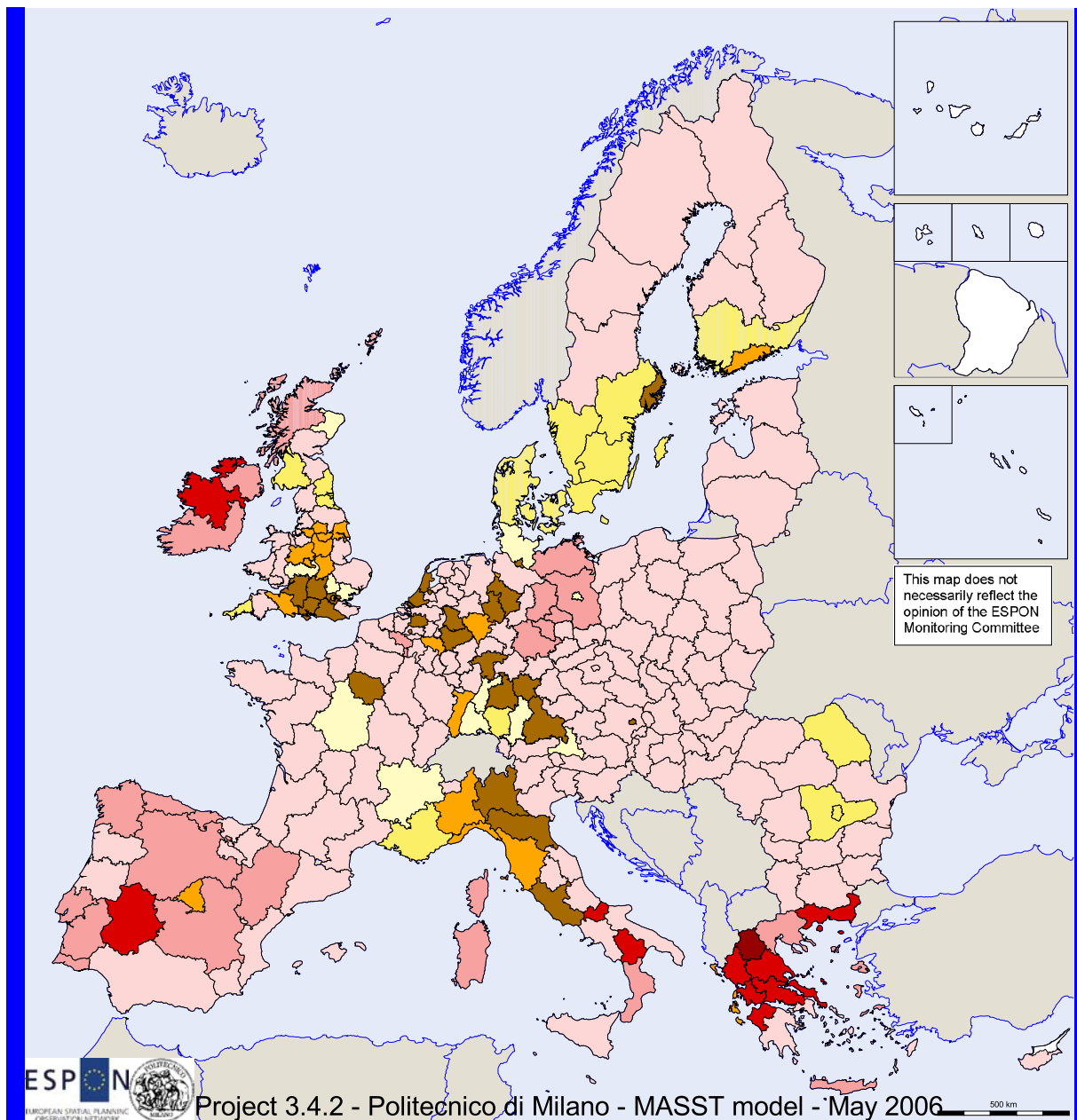
All effects of macroeconomic policies and of changes in macroeconomic content are reported in terms of induced variation in regional growth rates in 2015, the final year of simulation of the model. The variations presented in the maps are measured with respect to the 'Baseline Scenario' (see project 3.2) - the benchmark scenario of ESPON 3.2 -, a scenario in which all present tendencies are supposed to continue in the future.

One of these simulations with opposing tendencies concerning fiscal expansion (i.e. increase public spending) and contraction is presented in maps 57 and 58.

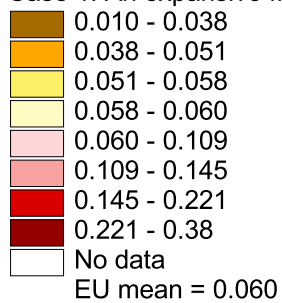
The expansive policy aims at stimulating the economy through a fiscal expansion, with no attention to the ways fiscal policy is financed. The aim of the exercise is in fact to capture the effects of a fiscal policy at the regional level, ignoring the funding aspect. This policy is expansive throughout Europe, but the effects are generally stronger ( and much higher than the European mean) in the four old Cohesion countries, namely Greece, Portugal, Spain and Ireland. Within each country, the highest effects of the expansive fiscal policy are registered in rural and less rich areas.

The restrictive policy reflects the need to maintain a virtuous public balance through the containment of public expenditure. The overall effect on EU growth is negative, and this is true for all countries and regions, as expected given the restrictive nature of the policy. The effects are less marked in Eastern countries, which are less sensitive to public expenditure, because of their restrictive trend in public finance developed in the past. In the Western countries, the restrictive effects are higher than in Eastern countries, with a strong variation at regional level. The pentagon area is generally more affected.

**Case 1: An expansive fiscal policy**



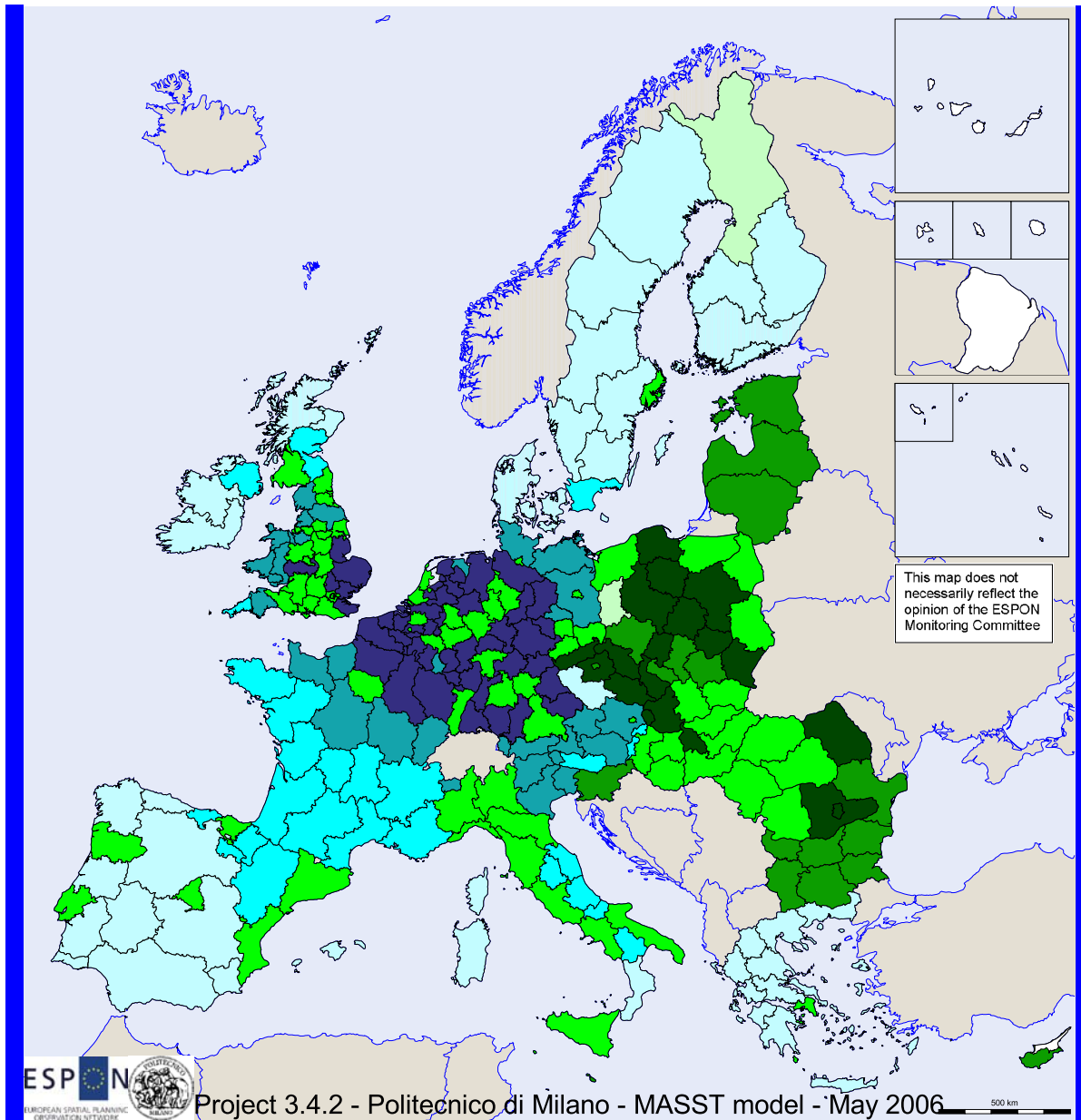
Case 1: An expansive fiscal policy



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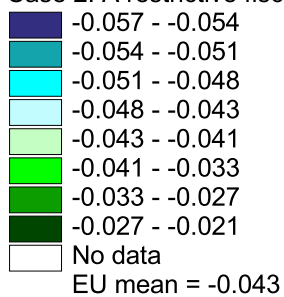
**Figure 6 Case 1 : an expansive fiscal policy (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario)**

**Case 2: A restrictive fiscal policy**



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**Case 2: A restrictive fiscal policy**



**Figure 7 Case 2 : a restrictive fiscal policy (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario)**

## 1.5 Small is beautiful: Regional Policies

Regional economic policy has gradually shifted since the 1960s. In a new economic context (i.e. globalisation, supply-economy, cycle of low productivity growth), the concept of regional competitiveness has gained growing influence. Instead of exogenous development policies, efforts are concentrated on the regional competitiveness, mainly through the valorisation of the region's endogenous growth potentials. Thus, instruments shifted from direct business aid to business environment upgrading, from 'hard' infrastructures to 'soft infrastructures'.

On the basis of a literature review seven main drivers of regional competitiveness have been identified. Assuming that regions do actually focus on regional competitiveness, our central objective is to analyse the current actual weight of policies aiming at strengthening these drivers. The analysis is based on an overview of regional policies implemented across European regions together with the relative financial efforts devoted to the factors, or the drivers, of regional competitiveness.

The nine analysed regions are selected from a previously developed typology which highlights a Centre-Periphery structure. Their case studies partially answer the above mentioned question, which, in a more operational way, can be reformulated as follows: How are financial means allocated among competitiveness drivers and in what kinds of regions?

Less developed regions with respect to the European average, such as Polish regions, mainly base their regional development policy on the implementation of 'hard infrastructure' but also amenities. In Poland, it is nevertheless surprising to observe the limited share of financial means allocated to human and social capital.

London as the best performing metropolitan region allocates important and almost equal shares of financial means to the development of human and social capital. This observation is coherent regarding on the one hand, the scope of social polarization and exclusion and, on the other hand, the relative inadequacy of supply and demand for qualification. The latter argument is even more relevant for Berlin for which the development of knowledge intensive services is somewhat hampered by a lack of qualified local workforce. In this context it is not surprising that Berlin strongly bases its development policy on the upgrading of human capital.

The peripheral Swedish region of Norrbottens clearly bases its regional development policy on the strengthening of 'soft' infrastructure, basically social capital. Norrbottens exhibits

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2 Given the important time constraint and the scarcity of available impact analysis (taking into account not only direct but also indirect effects), the case studies could not assess the impact of the implemented policies.

clearly the most 'modern' policy approach with little investment in 'hard' infrastructure and almost inexistent direct financial subventions and funding.

Based on the observations of the case studies, the chapter proposes policy recommendations for Metropolitan regions, Periphery regions, New Member States regions and Intermediate regions.

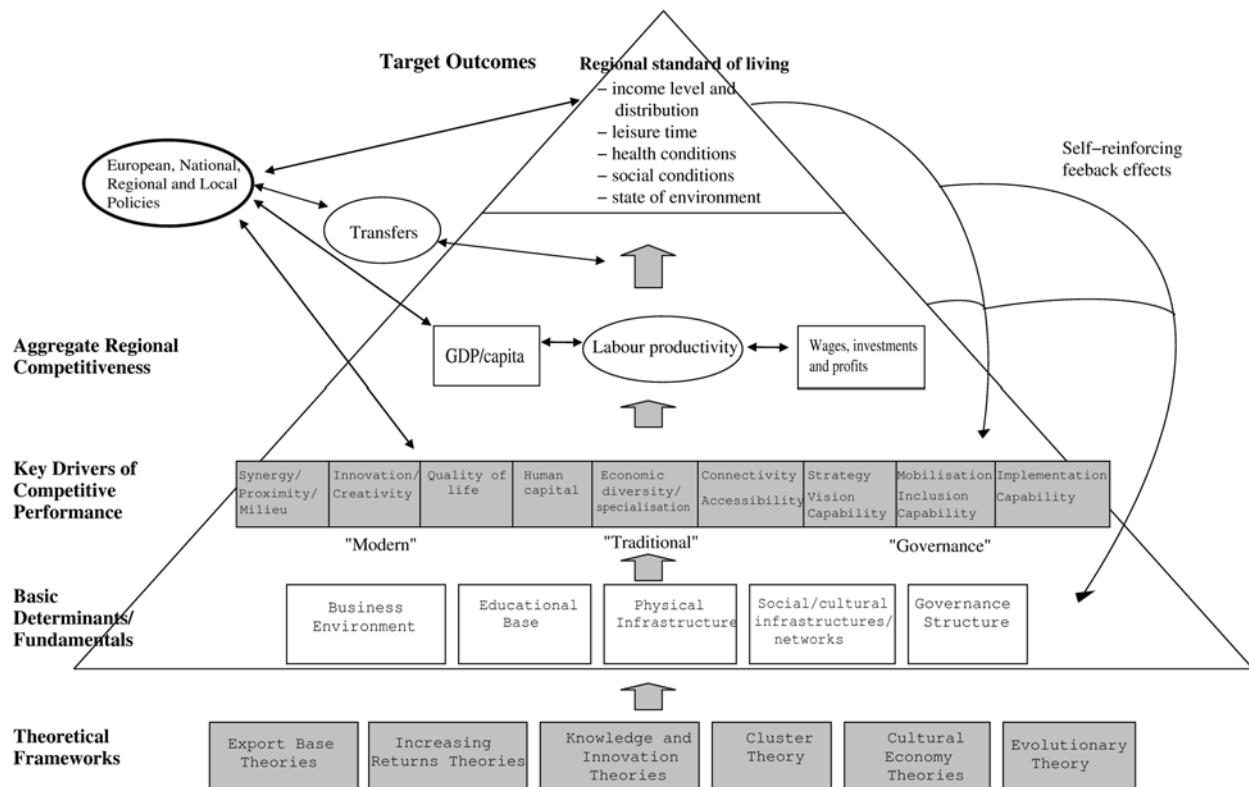
## **1.6 So what is regional competitiveness? : a concluding concept discussion**

The above research touches on many different subjects. One can, however, identify one main central thread that links all these questions: the notion of 'regional competitiveness'. This (together with 'territorial cohesion') is a key concept behind much of current policy thinking within the European Commission and amongst Member States and guides many of the programmes of regional development currently being devised. We present our understanding of the idea with the help of a diagram each element of which is an integral part of the whole definition<sup>3</sup>. It is important to understand that this diagram embodies a whole series of feedback effects from one 'level' to another, thus making this a continuously evolving system. It is to be understood as the fruit of our reflection that has accompanied the project throughout its duration and that was discussed at every TPG meeting.

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<sup>3</sup> This diagram is adapted from Martin, 2005.

**Conceptualising Regional Competitive Performance**



**Figure 8 Conceptualising Regional Competitive Performance**

The following brief conclusions can be drawn:

- Regional competitiveness cannot be correctly defined if it is not embedded in the larger picture of regional development and well-being of a region's population.
- We consider that at least the following elements play a role in the definition of standard of living:
  - material wealth, represented by income levels and distribution
  - leisure time
  - health
  - social inclusion
  - environment
- We propose three approaches to the measurement of aggregate regional competitiveness:
  - GDP/cap
  - distribution between wages, investments and profits
  - productivity
- It is the combination of these three aspects that relates to a region's competitiveness, which, therefore, is not limited to its sole capacity to compete on international markets. Hence, unless a region can attract more active population or more investment in

physical capital, the only possible way to increase competitiveness seems to be the increase of labour productivity.

- Based on the work concerning regional policies, external literature and debates within the team, we have settled on the following key 'drivers' of regional competitiveness, belonging to three different types:
  - 'Traditional' or 'Basic'
    - Economic diversity / specialisation
    - Human capital
    - Connectivity/Accessibility
  - 'Modern'
    - Synergy, proximity, 'milieux'
    - Quality of life
    - Creativity / Innovation
  - 'Governance'
    - Strategy / Vision capability
    - Mobilisation / Inclusion capability
    - Implementation capability

All of these allow some form of policy intervention.

## **1.7 Policy recommendations**

### **1.7.1 At regional (micro-economic) level**

1. Our study demonstrates that European Regions are characterized by a great diversity, as much in economic structures (see our Typology) as in development (from a factor 1 to 30, even more at NUTS 3 level) or workforce skills, not to mention the legacies from the past, the existence or absence of a strong regional identity, and a great number of other parameters. In our opinion, a regional policy should be based on a good knowledge of those differentiated realities in order to bring the best answers possible to local realities. We think it is unreasonable, not to say counterproductive, to believe some general recipes or a list of 'best practice' collected here and there might become a model to be applied everywhere. One and the same measure, taken in different regional contexts and realities, can lead to opposite results. Even in what could be considered prerequisites in economic development, that is sound communication infrastructures, studies show that, when a sufficient regional frame is lacking, an improved accessibility – for example due to the construction of a motorway – can result in an effect opposite to

expectations by depriving the region from its labour force through increasing work commuting or depopulation instead of contributing to local development! Optimizing the impacts of regional policies inevitably requires a deep knowledge of the region's strengths, weaknesses and dynamics.

2. However, we must admit this knowledge of regional realities is still too limited, not only in theoretical but also in empirical terms. The results and difficulties encountered in our study – but equally in other studies than ESPON – show we should head for four complementary directions:

- (1) The first consists in increasing our effort to collect and elaborate data on a fine regional scale. Too many basic data are still missing or too tedious to collect to reach a satisfying regional expertise level. No good knowledge of regional realities is possible without a minimum of exhaustive homogeneous data, on sufficient temporal series easily accessible on the whole of the European territory.

- (2) The second consists in intensifying fine studies on the structures, strengths, weaknesses and dynamics of the regions as currently conducted by ESPON.

- (3) Thirdly, and this aspect is nowadays cruelly missing, we think it necessary to work out the conceptual and practical tools of a true regional macro-economy – if not a true regional accountancy – as was the case in the elaboration of national macro-economic tools after World war 2. The Europe of the Regions will be efficiently built only if it is based upon and has control over its regions' macro-economy. A true monitoring of the regions' development, but also a real assessment of the economic impact of European regional policies will only be possible with the help of those tools. Today the Regions' productions are more or less well known, but no one really knows what remains within the Region and what leaves the Region and where, what gets in the Region and from where. The various cross regional transfers are not at all under control. The same is true as regards incomes, since even if we are roughly acquainted with the Regions' household incomes, we do not know much about what they are spent on and where, etc.

- (4) Finally, it is not enough to multiply Regions' radiographies to understand their strengths, weaknesses and dynamics, but it would be more than necessary to study the different regulation modes at regional level. Just like at national level, regulation modes exist at regional level. The comprehension and the development of territorial cohesion depend on an improved knowledge of regional regulation modes. If the elaboration of a regional macro-economy is an essential stage in the comprehension of regulation modes, this should however not be considered as a precondition.



Indeed, exploration studies of regional regulation modes can be of great help to work out the tools of a regional macro-economy. Understanding what a regions experiences and how it regulates its development mode will allow a better understanding of the tools that are necessary to elaborate the regional macro-economy itself.

3. This macro-economy at a finer level than the national level is all the more necessary as our study shows that regional competitiveness – understood here as the capacity for development in a larger sense - cannot be limited to a single indicator but depends on a multiplicity of factors, above all on their inter-relations. Regional regulation modes exist at regional level. A country's competitiveness is not limited to the test of the world's markets. The example of two of the main economies in the last years is enough to show the problem is much more complex : in spite of its high competitiveness on external markets and considerable trade surpluses, Germany's growth remains sluggish while the USA, despite their trade deficits, enjoy an above average growth. The same is true at regional level. The idea to reduce regional competitiveness to the world's markets test seems incredibly simplistic and caricatural to us, not to say very prejudicial, especially if that test determines EU regional policy. The 'international markets test' can of course represent a factor among others, for certain economic sectors and under certain circumstances, etc., but we are sure that focusing the whole EU regional policy on that single criterion not only will be detrimental to the regional economic cohesion but will very often result in a de-structuration of territorial cohesion between European regions. The results of our study show that more development goes together with more regulation, suggesting that it is precisely the multiplicity of factors and the quality of their interrelations – that is, the regulation mode – that help bring about a sound development potential.
  
4. We have highlighted a general convergence around the EU mean during the Keynesian-Fordist period (1945-1980) at the level of big regional structural types. Then there was a break, even some dynamic of divergence, from the neo-liberal regulation (1980 to now). There is consequently a real risk of increase in regional disparities and weakening of territorial cohesion effort. Therefore, it seems transfers, especially those bound to EU regional policies to promote regional development, should not be considered mere aid, if not aid at a loss, since they actually contribute to bring social, economic and spatial cohesion where it is missing, which benefits in return the whole region's competitiveness.

5. At a more concrete, more local level, our explorations indicate that *investment* has a strong regional component. This is all the more significant as our literature review shows a large part of the jobs are created by new, generally small-sized, enterprises. Investment can undoubtedly represent one of the levers of a dynamic regional policy. Regions should resort to all kinds of levers and factors to favour investment. Unfortunately, in this field, fiscal and/or social dumping is too quickly envisaged, as is the supply of infrastructures or discount establishment conditions to attract new investors. Our analyses have strongly underlined this is no advisable way to go. Social dumping inevitably leads to a lack of total demand resulting in a fall of investments, the exact contrary of what is expected. As to fiscal dumping, its impacts are cancelled as soon as all the regions act in the same way, but it also deprives regions of political means through reducing their receipts. As far as discount supply is concerned, one has too often seen new investors use it for competition or resort to regional aid and delocalise once the latter was exhausted. Creating an environment favourable to investment, establishing and perpetuating new enterprises is not possible without developing a policy aimed at new expanding markets or valorizing local potentials by promoting education, research-development, inter-firm cooperation, access to capital, dialogue between social actors, stimulating projects, etc., all measures that increase the know-how and productivity gains, or likely, when they generalize, to initiate a virtuous process in which all regions are in a win-win relationship.

### 1.7.2 At the general macro-economic level

- a. Our general macro-economic analysis of the regulation modes since World War 2 shows it is just as essential to ensure firm profitability (the competitive supply aspect) as the population's purchasing power (global demand aspect). A good economy not only makes profits when producing, but also through being able to sell what it produces. Indeed, it is from a macro-economic point of view nonsense, as is often the case today, that countries reduce their production costs by reducing their total wage bill in order to be more competitive on international markets since this only leads to curb global demand. It is this weak global demand resulting from a general curb of wages in the added value that explains the apathetic character of European growth for several years. This diagnosis is underlined by the OECD<sup>4</sup>, though too timidly. Indeed, this internal demand brought about by restrictive wage policies explains the low investment level (and therefore the low firm demand), and thus the weak growth rates. The headlong rush into globalisation is a self-maintaining effect of the neo-liberal regulation mode since the 1980s. Internal demand is an essential component of the good health of an economy. Now that firm profitability has been restored, a new dynamic must be established by restoring the mechanisms of productivity gains redistribution through internal demand.

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<sup>4</sup> OECD *Economic Outlook*, n° 79, May 2006. Available at : [http://www.oecd.org/document/4/0,2340,en\\_2649\\_201185\\_20347538\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/4/0,2340,en_2649_201185_20347538_1_1_1_1,00.html)

It should not be forgotten that trade outside the ESPON sphere only amounts to about 10% (percentage assessed in added value, not in turnover). It is nonsense to massively reduce internal demand, and consequently the EU internal growth dynamics, by compressing wage costs, especially in the name of competitiveness on markets that only represent a marginal percentage of total demand! In the future, emerging economies such as China or India might become the large consumers of the world, but currently most of Europe's production is still consumed in Europe.

- b. Indeed, all European texts speak of improving competitiveness, not only at EU level, but also at the level of each country of each European region, but that notion covers in reality very diverse aspects: productive competitiveness, fiscal competitiveness, wage cost competitiveness, competitiveness in quality, etc. Unfortunately, today competitiveness is only seen from the angle of labour cost, on the pretext of being competitive on international markets or to attract external investments. This results in a strengthening of the current depressive spiral. As much at national as at regional level, we think it would be a big mistake to regard the challenge of globalisation exclusively from the angle of wage competitiveness. We will never be able to compete with Bengali workers in that field! It is therefore imperative to develop all possible means to invest massively in all sectors generating productivity gains, but with a double aim: ensuring capital profitability requirements but also the increase of wages and collective services of good quality. Meeting capital profitability only, as is the case today, leads in mid-term to a macro-economic deadlock.
- c. Boosting a process of substantial productivity gains supposes at the same time investing in all sectors that can generate them as efficiently as possible (investments in education<sup>5</sup>, R&D, new ICTs, knowledge economy, quest for productivity gains in the tertiary sector: all those elements contain productivity sources – truly not as substantial, from a structural point of view, as those obtained by the generalisation of Fordism in the industry sector between 1945 and 1970, but nevertheless real, as could be seen the last years in the USA or the Scandinavian countries), but also achieving expansion investments according to the Kaldor-Verdoorn law, only possible if Europe's internal demand is boosted.
- d. To boost Europe's internal demand, it seems necessary to re-establish a norm for gain redistribution such as what was achieved in the immediate post-war period in order to ensure a tri-redistribution of productivity gains between firms, wage earners and State. It is time to stop the distortion of income distribution in favour of capital

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<sup>5</sup> The USA spend 21,000 \$ per student and per year on education, and France hardly 8,000, which results in increasing the technological gap between the two countries even more.

since it proves destructive in the long run as it depresses internal demand without for all that boosting investments. The terms of that norm can be diverse; they can be conditioned by different parameters such as the guarantee of a minimal profitability for firms or differentiated policies according to the opening of economic sectors to international competition, etc. However, whatever these terms may be, it seems essential to restore that principle as, as we have pointed out, it is the only way the two components of the economic cycle (a profitable supply and a sufficient solvent demand) will be able to go hand in hand and bring about a true virtuous circle in the end.

- e. Today, this prospect of economic environment stability in the long run is dramatically affected by drifts and dangers bound to the financialisation of the economy and the rise of financial actors in economic decisions. When a financial director takes over the management to put shareholders' satisfaction first, the financial logic prevails over the industrial logic, short-term profits overcome medium and long term investments. It seems thus also necessary to restore an environment giving priority to long against short term, in other words, to establish new governance rules imposing to come back to profitability requirements compatible with economic reason and to differentiate their objectives according to their investment outlooks. In the same way, Europe must reduce the damaging effects of fiscal and social competition because it is destructive in the long run.
  
- f. If we plead for boosting productivity gains and their equitable redistribution, we cannot ignore the weight of the current globalisation and the increased competition on international markets. We are no longer in a post-war context, where the self-centred development process was essential and where international trade was refocused and regulated between the USA-Europe-Japan triad. Competition from emerging countries is a reality, and even if Europeans will never be more competitive than Chinese in terms of labour costs (the more so as this policy dangerously curbs total demand, which is so essential to the completion of the economic circuit), we can do our best to diversify our activities in innovating products and, this way, better protect ourselves against competition from emerging countries. It is quite possible to implement specific policies in the sectors that are most concerned. Imbalance in the production structure, such as only industry (in Germany) or only services (in the UK) must be avoided. High level industries have to be coupled with the development of services. Falling back on not very sophisticated sectors can favour growth and employment in the short run, but in the end those jobs show a low productivity, contrary to jobs resulting from specialization. A lack of international specialization brings about long-term impoverishment of countries.

- g. When we speak of mass investments, we also include public contracts and, more generally, a true industrial policy favoured by public authorities. Almost all the great technological advances in the 20<sup>th</sup> century such as nuclear power, the invention of computers, internet, etc. were supported by public funding. This is all the more true because neo-liberal regulation drastically restricts the horizon of enterprises to the short term. This support should not be limited to the definition of a real industrial policy but should also offer adequate rules and policies of support to new entrepreneurs desirous to launch innovating projects but also back innovation within existing firms. The field of economic policy is gigantic, and the economy needs State support to a large extent: to finance research and education, to favour the emergence of innovation poles, to offer stimulating conditions to firms and investments, etc. A rise in education expenditure increases human capital, labour force skills, and consequently potential growth in the medium term. Therefore, one should not proclaim, on one hand, knowledge economy should be promoted and, on the other hand, disinvest in education (including wage earners' training and recycling) in the name of budget cuts, reduction of public expenditure or productivity rise in public services. Higher education, but also post-university education, applied and fundamental research, should receive particular support as battlefields of knowledge. If all these measures fail to be taken, if the necessary investments leading to long term productivity fail to be achieved, if productivity gains are not redistributed according to restrictive regulation norms in order to ensure a rise in demand, the EU economy runs the risk of new crises, and of a continuing tendencial decrease of growth with all their negative socio-economic consequences.

## 2 Scientific summary

This project was launched with a very ambitious series of research questions, covering an extremely broad scope of issues. In light of the fairly limited amount of time and resources available, the team decided to focus its efforts on collecting, summarizing and adapting existing knowledge to the specific needs of ESPON, only adding original research wherever deemed necessary. However, quite a few interesting approaches were explored and a series of new (for ESPON) data was analysed.

### 2.1 Main concepts

The concepts studied in this report can best be summarised by the pyramid presented in section 1.6.

The main concept in the current policy debate, but also in much of research on regional economic development is the concept of '**regional competitiveness**'. This concept is not clearly defined and we have, therefore, decided to embed it into a more general understanding of regional development which includes the question of the actual objectives of regional economic development (including possible negative effects of such development, notably social and environmental effects) and the drivers behind it. Regional competitiveness thus becomes a dynamic process, instead of a static state and a region's competitiveness can, therefore, change constantly, including through internal feedback processes within the system.

An important notion indispensable for the understanding of competitiveness is that of **productivity**. Some authors actually claim that all there is to regional competitiveness is productivity. Even if we take a more differentiated stance on this, we do believe that productivity gains, and the way they are distributed across the different factors of production, is a, if not *the*, crucial 'driver' behind a region's development. It is the increase of productivity which allows to create more value added which can then be distributed to more wages, thus possibly creating more demand, to more investments, thus possibly creating more innovation, or to more leisure time, thus possibly (and arguably) creating more well-being.

When looking for ways policy can influence regional development, we use the concept of '**drivers**' to define those levers elements which seem the most determinant for a region's economic 'success'.

## 2.2 Methodologies

In terms of statistical analysis several approaches that have not yet been used in this form in ESPON have been explored. None of these are scientifically new approaches, but they are of interest for spatial economic research in Europe and might be useful for future studies.

### – Analysis of sectoral data

The major novelty (and major challenge) of this project in terms of statistical analysis is the use of highly detailed sectoral value added data at regional scale. After long months of efforts, the team has managed to establish a database of regional value added broken up into 25 sectors and this at NUTS2 or even NUTS3 level (with a few exceptions in Germany, where NUTS1 was the only level available). In spite of the still remaining limits due to both spatial and sectoral resolution, this data provides a much more detailed vision of the localisation of economic activities across Europe than the 5-sector data used up to now.

The elaboration of this database required contacts with many national data sources and sometimes the use of employment data in order to estimate VA data at the desired regional scale. This obviously raises the question of productivity and is based on the assumption that productivity varies more between sectors than between regions. This effort is a good example of how to collect data by combining different sources and using different estimation methods.

- Indicator of 'annual available regional wealth'

The team has also used an experimental indicator developed by Axel Behrens from Eurostat (Behrens, 2003). This indicator provides an estimation of the annual flow of wealth to each region. Whereas the normally used GDP/cap is a measure of production of wealth within a region (not necessarily produced by the population of that region which constitutes the denominator of GDP/cap), this experimental indicator is an attempt at visualising the actual amount of new material wealth available to a region's population. It does this by distributing a country's net income of all sectors (thus already taking into account the balance of flows with the rest of the world) to the regions according to the known distribution of household incomes and a very rough estimation of the regional distribution of the rest of this net income, using population size as the distribution key.

As a result, this indicator gives an idea of transfers between regions.

- Localisation of Forbes 2000 companies' headquarters

Several other ESPON projects have used some form of data concerning the localisation of multinational enterprises' headquarters. Within this project, however, the team has deepened this approach by using a larger set of firms (Forbes 2000) and by analysing the sectoral distribution of these firms, thus giving a more detailed idea of where which of the largest firms located across Europe. This analysis was elaborated on the basis of the individual pages describing each of the firms on the Forbes website<sup>6</sup>.

- Analysis of share of variance of different scales

A very simple, but interesting, methodology was used in order to study the level of variations between scales. It uses the variance as indicator and measures the proportion of variance explained at each scale. The method goes as follows:

- Calculate the variance between the smallest-scale units across the entire space studied (example: variance between NUTS 3 regions across the ESPON space) – this is the total variance to be 'explained'
- For each scale, calculate the variance between the units within the respective unit of the next larger scale (example: NUTS0 across the ESPON space, NUTS1 within each NUTS0, etc)
- The sum of these variances should be equal to the total variance calculated in step 1. Thus one can calculate the proportion that each of the variances represents in the total.

This method obviously does not explain the origins of the variances, but it does give an indication of where (i.e. at which scale) to look for such an explanation.

- mapping absolute numbers (proportionate circles)

The ESPON community has produced very few maps of absolute numbers as most maps show intensities or levels of regions compared to a European average. In the theme of economic development, this has led to quite a few maps depicting economic growth in a way which makes the innocent reader believe that the powerhouse of economic activity in Europe are the Eastern countries, while the high growth rates in these regions can (partially) be explained by the very low starting level.

The team has, therefore, decided to complement this choropleth approach with another approach using proportionate circles in order to give an idea of the absolute GDP growth, combined with an information about the rate of growth. This significantly changes the

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<sup>6</sup> <http://www.forbes.com>



images and shows that most of European production growth is still concentrated in the pentagon.

### – **Modelling policy impacts**

General reflections:

It is very important to realise the inherent methodological problems of any attempt to study impacts of policies. These are mainly:

- the absence of counter-factuals: we cannot study identical regions where the policy was not applied, but where all other factors were equal. This alone is sufficient to assert that no policy impact analysis can be of a positivist (falsifiable) scientific nature!
- the interdependency between the EU, national, and regional policies: it is reasonable to think that national policies may be implemented in order to support specific industries and regions in response to the effect caused by the EU policy of economic integration. Thus, it is difficult to separate the effects from the EU-level policy from the effect of the national policy. In a similar way, regional policies may be implemented by both nations and the EU as a response to effects that may arise from EU-level policies, e.g. the common monetary policy.
- time lag: most policies are not introduced as shocks in the economy. Thus, the policies may be anticipated long before they are implemented, e.g. the implementation of the common currency was anticipated before 1999 meaning that actors in the economy, both public and private, may have adopted changes in their behaviour according to the policy. This introduces the problem of when to expect the effects of a policy to be observed.

This means that the only way to study policy impacts is to start with theoretical models representing such impacts and then either test hypotheses derived from these theoretical models through the analysis of evolution of some proxy variables over time, or to use the theory to build simulations models.

- Simplified impact model

In the aim to explore some easily usable and simple to understand techniques for assessing policy impacts ex-post, the team has developed a very simplistic model, evaluating the impact of interest-rate changes for different regions and evaluating the role that sectoral structure plays in determining these impacts. This model is mainly to be understood as an example of a possible approach towards ex-post assessment. It does, however, already provide some interesting insights into the effects of the European monetary policy.

- Application of MASST

The project has also made use of the MASST (Macroeconomic, Social, Sectoral and Territorial) model, developed by project 3.2. This model is an econometric model useful for measuring the impacts of both natural economic tendencies and normative interventions on economic growth rates of Europe as a whole, of EU27 Countries (NUTS0) and of NUTS2 level areas. In this project, the model was, for the first time, applied to simulate specific policy interventions. Even though these simulations cannot model a general macro-economic equilibrium, and thus cannot take into account a complete mix of policies, they are useful as ex-ante thought exercises supporting policy reflection by hinting at possible impacts of specific policies.

- Case studies and budget analysis

The team has used case studies in order to explore regional policies. At this level it was extremely difficult to actually study impacts, thus focusing the work mainly on the nature of policies. This was done through literature review and expert contacts, but also through the analysis of regional budgets. This methodology proved highly ambitious in light of the very diversified governance situations and budgetary arrangements across Europe. However, it did deliver insights into the policy priorities of some regions and proved an interesting approach which would allow a vision of regional governance beyond discourse and sole participation issues, if (and this is a big if) resources allowed the collection of a much larger sample of regional budgets.

- Meta-analysis

The project set out to explore factors determining the localisation decisions of firms through the use of meta-analysis based on existing enquiries across Europe. This approach proved difficult as scientific literature on such enquiries is scarce, most of the literature being more of the 'grey literature' type which is difficult to use in a scientific meta-analysis.

However, the methodology might be interesting to explore for future ESPON studies in fields where data is more readily available, as it allows to perform analyses across the ESPON space with fairly limited resources.

- Entry/exit

In the light of the difficulties encountered in the attempt of conducting a meta-analysis, the decision was made to use an alternative method to study factors of firm localisation: the so-called 'entry/exit' literature. This literature uses econometric methods to determine relationships between, on the one side, different variables characterising a region and, on the other side, entry of new firms, either by creation or by arrival from the outside. Due to very limited data available at a regional level across the ESPON space, the team could not conduct such an analysis and it was decided to do a literature review of existing analyses, even though these are limited to certain countries only.

In the future, however, such an analysis might be possible, if not on the number of entries, then at least on the balance of firm births and deaths over several years, using the structural business statistics data in the Eurostat Regio database. Even though this database is currently not sufficiently complete in terms of regional and temporal coverage to allow an analysis over the entire ESPON space, this should be possible in the near future.

## 2.3 Typologies

The team has developed two typologies, one on regional and one on national level.

### Sectoral typologies

The sectoral typology is based on the value added data broken up into 25 economic (NACE) sectors. Two typologies were developed, one with 20 types giving a more detailed overview of the sectoral economic structures of Europe's regions and one with 7 types allowing a more synthetic overview. These typologies were developed through a combination of principal component analysis, hierarchical clustering and manual adjustments in order to correct for data particularities.

The different types are characterised by their specific sectoral structure, expressed for each sector as the percentage of this sector in the total value added of the type divided by the percentage of this sector in the total value added of the entire ESPON space. We then subtract one from this ratio in order to have negative values for those sectors which are 'under-specific' in this type and positive values for those which are 'over-specific'. This allows an easy identification of the structures of the different types.

## Typology of economical regulation

As second typology was produced on national level due to the absence of sufficient regional data. This typology includes a wider variety of data than the preceding one, using a regulationist approach to economic development. The following themes are included:

- Income inequalities
- Environmental performances
- Social performances
- Economic performances
- Economic structures
- Lisbon Strategy
- Regulation and governance
- Type of economic command

The data for these themes were submitted to two successive principal component analyses, one for each theme in the first round and then one with the first components of each theme in the second round. This allows a synthetic view, giving equal weight to the different themes.

## 2.4 Indicators used/developed

Besides the collection and mapping of the sectoral data, the following indicators were developed, at least in an experimental way, within the project.

- Indicators of economic 'performance'

As reflected in the typology of economic regulation, measuring economic 'performance' of a region goes beyond measuring regional GDP per capita. We, therefore, propose a series of different indicators attempting to elaborate a more comprehensive picture of regional economic development. The original list of proposed indicators contains:

- Labour productivity
- Margin rate
- Capitalistic intensity
- Economic profitability
- Accumulation
- Real wages
- Share of wages
- Capital efficiency

Due to data limitations, however, we had to restrict the analysis to the following four indicators: labour productivity, margin rate, accumulation rate and share of wages in GDP. Most of the data used for the construction of these indicators comes from the *Structural Business Statistics* tables from Eurostat's Regio database. In the future, this database should provide the possibility to develop time series.

- Experimental indicator of regional wealth

We have built upon the work of Axel Behrens from Eurostat using his experimental indicator of regional wealth in order to depict the distribution and not the production of the wealth created annually. This indicator attempts to identify where the GDP produced every year actually flows to, including through public and private transfer mechanisms. It is elaborated on the basis of data on the net national income for all sectors (state, companies and households) and the regional distribution of household income and of population. Not all countries provide all the data needed and not all are therefore included in the maps elaborated by the TPG, but the available data already gives a good idea of the usefulness of such an indicator in the larger discussion on the economic wealth *available* (but not necessarily produced) in each region.

### 3 Networking

By the nature of the TPG, the team has profited of the experiences in several other ESPON projects, most notably projects 3.2 and 3.3.

The use of the MASST model is obviously an example of cross-fertilisation between projects, and discussions concerning the concept of regional competitiveness that had taken place in project 3.3 informed some of the work in this project.

Several intense discussions of project hypotheses and results took place at the two ESPON seminars in Manchester and Salzburg, in particular with members of the TPG of project 1.2.3.

Each of the TPG meetings was obviously also the occasion to further develop our thinking in terms of regional development and 'competitiveness'. The geographical distance between the research teams as well as the other obligations of the teams (none of which could work full-time on this project due to the limited resources), however, limited the depth of the theoretical coordination and common understanding.

### 4 Further research issues and data gaps to overcome

All of the research questions raised in this project merit further exploration. In most of the chapters, reflections are developed concerning possible future research issues and data gaps are an important part of these. Here just a few major reflections:

- exploit the Structural Business Statistics of the Eurostat Regio database

This database contains the following indicators in a fine-grained sectoral division at NUTS 2 level:

- Number of local units
- Wages and Salaries
- Gross investment in tangible goods
- Number of persons employed

In a few years this database will contain valuable time series which will allow to study structural evolutions of European regions, including through some of the indicators

developed above. Currently, however, there are still quite a few holes in the data, limiting its possible usage somewhat.

- the need for regional purchasing power parities

It is clear that working on notions such as regional economic wealth and well-being, the need for regional purchasing power parities becomes urgent. Comparing (material) well-being, but also salaries, in Paris and in the Auvergne or between London and Cornwall just doesn't make sense without a notion of the price levels in each of these regions.

A first approach might be to collect data on housing prices as one of the main spending items of households.

- A need for more systematic collection of regional public spending information

As other ESPON projects (e.g. 2.2.1 and 2.2.2) have already noted, the absence of regional data on public spending on all scales makes it difficult to conduct any kind of impact analysis. Even though spending is not the best measure of actual implementation, it is a quantifiable proxy, thus making it a useful tool for policy analysis.

- The need to overcome the problem of changing NUTS-delimitations for long-term time series.

An analysis of economic trends cannot be based on the sole evolution between 1995 and today. Longer time series are necessary, both for serious econometric work and for more general analyses of the development of the spatial structures in Europe. Currently it is very difficult to compare GDP data over time, both for spatial changes and for changes in the calculation of GDP. The effort on a long-term database which addresses these issues should definitely be pursued in the future to allow more research based on longer time series.

ESPON project 3.4.2  
 'Territorial impacts of  
 EU economic policies  
 and location of  
 economic activities'  
 Final Report  
 October 2006

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ESPON project 3.4.2  
'Territorial impacts of EU economic policies  
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October 2006

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This report represents intermediate results of a research project conducted within the framework of the ESPON 2000-2006 programme, partly financed through the INTERREG programme.

The partnership behind the ESPON programme consists of the EU Commission and the Member States of the EU25, plus Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

This report does not necessarily reflect the opinion of the members of the Monitoring Committee.

Information on the ESPON programme and projects can be found on [www.espon.lu](http://www.espon.lu)

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ISBN 2-9600467-1-4

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# Table of Contents

<b>1</b>	<b>Statistical analysis of economic development</b> .....	<b>12</b>
1.1	Introduction .....	12
1.2	EU Regions: An historical overview in a long-term perspective.....	13
1.2.1	A persisting centre – periphery opposition.....	13
1.2.2	The structural long-term evolutions in the old members of the Union .....	20
1.2.3	Special zoom : spatial and structural evolutions in Central-Eastern Europe during the transitional period .....	22
1.3	Recent economic growth in Europe at regional level .....	50
1.3.1	The map of economic growth between 1995 and 2002.....	50
1.3.2	Which level is important to understand the geography of recent economic growth? .....	54
1.4	Development and regulation mode: a typology .....	56
1.4.1	Introduction and database .....	56
1.4.2	Methodology .....	57
1.4.3	Main results .....	58
1.5	Mapping economic wealth and regional transfers .....	60
1.5.1	Introduction .....	60
1.5.2	Database and methodology .....	61
1.6	Proposals for new ESPON indicators performance.....	66
1.6.1	Introduction .....	66
1.6.2	Methodology .....	66
1.6.3	Database .....	67
1.6.4	Labour productivity .....	68
1.6.5	Margin rate .....	70
1.6.6	Accumulation .....	72
1.6.7	Share of wages.....	74
1.6.8	Toward a true regional macro-economy .....	76
1.7	Location of multinational enterprises and economic command in Europe .....	76
1.8	Typology of regional economic structure at NUTS 2 – NUTS 3 level .....	81
1.8.1	Introduction .....	81
1.8.2	Data.....	81
1.8.3	The Principal component analysis.....	83
1.8.4	The typology .....	89
1.8.5	The results.....	96
1.8.6	A cartographic synthesis of the regional structure of Europe.....	102
<b>2</b>	<b>The shifting economic, technological and political context of regional development</b> .....	<b>105</b>
2.1	Introduction .....	105
2.2	Where do we come from and where are we heading? .....	105
2.3	The Golden Age of Keynesian-Fordist interventionism .....	107
2.3.1	Conditions of emergence.....	107
2.3.2	Mode of regulation .....	108
2.3.3	Some results in figures .....	110
2.3.4	Why did Keynesian-Fordist interventionism run out of steam? .....	113
2.4	Toward neo-liberal regulation after the failure of the 1970s’ neo-Keynesianism .....	116
2.4.1	The failure of neo-Keynesian policies in the 1970s .....	116
2.4.2	Neoliberal regulation .....	117
2.5	How is the world after 25 years of neoliberalist tendencies of regulation?.....	118
2.5.1	Major trends.....	118
2.5.2	Neoliberal regulation in some figures.....	121
2.5.3	The weak growth trap.....	129
2.6	The translation into space .....	130
2.7	General economic policy: in search of convergence .....	131
<b>3</b>	<b>Literature review on regional growth, competitiveness, etc.</b> .....	<b>135</b>

3.1	The localisation of economic activities .....	137
3.2	Regional development .....	140
3.3	Regional competitiveness, innovation and technology .....	143
3.3.1	Drivers of Regional Competitiveness .....	143
3.3.2	Innovation and technological development.....	147
3.4	The role of Business Networks in the Localisation of Economic Activity and Differential Regional Performance .....	151
3.5	Definition of Business Linkages and Networks .....	152
3.6	Business Networks, Clusters and Agglomeration .....	152
3.7	Institutional Thickness and the Associational Economy .....	154
3.8	Networks as a Surrogate for Agglomeration .....	156
3.9	Concluding remarks .....	158
<b>4</b>	<b>Location and relocation of firms and enterprises with the European Union .....</b>	<b>160</b>
4.1	Introduction .....	160
4.2	Meta-analysis.....	162
4.3	Barriers to entry and exit.....	165
4.4	The empirical entry-exit literature.....	169
4.4.1	Different measures of entry and exit, and different data sets .....	169
4.4.2	Entry.....	172
4.4.3	Exit.....	177
4.4.4	Concluding comments and policy recommendations .....	179
<b>5</b>	<b>Impacts of macro (EU-wide) policies.....</b>	<b>181</b>
5.1	Introduction .....	181
5.2	The regional effects of EU-wide policies: a literature review .....	182
5.2.1	The European Monetary Union and its impact on regional development .....	182
5.2.2	Economic integration and production structures.....	187
5.2.3	State aid .....	191
5.2.4	Discussion .....	196
5.3	The nature of macro-economic policies as an evaluation problem .....	198
5.4	An empirical study on regional sensitiveness to changes in the interest rate.....	200
5.4.1	Methodology and research strategy.....	201
5.4.2	Data and Results .....	203
5.5	The Spatial Effects of Specific National Policies and Changes in Macroeconomic Contexts: an application of the MASST model.....	207
5.5.1	Introduction .....	207
5.5.2	Case 1: An expansive fiscal policy.....	209
5.5.3	Case 2: A restrictive fiscal policy .....	211
5.5.4	Case 3: A devaluation of the exchange rate .....	213
5.5.5	Case 4: A revaluation of the exchange rate.....	215
5.5.6	Case 5: An increase in cost competitiveness .....	217
5.5.7	Case 6: A decrease in cost competitiveness .....	219
5.5.8	Case 7: An increase in real interest rate .....	221
5.5.9	Case 8: An increase in inflation rate.....	223
<b>6</b>	<b>Regional policies and their impacts &amp; case studies.....</b>	<b>225</b>
6.1	Introduction.....	225
6.2	Objective of the study and organisation.....	228
6.3	Are regional policies really modern? Competitiveness drivers analysis .....	229
6.3.1	Selection of drivers of regional competitiveness.....	229
6.3.2	Results for two Belgian regions: Wallonia and Brussels.....	233
6.3.3	Note on regional policies in the New Member States.....	234
6.4	Case Studies: typology and selection .....	236
6.4.1	Regional typology .....	236
6.4.2	Selection of regions .....	237
6.5	Synthesis of the 9 case studies and policy recommendations.....	239
6.5.1	Metropolitan regions .....	239
6.5.2	Intermediate regions.....	246

6.5.3	Periphery regions.....	249
6.5.4	New Member States regions.....	252
6.5.5	Central region : Rhône-Alpes (France).....	255
6.6	Conclusion .....	257
<b>7</b>	<b>Conclusions: So what is regional competitiveness ?.....</b>	<b>260</b>
<b>8</b>	<b>Proposals for policy recommendations .....</b>	<b>266</b>
8.1	Introduction .....	266
8.2	At regional (micro-economic) level.....	266
8.3	At the general macro-economic level.....	269
<b>9</b>	<b>List of references .....</b>	<b>273</b>

## Figures and tables

Figure 1	GDP per capita in 1960 (EU15 without 6 East-German Länder=100) .....	15
Figure 2	GDP per capita in 1990 (EU15 without 6 East-German Länder=100) .....	16
Figure 3	GDP per capita in 2003 (EU15 without 6 East-German Länder=100) .....	17
Figure 4	Relative GDP per capita levels in Western Europe, by kind of simplified structural region .....	21
Figure 5	GDP growth rates in NMS (10) + AC (2) in years 1989-2003.....	25
Figure 6	GDP per capita in 2003.....	28
Figure 7	Change of GDP per capita in constant prices in 1998-2003 (average =115 %) .....	29
Figure 8	FDI stock in years 1989-2004 [in mln USD] (see below).....	31
Figure 9	FDI stock per capita in years 1989-2004 [in USD] (see below) .....	32
Figure 10	Registered companies with foreign shareholdings in 2002.....	33
Figure 11	FDI inflow in years 1993-2002 .....	34
Figure 12	Number of project carried out by foreign investors by region [31.12.2004].....	35
Figure 13	Registered enterprises per 10000 inhabitants in 2003 .....	38
Figure 14	Scale and motives of involvement in new business activity in 2004 .....	39
Figure 15	Economic situation of firms by regions in 2003 .....	40
Figure 16	Location of sub-zones of Polish Special Economic Zones in 2005.....	44
Figure 17	Effects of SEZs on regional labour market.....	46
Figure 18	Location of technology parks in Poland in 2005.....	47
Figure 19	GDP growth 1995-2002 .....	51
Figure 20	NUTS 2 growth of GDP (PPS) in comparison to the respective national growth rates.....	52
Figure 21	Annual growth rate of GDP (PPS) 1995-2002 .....	53
Figure 22	Position of each initial variable on the two first components of the PCA analysis .....	58
Figure 23	Development and regulation .....	60
Figure 24	GDP 2000 .....	63
Figure 25	New indicator of wealth 2000 .....	64
Figure 26	Experimental indicator of regional wealth (EU=100)/GDP (EU =100).....	65
Figure 27	Labour productivity (2002) .....	69
Figure 28	Margin rate (2002) .....	71
Figure 29	Accumulation rate (2002) .....	73
Figure 30	Wage share (2002).....	75
Figure 31	Location of Forbes 2000 company headquarters in Europe (data from 2005).....	79
Figure 32	Location of Forbes 2000 company headquarters in Europe (detail) (data from 2005).....	80
Figure 33	Correlation between initial variables (share of the added value in each economic sector) and the two first components of the PCA. ....	85
Figure 34	Correlation between initial variables (share of the added value in each economic sector) and the third and fourth components of the PCA. ....	85
Figure 35	Scores of each region of the first component of the PCA .....	86
Figure 36	Scores of each region of the second component of the PCA.....	87
Figure 37	Scores of each region of the third component of the PCA .....	88
Figure 38	Economic typology of European regions in 20 types .....	90
Figure 39	Sectoral specificity of the 20 types (letters indicate NACE codes).....	92
Figure 40	Economic typology of European regions in 7 types .....	94
Figure 41	Sectoral specificity of the 7 types (letters indicate NACE codes).....	95
Figure 42	A cartographic synthesis of the economic structure of European region .....	104
Figure 43	The economic cycle.....	109
Figure 44	Real wage cost and productivity per hour in the USA.....	112
Figure 45	Total public expenditure as a percentage of GDP .....	112
Figure 46	Evolution of profits, accumulation, growth and productivity for the G6 (USA, Japan, Germany, France, United Kingdom, Italy). ....	119
Figure 47	Growth of world GDP per inhab., 1961-2003 (yearly variation in %) and arithmetic mean by decade .....	120
Figure 48	Proportion of profits distributed as dividends in France and the USA.....	121
Figure 49	Long-term real interest rates (%): France (---) and USA (___) .....	122

Figure 50	Profit, investment and unemployment rates in Europe.....	122
Figure 51	Stock exchange performances and profit rates.....	123
Figure 52	Evolution of the proportion of wages in the total value added (France and EU). Adjusted wage share, whole economy (% of GDP) .....	124
Figure 53	Average yearly growth rate of the purchasing power of workers' average net wages in France (%)	124
Figure 54	Weekly income of a production worker (1990 dollars, USA).....	125
Figure 55	Share of savings in the available income of USA households (quarterly data, %). Available income = total income after tax. Savings = excess of available income over purchase of goods and services (incl. housing) and payment of interests. ....	128
Figure 56	Variation of GDP growth rate and of proportion of salary in total GDP between 1993 and 2003 in Europe .....	133
Figure 57	Variation of unemployment rate and GDP growth rate between 1993 and 2003 in Europe.....	134
Figure 58	Conceptualising Urban Competitive Performance.....	146
Figure 59	Case 1 : an expansive fiscal policy (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario) .....	210
Figure 60	Case 2 : a restrictive fiscal policy (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario) .....	212
Figure 61	Case 3 : A devaluation of the exchange rate (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario) .....	214
Figure 62	Case 4 A revaluation of the exchange rate (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario) .....	216
Figure 63	Case 5 : An increase in cost competitiveness (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario) .....	218
Figure 64	Case 6 : A decrease in cost competitiveness (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario) .....	220
Figure 65	Case 7 : An increase in real interest rates (value * 1000) (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario).....	222
Figure 66	Case 8 : An increase in inflation rate (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario).....	224
Figure 67	Relative Financial Efforts into Drivers of Competitiveness in 5 regions .....	258
Table 1	Estimation of the part of the centre and the periphery in the European GDP (excluding Central-Eastern European countries and the new German Länder, but including Switzerland and Norway)....	13
Table 2	Relative economic results of the metropolitan areas, by comparison to their national context (relative evolution of the GDP/inhab.) .....	19
Table 3	Relative GDP/inhab. Level in Western Europe, by kind of structural region .....	21
Table 4	Regional distribution and relative level of the GDP in the Central-Eastern European countries, on the basis of grouping of NUTS 2 units .....	24
Table 5	Selected data on conditions of running economic activity in 2002.....	36
Table 6	Broadband internet access for enterprises, 2004 in % .....	36
Table 7	Active enterprises by size (except for agriculture, forestry, fishery and public administration) in 2002. ....	37
Table 8	Effects of zones activities from the year 1996 to 2004 (see below).....	43
Table 9	Share of variance of economic growth 1995-2002 (in PPS) taken into account by the different spatial level of European divisions .....	55
Table 10	Indicators used for the regulation mode typology.....	57
Table 11	Proposed indicators of economic performance.....	67
Table 12	The NACE A-31 nomenclature reorganized in 25 sectors .....	82
Table 13	Share of the variance taken into account in the first ten new components of the analysis. ....	83
Table 14	7 group typology .....	98
Table 15	Productivity growth rates: GDP by worked hour .....	110
Table 16	Real wages 1953-82 (1970 = 100).....	111
Table 17	Public expenditure (in % of GDP at current price) .....	113



Table 18	Growth rate of GDP by inhabitant .....	113
Table 19	Productivity gains and their distribution (annual growth rates) .....	117
Table 20	Competing theories of regional competitiveness .....	139
Table 21	Analytical schemas .....	140
Table 22	Forms of capital – base for regional development .....	142
Table 23	Forms of capital – base for regional development .....	145
Table 24	From industrial regions to learning regions .....	150
Table 25	Factors rated as ‘absolutely essential’ for locating business (source: Cushman & Wakefield Healey & Baker, 2005).....	164
Table 26	Factors rated as necessary to improve current business locations (source: Cushman & Wakefield Healey & Baker, 2005) .....	165
Table 27	Sources of information about cities as business location (source: Cushman & Wakefield Healey & Baker, 2005).....	165
Table 28	Estimation results; dependent variable is regional sensitiveness to changes in the interest rate.....	203
Table 29	Estimation results, dependent variable is regional sensitiveness to changes in the interest rate.....	204
Table 30	Sectors with a significantly determined effect (95 per cent level) on regional sensitiveness to changes in the interest rate.....	205
Table 31	Conceptualisation of classic and modern regional policy.....	226
Table 32	Shift in the orientation of regional policies .....	227
Table 33	Drivers of regional competitiveness.....	230
Table 34	Regional competitiveness as a structured but circular process .....	232
Table 35	Financial efforts towards drivers of competitiveness, Wallonia and Brussels .....	233
Table 36	Potential Oriented Typology – New Member States (ESPON 2.2.2) .....	237
Table 37	Selection of regions within a typology .....	238

## Introduction

In current European policy debates, dominated by the Lisbon/Gothenburg agenda, regional economic development is a prime policy issue. It touches upon two of the major policy goals defined across the continent: cohesion and competitiveness.

However, regional development is a highly complex topic, with strongly disputed ideas, especially at regional scale. Within this field, the term of 'regional competitiveness' has gained a special status as main policy-defining framework, without any clear scientific definition of its nature and determinants.

In this report, we explore some of these issues, with the goal of trying to reach a better understanding of what it is that drives regional development and the convergence or divergence of it across the European territory.

We begin by setting the scene through an analysis of the past and current economic geography of Europe using different indicators in order to get a good grip of what is actually happening on the ground (Chapter 1). From there we go on to study some of the possible paths of explanation for this geography, of both theoretical and empirical nature. This includes the macro-economic context in which regions are embedded (Chapter 2) an overview of some of the explanations provided by the wide theoretical literature on the topic of regional development (Chapter 3) an exploration of the entry/exit literature in search for explanations of regional firm birth and death rates (Chapter 4) and the impacts of policies both at macro and at regional level (Chapters 5 and 6). We conclude this survey with an attempt at a holistic definition of regional competitiveness - understood in a large sense as a region's capacity for economic development - (Chapter 7) before we enter the realm of policy recommendations (Chapter 8).

# 1 Statistical analysis of economic development

## IGEAT

### 1.1 Introduction

Before trying to explain regional development, we begin by exploring the historical evolutions and current situation of the economic geography of Europe. This will lay an empirical basis for understanding probable future evolutions and possible policy options.

This chapter gives a general overview of EU Regions in a long-term perspective. Most of the empirical analyses in the following chapter date from before this project but are crucial for at least five reasons:

- a) Cycles of economic localisation are long-term cycles. Thus, economic geography cannot be studied convincingly in short-term periods. We therefore propose to use some long-term time series in order to show general trends which are independent of short-term events. Regions are also the result of their past and, even if there is nothing inevitable, one must admit their past conditions their future quite a lot since big structural divides show a strong permanence in the European space. A good understanding of the legacy and the inertia of the regional economic structures allows the capacity to identify Regions' strong points and weaknesses. This is in a way the temporal component of our *conceptual triangle of the Regional Competitive Performance*. This triangle is not static but evolves with time, even if this evolution is relatively slow. Regions' economic structures evolve in time and, precisely because the evolution is relatively slow, a certain historical distance is necessary to understand them.
- b) The evolutions analysed hereafter illustrate the framework of analysis designed in Chapter 2 and show the differentiated spatial dynamics between the Keynesian-Ordist period and the neo-liberal stage. They show the importance of a good understanding of the regulation modes for regional structural dynamics. This is the interactive component of our *conceptual triangle of the Regional Competitive Performance*; these feedback can either strengthen or disintegrate the economic cohesion of Regions.
- c) They also confirm our starting hypotheses that economic activities are more and more localized, notably in large metropolitan areas.
- d) These evolutions give us the general framework and methodology to build our study, notably for the understanding of the diversity and specificities of EU regional economic structures. This is precisely a temporal study of one of our triangles *Key Drivers of Competitive Performance*: Economic diversity /specialization. In the next chapter we will enhance and update them, notably by extending the analysis to the entire ESPON space.

- e) This framework (especially the typology) is also the background of the chapter about *Regional policies and their impacts & case studies*.

## 1.2 EU Regions: An historical overview in a long-term perspective

### 1.2.1 A persisting centre – periphery opposition

In spite of dramatic structural evolutions of the European economy as a whole since the Sixties, the spatial pattern of the European economy remains very strongly characterised by a centre –periphery structure, even more so if we consider the new member states. Even the relative structural position of the different kinds of regions remains quite similar during the last two or three decades.

These evolutions took place in the framework of two different economic phases:

- The first one characterised by Fordist industrialization as the main engine of the economy, policies clearly oriented towards attracting foreign investments and big factories;
- The second one, more flexible and more linked to service-oriented developments, with a much lower level of fixed capital formation. The geographies of production and consumption become more and more separated, leading to a rapidly growing use of long-distance transports. Sub-contracting becomes more and more frequent. The importance of the regional economic and technological clusters and of the network economies is growing. Globalisation leads to a weakening of the possibilities of regulation inside the national governance frameworks and a growing competition between regions and even cities.

	1966	1973	198	1990	2003
Centre (a)	59 %	59 %	59 %	58%	56 %
Of which the largest metropolitan regions (b)	28 %	27 %	27 %	27 %	27 %
Rest of Western Europe	41 %	41 %	41 %	42 %	44 %
Of which the largest metropolitan regions (c)	9 %	9 %	9 %	9 %	10 %
Total Western Europe	100 %	100 %	100 %	100 %	100 %

**Table 1 Estimation of the part of the centre and the periphery in the European GDP (excluding Central-Eastern European countries and the new German Länder, but including Switzerland and Norway)**

- Midlands and South-East, North-West England, Benelux, Nord-Pas-de-Calais, Ile-de-France, Lorraine, Alsace, Rhône-Pes, Provence-Côte d’Azur, old German Länder excluding Berlin, Lower Saxony, Schleswig-Holstein, Hamburg and Bremen, Switzerland, Northern and Central Italy.

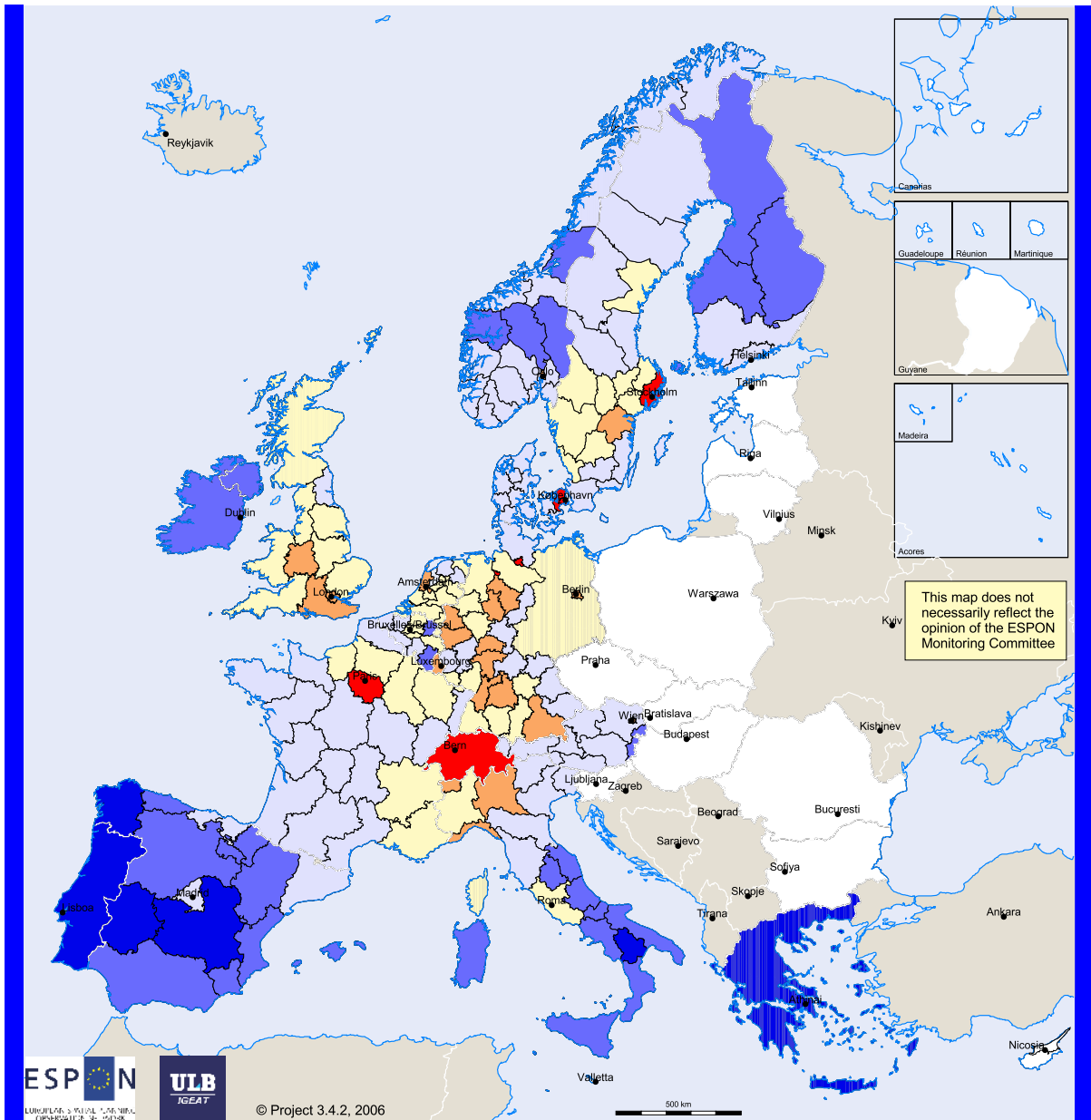
- South-East of England, Manchester, Merseyside, Ile-de-France, Rhône, North and South Holland and Utrecht, Brabant, Seldorf, Cologne, Darmstadt, Stuttgart, Oberbayern, Zürich, Lombardy, Latium
- Lisbon, Madrid, Cataluna, Campania, Aica, Vienne, Stockholm, Copenhagen, Oslo, Uusimaa (Helsinki), Hamburg, Bremen.

The simplest way to confirm this centre-periphery structure is to examine the deviation of the GDP/head of each region towards the European average (EU 15) in 1960, 1990 and 2003 (see Figures 1, 2 and 3).

The main area of high level of GDP/head in 1960 stretches from Central England to the North of Italy, including the Paris region. It corresponds more or less to the so-called Blue Banana. However, inside this core of the European economy, some regions appeared already to be in a less favourable situation: the decline of the coal industry and of some related traditional heavy-industry sectors as well as the crisis of the textile industry in some areas where this industry was not sufficiently modernised explain the below-average level of some regions like Nord-Pas-de-Calais in France or Flandre in Belgium. At this time, the situation is very depressed in all the peripheral part of Europe, in spite of some State-sponsored manufacturing developments in the South of Italy or in the Francoist Spain.

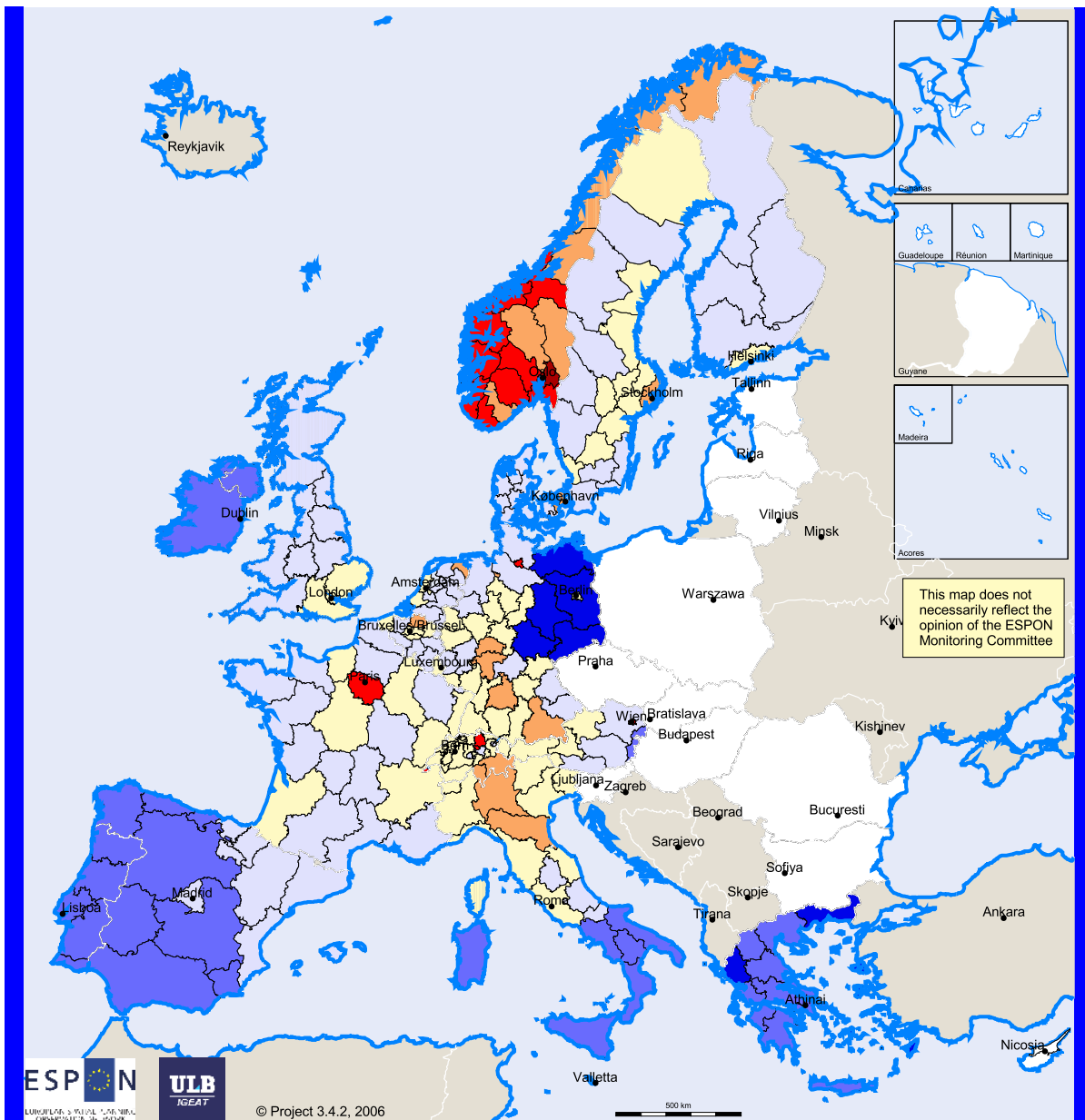
The 1990 map still shows the favourable position of the European pentagon (London - Hamburg - Northern Italy - Paris) but with the centre of gravity inside this central polygon slightly shifted towards the South: the old coal-mining and manufacturing basins of the North, linked to the beginning of the industrial revolution, perform badly, including the whole of Britain except the London metropolitan area. Southern Germany, on the other hand, is becoming one of the best performing and most R&D-oriented manufacturing regions in Europe while North and Central Italy benefit from its networks of small and medium enterprises, even if the level of R&D is quite low in this region. Some other smaller industrial districts with the same kinds of structure are also performing well, like the South of West Flanders in Belgium. The dramatic change of the position of Norway is linked to the growth of the oil rent, very well redistributed among the whole economy and all the regions thanks to the efficiency of the Norwegian welfare state.

**GDP per capita (pps) 1960 - European deviation**

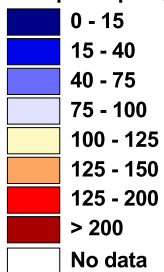


**Figure 1 GDP per capita in 1960 (EU15 without 6 East-German Länder=100)**

**GDP per capita (pps) 1990 - European deviation**



**GDP per capita (EU15 = 100)**



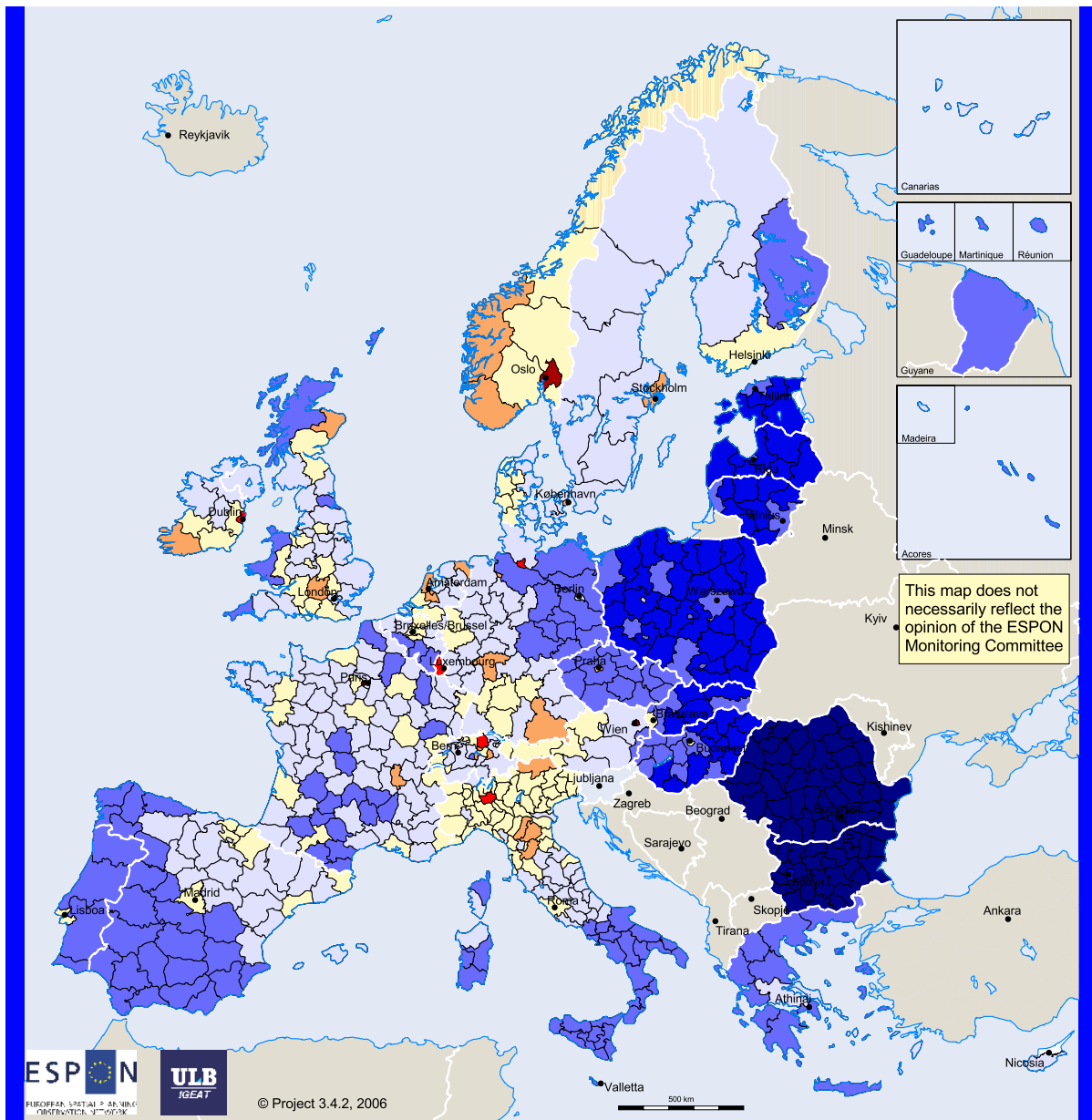
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Origin of data: Eurostat, National Statistical Offices

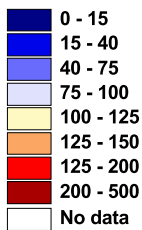
Source: ESPON Database

**Figure 2 GDP per capita in 1990 (EU15 without 6 East-German Länder=100)**

**GDP per capita (pps) 2003 - European deviation**



**GDP per capita (EU 15 = 100)**



**Figure 3 GDP per capita in 2003 (EU15 without 6 East-German Länder=100)**



The 2003 map confirms the position of the pentagon, but now the consequences of globalization of the world economy and the resulting very good economic results of the main metropolitan areas appear clearly (at least if one considers the metropolitan regions as a whole; the performances are often best in their periburban areas and some strong social problems are developing in some districts, due to the growing dualisation of the labour market linked to the dramatic deindustrialisation of those metropolitan regions). The metropolitan regions are becoming more and more the nodes of the world network of the advanced services economy.

As the Table below shows, most of the metropolitan regions are now performing better than the rest of their national economy. This process benefits much more to the metropolitan areas in the pentagon (London, Paris, Brussels, Amsterdam, Hamburg, Frankfurt, Munich) than to those which are more peripheral and less well integrated in the global economic networks, as described by P. Taylor. However, the peripheral metropolitan areas improve also their position towards the average of their national economy, like Lisbon, Madrid, Athens and yet more the Central-Eastern European capitals, which appear to be the main economic winners of the transition in these countries.

Industrial conurbations, with a low tertiary potential represent an exception to this new situation of the main metropolitan areas performing better than their global national context concern. Moreover, Ile-de-France seems to get out of breath and Vienna and even more so Berlin seem not to have been able to capitalize as they initially hoped on the opening to the East.

Reference	Metropolitan areas	1960-198	198-1990	1990-2003	1995-2003
Belgium	Brussels	-	-	+	+
	Antwerp	+	-	=	-
	Woolen conurbations	-	-	-	-
Netherlands	Amsterdam	=	+	-	+
	Rotterdam	=	=	-	-
United Kingdom	London	+	+	+	+
	Manchester	n.d.	n.d.	+	+
	Liverpool	-	-	-	-
	Sheffield-Leeds	-	-	+	+
	Birmingham	-	-	=	+
Ireland	Dublin	n.d.	n.d.	n.d.	+
	Copenhagen	-	-	=	=
Sweden	Stockholm	-	+	+	+
Finland	Helsinki	+	+	+	+
Germany	Berlin	-	=	-	-
Northern Germany (a)	Hamburg	-	+	+	+
	Bremen	-	=	+	+
	Bielefeld	-	=	+	+
	Cologne	+	-	+	+
Southern Germany (b)	Stuttgart	-	=	=	+
	Frankfurt	+	+	-	-
	Munich	+	=	+	+
Eastern Germany (c)	Berlin	n.d.	n.d.	-	-
	Dresden	n.d.	n.d.	+	+
	Leipzig	n.d.	n.d.	+	+
Austria	Vienna	=	+	-	-
	Basel	n.d.	+	+	+
Switzerland	Zürich	n.d.	+	+	+
	Geneva	n.d.	-	-	-
	Milan	-	-	+	=
Italy	Other main Northern cities	n.d.	-	+	+
	Rome	-	+	+	+
	Southern main cities	-	+	=	+
Greece	Athens	-	-	+	+
	Madrid	+	+	+	+
Spain	Barcelona	=	=	+	-
	Lisbon	-	-	-	+
Portugal	Paris	-	+	+	-
France	Other main cities (without Lille)	n.d.	=	=	+
	Nord-Pas-de-Calais	-	-	-	-

**Table 2 Relative economic results of the metropolitan areas, by comparison to their national context (relative evolution of the GDP/inhab.)**

(a)Northern old Länder  
 (b)Southern old Länder  
 (c)New Länder and Berlin

Among the peripheral parts of Europe, the evolutions are quite contrasted: two parts of peripheral Europe are performing dramatically well, Ireland and the Northern countries (without considering Norway, where the results are strongly influenced by the variations of oil prices) The success story of Ireland appears now to be less the sole result of footloose delocalisations of foreign enterprises looking for cheap manpower, as it was perhaps at the beginning of the Irish exceptional growth during the late Eighties and Nineties (if one considers Ireland's relative performance by comparison to the European average, one must admit that, despite its lower relative performance in the 1980s, it was indeed during those very years that Ireland mostly caught up its backwardness compared to Europe as a whole) The success of Denmark, Sweden and Finland is linked to a very efficient R&D growth, in small countries which have kept large national firms, and also, as in Denmark, to the efficient transformation of industrial small and medium enterprises districts into innovative tertiary areas, having delocated the manufacturing sequences to Poland or the Baltic countries for instance.

These global trends are subtended by a mix of national performances, the national level remaining very significant, and regional structural patterns.

### **1.2.2 The structural long-term evolutions in the old members of the Union**

*N.B.: In this section, we will use the results of a typology of regional economic structures in Western Europe developed before this project (C. Vandermotten and P. Marissal, 2000 & 2002) to structure our analysis. The use of such "old" results is justified by a triple aim:*

- a) to show the state of the main types of economic structures such as they existed in 1990, about twelve years before the one established within the project and presented below.*
- b) to rely on this typology to present the evolution in time of the relative growth of those regional economic structures (cf. Table 3: Relative GDP/inhab. Level in Western Europe, by kind of structural region 1960-2003).*
- c) to have a robust framework for the main types of regional structures within which we have analysed Regional policies and their impacts & case studies.*

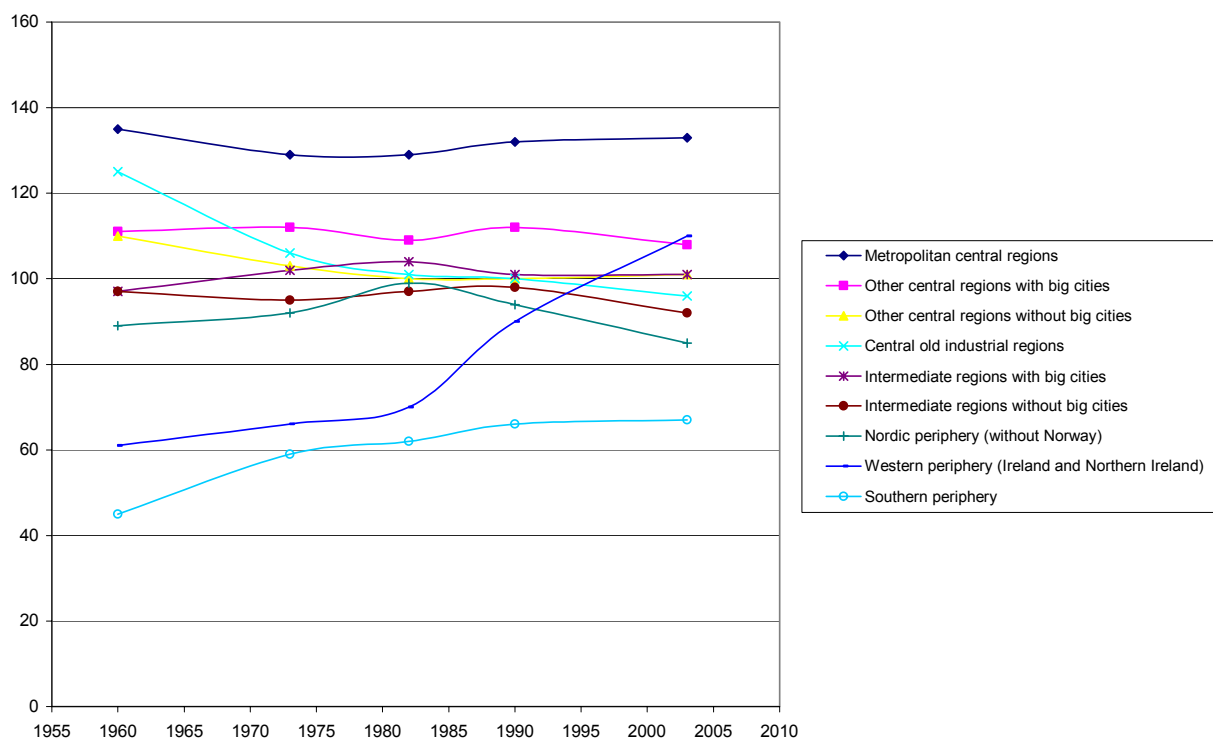
*For a detailed description of this typology see the original references or the corresponding chapter in our First Interim Report.*

EU 15, without the new German Länder and Berlin =100, in PPS	1960	1973	198	1990	2003
Metropolitan central regions	15	129	129	12	13
Other central regions with big cities	111	112	109	112	108
Other central regions without big cities	110	103	100	100	101
Central old industrial regions	125	106	101	100	96
Intermediate regions with big cities	97	102	104	101	101
Intermediate regions without big cities	97	95	97	98	92
Nordic periphery (without Norway)	9	92	99	94	8
Western periphery (Ireland and Northern Ireland)	61	66	70	90	110
Southern periphery	45	59	62	66	67
East German periphery	...	65	...	2	69

**Table 3 Relative GDP/inhab. Level in Western Europe, by kind of structural region**

Regions with big cities are those including cities with more than 250 000 inhabitants.

Source: personal computations, after Eu rostat data and the database of the IGEA /ULB; Maddison for the former GR in 1973 and 1990.



**Figure 4 Relative GDP per capita levels in Western Europe, by kind of simplified structural region**

The general aspect of the long-term evolution of the main types of regional economic structures shown on the graph of figure 4 illustrates the different dynamics between the two

regulation modes we have identified in our macroeconomic framework (Chapter 2.) From 1960 to 1998, we note a global convergence of the main regional types which all tend to come close to the European average, as a consequence of the process of regional integration during the period of Keynesian-Bordist interventionism, with 1998 representing a peak. The new neoliberal regulation period which follows is characterized by a slowdown of this integration process (except for the Western -Ireland and Northern Ireland -and Southern peripheries) if not the beginning of an inverse dynamic since, except the two peripheries mentioned, all the other types are further away from the European average in 2003 than in 1998. The inversion is still limited because, at regional and European level, strong logics of distributive spatial adjustments remain, which come on top of those still existing at national level (cf. section 1.4.)

### **1.2.3 Special zoom : spatial and structural evolutions in Central-Eastern Europe during the transitional period**

**Marek Kozak, Maciej Smętkowski**

#### **1.2.3.1 Introduction**

The very particular situation in the Eastern countries and the lack of relevant existing literature justified for us the need to explore in particular depth the trajectories of these countries since the fall of the Berlin wall. We provide an overview of the general tendencies in all countries, and a particular focus on Poland as a case study, allowing to deepen some of the analyses.

During the so-called socialist period these countries were characterised by a relative importance of manufacturing, in particular heavy industries, and a weakness of the service sector. During the Sixties the growth of the economies of these countries was strong, but it was a quantitative more than qualitative growth. The crisis and the reducing of the rates of growth appeared progressively during from the mid-Seventies and more and more clearly during the Eighties. The qualitative gap was then in fact growing and more and more unbearable as a relative opening of these economies towards the West took place in the same time. So, the economic and politic systems collapsed together very quickly at the turning between the Eighties and the Nineties.

The collapse of the 'socialist' economy was followed by a very deep crisis, not only economic, but also social. Depending on the countries, recovery begins from the mid-Nineties or even later, at the expense of very radical changes in the economic structure, eventually high levels of unemployment, at least in some countries, and dismantling of some very emblematic sectors of the former economy, in particular heavy industry. The

evolution of agriculture is quite different from a country to another, with different kinds of privatisation, not to speak of the low-productivity of the formerly dominant non-socialised Polish agricultural sector.

Socialist planning aimed to a more homogeneous distribution of the industry, through new industrial plants more or less evenly distributed on the national territory, but also privileged very big manufacturing 'combinates', located either on the old coal basins or often in the Eastern parts of these countries for strategic reasons or due to the providing of raw materials from the USSR.

		Percentage of the national GDP		Relative level of the GDP/hab. (national average =100)	
		1995	1999	1995	1999
Bulgaria	Sofia	24,0%	25,4%	175	18
	Coastal areas (a)	12,6%	14,0%	94	111
	Rest of the country	62,6%	60,5%	8	8
Czech Republic	Prague	21,5%	24,5%	18	212
	Rest of the country	78,5%	75,5%	9	8
Hungary	Budapest	3,9%	3,6%	18	191
	West of the Danube and Pest	3,9%	3,9%	8	92
	East of the Danube	1,2%	2,1%	76	68
Poland	Warsaw	10,0%	12,7%	28	83
	Other big cities (b)	1,7%	14,6%	155	167
	Katowice	8,1%	7,1%	142	10
	Western regions I	12,7%	12,2%	97	92
	Central regions (rest of the country)	3,7%	8,2%	8	8
	Eastern regions (d)	17,8%	17,3%	75	72
Romania	Bucharest	12,9%	1,2%	142	150
	Constanta	4,0%	4,5%	121	13
	Timisoara, Iad, Brasov, Cluj	1,2%	1,3%	118	125
	Moldavia and Danube delta	22,2%	21,7%	8	8
	Munedoara (e)	2,6%	2,2%	108	94
	Rest of the country	45,1%	44,5%	95	93
Slovakia	Bratislava	2,0%	22,7%	199	198
	Kosice	1,3%	14,0%	95	99
	Rest of the country	6,7%	6,4%	8	8
Estonia	Tallinn (f)	56,4%	58%	151	159
	Rest of the country	4,3%	41,3%	70	65
Lithuania	Vilnius	28,5%	31%	118	13
	Rest of the country	71,5%	66,9%	94	8
Latvia	Riga	5,3%	66,6%	18	162
	Rest of the country	46,2%	34%	79	57

**Table 4 Regional distribution and relative level of the GDP in the Central-Eastern European countries, on the basis of grouping of NUTS 2 units**

(a) Bulgarian Dobrogea, Varna, Burgas

(b) Lodz, Poznan, Krakow, Gdansk, Wroclaw

I Lower Silesia, Lubuskie, Western Pomerania

(d) Warmie-Mazurie, Podlaskie, region of Lublin, South-East Poland, Mazowia, unless Warsaw

(e) Including Jiu basin

(f) Põhja-Eesti

Source: EUROSTAT

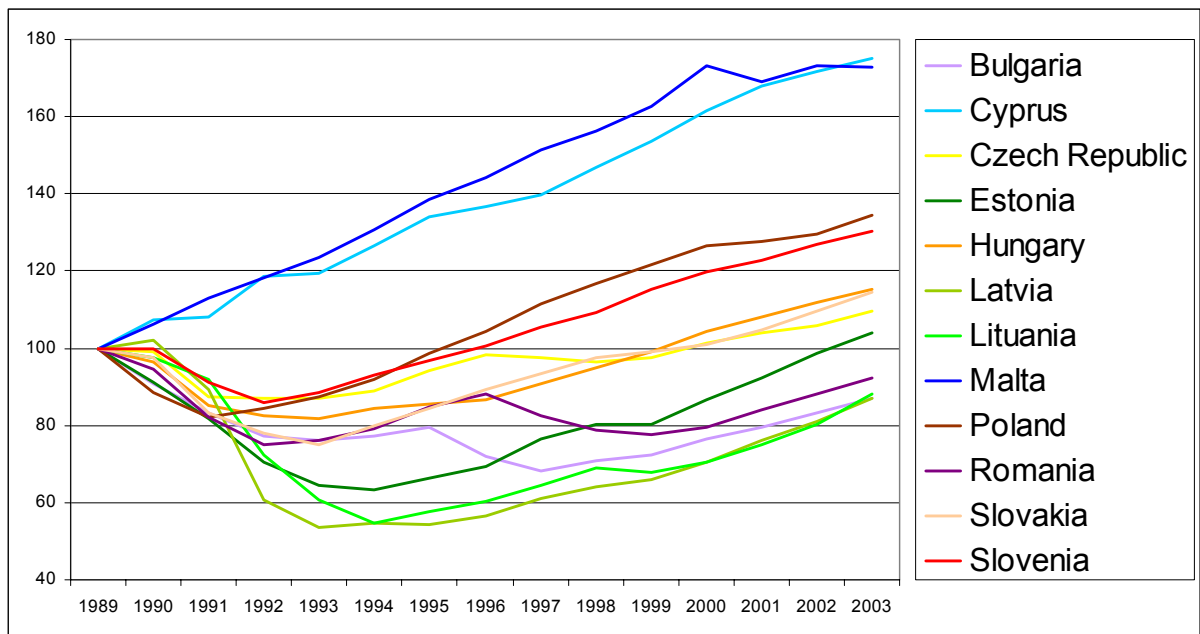
The dismantling of the socialist economy during the Nineties and the recovering in the beginning of this century led to a very quick growth of the intra-national disparities. Capital cities reinforced strongly their position, even if it was already strong in the centralised planned economy as centres of the national bureaucracy. Western regions fit generally better than the Eastern regions, mainly in the countries near the borders of the 'Old Europe', from which investments or subcontracting is coming, in the search of the advantages of a cheap well trained manufacturing manpower. The worse situation is in the early heavy industrial regions and in the rural areas of the Eastern parts of these countries.

The following section explores the evolution of the Eastern European countries in more detail, focussing particularly on Poland as an example case.

**1.2.3.2 Economic development trajectories**

*General outlook*

The growth rates since 1990 have been highly differentiated across new Member States (10) and accession countries (Bulgaria and Romania). The group can be divided into five different types based on Figure 5.



Source: compiled by authors based on Economic Survey of Europe, 2005 No. 2; <http://www.unece.org/stats/data.htm> and EC (Eastern and Central Europe 2000, 1994)

**Figure 5 GDP growth rates in NMS (10) + AC (2) in years 1989-2003**



The first type is represented by Cyprus and Malta that in general follow the path of development characteristic for old EU15 countries. Within the period of last 15 years the countries almost achieved level of 175% comparison to 1990 year.

The second group consists of Poland and Slovenia that despite of different paths of growth in the first period of transformation, respectively 1990-2001 and 2000-2002 follow the same relatively fast economic development. As a result these countries were first of post-socialist countries that reached (1996)level of development determined by year 1990.

The reforms implemented in Poland caused the deepest recession in comparison to other post-socialist countries, but in longer term allowed to achieve the fastest growth rate -over 5% annually in years 1994-1998. On the contrary Slovenia at the beginning of transformation was the best-developed part of former Yugoslavia with GDP per capita not far below EU average. Economic crisis after becoming independent state was the mildest in comparison to other countries and was caused by different factors related mainly to split up with other part of former Yugoslavia. Since 1993 the growth rate has been stable what allow getting closer to Polish path of development in years 2000-2002, when Poland suffered from economic stagnation.

The third group is represented by other countries of so called 'Vehrad Group': Czech Republic, Hungary and Slovakia. These countries achieved level of development from 1990 after 10 years. The Czech Republic transformation was the mildest, but as a result the country suffered from crisis 1997 and stagnation in years 1998-1999. In case of Slovakia recession relevant with transformation was the longest as a result of high share of traditional heavy industry. However, since 1999 the economic growth rate of the country was the highest mainly due to large inflow of foreign direct investment.

The fourth group are Baltic States that had the most difficult starting point after becoming newly independent states. The decline in this case was much deeper as a result of broken economic ties with other former Soviet Union countries and the necessity of difficult economic reforms combined with building of new institutions. In the first period of transformation GDP dropped in comparison to 1990 to 53,6% in Latvia, 64,7% in Lithuania and 63% in Estonia. The winner, who first crossed 1990 level of GDP, was Estonia. The country took advantage of efficient economic reforms (simple taxation system) combined with inflow of foreign direct investment partly as a result of strong cultural ties with Finland. Nevertheless since 2000 all these countries have been developing very fast achieving growth rates between 7 and 10% annually (ic)

The last group are two remaining accession countries. At the beginning of transformation Bulgaria and Romania has been following the Slovakia path of development till respectively 1994 and 1996. After that the countries suffered from economic decline related to desist from deep structural reforms. The decline was overcome at the turn of the century and now their growth rates are similar to other countries in the region. Nevertheless both these countries after 15 years achieved only 90% of GDP from the period before the transformation has begun.

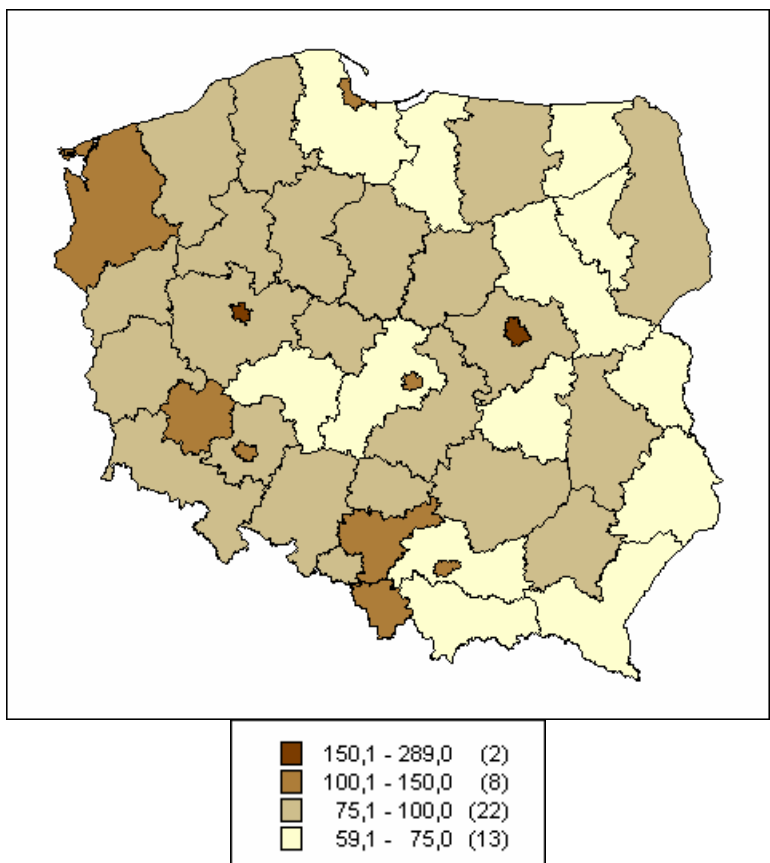
### *Regional distribution of GDP – Polish case*

Poland's regional differentiation measured on the NUTS 2 level is relatively limited, not different from EU average (1,2) (Gorzela 2006) however, being quite big country, it shows much higher level of disparities when analysed on the NUTS 3 level (1,5; see Figure 9) In general higher level of development represent western regions, in particular those with agglomerations (for instance Poznan, Wroclaw, Katowice, Gdansk, Szczecin) (Kzak 2003) It should be stressed that Poland as the only country among NMS has a number of agglomerations and probably the most polycentric settlement structure<sup>1</sup>. The highest GDP level shows Mazowieckie capital region with Warsaw. The least developed region are located along the Eastern border of Poland (including Lubelskie according to official statistics least developed region of the EU) The sources of differentiation along East-west axis to a large extent can be attributed to differences in gross value added per person in individual sectors in regions and labour productivity (Gorzela 2006)

Eastern territories of Poland represent low levels of urbanisation and are strongly dependent on agriculture (both in terms of employment and income) characterised by large number of rather small farms, often subsistence farms. It is clear that Poland is facing problem of significant labour surplus absorption. More difficult as rural areas population represents low education and skills levels (4 percent with higher education compared to 12% for Poland's average) Eastern regions have many features of peripheral regions. Underdevelopment of regional and national transportation infrastructure makes them difficult to access. Particularly high differences relate to innovation indices.<sup>2</sup> For the time being there are little signs of possible strengthening of economic cooperation with former CIS countries. All of those factors influence investment decisions: despite authorities' efforts tend to locate in the agglomerations and better developed and accessible western regions.

<sup>1</sup> Poland's Spatial Development Perspective, Government Centre for Strategic Studies, Warsaw, October 2005, Fig. 4

<sup>2</sup> See: Community Support Framework, Poland 2004-2006, Annex 3 (<http://www.fundusze-strukturalne.gov.pl>) April 2006

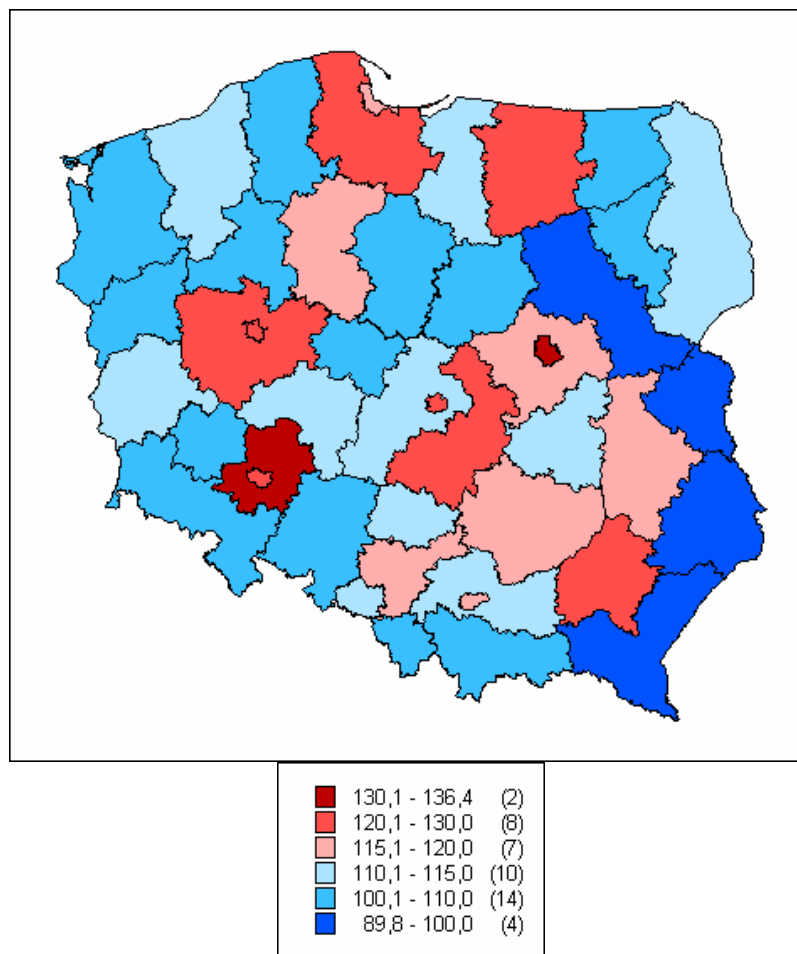


Source: compiled by authors based on Central Statistical Office data

**Figure 6 GDP per capita in 2003**

Differences in economic structures have also representation in demography, social structures and behaviour. Eastern Poland, outside agglomerations faces the problem of growing post-working age population. It is more conservative than the rest of Poland (large proportion of the rural areas population voted against Poland's accession to the EU). Unemployment is considered the most important social problem (2,8 million, that is 18% what represents double EU average)<sup>3</sup> It is the most serious problem for Warmińsko-Mazurskie (28% in February 2006), Zachodniopomorskie (26%) and Lubuskie (24%). The lowest unemployment rate represents mazowieckie and Malopolskie (14,1% each) and Wielkopolskie (14,9%) regions. In the light of official statistics unemployment rate in Eastern regions is not very high (16- 19% except for Warmińsko-mazurskie) One has to take into account that hidden unemployment in rural areas of Poland, in particular in the East, is estimated as 0.8-1.1 million people (2002) (Orłowski 2001) It is also area where the proportion of long term unemployed is the highest. 6% of those unemployed have no rights to unemployment allowance.

<sup>3</sup> Miesięczna informacja o bezrobociu w Polsce w lutym 2006 [Monthly information on unemployment in Poland, February 2006] <http://www.bezrobocie.net/stat/kraj.php>, downloaded 15 April 2006.



Source: compiled by authors based on Central Statistical Office data

**Figure 7 Change of GDP per capita in constant prices in 1998-2003 (average = 115,1 %)**

The map shows that regions differ also in terms of GDP dynamics. The fastest growth can be observed in particular in areas with agglomerations. Absolute leader (on NUTS 3 level) is Warsaw followed by Poznan, Wroclaw and Gdansk-Gdynia-Sopot subregions. High growth rates were noted also in subregions close to strongest agglomerations and Rzeszow subregion in south-eastern Poland. On the other hand lowest GDP growth characterizes eastern parts of the country (underdeveloped anyway) Low dynamics is visible also in regions suffering from massive restructuring of textile industry in Lodz (second largest city of Poland) and heavy industry in Upper Silesian agglomeration. One has to note surprisingly low growth rate of subregions along western border. They do not have large cities. Does it explain it all? Taking into account so high differences in growth rates one may expect in the years to come visible polarisation.

It has to be stressed that this general pattern of differentiation is deeply rooted in the past and can be traced in the Middle Ages. Dolnoslaskie (with Wroclaw) and Wielkopolska (with

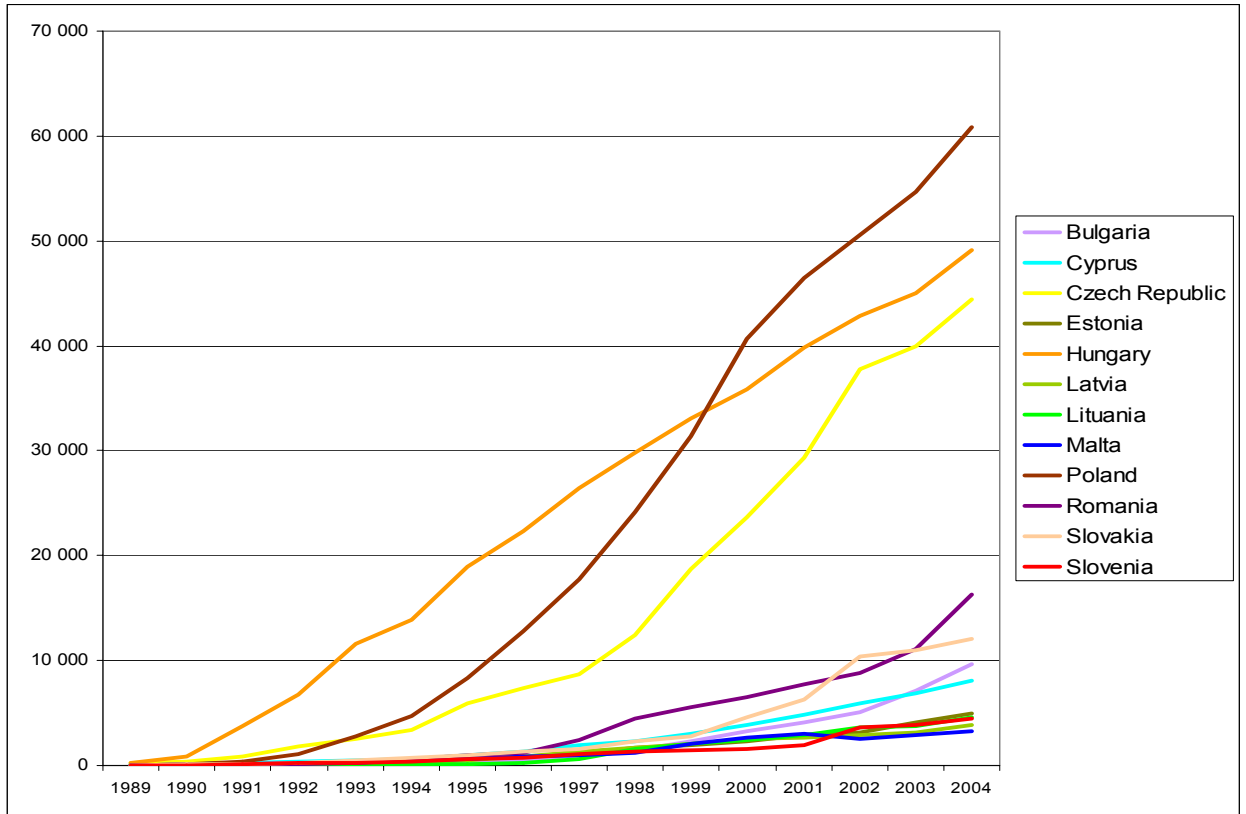
Poznan) regions always belonged to well developed parts of Europe.<sup>4</sup> The period of partitions (123years)resulted in petrification and even strengthening of those disparities which despite efforts of Poland's regional policy were not overcome till today. (Gorzela et al 2000) Cohesion policy is considered the main instrument to reduce the divergence rate and improve the competitiveness of regions and the country as a whole.

### 1.2.3.3 FDI inflow

#### *General outlook*

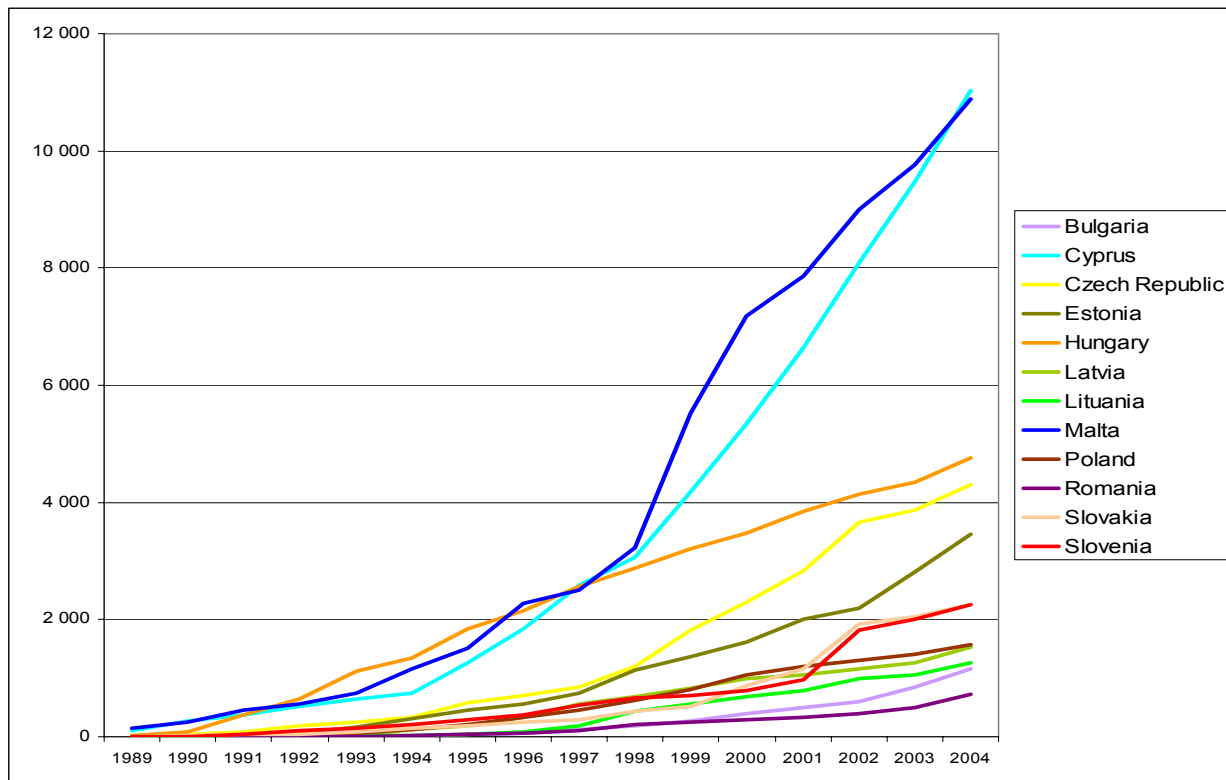
The most attractive countries for foreign investors in the region are Poland, Hungary and Czech Republic (Fig. 3). These economies accommodated 70% of total 222 billion USD inflow of foreign investments to 10 New Member States and 2 accession countries in years 1998-2002. The leader was Poland that attracted over 60 billion USD while Hungary and Czech Republic respectively 49 billion and 44 billion. However, the situation is different considering number of inhabitants. The first places took Cyprus and Malta with cumulative inflow over 10,000 USD per capita. The inflow of foreign capital to these countries has been especially fast after 1998. Next group of countries (approx. 4000 per capita) consists of Hungary (very stable inflow), Czech Republic (very fast after 1997) and Estonia (very fast inflow after 2002). The rest of the countries are far beyond with Slovenia and Slovakia on first places (over 2000 USD per inhabitants -booming in 2002). The growth rate of other countries is stable and inflow per capita is between 1600 USD (Poland) and 700 (Romania).

<sup>4</sup> Close to bankruptcy Prussia became a regional superpower only after conquering Danoslaskie, Wielkopolskie and Pomorskie in the 18th century.



Source: compiled by authors based on World Investment Report (UNCTAD) <http://www.unctad.org>

**Figure 8 FDI stock in years 1989-2004 [in mln USD] (see below)**



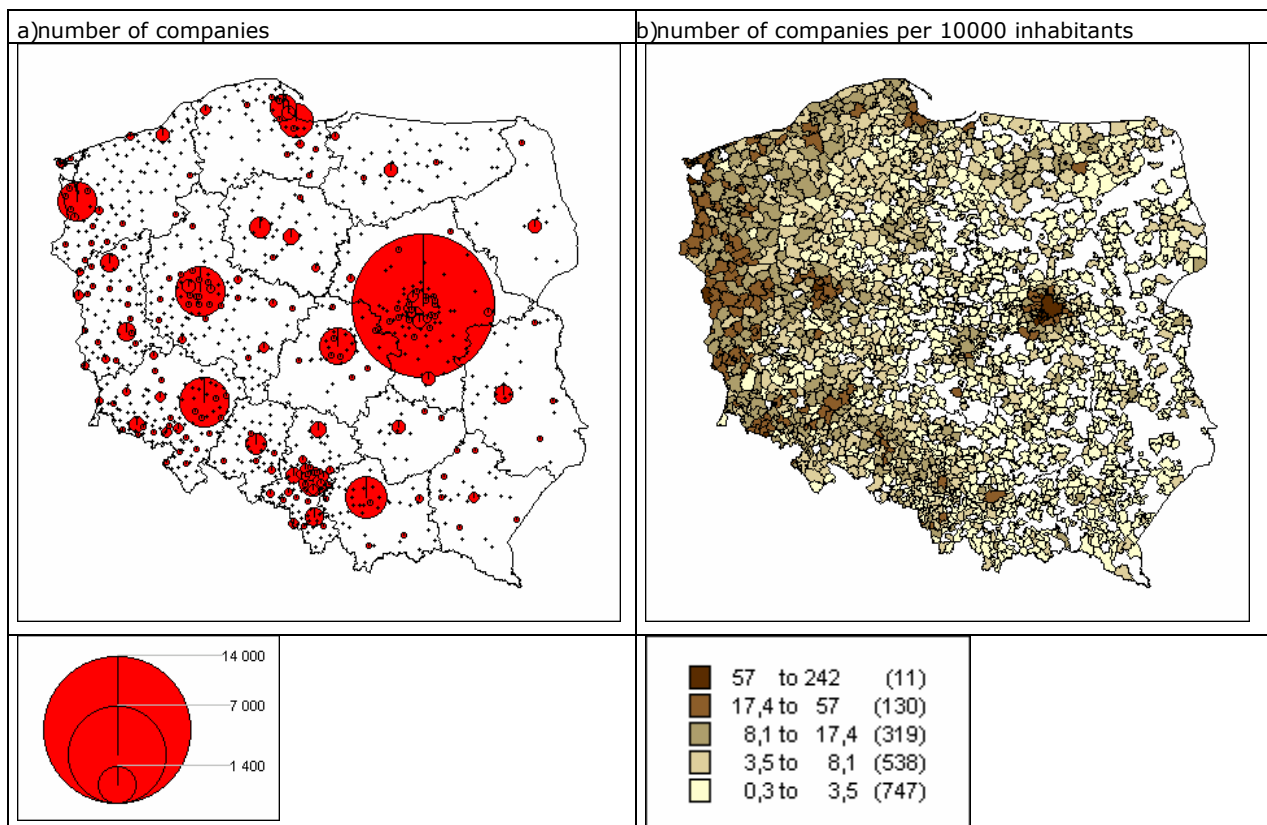
Source: compiled by authors based on World Investment Report (UNCTAD) <http://www.unctad.org>

**Figure 9 FDI stock per capita in years 1989-2004 [in USD] (see below)**

*Regional distribution pattern of FDI – Polish case*

Since the early 90s, international business has invested over 3 bln USD in Poland. This ranks Poland as a regional leader and, looking at the post-accession inflows into older EU Member States, suggests that the Polish economy might to maintain a strong growth rate in the foreseeable future. Furthermore, according to PAZ data, the share of the most valuable greenfield investment stands at 58% of total inflow in 2004.

The major methodological hindrance faced while preparing the regional breakdown of FDI is the fact that the location of a given company (place where the enterprise is registered) does not necessarily decide about ascribing the firm to a given region. However, based on Central Statistical Office (CSO) and Polish Information and Foreign Investment Agency (PIA) data some estimations might have been conducted in this field.



Source: compiled by authors based on Central Statistical Office data

**Figure 10 Registered companies with foreign shareholdings in 2002**

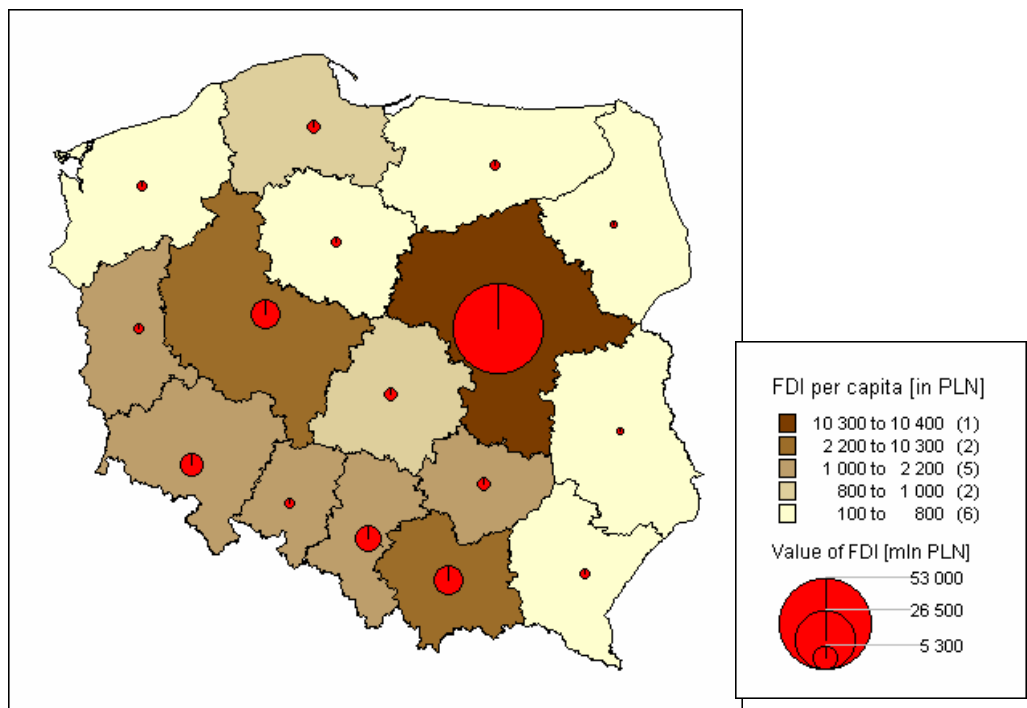
According to CSO data registered companies headquarters are highly concentrated. Together six largest metropolitan cities (with number of inhabitants over 500 000) as well as in Silesian conurbation and Szczecin (200 000 inhabitants) hosted 55% of total companies with foreign shareholdings. The single leader was capital city that attracted 52% of the companies situated in these metropolitan centres. Such firms stands for almost one third of total registered under trade law companies in Warsaw.

Since 1994 the number of foreign companies has been growing faster outside metropolitan cores. However, to some extent this was a result of formation of metropolitan areas (quite often in the form of urban sprawl). In general regarding number of companies the western Polish regions ( Lubuskie, Dolnoslaskie and Zachodniopomorskie) took advantage of border location and these provinces have attracted a lot of SMEs mainly with German shareholdings.

According to CSO statistics the value of FDI inflow were even more concentrated than headquarters of firms. Mazowieckie region have attracted almost 50% of total influx. The second group consisted of Wielkopolskie and Malopolskie voivodships that also representing qualified staff and strong business traditions. In general also other regions situated in south-west Poland belong to leading group in this field. On the contrary regions situated in



eastern Poland have been performing poorly as well as quite surprisingly Zachodniopomorskie (large capital city, close to border with Germany) and Kujawsko-Pomorskie (two medium large cities, developed industrial sector)



Source:compiled by authors based on Central Statistical Office data.

**Figure 11 FDI inflow in years 1993-2002**

Regarding only the largest investors according to Polish Information and Foreign Investment Agency the total number of firms that have invested over 1 mln USD account for over 3000 in 2004. Not surprisingly at the top of the list (marked in green) are regions with cities over 500 inhabitants. On the contrary the lowest inflow of investors were recorded at agricultural peripheral regions (marked in orange) situated at so called 'eastern wall' of Poland: Podlaskie, Swietokrzyskie, Lubelskie and Warminsko-Mazurskie.

Voivodship (region)	Locations	%
Mazowieckie	8	26.7%
Śląskie	92	12.5%
Województwo łódzkie	37	10.1%
Wielkopolskie	257	8%
Łódzkie	245	7.8%
Pomorskie	18	5.9%
Małopolskie	18	5.9%
Kujawsko-Pomorskie	144	4.6%
Lubuskie	103	3%
Zachodniopomorskie	101	3%
Podkarpackie	8	2.6%
Opolskie	62	2.0%
Warmińsko-Mazurskie	62	2.0%
Lubelskie	59	1.9%
Świętokrzyskie	52	1.7%
Podlaskie	49	1.6%
<b>SUMA</b>	<b>3,128</b>	<b>100.0%</b>

Source:PAIZ

**Figure 12 Number of project carried out by foreign investors by region [31.12.2004].**

The pattern of regional distribution supports the hypothesis on metropolisation of Polish space. Since 1990 the largest cities have attracted the majority of inflow to Poland. Even if we consider that some of the investments of companies registered in large cities are located elsewhere, this clearly shows the importance of metropolises as centres of control and management functions for national economy.

#### 1.2.3.4 SME development

##### *General outlook*

The process of economic transformation of CEE countries to a large extent depended on the pace and quality of privatisation of state assets (top-down privatisation) and SMEs creation (bottom-up privatisation). For obvious reasons the latter had decisive impact on ability to absorb human resources made redundant as a result of restructuring of the economy (and privatisation closely linked with streamlining of employment)

Country	Number of documents required for registration of economic activity	Time needed to start activity	Average time of court proceedings (in days till ruling)	Economic freedom index	Corruption index
Poland	11	58	1000	1,92	2,25
Czech Rep.	10	8	270	2,08	3,5
Slovakia	11	119	420	2,3	3,5
Hungary	5	65	85	2,00	3,00
Slovenia	9	62	1003	2,17	2,00
Bulgaria	10	8	410	3,5	4,50
Romania	9	46	225	3,2	4,75
Estonia	-	-	-	1,92	2,50
Lithuania	11	62	150	2,42	3,5
Latvia	7	11	18	2,3	3,0

Source: on the basis of: *Nowa Europa, raport z transformacji* [New Europe, transformation report] XII Brum Ekonomiczne, Instytut Wschodni, Warszawa 2003

**Table 5 Selected data on conditions of running economic activity in 2002**

Not more than two years before 2004 enlargement conditions for running business in CEE countries differed significantly. Difficult and time taking was business registration (in particular in Slovakia and Czech Republic) The highest level of economic freedom was reported in Estonia and Poland, the lowest in Romania and Bulgaria (tab. 5)

Country	small enterprise	medium sized	large enterprises
Czech R.	3	55	73
Estonia	65	78	93
Cyprus	3	53	93
Latvia	42	57	70
Lithuania	49	55	60
Hungary	-	-	-
Malta	-	-	-
Poland	21	47	79
Slovenia	56	78	91
Slovakia	22	3	58

Source: Eurostat news release 1502005, 24 Nov. 2005.

**Table 6 Broadband internet access for enterprises, 2004 in %**

In the context of Lisbon strategy goals it is of increasing importance to maximise use of ICTs by enterprises. The data presented in table 6 on broadband internet access for enterprises gives insight into differences in dividends. Relatively best saturation can be observed among large businesses with Estonia, Cyprus and Slovenia as leaders. Estonia is paving the way when it comes to small and medium sized enterprises. The worst situation is visible in Slovakia and Poland.

### Regional distribution pattern of SME – Polish case

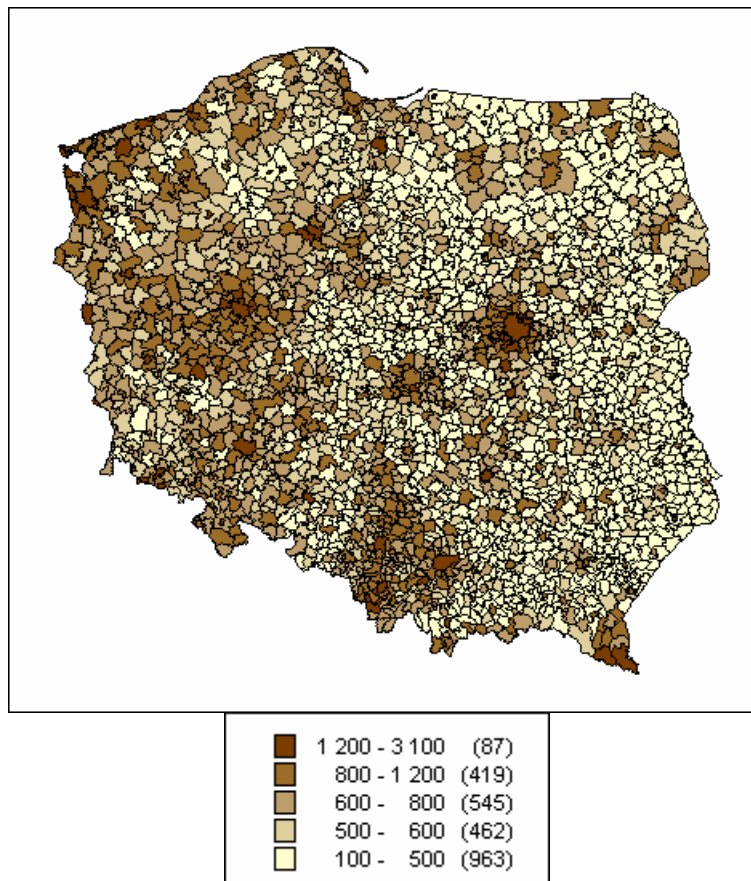
After 1990 Poland has been experienced the eruption of entrepreneurship behaviour. The number of registered small and medium size firms reached the number of 2 mln in just three years. Since 1994 the number of firms has also been also growing, but slower than in the first period of transformation. Currently 3 mln SME are registered at the end of 2003. According to the estimates of the Polish Agency for Enterprise Development (PARP) the number of active SME enterprises amounted only to 1.8mln. Nevertheless, because the ratios of inactive companies are quite similar across different regions, it is possible to present regional distribution based on number of registered firms. Number of active enterprises stabilised at the turn of the decades. The highest number of them can be registered in biggest, agglomeration type regions (Mazowieckie 14,8%, Śląskie 12,6%, Wielkopolskie 10,5%). It is clear that lack of agglomeration results in low number of businesses (Opolskie 2,9%, Pomorskie 2,4%, Lubuskie 2,6%, Świętokrzyskie 2,8%, Warmińsko-mazurskie 3,3%). Most of those regions are located in eastern parts (except for Lubuskie and Opolskie).

Enterprises	Number of enterprises	Share in %
Small (0-49 employees)	1719615	99,09
Medium sized (50-249)	108	0,75
<b>TOTAL SMEs</b>	<b>1732701</b>	<b>99,84</b>
Large enterprises (≥50)	2723	0,16
<b>TOTAL</b>	<b>1735424</b>	<b>100,0</b>

Source: Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce w latach 2002-2003. Report on SME sector in Poland in the years 2002-2003. PARP, Warszawa 2004, tab. 2.5.  
(<http://www.parp.gov.pl/publikacja64.php>)

### Table 7 Active enterprises by size (except for agriculture, forestry, fishery and public administration) in 2002.

The number of SME per 10000 inhabitants is quite differentiated in Poland (Map. 4). Not surprisingly the highest values of the indicator are recorded in largest cities with its metropolitan areas as a result of developed technical infrastructure and available office and industrial spaces as well as higher level of human capital. In general the western Polish regions have been performing better than eastern regions.



Source: compiled by authors based on Central Statistical Office data.

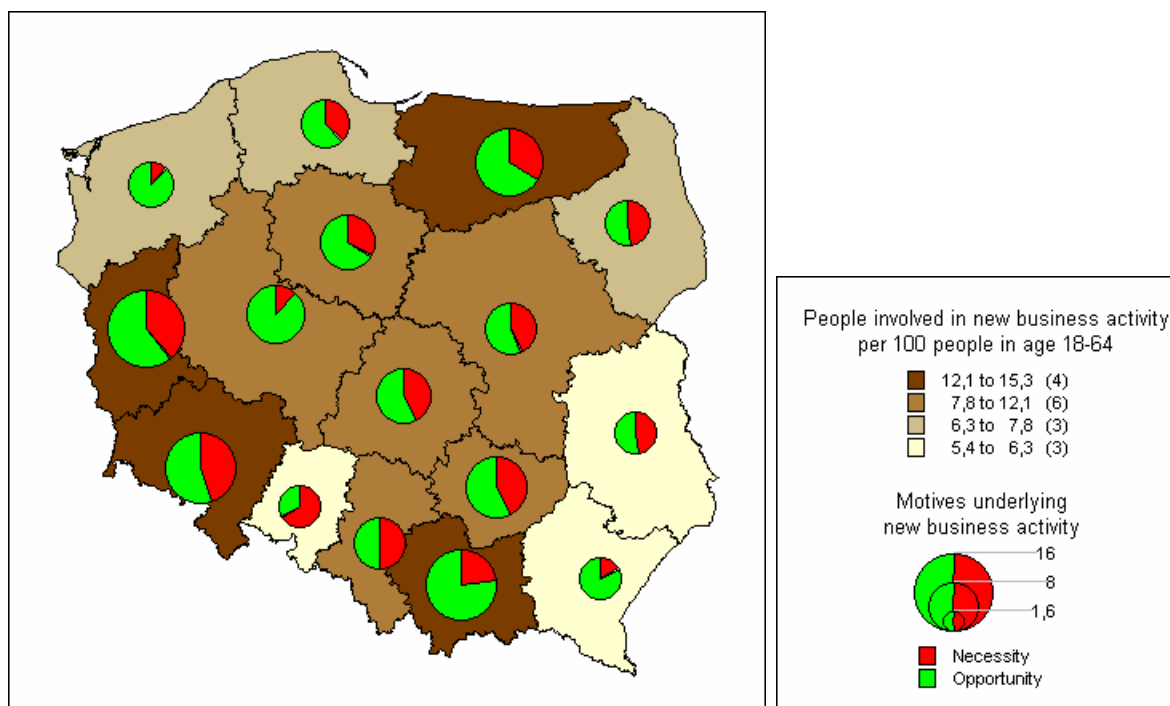
**Figure 13 Registered enterprises per 10000 inhabitants in 2003**

Among the explanatory factors might be mentioned: entrepreneurial traditions (Wlkopolskie) tourism opportunities (municipalities situated at the sea coast) as well as cross-border co-operation opportunities (municipalities close to the border with Germany)

This is also reflected by the motives of engagement in entrepreneurial activity. According to studies in the framework of Global Entrepreneurship Monitor (Bac ławski 2005) the motives might be on the one hand the advantage opportunity and on the other hand disadvantage necessity. It is recognised that new business set to take advantage of new opportunity is more promising than the business set as a result of lack of other employment opportunities. In general Poland is one of the countries with the highest ratio of new business as a result of necessity, mainly because of high unemployment. However, the comparison of Polish regions leads to some interesting conclusions (Fig. 14)

First of all, there is no clear evidence of correlation between level of unemployment and involvement in start-ups. Secondly one of the most important factor underlying motives of involvement in new economic activity is historic background. People in former part of Russian partition (Łodzkie, Swietkorzyskie, Mazowieckie, Podlaskie and Lubelskie) are not as

eager to take advantage of new opportunities, but rather start new business in necessity) as people from former part of Austrian part (Mazowieckie, Podkarpackie) and western Poland (Lubuskie, Pomorskie and Kujawsko-Pomorskie). Also inhabitants of voivodships situated on territory constituted part of Germany before II World War – usually younger population are more interested in opportunities – especially related to transborder cooperation. The exception is the only region with substantial German minority (Opolskie) probably because its inhabitants quite often look for opportunities abroad.



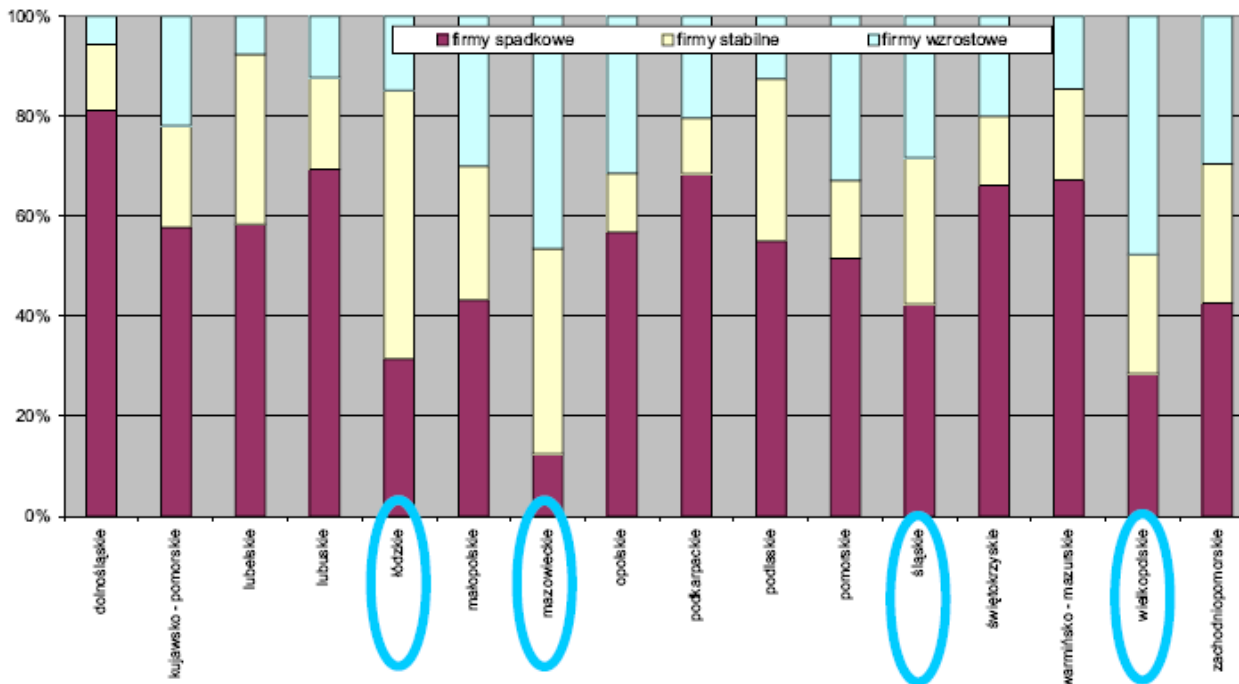
Source: compiled by authors based on GEM data (Baclawski 2005)

**Figure 14 Scale and motives of involvement in new business activity in 2004**

Regional distribution of income of SMEs follows the general pattern. What is visible is unproportionally higher share of Mazowieckie (27% of total SMEs income in Poland, which in 2002 was equal to 1044456,4 millions PLN) followed by Slaskie (12,9%) and Lubuskie (10,5%). Last positions on the list were occupied by Lubuskie (2,3%), Podlaskie (2,2%) and Opolskie (2,1%). About the same list can be done for investments in SMEs (total for Poland 5390,4 Mio PLN) employment (5,56 Mio employees in market sectors) and spending on innovations (only in the latter Mazowieckie as a leader was replaced by Slaskie region. Dominant role of agglomerations in export and import is easily noticeable (Gorzela 2006).

In 2003 a year ending stagnation period in Poland in many regions down tendency was prevailing in businesses opinions (Dolnoslaskie, Lubuskie, Podkarpackie, Swietokrzyskie,

Warmińsko-Mazurskie –over 60% each, Fig. 3. Up trend or stability was reported in the regions with agglomeration (Mazowieckie, Łódzkie, Śląskie, Wielkopolskie –45% or less indication of down trend)



Source: Kondycja małych i średnich przedsiębiorstw u progu 2003 roku, Raport z badań [State of SMEs at the threshold of 2003 research report] PRP, Warszawa, luty 2003, Fig. 2.

**Figure 15 Economic situation of firms by regions in 2003**

Accession did not influence seriously neither employment nor number of active firms. However, Polish SMEs –against some fears –not only went successfully through the process of adjustment to the EU market but were able to expand on it. An increase in investment spending was also noted.

In general the pattern of SME regional distribution is a result of both: economic and historical factors. On the one hand, opportunities for new firms are related to metropolitan areas, transborder co-operation and tourism development. On the other hand, negatively supporting factor is high unemployment. Nevertheless motives of establishing new start-ups have deep historic roots in the 19th century when Poland was under neighbouring countries partitions.

### 1.2.3.5 *Investment incentives schemes*

The aim of this part of the report is to show important incentives for investors in 10 new EU countries (plus Bulgaria and Romania). All information and data are inserted follow the organization responsible for encouraging investors in each country. That is the reason why the level of accuracy is differential. Collected data are presented in table divided in five sectors (See Annex 1 in Volume III). In *Major Economic Data* column there are presented important indicators concerning GDP, foreign trade, inflation, and taxes. *Tax incentive* column mention significant tax rebates (if they exist) and eligibility criteria as they are pointed by the country. *Other incentives* sector named additional inducements which do not concern taxes. These are financial and non-financial resources. *Business environment* is special category contained additional useful information for investors. They do not appear with all countries. All data mentioned in this column were pointed out by the country as important or attractive for investors. It is a kind of additional advertisement pointed by country. If they were not pointed, they were missed (not necessary they do not exist)

#### *General outlook*

It is clearly seen that all countries realized the necessity for attraction investors and advertising itself. They try to provide competitive offer in order to improve investment level. This offer often contains not only encouragement, but also an overview of each country as well.

The conclusion of presentation might be done from at least two aspects. On one hand we can compare types and amount of proposed incentives -that is the essential aspect.

On the other hand we can analyse *user-friendly* aspect -availability, clarity and the way of presentation the encouragements (on the web site)

#### Essential aspect:

- Almost all countries offer tax incentives. The other incentives -financial and non-financial programs -are additional. They are often prepared not only to encourage investors but also to solve country's urgent problems. The exception is Estonia, which provides new, simple and clear taxation system and resign from tax incentives.
- Some countries provide incentives in a way that shows a hierarchy of desirable investments (for example Czech Republic, Slovakia, and Slovenia) It shows the idea of development's direction in each country.
- Countries that have Special Economic Zones (for example Poland, Lithuania) concentrate all incentives in them. These countries focus on developing SEZ areas as a way to encourage investors.
- Very popular become industrial and technological parks. Most of countries emphasize the importance of them (Estonia) Those countries, which have industrial parks,



point them out as an important incentive and those, who have not, declare developing these areas.

- Sort of investments incentive depends on specific features and economical situation of the country (for example high unemployment, lacks in infrastructure or location – as in case of Cyprus)

#### Technical aspect:

- The way of presentation might does matter in encouraging investors. Availability and clarity of information is sometimes as important incentive as tax relief. It proclaims about the country's administration as well.
- The intention is not to criticize or to praise the offer of each country, but rather to point out some characteristic features:
- In Malta you have to register on the web site in order to have access to significant information about investments incentive
- On Latvia's site is necessary to fill the form if you want to gain any information that characterize the country (general overview, economical facts, tax system)
- Some countries send users into other sites (government, banks) what often complicate analysis (for example Romania, Poland, Slovakia) Other do not collect information about incentives and laws from the whole country and it is need to follow each region to find out about conditions for investing (sometimes there are no significant differences)

In conclusion it is worth to say that analysing each country offers, using accessible information, is possible to define its attractiveness for investing.

#### *Investment incentives schemes – Polish case*

The schemes for promoting investments in Poland used to be, in assumption, oriented on support to certain territories. The most important instruments are special economic zones programme and technology and industrial parks initiatives. However, since 2004 also a general scheme on supporting large investment has been in force. According to Ministry of Economy data, at the first glance the fiscal importance of these schemes are rather in favour of territorial approach than general approach. Tax exemptions offered in Polish Special Economic Zones cost approximately 650 mln PLN (ca. 160 mln EUR) in 2004 in comparison to 80 mln PLN (ca. 75 mln EUR) devoted to certain large investment in 2005 in the framework of Act on Financial Support on Investment. On this background technology and industrial parks seem not to be very important instrument, because they offer only local exemptions from real estate tax.

### Special economic zones

The first Polish special economic zone was established in September 1995 in Mielec (Euro-Park Mielec –Podkapackie region)<sup>5</sup>. In 1996 next two zones were established in Katowice (Silesia region) and Suwalki (Podlaskie region). The process became more dynamic in 1997 when 3 zones were established in April and 9 zones and 2 science parks in autumn. Total area of the zones is over 6 000 hectares. Nevertheless because of legal status ambiguity and lack of investors 2 zones (Mazowiecka and Czestochowska) were closed in 2001 and Tczewska and Żrnowiecka were united into one –Pomorska SSE. Currently, after the new administrative division of the country, special economic zones are situated in 12 of 16 new voivodships (provinces). The highest concentration of the zones can be found in dolnoslaskie voivodship (Silesia).

Indicator	1996	1997	1998	1999	2000	2001	2002	2003	2004
Number of existing zones	3	17	17	17	17	14	14	14	14
Number of active zones	3	5	13	15	15	14	14	14	14
Number of valid permissions	18	74	175	247	715	685	690	670	679
Number of active investors	-	-	-	-	-	293	352	392	429
Capital declared (in mln PLN)	1 295	2 588	5 682	6 703	10 694	10 246	-	-	-
Capital invested (in mln PLN), stock	-	-	-	3 972*	6 567	9 286	13 086	15 269	19 927
Number of jobs declared	3 675	10 239	26 156	33 936	61 093	57 467	-	-	-
Number of jobs created	-	-	-	11 622*	28 608	42 296	50 799	62 104	77 570
Expenditure on creation 1 place of employment (in thousand PLN)	353	253	217	197	230	220	258	246	257
Land development of zones (in hectare) (% of total area)	93,7 (4,97%)	303,70 (4,76%)	698,45 (10,94%)	895,02 (17,9%)	1078 (21,6%)	1910 (32,0%)			
Capital investment per 1 hectare	13,8	8,5	8,1	7,5	6,5	5,3			5,6

\* line 1999

1 EURO € a. 4,0 PLN

Source: Ministry of Economy

**Table 8 Effects of zones activities from the year 1996 to 2004 (see below)**

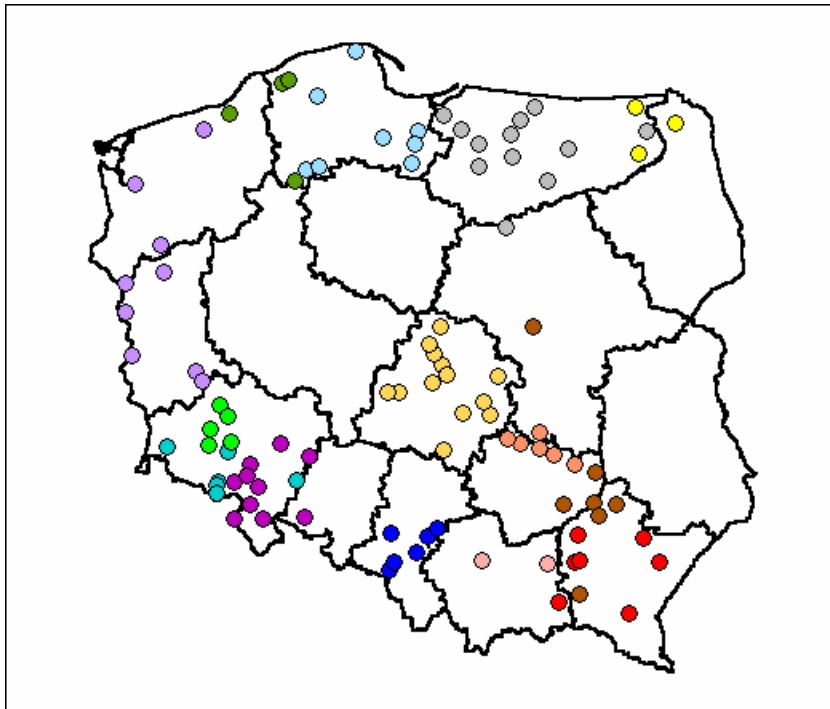
In the assumptions to the Polish special economic zone programme it was stated that all zones, in the area of over 6 000 hectares (which is about 2% of Polish industrial area) will create a total of 175 000 jobs –that correspond with about 5% of all industrial workers in Poland. The plan should be realised in a long-term (10-15 years) perspective. Table 5 presents in detail the realisation of assumptions in December 2004, after 9 years of establishment the first zone and 7 years of majority of rest.

Till December 2004, all existing zones are operating. About 679 licences that have been issued to companies planned starting economic activity within zones are valid. The actual

<sup>5</sup> Euro-Park Mielec followed the example of the first special economic zone in Europe –Irish Shannon Free Zone established in 1959 r.

investment reached the level of 20 billion PLN (c.a. 5 bln EURO) Investors also created almost 77 500 new jobs.

The average industrial plant founded in special economic zones cost 40 mln PLN (10 mln EUR)and employee 18 workers. The expenditures relevant with job creation was about 250 000 PLN (c.a. 65 000 EURO)per one place of employment. Up to now, only 2 %of total area of the zones was developed and that gives an average level of investment per every hectare of about 5,3mln PLN (1,5 mln EURO)



Source:compiled by authors

**Figure 16 Location of sub-zones of Polish Special Economic Zones in 2005**

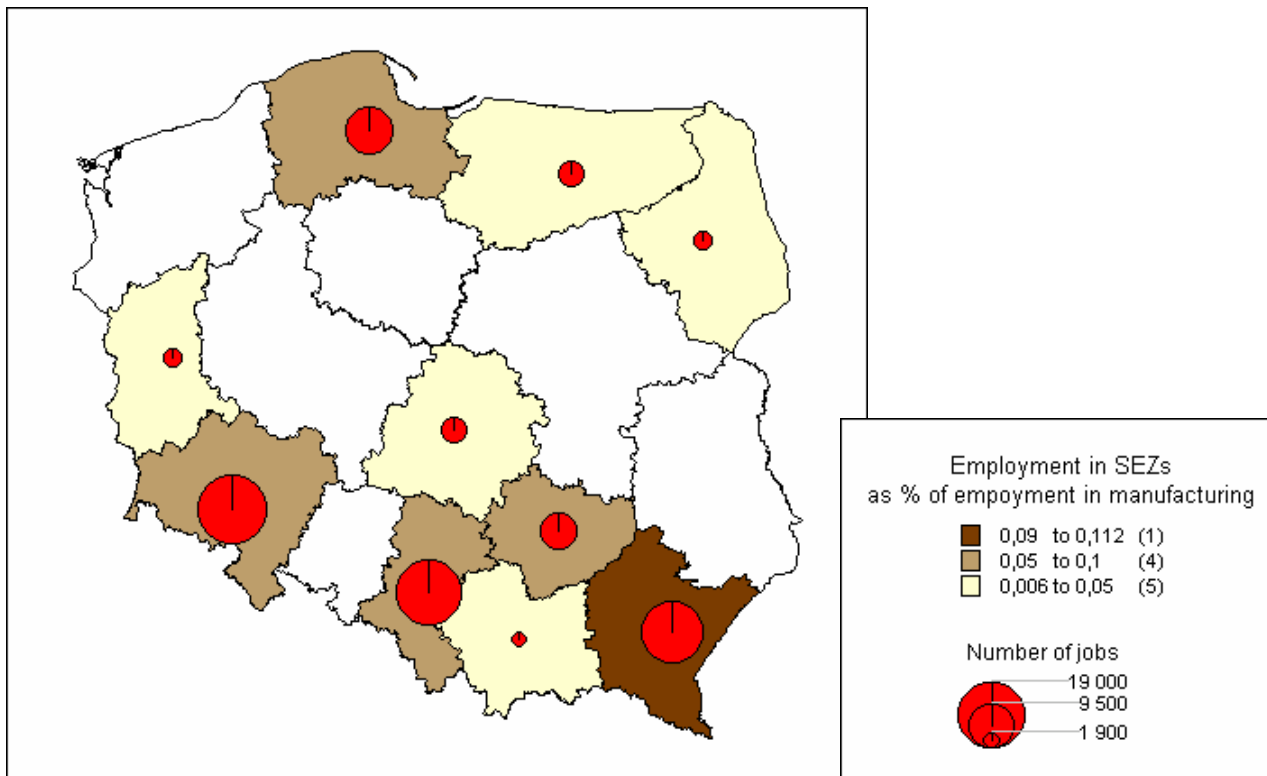
Nevertheless the actual results of the programme are concentrated both in spatial and sectoral terms. The most successful zone Katowicka situated in Slaskie region (Upper Silesia)has attracted 9% of all investments as well as concentrated 22% of total jobs that have been created. Together six the most important zones (also:wa łbrzyska, mielceka, legnicka, pomorska and respectively in terms of investment łodzka and in terms of employment tarnobrzeska)concentrate 8% of total investments and 79%of jobs created. Regarding sectoral structure of investment the majority of projects was related to automotive industry (M section)-42%of total. The share of other branches was much lower i.e. manufacture of pulp, paper and paper products;publishing and printing (P section) and manufacture of rubber and plastic products (H section) each 9% manufacture of other non-metallic mineral products (D section)and manufacture of basic metals and fabricated metal products (B section) each 7%

The importance of special economic zones in transformation processes of Polish industry was quite significant. The share of firms located in SEZ in total employment in manufacturing was 30% in 2004. Furthermore 20% of new jobs in industry plants created in 2004 took place in firms situated in SEZ. This was combined with the 10% share in total investment outlays in industry conducted in 2004. As a result the share of firms situated in SEZ in fixed assets in industry was approximately 2%.

However, the foreign capital, which in the assumptions should be the main addressee of the programme, was interested in special economic zones only in a small extent. The estimation shows that in the zones was invested about 3% of total foreign capital inflow to Poland in years 1996-1998 (Smetkowski 1999). Nevertheless, based on raw estimations the share was higher in case of industry sector - about 11% particularly in case of greenfield investment more than 25%<sup>6</sup>.

Till 2004 9 regions of Poland were affected by results of SEZ activity. Taking into consideration only these regions, the importance of SEZ was greater: 5,6% of total employment as well as 3,6% of new jobs in manufacturing in 2004 as well as 19,5% of investments outlays in industry conducted this year. In fact effects of special economic zones were significant only for 5 regional labour market (Podkarpackie, Slaskie, Dolnoslaskie, Pomorskie, Swietokrzyskie). The share of SEZ in these region in manufacturing labour force was over 5% in Podkarpackie more than 10%.

<sup>6</sup> This was a result of investment conducted by large automotive companies: General Motor, Volkswagen, Toyota and their suppliers.



Source:compiled by authors based on Ministry of Economy data

**Figure 17 Effects of SEZs on regional labour market**

In general Polish special economic zone programme was not, as it seemed, expression of long-term regional and industrial policy, but rather a temporary instrument to support selected regions with particular problems caused by economic transformation. The programme brings different results depending on the zone examined, in general better in regions with existing economic development potential than in lagging regions. Moreover only in few voivodships zones have significant share in labour market and capital investment. In the others their influence are limited to the local economic systems. Nevertheless, the increasing number of sub-zones in last few years, very often adjusted to particular investors location preferences, caused re-orientation of the instrument from territory oriented regional policy instrument towards general instrument of financial support of investment.

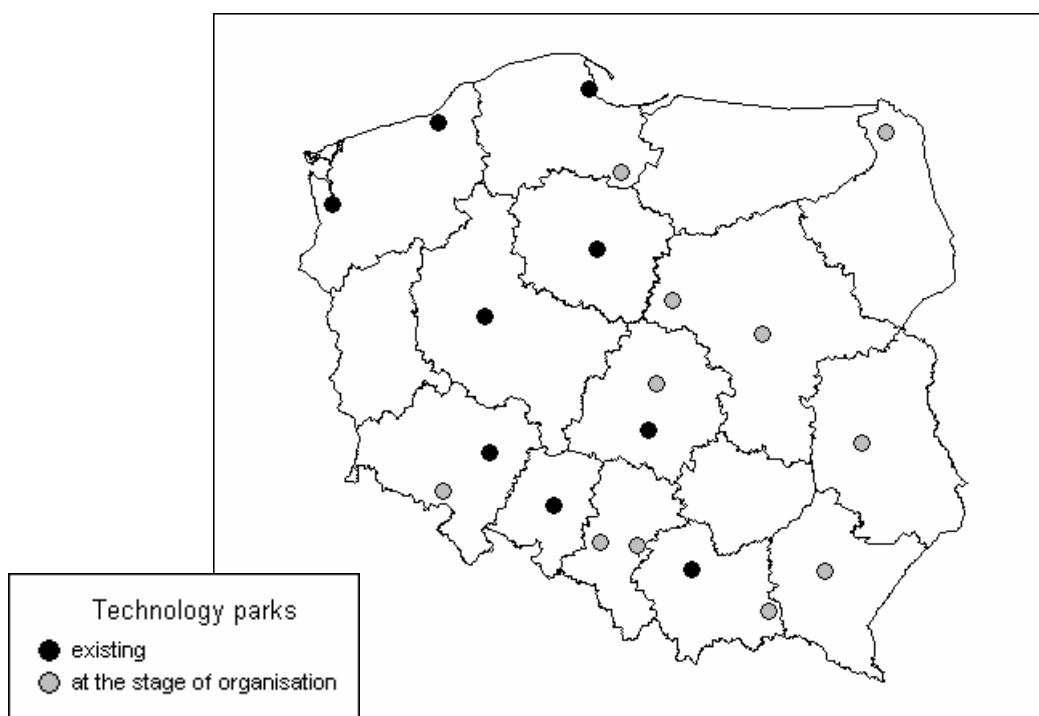
*Technology and industrial parks*

Industrial and technology parks operate in Poland in compliance with the Act on Financial Support to Investments. Both types of parks are complex of separated real estates together with technical infrastructure. In case of industrial park the objective is to develop brown fields comprise technical infrastructure remaining after the restructured of liquidated firm. In case of technology parks the aim is to ensure transfer of knowledge and technology

between science unit and entrepreneurs. Within the park entrepreneurs are offered advice on how to develop firm and transfer and apply technology.

The benefits obtaining by investors in these parks include: cheap infrastructure service and support services, synergy effects, local tax and fee exemptions and possibility to apply for public support within the framework of general schemes based on Act on Financial Support to Investment.

Currently there are 52 industrial and technology park initiatives in Poland which are at different stage of development. The majority of parks were established in years 2003-2004 as a result of support provided by Polish Agency for Entrepreneurs Development. Less than half of initiatives are technology based parks (22) The first one was established in 1999 in Poznan. Nevertheless the majority of the technology parks are at the initial stage of organisation processes and only 9 parks offer services for investors.



Source: compiled by authors based on Paizlata.

**Figure 18 Location of technology parks in Poland in 2005**

The effects of the parks operation are not spectacular so far. The total number of investors account for 2 of which 26 are micro firms employing less than 10 people. Furthermore, the activity of enterprises quite often is quite rarely related to high-tech sectors (Silka, 2005)

In general the technology and industrial park initiatives have the local scale and their importance are quite similar to business incubators. Based on available data one should not expect quick development of this initiatives in the near future.

### 1.2.3.6 Conclusions

#### *General outlook*

The growth rates since 1990 have been highly differentiated across new Member States (10) and accession countries (Bulgaria and Romania)

The **first** type is represented by Cyprus and Malta that in general follow the path of development characteristic for old EU15 countries.

The **second** group consists of Poland and Slovenia that despite the different paths of growth in the first period of transformation, respectively 1990-2001 and 2000-2002 follow the same relatively fast economic development. As a result these countries were first of post-socialist countries that reached (1996) level of development determined by year 1990.

The **third** group is represented by other countries of so called 'Vehrad Group': Czech Republic, Hungary and Slovakia. These countries achieved level of development from 1990 after 10 years.

The **fourth** group are Baltic States (Estonia, Latvia, Lithuania) that had the most difficult starting point after becoming newly independent states. The decline in this case was much deeper as a result of broken strong economic ties with other former Soviet Union countries. Since 2000 all these countries have been developing very fast achieving growth rates between 7 and 10% annually

The **fifth** group are Bulgaria and Romania. Both these countries after 15 years achieved only 90% of GDP from the period before the transformation has begun.

The territory of NMS represents lower level of development than EU 15 and relatively high internal development disparities deeply rooted in history and depending to a large extent on peripherality/accessibility. Transition period after 1990 brought to Post-Socialist countries both increase in territorial differentiation relating to spontaneous processes and impact of European integration on policies and institutions. It has to be stressed, however, that there is not one typical trajectory, what suggests that internal policies and institutions have dominant impact on development. The case of Poland is very informative: unquestionable leader in the beginning of 90, after economic slow down at the turn of centuries despite quite high growth rate of 4-5% a year found itself among relatively less dynamic NMS.

### *Polish case*

Since 1990, the structural changes of Polish economy has been strengthening the largest Polish cities that take over the role of economic centres from industrial regions. This was a result of development of service sector (especially F&E services highly concentrated in metropolises) influx of foreign direct investment (that especially at the first stage of Polish transformation were targeted at large cities) and development of SME firms (that was much easier at developed urban areas). The largest cities offers also sources of information necessary to implement innovations and qualified staff by hosting R&D centre, universities and others higher education schools. This pattern of economic development support the thesis on metropolisation of Polish space. Simultaneously western Polish regions were in general better developed than eastern regions from so called 'eastern wall' mainly because of historic factors (see Gorzelak 2006)

The economic policy have very small territorial impact in Poland. The regional aid are provided both in the general scheme of support for large investors and in special economic zones programme. However, Polish special economic zone programme was not, as it seemed, expression of long-term regional and industrial policy, but rather (at the initial stage of development) a temporary instrument to support selected regions with particular problems caused by economic transformation. The programme brings different results depending on the zone examined, in general better in regions with existing economic development potential than in lagging regions (Kynska 2000). Only in few voivodships zones have significant share in labour market and capital investment. In the others their influence are limited to the local economic systems. Nevertheless, the evolution of special economic zones from regional policy instrument towards general incentive scheme programme supporting large investments regardless of investment location has been observed in recent years<sup>7</sup>. As a result one should not expect any significant influence of the scheme for instance on polycentricity of Polish space.

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<sup>7</sup> According to Ministry of Economy plans a sub-zone of special economic zone will be soon established in Warsaw (sic)



## 1.3 Recent economic growth in Europe at regional level

### 1.3.1 The map of economic growth between 1995 and 2002

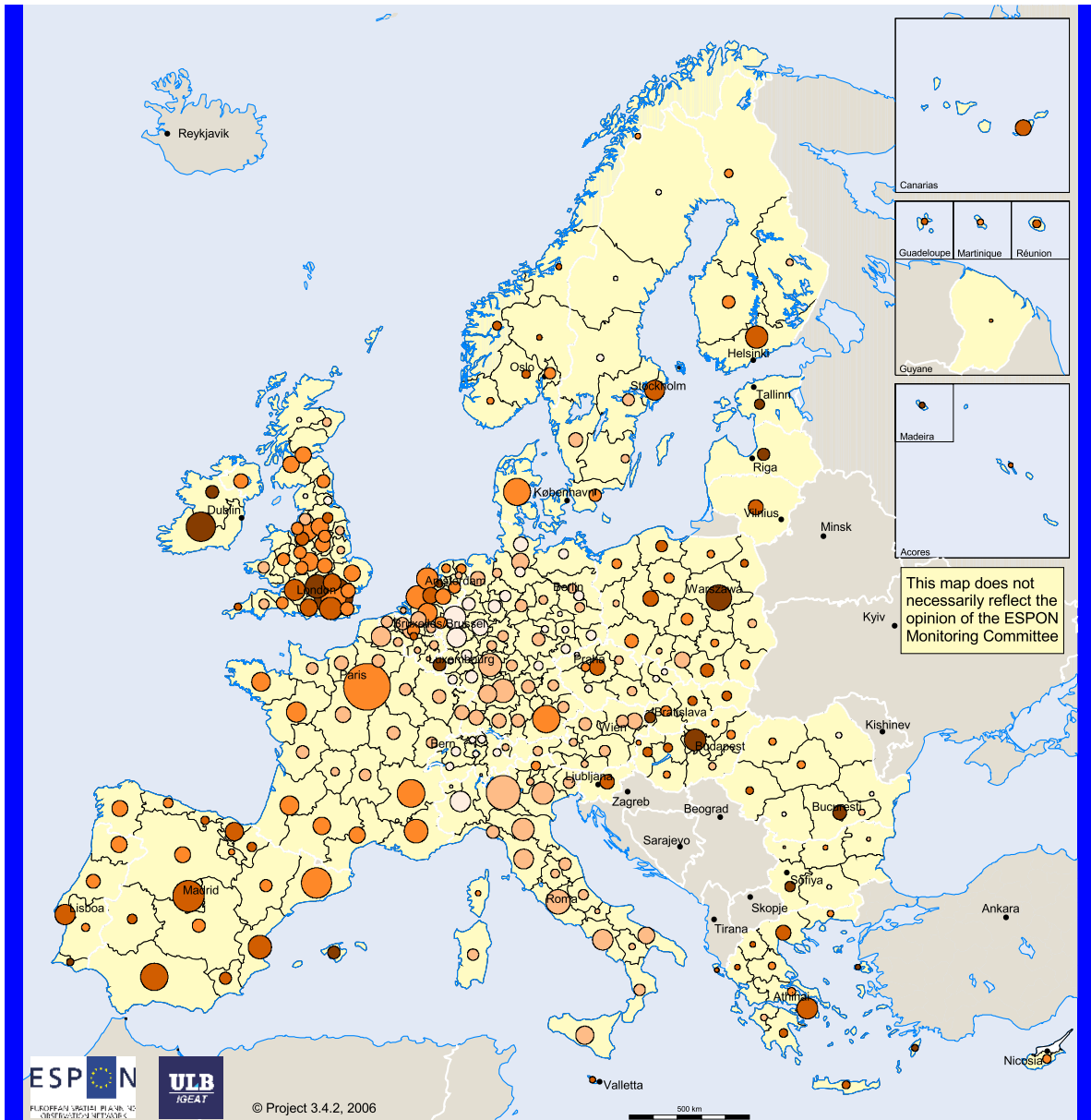
Now that we have seen the long-term evolutions across Europe, we will turn to the more recent situation. The spatial pattern of recent economic growth in Europe shows strong inequalities between regions. We present these dynamics in three different maps.

The first one shows economic growth at NUTS 2 level in both absolute and relative terms. The absolute figure clearly underlines the weight of main national economic poles and of central Europe in the total growth in Europe. The growth rate puts into the foreground the national differences in economic growth, for example between Germany and Italy, on one hand, United Kingdom and Eastern countries, on the other hand. We can already observe that most of the main national economic poles have better performances than the rest of the country, a finding we developed more in detail in the first interim report.

Since intra-national differences are hidden by international ones on this first map, we present a second map which shows the economic growth of the NUTS 2 regions in comparison of the growth in the country. It allows a much better perception of regional pattern of growth in Europe. With few exceptions, it confirms the better dynamic of the main economic poles, especially in central and Eastern Europe. But this map also underlines the persistence of regional differentiation in most of the countries. In the UK the dynamic is not only concentrated on the London metropolis but in nearly all the southern part of the country, prolonging a long term tendency. In France, the good performances of the western and Southern periphery of the country is also a well known fact, in opposition to the bad performances of old industrial areas of the north and of remote and underpopulated areas of central France. The same type of opposition can be observed in western Germany, while the growth in Eastern Germany mainly concerns the large periphery of Berlin, as we can confirm from the NUTS 3 map. In Italy, the pattern is a little bit more surprising, since it seems that the best performances are not anymore concentrated on the Northern, and especially, central parts of the country anymore, but rather in the Southern parts, even if the difference is not big. This should also be put into the context of the generally poor performances of Italy.

Finally, the NUTS 3 map gives a perception at a more refined scale. For example, the German NUTS 3 allows us to evaluate the growth differential between central towns, with generally a low growth rate, and their suburbs, with a better dynamic. Another example, in France, we can draw from this map that the dynamic of the western and southern peripheries is very much concentrated on the coastal départements.

**GDP Growth 1995 - 2002**



$$(((\text{GDP } 2002 / \text{GDP } 1995) ^ { (1/7) } - 1) * 100)$$

	1.196 - 3.427
	3.427 - 4.835
	4.835 - 6.196
	6.196 - 7.761
	7.761 - 12.323
	No data

**GDP 2002 - GDP 1995**

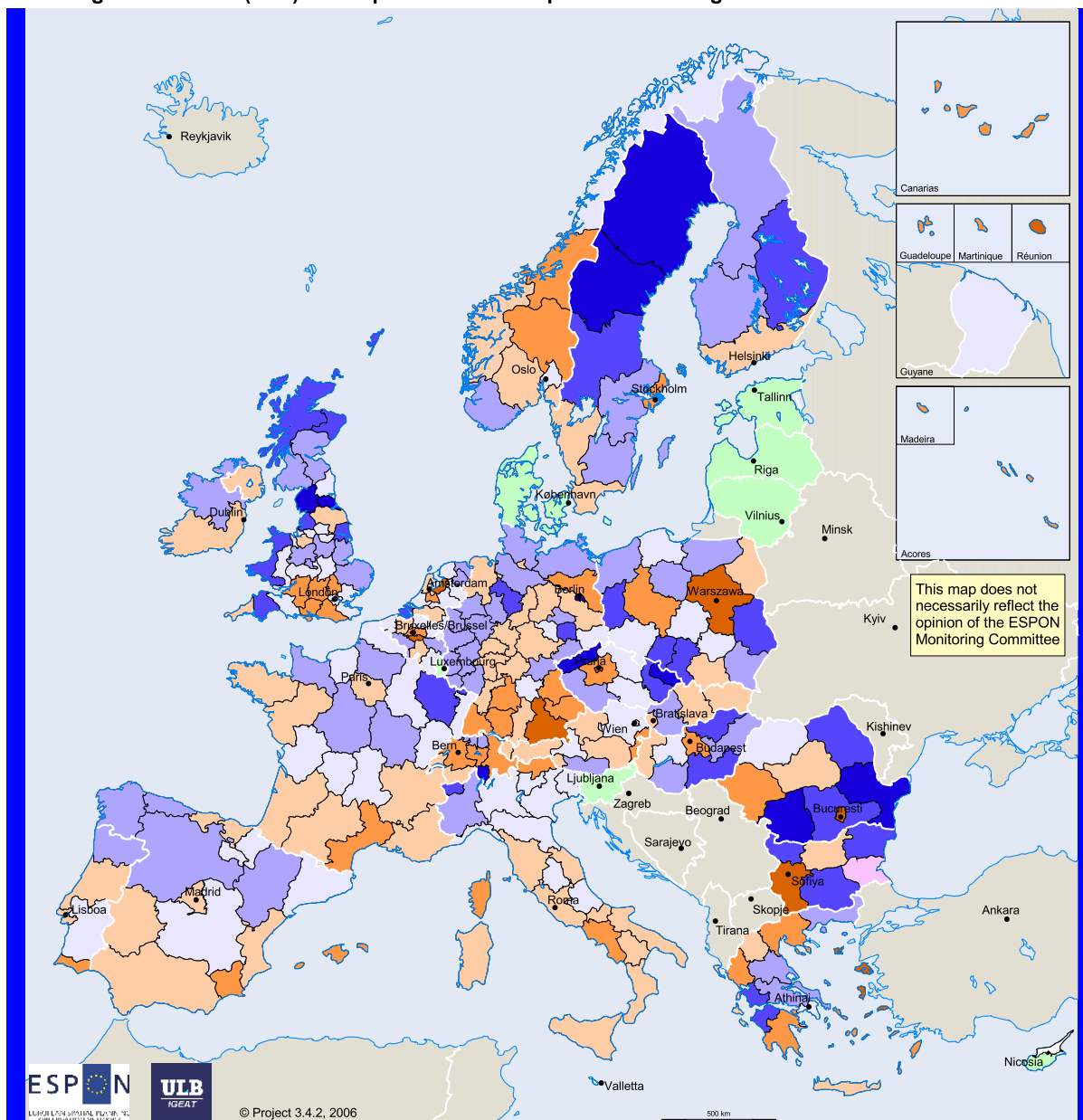


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Bulgaria, Norway, Romania and Switzerland only 1998 - 2002

**Figure 19 GDP growth 1995-2002**

**NUTS 2 growth of GDP (PPS) in comparison to the respective national growth rates**



**NUTS 2 Growth rate / National Growth rate**

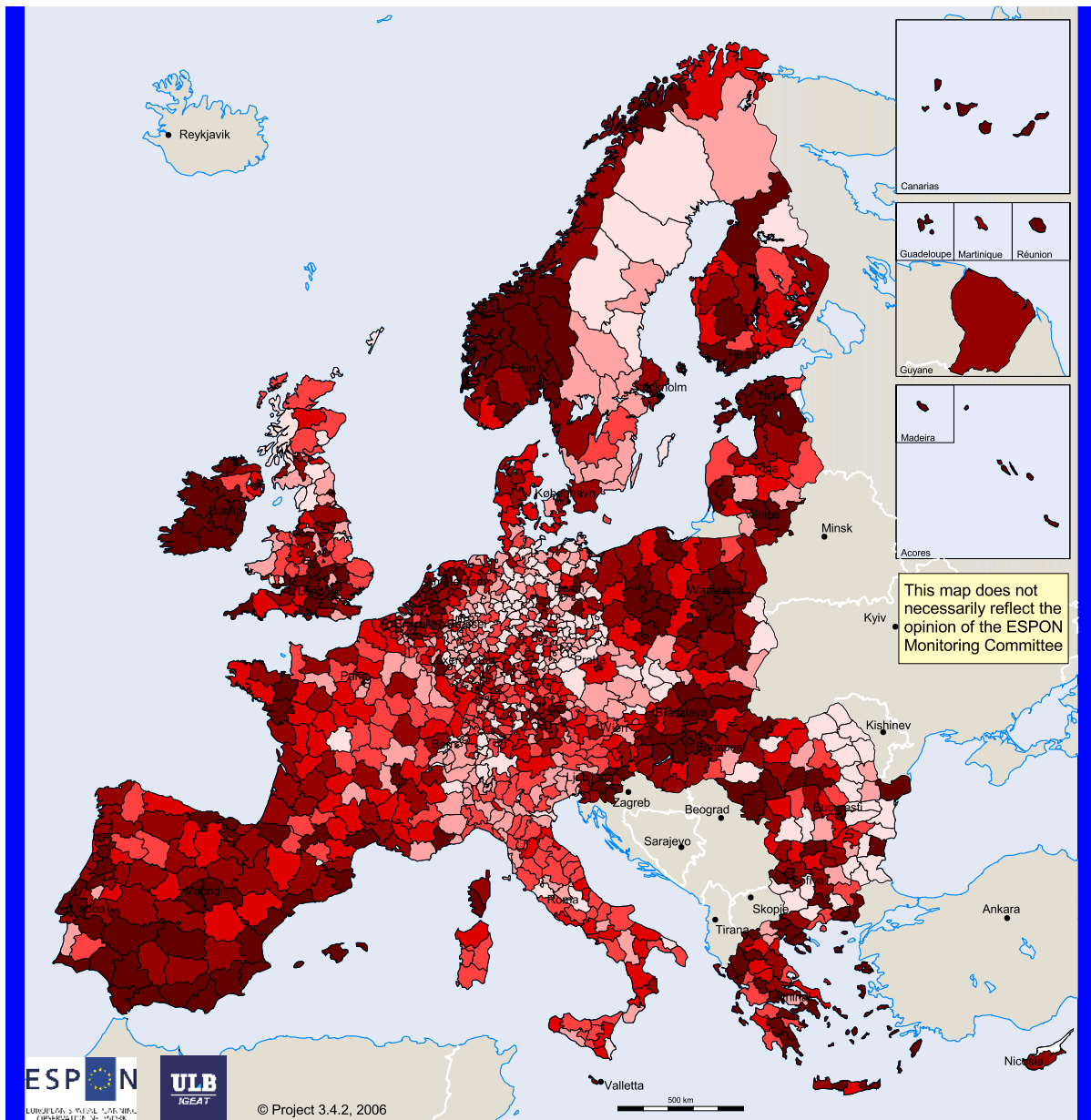
- Countries not divided into NUTS2 regions
- Negative growth
- 0 - 52.54
- 52.54 - 74.66
- 74.66 - 90.46
- 90.46 - 100
- 100 - 113.97
- 113.97 - 139.23
- 139.23 - 215.92
- No data

Bulgaria, Norway, Romania and Switzerland only 1998 - 2002

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**Figure 20 NUTS 2 growth of GDP (PPS) in comparison to the respective national growth rates**

**Annual growth rates of GDP (PPS) 1995 - 2002**



$$[ ((GDP\ 2002 / GDP\ 1995) ^ {1/8} ) - 1 ] * 100$$

- 3.634 - 2.418
- 2.418 - 3.229
- 3.229 - 3.807
- 3.807 - 4.443
- 4.443 - 5.465
- 5.465 - 12.23
- No data

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Origin of data: EU 25 and CC's : Eurostat,  
Norway and Switzerland : National Statistical Offices.

Norway, Switzerland, Bulgaria and Romania data is only 1998-2002

Bulgaria, Norway, Romania and Switzerland only 1998 - 2002

**Figure 21 Annual growth rate of GDP (PPS) 1995-2002**

### 1.3.2 Which level is important to understand the geography of recent economic growth?

To evaluate the most relevant scale to analyse the geographical pattern of economic growth, we conducted a variance analysis. This analysis will not give us the complete understanding of the territorial inequalities of economic performances but will help us to ask the good questions.

The principle is very simple and is based on the fact that the total variance<sup>8</sup> of economic growth between regions and EU 25 in the 1995-2002 period is the sum of the variance of international growth regarding to the European average and the variance of intra-national growth regarding to their national average (NUTS1 regarding to NUTS 0)

More generally, we can write:

$$\text{Total variance (NUTS3 in EU25)} = \text{variance (NUTS0 in EU25)} + \text{variance (NUTS1 in NUTS 0)} + \text{variance (NUTS 2 in NUTS1)} + \text{variance (NUTS3 in NUTS 2)}$$

The ratio between variance at one spatial level and the total variance gives the share of variance (or information) that is explained by the differences in the economic growth at this level.

These ratios are calculated in table 9. It shows clearly that a high share of the variation (46,8%) of the economic growth is due to the differences between countries. In other words, it means that the economic performances of a region is mainly explained by the country in which this region is included. To understand the European map of growth, one has to understand first the differences between countries.

So the main questions would be:

- Why do Germany and Italy have so bad economic performances?
- How to explain good performances in most of Eastern Europe?
- How to explain the differences between peripheral countries of Western Europe (Ireland has much better growth than Greece)?
- Etc.

More generally, this result raises the question of the persistence of major international differences in a unified market economy. To understand it, one has to take into

---

<sup>8</sup> Sum of the square of the difference between the regional economic growth and European growth weighted for each region by its average GDP in PPS between 1995 and 2002.

consideration the large autonomy of states in their economic policies (tax system, social redistribution). and the importance of institutional factors, still strongly national (education).

The second most important level to explain differences of economic performances is the differences of growth between NUTS 3 regions of the same NUTS 2.

The main process here is the differences inside metropolitan or urban areas, since most of the urban areas have good economic performances at their peripheries while many centres are in crisis. We can observe this process at NUTS 3 level in Germany, since German NUTS 3 clearly separates towns from their suburbs. However, this scale is not so relevant for our purpose as we could argue that centres and peripheries of a town belong to the same economic area, notably because of the importance of commuting. This is why, we also present our results excluding the NUTS 3 level, which is, for some aspects, a too refined one.

The others levels only account for about 20% of the total variation. It means for example that the process of metropolization –if it is understood as the concentration of the economy on the main national and international poles –is not the main factor to explain the map of economic growth in the recent years. It does not mean at all that this process does not exist: we already showed that the main metropolises have better economic performances than their national average, which was not the case on the precedent decennials from the 60s to the 1990. But the metropolization process does not explain everything and we can observe from our second map the persistence of big interregional differences in economic performance. For example, we can underline the best performances of South-western Germany in comparison to its northern part, the good performances of Southern France, which constitute a kind of French sunbelt, and the higher growth of Flanders compared to Wallonia in Belgium, etc. Some structural features, and some specific social inheritages, could explain a part of these differences, for example the weight of old industrial structures in North-western Germany, in Wallonia, in Northern France or England.

	Share of the total variance (nuts2 EU25)	Share of the total variance (NUTS 3 EU25)
Variance NUTS 0 -Eur25	67,0	46,8
Variance NUTS 1 -NUTS 0	16,7	11,7
Variance NUTS 2 -NUTS 1	16,3	11,4
Variance NUTS 3-NUTS 2		0,2
Total variance	100,0	100,0

**Table 9 Share of variance of economic growth 1995-2002 (in PPS) taken into account by the different spatial level of European divisions**

## Conclusions

From the maps and the statistical analysis, we can draw some main conclusions, which lead to some major interrogations.

First of all, the regional differential of growth is largely due to gaps in national performances. Even if our purpose is not to explain deeply these national differences, we have to keep in mind that regional differences on which we intend to focus represent a relatively low share of the total variance.

Second, even if intra-national variations between large regions (NUTS 1 and NUTS 2) account only for about 29% (sum of NUTS1-NUTS0 and NUTS2-NUTS1 variances) it is still very important to highlight patterns in these spatial differences and to explain them. We already insisted above on the importance of a metropolization process inside each country.

Finally, the analysis shows the importance of the variation of growth at a refined scale of NUTS 3 (about 8% of the total variance NUTS 3-EU 25). We interpret this mainly as the differences of economic growth between centres and peripheries inside metropolitan areas but others processes could also play a role.

### 1.4 Development and regulation mode: a typology

#### 1.4.1 Introduction and database

We have seen above that regional dynamics were still largely dependent on national dynamics. In order to understand some of the differences between countries we focus in this section on types of economic regulation at national level.

To that purpose, we have retained a series of variables by main theme illustrating a series of interrelated elements of economic development. Indeed, a regulation mode cannot be limited to an economic process but consists of a series of factors from good governance to attractive environment, but also efficiency of institutional structures, living standard, social conditions of labour, etc. The great advantage of a typology based on a multiplicity of variables is the possibility to show the resulting general coherences, the groups of variables evolving at the same time and reinforcing each other. This methodology allows meeting our objective, which is precisely to enhance regulation modes leading to an interaction of the totality of the drivers' behind regional economic (and competitive) performance.

As we will see later, competitiveness cannot be limited to a single factor such as, for example, the often highlighted international markets test, but results from multiple factors, especially the quality of the interrelations between the different factors identified here, grouped by dimensions.

Dimensions	Variables
Income inequalities (2004)	Gini index in purchasing power parity
Economic performances	Growth: GNP 1995-2005 Productivity: GNP / hours (2003)
Economic structures (2004)	Agriculture Manufacturing, Energy, Extraction Construction, trade, transports, communication Financial and Enterprise services Other services
Lisbon Strategy	R&D (2002-2004) Patents (2001-2002) Share of employment in high and medium technology manufacturing (2004)
Type of command	Net investment flows (2001-2004) Net investment stock (2000-2002)
Regulation and governance	Share of public expenditure (2004) Taxes in percentage of GDP (2003) Taxes on labour in percentage of GDP (2003)
Social performances	Long-term unemployment - % (2002 to 2004) Dispersion of income across quintiles (2001-3 average) Men's life expectancy at birth (2003) Women's life expectancy at birth (2003) Public expenditure in education (% of GDP; 2002) Internet access (2004-2005)
Environmental performances (2002-2003)	Energetic intensity Greenhouse gas emission

**Table 10 Indicators used for the regulation mode typology**

### 1.4.2 Methodology

Since each dimension is interesting in itself and tells us something about the structure of the countries, we choose in a first step not to synthesize all the variables but to summarize each dimension. In a second step, we will synthesize the different dimensions. Beside the fact that each dimension has a meaning in itself, this way to proceed allows us to give the



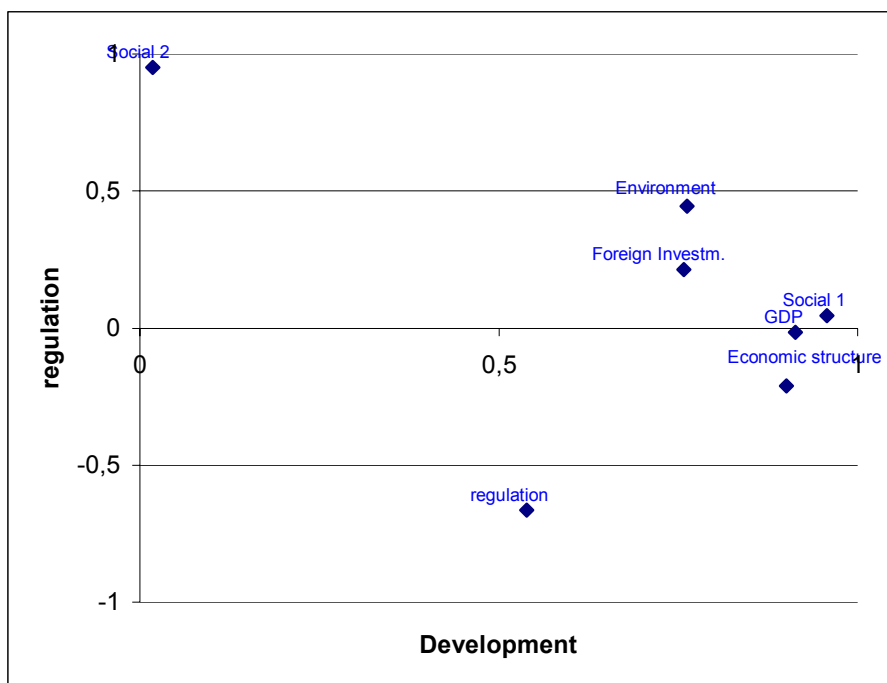
same weight to each dimension in the general synthesis, considering the fact that some of them have more initial variables than others.

For each dimension, we produce a Principal Component Analysis (PCA) in order to have a synthetic indicator. In the PCA all indicators are weighted by the population of the countries. We only keep the first component of each analysis, except for social issues, for which we keep the two first components because the second still accounts for 23% of the information (with six initial variables) and clearly shows another aspect of such issues. The first dimension in social issues is clearly related to development indicators, while the second deals with social inequalities.

The second step of the analysis is to produce a PCA with the different synthetic indicators. In this analysis, the eight initial synthetic variables can be summarized in two dimensions: the first accounts for 56% of the information, the second for 21%

### 1.4.3 Main results

Figure 22 gives the position of each synthetic variable on the two new components of the analysis.



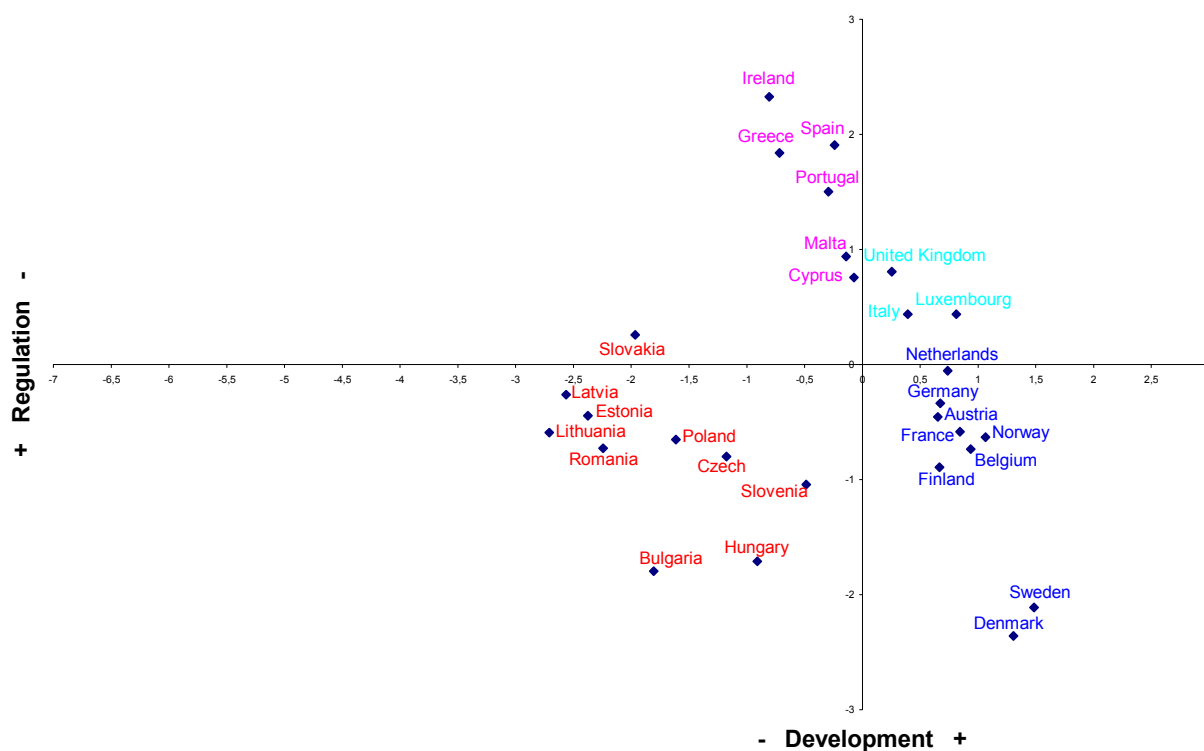
**Figure 22 Position of each initial variable on the two first components of the PCA analysis**

The first new component can be considered as a development indicator, showing the correlation between global social indicators (life expectancy...) standard of living, the economic structure. It appears that countries which have the lowest score on this indicator, mainly eastern countries, have the best economic performances for the ten last years. This is why we choose not to keep the indicator of economic performances, because it would strongly influence the position of the countries on the first component in a very ambiguous way: a good economic performance would influence the position on this development component negatively.

The second component could be called state regulation and redistribution: it opposes countries with a high weight of state in the economy and low social inequalities to countries where state weight and social redistribution are lower.

Figure 23 gives the position of the countries on the first two components. Two major groups appear on the graph: western and eastern countries. Both are similarly oriented, strongly suggesting that more regulation brings more development. Without discussing here the sense of the relationship, we note that more deregulation is not accompanied by more development. If we analyze in detail the oppositions resulting from the two components, it is possible to define four distinct groups (represented by four different colours on the graph). Indeed, the first component opposes rich countries of Western Europe on the right with poor countries of Eastern Europe on the left. Mediterranean countries such as Spain, Portugal, Malta, Cyprus, Greece and Slovenia have intermediary positions. The left position of Ireland, despite its high standard of living, is related to some structural weaknesses, relatively bad social indicators and a high level of foreign investments (comparable to those in Eastern countries).

The second component clearly opposes Scandinavian countries with high state regulation and low social inequalities, with some western peripheral countries where the weight of state is low and social inequalities are high. While especially UK but also Italy, are close to the second model because of intense deregulation in the last 25 years, France, Belgium, Austria and Germany have kept a relatively strong redistribution system. In Eastern countries, social inequalities remain relatively low but the weight of state regulation has become relatively low, especially for Baltic countries, and still with the exception of Hungary.



**Figure 23 Development and regulation**

\* The position of Romania, Bulgaria and Norway should be considered as very approximate since some indicators are missing for those countries.

A number of variables used in this analysis are unfortunately missing at regional level. In the interest of such a typology, they should be available at least at NUTS 2 level, to allow an easier anticipation of regulation modes at that level in future.

## 1.5 Mapping economic wealth and regional transfers

### 1.5.1 Introduction

The exercise done in the previous section has shown the weight of public expenditure and, more generally, of all kinds of transfers, when regulation modes are established at national level. This is also true at regional level: these transfers have a spatial dimension we try to objectify here. This illustrates the place of transfers and, a fortiori, the possible role of European policies in regional development. Indeed, it would be wrong to consider those transfers as mere assistance, if not assistance at a loss, as, in reality, they contribute to

bring in social, economic and spatial cohesion where it is lacking and increase therefore the global competitiveness of the Region.

One of the tasks for this project is to reflect upon the notion of regional economic performance and wealth and aggregate measures of these. The main aggregate measure up to date is the GDP which has the advantage of being widely available and fairly well harmonised. However, it only gives an idea of the amount of economic production in a given territory, and not necessarily of the actual income in this territory, which might be more relevant for notions such as territorial cohesion, where an indicator of economic well-being (or at least of economic revenues) would be more appropriate than one of production<sup>9</sup>. In its per capita form, often used for regional benchmarking, measuring regional GDP also means dividing the production at the place of work by the population at the place of residence, thus biasing results because of commuters.

### 1.5.2 Database and methodology

Eurostat publishes income indicators, and the comparison between household income and GDP already gives a certain idea of the relation between a region's GDP and its inhabitants. However, household income is not the only source of regional wealth, as transfers to public authorities and business profits also potentially benefit a region. Axel Behrens from Eurostat has developed a new experimental indicator attempting to identify the entire flows of money towards regions (Behrens, 2003)

This indicator was calculated by first applying the following formula:

Gross domestic product at market prices
+
Balance of primary income from rest of the world
-
Fixed capital consumption
-
Net national income at market prices
-
Balance of current transfers to/from rest of the world
-
Disposable income of all sectors
-
Disposable income of private households (1)
-
=
Disposable income of financial/non-financial corporations and private non-profit organisations (2)
+
Disposable income of the State (3)

<sup>9</sup> See also OECD (2006) 'Economic Policy Reforms: Going for Growth', notably chapter 6 on 'Alternative measures of well-being'.

The regional distribution of (1) is known. This is not the case for the sum of (2). Here Behrens makes the assumption that state activity on average benefits all citizens equally and divides the total amongst the regions according to their population. This might not be as defensible for (2) but as this only represents 4% of the total GDP, the bias seems insignificant.<sup>10</sup>

Each region is, therefore, attributed the sum of disposable incomes of private households plus its share of the incomes of other sectors (state and private). This –experimental!– indicator, therefore, should give a better indication of the actual financial wealth of each region, in contrast to the production-oriented information provided by the GDP.

In order to show some of the effects of such a recalculation, we have mapped Behrens' results. For several countries, data was not available, or not at NUTS 2 level, so these maps are to be understood as a first glimpse of the possibilities of such an indicator.

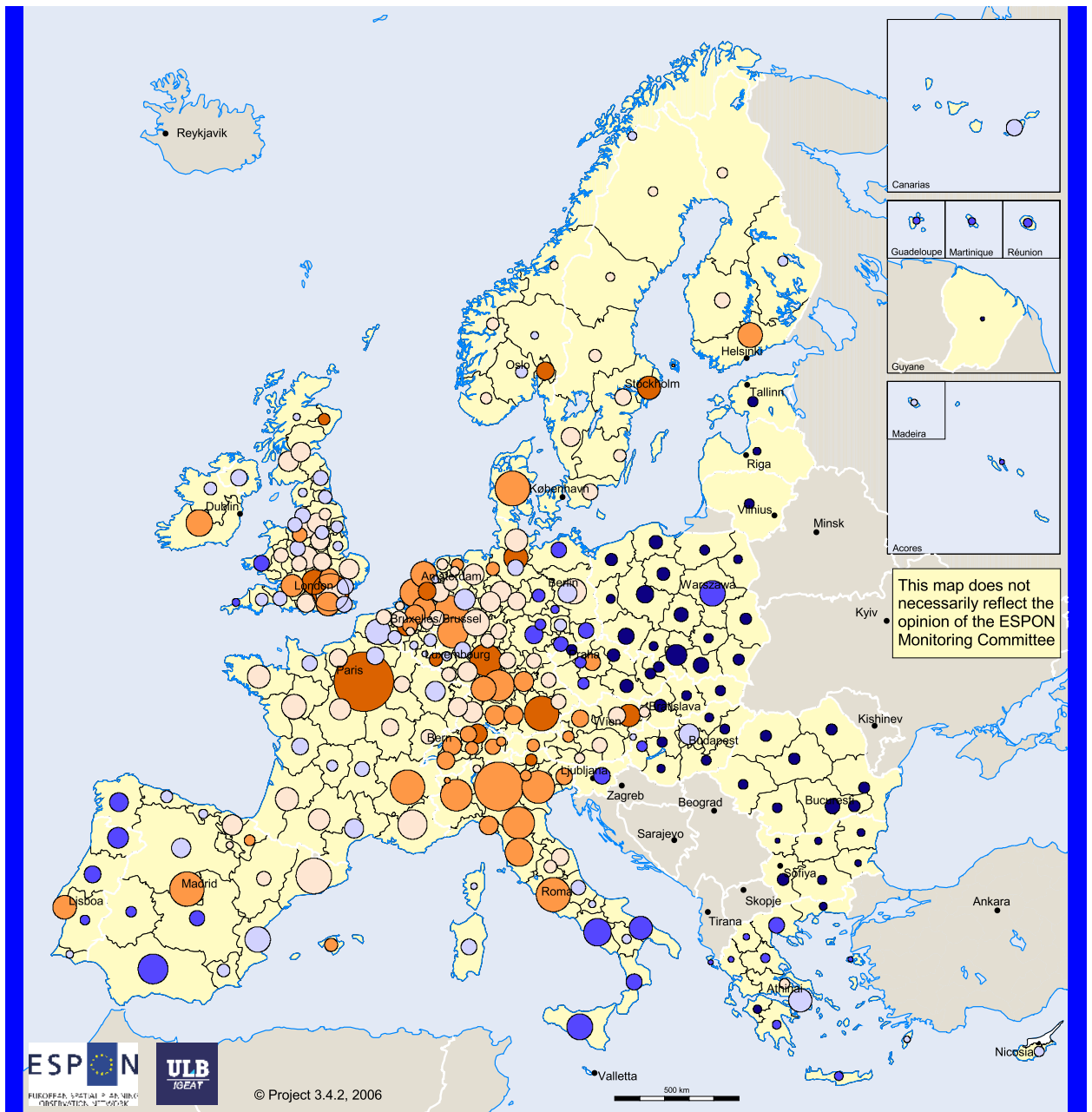
For reasons of comparison, we have mapped the GDP values Behrens used in Figure 24 showing both the total GDP (represented as share of the sum of all regions) and the GDP per capita. The following map then gives the same type of representation for the experimental indicator of regional wealth. Finally, we mapped divided the new indicator by the old and multiplying the result by the quotient of the two means (old/new) in order to take into account that the mean of the new indicator is lower than that of the GDP.

The geography exposed by these maps shows that in terms of regional wealth (as estimated by this indicator) disparities are not as strong as in terms of regional production. The overall picture is a smoothed one, with most regions in the central classes. Figure 26 allows to identify mostly two main levels of this redistribution. First of all one can observe that most capital regions lose in favour of their surroundings. This obviously is partly due to commuting effects, but also to the fact that metropolitan areas concentrate most of production (as can be seen in Figure 24) and wealth creation, which is then redistributed to other regions. But also clearly visible is the redistribution at a higher level between macro-regions within countries, such as from South-West to East Germany and from North to South Italy.

This indicator might be very useful in determining the actual state of territorial cohesion (at least in economic terms) in Europe.

<sup>10</sup> It also shows that using other indicators than population, such as total value added, does not change the results significantly.

**GDP 2000**



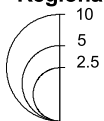
This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

ESPON ULB IGEAT © Project 3.4.2, 2006

**GDP per capita (average = 100)**  
**average = 19275,5**

- 10 - 59
- 60 - 79
- 80 - 99
- 100 - 119
- 120 - 159
- 160 - 248
- No data

**Regional GDP / Sum of all regional GDP x 100**

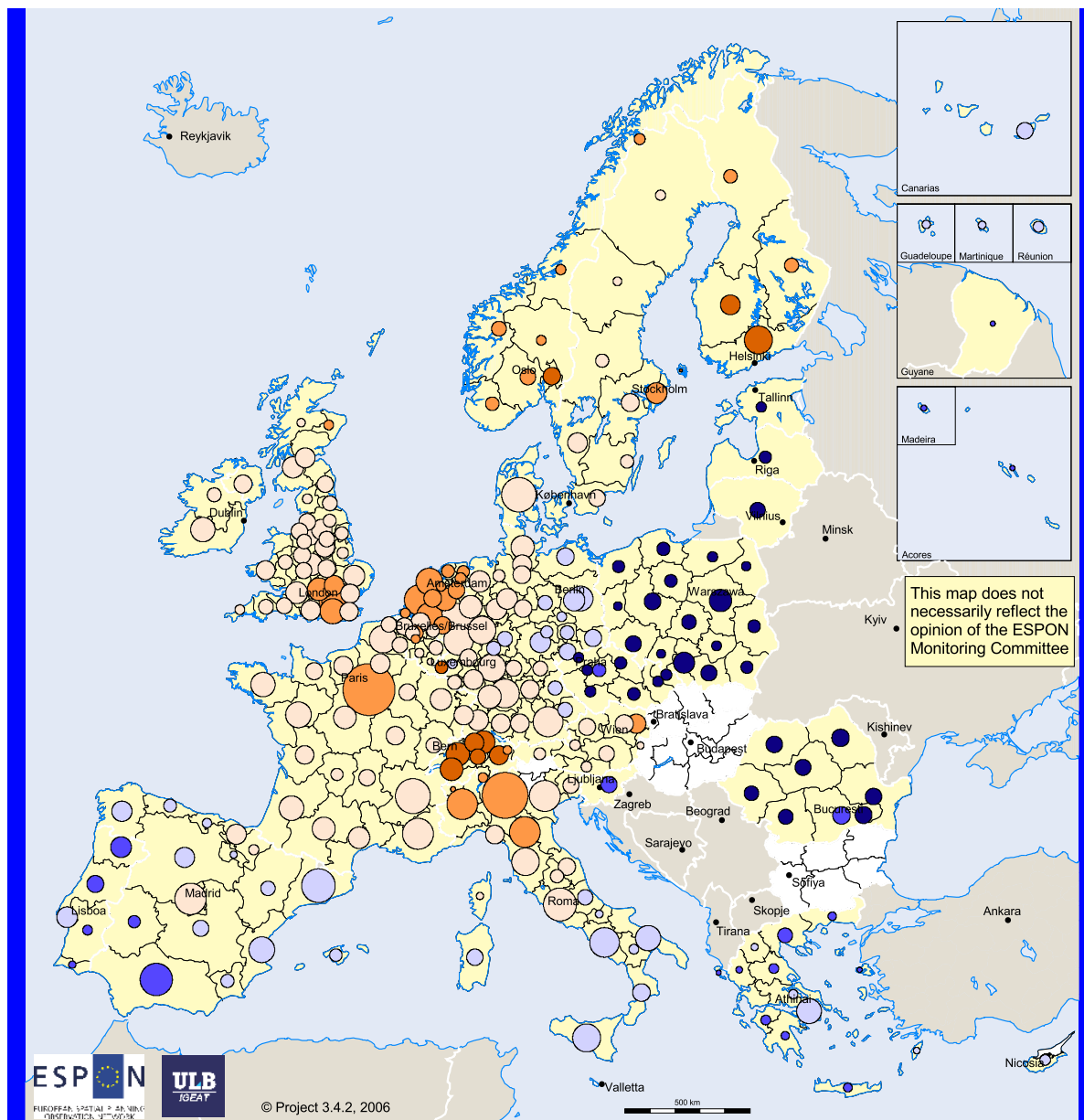


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 Switzerland and Norway : national institutes  
 Statistics in focus - GENERAL STATISTICS  
 THEME 1 - 06/2003  
 Axel Behrens, How rich are Europe's regions? Experimental calculations

**Figure 24 GDP 2000**

New indicator of wealth 2000



This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

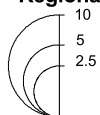


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New indicator per capita (average = 100)  
average = 17736,3

- 10 - 59
- 60 - 79
- 80 - 99
- 100 - 119
- 120 - 159
- 160 - 248
- No data

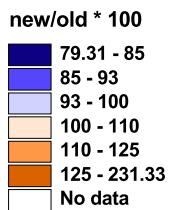
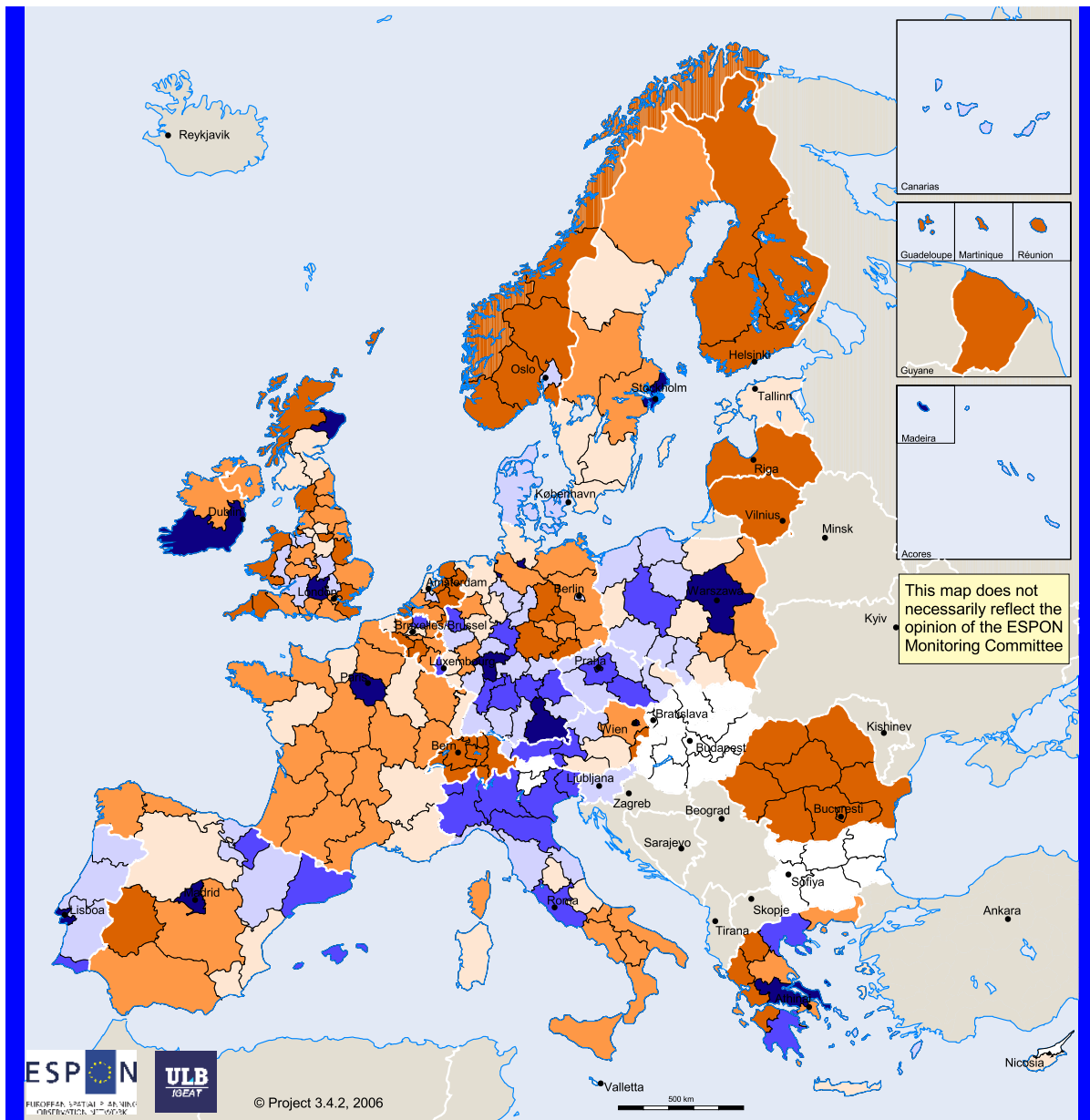
Regional new indicator / Sum of all regional new indicators x 100



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Axel Behrens, How rich are Europe's regions? Experimental calculations

Figure 25 New indicator of wealth 2000

**New indicator per capita 2000 / GDP per capita 2000**



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 Axel Behrens, How rich are Europe's regions? Experimental calculations

**Figure 26 Experimental indicator of regional wealth (EU=100)/GDP (EU =100)**



## 1.6 Proposals for new ESPON indicators performance

### 1.6.1 Introduction

As the previous sections show, there is a need for new indicators of regional economic structures and developments, in order to take into account the complexity of regional economic development by measuring some elements of regulation and thus go beyond the simple GDP cap.

Indeed, we have seen that the national logic remains largely decisive to understand the region's differential evolution. Besides, our general macroeconomic framework (chapter 2) has revealed the importance of regulation logics at that level. This is what we tried to show by elaborating a typology of regulation modes at national level. The countries' development has been proved to be accompanied by a strong national regulation-cohesion. For this reason, we tried, in a first approach, to work out at *regional* level the same indicators revealing *national* level regulations.

In addition, as many other ESPON projects, notably project 3 have developed indicators for measuring regional performance and potentials, we have decided to present a different set, which we believe are important for understanding the economic structures and dynamics of European regions and complement the others developed elsewhere.

### 1.6.2 Methodology

The elaboration of these new indicators has been guided by the global macro-economic framework we have developed in previous reports and which is detailed in chapter 2. As we develop in this chapter, the key variables to understanding the macro-economic developments are both productivities: labour productivity (indicator 1) and capital productivity (indicator 2). It is the relative evolution of these two productivities compared with real wages (indicator 6) that determines the margin rate (indicator 2) and the profit rate (indicator 4). The analysis of the link between real wages and profits is crucial to understand if there is a distortion in income structure (indeed, if real wages go up at the same pace as productivity, income sharing remains stable, and conversely) and thus a trend toward a relative decrease in internal demand (indicator 7). We have also seen that real wage progression was going to contribute to determine product growth according to global effective demand, and that this progression in turn brings about a positive effect on the dynamics of investment (indicator 5) and thus the capital intensity of productive capacities (indicator 3).

Contrary to the Keynesian view, which emphasizes demand above all (and make supply depend on demand), or to neo-liberal views, which almost exclusively stress the conditions of supply profitability (and make demand depend on supply), we believe a completed economic cycle can only be effective if ones respects at the same time and in a well-balanced way, capital profitability conditions (supply) and the increase in final demand (wages, public expenditure, investments). Our set of indicators tries to best approach and measure this global logic.

Indicator	Calculation	Comments
1. Labour productivity (AV/L)	GDP / Hours worked	[or wages; or employment]
2. Margin rate	EBITDA/Added value	[or (AV – Wages) for EBITDA]
3. Capitalistic intensity (K/L)	Capital stock / employment	Measures capital intensity of the production system
4. Economic profitability - (Profit rate)	EBITDA / Capital stock	EBITDA/K = (EBITDA/AV) * ((AV/L) / (K/L)) [or (AV – Wages) for EBITDA] [if not: EBITDA / GDP]
5. Accumulation	Investment / GDP	Rate of investment
6. Real wages	Average wages in regional PPS	Regional PPS does not yet exist
7. Wages part	Wages / GDP Household income / GDP	This proportion of wages in GDP might be used to discuss the contribution of regional economic production system to internal demand. [! Self-employed]
8. Capital efficiency	GDP / Capital stock	Efficiency of capital accumulation. Opposite of K intensity (K/GDP)

**Table 11 Proposed indicators of economic performance**

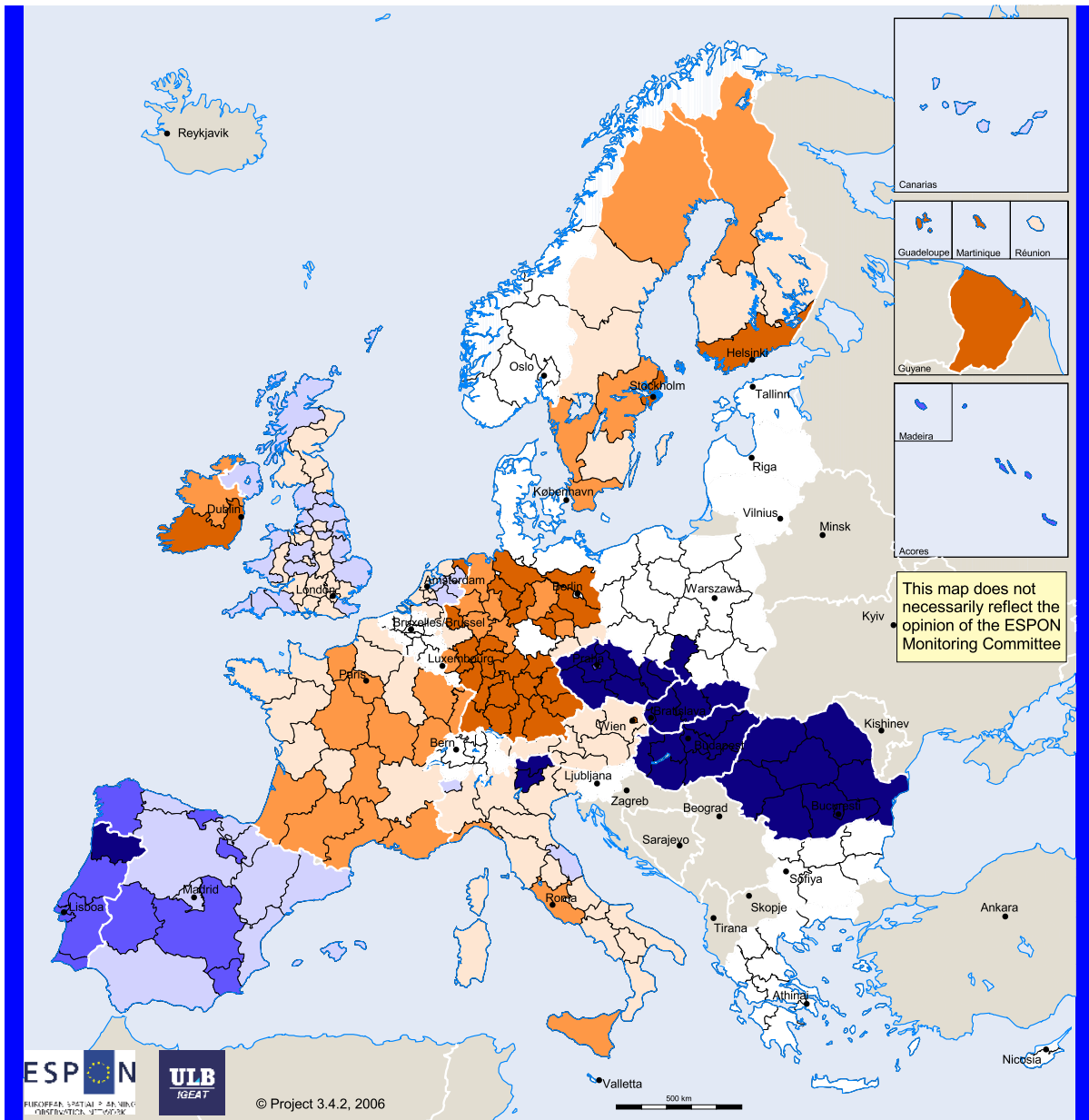
### 1.6.3 Database

Our set of indicators has been mapped from available data. Unfortunately, at regional level, some are desperately missing, such as stock of capital, local deflator, number of working hours, etc. The most promising database was the *Structural Business Statistics* (see above), complemented by the ESPON database for employment in the missing countries. However, the *SBS* database only covers the 'marketable' sector - except agriculture - and is limited to the NUTS 2 level. In view of the still very incomplete, especially from a temporal point of view, character of that database, any evolutionary mapping was risky: this is why we have retained the 2002 data, both the most recent and the most complete. We could this way map four indicators: labour productivity, margin rate, accumulation rate and share of wage in GDP.

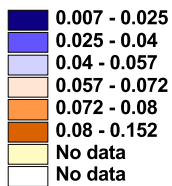
#### **1.6.4 Labour productivity**

To measure Labour Productivity (GDP/Labour), we have used a very rough indicator, which does not take into account the real number of hours of work. The resulting map is nevertheless quite significant as it clearly shows countries and regions with high added value by job such as Germany, France or Ireland (as for the latter, we need to be aware that this performance is, for a part, artificial due to transfer-price manipulation by TNCs – cf. Volume 3, Annex p. 124), and the metropolitan areas in which some regions show a good economic dynamism such as Southwest France. On the opposite, some areas are characterized by a definitely lower added value by job: the former Eastern countries (Czech Republic, Slovakia, Hungary, Romania), as well as non peripheral countries or regions like Portugal or south-central Spain. Beyond some internal contrasts, national realities are very strongly dominant in the spatial distribution of productivity.

**Labour productivity (2002)**



**gdp/employment**



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 Origin of data: EU 15 and CC's : Eurostat,  
 Norway and Switzerland : National Statistical Offices.

**Figure 27 Labour productivity (2002)**

For the record,  $GDY_{\text{habitant}}$  is the product of an intensive component (labour productivity:  $GDY_{\text{habitant}}$ ) by two extensive components (employment rate  $N_{\text{habitant}}$  and total hours

of work ( $N$ ) with  $GD$  =production;  $L$  =quantity of labour;  $N$  =employment;  $H$ = population. This relationship can be written as follows:  $GD/H = L/N$  or in full: the living standard is equal to labour productivity multiplied by hours of work and employment rate.

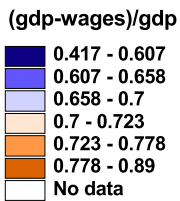
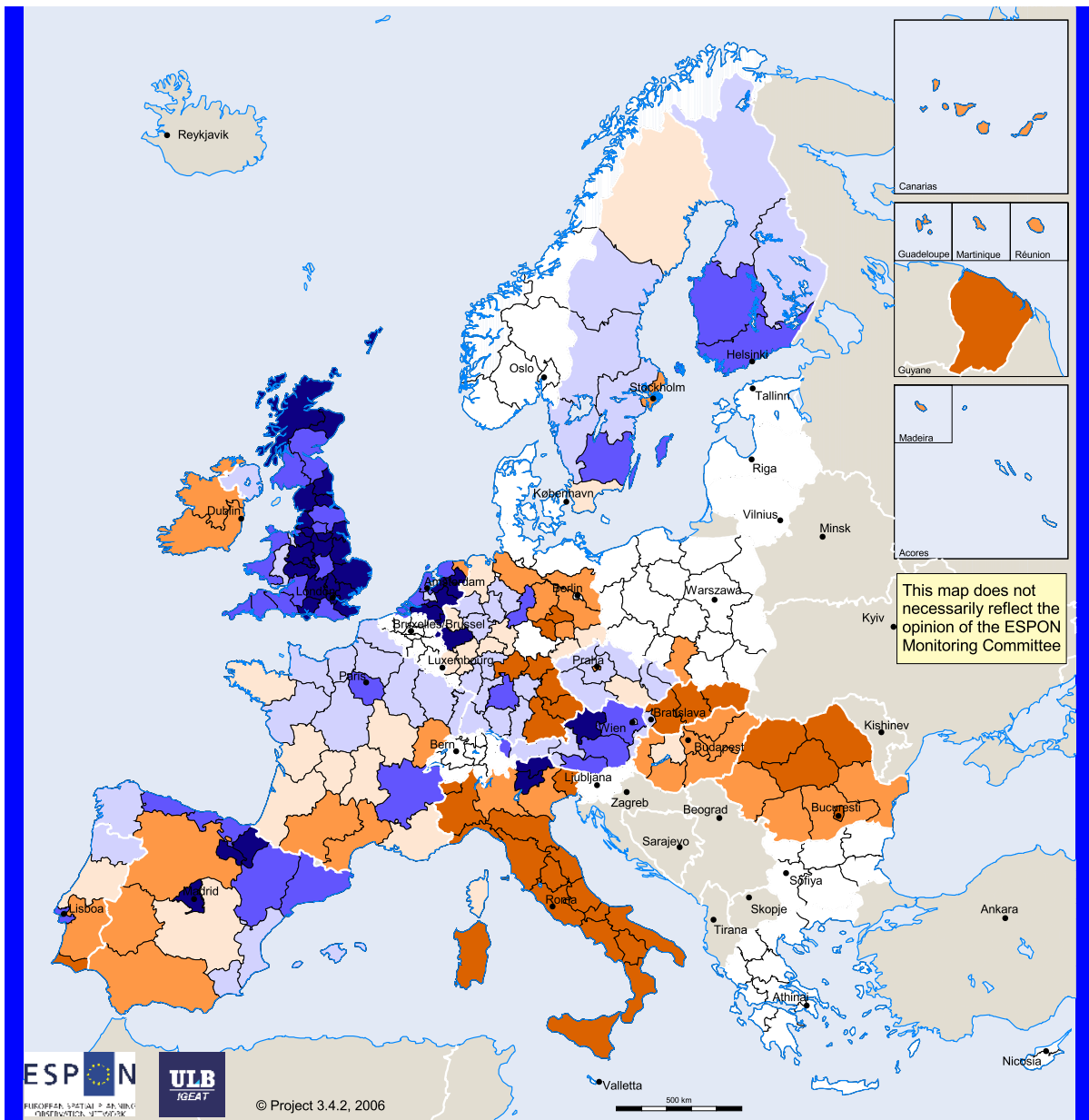
Any increase in working hours and/or employment rate, as these are external components, will have a positive impact on the  $GD$ /habitant<sup>11</sup>. At the first term (labour productivity) is the most important since it allows profit margins that can be allocated either to growth, or to shorten the working week, to increase profits and/or wages, etc. This is what we have mapped here.

### 1.6.5 Margin rate

- This indicator represents the share of gross operating surplus in the added value. Margin rate means what's left when wages have been paid, and can be allocated to reinvestment, cash flow, taxes, return on investments, etc. This map is thus the inverted replica of the share of wages because, when this share is relatively weak in the added value produced, the margin rate is high, and inversely. This map provides a radiography, at a given time (2002) of the relative position of countries and regions as to their policy of added value distribution. Ireland, Italy, Slovenia, Hungary, Romania, south-south-western areas of Portugal, Spain, France and Germany, as well as some metropolitan areas such as Stockholm and Prague, show margin rates higher than the EU average.

<sup>11</sup> Provided circumstances are favourable to economic growth because, if not, the increase in working hours will essentially result in a worsening, if not a reduction, of the employment rate. Employment depends indeed on growth (more growth leads to more jobs) increase in productivity (which reduces the impact of growth on employment) and working hours (their reduction results in more jobs) The situation of weak economic growth since the 1980s, contrary to the happy years of the Keynesian-ordist interventionism (1945-1980) no longer allows to make up for the negative impact the increase in productivity has on employment. The latter has thus essentially risen as a result of the reduction of the working hours, especially in France.

Margin rate (2002)



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 Origin of data: EU 15 and CC's : Eurostat,  
 Norway and Switzerland : National Statistical Offices.

Figure 28 Margin rate (2002)

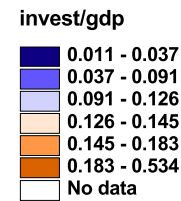
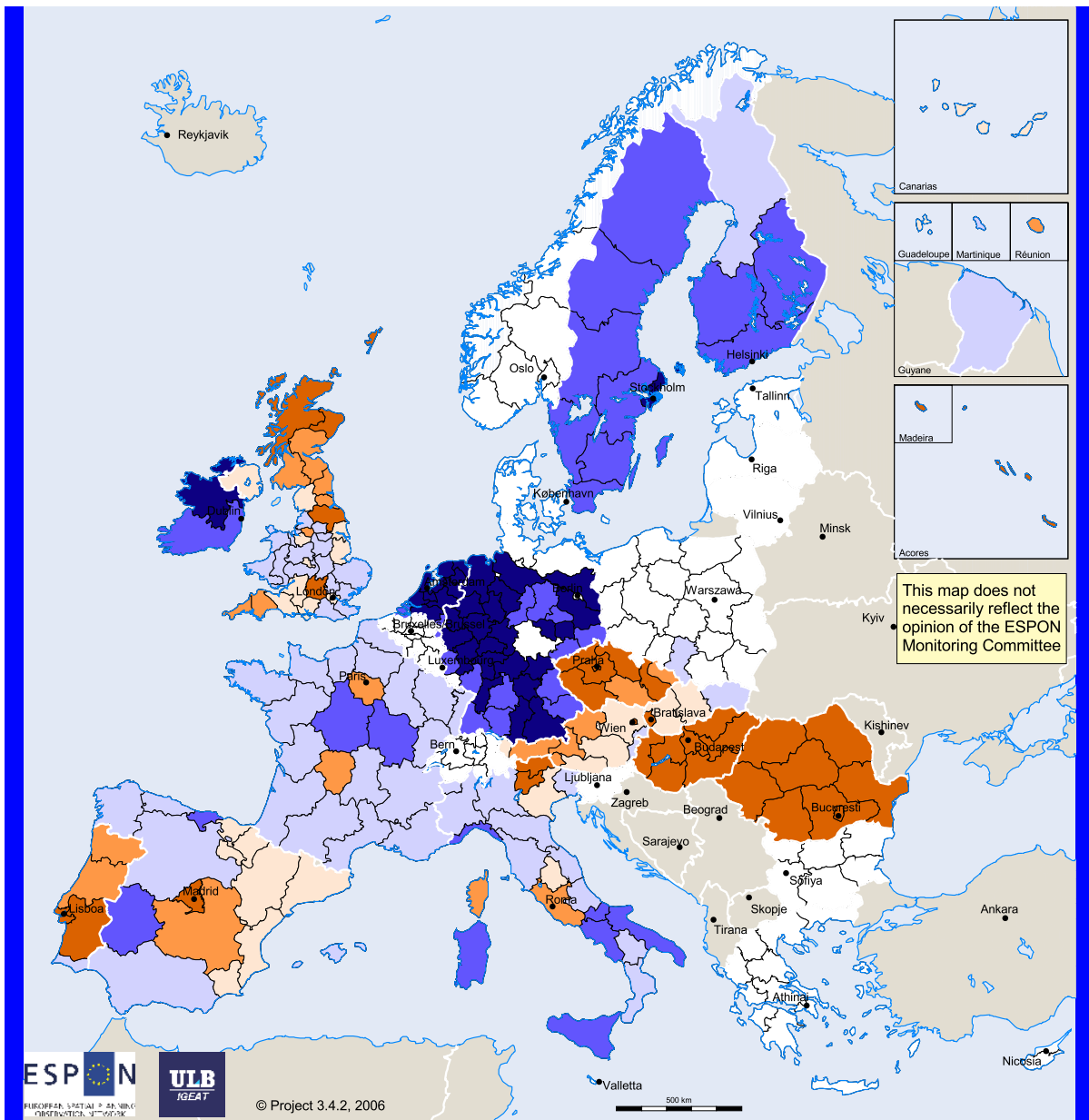
The question is how they are going to use those profit margins once wages are deducted. This is precisely what our other indicators will partly try to determine.

### 1.6.6 Accumulation

Accumulation rate is the share of the wealth produced which is devoted to reinvestment (relation between investment and GDP). It is a pledge for the future, and largely determines growth rates, as much in the medium as in the long run. A society that does not reinvest sufficiently –especially in buoyant markets –takes a mortgage on the future, if only by the simple fact it risks losing its competitive position. Moreover, investment is a cyclical process and strongly varies from one year to another. Therefore, we would have liked to take from the numerator the average on several years, but the database time gaps would have considerably reduced the number of mappable areas. This is why we had to make do with the only year 2002. The worst disadvantage of our choice is that spatial differentiations at national level mainly reflect the economic cycle, which can vary a lot between countries at a given moment, and very imperfectly reflects medium-term trends. This is probably less true with regional differentiations, which are here quite significant. It is relatively surprising in our eyes –and consequently a satisfaction for regional policies – to note that, beyond obvious national specificities, some regional behaviours show sharp contrasts.

Indeed, the map shows a very general metropolitan effect with investment rates systematically high or higher than their environment (Lisbon, Madrid, Paris, London, Rome, Prague, Bratislava, Vienna) with exception of Dublin, Stockholm and Helsinki. Finally, some regional contrasts are strong or relatively strong, for example between the north and the rest of England (except London and the southwest) between south and north in Italy, between central Spain and the rest of the country. Obviously, investment shows a marked regional component, and this is quite surely one of the levers regional policies can efficiently impact on.

**Accumulationrate (2002)**



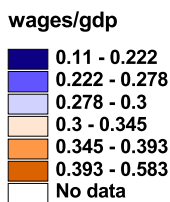
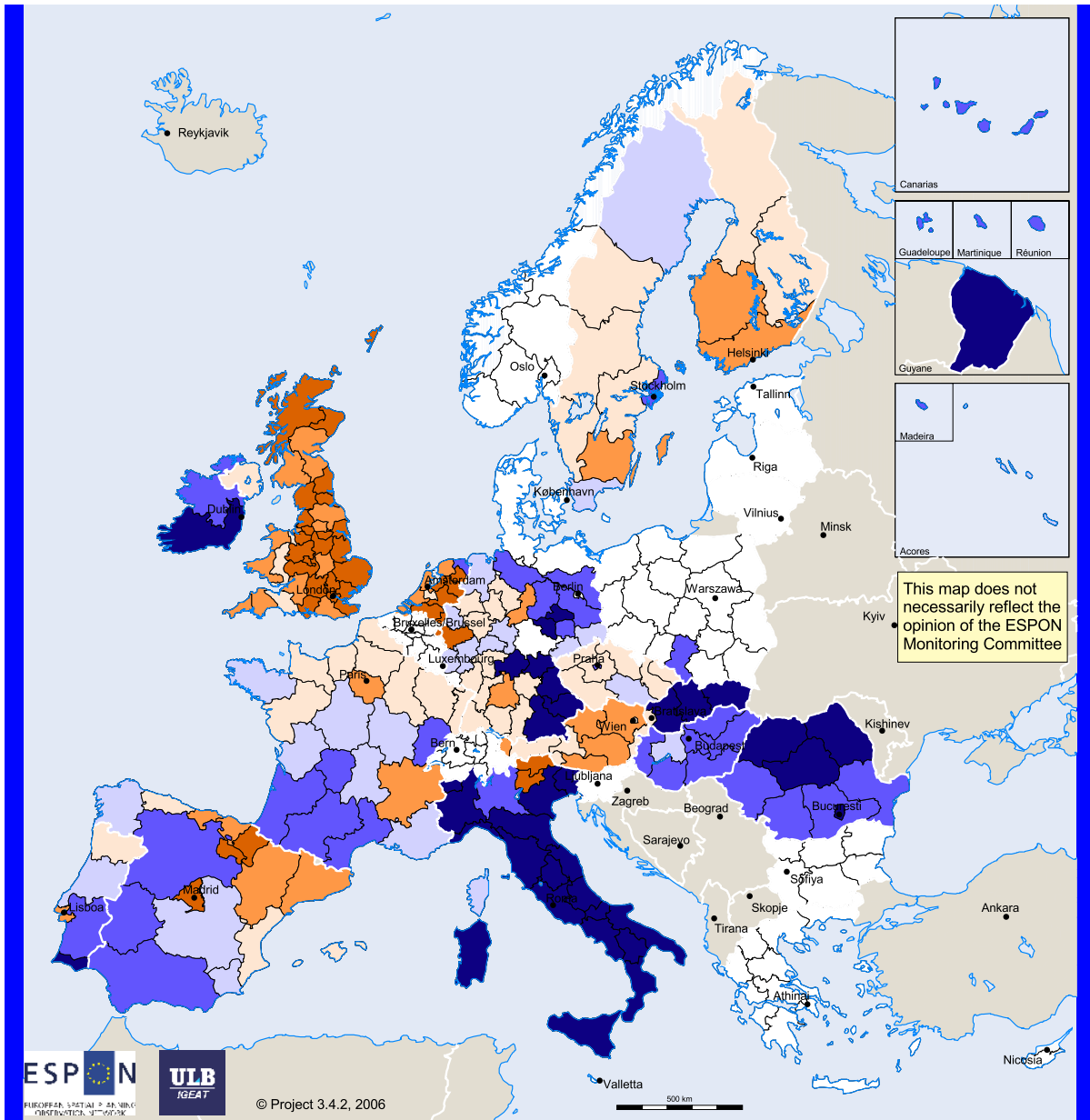
**Figure 29 Accumulation rate (2002)**



### 1.6.7 Share of wages

- As indicated above, the map of wages/GDP is in a way the inverted replica of the margin rate. Our comments will therefore not differ much from what we said previously, except that the attention is drawn here on the regional differentiations of the contrasts related to the share of wages in the whole added value produced.

Wages share (2002)



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 Origin of data: EU 15 and CC's : Eurostat,  
 Norway and Switzerland : National Statistical Offices.

Figure 30 Wage share (2002)

### 1.6.8 Toward a true regional macro-economy

For the sake of easiness, it would be tempting to simplify the political message and reduce the objective to a single dimension of reality. However, we do not think that the issue of regional competitiveness can be reduced to the regions' capacity to pass the test of international markets, as regrettably expressed in many EU documents. We don't even think this is a good synthetic indicator of competitiveness. It is at the very most one parameter of the global problematic. No serious economist would dare reduce the issue of national competitiveness to a positive trade balance. It only takes comparing two of the main economies to understand it easily: for several years Germany has been very competitive on external markets and has shown a trade surplus despite a sluggish growth; on the other side of the Atlantic, the USA with a series of trade deficits, enjoy all the same an overaverage economic growth. We therefore see no reason to retain that single dimension at regional level with the aim to measure its competitiveness, when the latter is to be understood as the general capacity for regional development.

## 1.7 Location of multinational enterprises and economic command in Europe

Even more than that of wealth, the geographical distribution of economic command shows a very high level of concentration in Europe. Multinational headquarters, financial services, stock exchanges illustrate this phenomenon. To evaluate this concentration, we elaborated a map of the localization of headquarters of multi-nationals enterprises which belong to the list of the top 2000 global companies compiled by Forbes<sup>12</sup>, which also specifies their sectoral specialization. This specialization is illustrated in figures 3 and 2 by the use of specificity diagrams.

The concentration of the economic command in the central blue banana' of Europe, and Paris, is evident from this map. Most headquarters are indeed located between the north of England and central Italy, including the Benelux, Germany and Switzerland. Inside this large central area, the predominance of three poles is clear: London and Paris are the main internationalized economic poles in Europe, but the Randstad (Holland (Amsterdam-Rotterdam)) is not so far from these two major poles. It confirms the strong internationalization of the Dutch economy, put into the fore in the second interim report of the 3.1. project (see the high extra-European opening rate of the Dutch trade.) More generally, the international importance of these three major poles is also confirmed by others indicators, as the internationalization of the airports, the stock market value, and the weight of business and financial services. These indicators underline also the importance of

<sup>12</sup> available at [www.forbes.com](http://www.forbes.com).

some others poles, especially Frankfurt, Zürich and Milan, which are not of this major level when one takes only multi-national headquarters into consideration.

The map does not only illustrate a general hierarchy in the European command but also national command of the economies, very related to the general urban structure of the economies. On one side, we have the French pattern, where all the headquarters are localized in Paris, with two minor exceptions, at the image of the very centralized French urban structure. On the other side, we have the German pattern, where headquarters are localized in several major centres (Hamburg, Düsseldorf, Frankfurt, Berlin, Munich), reflecting here again a decentralized urban, and political, structure. The British distribution of headquarters, while close to the French centralized pattern, shows beside the major pole of London, a high number of towns (Manchester, Birmingham, Newcastle) with few multi-national headquarters. In Italy, beside the three important poles (Turin, Milan, Roma) we observe a dispersion of the headquarters of multi-nationals mainly specialized in the financial services, at the image of the scattering of its financial system. Moreover, it is necessary to underline the weakness of Italy in terms of localization of headquarters, sign of an economy in some aspects less internationalized and dominated by firms of small and medium size.

Outside the blue banana, headquarters are very often localized in the capital cities, such as Madrid, Dublin, Stockholm. In the case of Spain, the clear domination of Madrid is striking, despite the fact that Barcelona is a comparable city in terms of size.

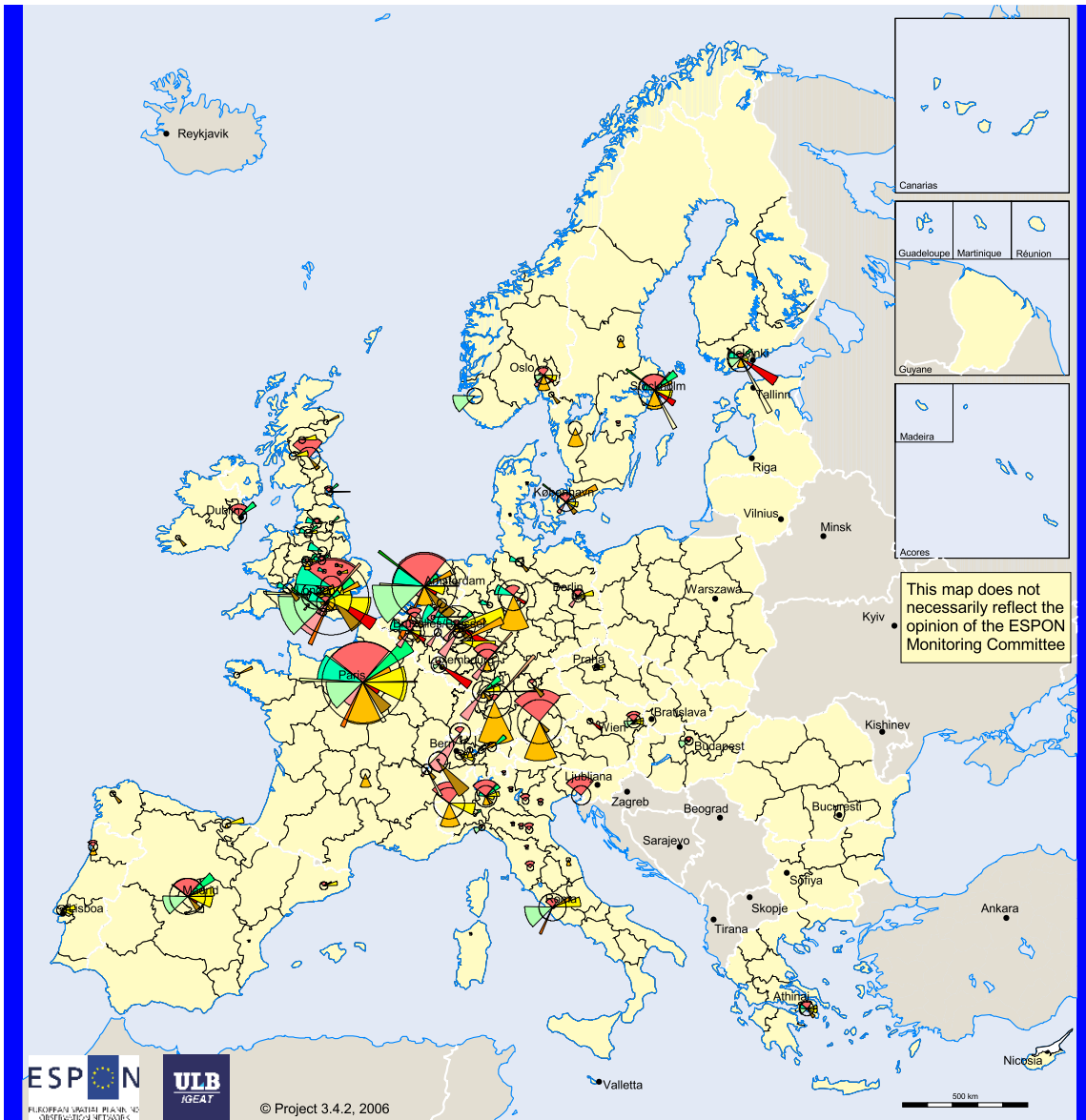
In Eastern Europe, only Praha and Budapest have few multi-nationals headquarters.

In terms of specialization, we can underline some major facts:

- the similar structure of London and the Randstad Holland, specialized in tertiary multinationals such as financial services, retail trade and trading, but also oil industry. While the Randstad is clearly underspecialized in all production except oil, London has some specialization in some high technological production (biotechnology, aerospace)
- Paris has a more balanced structure between services and production, including some high technological industries (software, aerospace).
- in Germany also, the specialization reflects and underlines the economic structure: we observe two poles specialized in financial services (Munich and Frankfurt) some cities specialized in capital goods and consumer durables (Munich, Stuttgart, Wolfsburg), in chemicals, and in some traditional industry in the Ruhr area (utilities and materials) This last point is interesting because this old industrial region is the only one to keep the ownership of its own industry and even to constitute firms of multi-national level;
- In Italy, financial services are dominant especially in Milan and Turin and in small cities of third Italy, while Rome is more specialized in oil industry and media;

- Elsewhere, we observe local specializations such as the famous technological industry in Helsinki. Only Madrid and Stockholm reach, on a smaller scale, the diversification of major poles of the blue banana.

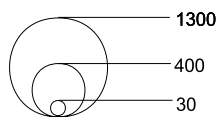
Location of Forbes 2000 company headquarters in Europe



Type of activity

- Software and services
- Utilities
- Transportation
- Construction
- Health Care
- Financial Services
- Business Services
- Retail, Hotels and Restaurants
- Trading
- Oil & Gas
- Chemicals & Biotech
- Aerospace & Defense
- Capital Goods and Consumer Durables
- Technology
- Food & Household products
- Materials
- Media & Telecom
- No data

Total Sales (\$bil)

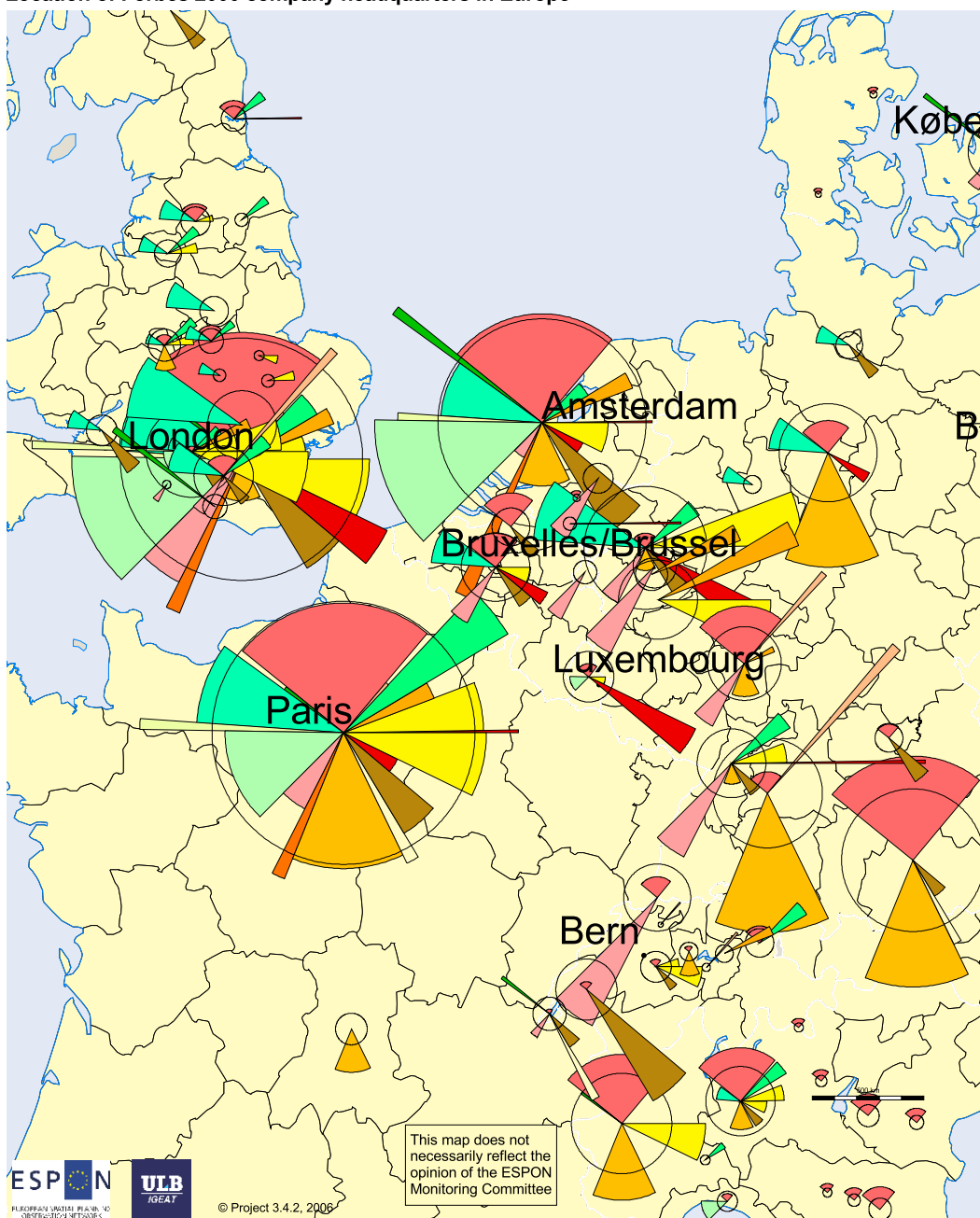


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Origin of data: Forbes.com

Figure 31 Location of Forbes 2000 company headquarters in Europe (data from 2005)

Location of Forbes 2000 company headquarters in Europe



Type of activity

- |  |   |
|--|---|
| <span style="color: red;">■</span> Software and services             | <span style="color: lightgreen;">■</span> Oil & Gas                     |
| <span style="color: yellow;">■</span> Utilities                      | <span style="color: pink;">■</span> Chemicals & Biotech                 |
| <span style="color: orange;">■</span> Transportation                 | <span style="color: lightblue;">■</span> Aerospace & Defense            |
| <span style="color: green;">■</span> Construction                    | <span style="color: gold;">■</span> Capital Goods and Consumer Durables |
| <span style="color: lightblue;">■</span> Health Care                 | <span style="color: brown;">■</span> Technology                         |
| <span style="color: pink;">■</span> Financial Services               | <span style="color: darkred;">■</span> Food & Household products        |
| <span style="color: lightgreen;">■</span> Business Services          | <span style="color: yellow;">■</span> Materials                         |
| <span style="color: orange;">■</span> Retail, Hotels and Restaurants | <span style="color: lightblue;">■</span> Media & Telecom                |
| <span style="color: green;">■</span> Trading                         |   |

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Origin of data: Forbes.com

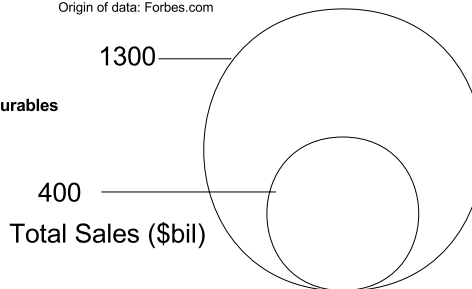


Figure 32 Location of Forbes 2000 company headquarters in Europe (detail) (data from 2005)

## 1.8 Typology of regional economic structure at NUTS 2 – NUTS 3 level

### 1.8.1 Introduction

In this section we try to synthesize the structure of the European economy at regional level., based on sectoral structures. Europe has strong economic inequalities, notably between the wealthy central regions and the southern and eastern peripheries. Our point here is to show that economic inequalities are reinforced by structural differences between rich and poor regions. We will synthesize these structural features in typologies of European regions.

We would like to draw the reader's attention to the fact that these typologies should not be read too rigidly. Three main reasons explain the uncertainty about the classification of regions by type: some regions might be shifted from one type to another because they do not have a very marked structure – in the sense structural types have been defined; the sectoral division we use has a big impact on the result as well as the method chosen; spatial divisions also impact a lot on the result, since for example two parts resulting from the division of a region can belong to two types differing from the initial region, which is their average. The aim is thus to show the big geoeconomic divisions of the European space and not to classify every area once and for all.

### 1.8.2 Data

Most analyses of regional production systems in ESPON use a very limited differentiation of economic activities. This is highly unsatisfactory as the type of policy to use in a given region obviously depends on the specific mix of activities with which this region operates. It is thus important to be able to analyse the distribution of activities across Europe. Then, we have mainly concentrated our efforts on the collection of structural data, on the basis of value added (and employment) by economic sector, as this is the basic building block in the understanding of regional economic developments. The goal is to build a typology of European regions based on their economic structure.

The basis of our typology is the complete matrix at NUTS-2 level (NUTS-3 for Spain, France, Italy and Poland) of economic structure of European regions in 25 sectors (see table below) in 2002, measured in value added. The main data source is Eurostat (for the first letter of the NACE typology) we have disaggregated the added value of the industry sector with the help of employment in order to reach the second letter of the NACE subdivision (national employment data have been used for that purpose)



The economic sectors for which the value added data are needed have been chosen according to the European nomenclature: NACE Rev. 1. The choice of the ideal level of sectoral division is a trade-off between precision and availability. If it were possible, the data should be collected at the NACE 2-digits level, that is to say with 60 sectors, but we are aware that at this level the statistics of value added by region will not be available for every country. The NACE A17 level is, on contrary, not precise enough because with its 17 branches, it does not include a subdivision of the manufacturing branch. We need this division inside the industrial sectors for differentiating regions with old heavy-industries, light industries or technologically advanced industries. In conclusion, the ideal level of sectoral breakdown is the NACE A3 level, with 3 branches, given in the table below. For reasons of data availability and analysis clarity, we have merged the 3 sectors of the nomenclature into 25.

A-B	A: Agriculture, hunting and forestry B: Fishing
C	C: Mining and quarrying of energy producing materials CB: Mining and quarrying except energy producing materials
D	D: Manufacture of food products; beverages and tobacco
B-D	B: Manufacture of textiles and textile products D: Manufacture of leather and leather products
D	D: Manufacture of wood and wood products
D	D: Manufacture of pulp, paper and paper products; publishing and printing
D-D	D: Manufacture of coke, refined petroleum products and nuclear fuel D: Manufacture of chemicals, chemical products and man-made fibres
D	D: Manufacture of rubber and plastic products
D	D: Manufacture of other non-metallic mineral products
D	D: Manufacture of basic metals and fabricated metal products
D	D: Manufacture of machinery and equipment n.e.c.
D	D: Manufacture of electrical and optical equipment
D	D: Manufacture of transport equipment
D	D: Manufacturing n.e.c.
E	E: Electricity, gas and water supply
F	F: Construction
G	G: Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
H	H: Hotels and restaurants
I	I: Transport, storage and communication
J	J: Financial activities
K	K: Real estate, renting and business activities
L	L: Public administration and defence; compulsory social security
M	M: Education
N	N: Health and social work
O-P	O: Other community, social, personal service activities P: Activities of households

**Table 12 The NACE A-31 nomenclature reorganized in 25 sectors**

### 1.8.3 The Principal component analysis

The first step of our typology is a principal component analysis on the whole matrix. This analysis synthesizes the information into a small number of new variables (called components) that will take into account a higher share of the variance than the initial variables (25 sectors). It will thus put together sectors which have a similar geography. The relative value of each sector was weighted by the economic weight (total value added) of each region in order to give importance to more significant associations.

Table 12 shows the share of the information taken into account by the 10 first new components.

	Eigenvalue	% of variance	cumulated %
1	5,0	19,8	19,8
2	3,3	13,3	33,1
3	2,0	7,9	41,0
4	1,5	5,9	46,8
5	1,4	5,5	52,3
6	1,2	4,8	57,2
7	1,1	4,6	61,7
8	1,1	4,4	66,1
9	1,0	4,0	70,1
10	0,9	3,5	73,6

**Table 13 Share of the variance taken into account in the first ten new components of the analysis.**

To facilitate the interpretation of the new components, we projected the initial variables on the plane of the first and second components (Fig. 3) and the plane of the two next components (Fig. 4).

The first component opposes the financial sector, the businesses services, the transport and communication sector as well as other services, on the left side, to most of the manufacturing sectors as well as agriculture and building industry, on the right side. A negative score on this component is an indicator of economic commandment and centrality. In geographical terms (see Fig. 5) the opposition is between big central and commanding metropolitan areas, on one hand, and more peripheral areas, on the other. Most of the largest European cities appear in deep blue, while more secondary centres appear in less dark blue on the map.

The second component opposes some manufacturing industries of middle or high technological level, on the positive side, to low technological sectors, such as building industry, agriculture, catering, administration, education, which sometimes present a high proportion of value added simply by lack of development of other activities. Spatially, this indicator opposes to a certain extent rich central Europe, with a strong concentration of high technological industry, to the poor periphery, with high shares of agriculture, building industry and other types of low technological sectors or services to local population (see Fig. 6).

6) However, this needs to be qualified. On the one hand, some central regions of Great Britain and the Benelux do not have high scores on this indicator, often because, especially for Netherlands and England, they are strongly specialized in high level services and so much in manufacturing, even high-tech manufacturing. On the other hand, some peripheral regions have high scores on the indicator: Southern Sweden, Finland, and Ireland confirm their technological level, while some western regions of eastern Europe benefit from the outsourcing of some western companies, in middle technologies more than high ones, especially the car industry.

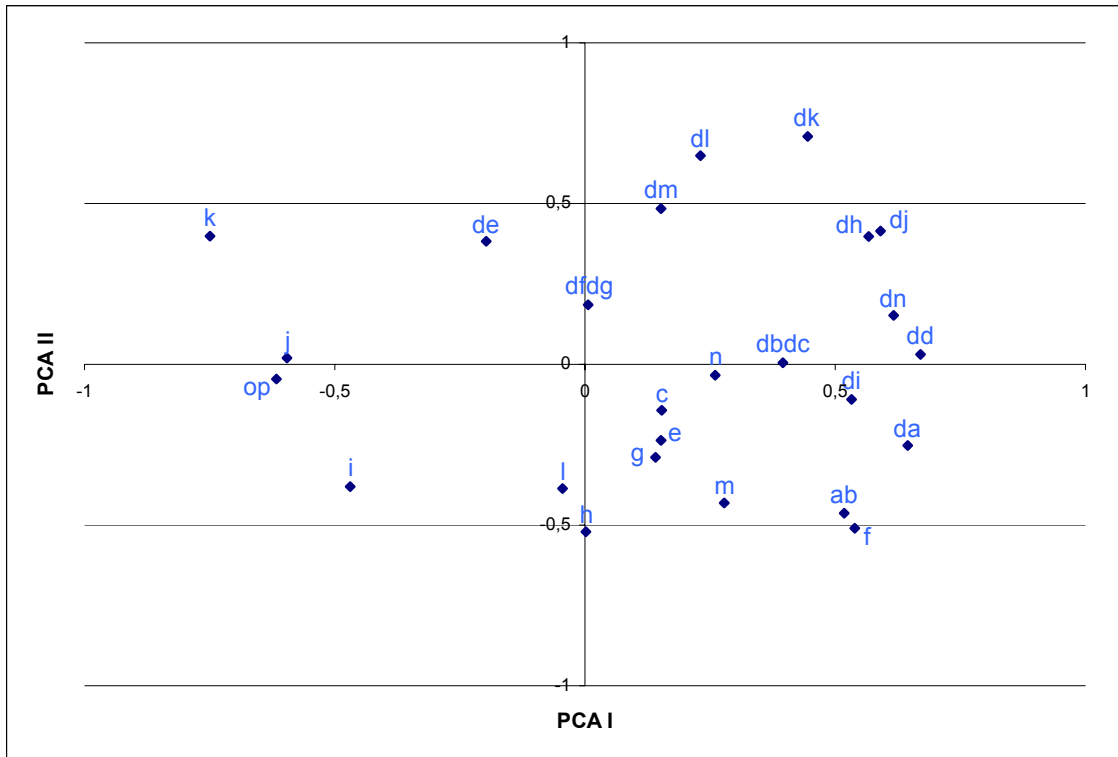
The third component clearly opposes mainly non market services (administration, education and health) to some market services and light industries. The weight of the non market services is the result of two different processes: the weight of the state in the economy, with countries such as Scandinavian countries, France or Belgium where it keeps a more important role, on the one hand, and the opposition between central and peripheral regions inside each country (see Fig. 3). Indeed, in peripheral regions non market services are developed by lack of others activities as it is the case for example in Wallonia, Southern Italy, or Eastern Germany.

The fourth and following components have a less strong structural and geographic coherence: they often highlight less significant oppositions, with some highly specific sectors. For example, the fourth component opposes the chemical industry to all others sectors, because of its very specific geography, which is in fact the result of different spatial logics: the oil industry in the port areas, the high technological pharmaceutical industry in some central areas, the heavy chemistry in some old industrial regions or even in development poles of the periphery,...

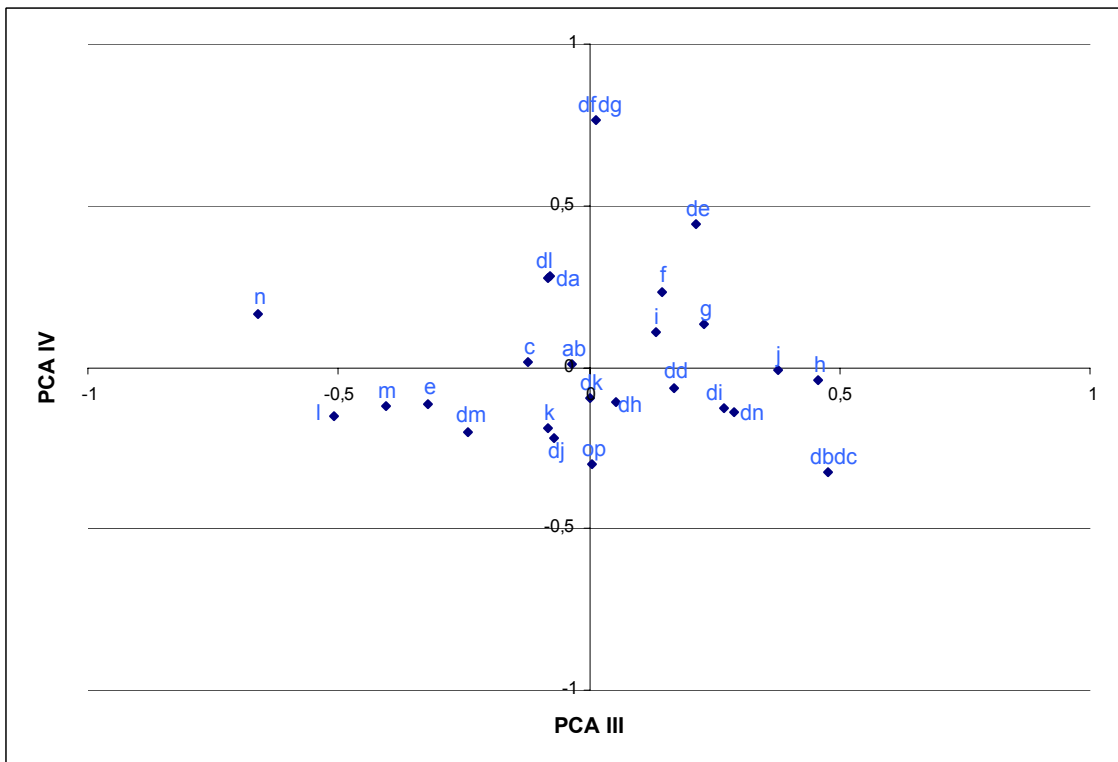
We chose to use the components of the PCA to produce our typology as the typology on the basic matrix with 25 sectors is not convincing enough: firstly, it takes into account some less coherent part of the information (thus making it difficult to discern the essential information from noise) but mostly it seems to be influenced by the uncertain limits between some sectors, which could explain their very high shares in some countries (for example the trade sector in Poland). The principal component analysis allows avoiding this difficulty because it puts together the same kind of sectors, thus distilling the essential information.

We only used the first three of the components resulting from the PCA. Taking into account the fourth and next components of the analysis would have for consequence to take into consideration a less coherent and comprehensive information, sometimes more anecdotal.

In the typological analysis, we keep the initial hierarchy of the three components (in terms of the share of information contained in each of them) by weighting the scores by the share of variance of each component.

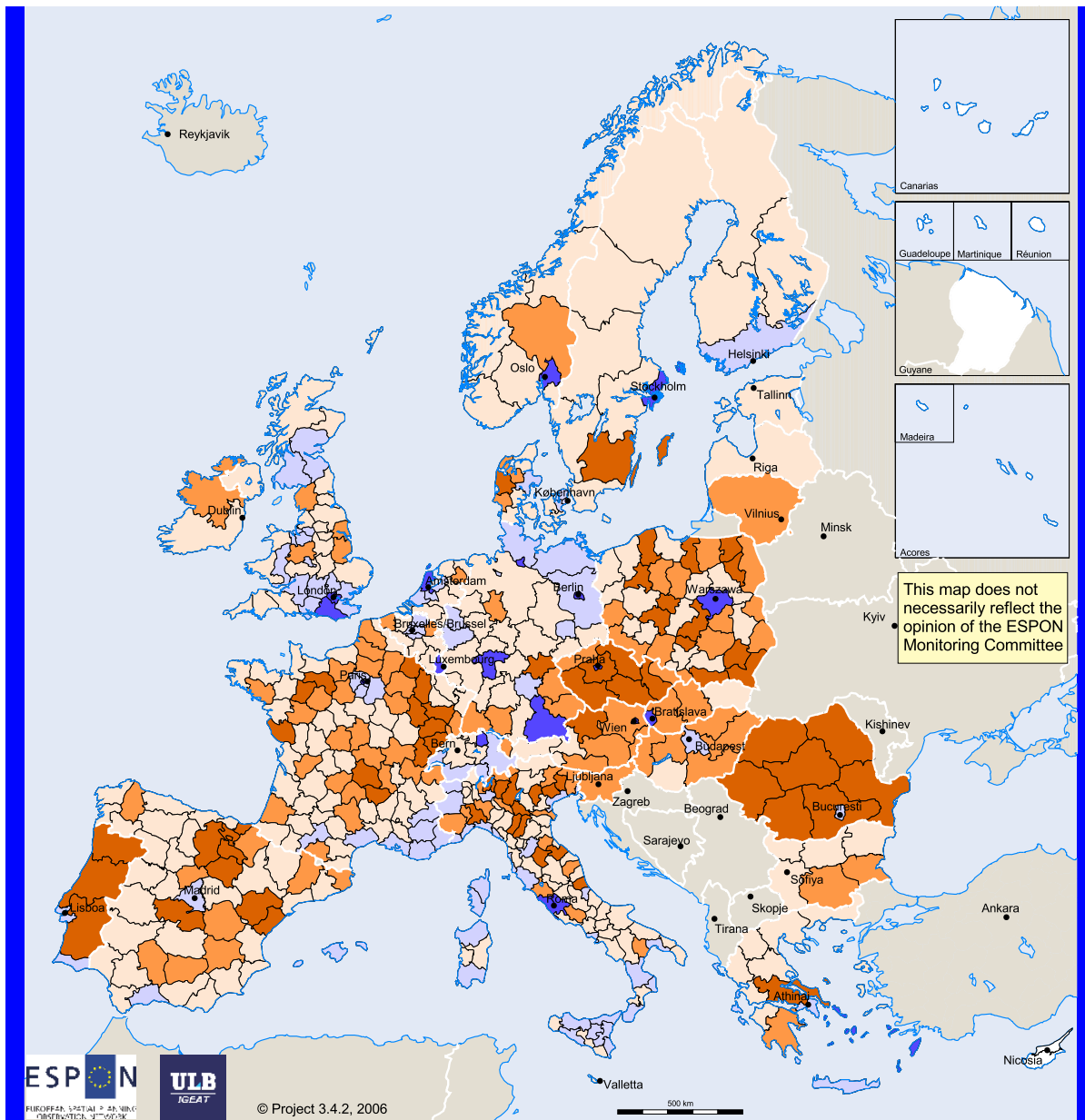


**Figure 33** Correlation between initial variables (share of the added value in each economic sector) and the two first components of the PCA.



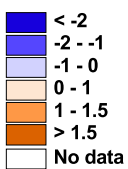
**Figure 34** Correlation between initial variables (share of the added value in each economic sector) and the third and fourth components of the PCA.

Component 1 of the PCA



This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

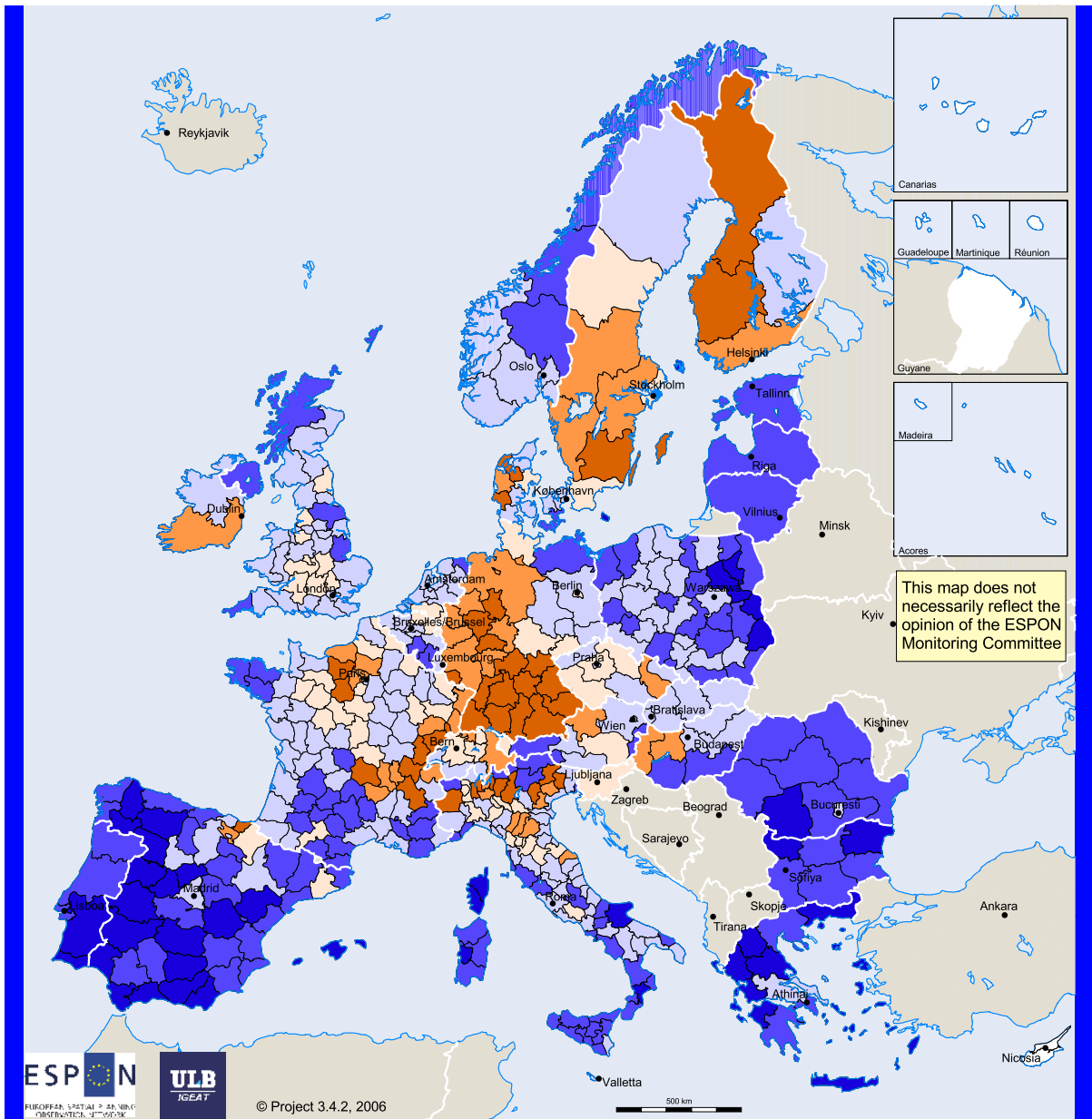
CP1



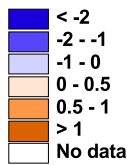
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 Origin of data: EU 25, CC's and CH, NO : Eurostat, National Statistical Offices.

Figure 35 Scores of each region of the first component of the PCA

Component 2 of the PCA



CP2

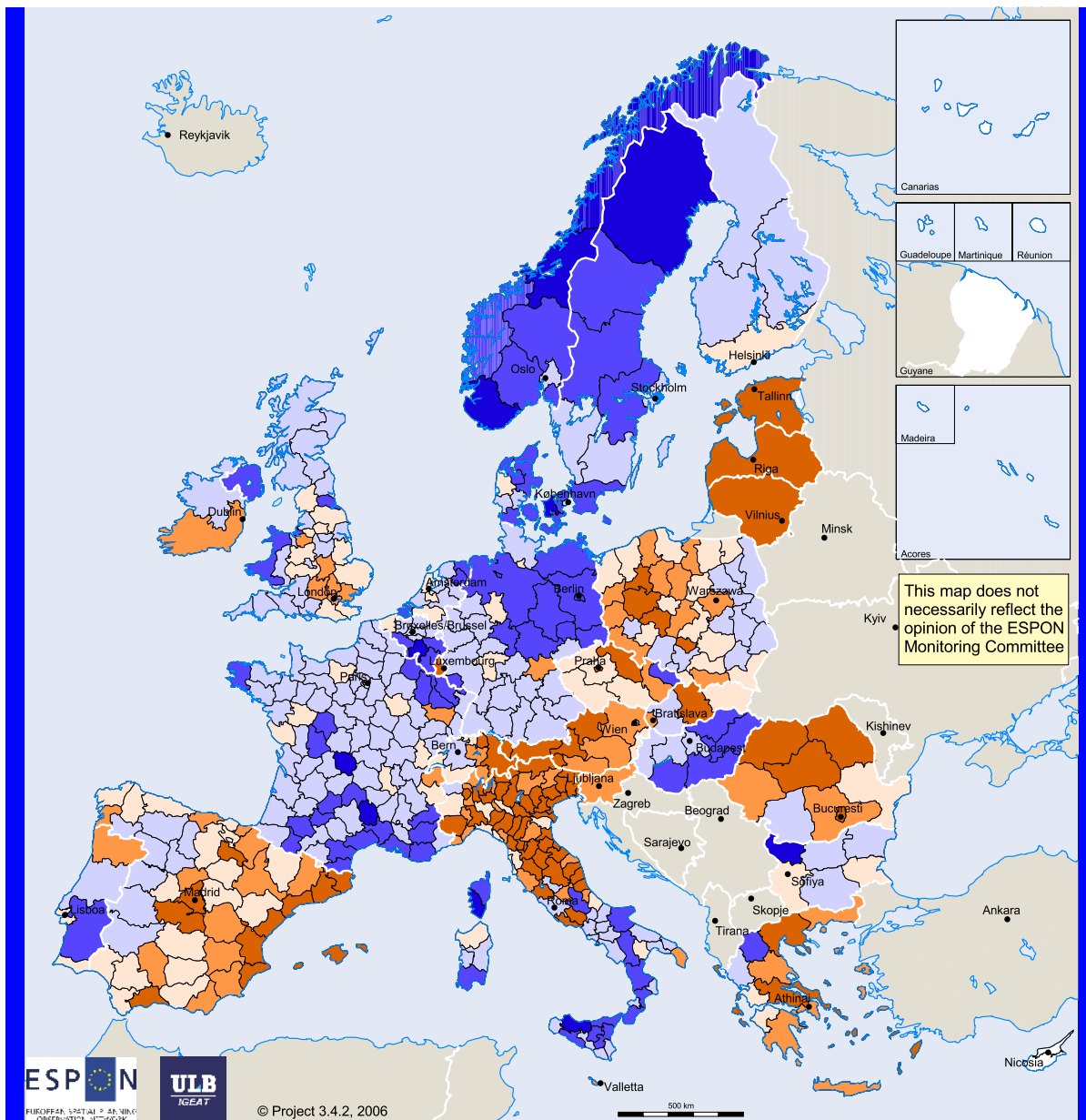


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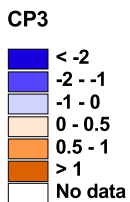
Origin of data: EU 25, CC's and CH, NO : Eurostat, National Statistical Offices.

Figure 36 Scores of each region of the second component of the PCA

Component 3 of the PCA



Canarias  
 Guadeloupe Martinique Réunion  
 Guyane  
 Madeira  
 Açores  
 This map does not necessarily reflect the opinion of the ESPON Monitoring Committee



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 Origin of data: EU 25, CC's and CH, NO : Eurostat, National Statistical Offices.

**Figure 37 Scores of each region of the third component of the PCA**

### 1.8.4 The typology

As a result of the principal component analysis, we have a matrix of the nuts2-3 regions and their scores on the three first components. The typology has for objective to gather together regions which have similar economic structure.

At the first stage, we associate the regions in function of the distances between them on the three first components. To achieve it, we use the ward method, which assures that the variance within types is minimized and the variance between types is maximized. With this method, we produced a 6 group typology. In the second stage, we associated some of these types in function of their structures. The typology itself proposes a way to associate the types but we choose also to take into account the average structure of each group. Indeed, groups can be relatively different because they have high or very high share in some specific sectors. But the structural difference remains weak to our point of view, between for example a region with 15 or 30% of added value in the textile industry (as both are exceptionally high) The following decisions have been taken on this basis:

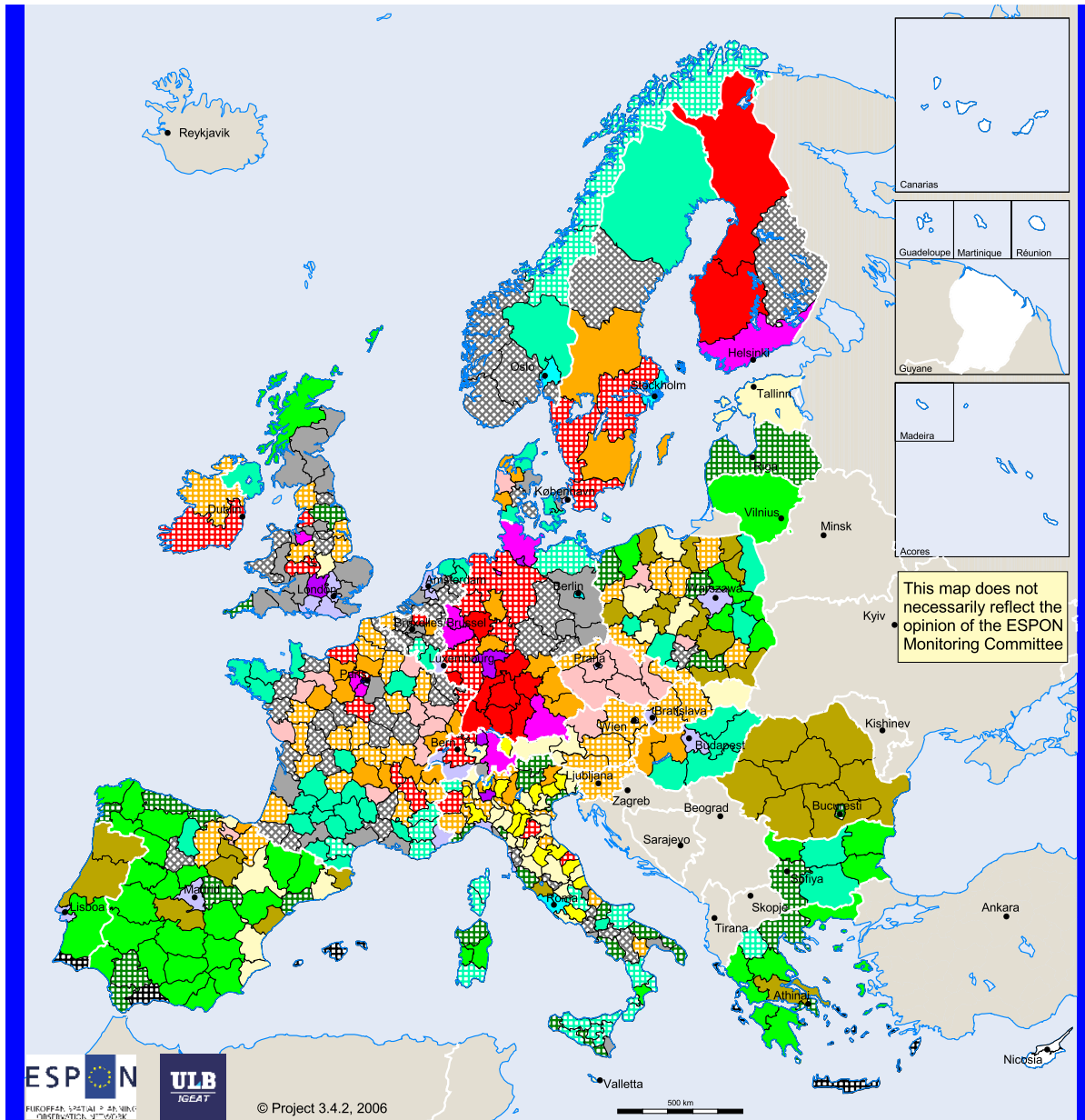
- some metropolitan types have been put together, for example two types of German metropolitan areas have been combined since they are characterized by their high levels in the financial and business services but also in high technological industries;
- two small types characterized by their lack of industrialisation and the strong weight of non market services (Eastern Germany, southern Italy, some southern French *departements*)
- two types characterized by a high share of manufacturing industry, especially of high technological level (high scores on the second component) have been combined;
- two types have been combined on the basis of the very high share of textile industry, while two others have been gathered together because of their high share of light industry with a more diversified structure.

We finally end up with a 20-group typology. But it could happen that some regions are closer to another type than the one they are included in. To avoid this, we use a kmeans algorithm to recalculate the distance between each region and each type and affect the region to the closest type.

Figure 8 illustrates this final typology and the graphs show the structure of each type.



**Economic typology of European regions in 2002, 20 types**



This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

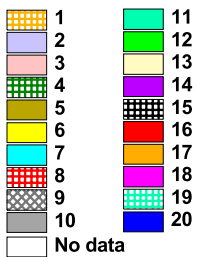
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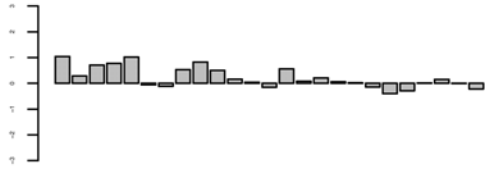
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**20 TYPES**



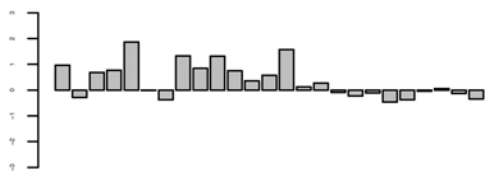
**Figure 38 Economic typology of European regions in 20 types**



type 1



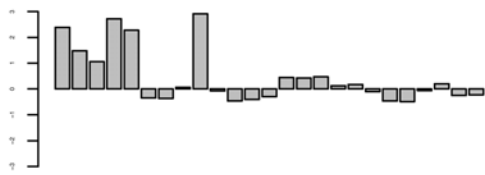
type 2



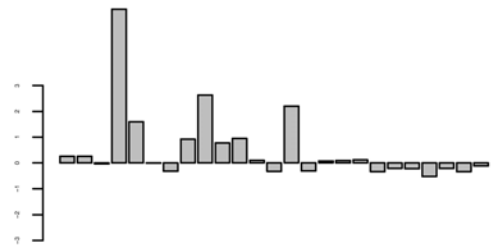
type 3



type 4



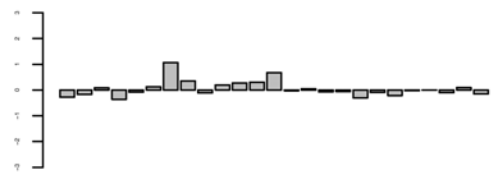
type 5



type 6



type 7



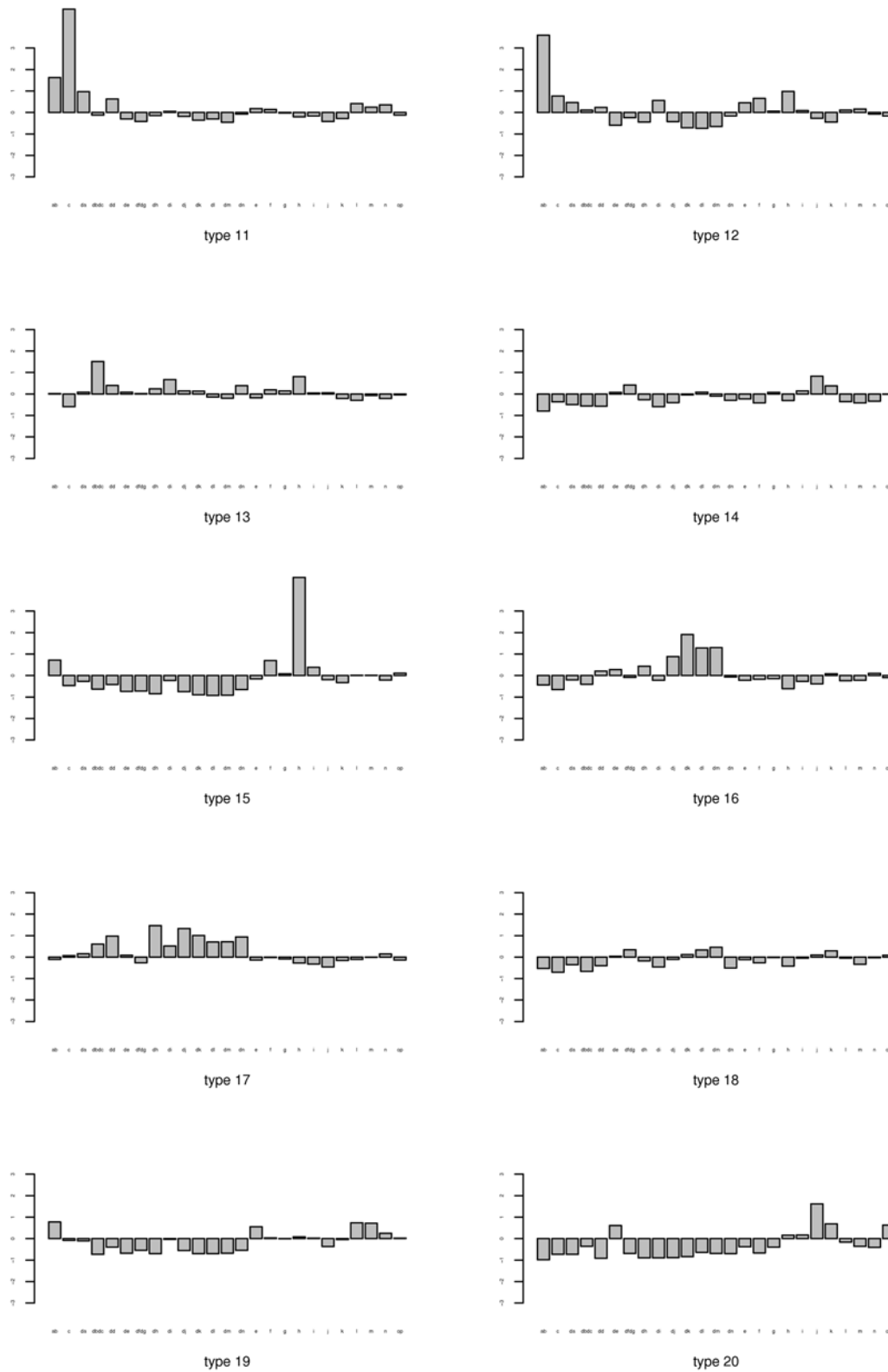
type 8



type 9



type 10

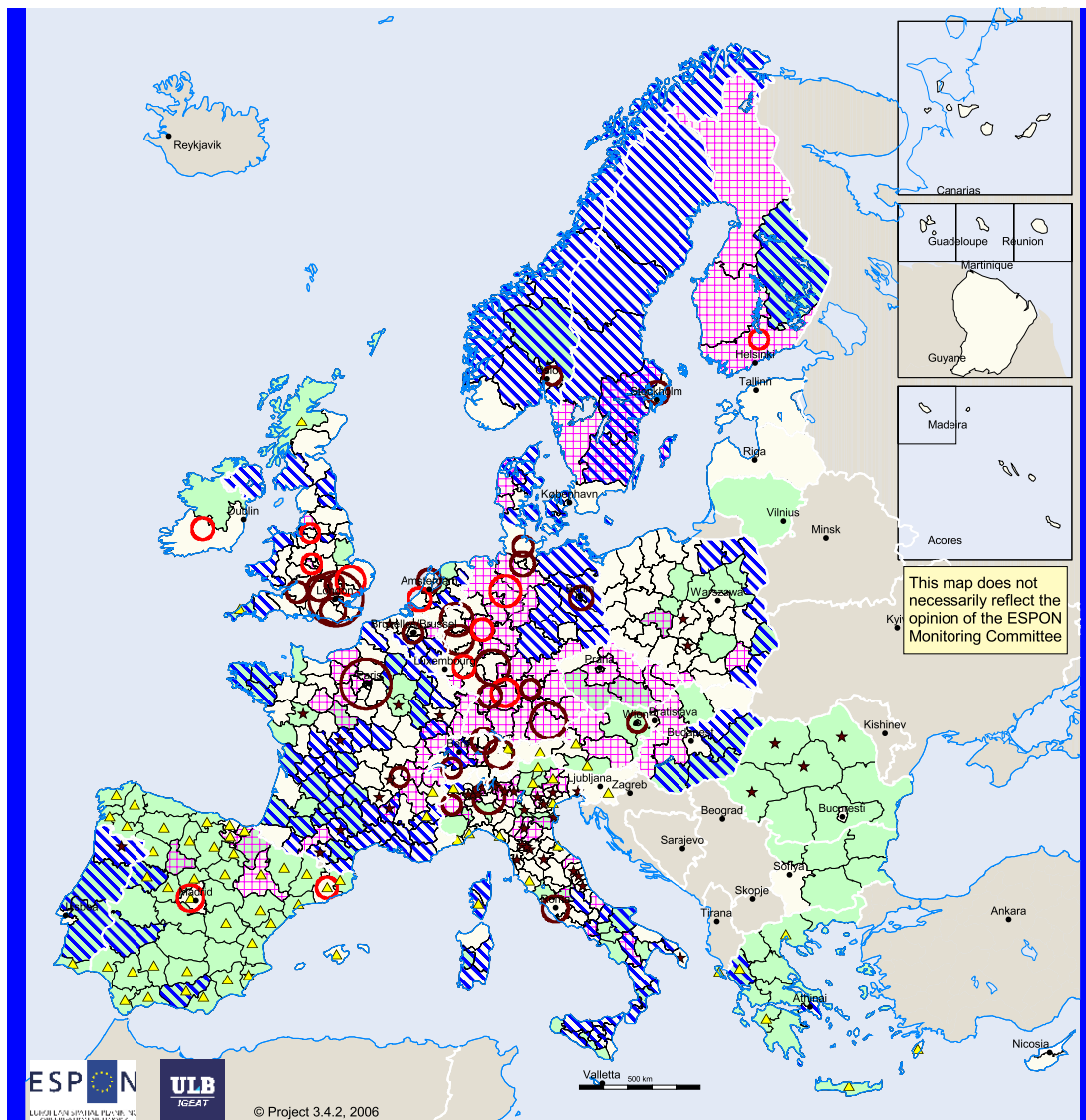


**Figure 39 Sectoral specificity of the 20 types (letters indicate NACE codes)**

Specificity is defined as the ratio between the share of the sector in the group, compared with this share in the whole ESPON area

With a similar methodology, we produced a simplified version of the typology, with only 7 groups. The first step was a 10 group typology on the basis of the first three components of the PCA of which some types have been gathered together on the basis of their structure to end up with 7 groups. Pay attention to the fact that this 7 group typology is not exactly based on the addition of some of the 20 types. This typology is illustrated in Figure 9 and the associated structure in the graph.

Economic specificities of European regions in 2002



This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

Financial and business services (JK)  
Only regions above 15 billions euro of JK added value

Added value (M euro) Share (%)  
 100000 Red square 0 - 30  
 50000 Brown square > 30  
 25000

Non market services (I, M, N, %)  
Blue diagonal lines 22 - 43.79

High technological level industry (DK,DL,DM, %)  
Pink grid 8 - 19.14

Agriculture and building industry (A,B,F, %)  
Green > 12

Catering (%)  
Yellow triangle 6 - 25.03

Textile industry (%)  
Red star > 3.5

White box Non specific region  
Grey box No data

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 Origin of data: EU 25, CC's and CH, NO : Eurostat, National Statistical Offices.

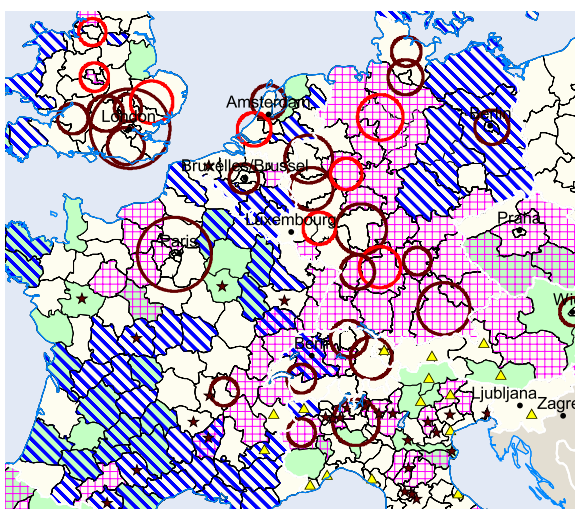
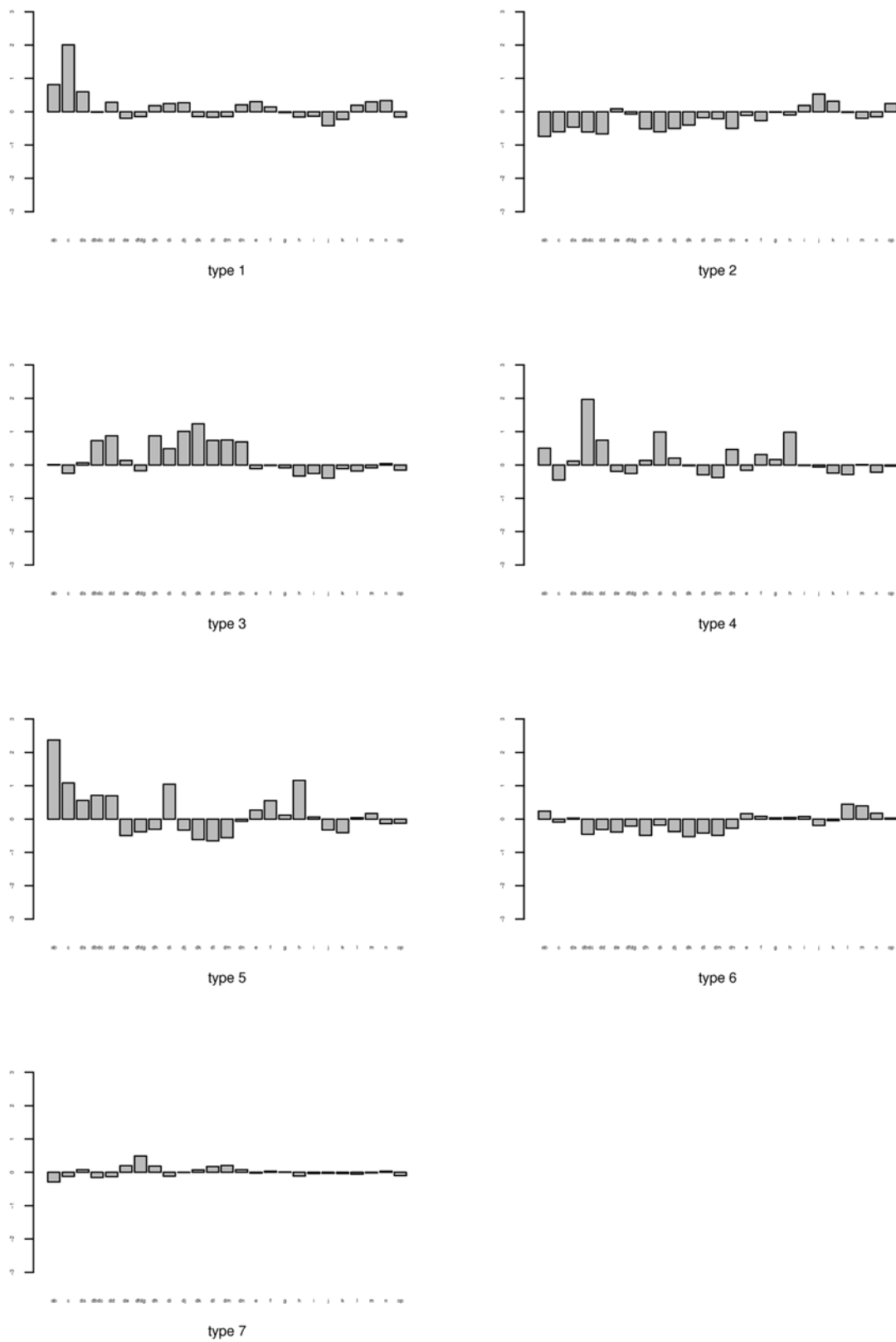


Figure 40 Economic typology of European regions in 7 types



**Figure 41 Sectoral specificity of the 7 types (letters indicate NACE codes)**

Specificity is defined as the ratio between the share of the sector in the group, compared with this share in the whole ESPON area

## 1.8.5 The results

### 1.8.5.1 *The 20 groups typology*

We produce here a brief description of the 20 types which constitute our typology.

Types 2, 7, 13, 14 and 20 are all metropolitan regions characterized by a clear specificity in high level services, namely financial and business services, and the under-representation of manufacturing industries. Type 20 clearly isolates the two global MEGAs, Paris and London, where the specialization in these services is the strongest. Type 14, including Frankfurt, Zürich and Milano, shows a less exclusive specialization in these sectors, and also a specificity in the chemical sector (which includes the pharmaceutical industry). Type 7 shows, in addition to a specialization in high level market services, a specificity in non market services, particularly the administration sector. It includes thus more administrative metropolises such as Brussels, Berlin, Stockholm, Oslo and Roma. Type 2 includes metropolises with a more neutral structure, and for example a weaker share of business services in their economy. It concerns peripheral metropolises of Eastern Europe, of Madrid and Lisbon, as well as Amsterdam, Luxembourg and some peri-urban areas around London and Paris. Finally, type 13 is distinct from the other metropolitan areas by the higher share of high technological industries. It includes some German regions (Munich, Köln). *departements* on the western side of Paris, the Alsace region..Their industrial character can be explained by the limit of the regions, which include both the urban node and the larger functional areas of the town and also, to some extent, by the remaining industrial specificity of most of German BA.

Types 4, 5, 11, 12 and 19 are the most peripheral ones. They are clearly specialized in the agriculture sector, as well as some market services to the population, such as the building industry or trade services. Type 5 includes most of Romania, some Polish regions, Northern Portugal and some other peripheral regions. These regions are also specialized in some light industry of low technological level (wood industry, textile, food industry, and non metallic minerals). In Poland and Romania, this is the result of the outsourcing to low cost labour areas. Type 12 includes most of peripheral Spain, Bulgaria and Greece as well as Lithuania, some eastern provinces of Poland and other peripheral regions. Here the peripheral structure marked by a strong specialization in agriculture is reinforced by the specific weight of the catering sector and the low level of industrialization. Type 4 is structurally near to the precedent one but with a more neutral profile, because these regions often include cities

with a more diversified structure. Types 11 gathers some peripheral areas at European level (central Bulgaria, eastern Hungary) with some peripheral areas of rich countries, such as some parts of Denmark, some *departements* of western France, and north-western Netherlands: the high share of textile is here combined with a specialization in non-market services, often typical of peripheral regions of more or less developed countries. Type 19 is very near but even more under-industrialized. It includes some parts of Southern Italy, Northern Norway and other peripheral areas.

Type 15 is a very peculiar peripheral type because it is over-specialized in the catering sector related to the touristic attractiveness of the area. It gathers together the Algarve, Malaga, the Balears, Crete, the Cyclades and Cyprus.

All others types could be considered as central or sub-central without the presence of big metropolitan areas. This explains the relative under-specialization in high level services of all these groups.

Types 16 and 17 have a strong specialization in the high technological industries, but more exclusively for type 16. The first includes mainly German regions while the second includes some *departements* of the Parisian basin, Limburg in Belgium, southern Sweden or western Hungary. Type 3 shows similar specializations but in a more peripheral context, with higher share in agriculture and light industry. It concerns a large part of the Czech Republic, some *departements* of the Parisian basin and Eastern France and other isolated regions. Type 8 is also specialized in high technological industry, including the chemical industry, but to a lesser extent and within a much diversified structure. It includes large German regions, some parts of the Parisian basin, the Torino province in Italy and some large regions of Southern Sweden including Malmö and Gothenburg. Compared to the precedent types, type 1 has a much less technological profile but still a marked industrial character.

Types 6 and 13 are very specialized in the textile industry, but in a much more exclusive way for the first, while in the second, the presence of cities explains a more diversified economy.

Types 9 and 10 are not industry oriented and present a very neutral profile. Type 10 is the least industrial one: not surprisingly, it includes most of non metropolitan Great Britain. Type 9 is mainly distinguished by the specialization in non market services: we find here some parts of Central France, the West of eastern Germany, some peripheral Scandinavian regions, or some old industrial regions which have completely lost their industrial specificity and have now a specialization in non-market services by lack of other activities (Lorraine, Flanders and Liege in Belgium, some English regions)



### 1.8.5.2 The 7 group typology

produce here a brief description of the 7 types which constitute our typology.

#### Some important characteristics of the 7 group typology

TYPE	Type 1 Non-market services, agriculture & light industry	Type 2 Big metropolis Advanced services : Finances & Business	Type 3 High & medium technological industry	Type 4 Textile Market services for population	Type 5 Agriculture Non-market services Trade Horeca Industry (build & light)	Type 6 Market & non-market services for population Weak in industry	Type 7 Neutral Central without big cities	Total
Proportion of European GDP (%)	10,7	28,1	17,0	5,0	9,0	8,9	21,1	100
Proportion of European population (%)	12,9	19,0	16,2	5,3	17,9	10,1	18,6	100
GDP/cap 2002 (EU=100)	83,1	147,9	105,3	94,5	50,5	88,2	113,5	100
Evolution of GDP 2002-1995 (°°)	-6,9	2,0	-6,1	-2,2	6,2	0,0	1,6	
Agriculture, Fisheries, Construction (A-B+F)	133	60	99	136	205	112	95	7,7
Light industries (DA->DD+DI+DN)	135	47	141	169	159	84	99	5,4
Technological industries (DK+DL+DM)	84	74	190	77	39	52	115	6,1
Trade, Hotels and Restaurants (G-H)	94	97	87	132	133	104	98	14,7
Financial and other business services (J-K)	73	136	83	79	61	93	97	27,4
Non-market services (L-N)	127	88	93	82	101	133	99	17,5
Unemployment rate (Unemployed/Active pop.)	107	78	74	117	141	141	76	7,9
Activity rate (°)	92,6	104,3	96,9	97,9	101,3	95,4	105,3	100
Migratory balance 96-99 (‰)	0.6	1.1	1.6	4.5	2.0	0.6	1.7	1,5
Mean annual population growth	0.93	0.32	0.35	0.66	-0.03	0.11	0.30	0,33

(°) Activity rate = (Actif population + unemployed)/Total population (EU=100)  
(°°) compared to average EU evolution

**Table 14 7 group typology**

### Comments on the interpretation of the data in Table 13 :

- The evolution of the GDP 2002-1995 of each type is compared with the average EU evolution. For type 1 for example, the -6,9 value for the evolution of GDP 2002-1995 means that, in 1995, that type was at the 90 level compared with the EU mean (100) whereas in 2002 it is at level 81 compared to the same average.
- The current structural data of each of the types (the yellow central part of the figure) that is, the importance of the relative presence of economic sectors in each of the types, are expressed as an index in relation to the EU average. This allows an easy assessment of deviations from the mean. An index, for a given type in an economic sector, means this type has a specificity, in that sector, higher by % than the average weight of this sector in the whole EU economy. We have also pointed out the relative importance of all sectors in the European total in the last column. This allows measuring the relative contribution of each economic sector to the total European economy. We can note for instance that the Financial and other business services' sector accounts for 27,4% of the total EU economy, and so on.
- The unemployment rate and the activity rate are expressed in relation to the EU average. However, we have mentioned, in the last column, the average unemployment rate for the whole EU (7,9 %) and the migratory balance (1996-99) and population growth are indicated in per thousand and per cent respectively. Data of population growth relate both to natural and migratory growth.
- The activity rate is approximate: since age structures are missing, we have related the active population +the unemployed to the whole population instead of the population of an age to work (20-65-year-old for instance) This is why the activity rate we have calculated also reflects the effect of regional differences in age structures. Yet one should be careful, when it comes to interpreting this data, not to draw too hasty conclusions.
- Finally, the values significantly inferior to the EU mean appear in bold, while significantly superior values are highlighted.

**Type 2** gathers together nearly all major metropolitan areas of Europe, highly specialized in advanced services such as finance and business. Helsinki, because of its very large area in NUTS 2, has a less specialized sectoral structure, while Athens and Sofia do not have these specializations and appear as peripheral and mainly non market-oriented economic areas. This type represents in itself nearly 8% of the European GDP. Since it regroups only one fifth of the population, its GDP per capita is nearly 50% higher than the European average. Big metropolises keep reinforcing their relative positions in relation to other Regions as they have gained 2 points since 1995. In other words, metropolitan regions distance themselves from the EU mean, whereas during the Keynesian-Ordist period they were close to that mean (1945-1980, cf. 1.1.4 *The structural long-term evolutions in the old members of the Union* and chapter 2.) Employment has a relatively better position in this type of region

since the unemployment rate is inferior by 22% to the EU mean and the activity rate superior by 4,9%. Although positive, the migratory balance of type 2 is among the lowest among the 7 types and is by more than one half lower than that of the whole EU zone.

**Type 7** has a central location, though outside metropolitan areas. Its economic structure is globally neutral (very close to the average EU economic structure) except a slight specificity in high and medium technology but with a weak specialization in some industrial sectors, especially chemical industries. This type represents one fifth of the European GDP. Its GDP per capita is by 1,5% higher than the European average and reinforces its relative position compared to the other regions since this type has diverged from the EU mean by 1,6 point since 1995. Its migration balance is a bit higher than the EU average (10% more). Together with type 2, type 7 represents half of the wealth produced in Europe and their GDP per capita is 3% higher than the EU average. They unquestionably represent the dynamic core of EU economy.

Next to this economic core, **type 3** has a central or subcentral position without big metropolitan areas. This type is characterized by a very strong industrial specialization, mainly in high or medium technological industries. It includes most of southern Germany, the Parisian basin and eastern France, some Swedish or Finnish regions, north-western Italy, the Czech republic and western Austria. The last three areas have however a less high technological specialization. Let's underline the absence of the United Kingdom in this type, because of its high specialization in market services and a stronger deindustrialization process than elsewhere in Europe. This type represents 17% of the EU GDP and its GDP per capita is still a little above the EU average (5%). However, this regional type, which was 11,4% above the European mean in 1995, has lost 6 points since then, and is now only at 5,3%. This is most certainly the consequence of the sluggish character of the economic growth of Germany, many regions of which belong to this type. Despite this lack of dynamism, the unemployment rate remains inferior by 26% to the European average and the activity rate superior. These areas are strongly dependent on the conjunction of industrial cycles and their structures are in need of stabilizing tertiary activities.

**NB:** The three above types (type 2, 3 and 7) account for two thirds of the European GDP (66,2%) and a bit more than half of the European population (53%), that is to say a level of 2% above the EU mean in terms of GDP/capita. The four following types are together at a distance of 27% under the European mean in terms of GDP/capita. They represent one third of the European GDP, and a bit less than half the EU population.

Next to this dynamic core, **type 1** occupies an intermediary position. It is a group of subcentral regions without big metropolitan areas, and globally more rural than the precedent one. It is characterized by specificities in agriculture-fisheries-building, light industries and non market services sectors. This type represents 10.7 % of the EU GDP and 12.9% of the population, thus a GDP per capita 17% inferior to the EU average. This type is

far from the EU mean since it is today 17% under the EU mean, vs. only 10% in 1995. This is most certainly the result of an apathetic economic structure. In type 6, type 1 shows the weakest migratory balance. A type 1's total population growth is the strongest of all types, and three times above the EU mean, the natural balance is very high. The unemployment rate is above the EU average and the activity rate below.

**Type 5** is, with type 6, one of the two more peripheral types. This type gathers together most of the peripheral Europe outside big urban areas, including most of the Iberian peninsula, Greece and Eastern Europe, excluding the Czech republic and Hungary, which have more central structures. Only some provinces of southern Italy are included in this type because of the non market specificity of most of this area. The peripheral Europe is characterized by a clear specificity in the agriculture-fisheries-building, light industries, tourism sectors, some services to local population, such as trade, catering, building industry and an under-specificity in high technological industries and financial and other services. Let us have to distinguish between areas with very little industry and those with some specificity in low technological light industry (food industry for example) This type represents 9% of the GDP but a population almost twice as high (17,9%) resulting in a GDP per capita half less than the European average. The unemployment rate is by 41% higher than the European average. However, in spite of this unenviable profile, the GDP per capita of this type has come by 6,2 points closer to the EU mean between 1995 and 2002, which is most certainly due to the presence of fast growing Eastern Region in this type. The migratory balance of type 5 is above the EU mean, but its total population growth is negative, which can only result from a clearly negative natural balance.

Together with the previous type, **type 6** is the second clearly peripheral type. This type shows an under-specialization in manufacturing industries while market and non market services to the local population are specific. Those areas have also a slight agricultural specificity. It mainly includes eastern Germany, the Mediterranean coast of France and southern Italy. The geographical composition is definitely less homogeneous since this type regroups tourist Mediterranean areas and the former East Germany or even Bulgaria's capital (in account of non market services) This type represents also 9% of the EU GDP but 10% of the EU population, much less remote from the EU average (11%) than type 5. This type progresses like the EU mean. The unemployment rate is, as in type 5, 40% higher than the EU average and the activity rate lower. Both the migratory balance and total population growth are significantly inferior to the average European evolution.

Finally, **type 4** is very much characterized by the dominance of light industries (esp. textile) agriculture-fisheries-building, hotels-bars-restaurants as well as market services to the local population. It includes mainly central and north-eastern Italy, some Polish regions, and Estonia. It only weighs 5% of the EU GDP but its GDP per capita is very slightly inferior to the EU average since it regroups almost as much population (5,9%). This type however shows a growth rate inferior to the EU average, probably as a result of the impact of

globalisation on this type of economic structure. The unemployment rate is above the European average, as are the migration balance and population growth.

Our description of European structural types, and above all their evolution between 1995 and 2002, allows confirming two of our most important previous assessments, established on the basis of our structural typology on the 1990 data (cf. 1. 1.4 The structural long-term evolutions in the old members of the Union) that is, the strengthening of the metropolitan and central areas, and the slow divergence movement of regional types in relation to the EU mean during the neo-liberal period (from 1990 to now) following the regional convergence in the course of the Keynesian-Brundage period (1945-1990). The only exception to that slow regional divergence is represented by type 5, which is close to the European mean. This is because of the strong growth experienced today by most regions of Eastern Europe, which, after a long period of economic transition-decline, start growing again on a stabilized economic basis. The second closest to the EU mean is type 3 (from 111,4 to 105,3). This cannot be interpreted as a convergence process since this dynamic is most certainly the consequence of the German sluggishness due to a restricted internal demand by reduction of wage bill.

### 1.8.6 A cartographic synthesis of the regional structure of Europe

On the basis of the same principal component analysis, we produced a more intuitive synthesis of the regional economic structure of Europe. From this analysis, we extracted some main indicators to show the big regional divisions of Europe.

The first component suggests an indicator of the leading role of the metropolitan regions, mostly on the basis of their share in financial and business services. It is our first indicator. We isolate all the cities with more than 15 billions euros in this sector, and distinguish those with more than 3% of these sectors.

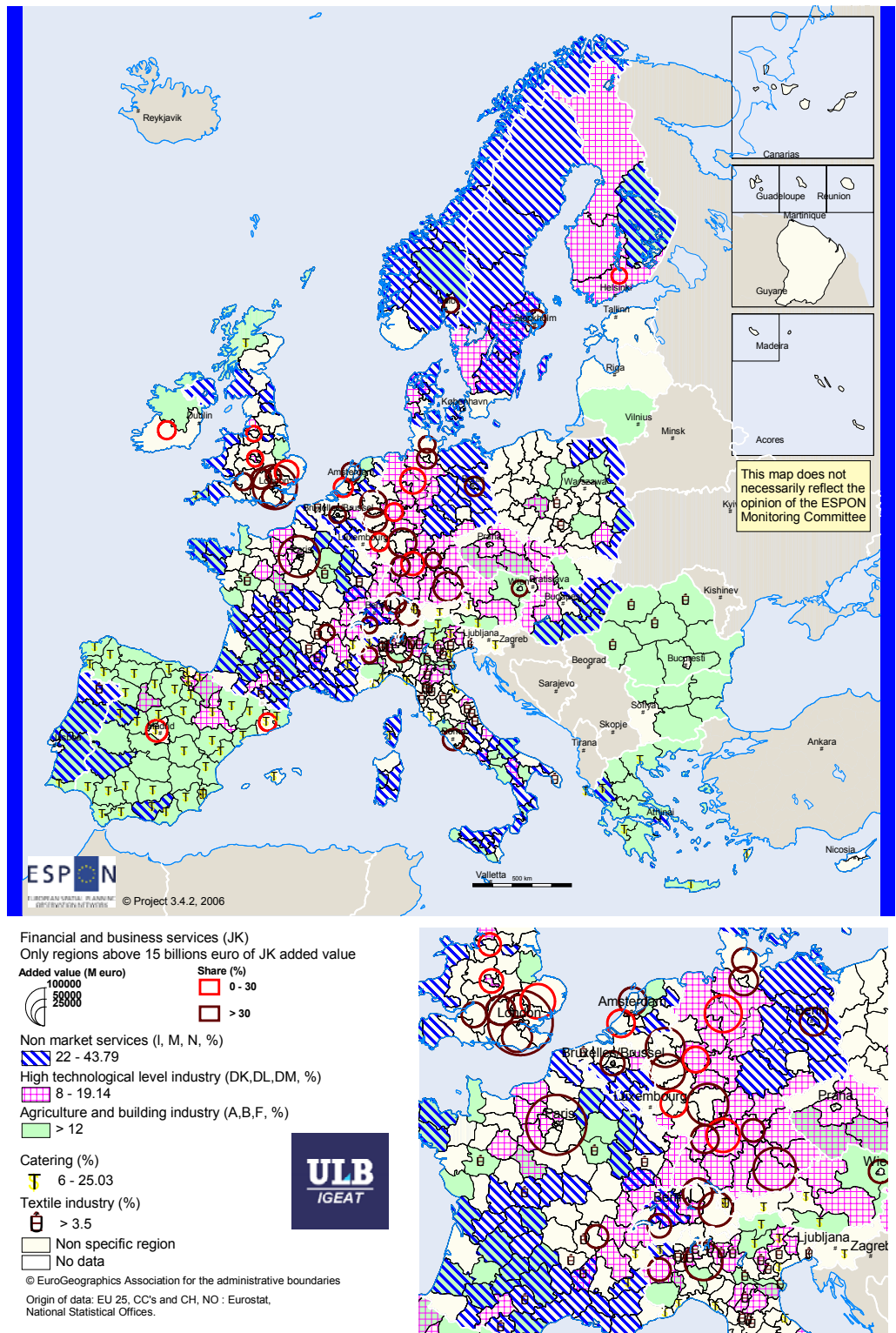
The second component isolates three manufacturing sectors which are typical of high or middle technological industry. Our second indicator is the share of electric and electronic equipments, of machine-tools industry and of transportation industry. We isolate all regions with more than 8% of these sectors.

The third component of the analysis suggests the importance of the non-market services to the population. Our third indicator is the share of administration, education and health in the economy, with a threshold of 22% of the total added value. It allows highlighting countries with a high share of non-market services as well as peripheral regions of some countries where non-market services are present by the lack of other activities.

The two first components isolate agriculture and building industry, which are clear peripheral activities. This is our fourth indicator which is a clear indicator of peripheral structure, with a threshold of 12% of the total economy. However, it is important to note that some regions, such as Poland, have a high share of agriculture in employment but not in added value, because of the very low productivity of the sector.

Finally, we isolate two sectors which indicate some very specific structures: the textile industry and the catering sector, which is typical of the tourism industry.

**Economic specificities of European regions in 2002**



**Figure 42 A cartographic synthesis of the economic structure of European region**

## 2 The shifting economic, technological and political context of regional development<sup>13</sup>

Marcel Roelandts (IGEAT)

### 2.1 Introduction

In this chapter and the following, we will explore a series of different perspectives which allow to gather some elements for explaining the economic geography of Europe described in chapter 1. By definition, this survey can only be incomplete, but we believe that it touches upon some of the more important questions that regional economic policy has to face.

### 2.2 Where do we come from and where are we heading?

The Lisbon strategy (2000) gave the fifteen about ten years to catch up with the United States and become *the world's most competitive and dynamic knowledge-based economy*. Beyond a mid-course assessment, which would be inopportune here, we must admit that the Lisbon strategy did leave its mark in all fields, and notably in regional policy, which we are addressing here. Without simplifying too much, one can easily say the essence of the Lisbon strategy comes down to the key concept of *competitiveness*, which definitely underlies – or at least, very strongly marks – all policies. Regions are in an increasing way asked to take that notion into account and to integrate it into the definition of their objectives. Indeed, it has never been so much talked about *regional competitiveness* as today, notably in the Scoping Document for an Assessment of the Territorial State and Perspectives of the EU endorsed at the Luxembourg Informal Ministry Meeting on Regional Policy and Territorial Cohesion in May 2005, and even the notion of *inter-city cooperation* within the framework of polycentric structures is more and more conceived and understood as a tool allowing cities *to best position themselves in the world's urban networks competition* in a context of globalization, etc.

The purpose of this study is to analyse the territorial impacts of European economic policies and of the location of economic activities. To carry out this analysis – notably from the point of view of the Lisbon strategy, which means checking if the policies defined do or do not increase regional competitiveness – it seems necessary to us, in methodological terms, not

<sup>13</sup> See References (Chapter 9) for a list of the main sources of inspiration for this chapter.



to be satisfied with a mere radiography and a diagnosis of the current situation at a certain moment but to replace it in a historical and changing perspective. Indeed, the essence of political practice precisely consists in making structures and evolutions more flexible in the right direction. This requires a good understanding of the main trends and aggregates of the global macroeconomic framework in which we evolve. Those who do not appropriate and master their past cannot define their future.

To lay down this progressive framework, we have to define its temporal and geographical horizon.

Our temporal horizon will be the post-war period, as the current situation is inherited from, and still quite marked by the structures and dynamics established in those days, a period that is better known as the Golden Sixties, the golden age, wealth or consumption society, etc. This post-war prosperity itself can only be understood as a reaction to the particularly troubled interwar period. The second reason for this choice is linked to the fact that the present period –which starts with the neo-liberal turning point in the early 1980s –result, on one hand, from the deterioration in the conditions that made the Golden Sixties prosperity possible and, on the other hand, from the failure of the attempts made to remedy that deterioration during the 1970s (neo-Keynesian policies). As a consequence, understanding the current neo-liberal period presupposes a good knowledge of the problems the neo-liberal trend tried to respond to and to which extent it was or not successful.

It seems therefore essential, to understand the current situation and its dynamics, (a) to outline the main macroeconomic advances and determining factors, (b) to realize why it weakened between the late 1960s and the beginning of the 1970s, (c) to identify why the neo-Keynesian policies in the 1970s failed to revive the Golden Age and lastly (d) to understand the impulse behind the neo-liberal turning point that started in the early 1980s and provides the framework of the present situation.

At this point of our analysis, our geographical horizon will essentially be limited to the national framework, since differences in regional growths are first determined by differences in national dynamics (see chapter 6). A sound understanding of regional differentiations implies a good comprehension of national dynamics. In the following chapters of our study, we will examine how this comprehension framework is expressed at regional level, as much from a theoretical as from an empirical point of view.

Yet the above assertion should not lead us to conclude that there is no call for considering properly regional specificities. Instead it aims at delimiting the place of regional policies, understanding their scope but also their limits, because it is useless to consider regional policies as a book of recipes, of *best practice* which, if implemented identically everywhere, will give the same results, whatever the national context and the specific history of the forces and weaknesses of the regions may be.

## 2.3 The Golden Age of Keynesian-Fordist interventionism

### 2.3.1 Conditions of emergence

The postwar years were much influenced by the preceding period which, in about thirty years (1914-1945) suffered two world wars of growing intensity, the biggest overproduction crisis in the whole history of capitalism, as well as considerable social unrest in the 1930s but also at the end and in the immediate beginning of World War I. It was in the second half of World War II, more exactly after the Stalingrad defeat in January 1943—true turning point in the process of military operations—that the life blood exiled in London started to reflect on the organisation of society after the victory of the Axis forces. This reflection takes place in a context of concord with multiple meetings gathering the leaders of the State, the Resistance, employers, and unions, from which several major ideas explicitly or implicitly emerge:

- a) the necessity to avoid another economic depression like in the 1930s, with its economic (bankrupts), political (fascism) and social (unemployment, poverty, social unrest) consequences and, in the end, a new, still more terrible war;
- b) the necessity to avoid multiple protectionist reactions like in the 1930s, because they result in a deflationist spiral;
- c) the –unanimously shared – conviction that State intervention at national level is essential, since it represents a coordination and regulation instrument on European and international scale;
- d) the necessity to avoid a remake of World War I, with the rise of insurrection and social unrest<sup>14</sup>;
- e) the perspective of strong economic growth due to productivity gains resulting from the introduction and the generalisation of the Fordist industrial production offered the necessary material for a collective agreement between all nations' life blood;
- f) finally, to react to the emergence of a new world division into two rival blocs, notably the necessity to counter the USSR influence, which made the social question its propaganda fund, when it was still basking in the public opinion for having escaped the 1929 crisis and for its military successes against Nazism.

The Beveridge Plan can be considered the emblem of the new welfare State policy which will be defined in most European countries.

<sup>14</sup> Indeed, in addition to the Russian revolution in 1917, there was another revolution in Bavaria during six months (from November 1918 to April 1919) as well as in Hungary between March and August 1919. Moreover, a large insurrectional movement took place in Bulgaria in September 1918 and another affected the whole of Germany between November 1918 and February 1919, and all the other European countries were hit by multiple social movements of various scope.

### 2.3.2 Mode of regulation

From those meetings a new form of regulation appears at macroeconomic level – to which we limit the present analysis – which we will call *Keynesian-Fordist interventionism*, a heavy formula indeed, but extremely explicit:

- a) *interventionism*, because all the other social and political actors are now convinced of the profitable character of State intervention in the economy after the failure of the return to liberalism in the inter-war period, and of the positive State contribution to the restoration of economic and social situation in the 1930s, and of its role during World War II.
- b) *Keynesian*, because in this case, regulation is first aimed at offsetting the insufficient solvent demand so as to avoid deflationary trends like those characterizing the 1929 recession and the 1930s (Keynesianism is also called 'economy of demand')
- c) *Fordist*, because this regulation is based on spectacular productivity gains (an average threefold increase for the whole economy, much more if we consider the industrial sector only) unprecedented in the whole history of capitalism.

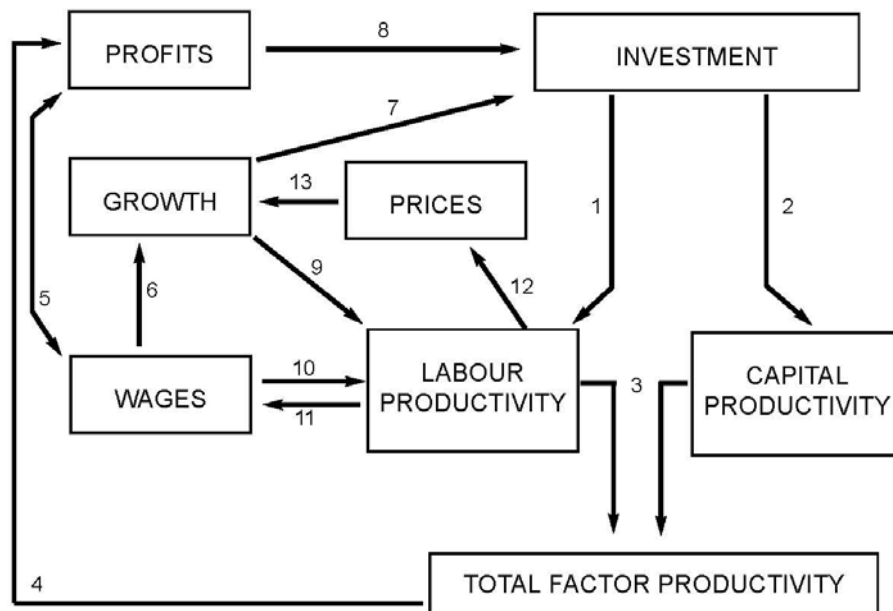
This Keynesian-Fordist interventionism is structured around the four following elements:

- 1) The introduction and the generalisation of the Fordist production process –which can be summarized in the 'assembly line' 'shift work organization' 'binomial' – is going to bring about very high productivity gains resulting in an abundance of goods at decreasing real prices and consequently ensure higher profit rates and volumes. Shift production (organised in three shifts of 8 hours) is notably going to allow the depreciation of fixed assets much more rapidly and thus allow a quicker introduction of new technologies.
- 2) Two major mechanisms will be put in place to create the necessary solvent demand in order to absorb the growing supply of goods and services: an increase in real wages and growing State intervention in the economy. In opposition to the previous tendency to reduce wage costs, it will now be explicitly –legally or conventionally – provided for an indexation mechanism of real wages (thus outside inflation) in proportion to productivity gains. Similarly, the growing State interventionism in the economy, by means of a significant increase in State revenues and expenditures, is also going to contribute to support solvent demand and stabilize economic cycles. Productivity gains will be distributed almost proportionately between benefits, salaries and State revenues.
- 3) The implementation of a range of Keynesian mechanisms to support demand such as maintenance and training of the workforce, the creation of a true social security at all levels and the granting of multiple and varied allowances (family, pension, unemployment, industrial accident, sickness, dismissal notice,

preension, etc.) are going to allow increased qualification of the active population and stabilisation of solvent demand and economic cycles through the freezing of deflation.

- 4) A those regulation mechanisms will be incorporated into institutional or conventional constraints varying from country to country (through national, sectoral or field agreements) to ensure the permanence in time of that huge mechanism of productivity gains distribution.

The following figure represents that type of regulation in which productivity gains and their equidistributed sharing play a determining structural role in the completion of economic cycles



source:M. Roelandts, IGEA

**Figure 43 The economic cycle**

The conjunction of high productivity gains –both from work and capital –made possible by the introduction and the generalisation of the Fordist mode of production, determine performances in terms of global factor productivity (link nr.3) It is the relative evolution of the latter, compared with the evolution of real wages, which, in turn, determines the progress of the firms profit rate (links 4 and 5) The connection between wages and profits (link nr.5) is crucial in the Keynesian-Fordist regulation because there is, on one hand, an equidistribution between these two aggregates and, on the other hand, an indexation of real wages to productivity gains. Indeed, if real wages increase at the pace of productivity, the sharing of revenues remains stable.

This progression of wages is going to contribute –thanks to saving rates and dynamic incomes other than revenues from work –to determine the GDP growth according to total effective demand (link 6) The progression of demand in turn impacts on the dynamics of

investment (link nr.7) In the same way, the evolution of the profit rate influences the creation of capital (link 8) Investment is not only influenced by profits but also by demand. Capital accumulation is thus determined both *by profitability conditions AND demand size*. During the Keynesian-Fordist period, the considerable gains in terms of global factor productivity and in terms of wage increase are going to combine and give a strong impulse growth and investment.

The so-called Law of Kaldor-Verdoorn introduces a positive link between GDP growth and increase of labour productivity (link 9) The high labour productivity gains allow, this time at sectoral level, the modulation of the scope of real wage evolution (link 10) A opposite relation can also play a role as far as the wage evolution resulting from social demands is going to partly determine the evolution of work productivity (link 11) Productivity and its sectoral profile strongly contribute to the determination of relative prices (link 12) which in turn contribute to determine the dynamism and the sectoral direction of growth (link 13) The consumption elasticity to prices is a powerful means to focus demand on high productivity sectors and this way contribute to the creation of a virtuous circle.

Finally, investment, boosted by favourable profitability conditions of capital and by product growth (allowing the extension of the production scale) results in increases in the productivity of work and capital (links 1 and 2)

The economic cycle is thus a **two-act** play, requiring at the same time guaranteed conditions for capital profitability (supply side-competitiveness) and the existence of corresponding solvent markets (demand side)

This pattern is of the utmost importance since it allows to understand at which level the virtuous circle ground to a hold between the 1960s and 1970s, before deteriorating all along the seventies and, on the other hand, to understand the logic of the new neoliberal regulation which, little by little, took shape from the beginning of the eighties.

### 2.3.3 Some results in figures

How does *Keynesian-Fordist interventionism* translate into figures? Some graphs and tables validate and illustrate the main links described above:

#### 2.3.3.1 Considerable productivity gains

	180-1913	1913-50	1950-73	1973-98
EUROPE (12 countries)	1,55	1,56	4,77	2,29
Japan	1,99	1,8	7,74	2,7
USA	1,92	2,48	2,77	1,52

Source: Maddison A, *L'économie mondiale*, 2001: 30, OCB.

**Table 15 Productivity growth rates: GDP by worked hour**

The above table illustrates the exceptional character, in the history of capitalism, of the Keynesian-ordist period (1950-73 period in the table) in terms of productivity gains. The latter have more than tripled in Europe and more than quadrupled in Japan by comparison with previous periods. The lower performances of the United States are due to the fact that the regulation had started earlier, as of the 1900s, and had been strongly speeded up by World War II.

**2.3.3.2 Considerable increase in real wages**

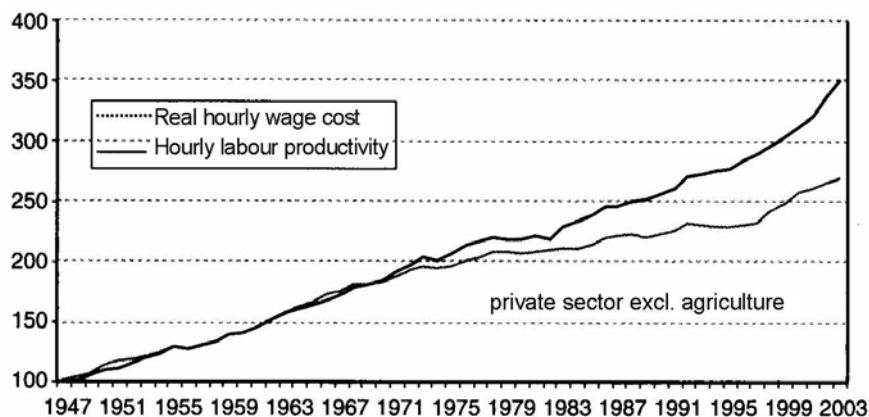
	1953	1960	1970	1982	1953
RG	41,8	55,8	100	140,2	x 3,3
Italy	3,5	52,5	100	19,7	x 3,3
Belgium	5,5	64,3	100	16,8	x 3,1
Netherlands	40,2	54,9	100	13,9	x 2,8
France	55,5	61,9	100	154,4	x 2,78
UK	61,1	75,3	100	12,1	x 2,01
USA	69,0	8,0	100	106,9	x 1,55
Japan	8	50,9	100	169,9	x 4,45

Source: Herman Van der We, *Histoire économique mondiale*, Adademia Duculot, p.192.

**Table 16 Real wages 1953-82 (1970 = 100)**

The above table illustrates the dynamics in solvent demand growth all along the Keynesian-ordist period. Real wages are on the average more than tripled in developed countries, something that had never been seen in the whole history of capitalism. Once again, the lower performances of the USA are explained by a movement of increase starting in the mid-1900s and which will be maintained during WW.

**2.3.3.3 Revenues sharing or parallelism between productivity gains and real wages**



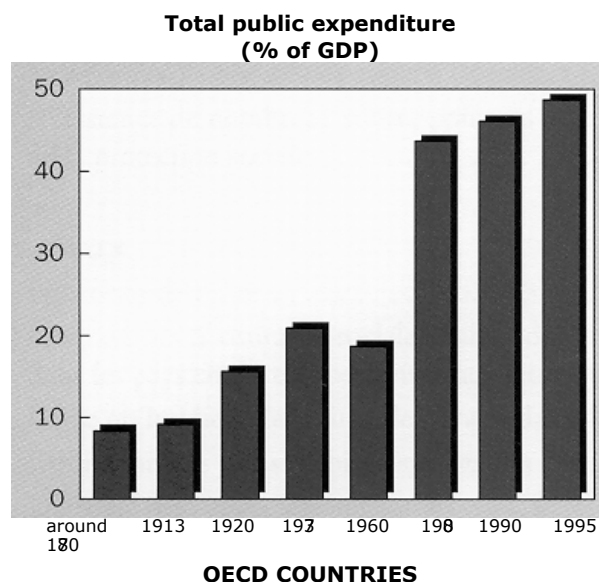
Source : Bureau of Labor Statistic (BLS).

**Figure 44 Real wage cost and productivity per hour in the USA.**

The above graph, showing the evolution of wages and productivity in the USA illustrates the typical parallelism, in the Keynesian-ordist regulation, between the growth in productivity gains and the postwar increase in real wages until the early 1970s. After a first small divergence in the 1970s, we can clearly identify, from the early 1980s, the growing gap typical of neoliberal regulation.

We have chosen the United States as example on purpose because, contrary to long lasting cliché, the link between wages and productivity, characteristic of the Keynesian-ordist regulation, is not typical of Europe but rather of the great majority of the OECD countries.

**2.3.3.4 Increasing State intervention in the economy**



Source: World Bank, World Development Report 1997

**Figure 45 Total public expenditure as a percentage of GDP**

On this graph from the World Bank report, we can notice the very strongly growing share of total public expenditure in the GDP. In Europe and the United States, most of this growth took place during the typical Keynesian-Fordist period and not in the course of the (neo-Keynesian)seventies, as shown in the following table:

	1950	1973	1999
Europe (F, G, NL, UK)	29,8	42,0	45,9
USA	21,4	31,1	38,1
Source: Maddison A. <i>L'économie mondiale</i> , 2001: 30, OCE.			

**Table 17 Public expenditure (in % of GDP at current price)**

**E) The Golden Age in terms of growth**

	180-1913	1913-50	1950-73	1973-98
Europe (12 countries)	1,2	0,76	4,08	1,78
USA	1,8	1,61	2,45	1,99
Japan	1,48	0,8	3,05	2,3
World	1,3	0,91	2,93	1,3
Source: Maddison A. <i>L'économie mondiale</i> , 2001: 28, OCE.				

**Table 18 Growth rate of GDP by inhabitant**

The above table illustrates the indisputably spectacular and totally new character of the Golden Sixties, with growth rates by inhabitant that were never as high in the history of capitalism, about twice if not three times higher than during previous or posterior periods. The Keynesian-Fordist regulation made this possible by increasing demand parallel to supply during a good thirty years, thus as long as high productivity gains and redistribution mechanisms could remain stable.

**2.3.4 Why did Keynesian-Fordist interventionism run out of steam?**

The Keynesian-Fordist interventionism weakened little by little from the 1970s because its continuation depended on two conditions: the continuation of high productivity gains and of redistribution mechanisms, the latter being themselves dependent on the continuation of the historical context in which they had appeared.

Why did work productivity start decreasing at the turn of the 1960s-70s?



Work productivity gains have two main origins: a better organization of the working process –this is typical of Taylorism and Fordism– and the emergence of technical progress. A reorganisation of the working process is theoretically more interesting, because less expensive, but, most of the time, both are combined because a reorganisation of the working process very often means a deepening of the division of work and increased mechanisation of that process (especially for Fordism) This explains why productivity gains cannot grow forever, and why they started decreasing at the turn of the 1960s-70s:

1. As long as the Fordist production mode affected every possible industrial field, productivity gains were particularly boosted by geographical and sectoral expansion. When the adoption of that new working process started to decline, the productivity gains bound to that adoption progressively disappeared, leaving only the productivity gains bound to the introduction of technical progress within the Fordist production mode itself or its selective improvements (such as the import of its Japanese variant –Toyotism– with just in time , quality circles, etc.)
2. After the stage of domestic durable Fordist goods with high productivity (cars, household appliances, radio, TV/HF, etc. ) the consumption structure progressively moved towards goods, and especially services, with weaker productivity progress (personal care, culture, tourism etc.) It is indeed more difficult to obtain productivity gains in services, especially when they imply face-to-face relationships. Most of the time, it is even precisely the contrary that occurs:improving the quality of a service requires spending more time on it. This was coupled with a growing tertiarisation of the economy, with a very large development of the non-market sector in which productivity gains are structurally lower. The second reason explaining the drop in productivity gains is thus to be found in a shift in the consumption structure and in the growth of a large part of the tertiary sector.
3. As competition and technical advances generalised more and more rapidly, productivity gains have become more and more expensive, bringing about a decrease in their profitability. More precisely, if, during a first stage, productivity gains allowed a decrease in real prices which largely made up for the efforts made in order to constantly modernize the production apparatus, little by little, the competition pressure, the acceleration of capital turnover, etc. resulted in a situation in which investment costs were less and less offset by the productivity gains they generate. In the 1950s-1960s for example, there was an important saving on the quantity of work needed for the production of a good or a service, but, since then, the pace of such savings has slowed down. Capital productivity<sup>15</sup> drops from the beginning of the 1960s in Europe and in the middle of the same decade in the USA This tendency makes the notion of technical advance relative since work savings went on in production but resulted in higher need for capital.

<sup>15</sup> GDP by capital unit (net primary unit of fixed assets)

### **Deterioration of the conditions having favoured Keynesian-Fordist interventionism**

If we take the six conditions that, from a historical point of view, determined the emergence and the continuation of the Keynesian-Fordist regulation, we have to admit that many of them have already lost importance, if not completely disappeared, at the turn of the 1960s-1970s. This disappearance will be completed with the collapse of the East bloc in 1989:

é) Not only the spectre of a recession like in 1930s had disappeared, but the idea that the economic parameters were from then on under control, was very widespread until and in the 1970s. Today, crises are no longer considered avoidable but the conviction remains that, all in all, the problem comes down to a question of more or less efficient macroeconomic adjustment.

è) That conviction is all the more widespread that, thanks to the existence of numerous international institutions, international cooperation in case of a crisis, and the opening to markets resulting from globalisation, the fear of a return to the 1930s' deflationist protectionism has completely disappeared.

é) The failure of neo-Keynesian policies and the State's growing debt in the 1970s have largely undermined the State's credit gained in economic interventionism.

è) The fear of social unrest, strongly developed from the end of the 1960s –prompting social measures in the framework of neo-Keynesian policies – evolves in parallel and starts to drop in the second half of the 1970s with the progress of unemployment, restructurations and general job insecurity.

é) At that point, the atmosphere of harmony prevailing in the days of reconstruction is far away. To this are to be added a range of problems linked with the decline in growth and in firm profits, rising unemployment, etc. which no longer prompt social actors to get involved in large compromise solutions or projects like in the aftermath of World War II but rather make them withdraw into the defence of their own interests. A new stage is now reached in which, step by step, *every man for himself* overtakes collective plans. The drop in productivity gains makes the issue of gains redistribution always more acute.

è) Lastly, the fall of the Berlin Wall in 1989 and the resulting collapse of the East bloc have removed any necessity to position as competitors like in the aftermath of WWI. The political system in the Eastern countries has lost the attractive character it had in the public opinion in those days.

## 2.4 Toward neo-liberal regulation after the failure of the 1970s' neo-Keynesianism

### 2.4.1 The failure of neo-Keynesian policies in the 1970s

As we have seen, the interlude of economic growth due to Keynesian-ordist interventionism depended on two conditions: high productivity gains (ordism) and their conventional distribution between State, capital holders and wage-earners (Keynesianism). We have also seen that such a regulation is only possible if those gains keep increasing fast and their redistribution is agreed on. The progressive decrease in productivity gains from the turn of the 1960s-70s saw the end of the consensus on gains sharing. Indeed, one can only share the wealth created, and that wealth started to decrease progressively, catalysing a growing stake around its appropriation. In addition to this deterioration of wealth conditions, there were the erroneous policies of the seventies.

In the 1970s, when the ordist production mode is running out of steam, policies aim at compensating the consequent recessions and the increase in social unrest through some extra Keynesian measures (deflationary measures, support of sectors in difficulties, deficit spending, etc.) Meanwhile, purchasing power injection (to support solvent demand and ease social tensions) in absence of productivity gains leads to inflation and debt of all the economic actors. In the late 1970s, inflation is at a maximum, firm profits insufficient, and debt starts to snowball everywhere.

Since Keynesian-ordist interventionism was able to increase demand parallel to supply and since solvent demand was guaranteed, the return of recession resulted, first and last in the late 1960s, in a decrease of labour productivity rather than an overproduction crisis like in the past. Of course, as soon as the machine grinds to a hold, the shortfall in solvent markets comes along on top of a decrease in profitability because that growth slackens (and so does investment, resulting in lower demand on firm side) austerity sets in (in first place through decrease in indirect wages and erosion by inflation) unemployment grows, etc. Nevertheless, the shortfall in demand will still largely be compensated over the 1970s by maintaining direct real wage indexation and neo-Keynesian mechanisms (budget deficits, multiplication of multiple credit forms, public compensation for restructuring processes, public support for restructurations, etc.) It is only from the 1980s that, following the neoliberal turning point, mechanisms of redistribution of productivity gains are dropped in favour of a curb or even a cut in real direct and indirect wages.

## 2.4.2 Neoliberal regulation

The incapacity of neo-Kynesian policies to give a boost to growth and re-establish firms profitability, curb inflation and public debt, will strongly legitimize the neo-liberal turning point launched by the Thatcher and Reagan administrations at the turn of the 1970s and 80s, soon followed by other countries, and characterized by the drop of redistribution of gains in favour of their almost exclusive allocation to profits aiming at restoring firms profitability which was at its lowest level by the late 1970s. This will be achieved through deindexation, curb or freezing of wage increase and limitation of public expenditure. The extremely sharp divergence between increase in productivity and real wages is clearly visible in Figure 42 as regards the USA. On top of that there was a strong increase in interest rates from 1970 in order to curb inflation.

The following table presents the new allocation of productivity gains, typical of the neoliberal regulation. We have taken the case of France but, apart from some details, the main trends are similar in all countries having experienced Keynesian-Ordist interventionism:

Productivity gains have been broken up into 5. Their addition = productivity per hour.		
	1959-198	198-2002
Work productivity per hour	4,8	2,26
1) increase in real wages	4,3	0,3
2) increase in tax rates	0,56	0,3
3) decrease in working time	0,60	0,75
4) increase in profits share	- 0,90	0,52
5) relative consumption price	0,16	0,24
Sources: Insee and OED Benallah S. <i>et al.</i> , Revue de IRES, nr. 44, 2004		

**Table 19 Productivity gains and their distribution (annual growth rates)**

This table clearly shows the difference in dynamics between two periods of a similar duration, covering both regulation types, Keynesian-Ordist (1959-198) and neo-liberal (198-2002)

Between 1959 and 198, work productivity per hour has been progressing at the exceptional pace of 4,8% per year. It was thus multiplied by 2,7 over a period of 21 years. This means that, in 198, it was necessary to work 22 minutes to produce what was produced in one hour in 1959. It is precisely that performance, unprecedented in the history of capitalism, that provides enough material to allow Keynesian tri-distribution. Indeed, we can notice the very strong progression of real wages (thus outside inflation) hardly inferior

to productivity per hour, and which are multiplied by 2,4 in about twenty years. Concretely, this means that, in terms of purchasing power, wage-earners can afford to buy 2,5 times more in 198 than in 1959. As to profits, starting from a historically quite high point in the postwar period, they have slightly gone down over the period (0,9%The differential between work productivity per hour and increase in real wages (€0,45) added to the drop in profits (€1,5%allows both a small decrease in working time 0,6%yearly, thus a 12%decrease in 20 years)and a modest progression of indirect wages (the progression of tax rates absorbs yearly 0,56 productivity points)

The neoliberal turning point of the 1980s results in a total upheaval of this distribution of productivity gains. Indeed, the work productivity per hour has been more than divided by two and it now increases by only 2,26%per year (in a way, a return to normal, since the average productivity in the entire 20<sup>th</sup> century is about 2%but the very conditions of productivity gains distribution are completely modified, all the more as firms returns had dropped to a historically low level given their progressive decrease. The Keynesian-Ordist tri-distribution will disappear in favour of the sole profit of companies. The share of wages goes down spectacularly, from 4,5%per year before 198 to 0,3%after: a division by twelve!In other words, the fall in work productivity growth is reflected in the sole direct and indirect wages (the contributions rate drops from 0,56 to 0,3%and only the working time is spared<sup>16</sup>.

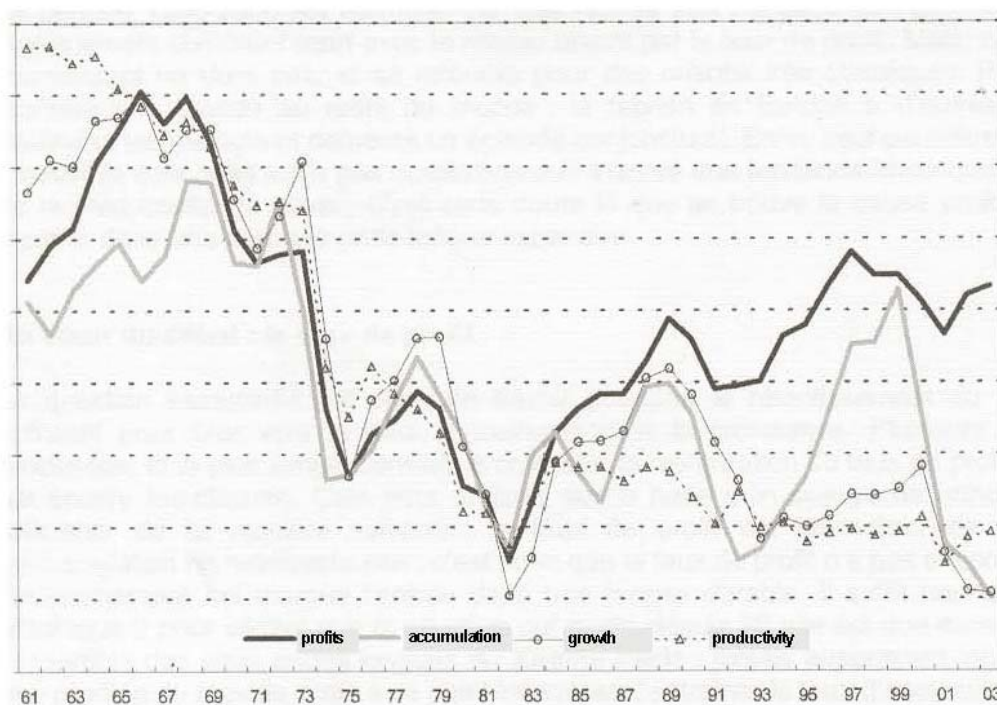
## 2.5 How is the world after 25 years of neoliberalist tendencies of regulation?

### 2.5.1 Major trends

The basic idea of the new neoliberal regulation from the 1980s can be summarized in the famous expression of Germany's former Chancellor Helmut Schmidt : *'Today's profits make tomorrow's investments and the day after tomorrow's jobs'*. That's the whole paradigm of supply economy, which focuses almost exclusively companies profits. Indeed, according to this economic theory, if firms make profits, they can invest and therefore provide for solvent demand through jobs creation.

Which conclusions can one draw, from a macroeconomic point of view, after 25 years of neoliberal regulation?The following graph shows the general trends for the G6 countries (USA, Japan, Germany, France, UK, Italy)

<sup>16</sup> This is unique to France, with 9 hours in 198 and 5 hours at the end of the 1990s.



Weighted averages according to GDP for the ' G6 ' (USA, Japan, Germany, France, United Kingdom, Italy). Source: OECD, *Economic outlook*, 2003

Source: M. Hsson, *Le capitalisme après la 'nouvelle économie'* in Christian Zeller (Ed.) *Die globale Enteignungsökonomie*, Verlag des fischen Dampfboot, Münster (2004)

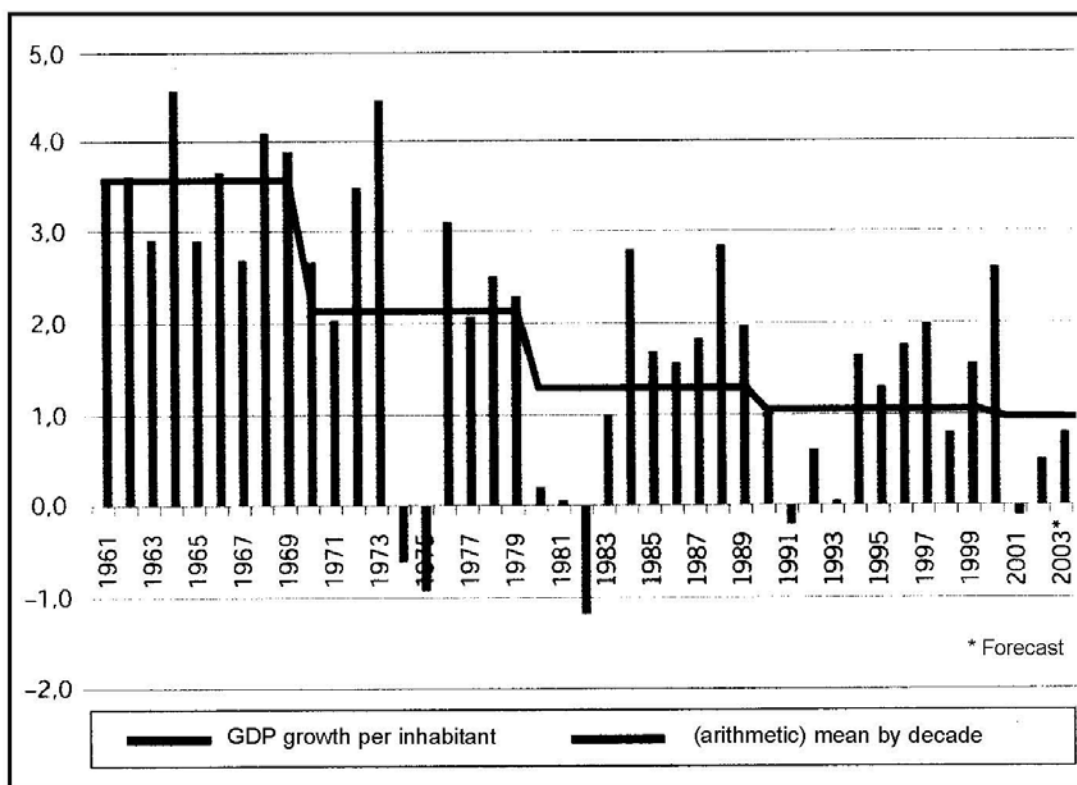
**Figure 46 Evolution of profits, accumulation, growth and productivity for the G6 (USA, Japan, Germany, France, United Kingdom, Italy).**

From this graph it is clear that the neoliberal regulation has allowed the restoration of profitability since profit rates have strongly picked up again. On the other hand, neither productivity nor accumulation (though with very pronounced cyclic variations) nor, consequently, growth recovered. The diagnosis is easy and now shared to diverse extents by more and more economists, and highly respected ones at that: productivity gains are almost entirely monopolized by profits and the latter were hardly called upon to invest. This is what explains the structural weakness of investments, and thus of accumulation and resulting growth. The growth failure does not allow unemployment to come down and, since the curb on wages continues, demand is not keeping pace. This is why, as a logical consequence, firms are no longer encouraged to invest in expanded capacities, which would allow scale economies and productivity gains.

The Keynesian-Ordist period had seen a boom of the world trade and a recentring of the latter on developed countries, due to the dynamic demand within those countries. This is how the Third World's share in world trade constantly decreases between 1950 (9%) and 1972 (1%). Today, on the contrary, given the crippled internal demand (as much on enterprise side with low investments as on household side with stagnant purchasing power)

we are faced with a race toward the 'outside' leading to globalisation and investment in emergent countries.

This leads to a seemingly paradoxical situation: while firms make very high profits and record dividends are paid out to shareholders, wage-earners see their purchasing power decrease in a climate of growing anxiety, dominated by the multiplication of delocalisations, a permanent high unemployment level and insecurity in all its forms. Many reforms have been implemented in order to increase liberalisation, deregulation, and flexibilisation of the labour market. Markets have opened to the East, China and India have made their entrance, public expenditure has been cut, private enterprise made easier, and yet world growth, measured in terms of GDP/inhabitant, still hasn't recovered (fig. 45 )

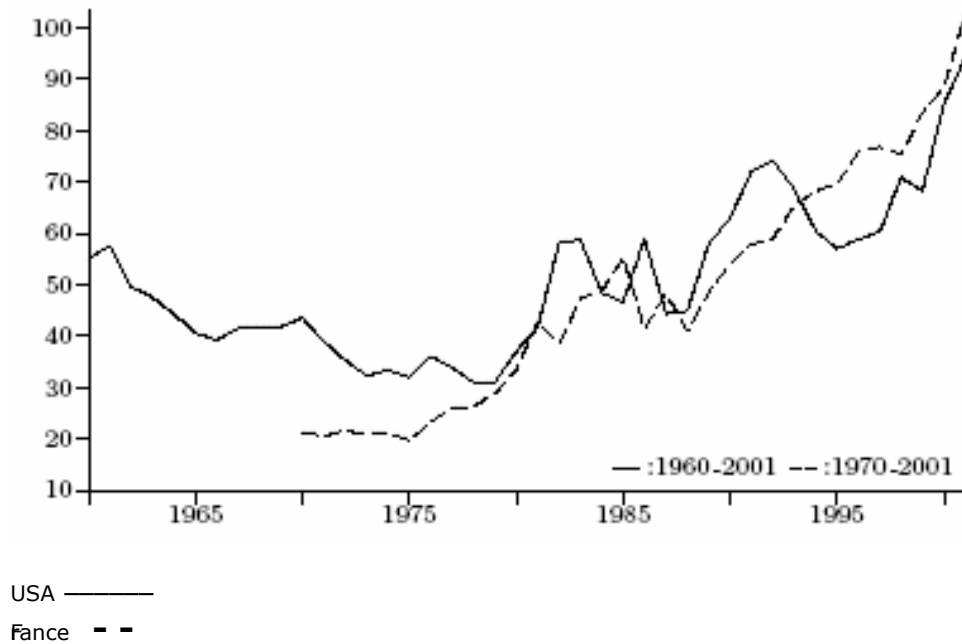


Sources: ~~WORLD BANK~~ *World Bank Development indicators in the world 2003 (on line version) and Economic outlook 2004*

**Figure 47 Growth of world GDP per inhab., 1961-2003 (yearly variation in %) and arithmetic mean by decade**

## 2.5.2 Neoliberal regulation in some figures

### 2.5.2.1 *Financialisation of the economy*



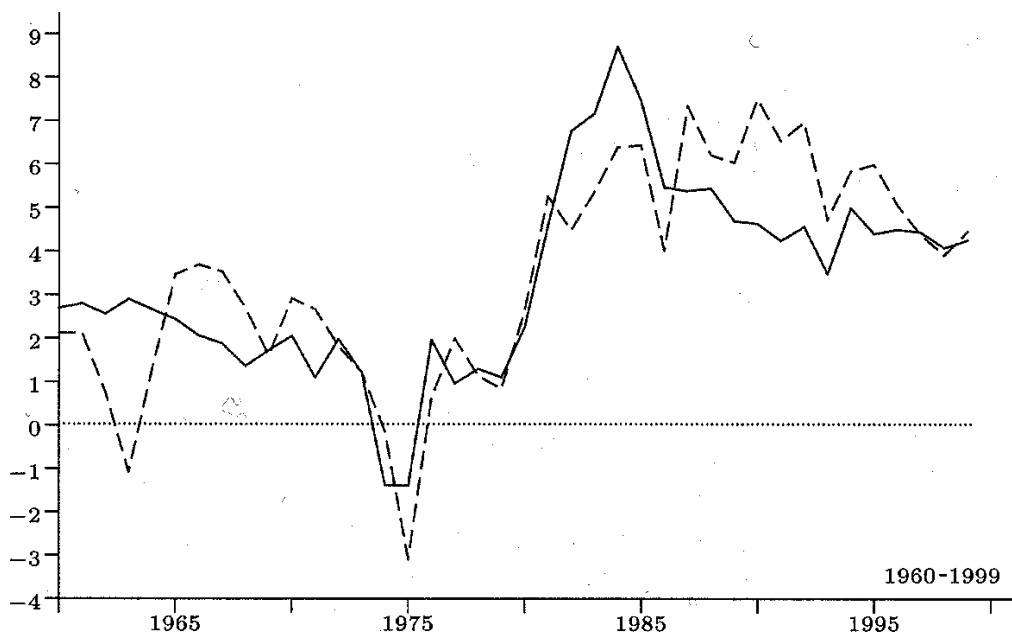
source: Dmáil and Léy

**Figure 48 Proportion of profits distributed as dividends in France and the USA**

Today, in spite of strong increases in profits on one side, growth, purchasing power and employment decrease on the other. Where do the firms' profits go? The above graph shows, a growing part of these is redistributed in form of dividends instead of being reinvested within the firms.

This evolution has allowed easier financial flows and has led to a reduction in proximity between capital, management and (state)regulatory systems, leading to an increase in power of (mainly institutional)stock holders and higher rotation rates in management, whose members often have direct interests in the evolution of their companies stock market value. In a circular dynamics, this again leads to larger proportions of companies' value added being distributed in form of dividends and to pressure to increase the return on investment and thus the profit rates. Long-term investments are no longer favoured as stock holders demand high profit rates in short periods and as companies cannot hold on to their revenues long enough for long-term projects.



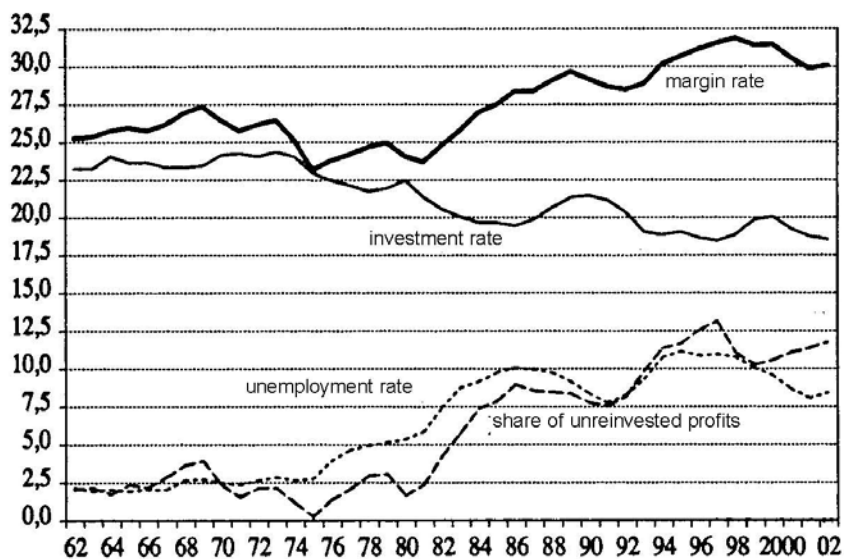


Source: *Crise et sortie de crise*, G. Dmél et DLéy, PUF 2000

**Figure 49 Long-term real interest rates (%): France (---) and USA (\_\_\_)**

The graph shows that real interest rates were fairly low and thus did not discourage investment in the Keynesian-ordist time, contrary to the neoliberal regulation period, in which they represent a transfer of value in favour of financial capital and to the detriment of investment.

**2.5.2.2 Profits destination**

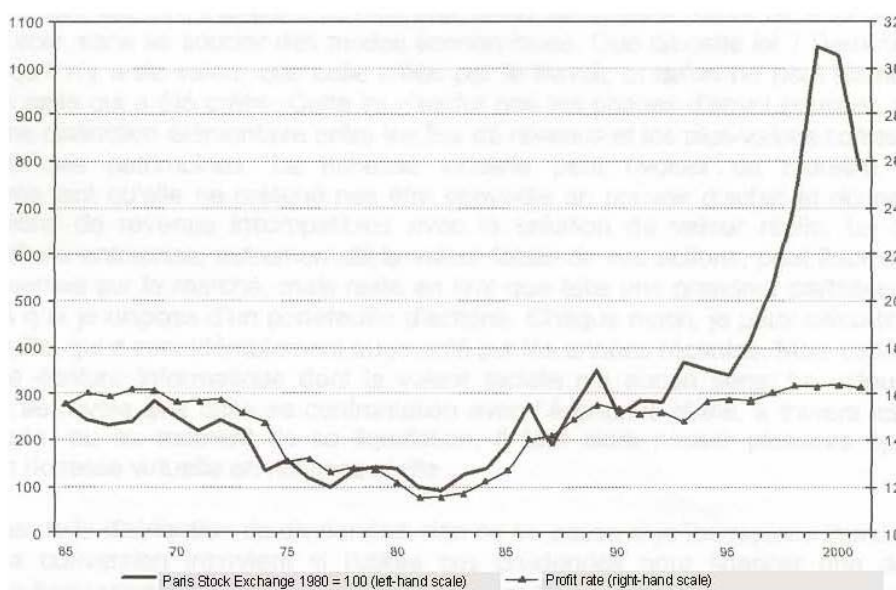


Source: M. Hsson: *Les casseurs de l'E'at social*, La découverte, 2003

**Figure 50 Profit, investment and unemployment rates in Europe.**

As this figure clearly demonstrates, contrary to Helmut Schmidt's famous assertion, the reality is that the increase in *today's profits* hasn't *made tomorrow's investments* nor *the day after tomorrow's investments*. On the contrary, while profits have been strongly rising since the beginning of the 1980s, investments have steadily decreased. At the same time, one can observe an almost parallel evolution of unemployment and the proportion of profits which are distributed.

**2.5.2.3 More financial instability**



Sources: Quid 2002, CEA, OECD

**Figure 51 Stock exchange performances and profit rates**

In the Keynesian-Ordist period, stock market performances followed the evolution of firms profits. This is logical and easy to understand, since stock exchange prices anticipate future firm profits. Relatively stable until the early 1970s, those performances started falling as a consequence of the deterioration of the economic situation all along the 1970s and till the early 80s. With the neo-liberal turn and the re-establishment of firm returns, the profit rate recovered in the 1980s to reach and even slightly overtake the level of the late 1960s. Meanwhile, with the accumulation of profits and the increase in their distribution in the form of dividends instead of reinvestment, there has been, as soon as the early 1990s, a disruption between firm profits evolution and stock exchange prices. This shows most clearly the consequences of financialization of the economy generated by neo-liberal regulation. Financial intermediaries have, in a way, fallen into monetary illusion which consists in the idea that money creates money (M-M) forgetting that profits are the result of production through the creation of value within enterprises (M-P-M)

**2.5.2.4 Relative decrease of wages within developed countries**



Source: M. Hlsson: *Les casseurs de l'Etat social, La découverte, 2003*

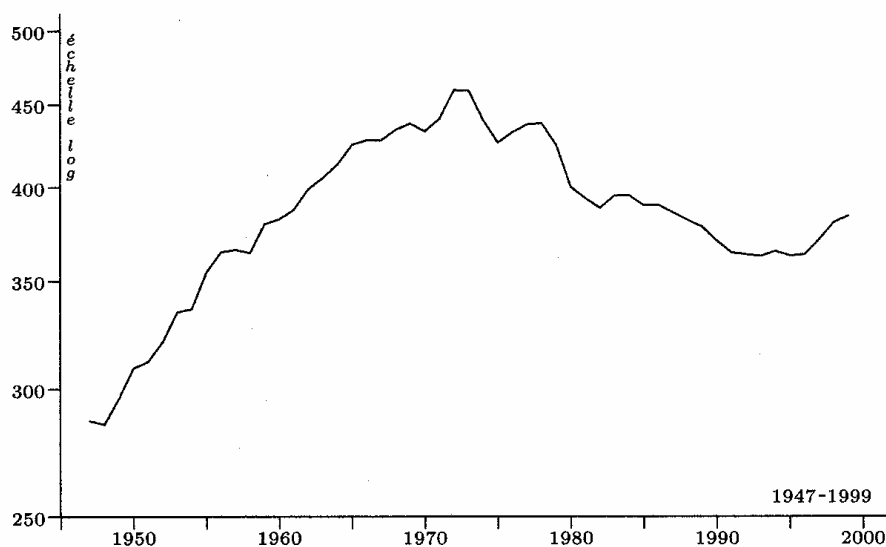
**Figure 52 Evolution of the proportion of wages in the total value added (France and EU). Adjusted wage share, whole economy (% of GDP)**

The above graph illustrates the shift in the structure of income distribution to the detriment of wage-earners' income and in favour of capital returns. Further details about this shift can be found in the chapter hereafter 'Some considerations on basic trends today'.



Source: Bayet A 1997, *Deux siècle d'évolution des salaires en France* document de travail INSEE série verte, n °97-02.

**Figure 53 Average yearly growth rate of the purchasing power of workers' average net wages in France (%)**



Source: G. Dmáil et DLéy, *Crise et sortie de crise*, PUF 2000.

**Figure 54 Weekly income of a production worker (1990 dollars, USA)**

The first graph very clearly shows the logic underlying the 3 main regulation types over the last hundred years:

é) liberal regulation (195-1945 on the graph) maintains constrained wages –on the average under 1% on the whole period- leading to periodical overproduction crises.

è) Keynesian-ordist regulation makes increases in profits, wages, employment and growth compatible, while reducing economic cycles;

é) neoliberal regulation turns out to be the worst in the whole history as regards incomes, especially workers' incomes.

- The second graph shows the same dynamic for the United States during the last two regulation periods: growth in the Keynesian-ordist period and decrease afterwards.

### 2.5.2.5 *The structural distortion in income sharing*

Within the G7, the share of profits in national income has never been as high as since the two oil crises of the 1970s: they represented 14% of the GDP in 2004, vs. only 10% at the beginning of the 1980s. In the industrialised countries, since the end of the 20<sup>th</sup> century, the share of wages in the added value, after having been over 70% at the end of the 1970s, has not stopped decreasing, with an acceleration in the last decade, to reach a

level under 65% since the beginning of the 21<sup>st</sup> century, according to the latest OECD data. As for the share of profits, it has taken the opposite way, increasing from 0% to almost 40%. According to some studies, one half of the increase of profits is due to the distortion in gains distribution in favour of capital, the other half results from the fall in costs resulting from globalisation which, *in fine*, amounts to work productivity gains too.

### **Which are the reasons for this structural distortion in income sharing?**

We are faced here with the confluence of short economic cycles and long- and medium-term movements in the economic history. We have seen that the failure of neo-Kynesianism in the course of the 1970s to revive the virtuous circle of the Golden Age (1945-1970) the necessity to restore firms profitability which were at their lowest level in the late 1970s, the burden of unemployment, which had already largely deteriorated wage-earners' negotiation power, the imperious necessity to put an end to the two-digit inflation rates of the 1970s and the necessity to reduce the growing debt of States, which were quite often superior to 100% of the GDP, etc., all this had strongly contributed to legitimize the neoliberal turn in the early 1980s. In essence, this turn amounted to give up *de facto* the agreement on productivity gains distribution, which had prevailed in Europe, implicitly or explicitly, since the end of World War II. From then on, productivity gains have been, through austerity and reduction measures or freezing of wages, almost entirely allocated to the restoration of firms profits.

The neo-liberal turn was not limited to giving up the incomes distribution rules, even if this is its essential feature. Indeed, one could have imagined that, once firm profits were restored, inflation and the snowball effect of public debt mastered, the Golden Age would have returned progressively. Yet it didn't. The opportunity was seized to change permanently the order at almost all levels. The paradigm has been completely modified: today, neo-liberal inspired policies are implemented almost exclusively and to a growing extent, with its trail of State disengagement, deregulation, flexibilisation of the work market, market liberalisation, and so on. Therefore, and we want to emphasize this idea, one must be conscious that this shift in paradigm has set in for good with its own dynamic, evolution laws and contradictions. The freezing, growing precarity, delocalisation threats have undermined wage-earners' negotiation power still more and make way for a wider erosion of incomes by profits, a relative fall in demand and investments in developed countries. This is a self-maintaining dynamic which tends to draw the whole society downwards.

## Are there countertrends to this structural distortion in income sharing?

Are there any countertrends that could eventually stop that deflationary spiral? We see three of them.

First, the phenomenon of population ageing in the industrialised countries might contribute to restore a balance by limiting the work supply, and consequently push wages upwards. Secondly, wage costs should, one day, start increasing in emergent countries. Thirdly, the effects of competition should end up in limiting the benefits of delocalisation.

Meanwhile, these three structural countertrends are uncertain at several levels. On the one hand, population ageing might be compensated by an opening to foreign workers and/or following a still higher liberalisation of the work legislation. On the other hand, the transition period necessary to see a tendency to wage increase in China and in India may be quite long since it will essentially depend on the exhaustion of rural exodus, which is far from over given that, in these two countries, still more than one half of the population belongs to rural areas. Lastly, one does not see what could stop the domino game of delocalisations toward areas with still lower wages if some day wages in emergent countries went up considerably. In short, the time is still far away when tensions on the labour market will reduce downward pressure on wages and delocalisation drains, all the more because emergent countries will also reduce their productivity gap and will therefore be able to maintain their comparative advantages a long time still.

### Delocalisations and competitiveness through wage costs

In all cases, the delocalisation process is going to support firm profitability since its first aim is to reduce production unit costs, almost always toward countries with low wage costs. Seven European firms out of ten delocalize with a view to approach emergent countries, of course, but also to cut their work costs: on average this decrease represents of 8% according to Roland Berger consultants<sup>17</sup>, sometimes much more. The gap is indeed, as everyone knows now, considerable. While the cost of one working hour in the manufacturing industry reaches 24\$ in Germany (world record), 21 in the USA, 19 in Japan and about 17 in France, it only amounts to 5\$ in Poland or the Czech Republic and 0,6\$ in China, thus approximately 8 times less than in France and 40 times less than in Germany!

Thanks to those wage levels, the unit labour cost for a western firm which delocalizes finally amounts to 50% (in CEECs) and 8% (in China) less than in Germany, which is the most expensive in industrialised countries. Moreover, the movement also affects activities that could not even be thought of 10 years ago, notably in services: computer programming, of course, but also telephone platforms, advice in law, tax, accounting, ..without forgetting financial information analysis.

The scope of the movement is yet very difficult to assess, so difficult indeed that different studies on the issue conclude with job losses varying from a factor 1 to 5! Nevertheless, all of them draw

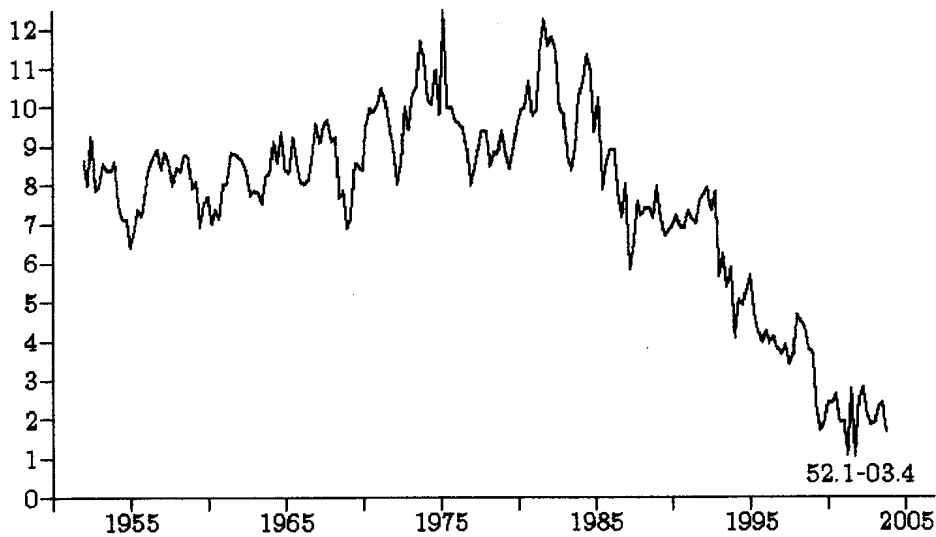
<sup>17</sup> *La délocalisation des services prend son essor en Europe*, a study co-directed by UNCTAD and Roland Berger Strategy Consultants, in a representative sample of 500 European big firms in June 2004.

negative conclusions, especially for the least skilled jobs but here also, moves up the value chain in emergent countries affect a growing part of skilled jobs and sectors.

In any case, the industrial production growth in the different parts of the world and the growth of their respective share in world trade provide a good indicator of the tendency: from 1994 to 2004, industrial production increased by 10% in Japan, 25% in the Euro zone, 40% in the USA but by 8% in the CEECs and the Asian countries (except China) and by 30% in China.

As for the share of emergent countries in the world trade, it went up from 20 to 30% over the period 1990 to 2004 (of the imports of the developed countries) for firms producing goods and services whose cost price strongly depends on work cost, it is obvious that delocalisation, when technically and commercially possible, directly favours profits increase. But this phenomenon can be just as efficient for the firms which only threaten to delocalize, and also for those, still more numerous, for which delocalization is practically impossible and whose managers use threats of unemployment due to globalisation in order to put pressure on wages.

**2.5.2.6 Household savings**



Source of figure: Druéil-Lévy (2003) *Le néo-libéralisme sous hégémonie Etats-Unienne.*  
 Source of data: NIPA (BEA)

**Figure 55 Share of savings in the available income of USA households (quarterly data, %). Available income = total income after tax. Savings = excess of available income over purchase of goods and services (incl. housing) and payment of interests.**

Faced with stagnation if not a cut of their income, households draw on their savings more and more in order to maintain their level of consumption. This is a great concern for the future since tomorrow's investment and consumption are being undermined. One doesn't need to be a genius in economy to understand that this model of growth cannot

survive in the medium or the long run, and that there is another reason for being concerned by a still greater cut in global demand in the coming years.

### **2.5.3 The weak growth trap**

One of the major consequences of the structural distortion in income sharing is the weak growth trap. Indeed, job losses and the relative decline in global demand in the industrialised countries do not encourage firms to invest in production capacities but rather to delocalize still more in search of more dynamic consumption markets abroad. Apart from some exceptions, household demand is weak because incomes are weak. The distortion in income sharing does not lead to a restoration of employment nor to an important increase of investments. Everywhere, mountains of cash are piling up, but investments lag behind. The lack of investment in Europe is not offset by investments overseas. There is a true capital drain in financial intermediation.

We have also seen that the fall in global demand not only marks our present; from now on it leaves a mark on our future too, since a good deal of the current consumption occurs to the detriment of savings and the financing of pensions is less and less ensured.



## 2.6 The translation into space

In the context described in previous chapters, i.e. where companies have to compete on cost (as productivity is not rising) and do not invest themselves, one of the main sources of cost-savings is the increased use of externalities (already trained work force, outsourcing, existing infrastructures, etc) because, confronted with the lack of long-term investment funds and with the need to innovate constantly, enterprises (in the rush to higher and higher profit rates) have to save costs by pooling their resources, either directly in specific enterprise clusters (groups of firms specialised in the same sectors) or indirectly in metropolitan areas offering a more anonymous system of agglomeration economies (a large base of a flexible, trained work force, many different potential subcontractors, etc)

The translation into space of the above general economic trends obviously depends on the spatial context. We will differentiate our hypotheses concerning territorial impacts along the lines of the classical division in centre and periphery.

In central regions, the increased use of externalities can be seen as one of the most important factors determining current economic geography. Much of this trend is linked to the need for companies to have access to a recruitment pool of qualified and flexible labour, but also to the availability of multiple potential subcontractors allowing rapid changes of products and production flows. In spite of modern communication technologies, physical proximity still seems to be an important factor. Two types of regions offering externalities can be identified: first highly-specialised regions in which a network of enterprises offer a pool of subcontracting and labour-recruitment possibilities for a specific economic sector (so-called Marshall-Romer externalities) Classical examples have been the 'Third Italy', the Belgian Courtrai, and other marshallian districts. Second, large metropolitan areas which offer a wide spectrum of qualified labour and potential subcontracting relations across many economic sectors, thus allowing enterprises to reorientate themselves easily if necessary (Jacobs externalities) Generally, regions already rich in externalities have been favoured by the recent economic developments, which explains the trends of (e)metropolitanization of economic development.

At the same time, a high capital ratio allows industries to retain a certain independence from salary costs and thus to stay in high-salary, metropolitan regions, close to their markets. This is reinforced by the fact that most of the EU production remains within the EU.

The European economic geography, however, is obviously not only determined by the central and metropolitan regions with their particular offer of externalities. Some peripheral regions that present quite different characteristics show high growth rates. The companies localising in these regions seem to specialise in sectors demanding a careful balance

between salary levels, public intervention and proximity to the central EU markets, thus justifying their choice of relatively (within the EU context) low-cost regions within Europe instead of moving further away. The classical metropolitan externalities of a qualified labour force seem to play a lesser role here.

Another type of possible regional growth type to be investigated is one based on a strong internal demand. Economic policy most often seems to focus on globalised markets and competition. However, historically many economies have grown on the basis of their local markets and the specificity of the EU's economy as an SME economy pleads for the interest of at least investigating the possibility of regions not attracting supra-regional players, but of building their success on endogenous growth potentials. One example supporting this idea is the recent economic developments in Germany, where exports are flourishing, but the economy is almost in recession, mainly due to the very low level of internal demand.

Although they are represented in all of the above types, we will also have to investigate the Eastern European regions with special attention, due to their very specific historical paths. Some of them seem to offer some form of laboratory in terms of more radical economic policies. These should not, however, be overestimated either, as they are dependent on the very specific situation of these regions at this point in time.

## 2.7 General economic policy: in search of convergence

Addressing the issue of integration and economic and territorial cohesion, one is confronted with the question of how to deal with a group of countries and/or regions of very diverse productivity and wage levels, such as, for example, Spain, Portugal and Greece at the moment of their accession or such as today's structural funds regions. One can oppose the two extreme approaches existing today: either a progressive harmonisation and a proactive policy towards economic, structural and spatial cohesion in a medium-term perspective, as was the case for the three aforementioned countries, or an immediate opening of competition as the current discourse seems to endorse. Obviously other options exist between the two, but we seem to be in a phase of transition from the former to the latter.

The harmonisation approach is based on a process during which the lagging countries catch up in terms of productivity and wage levels. To launch this process at the time the European Community had put into place a macro-economic context along the following axes:

- The zones with low productivity have relatively high prices. In order to avoid the shock of immediate and total competition, these zones can maintain prices in (artificially) rapid progression in order to accompany the catch-up in productivity. Such price support<sup>18</sup> made possible an economic transition allowing restructuring and reconversion of low-productivity sectors towards more productivity intensive production.

<sup>18</sup> For example the support of agricultural prices for Spanish products after its accession.

- Lagging regions also benefited from transfers supporting convergence.
- At the same time, the application of the European social model implying wage progressions in relation to productivity growth allowed a rise of salaries and thus the strengthening of internal demand.
- Finally, the still existing control of capital movements allowed a certain stability for this exceptional mode of transition.

In this context, as could be observed in Spain, Greece and Portugal, regions were able to move up the value chain and to specialise in productive structures more in line with the European average.

The competition approach, on the other hand, goes against the first model on four levels:

1. By making price stability an absolute priority (as through the ECB's status) current European policy reduces the adjustment opportunities available in the past. Competition is immediate and severe pushing a series of economic activities lagging in productivity over the brink of bankruptcy.
2. Convergence transfers to new member states are less in relative terms than those attributed in earlier accession processes.
3. Current policies at all scales aim at abandoning any generalised norms for wage evolutions, but also at deregulating the labour market and reducing mechanisms of social transfers. In addition, globalisation and deregulation policies create competition for jobs, thus exerting pressure on direct and indirect wages and on working conditions.

The almost perfect freedom of movement of capital takes away the possibility for differential policies in lagging regions as it puts much pressure on prices, wages and social transfer mechanisms.

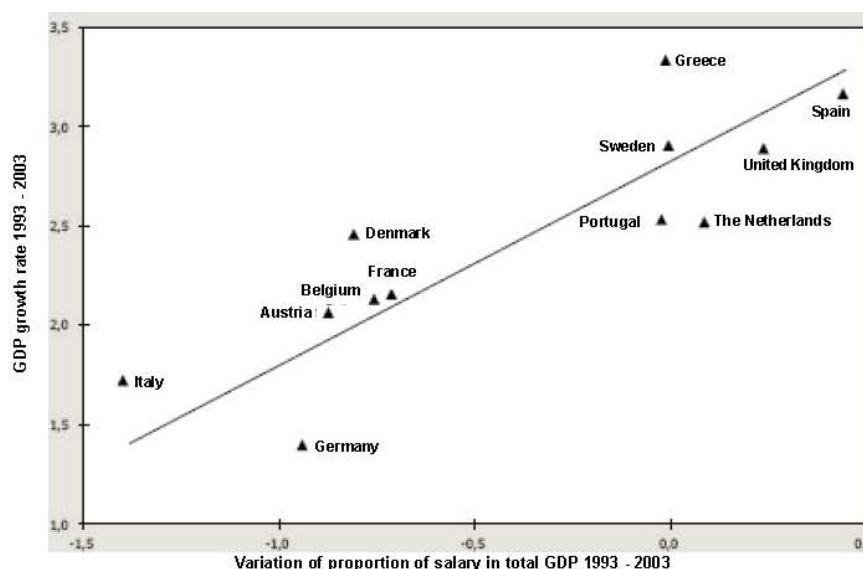
As a result of these elements, the new macro-economic context incites lagging regions to specialise in those economic sectors where wage level is an important competition factor, forcing them to limit the redistribution of productivity gains towards salaries and thus reproducing regressive specialisation. A recent studies have shown at global scale for the national level (Milanovic, 2003; Bensidoun and Chevalier, 2005) this development scenario contains the risk of rising economic, social and spatial inequalities as generalised competition blocks wage progression both in rich and poor regions, thus limiting the potential for endogenous growth and pushing towards an exogenous growth model. The unequal distribution of wealth contributes to the reduction of growth and employment, while the accumulated capital is invested elsewhere in the world. Thus harmonisation of production structures and convergence become more difficult.

Parallel to convergence, the second approach also seems to weaken economic growth. Europe does not have a problem of competitiveness, but a problem of internal demand due to a transfer of income from wages to financial revenues as well as a lack of investment

(see Figure 45) financial revenues are only very partially reinvested (at least not in Europe) and the potential for private consumption decreases as can be seen in the proportion of wages in the total value added since 1960.

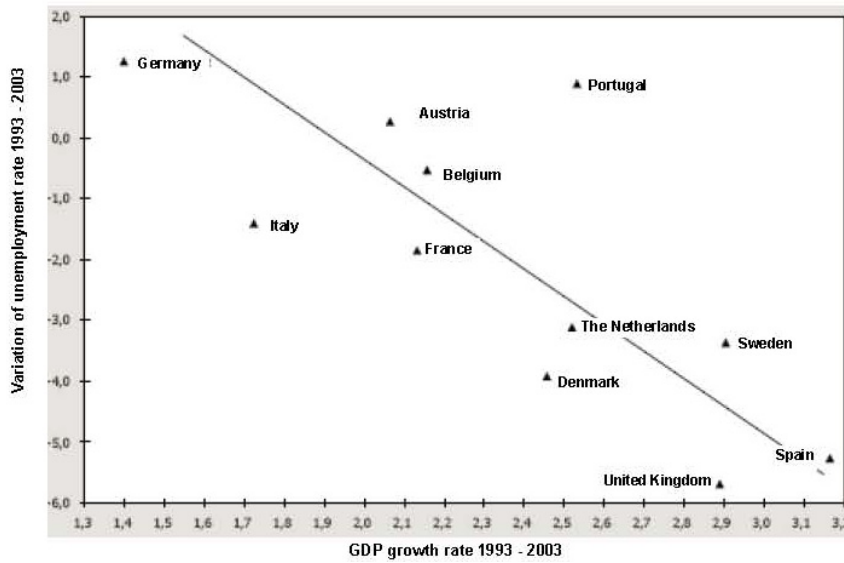
Three observations support this hypothesis:

1. During the period 1993-2003, wherever salaries have risen the most, economic growth was highest. Without wanting to discuss the relationship between growth and salaries, it is impossible to deny that those countries which have seen the slowest salary growth have not seen the highest growth in GDP as can be seen in Figure 54. At the same time, it seems to be mostly those countries whose salaries have progressed the most rapidly that have also experienced the most important decreases in unemployment rate (Figure 55)



**Figure 56** Variation of GDP growth rate and of proportion of salary in total GDP between 1993 and 2003 in Europe

Source : *Les mutations de l'emploi en France* IRES, éd. La Découverte, 2005



**Figure 57 Variation of unemployment rate and GDP growth rate between 1993 and 2003 in Europe**

Source: *Les mutations de l'emploi en France* IRES, éd. La Découverte, 2005.

1. The boom period Europe went through between 1997 and 2001 with the creation of some 10 million jobs was essentially due to two factors: the weak Euro supporting exports and a halt of the decline of the proportion of wages in GDP. These factors are thus either exogenous (exchange rate) or in contradiction with the logics of current political leitmotiv of current EU policies
2. Finally, it is interesting to note that in Germany –as an example of a low-growth region –reduction of wage costs has allowed to support exports, increasing in volume by 16% between 2000 and 2004, but at the same time severely constricted internal demand which decreased by 1% at the same time, growth has been slow.

### **3 Literature review on regional growth, competitiveness, etc.**

**John Jørgensen**  
**Jon M. Steineke and Andrew Copus, Nordregio**  
**Maria Prezioso, Sefemeq**  
**Niklas Hanes, CERUM**  
**Samir Al-Assi, Dulbea and Moritz Lennert, IGEAT**

The growing awareness that surrounds the issue of European competitiveness and Europe's innovative capacities is echoed – and largely inspired by – theoretically informed investigations of the importance of medium- and long-term changes in regional economies throughout Europe, as well as the crucial role of territorial innovation systems for economic development. It is the purpose of this chapter to present and discuss some of the most important theories of the localization of economic activities, regional development, and regional competitiveness, in order to provide a state-of-the-art overview of the fundamental processes influencing the location pattern of European industries<sup>19</sup>, thus helping in the understanding of the territorial structures depicted in chapter 1.

In the chapter some of the primary research questions raised in the ToR are addressed explicitly:

- Regional competitiveness, what does it mean and how can it be measured?
- What are the main factors influencing the location decisions of enterprises?
- How do these factors influence location decisions, and how do existing structures and endowments influence location patterns?

This implies that the state-of-the-art overview of theories of location of economic activities, as well as theories of regional development and competitiveness, will focus on arguments that try to understand the origin of those 'specific environments', and how and whether they are related to regions that are already endowed with attractive resources. Furthermore, while evaluating the policy recommendations that come with each of the theoretical standpoints, the possibility of creating 'specific environments' also comes into focus.

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<sup>19</sup> The chapter draws upon the results that are conveyed in the W2.1-report: 'The localization of economic activity: A theoretical review'. References are kept at a minimum here. Please, consult the W2.1 report for more accurate and complete references.

To paraphrase a distinction used in a study published ten years ago (Cheshire and Gordon, 1995) between demand-side and supply-side questions, the focus here is more on the former, but throughout the chapter, the latter is integrated in the argumentation. Amongst the most crucial demand-side questions are: What are economic agents seeking from areas in which they are operating? What factors favour or impede local development? What is the response in different locations and economic environments to various European policies? And which factors, on which local policy makers could exert an influence, actually affected the performance and location of firms? Focusing on supply-side questions a set of related questions becomes important: Actions of local agents involved in the supply of sites for economic activity supply both in terms of their supply and in terms of the attributes which they are seen to offer. What kind of policies is being pursued?

Clearly, this chapter covers a vast, trans-disciplinary field of research engaging a variety of geographers, economists, and sociologists. As such, we have had to be very selective in the presentation of the literature. The primary research questions and the working hypothesis have thus guided the selection process. It is thus of prime concern to understand how and why firms compete by means of their location. The competitiveness of a firm is dependent on the environment, including the relations firms have with other firms and institutions in their surroundings, hence regional development and regional competitiveness are strongly linked to the behaviour and interdependencies of firms (sections 3.3-5). In the chapter we have a closer look at agglomeration economies (section 3.6) as we investigate those arguments in the literature relating in particular to re-concentration and re-metropolisation. In the report this is done by looking at a) business networks and processes of clustering, b) larger firms and c) smaller enterprises, respectively. In this chapter, however, we are focusing on the former.

In this report it is stressed that the notion of competitiveness, and indeed regional competitiveness, is far more complex than it is generally believed. Focusing on regional competitiveness it becomes clear that it differs from both national competitiveness and competitiveness at the level of the firm. In order to distinguish between the various components of regional competitiveness an elaborated version of the 'pyramidal model' of regional competitiveness' suggested by Gardiner et al. (2004) and Martin 2005 is used. Thereby it is possible to distinguish between the sources of competitiveness, the 'revealed' competitiveness, i.e. the performance of regions that can be measured by various indicators, and the target outcomes, the aim of rising quality of life and standard of living.

### 3.1 The localisation of economic activities

In the debate on the localisation of economic activities, and in the literature on territorial development, industrial (re-)organisation and issues related to regional and economic competitiveness, such as innovation and technological development, it is clear that orthodox perspectives, e.g. the paradigmatic status of Weberian locational theory, have been increasingly challenged in the last 10-20 years by a plethora of heterodox perspectives (Storper, 1997). Orthodox perspectives argue that firms seek locations that minimize distance-transactions and production costs. In the orthodox perspectives the focus has primarily been directed towards demand-side questions, i.e. what are economic agents seeking from areas in which they are operating?

Most notably the orthodox perspectives include application of neo-classical economics while discussing the issue of regional development. Within this framework, the processes of equilibrium will work in the direction of regional convergence at all scales, although various hindrances to convergence can be detected, and dealt with theoretically. The neo-classical growth model (Solow, 1956) operates with diminishing returns to capital - ensuring that poorer regions tend to have faster income growth than wealthier regions. The mobility of production factors tends to speed up the convergence process. The neo-classical growth model is based on the assumption of an exogenous technology base. This means that the model predicts that all economies grow at the same rate in steady state. Economies with a small capital stock will however experience faster growth in the short run. There is an extensive empirical literature on income convergence across nations and regions. Several studies find evidence for convergence, e.g., Barro and Sala-i-Martin (1992) find support for the convergence hypothesis for European regions using data for 7 countries and 73 regions. However, this convergence tends to be relatively slow. Armstrong (1995) also includes regions from southern Europe and concludes that the inclusion of these regions in the regression models results in smaller parameter estimates for convergence. Some authors have however argued that growth studies often suffer from methodological problems, which may bias the results towards convergence (see, e.g., Qah, 1993).

Within the neo-classical framework, economic integration is predicted to speed up convergence towards steady state. However, the neo-classical model does not explain factors determining higher growth rates in the long run. If we believe that economic integration will enhance economic growth in the long run, we cannot use the neo-classical model in order to find out why growth may be enhanced. The neo-classical model can thus be questioned at several levels. A general conclusion from more recent theories is that economic growth is often associated with agglomeration and scale effects, e.g., endogenous growth models (see, e.g. Romer, 1986) and theories of the 'new economic geography' (see,



e.g. Kugman, 1991) These models are not based on the assumption of diminishing returns.

*Territorial development and regional competitiveness*

The *heterodox perspectives* on territorial development build upon developments within various strands of economic theory, for example, on evolutionary and institutionalist economics. A major inspiration referred to by many scholars here is the seminal work of Piore and Sabel (1985) which spurred researchers to look more carefully at localised, specialised production systems, e.g. the Industrial districts, or Marshallian districts, found in The Third Italy, in Baden-Württemberg and other places throughout the European space. In this way, various developmental paths have been detected, for example, regions that are high road instances (e.g. Baden-Württemberg) upstream innovations (e.g. Québec) downstream near-market innovations (e.g. Catalonia) 'dirigiste' systems (e.g. Midi-Pyrénées) localist systems (e.g. Tuscany) etc.

These heterodox perspectives are elaborated in and through a rather vivid, and at times bewildering, inter-disciplinary discussion among economic geographers, urban and regional economists, and economic sociologists. Despite the dissimilarities between the heterodox perspectives, they share a rather critical stance towards the orthodox approach. Moreover, this is particularly pronounced in relation to their stance on neo-classical economics, challenging orthodox perspectives to rethink their assumptions. As far as economic development theories are concerned then, a whole range of competing theories exists. Martin (2005) proposes a useful didactic presentation of those theories and their implications for regional competitiveness, (see table) In the table below, the first two sets of theories remain firmly within the orthodox mainstream, while the latter form an essential part of the heterodox discourse:

Theory	Main Source of Regional Growth and Productivity
Export-base theories	The competitiveness (productivity) of a region's tradable base is an important determinant of its overall economic performance and success. Export base theory highlights the role that a region's export sectors play –both directly and via multiplier effects on the region's non-tradable activities –in stimulating incomes, investment and productivity advance.
Endogenous (or new) growth theory	The accumulation and attraction of educated and skilled human capital is the key source of local economic growth and productivity advance, via its effect on technological progress. The localised concentration of such workers promotes knowledge creation and spillovers, and thence innovation.
Neo-Schumpeterian theory	Innovation, technological advance, and entrepreneurialism are the key drivers of regional competitive performance. There are two opposing views as to what stimulates local innovation: local economic specialisation (through rivalry between similar and competing firms) or local economic diversity (through the greater scope for novelty and market opportunities)

Cluster theories	A region's competitive advantage depends on the presence of localised clusters of specialised export-orientated industries, and associated supporting supplier and institutional networks. Such clustering stimulates: inter-firm rivalry and knowledge spillovers, innovation, investment, and a local pool of specialised skilled labour, all of which increase local productivity.
Evolutionary theory	An evolutionary perspective emphasises dynamic competitive advantage, and the adaptive capabilities of a regional economy to respond to shifts and changes in markets, the rise of new competitors, and the development of new technologies. A region's competitive advantage is the complex outcome of its past development -path dependence- and its capacity to create new pathways of development.  The evolution of institutional forms is crucial to this process.
Institutionalist theory	A region's competitive advantage is held to derive from the 'thickness' of its institutions. That is, a well-developed and regionally embedded set of informal and formal institutions, from business and trade associations, to educational and training institutions, to entrepreneurial culture, to civic trust and other forms of 'social' capital, all with a common sense of purpose, provide a highly favourable environment for economic development and expansion.
Cultural theory	A looser body of theory' that attributes regional (and city) success to the existence, on the one hand, of cultural diversity and tolerance (which allegedly stimulates creativity, innovation and entrepreneurship) and, on the other, to favourable cultural amenities and infrastructure which enhance the quality of life and help to attract workers and businesses.

(Adapted from Martin, 2005)

**Table 20 Competing theories of regional competitiveness**

If the distinction between orthodox and heterodox theoretical perspectives on the (e-) location of economic activities is combined with the three scales applied in many ESPON-studies, namely, the micro-, meso- and macro-levels, (see table below) it can be observed that the orthodox perspectives often confine themselves to one of the scales, while the heterodox perspectives are usually much more open to applying a 'multi-scalar' approach, enabling them to analyse the interrelated processes at play, e.g. how does globalization influence, and how is it itself influenced by these processes, including the relocation of businesses, even at the local/regional level? This development towards more 'relational' perspectives has also had an impact on empirical studies of locational behaviour at a local/regional scale. There is the tendency to move away from -or to supplement -studies of, for example, Christallian spaces (studies of the city and its hinterland) and behavioural studies, with an analysis of the complex relationship with wider socio-economic processes outside the firm's immediate business environment. In short, regional economies are viewed as 'stocks of relational assets' (Torper, 1997:28)

	Micro-level	Meso-level	Macro-level
Orthodox perspectives			
Heterodox perspectives			

**Table 21 Analytical schemas**

In the context of these heterodox perspectives, firms are regarded as bundles of resources, competencies, or capabilities that are then strategically deployed to realise corporate strategies. Resource or capability developments are tied to territories and networks, and the locational behaviours of embedded firms are constrained by these networks or territories (Maskell and Malmberg, 1999a). These heterodox perspectives span theories that are accompanied by advanced econometric analyses and multi-variable, statistical analyses to theories that point to the importance of 'softer' factors, such as human and social capital, industrial milieu, institutional set-ups and the 'cultural' aspects of competitiveness (Lundvall (ed.) 1992, Braczyk et al., 1998, Dunning (ed.) 2000). Indeed, the latter are often based on qualitative research methods, though in recent years numerous research teams have undertaken comparative studies at the meso- and macro-levels using quantitative research techniques in order to rank the importance of various 'softer' development factors, including analyses that compare the importance of 'softer' factors to economic parameters of performance.

### 3.2 Regional development

In this section neo-classical growth theory, and in particular, more recent models of endogenous growth are considered. Regional growth and convergence is a significant issue in itself, and as such, it would merit having its own ESPON project. It is quite clear that the study of economic growth and convergence faces significant methodological problems. Furthermore, empirical results seem sensitive to the selection of countries or regions, as well as to the time period selected. Barro and Sala-i-Martin (1992) argue that evidence of convergence is more likely to be found in studies on regional data, since regions are more homogenous with respect to preferences and institutions. Although several studies find evidence for convergence among European nations and regions, other studies find instead that rather more complex patterns can be seen to be developing. Some of the research is concerned with the existence of 'regional convergence clubs' (see, e.g. Cah, 1996a, 1996b, for a discussion of convergence in the neo-classical model and 'regional convergence clubs'). These regional clubs can emerge from regional differences in saving ratios, technology, etc. Mora et al (2005) studied conditional convergence for European regions related to the initial sector specialisation. The data covers 108 regions (NUTS 1 and NUTS 2) for the EU-12 members during the period 198-2000. They found that regions specialised in low tech intensive industries before integration have not showed any sign of

convergence. They also found that regions with lower specialisation in low-tech industries, located further away from the core saw significantly higher convergence.

Esteban (2000) points out that one explanation for the inconclusive results on economic growth and convergence is that most empirical studies use per capita income instead of productivity per worker as the dependent variable. The problem with per capita incomes is that differences in income may reflect employment rates and participation rates and not necessarily productivity. Esteban states that interregional differences in aggregate productivity (per worker) may be compatible with the regional equalisation of productivity sector by sector. Even if the productivity for each sector is equal across regions, differences in industry mixes can give variation in aggregate productivity in a region if the productivity per worker differs between industry sectors. It is also possible that regional differences in average productivity affects all industries in the same way, e.g. through regions' specific endowments such as infrastructure. Esteban (2000) studies interregional differences in productivity among European regions. Sector data on regional employment and gross value added are analysed for NUTS 2 regions. The empirical results indicate that interregional differences in aggregate productivity are predominantly explained by region-specific productivity differences, and that regional specialisation has a much lesser role in explaining aggregate productivity. Esteban concludes that this result indicates that policies should be aimed at stimulating productivity uniformly in lagging regions, e.g., infrastructure and human capital.

Hippich and Geppert (2003) study convergence across European regions by applying a Markov chain on GDP data for 57 regions for the period 1980-1999. They found no evidence for convergence for the period 1980-1992. Although they found evidence for convergence for the post-Single Market period, this convergence was very slow, a result which is consistent with many other empirical studies on convergence within Europe.

Although the empirical literature on economic growth and convergence is extensive, the results on convergence are ambiguous. Furthermore, the empirical results that have been presented cannot definitively answer the question of whether European integration has enhanced economic growth. They do not however prove that it has not either!

Contrary to prominent views that globalisation would gradually decrease the importance of geography and location for economic activity (Ernon, 1997; Cairncross, 1995) the logical consequence of the interactive linkage model is that geographical proximity matters. Moreover, knowledge spillovers and externalities are geographically bounded, and the main mechanism of high contextual, tacit, or uncertain knowledge spillovers is face-to-face interaction through repeated and frequent personal contacts (von Hippel, 1994) This

observation implies that social capital is indeed the material of knowledge spillovers. A final observation relates to the cumulative nature of innovation processes. As advocated by the endogenous growth literature, knowledge accumulation constitutes the primary element of economic growth and is the main source of increasing returns to production factors (Romer, 1986, 1990; Lucas, 1988). This cumulative nature of knowledge and innovation may be part of the explanation of why regional disparities regarding GDP per capita in the EU persist. This also explains the location choices of multinational corporations with respect to their innovation activities (Cantwell and Iammarino, 2003).

Forms of capital	Nature	Content	Intervention means
Natural Capital	Public	Natural resources and environment	Subsidies to businesses Public investment
Productive Capital	Private Public	Business investments Infrastructures investments	Subsidies to businesses Public investment
Creative Capital	Private Public	Private spending Public spending	Subsidies to businesses Universities Public Research Centres
Human Capital	Private	Knowledge and skills of the workforce	Subsidies to businesses Education, trainings
Social Capital	Public	Depth and extent of interactions between business networks, public organisations, associations, etc.	Economic, technologic and social animation

(Capron, 2002)

**Table 22 Forms of capital – base for regional development**

In their turn, those new concepts encouraged the creation of ‘clustering policy’. Interest in cluster theory, developed by Porter (1990) lies in the relationship between collaboration and competition. According to cluster theory, a region’s competitive advantage depends on the presence of localised clusters of specialized export-oriented industries, and associated supporting supplier and institutional networks. Such clustering stimulates: inter-firm rivalry and knowledge spillovers, innovation, investment, and a local pool of specialized skilled labour, all of which increase local productivity<sup>20</sup>.

Numerous studies have produced evidence that global corporations have increasingly sought out regional economies with competitively advantaged regional industrial clusters (for example, Dittus (1993) a study of trade patterns of FDI flows in seven advanced economies). As economic coordination becomes increasingly globalized, the key interactions among firms in specific industry clusters become regionalized.

<sup>20</sup> Martin (2005) p.17

### 3.3 Regional competitiveness, innovation and technology

What is meant by reference to the competitiveness of regions, cities, and localities? In what sense can one talk of regional competitiveness? In what sense do regions and cities compete? These are important questions that have been raised again and again over the last years. This debate has been synthesized in a recent special issue of *Regional Studies* (Vol 39, December 2004) most notably by Gardiner et al. (2004)

#### 3.3.1 Drivers of Regional Competitiveness

Over the last years the concept of 'competitiveness' has gained growing influence. Martin (2005) considers that it became a new conventional wisdom 'implying that nations, regions and cities have no option but to strive to be competitive in order to survive in the new marketplace'. Economists and experts everywhere have elevated 'competitiveness' to the status of a natural law of the modern capitalist economy.

At the same time, there is an overwhelming academic agreement that, as part of the process of accelerating globalisation, regions are the primary spatial unit (perhaps even displacing nation states) of wealth production and economic governance (see for example, Ohmae, 1995)

The European Commission is one of many institutions anchoring its analysis into the 'regional competitiveness' concept. Indeed, the improvement of regions' competitiveness is at the core of the Cohesion policy. In its third report on economic and social cohesion, the European Commission points to the wide disparities in terms of output, productivity and employment which persist between EU member states and regions. According to the report (EC, 2004) these disparities stem from structural deficiencies in **key factors of competitiveness** -inadequate endowment of physical and human capital (of infrastructure and skills) a lack of innovative capacity, of effective business support and a low level of environmental capital (blighted natural and/or urban environment)

The same report states that 'countries and regions need assistance in overcoming these structural deficiencies and in developing their **comparative advantages** in order to be able to compete both in the internal market and outside'. Strengthening the **regional competitiveness** throughout the Union and helping people fulfil their capabilities will boost the growth potential of the EU economy as a whole to the common benefit of all.

What exactly is the precise meaning of 'regional competitiveness'? For many, 'competitiveness' remains a contentious concept (Martin, 2005) that is not well understood. While 'regional competitiveness' is indeed a key notion that should be a policy priority, it is

also still a complex issue with no consensus regarding its precise meaning or the underlying determinants.

The concept of 'competitiveness' has received considerable amount of criticism. Kugman denounces it as a 'dangerous obsession' (Kugman, 1994). He argues that it is wrong to draw an analogy between individual firms and national economy, and that if competitiveness has any meaning then it is simply 'productivity'. Even Michael Porter, whose work played a key role in transferring the notion into economics and public policy (Martin, 2005) prefers the notion of 'competitive advantage' instead, and also claims that true competitiveness is measured by productivity.

However, it appears that increased productivity is a necessary but not sufficient condition for a 'true' competitiveness. Only a high-road to competitiveness, based on high productivity achieved through constant innovation in products and processes, investment, and a high-skilled labour force, is consistent with high wages and a high standard of living' (Martin, 2005)

These considerations come close to the **European Commission's definition of competitiveness** as 'the ability to produce goods and services which meet the test of international markets, while at the same time maintaining high and sustainable levels of income or, more generally, the ability to generate, while being exposed to external competition, relatively high income and employment' (EC, 1999, p.4). This definition could be improved by adding to the ability to meet the test of international market, the test of local and national markets.

The notion of competitiveness applied at the regional level is equally contentious (Martin, 2005). A region is neither comparable with a firm as an economic actor (no organisational identity or unity) nor with the national economy (no fiscal or monetary policy). However, unlike with nations, regional trade may well approach a zero-sum game. Indeed, regions with similar profiles of economic specialisation compete with each other. And within the national context, regions compete for the same labour force, capital and even public investments.

It is worth mentioning that for Kugman (2003) it may well be more meaningful to talk about competitiveness at the regional level than at the national level. According to him, at the national level what matters is 'comparative advantage', but interregional growth rates are much more sensitive to differences in efficiency. A region with a high productivity will have a competitive advantage in attracting capital and labour from other regions, and will thus tend to reinforce the region's productivity even more.

Per capita GDP, Gross Value Added per worker or employment rate are all measures of the overall regional competitiveness, but are themselves the outcome of the complex

interactions of various factors. When comparing different regional performances, what really matters is their dynamic measured for instance by their comparative growth.

As observed by Martin (2005) for the UK even over the long-run, high productivity growth regions do not necessarily enjoy high employment growth (e.g. London). Actually, over the period 1980-2003 only one region (South-East) among 12 has recorded above average growth of both productivity and employment. Four regions even recorded above average employment growth associated to below average productivity growth. In summary, productivity is not the equivalent of regional competitiveness (as for Porter and Rugman)

Economic theory might help us to approach the underlying determinants of regional differences regarding competitiveness. It is possible to extract some key factors 'or 'drivers' of regional competitiveness from the various and often overlapping set of economic theories. Generally, the literature identifies the following set of determinants: (1) productive capital (inherited economic and business structure, soft and hard infrastructures) (2) human capital, (3) knowledge capital and (4) social capital.

Forms of capital	Nature	Content	(Intervention means)
Natural Capital	Public	Natural resources and environment	Subsidies to businesses Public investment
Productive Capital	Private Public	Business investments Infrastructures investments	Subsidies to businesses Public investment
Knowledge Capital	Private Public	RD RD	Subsidies to businesses Universities Public Research Centres
Human Capital	Private	Knowledge and skills of the workforce	Subsidies to businesses Education, trainings
Social Capital	Public	Depth and extent of interactions between business networks, public organisations, associations, etc.	Economic, technologic and social animation

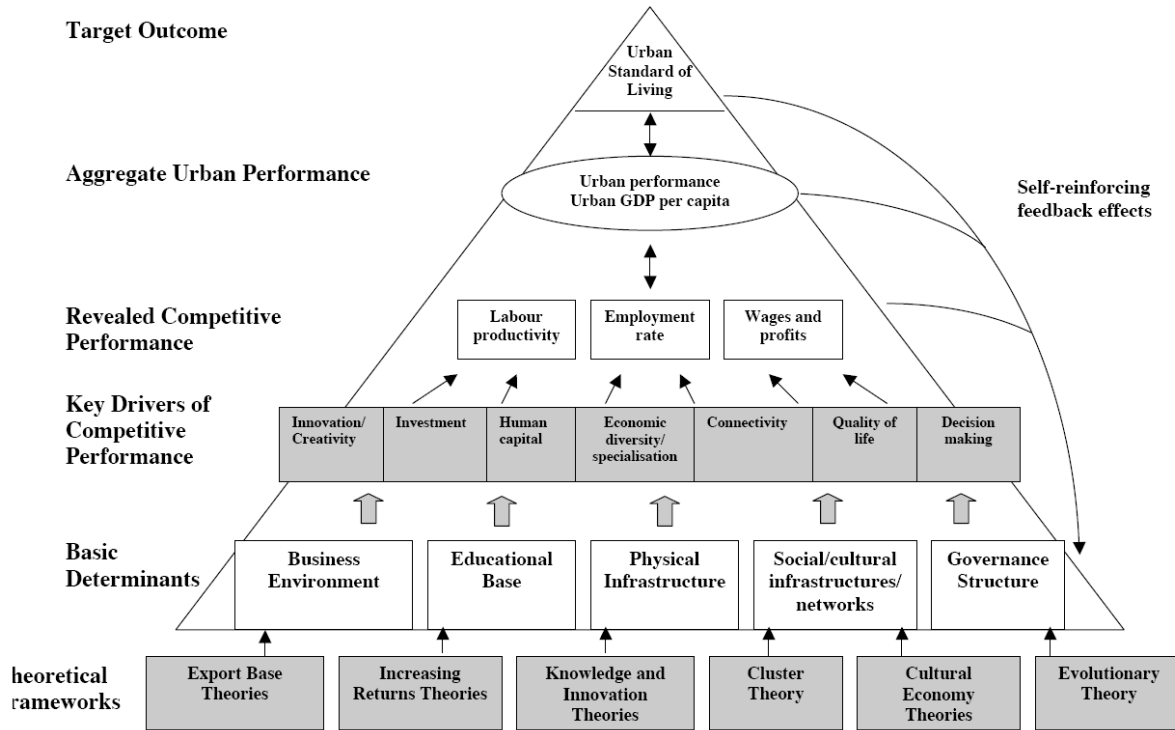
(Capron, 2002)

**Table 23 Forms of capital – base for regional development**

Camagni (2002) points to the fact that if a region display a higher competitiveness on a longer term basis then it is most likely based upon absolute competitive advantages rather than comparative advantages. A successful region is then to be thought of as possessing superior technological, social, infrastructural assets that are external to but which benefits individual firms to a degree that prevents geographical redistribution of economic activities to take place (see also Gardiner et al, 2004)



Based upon such arguments Gardiner et al (2004) and Martin suggest the 'pyramidal model' of regional competitiveness (see figure below)



Source: Martin, 2005

**Figure 58 Conceptualising Urban Competitive Performance**

Thereby it is possible to distinguish between the sources of competitiveness, the revealed competitiveness, i.e. the performance of regions that can be measured by various indicators, and the target outcomes, the aim of rising quality of life and standard of living. The importance of the basic determinants can be understood by applying various theoretical viewpoints in the analysis some of which will be discussed below.

Divers of regional competitiveness are also at the core of businesses concerns. In an attempt to improve its understanding of the broad range of factors which shape a region's competitiveness, the European Commission published a survey (EC, 1990). It covered around 9000 companies located in (1) regions suffering from lagging development (Objective 1), (2) regions facing industrial decline (Objective 2) and in (3) ten more-favoured regions. The survey questionnaire listed 3 determinants of competitiveness and asked business managers to identify the three determinants with the highest priority for improvement. The 3 determinants are grouped into 9 main categories:

- Financial markets
- Educational system

- Labour market
- Macroeconomic outlook
- Infrastructure
- National policies and institutions
- Regional policies and institutions
- Regional economic structure
- Social facilities

In lagging regions, the determinant 'cost of credit' was mentioned most frequently, indicating that interregional disparities in interest rate appear to remain significant. The other most important determinants are common to all three types of regions. They include a lowering of income and corporate tax rates; an increase of qualified labour supply; a decline of indirect labour costs; a deregulation of the labour market; and a higher rate of national growth. The high ranking of this last factor illustrates the importance of the national macro-economic environment.

The survey gives a good indication of what drivers were given the highest priority by business managers in the beginning of the 90s. The 'cost of credit' can be clearly identified as a specific driver that could be renamed 'financing' (capital and credit). A question is whether the order of priority would have changed today, in addition to the fact that certain major determinants, such as innovation, were not clearly stated as possible choice in the survey (except in Industrial policy).

### 3.3.2 Innovation and technological development

Regional economic growth rates tend to be closely correlated with regional rates of innovation (measured by patenting and R&D spending)

There is a growing consensus, within both orthodox and heterodox perspectives, that innovation is the key driving force behind economic growth, standards of living, international competitiveness, and regional development (As and Yrga 2001). Three different, and distinct, literatures are re-examining these issues: what has become known as new economic geography (Kugman 1990), new growth theory (Romer 1990), and the new economics of innovation (Nelson 1993).

The *new economic geography literature* seeks to answer the question: why does economic activity concentrate in certain regions but not in others? One of the most important findings from this literature is that knowledge spillovers provide a mechanism for enhancing the innovative performance and growth of firms. Co-location facilitates knowledge spillovers by providing opportunities for both planned and accidental interactions, and that locations that

contain concentrations of knowledge-intensive resources will be the locus of knowledge spillovers.

*New growth theory* seeks to explain the causes of economic growth, leaving out regional considerations and ignoring completely discussions of the key processes and institutions involved in innovation. The new economics of innovation literature explains the institutional arrangements of the innovation process but leaves out regional issues and economic growth

New growth theories suggest that differences in growth rates may result from increasing returns to knowledge. One source of increasing returns may be agglomerations or geographic concentrations of knowledge that provide a means to facilitate information searches, to increase search intensity and to ease task co-ordination in general (Edman 1999). Knowledge is not easily contained and for this reason, location may enhance the generation of innovation and yield higher rates of economic growth.

However, to the question of why some regions are more innovative than others, two opposing views emerge. The Marshall-Arow-Romer view is that innovation is stimulated by externalities associated with economic specialisation, while Jacobs views innovation as being promoted by local economic diversity and heterogeneity. Despite the fact that the debate between these opposing views has not yet been resolved (Glaeser 2000) recent interventions in the literature find evidence that the influence of Jacobs' externalities on innovation increases together with technological intensity, while the Marshall-Arow-Romer externalities are important for innovation in mature industries (Anderson et al. 1995; Greunz 2004)

In respect of the *new economics of innovation*, the importance of specific regional knowledge resources in the stimulation of innovative capabilities, and the competitiveness of firms and regions are combined in the concept of regional innovation systems. By this concept, it is argued that firm-specific competencies and learning processes can lead to competitive advantages if they are based on localized capabilities such as specialised resources, skills, institutions and shared common social and cultural values (Maskell and Malmberg 1999b)

In comparative studies of regional innovation systems, the relevance of various determinants for regional innovation potential as well as the innovative linkages and networks between different players, have been studied. It is generally conceded that the innovative performance of regions is improved when firms are encouraged to become better innovators by interacting both with various support organisations as well as other firms within their region. Basic stimuli in promoting innovative activities are not only the individual strategy and performance of firms, but also the institutional characteristics of the region, its knowledge infrastructure, and knowledge transfer systems (Doreux and Parto

2004) These ideas have inspired studies on the spatial clustering of firms, in particular in the OECD

The latter perspective is closely related to the views on innovation expressed in Neo-Schumpeterian theories as they focus on recurring structural changes, inspired by, what Schumpeter calls, the perennial gales of creative destruction, which is followed by waves of expansion and rapid growth. Pioneering entrepreneurs are responsible for creating these gales as they search for new productive and trade combinations (innovations in the Schumpeterian sense) to gain greater profits. In the Schumpeterian view of localisation and innovation, firms are viewed as learning agents. Hence, some Neo-Schumpeterian models of economic growth and industrial dynamics have much in common with evolutionary theories of economic growth, e.g. the discussion of 'regional innovation systems' (Andvall et al, 1993) System interactions occur between firms and the innovation support infrastructure. Typology of Regional Innovation Systems (RIS) (Braczyk et al. 1996) based on dimensions of innovation activity (*governance infrastructure* and *business superstructure*) has been developed and helps to understand the similarities and differences in terms of the level and degree of RIS institutionalisation.

Recent studies on innovation systems indicate that the region is a key level at which innovative capacities are shaped and where value-generating processes are governed and coordinated (Heim et al. 2005) Moreover, governments and national agencies now approach regional innovation systems (RIS) as key elements in promoting the innovativeness and competitiveness of regions and firms.

RIS are defined as interacting knowledge generating sub-systems, composed of public and private R&D establishments, higher education institutions (universities and colleges) technology transfer agencies, vocational training organisations and the production structure –i.e. the business community. RIS studies have been inspired by Porter's work on how clusters, geographically proximate groups of interconnected firms in the same or adjacent industrial sectors, can produce competitive advantage based on exploiting unique resources and competencies.

Although his work has also been severely criticized<sup>21</sup>, the recent contribution of Florida<sup>22</sup> is also worth mentioning here. He argues that the role of the regions in the new era of global capitalism is a key element but is generally still misunderstood. Regions are becoming the

<sup>21</sup> The main arguments against Florida's theories are that he uses a biased data set (conflating city centres and metropolitan regions) that his association of the 'creative class' with economic development has no empirical basis, and that the notion of the 'creative class' is, as such, misleading, since there is no homogenous 'class' in that sense (Evine, 2004; Atkin, 2005)

<sup>22</sup> Florida (2000) pp. 23-29.

reference points for the creation and transmission of knowledge. Florida introduces the concept of learning region: Learning regions are vehicles of globalisation: they function as collectors of knowledge, providing the necessary environment for knowledge creation, circulation, and learning. In opposition to old industrial regions, learning regions are characterized by bottom-up governance structures reflecting those of knowledge-intensive firms: mutual dependency relations, a network organization, decentralised decision-making processes, flexibility and a constant concern to meet the needs of consumers-citizens. More recently, knowledge externalities have been acknowledged to exacerbate spatial disparities of growth. The following table compares the opposing characteristics of industrial and learning regions.

The contrast is very evident between the functional logic that prevails in industrial regions and the territorial logic that is seen as making learning regions successful. Transition from one model to the other cannot be achieved without a regional strategy providing the impetus essential to mobilise the process of change<sup>23</sup>.

	<b>Industrial regions</b>	<b>Learning regions</b>
<b>Basis of competitiveness</b>	Comparative advantages I. Natural resources I. Physical labour	Sustainable advantages - Knowledge creation - Continuous improvements
<b>Production system</b>	Mass Production I. Physical work V. Separation of production and innovation	Knowledge-based production V. Continuous creativity I. Integration production and innovation
<b>Industrial Infrastructure</b>	Mass length supplier relations	Businesses networks
<b>Human Infrastructure</b>	I. Low cost and low qualified work I. Tayloristic workforce X. Tayloristic education and training system	X. 'intelligent' work I. Continuous training and education
<b>Physical and communication infrastructure</b>	I. Infrastructures conceived on a national basis	I. Infrastructures conceived on a global basis V. Electronic exchange of information
<b>Industrial governance system</b>	V. Conflicting relations I. Hierarchical organisation I. Regulatory framework for control and command	I. Partnership relations of mutual dependency X. Flexible regulatory framework
<b>Institutional governance system</b>	Centralised, hierarchic and reactive functional logic X. Separation of skills I. Intervention based on market deficiencies I. Centralisation of decisions I. Administrative management	Ascendant and proactive territorial logic V. Integration of skills V. Intervention based on systemic deficiencies I. Decentralisation of decisions I. Public-private partnership

(Adapted from Florida, 2000)

**Table 24 From industrial regions to learning regions**

<sup>23</sup> Capron (2001)

More than ever then, innovation is a necessary condition for economic growth, and nowadays knowledge has become a production factor. In recent decades, *the model of innovation* gradually evolved from being linear to that of an integrated and networking model<sup>24</sup>. The linear model, dominant from the 1950s until the 1970s, views innovation as a straightforward path from the laboratory directly through to the marketplace. The incompatibility of the linear model with the present techno-economic paradigm has however received a great deal of attention in the literature (Kne and Rosenberg, 1986; Lundvall, 1985; Si, 1998). In contrast, regions characterised by an integrated innovation and production system with flexible linkage, feedback and looping relations between actors (Kne and Rosenberg, 1986) revealed themselves to be the winners in the competition race (for example: Third Italy (Pyke and Sengenberger, 1992) or Baden-Württemberg (Brazczyk et al., 1998)).

Innovation is a key weapon in today's system of global economic competition (Brazczyk et al., 1998). Major changes in the organization of production, policies, and business location also mean that the regional level has grown in importance as a source of innovation support for business. This is particularly so where regional business is predominantly small-firm based in nature, or linked in supply chains to larger enterprises. Some regional administrations are well equipped to perform this function, others less so.

### **3.4 The role of Business Networks in the Localisation of Economic Activity and Differential Regional Performance**

In recent years, a number of different 'schools of thought' have described the various aspects of the resurgence of regional economies. The heterodox perspectives have in common a 'relational approach' to the discussion of regional development and competitiveness. Regional development and competitiveness stem from 'relational assets', which are primarily embedded within the regional economies – as opposed to the orthodox views, where technological development is seen as an 'external' factor to the regional economy. This development has inspired researchers to identify the various aspects of a regional environment that tend to foster 'endogenous' development.

Business linkages and networks have been recognised as very important features of the economic landscape. A substantial and varied literature reflects the research carried out within a range of disciplinary contexts. Although the terminology varies considerably, and the exact nature of cause and effect relationships is not always clear, it is nevertheless evident that business networks cannot be ignored in any review of the changing geography of economic activity in Europe.

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<sup>24</sup> Greunz (forthcoming in 2006)

In the interests of clarity, it would be helpful to begin by briefly considering the nature of business linkages and networks, before reviewing the network characteristics of different types of clustering and agglomeration, and the relationships with governance environments, and with innovation. The section concludes with a discussion of the potential for networks to act as surrogates for agglomeration, and of the geographical implications of this.

### 3.5 Definition of Business Linkages and Networks

Business networks, and the linkages that compose them, have been variously defined and described by writers from a range of disciplines. A fundamental distinction should perhaps be made at the outset between those who focus on linkages/networks based upon transactions, and those who stress the importance of social relations and informal contacts between entrepreneurs. The former could be described as the transaction cost' school, while the latter could be labelled, the 'embeddedness' school. The former grouping equates to the older academic tradition, which can be traced back to the writings of Alfred Marshall in the 190s<sup>25</sup>. The latter grouping is often associated with the Norwegian sociologist Granovetter (1985) but also draws very much upon studies of industrial districts in Italy, and of networks in South Asia. It has become popular in recent years, in association with the decline of manufacturing and the increasing role of service and high technology industries, in which the exchange of tacit knowledge' is especially important to innovation and growth.

### 3.6 Business Networks, Clusters and Agglomeration

McCann and Shefer (2004) distinguish three types of agglomeration or clustering behaviour, associated with (a) Marshallian or New Economic Geography clusters, (b) Industrial complexes and (c) Social Networks.

The first type is characterised by transient inter-firm relations (spot trading). Cluster membership and benefits are associated only with location, and are therefore open and free to all once local rent costs are met. According to the Marshallian School, agglomeration brings 'external economies of scale' due to reduced transaction costs, labour pooling and the rapid diffusion of technical information. The New Economic Geography' school built on the 'cumulative causation' ideas of Myrdal (1957), Friedman (1958) and Hirschmann (1958) producing a 'buttoned-down, mathematically consistent analysis' of agglomeration economies (Jijita et al 1999, Kugman 1994).

<sup>25</sup> For a 'potted' history of the concept, see Johansson and Ogley, 2004.

Industrial complexes are common among heavy industries where long term investment in locations and long-term inter-firm relationships along the production chain are necessary. Access to this sort of 'cluster' is restricted by high costs, and location may be dispersed (implying attenuated linkages)

The third type of cluster is typified by the term, 'New Industrial District'. Inter-firm relations are characterised by high levels of trust and co-operation, entry may be restricted according to social criteria, and the geographical manifestation is most likely to be relatively localised.

Moulaert and Sekia (2003) have provided a very detailed review of this last group, which they give the generic title, 'Territorial Innovation Model'. Over the past two decades, they explain, there has been a resurgence of interest in the region as an environment for innovation and economic growth. This has been associated with the rejection of Keynesian regional interventions and the acceptance of structural shifts away from heavy and manufacturing industries and towards light, technology-based industries and services. Within this context, there has been an interest in identifying the characteristics of regional environments, which can help to explain why some regions have adjusted to the 'post-industrial' world better than others. This has resulted in the development of a number of 'Territorial Innovation Models', including:

- Innovative Milieux
- Industrial Districts
- Localised Production Systems
- New Industrial Spaces
- Clusters of Innovation
- Regional Innovation Systems
- Learning Regions

All these conceptualisations share many elements, and differ in emphasis rather than substance<sup>26</sup> –they are, indeed a part of the heterodox perspective identified previously. All of them, for instance assume that firms within an innovative region will interact within a relatively dense network of linkages. Most stress the importance of informal linkages as well as transactions. Several stress the importance of kinship relationships. Co-operation is generally considered more auspicious than competition, and path dependency is important, (in the sense that relationships of trust, traditions and institutions generally develop relatively slowly)

<sup>26</sup> Although Moulaert and Sekia argue that this unity is semantic rather than substantive, due to the flexible way in which the core concepts are treated.



### 3.7 Institutional Thickness and the Associational Economy

Most territorial innovation models' recognise the importance of links between firms and organisations within the public and third sectors. Ohannisson *et al.*, 2002, propose a three-fold classification of business linkages. They define first order networking as comprising business to business links (both transactional and social), second order networking as comprising business to institutional links, and third order networking as indirect (social) links between firms via local institutions. Thus networks not only extend to include the public and third sector development organisations, but the latter are seen as an essential component of local networks, since they connect firms which may be unlikely to form transaction links.

Particular emphasis is laid upon second and third order links in the work of Amin and Thrift (1995) on 'Institutional thickness', and Cooke and Morgan (1998) among others) on the 'associational economy'.

Amin and Thrift (1995) claimed that a particular model of regional governance - known as 'Institutional thickness' - can provide one of the preconditions for successful economic development. They suggested that institutional thickness may be broken down into four elements:

- (i) A large number and variety of institutions (ranging from development agencies, local authorities industry associations, unions and research institutes, and, even, the firms themselves) to represent the actors in the network.
- (ii) High levels of interaction within the network are necessary. The institutions involved must be actively engaged with and conscious of each other, displaying high levels of contact, cooperation and information interchange which may lead, in time, to a degree of mutual isomorphism.'
- (iii) The development of 'sharply defined structures of domination and/or patterns of coalition resulting in both the collective representation of what are normally sectional and individual interests, and the socialisation of costs and the control of rogue behaviour.'
- (iv) A commonly held industrial agenda, which the collection of institutions both depends upon and develops'. This common agenda for development may be formally defined, or simply a common set of priorities, perhaps reinforced by other sources of common identity, reflecting their embeddedness in local culture.

The authors stress that the first of the elements is a necessary precondition, but not sufficient without the development of the other three less tangible processes. What is of significance here is not only the presence of a network of institutions per se, but rather the

processes of institutionalisation; that is, the institutionalising processes that both underpin and stimulate a diffused entrepreneurship' (Amin and Thrift, 1995). Furthermore they point out that while the former is relatively easy to create by policy intervention, the institutionalising process is much more difficult.

More recently, it has been argued that the 'associational economy' offers a third way' (Cooke and Morgan, 1998; Garmise and Rees, 1997; Hudson et al 1997) between state and market led strategies. The common thread running through many third wave conceptions is the idea that to be an effective animator of development the state must be reconstructed rather than dismantled and this means enhancing its capacity rather than its size' (Cooke and Morgan, 1998). This third approach, namely the associational model, considers more the efficacy of the state as opposed to the scale of state intervention (which had been a key distinction between previous Keynesian and neo-liberal approaches)

Like the concept of institutional thickness, the associational model is based upon networks of institutions, both private (such as firms) and public-sector (such as universities and research laboratories, etc) as well as 'intermediate' (trade associations, chambers of commerce, etc) (Garmise and Rees, 1997). However, it differs in that it explicitly seeks to empower the intermediate associations that lie between the state and the market, where economic activity is increasingly based on modes of collective learning and where competition increasingly involves partnership and interactive innovation (Cooke and Morgan, 1998).

Within this context, one of the key developmental roles of the state is to create the conditions – the formal framework as well as the informal norms of trust and reciprocity – whereby firms, intermediate associations and public agencies can engage in a self-organised process of interactive learning' (Cooke and Morgan, 1998).

Those promoting the associational model stress that the state is just one among many institutions in the developmental process. Salas et al (1999) for example, suggest that universities, local governments, labour markets, communities, entrepreneurs, infrastructure, and financial sources are all shapers of the economic structure of a region. Consequently, 'the effective use of state power is contingent on the active cooperation of others, hence it needs to collaborate with and work through the institutions which collectively constitute the national system of innovation' (Cooke and Morgan, 1998).

As noted earlier on, in recent years the concept of innovation as a driver of economic growth has shifted away from that of being an individualistic linear 'technology transfer

process<sup>27</sup>, towards an incremental, endogenous, group activity. We have been reminded (North and Smallbone 2000, Ashem 1999) that innovations are not necessarily based on high or new technology, and that new products and new processes often originate within the manufacturing sector, or from an interaction between producers and their customers/suppliers. Innovation therefore depends not solely on technology transfer arrangements, or the presence of individual innovators, but upon the characteristics of the entire local economy, the various actors, the relationships between them, and the environment within which they operate.

Such incremental innovation, based upon learning by doing, and information, which is not formally codified (tacit knowledge) is shared between entrepreneurs of firms through informal contacts. This shows that non-transactional business linkages are of vital importance in the development of regional innovation systems.

Amin and Cohendet (1999) point out that the popularity of endogenous growth theories based on dense localised networks has tended to result in a strong emphasis being placed upon informal, tacit knowledge. They describe the popular view that firms in regions that are replete with the assets which support innovation and learning – information, knowledge, technology, ideas, training and skill – gain dynamic efficiency through the access they enjoy through networks of interdependency with other firms, formal institutions of learning and common conventions and understandings that surround firms. However, they argue that formally constituted and distanced networks of knowledge and learning based on universally available fruits of science and education are of equal importance to regional economic growth.

### **3.8 Networks as a Surrogate for Agglomeration**

Agglomeration and Business Networks are alternative responses (though not mutually exclusive ones) to the need to minimise certain costs, and to maximise access to information relating to innovation. Cost minimisation may be achieved either by reducing transport costs (agglomeration) or by offsetting lower transaction costs against higher transport costs (networking). The diffusion of innovation is driven by knowledge spillovers which may originate either in research and development institutes (often in cities) or from within the industry itself.

<sup>27</sup> Marshall, 1920; Schumpeter, 193.

Transaction costs tend to be lower in urban areas, where a large number of potential trading partners are located within a relatively small area, and trading institutions and services are well developed and easily accessible. Therefore, within urban areas or conurbations competitive advantage is mainly derived from 'agglomeration', whereby large numbers of firms, located within a relatively small area are able to trade without incurring high transport costs, while benefiting from a degree of product differentiation and diversity, and relatively low transaction costs due to the presence of institutions and services. Shared access to specialised pools of skilled labour is also important. Knowledge spillovers are available both from publicly funded research institutes, and through formal or informal contact between firms (Goetz and Rupasingha 2002 p1229) The relatively large number of trading opportunities means that 'spot trade' or 'anonymous market' transactions tend to be common, flexibility and the benefits of differentiation being more attractive than those of 'routinised' business linkages. As such, both the benefits of agglomeration and the majority of knowledge spillovers are external to the businesses; they are predominantly public goods (Hansson and Ogley, 2004, p.16)

Agglomeration economies are not easily available outside cities and densely populated industrial regions. Their competitiveness must be based upon another strategy to offset reduced transaction costs against the generally higher transport costs. Indeed, the so-called 'Californian School', e. g. the writings of Scott and Storper in the late 1980s, showed that low transaction costs could be obtained in localised production systems through extended, 'untraded interdependencies' (Scott and Storper, 1993) Therefore, it might be advantageous to distinguish between 'urbanization economies', which are the agglomeration economies that can be obtained in urban settings where firms have access to pools of knowledge and skilled labour, and 'locational economies' which have the economic advantages that stem from business-to-business relations in a local, specialized production system. This often results in the development of stronger business networks, composed of spatially, dispersed firms linked by repetitive transaction relationships. Such transaction links may also develop into channels for the diffusion of information relating to innovation – some of which are 'untraded', i. e. the ideas travel 'informally' through personal contacts and social networks. Unlike agglomeration advantages, business networks are not a public good; they are a form of 'club good' (shared between each pair of network members)

..for many transactions, an established network reduces the effective distance between nodes, reducing the transaction (or transport) costs that would otherwise be prohibitive. When co-location is infeasible, networks may substitute for agglomeration.

This possibility of substitution means that small regions may survive and prosper – to the extent that networks can substitute for geographically proximate linkages, for local diversity in production and consumption, and for spillouts of knowledge in dense regions. (Hansson and Ogley, 2004, p. 175)

The above findings reflect the situation at the close of the 20th<sup>c</sup> century. Ohansson and Wigley (2004 p175) argue that technological change (affecting both production and transport and communication) are already changing the trade-off conditions between agglomeration and networking in complex ways, such that during the first decades of the 21st<sup>c</sup> century spatial patterns of business networking are likely to change considerably. One hypothesis might be that some peripheral regions could see a broadening of their economic structure as transport and communication improvements increasingly allow firms located there to participate in long distance networking. Whether a remote region can exploit these new possibilities and become more competitive will depend upon a range of local characteristics, including attractiveness to inward investment due to quality of life characteristics, and the potential for endogenous entrepreneurship, reflecting human and social capital, governance and so on. Furthermore, in the literature on the 'clustering' of economic activities it has been shown that clusters often owe their success to 'pipelines'; e.g. relations to centres of knowledge or expertise further away, and sometimes even to research centres located on another continent (Bathelt, Malmberg and Maskell, 2004) In terms of remote European regions this might very well point to the fact that policy measures will have to be set up to ensure that emerging, local production complexes have access to such 'pipelines'.

The very awareness of the possibility of having developments that echo Marshallian districts' implies that re-agglomeration does not necessarily equate to re-metropolisation. Surely, growth continues to favour the 'core' areas, including the larger metropolitan areas in the Pentagon, but throughout the European economic space, differential growth rates and different regional productivity rates are nevertheless found within the 'core', as well as in other sorts of regions. As such then, the focus on re-metropolisation should be balanced' against a discussion of the processes of endogenous growth –and the weaknesses of Less Favoured Regions.

### 3.9 Concluding remarks

Based on the review of literature, the following lessons can be learned:

- There is a growing consensus within both orthodox and heterodox perspectives that innovation is a driving force behind economic growth, standards of living, international competitiveness, and regional development.
- Regional competitiveness is linked to productivity; higher productivity on a persistent basis is linked to absolute competitive advantages
- Knowledge spillovers provide a mechanism for enhancing the innovative performance and growth of firms. Co-location facilitates knowledge spillovers by providing opportunities for both planned and accidental interactions.

- Regional models that favour an integrated innovation and production system with flexible linkages, feedback and looping relations between actors –are however also possible beyond the main metropolitan areas
- The geographical proximity of economic actors matters since knowledge spillovers and externalities are geographically bounded, and knowledge and innovation accumulate in a given region
- MNCs –tapping in, but also re-ordering local economies
- De to their limited size, SMEs tend to be pa rticularly sensitive to regional variations in different kinds of external economies.

## 4 Location and relocation of firms and enterprises with the European Union

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### 4.1 Introduction

Although other sectors such as the state play an important role in regional economic activity, it is mainly via private firms that the dynamism and economic strength of regions manifests itself in the current economic system. It is, therefore, important to understand why firms are created and closed in one region and not another. This is the objective of this chapter.

The importance of a flexible organization and line of production has during the last decades become one of the key factors for companies trying to survive in a world where changes in the economic conditions occur with a higher frequency than ever before. In order to take advantages of new opportunities generated by constant changes in the economic environment, new firms are created and existing firms try to merge into new markets and at the same time leave markets with declining demand. The development of new products and services do also generate new opportunities for individuals as a large part of all new jobs are created within new firms. In some branches, up to 8-percent of all new jobs are created within new, and in most cases small, firms<sup>28</sup>. This makes the formation of new firms important from a policy perspective as the creation of new jobs and low unemployment rates are often have high priorities on the political agenda. On the other hand, inefficient firms, firms operating on markets with declining demand and firms with lower ability to adapt to these new conditions tend to have more difficult to survive which in some cases led to unemployment. From a strict economic perspective, the closedown of inefficient firms is something positive as production resources are released that could, and in the long run will, be used in the production of other goods and services. From the employees' perspective, the loss of a job due to a closedown may be the starting point of something new and a chance to take advantage of new opportunities. However, the ability to take advantages of new opportunities is not equal across individuals as individuals differ with respect to their

<sup>28</sup> As correctly pointed out by Brown, Hamilton and Medoff (1990) this is not to say that new jobs are created within small firms but new firms are usually small.

skills and ability to adjust, which in some cases lead to long term unemployment and personal tragedies.

It is from this perspective of importance to understand the mechanisms behind the creation of new and closedown of old firms in order to form a policy to reduce transaction costs associated with structural change. Transaction costs do in this case refer to all costs associated with the adjustment of the production process; the closure of old firms, new firm formation, unemployment due to structural transformation etc. This is also of interest to regional policy makers as regions in some respect compete in attractiveness with other regions where one important component is the ability to offer a creative and dynamic spirit for enterprises which will attract not only new firms but also individuals and generate new jobs. In a longer perspective, the regions ability to attract individuals and generate high incomes is crucial for the regions ability to uphold high standards in the provision of public services and thereby increase its competitiveness even more in relation to other regions.

Part of the existing empirical literature on start ups of new firms and the close down of existing ones within a specific region use the so called entry-exit models as their point of departure. These models are based on the work by Bain (1956) who tried to explain the existence of excess profits; i.e. why don't more firms enter markets where incumbent firms make high profits? To explain this phenomenon, Bain introduced the concept of barriers for firms to start new businesses (enter) or leave the market (exit) such as economies of scale (i.e. fixed costs) product differentiation advantages, absolute cost advantages, (regional) patents, capital requirements, national laws and regulations, and actions taken by incumbent firms in order to prevent new firms to enter their market. From the entrepreneurs perspective it is not hard to imagine the effects of such barriers. The knowledge of the consequences of barriers is of importance from a policy perspective as they affect the market structure. However, part of the literature on entry and exit of firms also focuses attention on a broader set of potential determinants of new firm formation and firm death. Within this literature information on the number of start ups of new firms or close downs of old ones, often normalized by the existing stock of firms or labour force within the specific region, are typically explained by different measures of demand. It is reasonable to assume that as the demand increases the number of new firms also increases. Changes in demand could come from changes in income levels, migration, and increased public spending. Other potentially important factors to explain differences in firm formation across regions relate to existing factors of production within the region where the activity is located such as the endowments of human capital, natural resources, and



different measures of public policy. This literature is closely related to the literature on localization where features of the spatial dimension are introduced in a more complete manner.

The main purpose of this work package is to summarize and review the empirical literature on what factors are important determinants of enterprise localization. Focus will be on studies based on European data using regional characteristics to explain differences in entry and exit rates across regions. From the start, the intention was to focus on studies based on enquiries where enterprise executives of European based firms were asked about the main advantages of their enterprises current location and the reasons for possible relocation. To accomplish this objective the intention was to make use of the nowadays frequently used method of meta-regression analysis which is a specific statistical method designed to, in a structural way, summarize, evaluate and analyze previous results in empirical research, not only within the field of economics. Unfortunately, such study have not been possible to carry out as the number of studies within that field are not enough in order to conduct a meta-analysis (the basic features of meta-analysis are briefly explained in Section 2 complemented by a more in depth description in Annex 1 of Volume 3). Therefore, this work package will instead concentrate on the entry and exit literature and its policy implications.

The rest of this work package is organized as follows. The method of meta-analysis is described in brief in Section 2. Based on economic theory, Section 3 gives a general description of the concept of entry and exit with special attention on barriers to entry and exit. A review of the major findings within the empirical entry and exit literature are discussed and critically reviewed in Section 4. Based on Section 4, Section 5 will summarize the main findings and policy implications.

## 4.2 Meta-analysis<sup>29</sup>

The basic idea behind meta-regression analysis is to first collect data from a set of independent (and relevant) empirical studies on a particular subject. In the next step a dependent variable is created based on a common metric, for instance, the parameter estimate, its t-value, or a summary statistic on the variable of interest from each of these

<sup>29</sup> This section will only in brief discuss and give the reader an intuition behind meta-analysis. For a more technical and deeper discussion regarding the pros and cons of meta-analysis, please see Appendix A and references therein.

studies. This variable is then used as the dependent variable in a regression where the covariates may (among other things) include information on the design and used methodology, characteristics of the data set, publication details (year, journal, etc.) etc. for each specific study to be included in the review. In other words, the result (parameter estimate or a summary statistic of the variable of interest) from each study become one observation<sup>9</sup> of the dependent variable in the meta-regression analysis while research design, methodology, characteristics of the data set, publication information etc., are used as explanatory variables. This method allows the researcher to analyze a large set of previous studies and to formally test to what extent the results are driven by different research methods, type of data (number of observations, which region) type of industry analyzed, etc. Compared to a narrative literature review, the results of a meta-analysis will in some respects put the researcher in a better position to detect trends and to make inference about the existing knowledge as presented in the literature. Such analysis has to be based on a large set of studies with similar set up both in terms of theoretical background and variables used in the empirical analysis. As this is not the case for the literature based on enquiries the meta-analysis has not been possible to conduct.

The following box provides a very brief idea of the results of such enquiries using the European Cities Monitor<sup>10</sup> as an example.

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<sup>9</sup> In some cases, which are not uncommon, results from different model specifications are presented within one study. Then it is, of course, up to the meta-analyst to decide if only one or several results from this study should be included in the meta-regression.

### What do businesses say about location factors? Results from the 'European Cities Monitor'

M. Lennert (GEA)

The real estate company Cushman & Wakefield Healey & Baker<sup>3</sup> produces an annual report called the 'European Cities Monitor' which is based on an enquiry of a sample from Europe's 15,000 largest companies. In this enquiry, Senior Managers or Board Directors, with responsibility for location are interviewed by phone. The results obviously have to be taken with caution for several reasons:

- Enquiries about business location always contain the risk that respondents say what they think is expected of them, not necessarily what actually determines their choices. Linked to that is also the danger that some respondents use such an enquiry as a vector for their political demands thus giving more emphasis on certain factors which are not that important in their actual choice.
- Some elements might be taken for granted, thus not appearing as a factor.
- The role of consultancy companies in locational decisions of large companies (see table 24) might create a self-reinforcing effect that clients repeat what they read in the consultants' report of last year.

Nevertheless, the results are interesting to consider, in complement to our own analyses. Therefore, we present some of the table below, taken from the 2005 edition. Many of the factors accounted for were not studied in the entry/exit literature, thus making the approaches somewhat complementary.

	2004	2005
	%	%
Easy access to markets, customers or clients	61	60
Availability of qualified staff	56	57
Transport links with other cities and internationally	50	52
The quality of telecommunications	47	50
Cost of staff	9	5
The climate governments create for business through tax and the availability of financial incentives	8	2
Value for money of office space	29	3
Availability of office space	27	0
Languages spoken	28	24
Ease of travelling around within the city	25	22
The quality of life for employees	18	16
Freedom from pollution	16	13

**Table 25 Factors rated as 'absolutely essential' for locating business (source: Cushman & Wakefield Healey & Baker, 2005)**

This table shows that the main location decision remains accessibility, both physical and virtual, with the availability and cost of (qualified)labour as second important factor. This obviously favours central positions such as those in the pentagon, and it also underlines the concentrating effect of agglomeration economies in metropolitan areas which can provide a large reserve of labour with high accessibility. This is counterbalanced, however, by the cost of labour. These results are confirmed by table 25 showing the desired

<sup>3</sup> <http://www.cushmanwakefield.com>

improvements to current business locations. Again, accessibility is very high on the agenda.

	%	%
Improve transport links with other cities	2	3
Improve traffic circulation	2	8
Improve public transport	8	29
Lower community taxes	13	15
Reduce bureaucracy	6	7
Improve telecommunications	5	6
Improve shopping/leisure for workers	8	6
Better supply of qualified workers	4	5
Less pollution	6	5
Improve parking	4	3
Improve security	-	2
Cleaner streets	2	1

**Table 26 Factors rated as necessary to improve current business locations (source: Cushman & Wakefield Healey & Baker, 2005)**

Table 26 provides allows some very interesting insights for the understanding of regional dynamics. It shows the main information sources the enquired companies use for evaluating business locations. The top source of information (and thus motivation) is the presence of other companies. This supports the idea that there are positive feedback (or snowball) effects within locations, thus favouring those that are already well-positioned, making a policy which aims at redistributing activities across a territory even more difficult, but at the same time leaving the door open for policies which might succeed in launching such a snowball effect.

	%
Other companies located there	68
Consultancy advice	63
General reputation	53
Media comment	44
City publications	8
City websites	8
Internally	6
Chamber of Commerce	5
Local Authority	3
Embassy	2

**Table 27 Sources of information about cities as business location (source: Cushman & Wakefield Healey & Baker, 2005)**

### 4.3 Barriers to entry and exit

In a stylized world free of barriers to entry and exit, free flows of capital, goods and individuals between regions, no economies of scale or taxes, economic theory predicts the

number of firms within a local market to increase until the firms make zero profits. That is, as long as profits are higher than zero<sup>3</sup>, new firms will enter the market in order to take advantage of these 'excess' profits. In such a world, prices are driven down to the firms marginal cost, which give consumers information on production costs and reduces information asymmetries. However, in the real world there exist 'excess' profits, prices above marginal costs and some times even monopolies. Bain (1956) introduced the concept of barriers to entry as a potential explanation for this phenomenon which he defined as anything that allows incumbent firms to earn 'excess' profits without threat of entry. Bain identified four elements of market structure which affect the ability of established firms to prevent 'excess' profits from being eroded by new firms on the market; economies of scale, absolute cost advantages, product differentiation advantages, and capital requirements. It is of importance to understand the consequences of such barriers to be able to explain localization patterns as well. For instance, the existence of barriers to entry could be one explanation why a specific region with advantageously characteristics in terms of production factors (both human and physical capital) infrastructure etc. do not attract businesses that would obviously benefit from such characteristics. Therefore, a discussion of the nature of the different types of barriers mentioned above and also the role of potential actions taken by incumbent firms in order to prevent or obstruct new entries (also recognized by Bain) and national laws and regulations will precede the discussion of the empirical results.

### 1. Economies of scale (e.g. fixed costs)

Economies of scale, or high fixed costs, exist when the average cost of producing a good or a service decline the greater the number of units produced. If the fixed costs associated with entering a market are high it means that firms have to take a considerable size of the market in order to make a successful entry. To give an extreme example: the fixed costs within the aircraft industry is much higher than the fixed costs within the hairdresser industry which could be one factor explaining why there are a large number of barber shops while there are only a few number of aircraft manufacturer within the European Union. One may argue that an aircraft manufacturer serve the whole world while the hairdressers market is local. However, even in medium sized towns, the number of hairdressers often outnumbers the total number of aircraft manufacturer in the world. Based on estimates of potential cost savings from increased output, Pratten (1988) ranked industries in terms of importance of economies of scale and found large economies of scale in motor vehicles, transport, chemicals, mechanical engineering, electrical engineering and instrument engineering, just to give a few more examples of industries associated with economies of

<sup>3</sup> Negative profits are just another word for loss.

scale. Hence, there is likely to be a negative correlation between the fixed costs on the one hand and the competitiveness on that particular market and the number of new firms on the market on the other. Economies of scale may also prevent exit as large investments tend to have lock-in effects.

## 2. Absolute cost advantages

Established firms may own superior production techniques through experience (learning by doing) or research. They may also have foreclosed the potential entrants' access to crucial inputs, either through exclusive contracts with suppliers or exclusive possession of a crucial natural resource. The tendency of vertical integration (suppliers buy retailers or vice versa) in some branches will probably make it more difficult for small and independent suppliers or retailers to enter the market. This type of absolute cost advantages could also prevent inefficient (parts of) firms from exit as profits could be redistributed between in this case the supplier division and the retailer division<sup>3</sup>.

## 3. Product-differentiation advantages

Established firms may have patented product innovation (which of course also could be seen as an absolute cost advantage) or may have cornered the right niches in the product space. Patents are often of great importance within the pharmaceutical market and could be one explanation why it is difficult to establish new firms within this sector. Incumbent firms may also enjoy consumer loyalty through, for instance, advertising or loyalty programs such as frequently flyer programs. When established firms have crucial patents or enjoy consumer loyalty, it is more difficult for potential entrants to enter the market. Patents could also have a negative effect on exit as patents protect firms from competition<sup>3</sup>. However, it should also be kept in mind that the purpose of patents; to protect and stimulate new innovations which often are costly to develop.

## 4. Capital requirements and sunk costs

In relation to established firms, entrants may have trouble finding financing for their investments because of the risk to creditors. One argument is that banks are less eager to lend money to entrants because they are less well known to creditors in relation to already

<sup>3</sup> That is, if retailer A purchases supplier B, profits generated within the retailer section of the new company A could be redistributed to potential losses made by the supplier part of the new company.

<sup>3</sup> The purpose with patents should also be kept in mind; to stimulate and encourage innovations, a process which often is costly.

established firms. The potential entrant has no record to show the creditors while established firms may have a long record of creditworthiness. This is basically a problem of asymmetric information; the creditor has incomplete information regarding the capability and skills of the new firm; its executives, organization and/or future profits. The granting of credits could also affect the closedown of firms if banks grant credits to firms with no future. Adretsch and Mahmood (1995) find entrants' hazard rates to increase with the industries capital intensity, while older firms' rates decrease.

A firm's entry or exit decision could also depend on to what extent investments are retrievable, or in economic terms sunk. A cost is sunk if it is a necessary cost for the firm in order to be competitive and stay in business and at the same time not easily disposed in the case of bankruptcy. Examples of sunk costs are advertising costs (called intangible costs) or special machines and other types of fixed capital (tangible costs). Among others, Melachroinos and Spence (1999) find sunk costs to have a significant effect on exit within the Greece manufacturing industries during the 1980s.

##### *5. Potential actions taken by incumbent firms in order to prevent new entries*

In many markets it is likely that incumbent firms react in order to prevent or obstruct entry. This is one factor a potential entrant has to take into consideration before entering a market. For instance, incumbent firms may act strategically and lower prices and even accept periods with negative profits in order to fight an entrant. One classical example is the airline business where airlines who already serve a specific route often respond to entrants by lowering prices. This price war continues until one has to leave the market, in this case the route. The airline market is often described as a contestable market. That is, given that an airline has made investments in aircrafts and personnel, they are flexible in choosing routes. Hence, even if one airline is the only operator at a specific route, just the possibility that other airlines would start to serve the very same route will keep the current operator from charging monopoly prices.

##### *6. National laws and regulations*

There exist a number of markets where entry is restricted by national law and regulations. In some cases and for different reasons, the national law prescribes certain services to be provided only by the public sector. Common examples are courts of law, national security (military forces) and police. Other examples are the Swedish Systembolag who possess the

national monopoly on the sales of liquor and wine, and the Apotek (who experience the same exclusive rights to sale drugs) Consequently, independently of the prices of liquor, wine and medical drugs in Sweden, it should come as no surprise that these markets are operated by one firm only. Another example is the reference price system on medical drugs introduced in Sweden 1993 In this system the reference price is set to the price of the cheapest generic drug with the same (or at least very similar) field of application on the Swedish market plus ten percent. If the drug is more expensive, the customer has to pay the excess price. This system could affect the decision of new generic manufacturers to enter the Swedish market as it could affect potential profits. In an analysis of the Swedish pharmaceutical market, Rudholm (2001) find evidence in support for this hypothesis. This could of course also have restrictive effects on exit if non-competitive firms are kept on the market due to the protection from competition from other firms.

As mentioned above, in the discussion on firm location, it is of importance to keep these barriers discussed above in mind. It should also be emphasized that these barriers are more or less permanent and can differ between branches, industrial sectors and regions.

#### **4.4 The empirical entry-exit literature**

Even though most of the empirical entry and exit literature take the work by Bain as their theoretical point of departure, there is an apparent heterogeneity in the data sets used and definitions of variables across studies. The level of aggregation ranges from continents to municipalities, the definition of entry and exit differ, the definition and inclusion of explanatory variables differ, and so do functional forms and econometric methods between studies. To make this review more readable and to focus on the for this project most relevant parts of this literature, the review of the empirical findings will mainly concentrate on studies based on European data which include regional characteristics as explanatory variables and the lower levels of aggregation (regions or lower)

##### **4.4.1 Different measures of entry and exit, and different data sets**

By definition, the number of new plants or firms (henceforth firms will be used as a collective word for firms, enterprises and plants) within a region is the sum of the number of new firms, the number of transfers from other regions and the number of new firms opened



and operated by existing firms. By the same reasoning the number of exiting firms is defined as the sum of firms who leave the market for good, the number of firms leaving for another region and the number of firms purchased by or merged into other firms. It is in most cases not feasible to compare the actual numbers of new entries or exits of firms as regions differ in size and population, which, in turn, affect the local demand. Therefore, the number of entries and exits are often standardized either by the labour force (labour market approach) or the existing stock of firms (ecological approach). The labour market approach is based on the theory of entrepreneurial choice by Evans and Ivanovic (1998) which simply says that firms have to be started by someone. Even though it is assumed that some professional experience from both the local market and product market is needed before the entrepreneur can start a new business, this approach does not assume labour to be non-mobile between regions nor product markets. It also has the attractive feature of a clear lower and upper bound (0 and 1) where the upper bound represents the case where every worker within a labour market has started her own business. As the ecological approach relates the number of new firms to the existing population of businesses often within a specific branch, this approach has frequently been used in studies trying to explain why the degree of entry varies across product markets (Adretsch and Fitsch (1994a, page 106)

There is no consensus in the literature which of these two definitions to be used when. For both theoretical and empirical reasons, Garofoli (1998) argue in favour of the labour market approach, while Adretsch and Fitsch (1994a) argues that it depends on underlying assumptions and the question to be analyzed. Whatever the reasons for or against the two, the spatial pattern of new firm formation and the econometric results could be totally different depending on the definition. This is clearly demonstrated both by Adretsch and Fitsch (1994b) and Keble and Walker (1994). When Keble and Walker divide the number of new firms by the existing stock, the new firm formation rates are highest within the London area and south eastern part of the UK. When they divide the number of new firms by the number of employees in each region, the new firm formation rates are highest in Scotland, Wales, and the South West and London areas. Even though Keble and Walker report results based on both definitions in order to make the results comparable with other studies, they argue in favour of measuring the number of new firms in relation to the number of employees (the labour market approach)

Both the ecological and the labour market approach have merits as well as drawbacks. In the following review and discussion the overall rate of entry and exit of firms will be based on studies using the labour market approach while branch specific issues will be based on

studies using on the ecological approach. This is motivated by an example. Assume that entrepreneur A would like to start a new firm within branch X in a specific region. Assume further that even though there are a large number of firms within that specific region, there are no firms within branch X. Hence, the competition within branch X in that region is low even though the total number of firms is large. Therefore, it is reasonable to relate the number of entries or exits into a specific branch to the number of firms within that specific branch to at least in some respect capture the competitiveness. On the other hand, when discussing the total number of entries and exits, it is reasonable to relate this to the potential within the region, which in this case is the number of potential workers within the region or the total demand. Therefore, when analyzing the total number of entries or exits only results based on the labour market approach will be discussed.

A few examples will be used to emphasize the heterogeneity of data sets used. For instance, Keble and Walker (1994) analyses variations in new enterprise formation, growth in numbers of small business, and business failures in the United Kingdom during the period 1980-1990. Business registration and deregistration is measured at the county level and defined both in relation to the existing stock of enterprises and the number of employees within the county. Other studies who use both the ecological and labour market approach are Adretsch and Fitsch (1994b), Garofoli (1994) and Guesnier (1994) while Stopoulos and Spence (1999) only use the ecological approach. One interesting feature of the data set used by Keble and Walker is the distinction between small and large business formation, a distinction not always made in the literature. That is, it is reasonable to assume that the start ups of large enterprises are driven by other factors compared to the formation of small businesses.

The result of what factors are important determinants of entry and/or exit is also likely to be branch specific. This is recognized by, among others, Berglund and Brännä (2001) who analyse entry and exit of firms at the municipal level in Sweden during the period 1980-1993. Their data include information on the number of entries and exits within eight different branches (agriculture, mining, manufacturing, electricity, construction, commerce, transport, and financing) for all Swedish municipalities which make it possible to analyze different entry and exit patterns for different branches. Even though the insight that different factors may have different impact on the firm formation in different branches is not something new, the ability to divide the data into that many branches over such a long time period and disaggregated level (municipal) is quite unique. To compare with other studies, in their analysis based on firm formation in 75 regions in West Germany between 1980 and

199, Adretsch and Fitsch (1994b) make separate analyses for all branches, only manufacturing, and only the service sector. Other examples are Garofoli (1994) (Italian provinces 198-1991; all branches and manufacturing only), Topoulos and Spence (1999) (Greece 198-1991, national level; consumer goods, intermediate goods, and producer goods) and Hart and Gudgin (1994) (6 regions in Ireland 198-1990; manufacturing only)

The distinction between different definitions of entry and exit, different time periods and countries are important to keep in mind when we now turn to the discussion of what are found to be the most important determinants of firm formation and firm death.

#### 4.4.2 Entry

##### *Local demand*

Initially, most new firms serve local or geographically restricted markets which suggest local demand or the growth in local demand to be one important factor in explaining the entry of new firms (see Storey (198)). That is, as the demand within a local market increase, the number of firms increases. The increase in local demand could be due to higher income levels, in-migration or population growth, but could also be driven by increased spending by the public sector. For instance, local government expenditures, intergovernmental grants and regional policy including support to new firms affect the local demand for goods and services, which in turn could affect the supply of new firms. It should be noted that in-migration and population growth affect both the supply of new firms as the number of potential entrepreneurs increase, and the demand for goods and services within the region.

Several studies report a positive relationship between entry and local demand. For instance, Keble *et al.* (1992) demonstrate a strong relationship between total new small firm formation and in-migration in rural areas in the UK. These findings for the UK are further supported by Keble and Walker (1994) and Ayadike-Dones *et al.* (2005). Similar results are also reported for Germany by Adretsch and Fitsch (1994b) who find total new firm formation to be positively correlated with population density, population growth and per capita value added. For Italy, the results presented in Garofoli (1994) suggest a positive effect from population growth on total firm formation. Further, the findings in Hart and Gudgin (1994) indicate a positive relationship between industrial demand and total entries

of new firms in Ireland.

As mentioned above, it is reasonable to assume that different regional characteristics affect different branches differently. This is distinctly shown in Berglund and Brännä (2001) having the possibility to analyze the eight different branches separately, their results suggest that local demand, measured as total income within the municipality, has a positive effect on entry within the transport sector. However, they do not find any significant effects from local demand on agriculture, mining, manufacturing, electricity, or construction. In addition, their results suggest the average income level to be negatively correlated with entry within agriculture and transport, while positively correlated with entry within construction. They also include size in their analysis and find it to have a negative effect on firm formation within construction while a positive effect on firm formation within transport. Another important contribution by Berglund and Brännä is the inclusion of localization subsidies provided by the national government. However, they do not find any significant effects from such subsidies on firm formation. Adretsch and Fitsch (1994b) find new firm formation in the manufacturing sector in Germany to be positively correlated with population density, and Ilmakunnas and Topi (1999) find a positive correlation between new firm formation in manufacturing and growth in demand in Finland.

Analyzing the service sector, Adretsch and Fitsch (1994b) find for the service sector population growth to have a positive impact on new firm formation and per capita value added. The results in Berglund and Brännä (2001) suggest that local demand, measured as total income within the municipality, has a negative effect on entry within financing. However, they do not find any significant effects from local demand on commerce. In addition, their results suggest the average income level is positively correlated with entry within commerce and finance. They also find a positive effect on firm formation within finance.

The main conclusion from this is that there is a positive correlation between the total creation of new firms and the local demand which suggests that in migration, income growth, and increased public spending tend to have a positive impact on the creation of new firms. This implies that public policy could make a difference. However, the results differ across branches and the few empirical studies where public spending is explicitly included in the models do not show any clear impact from public spending. This could be due to the fact that most of these policies have not had the persistency or the power it takes to make a difference. What could be said is that if public spending should be used to equalize firm birth

rates across European regions, it will take considerably time and resources to achieve this and that it would be naïve to suggest that such a process would come easily and give quick results.

### *Skills*

It is often believed that highly skilled individuals, either measured as formal education or on the job training, have a positive effect on entry and a negative effect on exit. The intuition is that skilled workers are more likely to possess the competence associated with the shift from being either unemployed or employed to start and run a new business. A large amount of highly skilled workers may also provide a key source of inputs needed by new firms. Another measure of skills is managerial skills or contacts with others who run their own business. Such characteristic of a region is often measured as the number of small businesses where the basic idea is that a large share of small businesses within a region will make it more likely that individuals have some relation to someone who run his or her own business and by this get information and knowledge regarding what it takes to start a new firm.

Adretsch and Fitsch (1994b) find a negative correlation between the share of unskilled workers and total firm formation which is in line with the findings in Guesnier (1994) who find positive effects from on the job training on total firm formation. Hart and Gudgin (1994) report positive effects from the proportion of the population holding professional and managerial occupations. However, this hypothesis is not supported by the results presented by Berglund and Bränä (2001) when analyzing different branches. They find high education, measured as the number of individuals with at least three years of education at university level in relation to the population aged 16-64 years, to have a negative impact on both entry and survival rates within agriculture, construction, and transport. They also find high education to have a negative impact on both entry and survival rates within financing. Again in contrast to this, Hart and Gudgin (1994) report positive effects from the proportion of the population holding professional and managerial occupations on firm formation within manufacturing. Garofoli (1994) finds a positive correlation with high specialization index<sup>5</sup> which could be interpreted in terms of special knowledge, and firm formation within manufacturing.

Another interesting finding with respect to skills is the one by Mata (1996) Based on a data

<sup>5</sup> This index is based on the percentage of employees within different sectors. Due to a printing error, the exact definition is actually not included in the paper.

set for Portugal, Mata find better qualified Portuguese entrepreneurs measured as more formal schooling tend to start initially larger firms. This in combination with results presented by Adretsch and Mahmood (1995) and Wagner (1994) that hazard decrease with the entrants' initial size which is also found in several other studies is interesting as it suggest that formal education do also have a negative effect on hazard rates. This conclusion is supported by the results presented by Bruderl *et al.* (1992) who report that hazard rates of German entrant firms to be lowered by the entrepreneurs general and industry-specific work experience. Also Boney *et al.* (2007) in their study based on UK data find that surviving firms are larger than non-surviving firms, even though they also find that the importance of the firms' size on its probability to survive decreases over time where time is found to be more important than size. Small establishments have higher hazard rates, which is lowered if they can grow fast, a result supported by the arguments given by Adretsch (1995a). Also Knings *et al.* (1996) report that hazard rates increase for small firms in Belgium. It should, however, be emphasized that the general result that survival probabilities of new firms are low and the probability of exit decline with the firms' size should be considered in the light that most econometric models are better in predicting survival rates in the short run compared to long run. That is, initially large firms are found to have higher survival probabilities in the short run while it is not clear if initially larger firms also tend have higher survival probabilities in the long run. Even though an initially large firm tend have higher survival probability there might be so that there are the initially small firms who survive in the long run.

The overall impression is again mixed. Education and managerial skills tend to have a positive effect on the over all firm formation even though the number of new firms in all branches are not equally affected, which is reasonable. Education does also tend to have effect on the survival rates as highly educated individuals tend to start larger firms and larger firms have higher survival rates.

### *Wealth*

Starting a new firm is often associated with a capital investment such as capital stock, office space, machines, computers etc. As discussed above, if the capital market could be characterized as a market with imperfect information, capital requirements could constitute a barrier to entry. However, if the entrepreneur is wealthy and/or in possession of valuable assets such as house ownership, it is reasonable to assume that this barrier will be less significant.

Another measure of wealth is unemployment (or employment) rates. The correlation between the number of new firms and the unemployment rate could go either way. Based on the argument of capital requirements, unemployed may have lower credit ranking compared to employed, which suggests a negative correlation between the number of new firms and unemployment rates. On the other hand, as pointed out by Storey (1991) unemployment does not only create incentives to start a new business, but constitutes a source of labour inputs for new firms. In addition, high unemployment rates tend to have a moderate effect on labour costs (see Evans and Ivanovic (1998) and Evans and Leighton (1998, 1999)).

Keble and Walker (1994) report a strong positive correlation between wealth measured as housing values and total new firm formation. They also note that their measure of wealth correlates with the share of the population with a managerial or professional position which implies that it is difficult to separate the effect of wealth in terms of housing values and skills. In addition, they do not find the unemployment rate to be correlated with total new firm formation. Garofoli (1994) finds the total number of new firms divided by total population to be negatively correlated with the change in unemployment. Opposite results are reported by Guesnier (1994) who finds a positive impact from unemployment rates and a negative impact from changes in unemployment rates on firm formation. Bosma *et al.* (2005) find that the unemployment rate has a positive effect on total entry while the share of employed in manufacturing is found to have a negative effect on entry and exit. These results are based on data from the Netherlands 1988-1999. Looking at manufacturing only, Adretsch and Fitsch (1994b) find a positive correlation with changes in the unemployment rate for the establishment of new firms within the manufacturing sector, a result supported by Ilmakunnas and Topi (1999) in their study based on Finnish data.

#### *Attitudes towards entrepreneurs*

The local socio-cultural attitude towards entrepreneurs could affect the number of new firms. Socio-cultural attitudes are often difficult to measure. Instead, political preferences revealed in local elections have been used as an indicator of attitudes towards entrepreneurs where the hypothesis is that a large share of socialist voters should reflect a negative attitude towards entrepreneurs. Another measure used is the share of small firms within the region. Here, a large share of small firms is supposed to be positively correlated with a positive attitude towards new firms.

Keble and Walker (1994) find a positive correlation between the total number of new firms and the share of the population voted in favour of the Labour (or Nationalist) party. They take this as evidence in favour for the hypothesis that socio-cultural attitudes matter for firm formation. The fact that the relationship seems to depend on the definition of new firm rates indicate that the relationship should be interpreted with caution. Moreover, it is not made clear in the paper to what extent the voters of these two parties share the same attitude toward entrepreneurs. Guesnier (1994) uses the total share of small businesses (1-49 employees) as an indicator of attitude and report a positive effect.

#### 4.4.3 Exit

Even though the results differ between separate studies of entry of new firms the interpretation of the parameter estimates are similar. A positive correlation between, for instance, in-migration and the number of new firms within a specific region is often given a positive interpretation in terms of future prospects, growth, innovation, etc. for the particular region. As people move in the number of new firms increases. A similar positive interpretation of a negative correlation between in-migration and a relative measure of exit of firms is not correct without considering the effects on entry. The close down of firms or low survival probabilities within a region might actually be something positive depending on the reason behind the close down. The firm might have been purchased by another firm because of its specific skills, key personnel, patents, etc. The features of the purchased firm might be further and better developed in combination with other features within the purchasing firm than otherwise. And only the fact that the firm has been purchased indicate that the firm have attractive qualities. Firms are also closed down due to the fact that the owner retires or do not want to run the business anymore, reasons which may not have anything to do with the firms' success, capacity or potential and could be totally voluntarily and desirable. This makes it necessary to relate results from analyses of closedowns to results from analyses of new firm formation in order to make correct interpretations. From an econometric point of view, the effects of, for instance, local demand on the exit of firms should preferably be estimated simultaneously with the effects of local demand on entry in order to make more informative interpretations of the parameter estimates. However, the relation between entry and exit are not often explicitly modelled in the literature<sup>6</sup>.

<sup>6</sup> One explanation for this might be that OLS or similar regression techniques do not gain in efficiency from simultaneous estimation if the covariates do not differ between equations. However, this could be more explicitly spelled out in some of the studies reviewed here.



Entry of firms is a necessity for exit which suggests that there could be a correlation between the number of entries and exits. This is however an empirical issue as exit is not a necessity for entry. Several studies report a strong positive correlation between the entry of new firms and the closedowns of old ones, see for instance Bessley and Hamilton (198) and their study of manufacturing in Scotland, Cable and Schwalbach (1991) analysis of entry and exit based on data for eight European countries, Boney *et al.* (2003) in their study based on UK manufacturing data, and Geroski (1991a, 1991b) for British industries. Other studies indicate that a large number of entries are followed by an increase in the relative number of exits. For Germany, Boeri and Bellman (1995) find a positive entry shock to be followed by an increase in the next year's hazard rates and Sleuwegen and Dhandschutter (1991) found the same lagged pattern for Belgian manufacturing industries. Even though entry and exit rates are found to be positively correlated and that exits follows from entries, this is not enough to state that the determinants of entry and exit are the same or that they have the same effect on entry as well as on exit.

Adrecht (1995b, chap 7) observed that exits by older firms are less sensitive to industry growth disturbances than are exits by younger firms. A firm's growth rate also tend to decline with age and there seems to be a factor of 'over' entry or overshooting in entry where firms are later shaken out. There is evidence based on US data that supports the Darwinian interpretation that unproductive firms are replaced by more productive, see Baldwin (1995) Geroski (199) found that overall productivity growth in 79 British manufacturing industries during 1976-79 increased significantly with the lagged rate of gross entry of new firms. However, this process (Darwinian) should continuously make less productive firms to shrink and productive to grow its market share and sales. For businesses small enough to be tied to their proprietors' life cycles, the managers' age positively predicts the business survival in prime working years, but eventually age leads to discontinuance or sale of the business, see among others Blims and Schmitz (1996)

Another interesting issue raised in a study by Bogstra and van Dijk (2003) is the question if the location of the firm affects its performance in terms of employment. This question is analyzed using 3,000 observations (firms) for the Netherlands 1994-1999. The data used include information on all branches, manufacturing, retail and business services. Bogstra and Dijk find small, young and relocated firms to experience really large increases in employment and that firms seem to benefit from being located in an area with high

population levels and diversity of economic activities. Firms located at industrial sites seem to experience more employment growth than those that can be found outside any specific kind of facilitated enterprise zone. The influence of specific location characteristics differs considerably across industries. For manufacturing and retail there is evidence to suggest that the employment performance of a firm is related to the firms' location. These two industries do not gain from being located of an office enterprise zone. Areas characterized by large increases in population numbers do not present the most suitable business environment for manufacturing firms. Location characteristics do not contribute in explaining variations of employment growth of firms belonging to the business service sector.

#### 4.4.4 Concluding comments and policy recommendations

So, what have been learned from this? The main findings could be summarized as follows: A large part of all new jobs are created by new firms, and that new firms in general are small. Entry of new firms is common even though the variation across regions is substantial. There is a positive correlation between the creation of new firms and the local demand which suggest that in migration, income growth, and increased public spending tend to have a positive impact on the creation of new firms which implies that public policy could make a difference. However, empirical results indicate that measures of explicit government actions tend to have a low effect on new firm formation. This could be due to the fact that most of these policies have not had the persistency or the power it takes to make a difference. What could be said is that it will take considerably resources to equalize firm birth rates across regions within the EU. What is needed is persistence and determined governments. It would be naïve to suggest that such a process would come easily and give quick results. In combination with the fact that the endowments of human capital within a region tend to have a positive effect on new firm formation, the location of new universities might fulfil both these requirements of a successful public policy in order to equalize regional disparities in new firm formation; such investment is long term and has a positive effect on the regional endowments of human capital.

The survival rates of new firms, which most often are small, are low. It is tempting to suggest that new, small firms need and should have support to survive. As these firms do not survive it means that they are not competitive enough to survive, and why support uncompetitive firms? Similar policy recommendations are put forward by Ayadike-Dnes *et al* (2005) who suggest in their study based on the UK situation that policy makers should

not focus so much on entry of new firms but instead on survival of existing firms in order to increase the net number of firms. However, this recommendation has its obvious weakness in that such policy will bring about lock-in effects; existing non-competitive firms will be subsidized and the structural change within the economy obstructed. This kind of policy has already been employed for large firms, especially during the 1970s.

Should small firm policies move from stimulating birth to promoting high potential growth firms? The main problem with such policy is that it is not equal across firms and that it is difficult to know which firms or branches are to be successful in the future? If the policy discriminates firms, which criteria is to be used? This is likely to be political controversy regarding these criteria. However, in the light of inefficiency and unequal redistribution of resources across regions, we should bear in mind the large amounts spent on the agricultural policy within the EU which consumes nearly (or is it above) 50-percent of the total EU budget. It is hard to imagine that regional support to new firm formation (or even public support to specific, what is believed to be successful, small firms) would create as substantial inefficiencies as the current agricultural policy.

Final reflection concerns other potential effects from a policy which tries to equalize entry and/or survival rates across regions. For instance, let's say that new universities or university colleges are located in regions with low employment rates in order to both affect the unemployment rate and to stimulate the formation of new and larger firms with high survival probabilities. Such policy or other policies undertaken to reduce regional disparities in birth rates may constrain (or discourage) migration across regions as it compensates for differences in demand across regions and for natural advantages found in urban areas. The cost, political and financial, of achieving equality across regions in firm birth rates and economic well being may be substantial. Only the political process can value to what extent such extra costs are desirable. But it should be made clear that a policy undertaken to equalize opportunities across regions may cost not only in terms of public spending but also in terms of total economic.

## 5 Impacts of macro (EU-wide) policies

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### 5.1 Introduction

As previous chapters have shown (particularly chapters 1 and 2) it is important to understand what impacts macro-economic (EU-wide or national) policies –which at their origin are not thought as regional development policies –have on the territorial structure of Europe's economy and on the economic development of individual regions. A central question is which regions, or types of regions benefit most from EU wide policies and which regions benefit less? If it is possible to identify such regions, this would contribute to the definition of regional competitiveness in the context of EU-level macro-economic policies.

As noted in an earlier chapter, the nature of macro-economic policies has changed during the post-war era. The Keynesian view that the economy can be fine-tuned through policy interventions has been replaced by economic policies based on norms, e.g. inflation norms and independent central banks which restrict the use of fiscal policies. A general opinion is that national monetary policies have lost their effectiveness in a world of free movements of capital and de-regulations in the exchange market. The implementation of the European Monetary Union (EMU) has also limited national policy interventions; the adjustment effect via the exchange rate and national monetary policy is no longer available for national policy makers. The implementation of the common market and monetary union have also raised a need for EU policy interventions that prior to the reform mainly have been national commitments, e.g. redistribution policies.

There has been a long going debate whether EMU is an optimal currency area. According to theories concerning optimal currency areas (OCA) the loss of exchange rates and national central banks necessitates flexibility in some other dimensions, e.g. flexible wages and mobility of production factors. Regional productive structures have also been found to be important in the new macro-economic environment. Shocks to the economy are more likely to be averaged out between regions when industry structures are diversified. Much of the discussion in this chapter is mainly concerned with European integration; industry structures and their regional effects.

The chapter consists of three parts; in the first part we present a brief theoretical discussion of the underlying processes driving regional effects of macro-economic policies. In the literature review we more precisely wish to address questions such as to what extent has the common market affected regional growth and production structures? What are the effects of state aid? What are the main regional effects of the single currency and common monetary policy? However, such a literature review would be extensive as regional effects

of macro-economic policies may be studied by almost every discipline within economics. Thus, it is necessary to concentrate on some of the most relevant areas.

The literature review should be seen as an attempt to point out some of the theoretical frameworks that can be the starting point for the discussion of EU-level macro-economic policies and their impacts on regional development. We also intend to review some of the empirical literature in order to collect some indication what effects of EU-level macro-economic policies have already been measured.

The second part contains a discussion of macro-economic policies as an evaluation problem; some general methodological problems will be discussed. The section might be of value for understanding the limitations of different empirical methodologies discussed in this chapter, in the literature review as well as in the empirical analysis.

Upon demand from the ESPON monitoring committee the third part contains an attempt to empirically investigate regional effects of macro-economic policies. In this ESPON project we present two approaches. The first approach presented in this section is an analysis of regional sensitiveness to changes in the monetary policy. The empirical analysis is conducted in two steps. In the first step, we estimate the impact of interest rate on regional GDP data. The second step is a cross-section analysis of regional industry structures and their impacts on interest sensitiveness. The empirical analysis is based on a sample of NUTS2 regions for the period 1980-2004.

The second approach is an application of the MAST model developed in ESPON 3. The simulation results from the MAST model are presented in section 5.5.

## **5.2 The regional effects of EU-wide policies: a literature review**

The literature in this field is vast and complex, as the issue can be addressed from many different perspectives, be it in the definition of macro-economic policies, or the types of impacts studied. We have, therefore, decided to select some issues that seem the relevant in regard to territorial development, i.e. economic integration (Single Market) state aid, and the European Monetary Union. The section concludes with a discussion of the general results found in the literature.

### **5.2.1 The European Monetary Union and its impact on regional development**

The theory of optimal currency areas can be traced back to the seminal work by Mundell (1961). In an open economy with flexible exchange rates, macro-economic shocks may be absorbed by the exchange rate. A general conclusion is that when exchange rate flexibility and national monetary policies are no longer optional among members in the currency area, economic flexibility is required in other dimensions. The model presented by Mundell states that an optimal currency area requires geographical mobility in production factors or the

possibility to implement extensive redistribution schemes and regional policies. Another option is that nominal wages and prices are flexible. This flexibility is necessary in order to deal with asymmetric shocks among regions<sup>3</sup>. Theoretically, a sufficient condition for the implementation of a common currency is that at least one of the criteria is fulfilled. Thus, a fundamental question for the EU is to what extent these criteria are fulfilled. This question is not easily answered. However, it does not seem controversial to state that prices and wages are not flexible. As a consequence, much of the discussion whether or not EMU is an optimal currency area has been concerned with labour mobility across European regions. Although labour mobility is an important dimension of optimal currency areas there are other dimensions that are important determinants of an optimal currency area. These factors are also relevant for the transmission effect, i.e. the way that the monetary policy affects the economy. Theories of optimal currency areas are often concerned with homogeneity in economic structures among member nations. However, homogeneity in economic structures is also highly relevant to consider at the regional level (see Magnifico, 1973 for a seminal study). One important aspect is the industry structure and the degree of specialisation. The problem of highly specialised regions is intuitive; demand shocks are more likely to be averaged out when regions are well diversified (see e.g., Knen, 1969). One might argue that mobility of production factors becomes more important when regions are highly specialised in one sector.

Another aspect is to what extent regions are equal with respect to economic openness (see e.g., McKinnon, 1963). Differences in openness between regions and nations become important when the devaluation option is not available; monetary policies affect the demand side in the economy and hence the external balance. A further dimension of homogeneity among regions is inflation patterns. Countries and regions may show different inflation rates due to structural differences driving inflation. These differences may for example be found in the labour market. Recently, the theory of optimal currency areas has been extended in different dimensions. One example is the benefit of a currency union that a country with a history of high inflation may experience (see e.g. Tavlas, 1993). This is related to the time consistency problem of monetary policy.

Since the EMU is a reality, it is quite natural to shift the focus from whether or not EMU is an optimal currency area to the question of regional effects of the monetary policy. A uniform monetary policy may have different regional effects due to differences in the transmission mechanism. The transmission effect of monetary policy works through different markets, e.g. the financial markets, the labour market, and the aggregate demand (consumption and investments). Thus, the transmission effect of monetary policy differs between regions due to disparities in the markets mentioned above. One intuitive way of explaining the transmission mechanism is the interest rate effect on the demand for investments and consumption. Another channel for the monetary policy is the exchange rate. An important question is whether the EMU enhances symmetry in external shocks

<sup>3</sup> One example of asymmetric shocks is a country specific reduction of aggregate demand. The monetary policy performed by the ECB is a perfect example of a symmetric shock that can have large asymmetric national and regional effects due to differences in the transmission mechanism.

through convergence in the transmission effect or if economic integration in general enhances regional specialisation (as often predicted by the new economic geography) which in turn may lead to divergence patterns through the transmission effect. If the criteria for optimal currency areas are endogenous, then we may have the case that countries are more likely to fulfil the criteria after entry into the union than before entry into the union.

Regional effects of monetary policy are generally explained by differences in economic structure, e.g., the regional industry-mix. Some authors argue that this research is to some extent misleading due to the underlying assumptions that have been made. As pointed out by Dew and Rodriguez-Fuentes (2003) there is a lack of financial variables, such as the money supply, within regional economics. A common assumption in regional economics is money neutrality, i.e. the analysis only focus on real variables. An alternative approach is to assume perfect capital mobility which implies an endogenous money supply. However, the capital flows are determined by regional differences in real variables and do not affect real variables. Thus, monetary variables are considered to be determined exogenously, at the national level, and not affecting regional variables. An implication of this assumption is that if these regional differences did not exist, it would not be possible to observe any regional effects of monetary policy.

More recent theories of the transmission mechanism focus on market failures and especially asymmetric information. The so called post-Keynesian theories consider the money supply at the regional level to be endogenous. Although the money supply is exogenous at the national level the supply of money at the regional level is determined by demand and willingness of banks to supply credit. The supply of bank lending is affected by monetary policies and different regional impacts are a consequence of the availability of bank credit in the region. In this aspect, the regional banking development is a central factor. The money supply is foremost determined by banks and borrowers liquidity preferences and not the intervention by the central bank (Dew and Rodriguez-Fuentes, 2003). Important regional differences in financial structures are for example, the share of small banks, the development of the bank sector, and substitutes for bank-lending. Unfortunately, the lack of regional data on financial structures makes these hypotheses difficult to test.

### *Some empirical findings*

To what extent regions are sensitive to asymmetric shocks depends much on the productive structure. Shocks are more likely to be averaged out when production structures are highly diversified. Highly specialised regions on the other hand necessitate a high mobility of labour in order to cope with asymmetric shocks. There are some empirical evidence that European regions are more sensitive to asymmetric shocks than regions in the U.S. (see, e.g., Bayoumi and Eichengreen, 1993). One explanation is that Europe is more separated between periphery areas and centres. Barrios et. al. (2003) study business cycle correlations among UK regions and six euro-zone countries for the period 1966-1997. They conclude that the business cycle in the U.K is out of phase with the euro-zone countries. Furthermore, they state that the trend is towards less correlation. They also find that the

cyclical correlation within U.K regions is high. An important conclusion made by Barrios et al. is that they can not rule out the possibility that the asymmetric cycles have its origin in divergent macro-economic policies and that policy coordination through EMU would yield more symmetric cycles.

Etas (1997) study the correlation in national and regional business cycles for 12 EU members for the period 1966-1992. He finds an increase in the correlation between regions across nations borders but also a decrease in correlation between regions within countries. As an example he points out that regions in the northern part of Italy are more correlated with regions in Germany compared to the regions in south Italy. Etas concludes that the result is partly an effect of increased trade causing regional cross-border links instead of specialisation at the national level. Another explanation according to Etas is that coordination of economic policies has increased cross-country correlations<sup>8</sup>. Several other studies focus on national business cycle correlations. The results in Fankel and Rose (1997, 1999) indicate that trade links between countries are correlated with business cycles. Their studies are based on 20 OECD countries for a 8 year period.

There are numerous studies on labour mobility and there are several reasons for this interest in mobility, e.g., real wages do not easily adjust downwards and capital is relatively mobile. As noted above the importance of labour mobility is dependent upon how sensitive the regions are to asymmetric shocks; a high degree of production specialisation within a region increases the demand for labour mobility in the case of asymmetric shocks. Bentivogli and Pagano (1999) study to what extent regional differences within EU stimulate labour mobility. They find that migration in the U.S. is more influenced by income differences than migration in Europe (obviously because of barriers more or less inexistent in the U.S. such as language and culture) This result seems to be quite evident in the literature, although the magnitude of the effect varies. Eichengreen (1990) studied labour mobility in the U.S. and Europe. He found that the mobility was three times higher in the U.S. compared to the EU. Bentivogli and Pagano concludes that the fact that migration in Europe is less sensitive to regional differences makes it difficult to rely on labour mobility in order to compensate asymmetric shocks. This is particular troublesome if European integration enhances regional specialisation. Then, it is necessary to rely on other adjustment mechanisms, which is a conclusion that is found in several studies, e.g. Obstfeld and Peri (1998) argue that EMU is not an optimal currency area, one argument is that price and factor mobility is low and that public transfers is a more important adjustment mechanism.

Costa-i-Font and Tremosa-i-Balcells (2003) study how different Spanish regions respond to the common currency. Among the results they find that large, diversified and open regions are best prepared for the common currency. They also find that real exchange rate

<sup>8</sup> There is also an empirical literature investigating the hypothesis that a common currency enhances international trade (see e.g. Glick and Rose, 2002, Fankel and Rose, 2000, and Thom and Walsh, 2002) however, this literature is concerned with national trade effects and we have chosen not to review the literature more closely. One conclusion from this literature is that there are no clear answer to whether a common currency enhances trade.



differences may be large between regions. A policy implication is that if production factors and prices remain relatively rigid and the pattern found in Spain applies to other countries, then the most important policy for regional asymmetric shocks will be fiscal redistribution.

It is quite clear that regional industry structures matter for the impact on monetary policy. Carlino and Difina (1998) study how sensitive EMU countries are to monetary policy shocks. Carlino and Difina define three different groups of nations with respect to how sensitive they are to shocks, e.g. they find that Finland, Ireland and Spain are most sensitive to shocks. They argue that the asymmetric response is due to the industry mix and the degree of banking concentration. In a study of regional interest rate shocks in Germany, Arnold and Møgt (2004) found that regional effects of monetary policies are best explained by regional industry structures. The results indicated that public and personal services and manufacturing industry are important determinants explaining regional variation in the transmission effect. They did not find any evidence that firm size or bank size affect the regional effects of interest rate shocks. Thus, the result does not give any support for the hypothesis that credit channels affect the transmission effect. Their study was based on regional GDP data for the period 1970-2000.

However, there is no consensus in the literature concerning the policy implications. Some authors argue that the regional differences that can be observed are of less importance. In country specific study on the Netherlands, Arnold and Møgt (2002) also found that the regional effect of monetary policy can be explained by industry composition in the regions. An interesting result, although with weak support, is that workers in the sectors which are sensitive to monetary shocks are compensated by higher average wage levels. If this is the case, Arnold and Møgt argue that regional subsidies dispensed to regions which are sensitive to shocks could distort the trade-off between risk and return. The arguments put forth by Arnold and Møgt are thus not consistent with the conclusion often found in the empirical literature of regional effects of the EMU that fiscal redistribution may be an important tool for handling regional disparities.

Arnold (2001) finds that the regional industry mix (share of industrial employment) is important for the transmission of the monetary policy. One explanation for the regional differences in policy impacts is varying sensitiveness in the demand for the products. Furthermore, he argues that between-country variation in regional effects is not larger than within country variation. Arnold then concludes that the present regional differences are not likely to restrain the monetary policy within the EMU.

Arnold and Mes (2000) argue that the differences in financial structures among EMU countries are endogenous. Their analysis indicates that the differences in capital market structures are correlated with differences in past inflation and inflation uncertainty. Furthermore, they argue that the different responses through the transmission effect will vanish in the future due to monetary unification and liberalisation of capital markets. However, the study by Arnold and Mes is based on national data and the results do not necessarily apply to the regions. Arnold and Mes interpret their results as evidence against

the hypothesis that the transmission mechanism enhances tension within the union, they even argue that the transmission differentials to be a 'hon i ssue' of the EURO. Instead they conclude that other issues may be worth attention; e.g, a potential democratic deficit and a ECB board with strong regional representation.

## 5.2.2 Economic integration and production structures

Before discussing empirical evidence within this area, we briefly introduce some of the theories that can explain integration effects. The discussion is based on neo-classical trade theory and more recent trade theories within the new economic geography. Theories within the new economic geography differ from traditional spatial analysis in that they are general equilibrium models. Since the predictions from these models may be based on quite complex theoretical models we have chosen to only discuss some fundamental mechanisms.

The issue of economic integration and regional effects is very extensive and may capture several macro-economic policies. The main focus is on the Single Market Programme and its impact on regional development. Some of the discussion concerning production structures in this section is not explicitly related to macro-economic policies; however, it is important to consider this literature when discussing the regional effects of the EMU.

A highly debated issue is whether or not economic integration increases regional disparities. As pointed out in chapter 3 in this report, the theoretical predictions on this topic are ambiguous. Furthermore, empirical results do not show any clear pattern of convergence or divergence. However, one conclusion is that previous patterns of convergence have become weaker in empirical growth studies. In this section we do not intend to discuss the convergence issue any further, instead we focus on economic integration and regional specialisation.

### *Predictions from the new economic geography*

According to the neo-classical trade theory, economic integration is supposed to increase regional specialisation when production structures change due to the comparative advantages. Convergence in factor prices and product prices are predicted by the neo-classical trade theory. This convergence may result from trade or mobility of production factors. The economic activity is supposed to be dispersed across regions. Several factors may change this prediction, e.g., an uneven distribution of natural resources or technology, which could result in complete specialisation.

More recent trade theories (e.g., new economic geography) incorporate other aspects in trade theory describing centripetal and centrifugal forces of geographic concentration. ~~Kugman (1998)~~ discusses some of these forces ; among centripetal forces we find market size effects, thick'labour markets and external economies. Among the centrifugal forces we find immobile production factors, land rents and external diseconomies. ~~Kugman (1998)~~ argues that scale economies and market size effects on the one hand and immobile

production factors on the other hand is a natural way of summarizing the character of the new economic geography.

In its simplest form, models of the new economic geography starts with an economy consisting of two production sectors, one sector providing a homogenous good under constant returns to scale (often assumed to be agriculture) and one sector providing non-homogenous goods at increasing returns to scale (manufacturing). Production factors are immobile in the former sector and fully mobile in the latter sector. The mobile production factor is the driving force in the agglomeration process. In most models, transportation costs constitute the balance between centripetal and centrifugal forces.

Very high transportation costs are an obstacle for competition in the markets. Furthermore, immigration of labour force causes production increases but also price competition effects within the region reducing real wages. On the other hand, very low transportation costs also drives price competition effects, enhancing deglomeration. One implication of low transportation costs is that scale economies can be realised independently of location. However, medium sized transportation costs may create an environment enhancing agglomeration processes and core-periphery patterns in the two industries (see Kugman and Venables, 1995). In practice, we observe several industries, many regions and different degrees of scale economies in the different sectors. This means that theoretical models describing this environment become complex and the predictions from the models less clear. In these cases it becomes more relevant to discuss changes in industry mix between different regions. Strong agglomeration forces will create clusters of industries with increasing returns to scale.

#### *Urban theories*

Basic trade theories and the new economic geography are naturally concerned with economic integration and its impacts on the economic structure in nations and regions. Theories within urban economics are explicitly concerned with agglomeration effects and industry specialisation. Although the effect of economic integration is not explicitly addressed in these theories, a relatively high degree of integration, or low transportation/transaction costs, are assumed in order to allow for an evolution of the urban system. However, the effects of integration and transportation costs are likely to follow the general predictions from the new economic geography. To what extent specialisation occurs in the urban theories depends upon basic assumptions. In the classic model presented by Andersson (1974) scale economies are assumed to be industry specific while diseconomies of scale are assumed to be external. Thus, models within this tradition predict a very high degree of specialisation. Later theories are based on more sophisticated assumptions allowing for urban systems which are specialised as well as diversified. A natural conclusion from these models is that high internal scale economies imply large cities in the optimal solution. The evolution of urban systems follows from cities growing larger than the optimal size, giving place for a new city. However, several factors may constitute an obstacle for the new city and theoretical models present different assumptions for allowing new cities to

emerge. Models within urban economics provide some interesting links between population growth, formation of human capital and the size distribution of cities. In connection to the European integration it is of interest to follow the evolution of the urban system in Europe. One reason is that the size distribution of cities also indicates the distribution of local demand thresholds' necessary to attract businesses.

To summarize this very short presentation of some general mechanisms within the economic geography and urban economics, it is important to point out that although the theories present some general conclusions on economic integration and regional specialisation, empirical evidence from numerous studies is needed in order to verify the hypotheses. Unfortunately, there are few empirical studies on regional specialisation; the natural explanation is lack of relevant data. In the next section we present some of the empirical studies that can be found within this area.

#### *Some empirical findings – economic integration and regional specialisation*

There are numerous studies analysing industrial specialisation and concentration at the national level, e.g. ~~Anger~~ and Pfaffermayr (2004) study industry concentration among European members for the period 1988-1998. Their analysis is based on 14 member countries and data on 99 industries. Although their study is not concerned with regions, their results indicate that geographic concentration actually declined during the period 1992-1998 i.e. the post-Single Market period<sup>9</sup>.

Marelli (2004) analyses the development of employment structures among European regions. The empirical analysis is based on 145 European regions for the period 1981-1997. Marelli finds that regional specialisation has decreased over time. One explanation according to Marelli is the shrinking of agriculture and manufacturing in those regions where these sectors initially were strong<sup>40</sup>.

Paluzie et al. (2001) study integration effects on industry specialisation in Spain for the period 1979-1992. The empirical analysis is based on data for 50 regions (NUTS 3) and 8 industrial sectors. They found no evidence of specialisation or geographical concentration among Spanish regions. They argue that one explanation could be that concentration was relatively high before the entry to the EU. Furthermore, they conclude that scale economies are the most important factor determining the economic geography in Spain. They also state that neo-classical trade theory is not able to explain the patterns of industrial concentration in Spain.

Midelfart-Karvik and Overman (2002) argues that there has been a higher degree of specialisation at the national level but a very weak specialisation process at the regional level. However, they argue that the economic activity in Europe has been more geographically concentrated.

<sup>9</sup> The final report of ESPON project 1.1.3 considers specialisation patterns across European regions. Similar to other empirical studies, the analysis in project 1.1.3 is based on a relatively short time period (1995-2001). Furthermore, they only consider three sectors.

<sup>40</sup> A shortcoming with several studies is the lack of a narrow sectoral division. Since specialisation may take place at a lower level, integration effects on specialisation may not be observed.

Although the empirical research in this area is relatively scarce, empirical results indicate that U.S. regions are more specialised and that industries are more geographically concentrated compared to Europe. This may be due to lower transaction costs in the U.S. (notably through the lack of language and culture barriers.) If this a correct conclusion, then further integration in Europe may lead to a higher degree of concentration of industries. However, due to the lack of regional data on European regions and that much more empirical research on European regions is needed, it may be far fetched to draw any strong conclusions from the results that have been presented so far.

#### *Empirical findings – urban growth*

Besides the literature that is based on neo-classical trade theory and the new economic geography, there is an interesting research field concerning urban economics and city growth. As was mentioned earlier, this literature is not explicitly concerned with economic integration and the effects on regional specialisation. Furthermore, most of the empirical literature within this field concerns the evolution and structure of cities in the U.S. Several interesting empirical studies on production structures, industry location and city growth can be found for the U.S.; see e.g., Black and Henderson (2003), Dobkins and Ioannides (2001), Ellison and Glaeser (1997), Beardsell and Andersson (1999), Glaeser et. al. (1992). Some of the empirical results that have been found are worth mentioning in this section. One result is that rank-size distribution of cities does not seem to change when the population grows which means that small and large cities show similar growth rates. A further result that seems relatively robust is that many studies find evidence for the rank-size rule which means that the population in the second largest city is approximately half the size the largest city.

Unfortunately, there are few studies on the evolution of European cities. However, some studies can be found. Eaton and Eckstein (1997) develop a theoretical model where localization economies and human capital accumulation constitute centripetal forces. The centrifugal forces in the model are congestion and transportation costs. In this theoretical model presented by Eaton and Eckstein, relative populations between cities reflect differences in total factor productivity across regions. The model predicts that human capital, rents and wages are higher in larger cities. In the empirical analysis Eaton and Eckstein study city growth in France and Japan using data on 9 urban agglomerations in France for the period 186-1990. They found that while the urban population has increased significantly, the population distribution among different urban areas has not changed to any large extent. Furthermore, the growth of urban population has not given rise to new cities. Eaton and Eckstein conclude that the mechanisms driving industrialization are present in proportion to the cities initial population size.

It is difficult to draw general conclusions from the empirical studies. However, it does not seem controversial to state that increasing returns to scale are important in the empirical growth and trade literature. Empirical research indicates that regional specialisation is lower in Europe compared to the U.S. Furthermore, the process of regional specialisation, if there

is one, seems to be relatively slow. There is a need for further studies on regional specialisation among European regions and cities. This is an important issue, especially since there seems to be a relationship between industry structures and regional responses to monetary policy. Another question is whether the monetary union affects production structures; from a theoretical point of view, [Kugman \(1993\)](#) argues that EMU will enhance regional specialisation. A similar conclusion can also be found in the empirical analysis by [Midelfart et al. \(2003\)](#) however, they argue that the effect is likely to be small.

### 5.2.3 State aid

In this chapter we have chosen to briefly review the state aid literature. The dispensation of state aid is only one part of redistribution within the EU. The reason that we have focused on state aid is that this form of redistribution has often been concerned with specific industries. Thus, it is interesting to relate the dispensation of state aid to regional development and regional industry structures. Furthermore, the trade-off between equity and efficiency discussed here is also applicable to other redistribution schemes.

State aid dispensed by national governments to specific industries, or activities, has long been a debated issue. Large resources have been devoted to state aid; there is also a large variation over time and across nations (and regions) with respect to the amount dispensed and the type of aid dispensed. State aid is an important tool for the politicians in order to support national industries. State aid has often been targeted towards industries (sectoral aid) that have not been able to compete on the international market. Such aid is generally considered to be harmful for competition among firms and industries. Furthermore, sectoral aid may decrease the incentive for restructuring of the economy. Thus, in the long run state aid may be harmful for the welfare of the citizens. The Lisbon strategy states that targeted state aid to specific industries should be minimized in order to enhance competition. State aid should be focused on all-embracing activities such as research, human capital, infrastructure, etc. (horizontal aid) however, the objectives of state aid are not solely based on efficiency principles; there are also equity objectives in the dispensation of state aid which makes the analysis more complex.

In this section we will discuss national arguments for providing state aid but also the arguments for the European Commission for prohibiting national state aid. In order to identify government incentives for the dispensation of state aid and the federal incentive for prohibiting state aid, one has to consider several dimensions of the phenomena. We will discuss the incentives from a pure economic view, i.e. the efficiency and equity perspectives. A further aspect of state aid is the political economy perspective, meaning that the benevolent government is replaced with politicians with other objectives than maximising the social welfare. One objective may be to retain political power which can be achieved by redistributing resources according to political party tactics. The section concludes with a discussion of regional effects of state aid regulations and some empirical findings.

In a recent paper by Fiederiszick et al. (2005) an economic framework for analysing European state aid control is presented. They identify different areas of economics that are related to the economics of state aid. The first is public economics which is natural considering the fact that state aid is a significant intervention by the state in the economy. The second area identified by Fiederiszick et al. is the economics of competition. As noted above, state aid dispensed to specific firms or industries affect the competitiveness. The third area is international trade since state aid may affect the terms of trade among nations. The political economy dimension can be applied to all three areas.

Fiederiszick et al. note that the analysis of state aid across Europe is not thoroughly discussed in the context of economic principles. Among several arguments against an analysis based on economic principles, they mention the fact that state aid is often considered to be illegal meaning that economic principles may be inappropriate. Their paper aims at presenting an economic framework for European state aid control which they argue contributes to the existing policy debate of state aid among European member states. Their paper fits well in our discussion of regional effects of state aid. We will therefore briefly discuss their paper below together with some other contributions to the 'economics of state aid'.

#### *Efficiency arguments in favour of state aid*

Let us begin by discussing the efficiency argument for dispensation of state aid. In the perfect world (for the liberal economist) markets are characterised by perfect competition. This means that there is full information, no scale economies, etc., which mainly is a theoretical construction and not a equilibrium expected to be observed in reality. The first welfare theorem states that all equilibriums in an economy with perfect competition are also Pareto optimal, i.e. it is not possible to make one individual better off without making some other individual worse off. The implication for state aid is that in this perfect world, state aid can not enhance welfare. From this theoretical point of view, some externality must be introduced in order to motivate state aid (or some other redistribution scheme). When externalities are introduced, public interventions may enhance market efficiency and hence total welfare in the society.

Fiederiszick et al. note some of the most important market failures to consider. The first is externalities; which means that actions taken by one agent affects other agents in the economy. These externalities are negative (harmful) or positive (beneficial). If private actors (households and firms) make their decisions without considering the externality, a non-optimal social outcome is observed (the externality creates a gap between the optimal social outcome and the optimal private outcome). A common example of a positive externality is the knowledge diffusion that may arise from R&D investments. A company may benefit from an R&D investment; the investment decision is based on this expected benefit. However, other firms may benefit from knowledge diffusion; this benefit constitutes the positive externality but do not generally affect the investment decision of the individual firm if it is not altruistic. From a social view this means that the investment in R&D is too

small compared to the social optimum. This argument is clearly in line with the present state aid policy.

However, even though positive externalities are present that should be internalised, there are significant costs associated with the funding of state aid. A general result in models of optimal taxes is that lump sum taxes do not have any distortion effects in the economy. However, most public interventions are financed by distortionary taxes, creating a welfare loss. The benefit from using state aid for internalising external effects must be related to the efficiency loss that follows from distortionary taxes (see Collie, 2005, for a theoretical analysis of state aid and R&D investments). Goods and services with public characteristics (non-rivalry and non-excludable) are other forms of externalities. From a social view, private provision of such goods results in a supply less than the social optimum. Therefore, public provision is needed in order to correct for the externality, i.e. taking into account the positive spillover when deciding on the supply of the good.

Another form of externality is information asymmetries; this is also referred to as a problem of missing markets. The market failure appears when some agents are better informed than others, e.g. the information advantage that firms may have over banks when applying for loans. The risk of approving a bad loan implies that some of the 'good loans' are not approved. Public interventions in the financial market may thus enhance efficiency.

In the context of national state aid, market power is maybe the most relevant externality. In the case of perfect competition, implying constant returns to scale and free entry into the market, prices are equal to marginal costs in equilibrium, i.e. the social optimum. Market power results in prices higher than marginal costs, which imply that consumer surpluses are reduced and producer surpluses are increased. One purpose of state aid is to reduce market power; one way is to support entry on a market. Collie (2000) discusses this dimension of state aid. Collie presents a theoretical model describing the national government incentive to provide state aid and the Commission incentive to prohibit aid in an oligopoly model with distortionary taxes. On the other hand, targeted state aid may also enhance market power. A related question is to what extent horizontal aid, e.g. R&D aid, affect competitiveness.

#### *Equity aspects of state aid*

The arguments discussed above concern efficiency aspects of state aid. As noted above, state aid is also dispensed on equity grounds. The equity objective can also be explained by market failures; the market process itself may produce unequal distribution of production and income. In fact, the equity objective is one argument which makes state aid legally compatible with the common market. The social benefit of achieving equity objectives must balance the negative or distortionary effect on market efficiency. This is a major role for economic analysis in the assessment of state aid effects on regional cohesion.

One might argue that sectoral aid is not an appropriate tool for fulfilling equity objectives. However, there are circumstances when the equity objective can be related to the industry structure. Midelfart-Karvik and Overman (2002) discuss potential outcomes of European integration on the localisation of industries. As discussed earlier in this chapter,



agglomeration and mobility forces affects the localisation of industries and may cause 'Industry black holes'. Some industries may be more 'valuable' than others which may be one valid argument for specific industry support in a region.

Fiederiszick et al. also discusses some limits for using state aid to correct for market failures. One obvious aspect is the difficulty of measuring market failure but also to determine the optimal size of the state aid to approve. In the context of measuring market failures, Fiederiszick et al. point out that a qualitative assessment is possible; however, the precision of a quantitative assessment is highly questionable.

One interesting aspect of state aid, only briefly commented by Fiederiszick et al., is the political economy dimension. The starting point for the political economy dimension is that politicians are not expected to maximise the general welfare function; the politicians have their own utility functions, e.g., retain political power. This approach opens up for lobbying and pork barrel politics, i.e. the dispensation of grants is characterised by political tactics. A inefficiency introduced by state aid is that firms may compete for aid from the public sector and not for consumer satisfaction. Such rent-seeking behaviour can be costly, from a welfare perspective, for the society.

As pointed out by Collie (2000) theoretical models concerning the efficiency of state aid are often based on the assumption of identical firms, thus, the dispensation of state aid due to uncompetitive firms or other political objectives can not be addressed in this framework. However, as Collie concludes, if state aid is dispensed due to political tactics rather than economic factors, there are even stronger motives for the prohibition of aid, from efficiency as well as equity perspectives.

#### *Efficiency arguments for prohibition of state aid*

Let us continue with the efficiency objectives for prohibiting national state aid. The intuitive argument for prohibition is that national interests do not necessarily coincide with the EU wide welfare objectives. Fiederiszick et al. highlight two arguments in favour of prohibition of national state aid. The first is cross-border externalities. A good example is the external effects that arise from strategic trade policies implemented by the national governments. The effect of state aid is naturally dependent upon the market structure. In a perfectly competitive market, state aid will only affect the profits of the individual firms; the supply of goods or the prices will not be affected (given that aid is financed by lump sum taxes and not distortionary taxes). On the other hand, in a market with imperfect competition, national aid to firms will result in lower foreign output and higher prices. In contrast to the perfect competition case, the opposite extreme case with one monopolist, state aid may result in higher output and lower prices. However, the two extreme cases are less interesting from a policy view. It is important to note that many theoretical contributions within this area are based on the assumption of homogenous goods. The introduction of differentiated goods may alter the picture (see e.g. Fiederiszick et al., 2005). Although sectoral state aid may be motivated by poor regional development, there are negative welfare effects to consider. One effect is the negative impact that aid may have on the

incentive structure. Sectoral aid may slow down the restructuring of the economy which is a welfare loss, at least in the long run. Second, national state aid may also create a bailout problem, i.e. firms expects to be supported (bailed out)which create an incentive structure that is harmful in the long run.

Aconcluding comment is that several studies suggest that the prohibition of state aid is consistent with the findings in the theoretical literature. However, much of the literature is foremost concerned with the conflict between the national and the federal level, i.e. the disparity between national welfare functions and EU level welfare objectives. The regional dimension is not thoroughly covered; which is reasonable since this dimension is mainly concerned with equity objectives and not the efficiency dimension mainly investigated in theoretical work. In the next section concerning empirical findings we intend to approach the regional dimension of the dispensation of state aid.

#### *Empirical findings – state aid and regional development*

Let us continue with a review of the empirical literature. There are few studies concerning regional effects of national state aid. One explanation is the lack of narrow state aid data at the regional scale, especially for comparable time series.

Nicolaides (2004) presents an attempt to empirically investigate the impact of state aid on regional cohesion. Nicolaides argues that the impact of state aid on regional cohesion among EU members is ambiguous. One explanation is that state aid is not proportionally dispensed to the most needy regions. In the empirical analysis he finds no correlation, negative or positive, between state aid and regional disparities. However, Nicolaides study suffer from severe data problem; in his case it is question of too few observations for each country which makes it impossible to draw any general conclusions from the empirical analysis. Although Nicolaides quantitative study suffers from poor data, he offers some interesting discussions concerning the dispensation of state aid and some observations based on case studies. In the case studies, regional dispensation of national state aid have been collected for four countries, Austria, Greece, Italy, and Spain. Nicolaides highlight three interesting observations. The first is that there is a large variation on the amount of aid dispensed to each region from year to year. This variation is not dependent on the total amount dispensed at the national level. Second, there is a large regional variation in the type of aid dispensed. Nicolaides note that R&D aid seems to be approved to richer regions while aid such as regional investments is mainly dispensed to poorer regions. The third observation noted is very interesting; aid mainly dispensed to poorer regions but within this group there does not seem to be a correlation between the amount dispensed and regional income levels. Nicolaides conclude that aid is not dispensed to the neediest regions. However, this conclusion indicates that Nicolaides is mainly concerned with the equity objective of national state aid.

Midelfart-Karvik and Overman (2002) analyse the impact of EU aid and national state aid on relocation of industries in the EU. Their model assumes that industrial relocation (measured as the change in share of a country in an industry) is driven by integration and

changes in factor endowments. The main question is whether policy affects the economic forces that determine location patterns. Midelfart-Karvik and Overman argue that the impact of Structural Funds may obstruct an efficient allocation of resources (through relocation.) Furthermore they argue that EU expenditures seem to be more distortionary than state aid. Although their first analysis concerns national data, some results are worth mentioning. One is that EU aid has an impact on R&D intensive activities. Another result is that targeted state aid to specific sectors or activities does not seem to attract that particular sector or activity. However, the regional analysis is less extensive due to the lack of regional data; they are not able to break down national state aid to the regional scale. It is important to note that this kind of analysis is associated with a methodological problem of endogeneity; i.e. structural funds or state aid are dispensed for a reason and it may be difficult to actually identify the effect of the funds.

Let us finally comment some of the results found in the political economy literature. There is an extensive literature concerning regional redistribution and political tactical objectives. Since the seminal study by Wright (1974) on New Deal Spending in the U.S., numerous studies have found evidence that governments, local as well as national, redistribute income with respect to party tactical objectives. Some studies can be found for the dispensations of national state aid. Neven and Röller (2000) found that the dispensation of national state aid to a large extent can be explained by political and institutional factors. Although one might identify regional characteristics determining the success of receiving grants due to political or institutional objectives, this redistribution is not consistent with welfare maximisation among regions. Thus, it may be of interest to further analyse the dispensation of regional aid within the EU in the context of tactical redistribution.

#### 5.2.4 Discussion

An important question in this respect is whether there are regional effects of EU-level macro-economic policies show a clear pattern, i.e. is it the same type of region that benefit from the different policies? This question is obviously also closely connected to regional and local policies, a link which we will attempt to analyse in the case studies. It is difficult to find such regional patterns. A common theme in the literature review is regional specialisation and concentration. The predictions on specialisation and concentration are very different when comparing neo-classical theories and more recent theories such as endogenous growth models and the new economic geography. Factor mobility is crucial within both theories; however, factor mobility can generate completely different development patterns, meaning that the question specialisation and geographical concentration is foremost an empirical question. Some studies indicate a specialisation process at the national level, but no clear results can be found for the regional level. One conclusion from empirical studies is that specialisation and concentration patterns are much stronger in the U.S. We will return to this question below.

It is difficult to generalise the results from empirical studies on European regions. First, studies that have used a narrow measure of industry structures are often based on national data. Regional studies are on the other hand based on one of very few countries; studies using regional data for several countries often end up with a regional industry indicators that are not narrow enough (agriculture, manufacturing, and services). Thus, integration effects on specialisation patterns may not be observed since they can be realised to a large extent within the broad definition of sectors.

One conclusion from the empirical literature is that regional industry structures do affect the outcome of the monetary policy. However, policy recommendations vary between different researchers. Some researchers argue that the regional differences in policy outcomes (through the transmission mechanism) in combination with the relatively low mobility across regions, requires extensive redistribution schemes within the EU. However, other researchers, e.g. Arnold and Møgt (2002) argue that the regional differences in the transmission effect are a non issue. In fact, they argue that there are some indications that there are compensating wage differentials; in such environment, regional aid may distort the risk-return trade-off. To summarize the empirical findings in this area, it is quite clear that regional characteristics matter, i.e. the symmetric policy shock that the monetary policy constitutes result in asymmetric regional outcomes. However, it is far from clear to what extent market mechanisms can handle the regional differences (e.g. compensating wage differentials and labour mobility). Given the research that has been presented so far, it is not possible to identify legible regional effects.

A less sensational conclusion is that there is a need for more research in this area. There are good reasons to follow the industry specialisation patterns when considering the effects of future monetary policies. If further economic integration result in higher specialisation, more severe regional differences may be observed. Kugman (1993) argues that this is a likely scenario. According to Kugman, regional specialisation has not occurred due to relatively high transportation costs and barriers to trade within the EU. Other researchers also suggest that European specialisation patterns will follow U.S. trends. However, it is far from obvious how to generalise U.S. trends to the European case. On the other hand, as pointed out by some researchers, the criteria for optimal currency areas may be endogenous; thus other factors than regional specialisation may develop in favour of the common monetary policy.

Regional redistribution is an important aspect of EU-level macroeconomic policies. In order to limit the scope of this chapter we have only considered national state aid. There are few empirical studies on the regional dispensation of state aid. A first conclusion is that the Lisbon strategy is consistent with the findings in the theoretical literature concerning the efficiency arguments on the distribution of state aid. It is less clear how the equity objectives may be affected by the Lisbon strategy, e.g. the dispensation of horizontal aid such as R&D. Some empirical evidence suggests that the dispensation of state aid may not have the desirable effects on industry locations. However, it requires extensive research efforts before it is possible evaluate the regional effects of state aid.

### 5.3 The nature of macro-economic policies as an evaluation problem

As was noted earlier, macro-economic policies are not thought of as regional development policies. Nevertheless, the EU-level policies may have significant impacts on regional development. Before going into details of impact assessment, it is necessary to discuss the specific nature of macro-economic policies as an evaluation problem but also to specify the policies that are regarded as macro-economic policies in this review.

In order to qualify as an EU-level policy in this literature review, the policy should to some extent treat all regions equally. The monetary policy performed by the ECB is a good example; the monetary policy treats the regions the same way, e.g. through a common interest rate. However, the outcome in regions may differ, e.g., due to different production structures and how sensitive regions are to asymmetric shocks. Regions may also differ in financial structures that make the money supply endogenous at the regional level. The main question is what regional characteristics determine the economic outcome in the regions. Another policy example is the implementation of the Single Market Programme (e.g., free movements of goods, capital and persons). The Single Market Programme raises the question of how political and economic integration affects regional development.

#### *Finding an appropriate counterfactual*

The distinction of a policy that treats all regions equally is an introduction to the methodological problems that are associated with the evaluation of EU-level macro-economic policies and their impact on regional development. The main question is how it is possible to relate a specific policy to an actual regional outcome, i.e. what would we have observed without the policy. In a statistical perspective the problem may be explained as there is no natural counterfactual or control group. This problem is present in many of the empirical studies that are mentioned later on this chapter, e.g., the effect of economic integration (after the implementation of the Single Market Programme) on regional industry structures is studied for a period after the policy implementation. The problem is intuitive: how can we actually relate the outcome in the regions to the implemented policy when all regions in the study are affected by the policy?

Although natural experiments are rarely observed in social sciences, we have to identify some counterfactual or control group. For example, if one wants to study regional effects of the common currency, a possible control group is nations (and regions) which have chosen not to participate in the final stage of the monetary union, i.e. the common currency and the common monetary policy. If one is interested in the regional effects of the common currency it may be possible to compare regions within the euro zone with regions outside the euro zone. For example, a majority of the voters in Sweden voted against the common currency in the referendum. Regions in Sweden could therefore constitute a control group if one aims at comparing regional effects of the monetary union. However, such control

groups are often difficult to construct, e.g. due to lack of 'overlapping' observations. As pointed out by Martin (2001) a common procedure often found in empirical studies is to study regional development in other economic and monetary unions, e.g. the case of regional development in the U.S. However, it is far from obvious how to generalise effects found in the U.S. in order to predict trends in the EU.

Counterfactuals that are not the outcome of a natural experiment introduce the problem of selection bias. For the Euro zone example above, the selection problem arises when the factors determining the outcome of the referendum (e.g. socio-economic characteristics and political factors) also affect other policies and regional and national development<sup>41</sup>. Thus, if differences between regions are found and these differences can be related to the implementation of the common currency, we can not determine whether the difference is a true consequence of the common currency. The observed regional differences may be caused by the (unobserved) factors determining the outcome of the referendum and at the same time affect economic development. This methodological problem is possible to control for; one approach is to first study the determinants of the policy choice (e.g., yes/no in the referendum) however, in order to really 'identify' the policy effect, by using so called instrumental variable techniques, it is necessary to at least find one explanatory variable (instrument) that can explain the choice of the policy but at the same time does not affect the outcome of the policy. Generally it is difficult to find such instruments. This is known as the identification problem in the evaluation research (see e.g., Maddala, 1993)

#### *Reversed causality*

Another problem associated with the evaluation of EU-level macro-economic policies is whether or not the explanatory variables in the analysis are exogenous. One example is studies investigating the regional impact of national state aid, or EU aid, (see e.g. Midelfart-Karvik and Overman, 2002) It is not clear whether state aid affects the regional industry structure or if it is the other way around. This endogeneity problem, or reversed causality, implies that we can not tell whether there is a causal relationship. Another example is the inclusion of population or migration in growth equations. Migration may be determined by income levels in the regions, but migration may also affect income growth (e.g. through labour supply effects) This problem necessitates the use of methods such as using pre-determined variables, e.g. using lagged (previous) levels of the variables or using two stage estimation methods where predicted values (from a first step) are used as instruments.

Further methodological problems are concerned with the interdependency between the EU, national, and regional policies. Theoretical models may give the support to the hypothesis that economic integration affects the national and regional industry structures. If this is the case, it is also reasonable that national policies may be implemented in order to support specific industries and regions in response to the effect caused by economic integration, e.g. the Single Market Programme. Thus, it is difficult to separate the effects from the EU-level

<sup>41</sup> Barrios et al. (2003) discuss a similar problem in their analysis of business cycle fluctuations among regions in the UK and in the Euro zone. We will discuss their study later in the literature review.

policy from the effect of the national policy. In a similar way, regional policies may be implemented by the EU as a response to effects that may arise from EU macro-level policies. It is also important to note that the outcome of national tax and redistribution policies often have a regional dimension. The obvious consequence is that the different policy effects are very difficult to identify.

#### *The role of expectations and time lags*

The role of expectations in the economy may also introduce a methodological problem in the analysis of macro-economic policies. The problem is that policies are not introduced as shocks in the economy. Thus, policies may be anticipated long before they are implemented, e.g. the implementation of the common currency was anticipated before 1999 meaning that actors in the economy, both public and private, may have adopted changes in their behaviour according to the policy. This introduces the problem of when to expect the effects of a policy to be observed. The study by Egger and Pfaffermayr (2004) illustrates this effect. They analysed the impact of European integration on foreign direct investments. They found a positive effect of the Single Market Programme; however, they argue that the effect took place between the announcements and that the integration effects were exhausted with the formal completion of the programme. They conclude that the integration effects on GDP in the EU have been substantial but foremost anticipatory.

A related problem concerns the time lag of the adjustment process and of the underlying process determining the regional outcome. Another practical problem with the evaluation of macro-economic policies is that we are foremost interested in long run effects of the policy, at the same time comparable data is not available on the regional level for periods long enough to capture long run effects, and to test for time lags.

These methodological problems are important to bear in mind when considering the empirical literature on regional effects of EU-level macro-economic policies. Different empirical methodologies have their limitations which affects the possibility to draw general conclusions. However, it is also important to remember that these methodological problems are present in most evaluation research.

## **5.4 An empirical study on regional sensitiveness to changes in the interest rate**

In the previous sections we have presented some general frameworks for analysing regional effects of EU level macroeconomic policies. We have also discussed some of the results that have been found in the empirical literature. This section contains the empirical part of the study. Upon demand of the ESPON monitoring committee, an empirical analysis is conducted. We test a methodology analysing if EU-level macro-economic policies affect European regions differently. The main purpose of this section is to illustrate how regions might respond differently to changes in the monetary policy, i.e. changes in the interest rate. The scope of the analysis must be viewed in the light of the time constraint of the study; the data

availability, and the difficulties of conducting this kind of analysis. We also present a different approach using the MAST mode I developed by ESPON project 3.

Numerous studies have analysed monetary policy impacts using aggregated national data. Quarterly observations are often available for a aggregated data, longer time series are thus available. However, the use of aggregated data leaves the variation within countries unnoticed. Recently, regional effects of monetary policy changes have been studied for European regions (see the literature review in the previous section) In the present study we will continue this work on regional effects of monetary policy. Previous research has foremost considered NUTS0 and NUTS1 level. One contribution with this study is that the empirical analysis is based on data for NUTS2 level. This is important since the observed patterns may be dependent upon the regional scale. Another contribution is that we have access to a narrow definition of the regional industry structure. However, a shortcoming with our approach is that the degrees of freedom are limited due to the relatively short time period.

#### 5.4.1 Methodology and research strategy

The effect of interest rate changes work through the so called transmission mechanism. One channel for the transmission mechanism is through the demand of consumption goods and investment goods. There are several explanations to why the transmission mechanism differs between regions. One is that industries may differ in how sensitive they are for changes in the interest rate. Monetary policy also works through the exchange rate as the interest rate affects the exchange rate which in turn affects the net export from the region. It is important to note that the question of monetary effects is also closely related to the issue of integration effects in general in the EU; the impact of integration on industry structures will affect future patterns of monetary policy effects. Other channels are the regional financial markets. The monetary policy works through the money supply of banks. The possibility to use substitutes for bank loans may also differ significantly between regions and industries. As was mentioned before, the money supply may also be affected by asymmetric information in the regions. The effects that work through the regional financial markets are difficult to study due to lack of data. Previous research has found evidence that the regional industry structure is an important factor determining the regional differences in monetary policy outcomes. In line with this research we focus on the industry structure among NUTS2 regions.

Our intention is to study the effect of changes in the monetary policy on regional GDP using both time-series techniques and cross section analysis (see e.g. Arnold, 2001) In a first step GDP growth is regressed on previous GDP growth rates and interest rates. In a second step, the regional effects of interest rates and the relation to regional industry structures are analysed in a cross-section approach. The following equation is estimated in the first step:

$$\Delta y_{i,j,t} = \beta_{0,j} + \beta_{1,i,j} \Delta y_{i,j,t-1} + \beta_{2,i,j} i_{j,t-1} + \varepsilon_{i,j,t}$$



where  $\Delta y_{i,j,t}$  is GDP growth in region  $j$  (in country  $i$ ) in period  $t$ ,  $\beta_{0,j,i}$  is a constant,  $\Delta y_{i,j,t-1}$  is the lagged GDP growth,  $i_{i,t-1}$  is the interest rate in country  $i$  in period  $t-1$ .  $\beta_{2,i,j}$  is the parameter capturing regional sensitiveness to changes in the interest rate.  $\varepsilon_{i,j,t}$  is an error term. Note that we assume the same growth process across regions and that the short term interest rate is an appropriate indicator of monetary policy.

In this model we use a short term interest rate as an indicator of monetary policy. The lag length of the interest rate is a priori assumption. One might argue that it takes longer time than one year for the interest rate to work through the transmission effect. Therefore we have also estimated the model and included the interest rate lagged two periods. In the regression model above, one parameter ( $\beta_{2,i,j}$ ) is obtained for each region. The use of annual GDP data on a regional level restricts the degrees of freedom and hence the lag length of the dependent variable and number of explanatory variables that can be included in the model. The short time series that are available restricts our analysis, e.g. the use of vector autoregressive models (VAR) and tests for lag lengths.

In the second step, we use a cross-section regression, where the estimated parameter for the interest rate in the first regression is regressed on variables capturing the regional productive structure and dummy variables for the countries. The dummy variables are included to control for country specific effects that may affect the transmission effect of monetary policy, e.g. institutional differences. The following equation is estimated using ordinary least squares:

$$\beta_{2,i,j} = \lambda_0 + \lambda_1 z_{i,j} + \lambda_2 D_i + \mu_{i,j}$$

where  $\beta_{2,i,j}$  is the parameter for interest rate sensitiveness in region  $j$  (in nation  $i$ )  $\lambda_0$  is a constant and  $\lambda_1$  is parameter to be estimated, capturing the industry structure effect on interest rate sensitiveness in the region.  $z_{i,j}$  is a vector of variables describing the industry structure in region  $j$  in country  $i$ ,  $D_j$  is a dummy variable for each country (dummy variables for Germany and the UK are included with Belgium as the reference group)  $\mu_{i,j}$  is an error term. We have tried two sets of variables describing the industry structure. First, we have constructed a Herfindahl index. The Herfindahl index is computed as the sum of squared industry shares in the regions. The index is essentially a concentration index, bounded between 0 and 1. If all value added in one region is supplied by one sector; the index is equal to one. An index close to zero indicates that the region is highly diversified. Second, we have included the sector shares of the regions value added. It is not possible to include all, or a majority of the variables, due to co-linearity between the variables. Therefore we have estimated the model in the second step and included each industry structure variable one at a time.

### 5.4.2 Data and Results

The data covers three countries for the time period 1998-2004 Belgium, Germany and the UK<sup>42</sup>. Data on regional GDP have been obtained from Cambridge Econometrics. As a measure of interest rate, and an indicator of the monetary policy, we use a short term interest rate. Data on interest rates have been collected from the International Monetary Fund<sup>43</sup>. From the IGET data base we have obtained variables describing the regional industry structure. The industry structure is measured as the industry share of value added in the region for the year 2002. 28 different industry sectors are included; see the list at the end of section 5.4. Ideally, the model should also contain information on industry structure in the beginning of the period.

The estimation results from the first stage are not presented in tables. The parameter for the lagged interest rate is expected to have a negative sign, i.e. an increase in the interest rate is expected to decrease regional GDP growth. Out of 8 regions, the estimated parameter is negative for 70 regions. It is important to note that these are preliminary results. The model seems to fit well for Germany but quite poor for Belgium. One explanation for the poor fit may be the short time series, another reason is that yearly growth rates may be difficult to explain. We have also tried other specifications; e.g. the model seems to fit better for Belgium when the interest rate is first differenced.

The results from second stage are presented below. In table 27 we present the results where the Herfindahl index has been used to capture regional specialisation. The first equation is estimated using the interest rate lagged one year.

Variable	Estimate	t-values
<i>Constant</i>	-0.006	-2.98
<i>Herfindahl</i>	-0.013	-0.69
<i>Dummy Germany</i>	-0.03	-4.96
<i>Dummy UK</i>	0.027	1.95
Adj R <sup>2</sup>	0.127	

Note: nr. obs = 8. t-values are corrected for heteroskedasticity (Nte)

**Table 28 Estimation results; dependent variable is regional sensitiveness to changes in the interest rate**

<sup>42</sup> Some member countries are excluded due to missing GDP data. Other member countries are excluded since the short term interest rate used in the analysis has not been available for all years.

<sup>43</sup> The short-term interest rate on line 60b is used in the empirical analysis.

As can be seen from the table, the industry structure, or sector concentration, does not seem to affect regional sensitiveness to changes in the interest rate. However, the dummy variables are significantly determined, indicating that there are institutional differences between countries. The interpretation is that Germany is more sensitive to changes in the interest rate than Belgium, and the UKs less sensitive.

In table 28 we present the results where the first equation is estimated using the interest rate lagged two periods. As can be seen from the table, the parameter for the Herfindahl index is negative and borderline significant at the 95 per cent level. This result is in line with our expectations, a higher degree of regional specialisation makes regions more sensitive to changes in the interest rate.

Variable	Estimate	t-values
<i>Constant</i>	-0.001	-0.46
<i>Herfindahl</i>	-0.03	-1.91
<i>Dummy GERMANY</i>	-0.006	-7.01
<i>Dummy UK</i>	0.003	1.71
$\Delta_j R^2$	0.08	

Note: nr. obs = 8. t-values are corrected for heteroskedasticity (White)

**Table 29 Estimation results, dependent variable is regional sensitiveness to changes in the interest rate**

We have also estimated the model in the second step using the specific industry characteristics as explanatory variables. Preliminary results indicate that some sectors seem to affect the regional sensitiveness to changes in the interest rate. In table 29 we present the sectors that have a significantly determined effect (at the 95 per cent level) on regional sensitiveness to changes in the interest rate. A positive effect implies that regions with a high share in these sectors (sector share of value added) are less sensitive to changes in the interest rate. A negative effect indicates that regions with a high share in these sectors are more sensitive to changes in the interest rate. Although these results are very preliminary and the empirical analysis should merely be considered as an illustration, the results presented below seem reasonable, e.g. the result that *Real estate, renting and business activities* is an interest rate sensitive sector and that *Public Administration* and

*Manufacturing of food products* are less sensitive in relation to the other sectors. The demand for goods and services provided by the latter sectors are less likely to be sensitive to changes in the interest rate than the former sector.

Sector	Effect
Agriculture, hunting and forestry	+
Manufacture of food products, beverages and tobacco	+
Manufacture of chemicals, chemical products and man-made fibres	-
Construction	+
Hotels and restaurants	+
Transport, storage and communication	-
Real estate, renting and business activities	-
Public administration and defence; compulsory social security	+

**Table 30 Sectors with a significantly determined effect (95 per cent level) on regional sensitiveness to changes in the interest rate**

It is important to note that the model described here is simplified and the parameters should be interpreted with caution. The available time series is short and we lack degree of freedoms in the analysis. However, the present analysis is an illustration of how EU-level macro-economics policies may be evaluated.

The narrow industry sector data provided by IGEA opens up for more thorough analysis of regional industry structures, e.g. within the field of monetary policy and regional development. The present analysis can be extended in several dimensions. First, longer time series makes it possible to specify more comprehensive models for the first stage, e.g., adding explanatory variables to the model. A important extension of the model is to

consider feed back effects between regions; the results obtained here are based on a model treating the regions separately. Longer time series also makes it possible to include additional lagged variables and to test for optimal lag length. In this way one may study the time aspect of policy impacts. Second, more comprehensive models can be specified for the second stage. The industry structures should be complemented with regional financial characteristics such as banking structures. Third, empirical studies like the one presented here can only identify if some regions are more or less sensitive to changes in the interest rate. Although the monetary policy generates different regional outcomes due to variation in the industry structure, this does not necessarily mean that there is a need for policy interventions. It might be the case that there is a risk-return trade off (see e.g., Arnold and Wugt, 2002) i.e. wage differentials compensating for the risk of income fluctuations. This issue needs to be analysed more thoroughly. Further, the hypothesis that the implementation of the EMU affects the transmission effect in a way that regional outcomes converge should be tested; possible by extending the empirical model presented here.

### **List of industry sectors**

1. Agriculture, hunting and forestry
2. Mining and quarrying
3. Manufacture of food products, beverages and tobacco
4. Manufacture of textiles and textile products
5. Manufacture of leather and leather products
6. Manufacture of wood and wood products
7. Manufacture of pulp, paper and paper products; publishing and printing
8. Manufacture of coke, refined petroleum products and nuclear fuel
9. Manufacture of chemicals, chemical products and man-made fibres
10. Manufacture of rubber and plastic products
11. Manufacture of other non-metallic mineral products
12. Manufacture of basic metals and fabricated metal products
13. Manufacture of machinery and equipment n.e.c.
14. Manufacture of electrical and optical equipment
15. Manufacture of transport equipment
16. Manufacturing n.e.c.
17. Electricity, gas and water supply
18. Construction

19. Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods
20. Hotels and restaurants
21. Transport, storage and communication
22. Financial intermediation
23. Real estate, renting and business activities
24. Public administration and defence; compulsory social security
25. Education
26. Health and social work
27. Other community, social, personal service activities
28. Activities of households

## **5.5 The Spatial Effects of Specific National Policies and Changes in Macroeconomic Contexts: an application of the MASST model**

**Roberto Camagni, Roberta Capello, Barbara Chizzolini, Ugo Fratesi  
(Politecnico di Milano)**

This report has been written by Roberta Capello and Ugo Fratesi.

### **5.5.1 Introduction**

This report uses the MASST model developed by the Politecnico di Milano research group within ESPON project 32 in order to analyse the spatial effects of national macroeconomic policies and of changes in macroeconomic contexts.

Each simulation is generated with the aim to understand the regional effects of *one single external shock at the time*, coming alternatively from:

- single macroeconomic policies (fiscal policies, interest rates policies)
- direct and indirect macroeconomic decisions linked to macroeconomic trends (exchange rates movements)
- effects of combined supply side policies /fiscal policies /macroeconomic trends (cost competitiveness variations)
- macroeconomic trends, allowed by macroeconomic policies (inflation)

No effort is made to include complementary policies addressed towards general consistency of macroeconomic equilibrium (e.g. expansive fiscal policies accompanied by restrictive monetary policies and rising interest rates) as:

- the MAST model is not designed to model these consistencies,
- the general effect would depend on the relative intensity of the different policies, difficult to determine on the basis of the existing literature, and
- the two opposite policy elements would counterbalance each other in terms of spatial effects, generating a regional pattern difficult to interpret.

Therefore, the simulations runs regard the following policies and changes in the macroeconomic context:

- an expansive fiscal policy (case 1)
- a restrictive fiscal policy (case 2)
- a devaluation of the exchange rate (case 3)
- a revaluation of the exchange rate (case 4)
- an increase in cost competitiveness (case 5)
- a decrease in cost competitiveness (case 6)
- an increase in real interest rates (case 7)
- an increase in inflation rate (case 8)

The effects are analysed at regional, NUTS2, level, whereas usually macroeconomic policies or changes in the macroeconomic context are considered to affect only the national scale.

The functioning of the MAST model has been briefly explained in an interim report of 3.2. A more detailed presentation of the technicalities of the MAST model is contained in many reports of the ESPON 3 project (Second and Third Interim Report)

The effects of macroeconomic policies and of changes in macroeconomic content are reported in terms of induced variation in regional growth rates in 2015, the final year of simulation of the model. The variations presented in the maps are measured with respect to the Baseline Scenario (see project 3)- the benchmark scenario of ESPON 3 -, a scenario in which all present tendencies are supposed to continue in the future.

## 5.5.2 Case 1: An expansive fiscal policy

### *Assumptions*

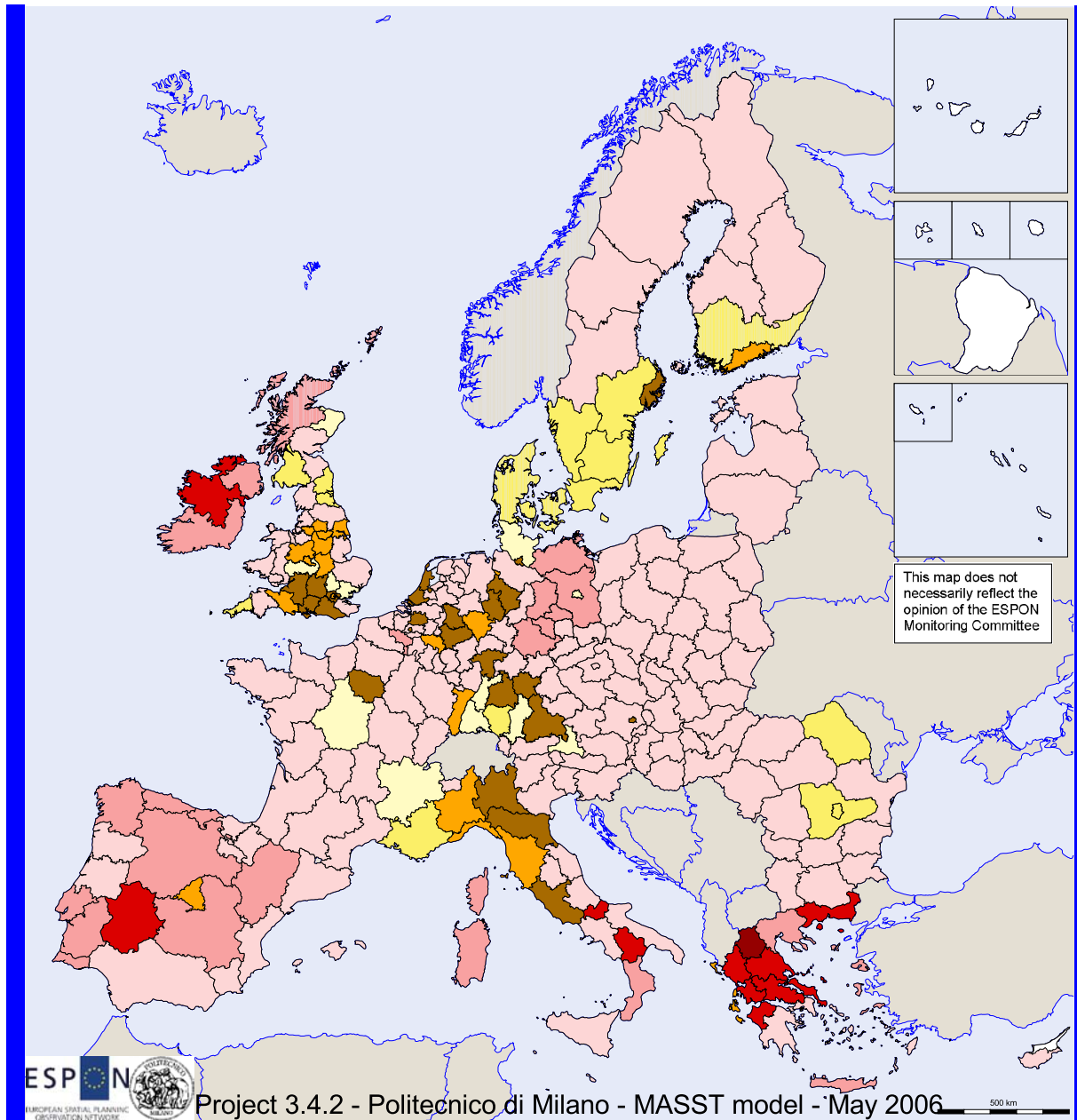
This policy aims at stimulating the economy through a fiscal expansion, with no attention to the ways fiscal policy is financed. The aim of the exercise is in fact to capture the effects of a fiscal policy at the regional level, ignoring the funding aspect. The annual growth rate of public expenditure is 2% higher in all EU27 countries with respect to their values in the baseline scenario. This expansion is joined by an increase of structural funds expenditure, under the assumption that - taking the baseline as benchmark - they are doubled in the New Member States (and in Bulgaria and Romania too, which, as an assumption, will join the EU in 2007) and increased by 50% in Old Member States.

### *Results*

This policy is expansive throughout Europe, but the effects are generally stronger (and much higher than the European mean) in the four old Cohesion countries, namely Greece, Portugal, Spain and Ireland. Within each country, the highest effects of the expansive fiscal policy are registered in rural and less rich areas, while the lowest ones are envisaged in capital city regions, like Madrid, Athens. In these countries, also agglomerated regions have lower effects than rural areas; among others, Catalonia, Valencia, Rioja and Navarra in Spain, Porto in Portugal.

Outside these countries, a high expansive effect is registered in Eastern Germany, in particular in regions around Berlin, and in Southern Italy, in particular in Calabria. Capital city regions, and in general mega regions in Western countries register a relatively low expansive effect; Paris, Milan, Rome, Frankfurt, Dortmund, London and the South-East, show the lowest effects. Denmark, the South of Sweden and of Finland obtain a lower advantage than the European average. In the East, an effect just above the European average is registered. In the case of Romania, Bucharest (and its surroundings) and the North-East are less affected than Europe as a whole.





This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

Case 1: An expansive fiscal policy

- 0.010 - 0.038
  - 0.038 - 0.051
  - 0.051 - 0.058
  - 0.058 - 0.060
  - 0.060 - 0.109
  - 0.109 - 0.145
  - 0.145 - 0.221
  - 0.221 - 0.38
  - No data
- EU mean = 0.060

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**Figure 59 Case 1 : an expansive fiscal policy (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario)**

### 5.5.3 Case 2: A restrictive fiscal policy

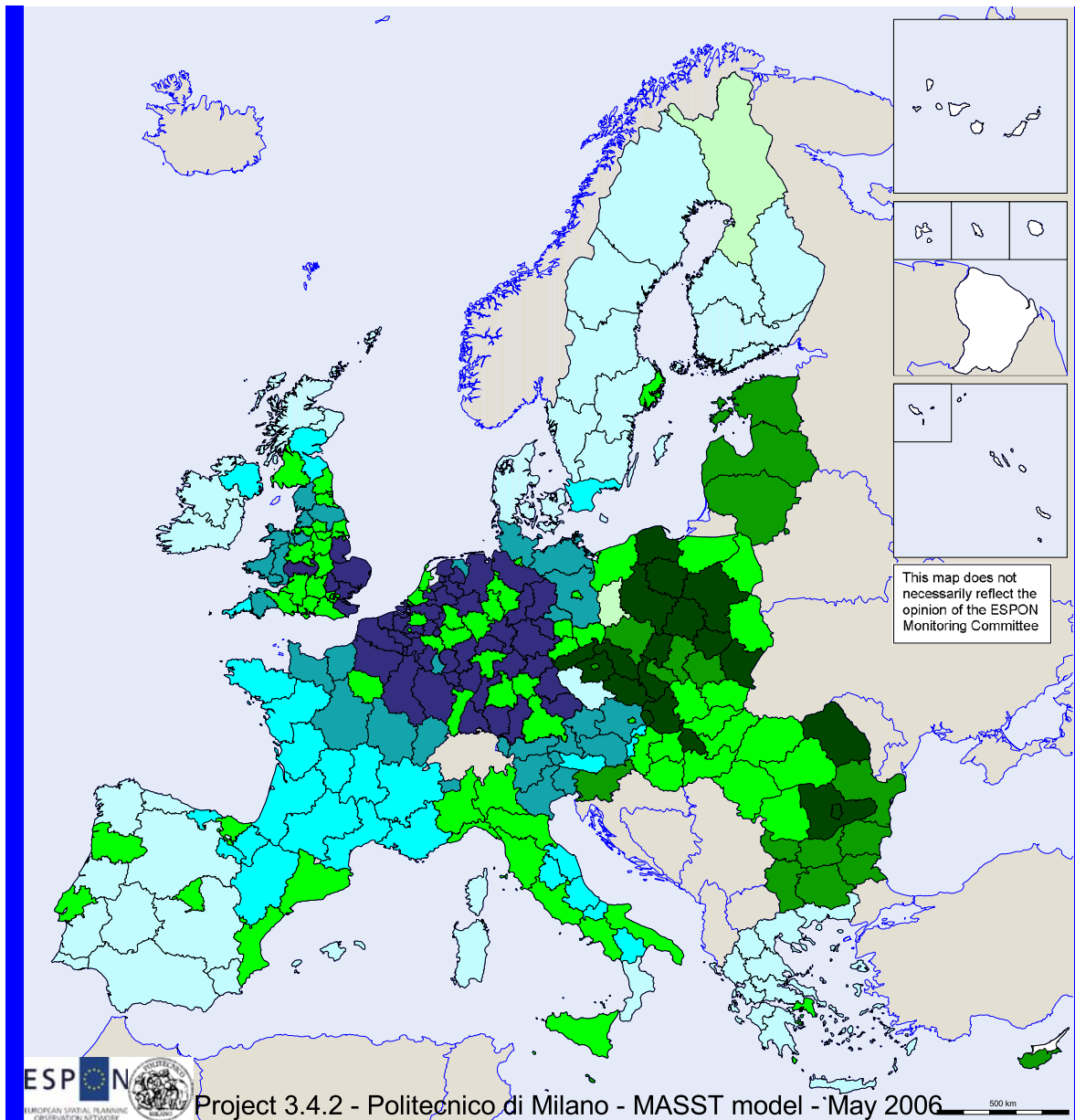
#### *Assumptions*

This policy reflects the need to maintain a virtuous public balance through the containment of public expenditure. This variable enters the MAST model as percentage annual variation. In this policy experiment, the annual growth rate of public expenditure is 2% lower in all EU27 countries with respect with their values in the baseline scenario. Structural funds expenditure remains the same as in the baseline scenario. In the case of the fiscal expansion, public expenditure funding is not taken into consideration.

#### *Results*

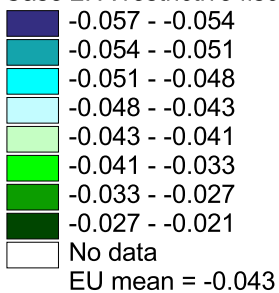
The overall effect on EU growth is negative, and this is true for all countries and regions, as expected given the restrictive nature of the policy. The effects are less marked in Eastern countries, which are less sensitive to public expenditure, because of their restrictive trend in public finance developed in the past. Inside these countries, the spatial effect is rather different between peripheral and capital city regions; the former suffer the most, while the latter are less affected. Greece, Spain, Portugal and Ireland are relatively less affected by this restrictive policy than the rest of Western countries; this relative good performance is explained by the assumption that the restrictive public policy does not impose a reduction in structural funds. Within each cohesion country, the lowest negative effect is found in capital city regions and/or agglomerated regions. In these countries, rural areas are affected more than the European average; the same kind of relative performance is registered in Sweden and Finland.

In the Western countries, the restrictive effects are higher than in Eastern countries, with a strong variation at regional level. The pentagon area is generally more affected, and its more negative performance influences its neighbouring regions, like central France, South-West of Great Britain, Eastern Germany, Austria and part of Northern Italy. Interestingly enough, in general, agglomerated and capital city regions are less sensitive to this restriction.



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Case 2: A restrictive fiscal policy



**Figure 60 Case 2 : a restrictive fiscal policy (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario)**

### 5.5.4 Case 3: A devaluation of the exchange rate

#### *Assumptions*

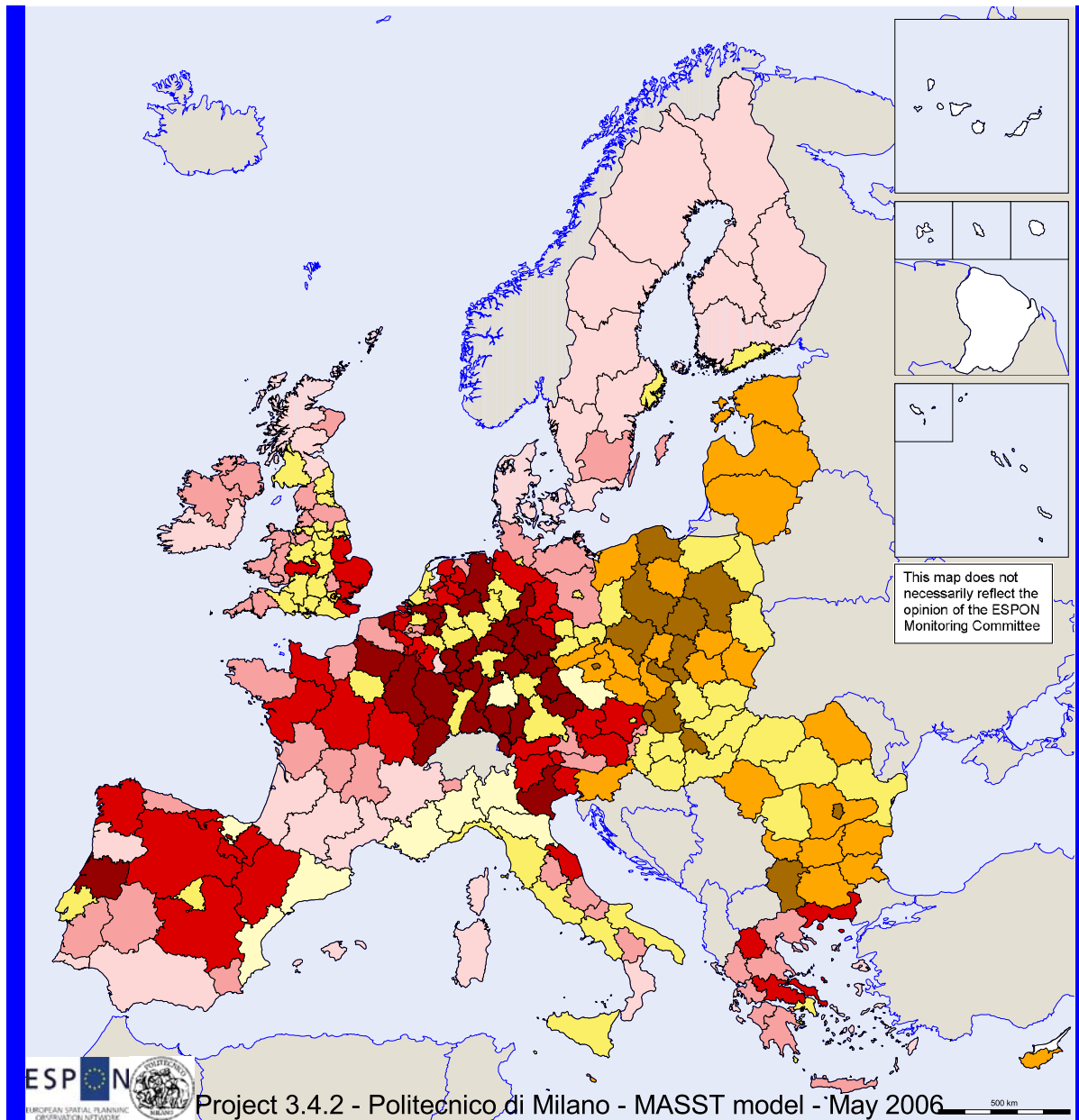
This case represents the effect of macroeconomic conditions leading to a devaluation policy of the exchange rate or of an expansive monetary policy. The devaluation is of 0.1% annual nominal exchange rate with respect to the baseline scenario.

#### *Results*

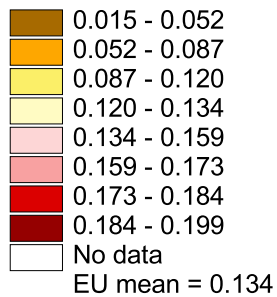
The effect is positive in all countries and regions, as expected, but much stronger in the West of Europe than in the East.

Within the East, Bulgaria and Romania present the same pattern of the 10 new member states of the EU; moreover, in the East the core regions are less affected than the peripheral ones, but all regions remain below the EU27 average. The regions located closer to the EU15 countries are also, in general, slightly more affected.

In the West, all capital city regions are less positively affected than their countries and the EU27 average; at the same time, regions around the mega and capital city regions register a higher effect. This is true even in Eastern countries, and finds an explanation in the fact that devaluation affects more regions primarily specialised in *labour-intensive*, *'tradeable'* and *higher price-elasticity* industrial activities, highly concentrated outside agglomerated regions or in specialised industrial areas, like the North-East and part of Central regions in Italy (the so-called Third Italy, where the industrial districts are located). On their turn, the economy of mega and agglomerated regions is in general more dependent on public services.



Case 3: A devaluation of the exchange rate



**Figure 61 Case 3 : A devaluation of the exchange rate (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario)**

### 5.5.5 Case 4: A revaluation of the exchange rate

#### *Assumptions*

This case presents the simulation of a revaluation of the exchange rate by 0.1% each year, generated by monetary policy or macroeconomic conditions.

#### *Results*

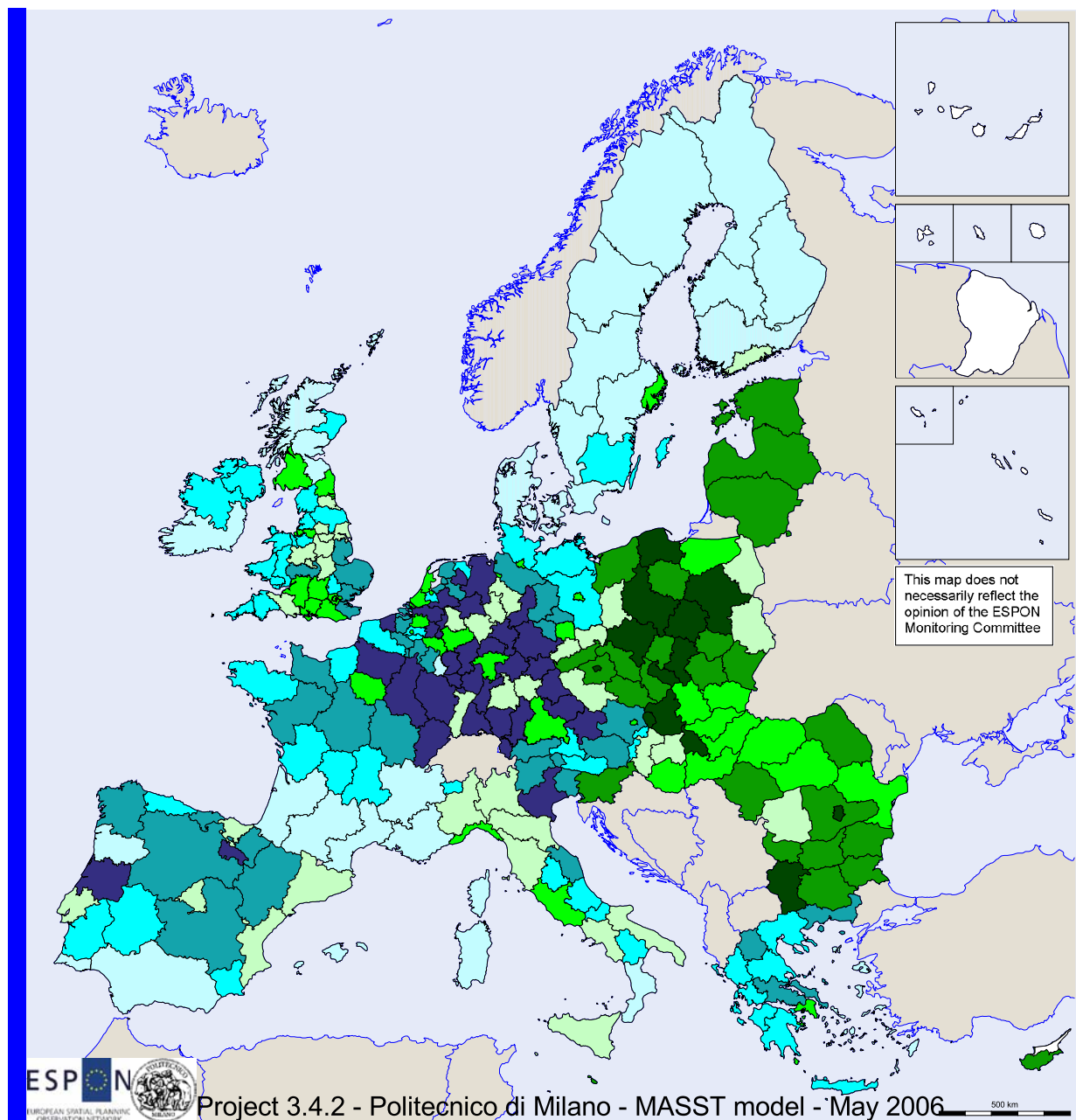
The effect of a revaluation would negatively affect growth in all regions of Europe, less intensively in the East where the cost competitiveness remains higher due to historical reasons.

Within the Eastern countries, those which would suffer the most from a revaluation would be the closest to the EU15, i.e. the Czech Republic, Hungary, the Slovak Republic and Poland; these countries are in fact negatively affected by the high negative growth of western countries. The less affected would be the Baltic republics of Estonia, Latvia and Lithuania.

In all countries, belonging to the East and the West, the capital city regions, and some agglomerated regions in Italy, Spain, Germany and United Kingdom, more dependent on services, will suffer less than the rest of their country and less than the EU27 average. This is easily explained by the fact that these regional economies are supposed to be less dependent on services and more on agriculture or manufacturing.

In the West, all countries appear to get the same negative effect; however, this is stronger influencing industrial regions of France, Germany, Belgium, the Netherlands and also Italy, Austria, Spain and Portugal.

Peripheral areas are generally less affected, as are the mega regions in all Western Europe.



Case 4: A revaluation of the exchange rate

Dark Blue	-0.199 - -0.184
Blue	-0.184 - -0.174
Cyan	-0.174 - -0.159
Light Blue	-0.159 - -0.133
Light Green	-0.133 - -0.108
Green	-0.108 - -0.086
Dark Green	-0.086 - -0.057
Black	-0.057 - -0.015
White	No data
EU mean = -0.133	

**Figure 62 Case 4 A revaluation of the exchange rate (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario)**

### 5.5.6 Case 5: An increase in cost competitiveness

#### *Assumptions*

The MAST model conceptualises the unit labour cost as a proxy of cost competitiveness of countries. This variable influences both exports and investments growth. This simulation is based on the assumption of a decrease of unit labour cost of 0.2% yearly.

#### *Results*

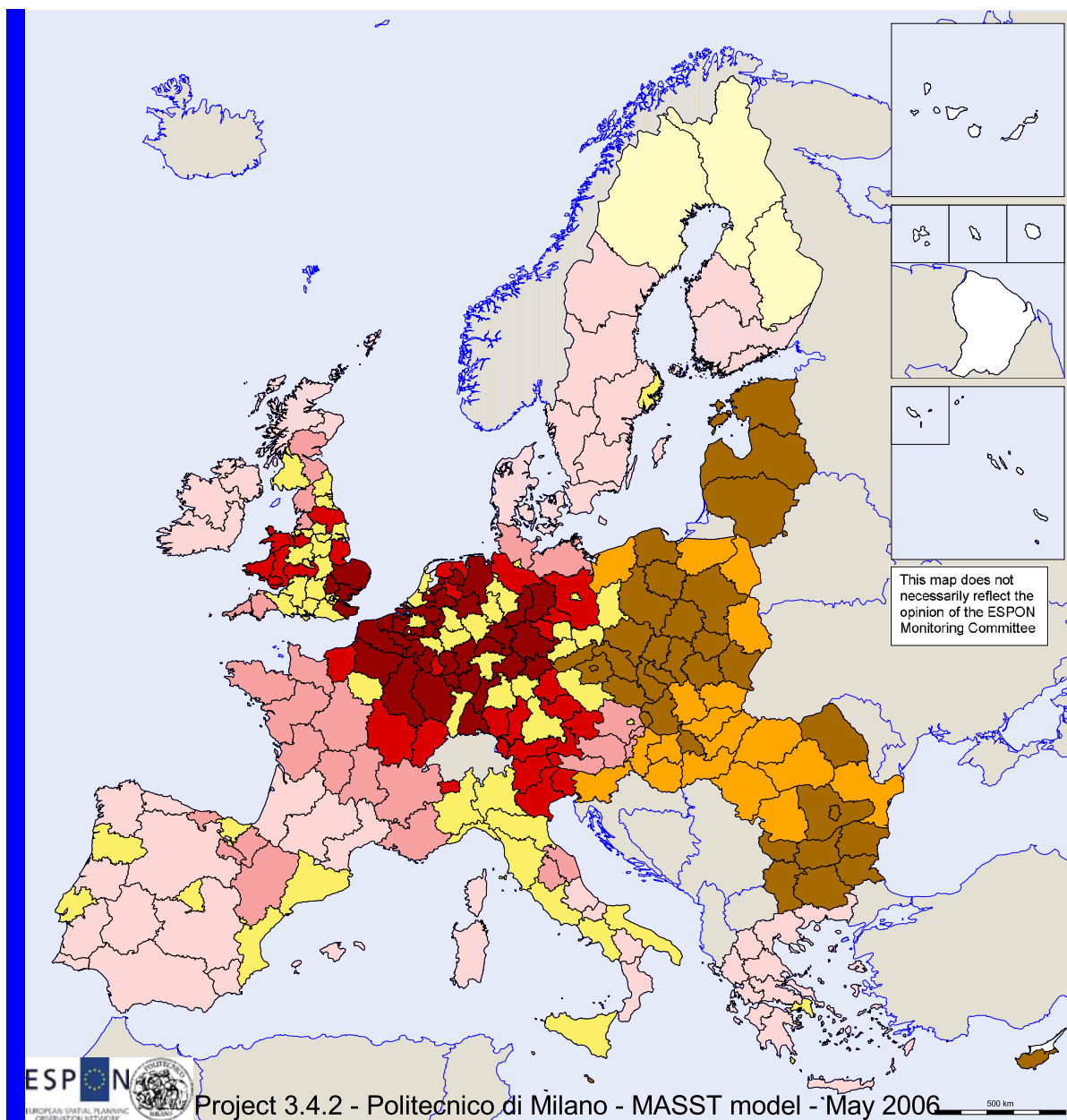
The effect on growth is positive in all regions of Europe, even if in a few regions of the Czech Republic, Poland and the Slovak Republic it is so low to be almost negligible.

Overall, the West is more affected than the East. Within the Eastern countries, the capital city regions and the mega areas are more responsive to the policy change.

In the western countries, on the contrary, agglomerated, capital and mega areas are generally less responsive than the rest of the country. In the Scandinavian countries the most peripheral areas are also less heavily influenced. The regional difference is explained by the effect that this policy provokes in the labour market. A shift from dependent jobs to self-employment is expected and logic to occur. This shift will have a higher impact on those regions where the starting number of dependent jobs is higher; dependent jobs are higher in agglomerated and mega regions in the East, and in industrial (urban) regions in the West.

The effect is very strong in urban areas of Germany, France, Belgium, the Netherlands and the Southern part of England. This coincides with the upper part of the Pentagon, plus some regions of Eastern Germany. Rural areas are generally highly sensitive to the policy. Within the western countries, Ireland, Italy and, with less intensity, Greece are less affected than other western countries.





Case 5: An increase in cost competitiveness

- 0.038 - 0.066
  - 0.066 - 0.092
  - 0.092 - 0.118
  - 0.118 - 0.127
  - 0.127 - 0.142
  - 0.142 - 0.150
  - 0.150 - 0.158
  - 0.158 - 0.167
  - No data
- EU mean = 0.127

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**Figure 63 Case 5 : An increase in cost competitiveness (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario)**

### 5.5.7 Case 6: A decrease in cost competitiveness

#### *Assumptions*

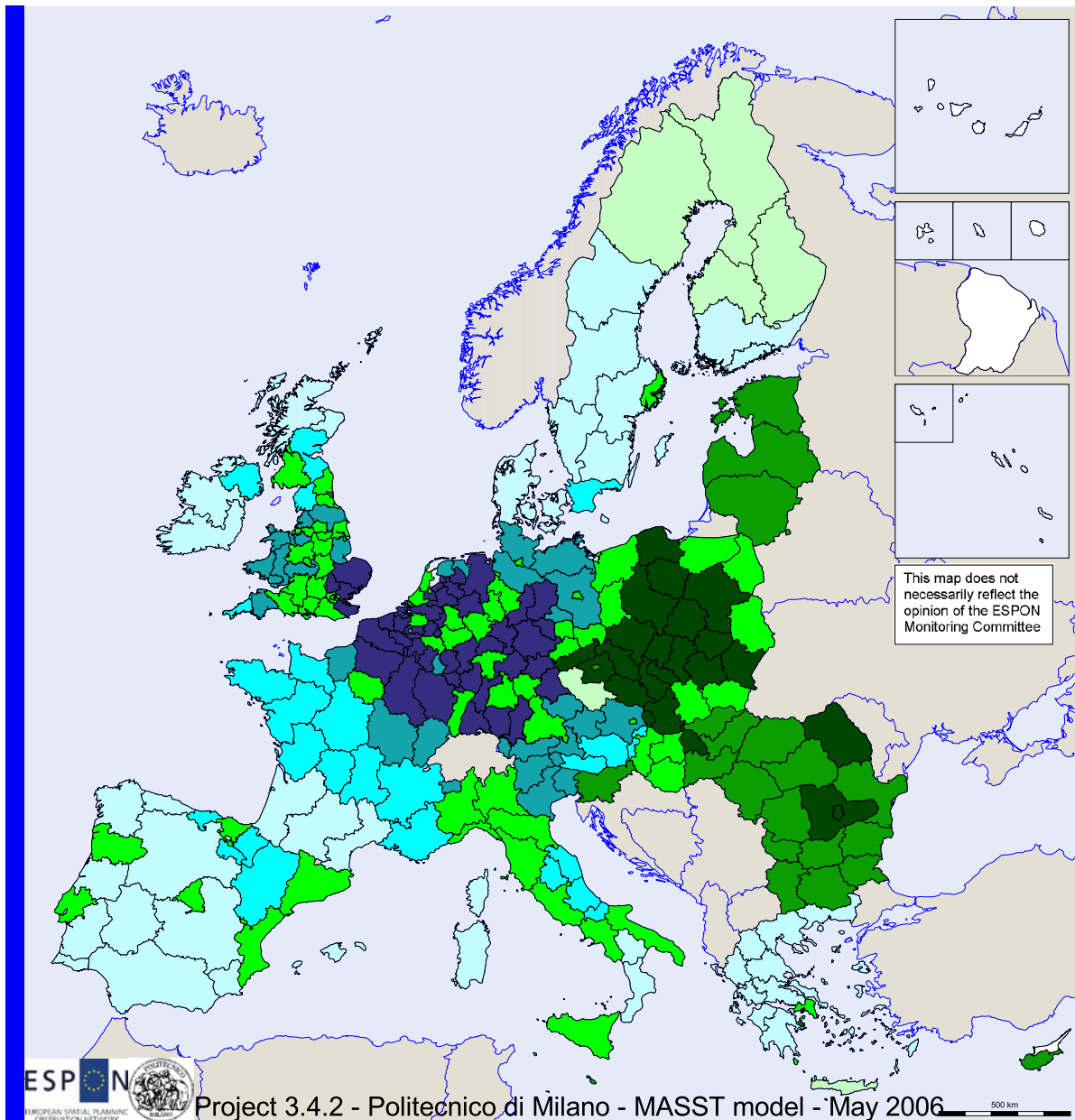
This simulation involves the increase of unit labour cost of 0.2% yearly.

#### *Results*

The effect of this policy is negative in all Europe, and again less negative in Eastern countries. Within the East, the more affected regions are the rural regions of Poland, and those of Hungary and the Slovak Republic with the exception of the capital city regions. Also in Romania, the areas around Bucharest are less affected than the others. The Baltic republics are also not very much influenced by this policy, being rural and non-mega territories.

In the West, this policy decreases the growth rate of all countries considerably. In particular the non agglomerated areas of the Pentagon and of Eastern Germany, which are more dependent on industry, are affected the most. In fact, as for the expansive policy assuming an increase in cost competitiveness, also in this case the expected increase in attractiveness of dependent jobs will limit (and even decrease) the number of self-employees, in search for a dependent job. This will be more marked where the starting number of dependent jobs is lower.

The agglomerated areas generally decrease their growth rate less than the rest, witnessing that they are able to maintain their competitiveness despite the higher cost of labour. This is true throughout Europe, both in the West and in the East.



Case 6: A decrease in cost competitiveness

Dark Blue	-0.139 - -0.131
Blue	-0.131 - -0.124
Cyan	-0.124 - -0.117
Light Blue	-0.117 - -0.106
Light Green	-0.106 - -0.102
Green	-0.102 - -0.084
Dark Green	-0.084 - -0.068
Black	-0.068 - -0.049
White	No data
EU mean = -0.106	

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**Figure 64 Case 6 : A decrease in cost competitiveness (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario)**

### 5.5.8 Case 7: An increase in real interest rate

#### *Assumptions*

This policy simulation is based on the assumption of an increase of the real interest rate in all countries of 2% with respect to the baseline scenario. Given the present very low level of real interest rates, an opposite simulation showing effects of a decreasing interest rate is difficult to envisage. For this reason, only an expansive policy on real interest rates is taken into consideration.

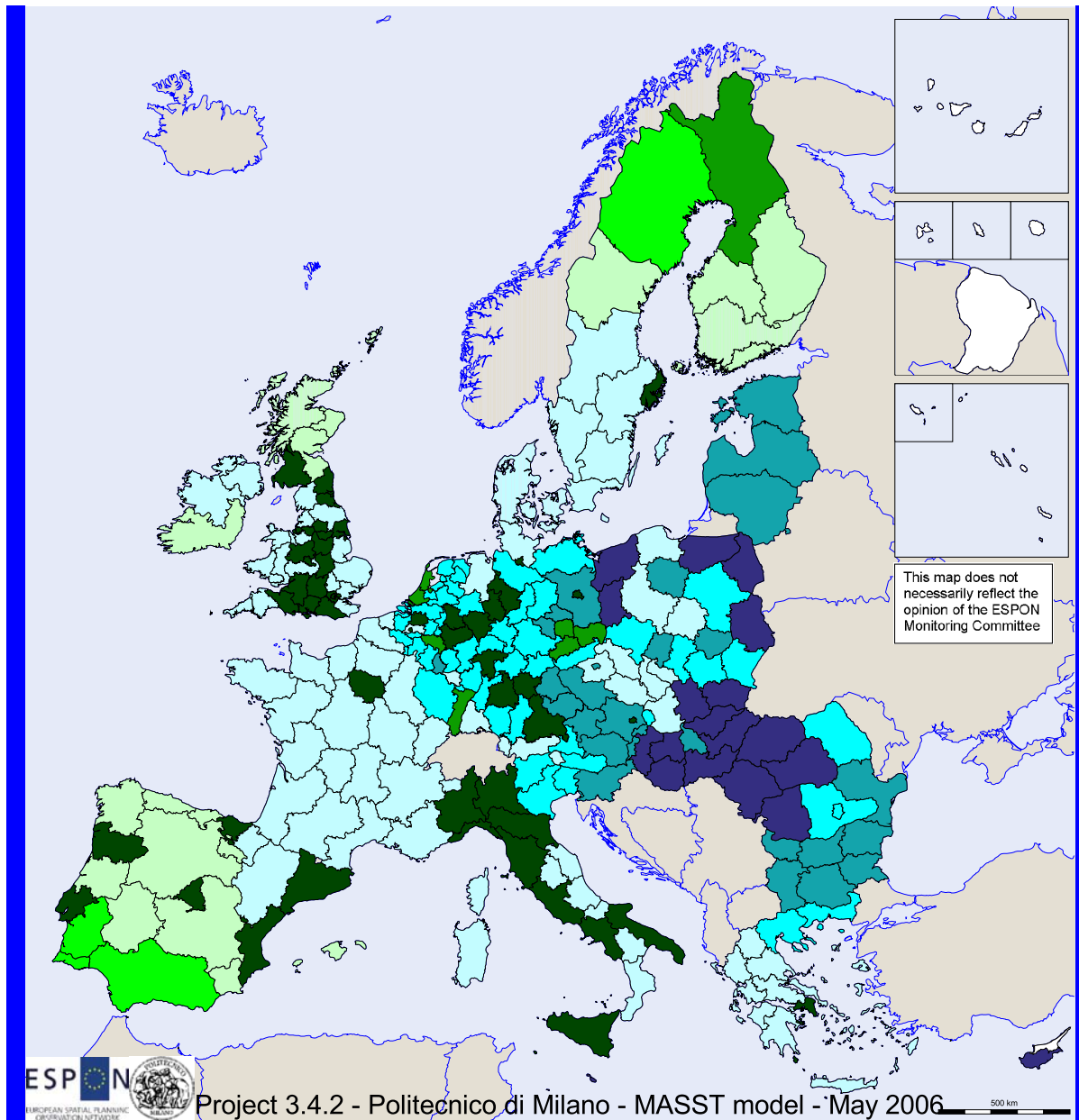
#### *Results*

A first general result is the extremely limited negative effect that the increase in real interest rate generates, probably explained by the fact that in the MAST changes in interest rates influence only investment rates; in the model, public balance sheet is not taken into consideration, and therefore the negative effects of an increase in interest rates on public debt not simulated in the present exercise. If this were the case, the negative effect would be higher.

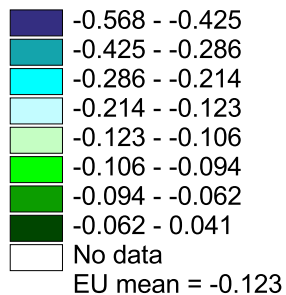
The generalised effect is negative all over Europe. The highest negative impact is registered in Eastern countries, especially in Hungary, Romania, Bulgaria and some rural regions of in the north-eastern part of Poland. Within Eastern countries, the less affected areas are some urban regions in Poland, and some north-eastern areas of the Czech Republic.

In general, an increase in interest rates generates a lower impact in western countries. Among them, Portugal, Spain and Italy are less sensitive to the effects of such a policy. In general, in each of these countries, agglomerated and mega regions register a very low impact: Madrid, Valencia, Barcelona, Basque countries in Spain, Porto and Lisbon in Portugal, as well as Milan, Turin, Genoa, Bologna, Florence, Rome, Naples, Bari and Palermo and their regions in Italy.

The same low sensitivity is registered in other mega and agglomerated regions in Western Europe, like Paris, London (and the South-East) Frankfurt, Hannover, Munich and other German regions in the north-central part of the country. In western countries, regions affected more by an interest rate increase are urban areas in the Pentagon area, and rural areas in France, Denmark and Southern Sweden. The Northern part of Sweden and all Finland are instead affected in a very limited way.



Case 7: An increase in real interest rates (values \* 1000)



**Figure 65 Case 7 : An increase in real interest rates (value \* 1000) (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario)**

### 5.5.9 Case 8: An increase in inflation rate

#### *Assumptions*

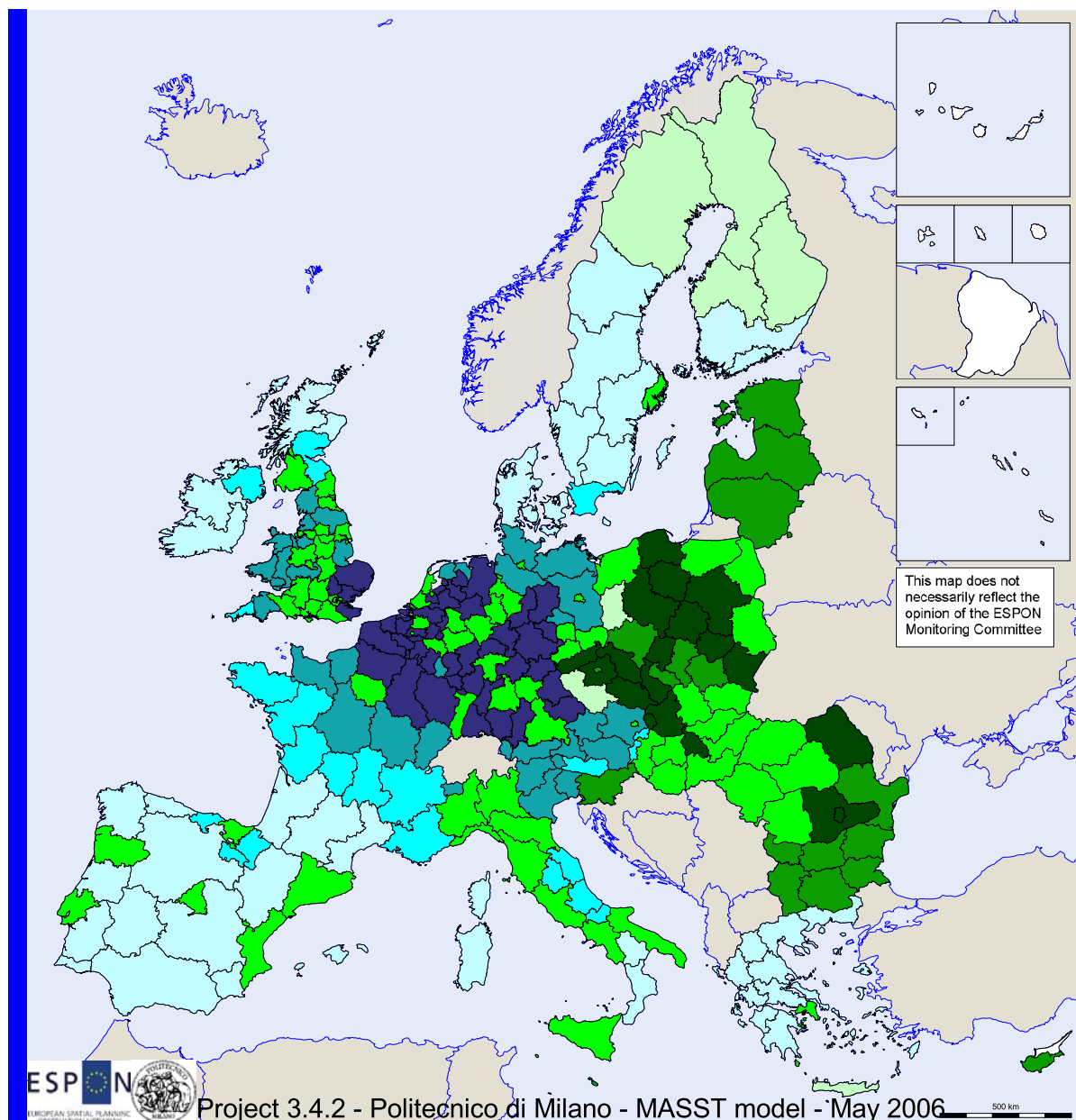
This policy simulation is based on the assumption of an increase of the inflation rate in all countries of 1% with respect to the baseline scenario.

#### *Results*

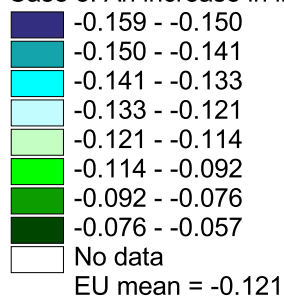
The EU-wide effect on growth is negative in all regions, and of a certain order of magnitude, witnessing that inflation has to remain of primary importance in the agenda of policy makers.

In the West this simulation affects to a more limited extent the peripheral countries such as Portugal, Spain, Ireland, Italy, Greece, Sweden and Finland, while it has a high negative impact in the agglomerated areas of the Pentagon region, including South-East England and Eastern Germany. Within western countries, the strongest areas, i.e. the mega and agglomerated, are less sensitive than the rest.

In the East, the effect is always below the EU average; this is particularly low in the mega and capital city regions. The less affected countries appear to be Poland and the Czech Republic, while Bulgaria and Romania are affected in the same measure of the rest of the Eastern countries.



Case 8: An increase in inflation rate



**Figure 66 Case 8 : An increase in inflation rate (variation in regional growth rates in 2015 compared to the ESPON 3.2 baseline scenario)**

## 6 Regional policies and their impacts & case studies

**Samir Al-Assi, Lydia Greunz, Henri Capron (DULBEA-CERT)**

**with the support of Marek Kozak and Maciej Smetkowski (EUROREG)  
for the information on New Members States**

### 6.1 Introduction

As developed in chapter 3 it is generally claimed that economic activity is becoming more spatially localized, more linked to specific environments offering externalities to companies. Thus, public policy is expected to be more and more oriented towards indirect intervention and less towards direct interventions (such as investment grants). Whether this hypothesis matches reality is the underlying question guiding this section, i.e. What kinds of policies are implemented, in which types of regions, and with which results? In light of the difficulty of actually determining impacts, however, the case studies have mainly been used to explore the policies implemented, not so much their impacts.

The hypothesis of a paradigm shift in public policy is for instance illustrated by Bachtler's (2000) conceptualisation from 'traditional regional policy' to 'modern regional policy' (see Table 6)

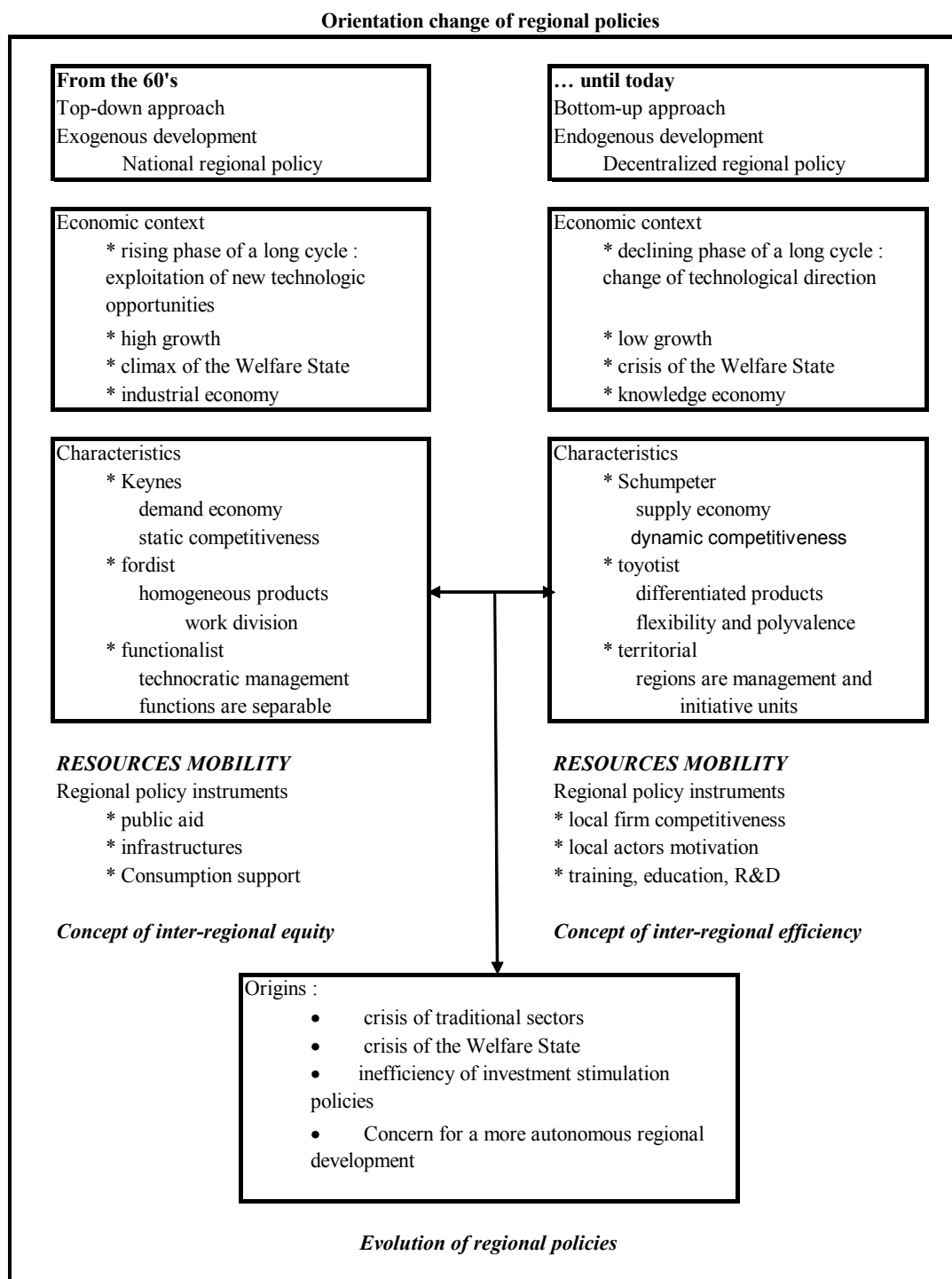


CONCEPTUAL BASIS	Industrial location theories	Learning region theories
	Key factors are regional attributes e.g. production costs, availability of workers	Key factors are regional capabilities e.g. innovative milieu, clusters, networks
<b>POLICY CHARACTERISTICS</b>		
Principle	Equity or efficiency	Equity and efficiency
Objectives	Employment creation	Increased competitiveness (e.g. Increased investment, entrepreneurship, innovation, skills)
Sphere of Action	Narrow (economic/ industrial)	Broad (multi-sectoral)
Mode of operation	Reactive, project based	Proactive, planned, strategic
<b>POLICY STRUCTURE</b>		
Spatial focus	Problem areas	All regions
Analytical base	Designation indicators	Regional SWOT analysis
Key instrument	Incentive scheme	Development programme
<b>Assistance</b>	<b>Business aid</b> <b>Hard infrastructure</b>	<b>Business environment</b> <b>Soft infrastructure</b>
<b>ORGANISATION</b>		
<b>Policy development</b>	<b>Top-down/centralised</b>	<b>Collective/negotiated</b>
<b>Lead organisation</b>	<b>Central government</b>	<b>Regional authorities</b>
Partners	None	Local government, voluntary sector, Social partners
Administration	Simple/rational	Complex, bureaucratic
Project selection	Internalised	Participative
Timescale	Annual budget	Multi-annual planning period
<b>EVALUATION</b>		
Stages	Ex post	Ex ante, interim, ex post
Outcomes	Measurable	Difficult to measure

Source: Bachtler, 2000

**Table 31 Conceptualisation of classic and modern regional policy**

Other similar conceptualisations also conclude to a shift in the forms of assistance: from hard to soft infrastructure, from business aid to business environment. Table 3 (Capron, 2002) synthesizes the main characteristics distinguishing the policies implemented between the 50s and 80s with the policies that emerged during the last twenty years.



Source:Capron, 2002

**Table 32     Shift in the orientation of regional policies**

From the 50s until the 80s, in the context of a 'demand-driven' economy, two instruments were favoured by governments: financial subsidies and infrastructure investments. The recovery of underdeveloped regions was only seen possible through the attraction of new investments and the development of infrastructures. Regional and local authorities had a

passive role, as the implementer of decisions taken at the national level. The controversy stems from the fact that these policies produced both positive (homogenisation of infrastructures potentials of regions) and negative results (widening the 'centre-periphery' gap due to increased mobility of labour and goods, regional dependency, etc.)<sup>44</sup>.

The economic crisis that occurred in the mid-70s not only radically changed the structure of economic activities and their location patterns but also led to profound changes in regional economic policies. This crisis showed the limits of Keynesian policies, unable to tackle with increasing unemployment, partly due to the decline of traditional industrial activities.

Since the economic crisis caused a new conceptual change affecting three levels: the actors, the instruments and the development philosophy. At the level of actors, regional authorities obtained a higher degree of autonomy regarding the definition and implementation of these policies. Several factors favoured this tendency towards more autonomy. At an institutional level, regions had requested more policy autonomy for a long time. In addition, the regional level was seen as better able to react to the fast changes induced by increasing globalisation.

In this new context, the concept of regional competitiveness has gained growing influence. Policies for innovation, R&D and education became essential policy instruments to support local firms' competitiveness. Throughout the last two decades, in the light of continuous regional disparities, exogenous development policies were left for the valorisation of the scientific and technological potential and the training of the workforce in line with business needs.

## 6.2 Objective of the study and organisation

**Our central objective is to verify the extent of this paradigm shift through an overview of regional policies implemented across European regions together with the associated financial efforts.** The analysis is based upon the relative financial efforts a region devotes to several selected 'drivers of regional competitiveness'. Indeed, we consider that a budget analysis is a reliable manner to understand the effective or actual priority of regional policies.

The analysis was first conducted on two Belgian regions, as a test step. The results of this analysis are presented after a first theoretical discussion over the concept of 'regional competitiveness', and the definition, and then selection, of the drivers of regional competitiveness. The methodology of the drivers of competitiveness analysis is presented in Appendix.

<sup>44</sup> See McKernan (1999)

This methodology was then extended to case studies<sup>45</sup> (section 6.4) covering 9 EU regions. Finally, based on the case studies observations, policy recommendations adapted to regional typologies are formulated.

### **6.3 Are regional policies really modern? Competitiveness drivers analysis**

Benchmarking of regions is a rather tricky exercise since regions have different characteristics and face different challenges. Therefore the suggested approach analyses the current actual weight of policies strengthening regional competitiveness. Assuming that regions do actually focus on regional competitiveness two questions need to be considered. First, how does this focus show up in the budgets or accounts of regional authorities? Second, how does it translate in terms of public expenditure?

#### **6.3.1 Selection of drivers of regional competitiveness**

Let us remind that this section aims at compiling an overview of regional policies implemented across European regions together with the associated financial efforts. These policies are classified into seven types of drivers of regional competitiveness listed in table 2.

This list of competitiveness drivers is based on the preceding theoretical discussion over regional competitiveness. It aims at being both exhaustive and synthetic and proposes categories that seem the most relevant for public policy action. Drivers of regional competitiveness are defined as the regions' endowments determining the level of competitiveness measured by the relative growth of its productivity, employment rate and GDP per head.

<sup>45</sup> Initially, a survey was launched at the attention of the ESPON Contact Points. The aim was to obtain budgetary information for one or two regions per EU country to conduct further drivers analysis. The survey has not been very effective. Out of 27 countries, 10 Contact Points provided some feedback. Indirectly, feedback from New Member States (Contact Points) was used in section 3. Feedback from France and Denmark was used in the case studies section (chapter 5)

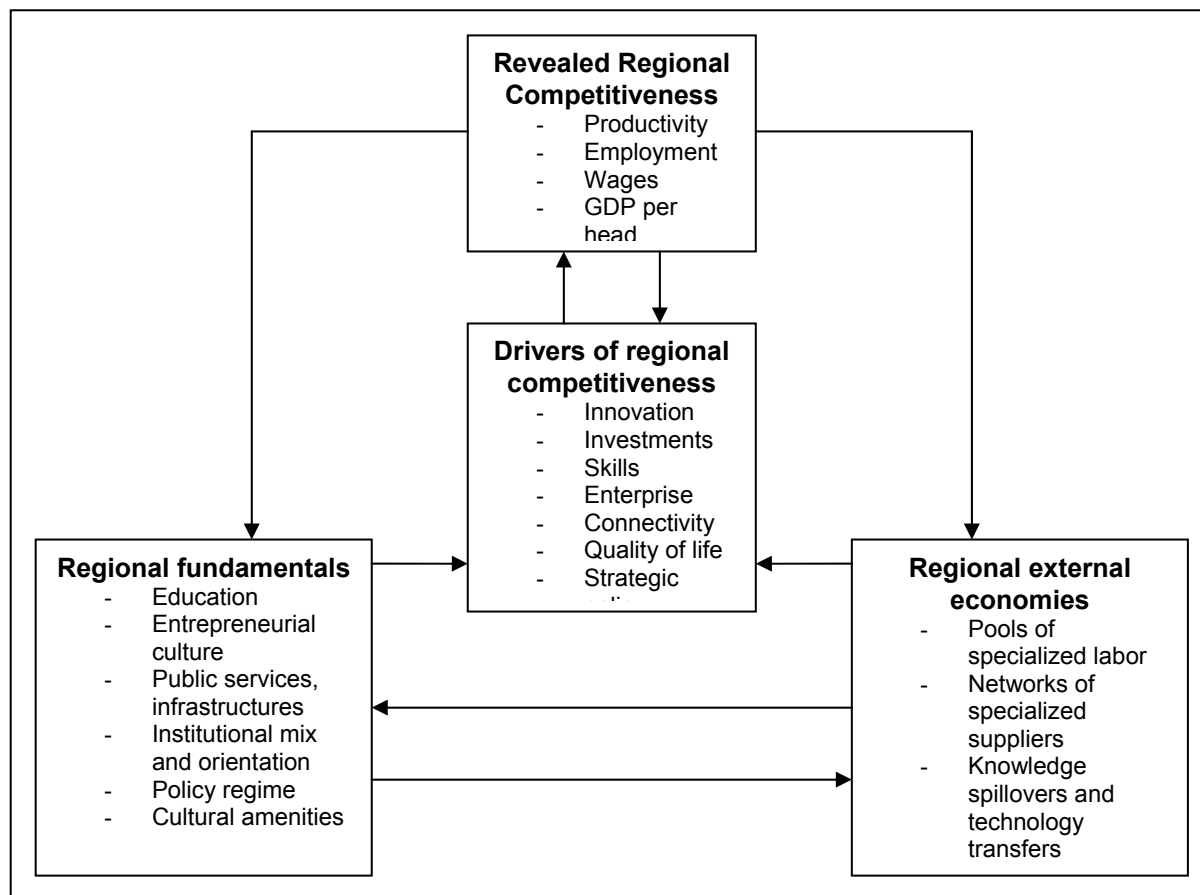
<b>Drivers of regional competitiveness</b>	<b>Definitions</b>
<b>Hard or Tangible Infrastructure</b>	Transport networks; industrial sites; communication systems; energy supply network; waste disposal and sewage systems;etc.
<b>Social Capital</b>	The networks of relationships among persons, firms, and institutions in a society, together with shared norms of behaviour, values and understandings (trust, cooperation, coordination, reciprocity, etc.) that enable a society to function effectively. Measurement of social capital is very difficult as it includes subjective elements (trust, etc.) Here, we focus on the public efforts to structure networks enabling cooperation and information flows (mainly through institutional capacity building) (based on OECD definition) Another focus is the measures taken to lower barriers against employment or business creation for disadvantaged groups (Minority Ethnicity;handicapped;women)
<b>Human Capital</b>	Skills and competencies of individuals which are mainly acquired through learning and experience. Some aspects of motivation and behaviour, as well as attributes such as the physical, emotional and mental health of individuals are also regarded as human capital. Here, we account public measures increasing individuals' skills or stimulating the recruitment of unemployed people through wage subsidies. The latter measure is mainly seen as a tool to compensate the depreciation of human capital caused by lengthy periods of unemployment (based on OECD definition)
<b>Fiscal and Financial Interventions (Investment)</b>	Public direct aid aimed at decreasing the cost of capital investments, mainly through grants and fiscal incentives.
<b>Financing (Capital and Credit)</b>	Compensating the high cost, shortage, rigidity and lack of access to financing means. Supply of capital, credit, credit guarantees.
<b>Innovation (Knowledge Capital)</b>	While 'Invention' is the creation of a new idea or concept, 'Innovation' is turning the new concept into commercial success. Innovation is primarily an economic and social, rather than exclusively a technological term. 'Technological innovation' is an innovation with significant performance content (as opposed to a fashion) Here, we focus on the public institutions which contribute to the development and diffusion of new technologies in a region and public spending for R&D (universities, firms) (Based on the Canadian Centre for Innovation Studies)
<b>Amenities / Quality of Life</b>	Amenity is defined as 'An enhancement to a piece of property that is not essential to the property's use, but may increase the property's value. Examples include a swimming pool, tennis courts, scenic view, access to a body of water, etc.' In terms of economic regional development amenities can for instance be the activities of soil or 'architectural' decontamination in industrial areas, the building of sport and cultural facilities in under-developed remote areas to attract investments, etc.

**Table 33 Drivers of regional competitiveness**

From a theoretical point of view, these drivers of regional competitiveness are extracted from the various and often overlapping set of economic theories. Indeed, there is no single economic theory providing a generally accepted definition of regional competitiveness and its determinants (or drivers). For instance, the endogenous growth theory and neo-Schumpeterian theories focus on the human capital and technological progress as the key sources of regional competitiveness. Cluster-based theories (Martin, 2005) closely associated with Michael Porter's Diamond model emphasise the role of localised clusters of specialised export-oriented industries, and associated supporting suppliers and institutional networks. Other set of theories focus on the role of various 'soft' factors, such as the 'thickness' of a region's institutions or even the cultural diversity and tolerance of a region (Florida, 2002).

The proposed list of seven drivers could also be seen as a mix of drivers of competitiveness with regional fundamentals, in the sense of Kugman (2003). According to him there are two sources of regional competitive advantage: *regional fundamentals* and *regional economical externalities*. Fundamentals are rooted in a region's characteristics; they are 'non-tradable' endowments that are immobile between regions. External economies are themselves a consequence of a region's pattern of economic development and specialisation. Fundamentals would be a well educated local population, a local culture of entrepreneurship, natural resources, public infrastructures, sustained public policy differences, etc. External economies are the spillovers that result from regional concentrations of industry, and therefore explain the snowball effect of virtuous circle of growth. For instance, knowledge spillovers result from personal contact among people working on related project.

Martin (2005) proposes a model where regional competitiveness is a structured but circular model interlinking 'regional fundamentals', 'regional external economies', 'drivers of regional competitiveness' and finally the 'revealed regional competitiveness' (see Table 3).



Source:Martin, 2005

**Table 34 Regional competitiveness as a structured but circular process**

Martin argues that what matters is how these 'drivers' are supposed to interact within a regional setting and that regional competitiveness is probably best seen as an evolving complex circular process, in which some outputs themselves become inputs, and thus influence future outputs'

The drivers identified in Table 3 capture most of drivers and fundamentals of Table 3. For instance, 'Connectivity' is included in 'Hard Infrastructure'; 'Entrepreneurial culture' is part of the 'Social Capital'; etc.

### 6.3.2 Results for two Belgian regions: Wallonia and Brussels

year 2005	Wallonia	Brussels
<b>Hard or tangible infrastructure</b>	54%	8%
<b>Social Capital</b> (supporting networking, cooperation, coordination, information circulation)	6%	5%
<b>Human Capital</b> (skills and competencies; cost of labour incentives)	15%	8%
<b>Fiscal and financial interventions</b> (investment grants, tax exemption, etc.)	12%	2%
<b>Financing</b> (supply of capital, credit, bank guarantees)	4%	0,9%
<b>Innovation support</b> (R&D support, technologies diffusion, etc.)	9%	9%
<b>Amenities</b> (quality of life, entertainment, culture, etc.)	1%	1%
<b>TOTAL</b> (1000 EUR)	<b>1.507.255</b>	<b>736.729</b>
EUR per head	444	72
Total Regional budget	6.0371	2.77497
EUR per head	1777	2755
% Regional economic development means in total budget	25%	27%

**Table 35 Financial efforts towards drivers of competitiveness, Wallonia and Brussels**

In Wallonia, economic activities were traditionally dominated by heavy industries, coal and steel. For the last decades, the regional problem has been primarily associated with the sharp decline of these sectors. The usual criticism addressed to policy makers is their failure to support the reorientation of the Region's economic base. Between 1996 and 2002, the GDP/capita of Wallonia has decreased from 74% to 72% of the Belgian average and from 8,4% to 8,9% of the EU-25 average (in Purchasing Power Parities). Between 1992 and 2002, the unemployment rate in Wallonia increased from 9,8% to 10,5% while the EU-25 average unemployment rate decreased from 8,9% to 7,8% (using Eurostat data). Moreover, in 2002, long-term unemployed accounted for 58% of the total Wallonian unemployed against 40,2% the EU-15.

Brussels Region is characterized by a strong dichotomy. On the one hand, it is by far the richest Belgian region, and a top ranking European region in terms of GDP/capita. On the other hand it has the highest unemployment rate of the three Belgian regions. Between 1996 and 2002, the GDP/capita of Brussels has decreased from 206% to 201% of Belgium average and from 24,3% to 23,5% of the EU-25 average (in Purchasing Power Standards; Eurostat data). Despite this decrease Brussels' level of GDP/capita remains very high. However, between 1992 and 2002, the unemployment rate of Brussels sharply



increased from 9,9% to 14,5% in Wallonia, the proportion of long-term unemployed in Brussels region, 55,1% in 2002, is much higher than the EU-15 average.

The situation seems even bleaker when looking at the data of the Belgian Ministry of Labour, which better captures real unemployment. The unemployment rate (total number of unemployed / Active population 15-64 years old) in January 2005 was 18,2% in Wallonia, 20,9% in Brussels and 8,5% in Flanders, with a Belgian average of 12,7%

The allocation of the identified economic development means between drivers of regional competitiveness enables to draw a few observations:

As already visible in its Regional budget, the weight of infrastructure spending is particularly heavy in Brussels region (around 17%). When restricted to its economic development means, infrastructures spending for roads network and public transports reach 8% of the total. Needless to say, that the remaining few financial means cannot allow any significant public support for innovation or human capital. In Wallonia, obvious efforts are made towards innovation (9% of total means) however, the traditional instruments of investment grants and other financial interventions still account for an important 12%

See Appendix for an example of detailed tables of financial means allocated to competitiveness drivers for the Walloon Region.

### 6.3.3 Note on regional policies in the New Member States

Some elements of information relative to regional policies in the New Member States (NMS) can be inferred from our survey<sup>46</sup> and from Euroreg's study over NMS' investment schemes.

For historical reasons, New Member States do not yet present a structured regional level of governance. This level is gradually being built in most NMS belonging to the Eastern-Europe area (Baltic countries, Poland, Hungary, Slovenia, Czech Republic, and Slovakia). The territorial smallness of Malta and Cyprus do not call for regional levels of governance.

NMS countries all try to attract investment in order to foster economic growth. They designed investment schemes that reflect regional development concerns. All of them have to respect the EU State Aid Regulations. Generally, investment aid schemes of National Authorities offer rates varying according to the region's unemployment rate.

Poland and Latvia have Special Economic Zones (SEZ). Lithuania has Free Economic Zones. In Poland, the first SEZ was established in 1995. In 2001, it counted 14 SEZ. In 2001, the 14 SEZ covered 6,000 hectares, for a total of 68 companies and 47,075 jobs. Around half

<sup>46</sup> Information provided by ESPON Contact Points.

of invested capital is coming from the EU. Interestingly, although the central aim of the SEZ is to attract  $\text{€}$  they only accounted for an estimated 35% of  $\text{€}$  flows in Poland between 1996 and 1998. Companies investing in SEZ benefit from a corporate tax exemption. Moreover, the maximum intensity of aid is 50% of the investment cost in most of Poland territory, except in Krakow (40%), Warsaw and Poznan (0%).

Today, SEZ are situated in ten of the sixteen Provinces (new Voivodships). The concentration of SEZ does not however appear to be really linked to the regional level of GDP per head. The Dolnoslaskie region alone counts 3 SEZ and is one of the richest Polish regions (in 2002: 112% of the national average GDP (in PPP) per head. Eurostat data). At the opposite three of the relatively poorest regions count 6 SEZ (Podkarpackie, Warmińsko-Mazurskie, Swietokrzyskie) however, most SEZ appear to be settled in regions presenting unemployment rates higher than the national average (average between 2003 and 2004 of 19,8% with Swietokrzyskie (19,9%), Pomorskie (20,4%), Warmińsko-Mazurskie (23,1%) and Dolnoslaskie (25,5%).

In Latvia's four SEZ the basic incentive package include 0 to 100% rebate on real estate tax and 0% rebate on corporate income tax. Moreover, there is no  $\text{VAT}$  on trade within the zone and no custom taxes on imports and exports.

In Czech Republic, tax incentives and financial aid offer different conditions in regions presenting high unemployment rate. For instance, the minimum level of investment to be eligible for a tax relief is lower in these regions. Grants for job creation and trainings range from zero in areas with unemployment rate below the national average to EUR 8000 per employee in areas with unemployment over 14% of the national average.

Finally, in Slovenia, the Osrednjeslovenska region, which is the richest of the country has a lower rate of investment incentive (5% against 40% in the rest of the country). These grants are available for investments in industry, some strategic services and R&D. Moreover, municipalities may also offer different forms of incentives negotiated on a case-by-case basis (i.e. local taxes exemption, access to industrial sites, etc.)

Latvia and Slovenia provide interesting examples about the current building of regional governance level.

Latvia has five NUTS 3 planning regions. Every region has a Council with elected councillors and an Agency for Regional Development. Councils currently do not have any proper budget but can decide on the following issues: development strategy; spatial planning; concepts of sector development; budget of the Agency for Regional Development. The Agency for Regional Development has to implement the Council's decisions. The Agencies are also allowed to participate in different INTERREG projects and other EC initiatives.

The national and municipal levels (NUTS 5) are the only two acting administrative authorities in Slovenia. Several attempts to introduce a regional level of authority, as indicated in the Constitution, have so far failed. However, some regional initiatives and cooperation do exist (NUTS 3) Regional Development Councils bring together representatives of the municipalities, employers, workers unions, NGOs, etc. These Councils decide on regional development programs and priority projects. They prepare regional spatial planning (in cooperation with national authorities) Although regional budgets do not formally exist, financial sources for regional activities are allocated by national budgets, municipal budgets and EU funds.

## 6.4 Case Studies: typology and selection

In the absence of coherent and exhaustive data across European regions allowing to study regional development policies, several case studies were conducted to at least get a superficial glimpse at the situation at this scale. This section describes the choice and use of the typologies on the basis of which cases have been selected and the selection criteria. Section 6.5 presents the results of the nine case studies (full case studies are joined as the annexes in Part III of this report) and sets of policy recommendations adapted to regional typologies.

### 6.4.1 Regional typology

In its response on the First Interim Report, ESPON Coordination Unit recommends to make use, as far as possible, of indicators and typologies provided by other ESPON projects. After checking through these existing typologies, it was decided to use the typology developed by the current project, which is more adequate with our field of investigation. Furthermore, this choice increases the overall coherence of the current project. However, as data collection took quite a long time, it was necessary to use an already existing typology (Vndermotten, 2000) based on 1990 data.

The methodology and details of this typology are explained in chapter 4 of the first interim report. In brief, Vndermotten (2000) proposes an economic typology of European Regions, which highlights a centre-periphery structure. The EU 15 Member States, Norway, Island and Switzerland are divided into 48 territorial units (NUTS 3 and 2). The typology is built upon the structure of these units' Added Value (19 sectors of economic activity, data of 1990) and takes into account the GDP per capita and per km<sup>2</sup>. The typology, which in total identifies 3 kinds of regions, provides the following types and subtypes:

1. The Centre, composed of:
  - a. Metropolitan regions
  - b. Non metropolitan central regions
    - i. Divided into three categories (degree of industrial specialization)
  - c. Sub central regions
2. Intermediate regions
  - a. Divided into three categories (industrial base intensity)
- 3 The periphery
  - a. Divided into two categories (rich and poor)

As the ten new member states were not included in this typology due to lack of data, an existing ESPON typology has been used to operate the selection of those regions. The 'potential oriented typology' of new Member states developed in ESPON 222 Pre-Accession Impact Analysis' appeared as the most relevant for our study.

ESPON 222 typology includes five kinds of potentials: labour market potential, innovation potential, regional market potential and geographic position, urbanisation and localisation advantages, institutional potential. These potentials are evaluated on the basis of several indicators. Cluster analyses resulted in a differentiation between ten groups of regions that can be aggregated into three categories.

Types	Categories	
10	high potential endowment	Capital city regions and growth poles;
9		
8		
7	medium potential endowment	Western border, centrally located rural and old industrialised
6		
5		
4		
3	low potential endowment	Eastern peripheral and rural regions.
2		
1		

**Table 36 Potential Oriented Typology – New Member States (ESPON 2.2.2)**

#### 6.4.2 Selection of regions

The following four types of region constitute the categories for the selection of regions inside the EU15 space: Metropolitan regions, Non metropolitan central regions, Intermediate regions, the Periphery. Two regions are selected in each category: the most and the less successful one. 'Successful' should be understood as 'competitive', such as discussed

previously. However, only one region is selected in the Central regions category. Two more regions are also selected in the Potential Endowment' typology for New Member States. In total 9 regions were analysed through case studies.

Here, competitiveness is defined as a combination of positive evolution of two indicators:

- Increase of the Gross Domestic Product per inhabitant (in Purchasing Power Parity) during the last 8 years (data:1995-2002)
- Decrease of the unemployment rate during the last 10 years (data:1995-2004)

The most successful region must outperform all regions of the same type, and the less successful one must show the exact opposite trend. In each category of type, regions are given a ranking in terms of GDP/head growth rate and in terms of job creation (decrease in the level of unemployment rate.) Then, each region obtains a final ranking that is equal to the arithmetic mean of the two previous rankings.

However, the unemployment data (Eurostat) lead to surprising ranking. As the reliability of these data was not considered as completely satisfactory (instability of data over time; instability of data comparability between countries) **the GDP/head ranking alone was finally used for the selection of regions.** The unemployment ranking was only kept as an indicator.

Moreover, given that some member of the research team are likely to have an in-depth knowledge over certain specific regions, the second, third or following most successful region might have been selected for the case study analysis instead of the first most successful region.

Types of regions	Number of records (total=192)	List of regions (NUTS 2, 3)	VAR GDP (growth rate of GDP/head PPP between 95-2002)	VAR UNER (decrease of unemployment rate between 95-2004)	final ranking
Metropolitan regions	25	1. Most successful 2. Less successful			
Non metropolitan central regions	3	3 Successful			
Sub-central regions	6	No			
Intermediate regions	49	4. Most successful 5. Less successful			
The periphery	49	6. Most successful 7. Less successful			

**Table 37 Selection of regions within a typology**

This approach enables a meaningful comparison. Schematically, best practices could be inferred from best performing regions and failure factors from the poor performing ones.

The selected regions are:

Type of regions	Most successful	Less successful
Metropolitan regions:	Greater London (UK)	Berlin (Germany)
Intermediate regions:	Ringkøbing Amt (Denmark)	Ville d'asta (Italy)
Periphery regions:	Border, Midlands and Western (Ireland)	Norrbottnens Län (Sweden)
New Member States:	Wlkopolskie (Poland)	Podlaskie (Poland)
Central region :	Rhône-Alpes (France)	/

**See Annex 1 in Volume 3 for more details about the selection, data availability and used definitions.**

## 6.5 Synthesis of the 9 case studies and policy recommendations

The complete case studies are presented in Appendix. The present section offers the key points for three main areas of analysis: socio-economic fundamentals and trends; the governance structures; the specificities of the regional policies. A key findings are presented in parallel for each pair of regions under a synthetic format allowing quick comparisons. Finally, recommendations based on the previous observations are formulated for each type of regions.

### 6.5.1 Metropolitan regions

#### 6.5.1.1 Socio-economic fundamentals

	London (UK) (+)	Berlin (GER) (-)
Population	<ul style="list-style-type: none"> <li>- 7.3 millions inhabitants Greater London Authority) NUTS 1</li> <li>- Density 2002) 4679 inhabitants/km<sup>2</sup></li> <li>- Highest population growth rate, with 7.7% against 3.1% for the UK (1991-2002)</li> <li>- Negative inter-regional net migration flow but positive international migration flow (accounts for 50% of foreign immigrants entering the UK)</li> </ul>	<ul style="list-style-type: none"> <li>- 3.4 millions inhabitants Berlin Land) NUTS 1 and NUTS 2</li> <li>- Density 2002) 833 inhabitants/km<sup>2</sup></li> <li>- Slight population decrease of - 1.4% against 4.1% Germany (1991-2002)</li> <li>- Although out-migration towards West-Germany was more than compensated by international in-migration and in-migration from the other Eastern Länder during the first years of reunification.</li> </ul>
Production	<ul style="list-style-type: none"> <li>- UK share: 16.5% of GW / 12% of population 2002)</li> <li>- GDP/head = 19% of UK Unchallenged first UK region 2002)</li> <li>- GDP/head average annual growth rate</li> </ul>	<ul style="list-style-type: none"> <li>- GER share: 37% of GD / 4.1% of population 2002)</li> <li>- GDP/head = 9% of GER. 10<sup>th</sup> place out of 16 Länder 2002)</li> <li>- GDP/head average annual growth rate</li> </ul>

	<ul style="list-style-type: none"> <li>- (1991-2001)=5.2% for UK</li> <li>- London's economic upturn starts in 1993 reversing a 40 year long decreasing trend in terms of share of UK jobs. Fastest growth between 1995-99; slowdown since 2000 financial markets correction</li> <li>- De-industrialisation is met by strong services growth; Total creation of 80,000 jobs (1993-2003)</li> <li>- Key specialities: capital markets; business services; air transport hub; international media</li> </ul>	<ul style="list-style-type: none"> <li>- (1991-2001)=1.9% for GER)</li> <li>- Fast convergence during the first years of reunification; but since 1996 Berlin GDP head is diminishing in relation to the west Old Bundesländer.</li> <li>- High post-reunification expectations. Berlin's development strongly linked with the difficulties of the New Länder. Berlin did not transform into a services metropolis: Net loss of 13,000 jobs (1-2004) Remains far behind West-German economic centres.</li> <li>- Key specialities: culture and media; software industry; biotechnology; medical engineering</li> </ul>
<p>Innovation</p>	<ul style="list-style-type: none"> <li>- Low R&amp;D intensity =1% of GDP (UK= 2%) Private sector accounts for less than 40% of R&amp;D expenditures. However, with a lower level of input London produces a higher level of output (Number of Patent application per habitant is twice as high as the national level) especially in high tech sectors.</li> <li>- Investment rate (2002) =18% (UK=20%)</li> </ul>	<ul style="list-style-type: none"> <li>- Berlin engaged in a positive process of knowledge accumulation. R&amp;D expenditures =4% of GDP (2001) much higher than German average (2.5%) Especially high share of high tech in patent applications. Private sector accounts for 50% of R&amp;D expenditures</li> <li>- Investment rate (2002) =27% (GER =25%)</li> </ul>
<p>Labour market &amp; Social</p>	<ul style="list-style-type: none"> <li>- Slowly decreasing unemployment rate (5)6.8% (4 times UK rate)</li> <li>- Labour market conditions began to worsen for Londoners in parallel to the 90s economic take-off</li> <li>- Strong socio-ethnic-spatial polarization:             <ul style="list-style-type: none"> <li>o Minority Ethnic Group face unemployment rates well over twice as high as the white population</li> <li>o Differential of employment rate between Inner London-East boroughs and London similar to Berlin -London disparity.</li> <li>o Higher UK proportion of graduates in workforce / Higher proportion of people with low or no qualifications</li> <li>o Job creation largely benefits large flows of well-qualified commuters (25,000)</li> </ul> </li> <li>- Social deprivation; Highest poverty rate in the UK             <ul style="list-style-type: none"> <li>o 30% of working age adults (19% for UK) 30% of pensioners, 50% of children in Inner London are living in poverty (income lower than 60% of national average disposable income of households, after housing costs)</li> <li>o 70% of Pakistani and Bangladeshi children and 55% of black children are living under the poverty line, after housing costs.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Rapidly increasing unemployment rate (5)18.8% (6.8 times GER rate)</li> <li>- Strong socio-ethnic-spatial polarization:             <ul style="list-style-type: none"> <li>o Unemployed and poor are concentrated in the western inner urban districts, where immigrants are also concentrated</li> <li>o Estimated unemployment rate 30% for foreigners is twice as high as Berlin's population average.</li> </ul> </li> <li>- Social deprivation:             <ul style="list-style-type: none"> <li>o 12.8% of people (10% in Germany) 23% of children living under poverty (income lower than 50% of local average income)</li> <li>o Approximately 9% of foreigners live below the poverty income level.</li> </ul> </li> </ul>

### 6.5.1.2 Governance

London (UK) (+)	Berlin (GER) (-)
<ul style="list-style-type: none"> <li>- Unitary State - highly centralized governance</li> <li>- Newly created Greater London Authority (July 2000)</li> <li>- Strong Mayor with a relatively weak upper-tier of government</li> <li>- Competencies: Transport (6% GLA budget) Police, Fire and Emergency (9% London Development Agency (LDA) 5% Some responsibilities in environment, culture, media and sport, public health and etc.</li> </ul>	<ul style="list-style-type: none"> <li>- Federal State - highly regionalized governance: Berlin has greater degree of autonomy than probably any other city administrations within OECD Berlin Land dates back to reunification.</li> <li>- Powerful Senate (executive branch)</li> <li>- Competencies: Research and Culture; Health, Education, Police, Justice, Transport, Social housing, Planning, Economic regeneration, Youth and Sports, Environment, Local governments, elements of the Social Security, etc.</li> <li>- Structural problem: discontinuity between Berlin Land and its surrounding hinterland inside Brandenburg Land; disincentives to cooperation</li> </ul>
<ul style="list-style-type: none"> <li>- GLA estimated annual budget = 1,770 EUR/habitant (EUR 13 billion)</li> <li>- GLA Taxes only provide 30% of budget resources</li> <li>- Estimated Central Government expenditures in London: EUR 91 billion (2003) includes 0.76 billion for Enterprises (.e. Investment grants) and Employment.</li> <li>- London is a net tax exporter (between EUR 12 and EUR 22 billion)</li> </ul>	<ul style="list-style-type: none"> <li>- Berlin Land estimated annual budget = 6,000 EUR/habitant (20 billion EUR)</li> <li>- Land Taxes provide 49% of budget resources</li> <li>- Extreme Public Deficit (to GDP = 7% in 2004; highest in Germany) Because of: reduction of federal subsidies after reunification, industrial decline, Germany's recession in the second half of the 90s, rising reunification investments in the city's eastern part; decreasing number of residents; misguided investment decision in real estate.</li> <li>- Major public spending cuts (between 94 and 2001) in Education, Research Sciences and Culture might endanger the prospects of Berlin's knowledge-intensive growth sectors.</li> <li>- Berlin's own financial corporation (Bankgesellschaft Berlin) actively took part in large-scale real estate investments. However, it back-fired with the real estate market crisis (increasing vacancy rates; falling prices)</li> </ul>

### 6.5.1.3 Regional policy

London (UK) (+)	Berlin (GER) (-)
<ul style="list-style-type: none"> <li>- Strategy: Mayor's Economic Development Strategy seeks a sustainable world city with strong long-term economic growth, social inclusion and environmental improvement. 4 major investment themes: infrastructure; people; enterprise; and promoting London.</li> </ul>	<ul style="list-style-type: none"> <li>- Strategy: the <i>Berlin Studie</i> and Senate identify 4 domains of action: Exchange relations; competitiveness and work; social cohesion; metropolitan equilibrium. Through the <i>InvestitionsBank</i> activities, public support focuses on SMEs and specific economic fields of competency (biotechnology, media, etc.)</li> </ul>
<ul style="list-style-type: none"> <li>- Breakdown of L means, as well as Objective 2 programme means, into drivers of regional competitiveness. Estimation:                         <ul style="list-style-type: none"> <li>o Hard or tangible infrastructure: 40%</li> <li>o Social Capital: 20%</li> <li>o Human Capital: 20%</li> <li>o Fiscal and financial interventions: 0%</li> <li>o Financing: 5%</li> <li>o Innovation support: 10%</li> <li>o Amenities: 5%</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Breakdown of the Economy budget of the Senate, as well as Objective 1 &amp; programme means, into drivers of regional competitiveness. Estimation:                         <ul style="list-style-type: none"> <li>o Hard or tangible infrastructure: 3%</li> <li>o Social Capital: 5%</li> <li>o Human Capital: 0%</li> <li>o Fiscal and financial interventions: 15%</li> <li>o Innovation support: 10-15%</li> <li>o Amenities: 1-5%</li> </ul> </li> </ul>



<ul style="list-style-type: none"> <li>- Answering two main constraints, Congestion and Space costs:             <ul style="list-style-type: none"> <li>o Effective world's largest congestion charging scheme introduced in 2003</li> <li>o Average road traffic speed increased by 8%Parallel increase and improvement of bus services.</li> <li>o Mayor's London Plan:2,300 new homes each year; 50%target of affordable homes. Major housing projects. Example in Lower Lea Valley 8,000 homes underway)</li> </ul> </li> <li>- <b>Low</b> SF spending (bottom 9%beneficiaries; 1994-99) Change in GDP per capita <b>above</b> national average (6-2000)(ESPON 2.2.1)</li> <li>- Share of National Structural Funds:1.7%0.28 billion for 2000-2006)</li> <li>- Ratio SF/Total GLA budget:0.75%</li> <li>- Positive impact of Investment grants scheme in the UKRSAsprojects in the period 1991-95 were associated with 8,000 net created/safeguarded jobs. Approximate Cost of EUR 19,500 per job. London only accounted for a very small 1% proportion of all RSAsupported projects.</li> </ul>	<ul style="list-style-type: none"> <li>- <b>High</b> SF spending (top 9%beneficiaries) Change in GDP per capita <b>below</b> national average (ESPON 2.2.1)</li> <li>- Share of National Structural Funds:4.4%1.3 billion for 2000-2006)</li> <li>- Ratio SF/Total Land budget:1.1%</li> <li>- Empirical evidence that regional investment incentives in West-Germany (1978) has had success with both the investment and the employment objectives. System was carried over to the new Länder af ter reunification.</li> </ul>
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#### 6.5.1.4 Conclusions

**London** is by definition an international service metropolis. London offers a strong contrast between, on the one hand, its overall solid economic performance and, on the other hand, the highest concentration of unemployment rates and child poverty in the UK. Within a context of expansion, regional policy aims at 'accommodating growth', as stated in the Economic Development Strategy (ED) of the Mayor of London.

Following the reunification, **Berlin** went through an intense economic restructuring that is still far from being completed. The analysis of most of economic indicators leaves a pessimist impression about Berlin's development during the last decade, especially in comparison to the high post-reunification expectations. Nevertheless some indicators, as high research and development intensity, also tend to indicate that Berlin needs some more time to bank on some of its first-class advantages.

In the context of Berlin's stagnant economy, characterized by high unemployment and -as in London - strong socio-ethnic-spatial polarization, regional policy's aim is also to 'stimulate growth'. In this respect, Berlin has less breathing space than London. Moreover, the Land institutions also have to concentrate on two major priorities:the most urgent one is the budget clean up and the politically most uncertain one is the merging with the surrounding Brandenburg Land in order to get an optimal spatial planning unit.

The London Development Agency, taken together with the funding of the EU Structural Funds (Objective 2) present a breakdown into the drivers of regional competitiveness that is close to the so-called modern regional policy. For Berlin, this is much less evident when analysing the Senate budget for Economy and the funding of the EU Structural Funds (Objectives 1 & 2).

The weight of economic infrastructure investments in London (40%) and Berlin (5%) is relatively similar. London invests more in 'Social Capital' (20% against 5% in Berlin) notably in promoting business creation and tackling discriminations against disadvantaged communities (women, handicapped and Minority Ethnic). Berlin's direct investment in training programmes (0% in Human Capital) is higher than in London (20%). The most obvious difference can be identified in the field of direct financial intervention which is much higher in Berlin (15%). The latter include investment grants, often conditioned on job creation or self-employment. London has already made a choice for supporting financing tools (5%) rather than direct subsidies. Finally, especially in comparison to Berlin, public investments in innovation do not appear particularly high in London, confirming the picture of a region with lower level of R&D input than the UK average.

#### 6.5.1.5 Recommendations

1. **Integrating Distressed Urban Areas** within the metropolitan regions is a strategic objective consistent with the best use of existing infrastructures and human assets, and social cohesion. It is also a recommendation of the OECD (1998).

In the light of often deep-seated problems of social cohesion in metropolitan areas (social polarization and exclusion, increasing multiculturalism, high and rising crime rates, worsening of the quality of life) it is important to strengthen security, to promote economic, social and cultural integration of the least favored, combat discrimination, and improve the availability of, and access to, key services. There is a need in distressed urban areas of a medium- to long-term development plan for urban regeneration. It is generally a precondition for success as it ensures the coherence of renewing investments and of their environmental quality. The commitment and **participation of private actors in urban renewal through private-public partnerships could help improving the efficiency of urban renewal strategies.**

2. Metropolitan areas face increasing **traffic congestion**, with its consequences on economic productivity (time lost in traffic jam) environment (CO<sub>2</sub> pollution) or even health (stress). These consequences are at the source of agglomeration diseconomies. London's bold but successful move introducing a **congestion charge** is an exemplary measure. Other metropolitan areas should reflect on this experience. Introducing a charge

proportional to the engine's cubic capacity would add more social equity. Finally, such a measure with obvious economic and environmental rationales is a potential wealthy source of funding for metropolitan areas –often running short of financial resources. Efficient investment in public transports is a necessary condition for this kind of measure to succeed. It will also be useful to think about the **development of polycentric urban areas** in reassigning housing, jobs and urban functions to reduce congestion. Other possible solutions are the increase of public transit ridership or ridesharing, to promote flexible work places.

3 Both Berlin and London show alarming indicators over the **high concentration of immigrants living under poverty**, which is often the direct consequence of high unemployment. While in Berlin estimations are based on the criteria of foreign nationality, London provides estimation based on the criteria of belonging to an ethnic minority group. London's context and approach towards the problem seem more appropriate. In EU countries, a context of high unemployment rate unfortunately favors the mechanism of ethnic preference excluding ethnic minorities from the job market (in addition to other forms of discrimination) **The approach explicitly recognizing the problem and fixing measurable targets looks more rational.** At least, the visibility of members of Minority Ethnic groups participating in the management of, for instance, public development institutions offers highest credibility.

Obviously, there is a **need for more efficient integration policies** considering the increasingly multi-cultural, multi-ethnic, character of metropolitan areas.

4. Berlin's uncomfortable financial situation, with cost cutting measures, reminds of the Public Authorities the obligation to **maintain sound financial management.** Moreover, it is a fact that public services are more and more asked to provide **evaluation of the results and impacts of their measures.** Throughout the elaboration of this case study, it became clear that this last aspect is far from being evident for regional economic development policy (i.e. transparency of budgets, evaluation studies, etc.)

Nevertheless, it is worth recognizing that a greater importance is more and more granted to policy evaluation. This reflects greater pressure for accountability in public spending as well as the need for governments to improve policy design and management. The best example is the implementation of the European structural policy which has generalized the evaluation practice.

5. **Metropolitan areas should concentrate on the most urgent issues and select the best instruments; subject to systematic independent evaluation.** Efficient public transports for workers, affordable housing for residents, efficient innovation systems are inescapable challenges for the future. Direct investment subsidies are clearly not the best way to use public funding to reach those objectives; unless evidence would prove the contrary.

Most studies about the impact of direct investment subsidies on regional development lead to much mitigated results and put into evidence that other factors are of first importance to sustain regional competitiveness. More indirect measures to **promote entrepreneurship, industrial partnership and collaborations** (clustering and networking) appear more powerful to improve regional competitiveness. Therefore, **beside efficient infrastructure and social amenities, the development of bridging institutions and actions stimulating social capital are essential components for the long term competitiveness of metropolitan areas.**

## 6.5.2 Intermediate regions

### 6.5.2.1 Socio-economic fundamentals

Ringkøbing Amt (DEN) (+)	Valle d'Aosta (IT) (-)
<ul style="list-style-type: none"> <li>- NUTS 3</li> <li>- 0,27 million inhabitants (+1.7% over last decade, slightly slower than Denmark's average)</li> <li>- Density: 56 inhabitants /km<sup>2</sup></li> </ul> <hr/> <ul style="list-style-type: none"> <li>- Stable share of Denmark's GDP =5%</li> <li>- Low unemployment rate very close to national average 5.27%</li> <li>- Successful transformation of manufacturing base into industrial clusters (e. textile; electronics; wood and furniture; construction) Examples:                         <ul style="list-style-type: none"> <li>o Textile moved up the value chain; from labour-intensive production towards designing.</li> <li>o Metallic production sector shifted from agro-machinery to windmills.</li> </ul> </li> <li>- Low relative rate of firm creation in relation to population number</li> <li>- Lowest educational level in Denmark (share of population with academic degrees; average years of school attendance of employed)</li> </ul>	<ul style="list-style-type: none"> <li>- NUTS 3 and NUTS 2</li> <li>- 0,12 million inhabitants (+4.6% over last decade, slightly faster than Italy's average)</li> <li>- Density: 5.8 inhabitants /km<sup>2</sup></li> </ul> <hr/> <ul style="list-style-type: none"> <li>- Decreasing share of Italy's GDP =0.27% with GDP/head from 14% of Italy (95) to 12% (2004)</li> <li>- Low unemployment rate of 9% while Italy's rate reaches 8%</li> <li>- Shares of total employment (2004) decreasing agriculture (4.4%) stable industry (12%) growing public administration, financial services and construction (50%)</li> <li>- Even in nominal terms, productivity has decreased by 1% during the last decade.</li> <li>- SMEs (2-49 employees) account for a higher share of employment (61% when in Italy as a whole 52% (2001)) But share decreased from 70% in 96.</li> <li>- Very low R&amp;D intensity =0.3% of GDP (2003) negligible amount of patent applications to EPO</li> <li>- The geographical advantage of European crossroad is weakening after EU enlargement</li> <li>- Traditional strength in tourism (winter sports) is also threatened by other rising price competitive locations</li> <li>- Except for roads, transport infrastructures level is low</li> </ul>

### 6.5.2.2 Governance

Ringkøbing Amt (DEN) (+)	Valle d'Aosta (IT) (-)
<ul style="list-style-type: none"> <li>- Has been the seat of a regional government ever since the formation of Danish Counties in 1793</li> <li>- Denmark is a decentralized Unitary State with regionalization through the existing Local Authorities.</li> <li>- Counties and Municipalities have taxation power and receive grants from Central government.</li> <li>- Today: 13 Denmark GNP distributed by Counties and Municipalities: 'World's most decentralized welfare state'</li> <li>- Today: 13 Counties (Amt) &amp; 71 Municipalities</li> <li>- January 2007: Reform will establish 5 Regions (elected Councils; not allowed to levy taxes) and 98 Municipalities; and transfer more power from the Regional level to the Municipal level and back to the Central State.</li> <li>- 1992 clarification of economic development competencies of Counties and Municipalities: Collective Business Services (framework measures for all firms in an area) No individual subsidies to firms.</li> <li>- For the whole 90s decade, Central government played a coordination role of regional policies implemented by sub-national actors (bottom-up) however, current tendency is for more Central interventionism.</li> </ul>	<ul style="list-style-type: none"> <li>- Italy is a Regionalized Unitary State with Regional Autonomy</li> <li>- Autonomous region with legislative and administration autonomy for:                         <ul style="list-style-type: none"> <li>o Employment; local policies; agriculture; environment; transports; tourism; water; etc.</li> </ul> </li> <li>- Composed of 74 Municipalities and 8 Mountain Communities (Regional Law 1993)</li> </ul>

<ul style="list-style-type: none"> <li>- The model of framework measures'and coordination role of the Central government enjoy two favourable factors:a consensual political culture; a relatively homogenous regional economic structure.</li> </ul>	
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### 6.5.2.3 Regional policy

Ringkøbing Amt (DEN) (+)	Valle d'Aosta (IT) (-)
<ul style="list-style-type: none"> <li>- Strategy (County Council)                             <ul style="list-style-type: none"> <li>o Challenge of an increased demand for human resources and qualification; risk for excluding people from the labour market;ageing population is leaving the labour market</li> <li>o Promoting a sustainable business development which contributes to create growth in the firms and thereby better competitiveness, increased earnings and good employment possibilities'</li> </ul> </li> <li>- Very limited role of financial subsidies for attracting ID in Denmark</li> <li>- Regional dimension of Advisory services for economic development (Ministry of Economic and Business Affairs)                             <ul style="list-style-type: none"> <li>o Network of Technology Information Centres (TIC)</li> <li>o Contact Points for Entrepreneurs (CPE)                                     <ul style="list-style-type: none"> <li>▪ TIC and CPE integrated in one system since 2004)</li> </ul> </li> </ul> </li> <li>- Regional Investment Promotion Agency (RIPA)low resources invested except in Copenhagen.</li> <li>- The '<b>Regional Growth Strategy</b>' of the Central Government also aims at balanced regional development, through lower taxes on labour income;efficient capital and labour markets;fewer administrative burdens, favourable conditions for education and research.</li> <li>- Additional special effort is also done for 15 small and medium marginalized areas (special regional growth partnerships)</li> <li>- <b>Regional Business Development Initiatives (RBDI):</b> development projects involving the cooperation of all governance level to improve framework'conditions (focus on Human Capital and Social Capital)                             <ul style="list-style-type: none"> <li>o Ringkøbing defined 8 broad Business Development Objectives</li> </ul> </li> <li>- <b>Some Ringkøbing economic policy instruments:</b> <ul style="list-style-type: none"> <li>o EURA=Regional Development Company of mixed-capital (implements the RBD through fundraising for projects and strategic studies)</li> <li>o BTURA=programme for advising and supporting new firms</li> <li>o HD=Development Assistance assistance and advices in innovation</li> </ul> </li> <li>- Ringkøbing is part of the 'Sydsjællandske' Business Development Initiative (cooperation of 8 West-counties in IT, research, education, etc.)</li> <li>- Institutions providing vocational training (e. TEØ) in collaboration with firms partly explain the successful transformation of the textile and clothing industry (learning cluster)</li> <li>- Successful re-education programme for unemployed in sectors such as wood and furniture, construction.</li> </ul>	<ul style="list-style-type: none"> <li>- Strategy (2004-06)increasing the employment rate, favouring entrepreneurship, investing in human capital. The Operational Regional Plan (ORP) three priorities are: Equal opportunity; Local Development; Information Society</li> <li>- Strategic vision as a 'node of nets and excellence centre' with development priorities in Tourism; Infrastructures; Agricultural diversification; entrepreneurship and competitiveness; Culture and Environment</li> </ul>

<p>- Objective 1, Objective 2 (ESGF program) <b>Medium</b> SF spending (medium beneficiaries) Change in GDP per capita <b>above</b> national average (ESPN 2.2.1)</p>	<p>- <b>Medium</b> SF spending (medium beneficiaries) Change in GDP per capita <b>below</b> national average (ESPN 2.2.1)</p>
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**6.5.2.4 Conclusions**

In the very homogenous socio-economic landscape of Denmark, **Ringkøbing Amt** (stable share of Denmark's GDP and population: 5% similar low unemployment rate: 5.2% suffers the lowest educational level in Denmark (share of population with academic degrees; average years of school attendance of employed) It is facing increasing demand for qualified workforce while at the same time witnessing ageing population. Knowledge-intensive and technologically advanced firms are weakly represented in Ringkøbing's economy.

In the field of economic development, Counties and Municipalities provide framework measures under the form of 'Collective Business Services' and are not allowed to disburse any individual firm subsidy. Counties's main regional policy instruments are the Regional Business Development Initiatives' which include the cooperation of all levels of governance. Ringkøbing's successful transformation of its manufacturing base into industrial clusters moving up the value-chain was accompanied by public policy actions. For instance, vocational trainings were provided for the textile and clothing sector.

**6.5.2.5 Recommendations**

In the case of European intermediate regions, sharing the main characteristics of Ringkøbing (i.e. share of the workforce that has an academic degree and the average number of years that the employed persons have gone to school are below the national average; mature industries, rather than knowledge-intensive and technologically advanced firms, are dominating) it is probably recommendable to focus on policy measures that would:

- Increase **dialogue between educational establishments** in order to **ensure supply of skills** demanded by the industries; and improving the regional innovation system.
- Increase the **supply of highly-qualified persons** either through an **upgrading of regional educational establishments** in the county, e.g. engineers and computer specialists, **or** through facilitation of **recruitment of staff from outside the county**, for example through investments in attractive amenities.
- Facilitate **professional networks**, for example by focussing on export, marketing, design and management development
- Establish a **supporting infrastructure**, for example counselling and advising institutions mainly directed towards **smaller, innovative and/or entrepreneurial firms**
- Promote business development including innovation, growth and the establishment of new firms

- Improve the competitiveness of the region through e.g. research, competence clusters and internationalisation investments
- Promote infrastructure within ICT and transport
- Stimulate **co-operation and co-ordination** between municipalities, organisations, firms, etc., to achieve an optimal effect of used resources

### 6.5.3 Periphery regions

#### 6.5.3.1 Socio-economic fundamentals

Ireland, originally Border, Midlands and Western (IRL) (+)	Norrbottens Län (SWE) (-)
<p>Note :according to our selection criteria (cf. above) we had initially chosen Border, Midlands and Western. After investigating, it appears that this NUTS 2 level has no real administrative counterpart as such in Ireland. Few data are therefore available at this scale. We have consequently decided to settle for Ireland's case. Our choice may be debatable, notably because regional entities with a limited decision-making power cannot be treated on an equal footing nor compared with a sovereign national entity. Meanwhile, on one hand, regional decision-making realities are quite diverse and, on the other hand, Ireland, in view of its size, is often held up as an example (generally to be followed) in the literature on regional economic development. We have thus considered it a good idea to deal with that case with all necessary reservations in order to draw lessons on possible or impossible comparisons.</p> <ul style="list-style-type: none"> <li>- GDP/head jumped from 68% of EU average in 1990 to 124% in 2003 (second EU country after Luxemburg) By far the highest growth (6.9% in EU).</li> <li>- Due to exceptionally high remuneration of foreign capital (net flow of 16% GDP) income per habitant level is much lower (only higher than 4 countries in EU 15)</li> <li>- Unemployment rate fell from 17.5% in 1988 to 4% in 2003 for the first time since 200 years, Ireland has net in-migration flows supplying the labour market, mainly from the EU.</li> <li>- Trade surplus = 15% GDP</li> <li>- Highest GDP per capita level in the EU</li> <li>- Large Multinationals (76% of GDP; 23% of exports) are the backbone of an export-driven economy.</li> <li>- <b>Explanation factors of the Economic Miracle:</b></li> <li>- 1988 Program for National Recovery (PNR) currency devaluation; sharp cuts in public spending; sharp decrease in relative labour costs; lowest corporate tax rate (10% on manufacturing and export services up to 2003; 12,5% on all business profits since then) efficient use of Structural funds aid (education, infrastructure)</li> <li>- Early targeting of key industrial sectors for tax discounts: ICT, financial services, pharmaceutical, etc.</li> <li>- Along time lagging behind in the education field,</li> </ul>	<ul style="list-style-type: none"> <li>- 0.25 million inhabitants ( - 5% last 10 years) Its share of Sweden's population fell by 7% between 95-03 NUTS 3</li> <li>- Density: 2.6 inhabitants /km<sup>2</sup></li> <li>- With a 2.6% share of Swedish GDP, Norrbottens' share decreased by 12% between 95-03</li> <li>- Following a similar trend to the national level, unemployment rate was halved during the last decade, reaching 5.9% (2% for Sweden)</li> <li>- 79% of firms have between 1 and 4 employees. Only minor differences in firms' size distribution with the rest of Sweden.</li> <li>- Since the outset of the late 19<sup>th</sup> century, industrialization has relied on abundant natural resources: ore, forest, waterfalls. The bulk of investments relied on State support and on venture capital outside of the region.</li> <li>- Even today, the booming raw material markets driven by China and India's demand has strongly favoured mining, iron and steel industry.</li> <li>- Dramatic change in the economic structure between 1960 and 2000; services increased from 3% to 65% of employment; increased female participation. Today's sectoral structure is close to national one. Strong ICT component.</li> </ul>



<p>Ireland has doubled its efforts to catch up with its backwardness from the Sixties; even now Irish spending on education is still low by west European standards; half of youth choose to go to University (highest proportion of OECD)</p> <ul style="list-style-type: none"> <li>- Attracted R&amp;D activities of major corporations in ICT and pharma, mainly process-oriented and more and more development-oriented (see p. 127)</li> <li>- Strong National Consensus (private, government, trade unions) around the PNR</li> </ul> <p>In spite of a substantial increase in the general standard of living, social and regional inequalities have relatively risen; strong inequality between the BMW region (poorer) and the S-E region; high poverty rates; underperforming public services (e. health, transports); highly indebted households.</p>	
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### 6.5.3.2 Governance

Ireland, originally Border, Midlands and Western (IRL) (+)	Norrbottens Län (SWE) (-)
<ul style="list-style-type: none"> <li>- Ireland is a Centralized Unitary State deprived of a strong regional reality. Local authorities have limited powers and functions.</li> <li>- The NUTS 2 Border, Midlands and Western Region' does not have a Regional Government with tax-raising or legislative powers. A public expenditure is centrally administered in Ireland with the exception of some discretionary expenditure by Local Authorities. The NUTS 2 region is a spatial unit serving for allocating the EU Structural Funds via Operational Programmes.</li> </ul>	<ul style="list-style-type: none"> <li>- Sweden is a Decentralized Unitary State with a Regional Decentralization.</li> <li>- 20 County Councils (composed of 290 local authorities) major responsibility is health care; plus regional development. Taxation power.</li> <li>- 21 County Administrative Boards (Lä) represent the State at the regional level; no taxation power. The Lä formulates tasks and priorities for regional policy</li> <li>- Main regional policy instrument and coordination tool between the three regional bodies (local authorities; County Council and Administration Board) are the <b>Regional Growth Programmes</b> (since 1998) . financed by the joint pooled funds of the partnership (public-private-civil society)</li> </ul>

### 6.5.3.3 Regional policy

Ireland, originally Border, Midlands and Western (IRL) (+)	Norrbottens Län (SWE) (-)
<ul style="list-style-type: none"> <li>- Due to its small size, Ireland is often considered as an adequate observation referential for regional policy; although much of the factors explaining its success are typically related to national policies (e. labour cost, taxation) and substantial interregional inequalities in income levels indicate a continuous need for a regional policy.</li> <li>- <b>Among the factors explaining the economic success, some are related to potential</b></li> </ul>	<ul style="list-style-type: none"> <li>- Strategy: Government 2001 'well-functioning and sustainable local labour market regions with an acceptable level of services in all parts of the country'. Insistence on policy coordination between all levels of governance.</li> <li>- 5 Policy Measures:             <ul style="list-style-type: none"> <li>o Stronger Regional and Local Authorities</li> <li>o Knowledge and Skills</li> <li>o Enterprises and Entrepreneurship</li> <li>o Local development, attractive</li> </ul> </li> </ul>

<sup>47</sup> ESPON 2.2.1 gives a more contrasting picture: all BMW sub-regions achieved lower GDP head growth than the national average. For the 5 Southern and Eastern sub-regions the impact on GDP head has been higher.

<p><b>regional policies in other EU countries:</b></p> <ul style="list-style-type: none"> <li>o High estimated impact of Structural Funds disbursements between 1995 and 1999: +3-4% of GDP during the whole period<sup>47</sup></li> <li>o Strong (National) Consensus of all partners (private, government, trade unions) around the PNR</li> <li>o Strong investment in Education</li> </ul> <p>- In a context of gradual decrease of corporate tax rates across the EU, competition between States might both suppress differential advantages and cut global EU public resources (for education, health, etc.)</p> <p>- Cost competitiveness is progressively complemented by diversification of the production base and increasing salaries (198 - 2001, Labour cost per hour in firms: Ireland =&gt; 114% EU =&gt; 100%</p>	<p>environments</p> <ul style="list-style-type: none"> <li>o Acceptable level of services everywhere</li> </ul> <p>- <b>Breakdown</b> of Regional Growth Programmes (2005) (County Council, Admin. Board; EU SF<sup>48</sup>; National Investment Grants) and a large part of other regional development means (National Administrations for Rail, Roads; Private funding, Municipalities) into <b>drivers of competitiveness:</b></p> <ul style="list-style-type: none"> <li>o Hard or tangible infrastructure: 26.9%</li> <li>o Social Capital: 9.2%</li> <li>o Human Capital: 1%</li> <li>o Fiscal and financial interventions: 1.9%</li> <li>o Financing: 0%</li> <li>o Innovation support: 10.6%</li> <li>o Amenities: 9.7%</li> </ul>
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### 6.5.3.4 Conclusions

The breakdown of **Norrbottnens** Regional Growth Programmes (2005) (County Council, County Administrative Board; EU SF (National Investment Grants) and a large part of other regional development means (National Administrations for Rail, Roads; Private funding, Municipalities) into the drivers of competitiveness, confirms a widely-shared perception that Sweden has gradually shifted towards a modern regional development policy. This includes cross-sector coordination, multi-annual programmes, bottom-up perspective, partnership based consensus.

This includes cross-sector coordination, multi-annual programmes, bottom-up initiatives and partnership based consensus. Social and Human Capital account for more than 50% of all means. The private sector funds up until 50% of all Social Capital means. Innovation (10.6%) is also well supported (e.g. Swedish Motor Test Region for major car constructors). Direct financial subsidies or financing are hardly used (1.9%). Finally, Amenities account for a high 9.7% which is relatively coherent with inherent problems of peripheral regions.

**Ireland's** development since the late 80s, and its Program for National Recovery in 1987, is often described as an 'economic miracle'. Its GDP/head jumped from 68% of the EU average in 1990 to 124% in 2003 (second EU country after Luxemburg) however, an exceptionally high remuneration of foreign capital (net flow of 16% GDP) explains that income per habitant level is much lower (only higher than 4 countries in EU 15)

<sup>48</sup> ESPON 2.2.1: Norrbottens, like all seven most northern regions of Sweden achieved changes in GDP per capita below national average while receiving high SF spending (top 9% beneficiaries)

Due to its small size, Ireland is often considered as an adequate observation referential for regional policy; although much of the factors explaining its success are typically related to national policies (e.g. labour cost, corporate taxation)

Nevertheless, we believe the story of Ireland's economic miracle could offer a valuable source of inspiration for the New Member States. Indeed, among the factors explaining the 'economic miracle', some are related to potential regional policies in other EU countries.

### 6.5.3.5 Recommendations

- Sweden's regional policy model can be considered as good example of the so called modern regional policy for any other EU region. However, Norrbottens' socio-economic data display that some of Sweden's peripheral regions do face real socio-economic problems (between 95-03 decreasing share of Sweden's population: -7% and decreasing share of Sweden's GDP: -12%)
- In this regard, policy improvements could follow from a **further widening of the Partnership with the business community**. In particular, this might both enhance the financial resources devoted to regional development and increase the bottom-up perspective.

## 6.5.4 New Member States regions

### 6.5.4.1 Socio-economic fundamentals

Wielkopolskie (West of POLAND) (+)	Podlaskie (North-East of POLAND) (-)
<ul style="list-style-type: none"> <li>- Always been among best developed regions of Poland</li> <li>- Population: 3 million</li> <li>- Density: 112 hab/km<sup>2</sup></li> <li>- GDP/head represents 105% of Poland average</li> <li>- Agriculture (4.8% of GDP / 18% jobs) is the most modern in Poland</li> <li>- Unemployment rate (16%) is similar to Podlaskie</li> <li>- Industry (3.9% of GDP / 2% jobs) leading branches are food industry, automotive and pharmaceutical</li> <li>- Geographical strength as Trans-European Transport corridors close to the German border.</li> <li>- Increasing but lower than Poland average R&amp;D activity (public-lead) 0.46% of GDP</li> <li>- Significant inflow of 10% of Poland's GDP</li> <li>- Relatively high level of education</li> <li>- Higher SMEs concentration</li> </ul>	<ul style="list-style-type: none"> <li>- Podlaskie is among the least developed EU regions</li> <li>- Population: 1.2 million</li> <li>- Density: 60 hab/km<sup>2</sup></li> <li>- GDP/head is only 76% of Poland and follows a decreasing trend.</li> <li>- Characterized by very low agriculture productivity (6.2% of GDP / 8% jobs)</li> <li>- Which, together with out-migration, explains the region's relative low unemployment</li> <li>- Poor traditional industry (2.5% of GDP / 19% jobs) in food, tobacco and wood manufacturing.</li> <li>- Bialystok capital role explains the region's strong non-market services in health and education</li> <li>- Increasing but low R&amp;D activity (public-lead) 0.2% of GDP</li> <li>- Podlaskie only attracts 0.4% of Poland's GDP</li> <li>- The region suffers from insufficient investments, notably in infrastructures</li> <li>- Existing clusters in food &amp; beverages</li> <li>- Weak SMEs concentration</li> </ul>

### 6.5.4.2 Governance

The construction of a regional level of governance is relatively new and on-going. This section is common to the two regions.

- Poland is a unitary state with recent regional decentralization
- Reform of 1999:16 *voivodships* (regions)districts;communes
- At the Region *voivodship*'level, two tiers of government:
  - Marshall Office =Regional self-government (Elected Assembly) for economic development;social affairs;foreign affairs;environment;communication;health; etc.
  - *Voivode* Office =Central government representative:controls the Marshall Office and supervises the central services (decentralization of public expenditure)
- Main public expenditures scheme at regional level Public actors, private, EU Starts the Integrated Regional Operational Programme (IROP) Structural funds account for the largest part of funding.
- However, most part of business support programmes are Sectoral Operational Programmes from the Central government
- **Decentralisation of tasks were not followed by proportional increase in regional authorities' budgets**

### 6.5.4.3 Regional policy

Wielkopolskie (West of POLAND) (+)	Podlaskie (North-East of POLAND) (-)
<ul style="list-style-type: none"> <li>- Strategy: very broadBut detailed description of operational goals and Monitoring and Evaluation system</li> <li>- <b>Breakdown of IROP (2004-2006) means into drivers of competitiveness is the same in both regions! Without consideration of their very different socio-economic characteristics and trends.</b> <ul style="list-style-type: none"> <li>o Hard or tangible infrastructure:70,1%</li> <li>o Social Capital:7,9%</li> <li>o Human Capital:6,2%</li> <li>o Fiscal and financial interventions:2,7%</li> <li>o Innovation support:1,5%</li> <li>o Amenities:12,9%</li> </ul> </li> </ul> <p>IROP in Podlaskie or Wielkopolskie (2004-2006)accounts for 10%of Gross Fixed Capital Formation, which is the sign of a real leverage potential.</p>	<ul style="list-style-type: none"> <li>- Strategy: 'competitiveness and social cohesion', dealing with investments;skills for market demand;environment;tourism;cross-border;multifunctional agriculture;etc... Broad and loosely defined</li> <li>However, the <b>current process of preparation</b> of the <b>IROP</b> for the period 2007-2013reveals that Podlaskie Region would favour a reorientation of its means:                     <ul style="list-style-type: none"> <li>o Hard or tangible infrastructure:54,5%</li> <li>o Social Capital:15,8%</li> <li>o Human Capital:8%</li> <li>o Fiscal and financial interventions:6,4%</li> <li>o Innovation support:2,5%</li> <li>o Amenities:11,7%</li> </ul> </li> </ul>

#### 6.5.4.4 **Conclusions**

**Wielkopolskie** and **Podlaskie** present much differentiated profiles. The former has always been among the best developed regions of Poland (e.g. GDP/head =105% of Poland's average, relatively high level of education, modern agriculture) the latter belongs to the least developed regions of the EU (e.g. GDP/head =76% of Poland, very low agriculture productivity)

In Poland, the construction of a regional level of governance is relatively new and on-going. So far, the decentralisation of tasks has not been followed by a proportional increase in regional authorities' budgets (at voivodship level)

The breakdown of the main public expenditures scheme at the regional level –the Integrated Regional Operational Programme (IROP)- into drivers of competitiveness is the same in both regions, without consideration of their very different socio-economic characteristics and trends.

Heavy weight of infrastructure investments (70%) and relatively high investments in Amenities (12%) answers the most urgent and visible differences with the EU 15 States. As a consequence, drivers such as Innovation receive negligible attention (1.5%) Interestingly, Polish regions do not make an intense use of financial direct interventions (2.7%) as it was the case for the traditional regional policy in the EU 15 States.

#### 6.5.4.5 **Recommendations**

- In New Member States regions, but especially in **regions with similar profile as Wielkopolskie, modern approach** to policy intervention should be implemented. This would include:
  - o Supporting R&D potential, by relating the **incentives for the FDI** to their **innovative profile and jobs quality**, rather than simply to the number of jobs created;
  - o Building infrastructure mostly where its lack or low quality is a barrier to development, postponing the 'general development' of infrastructure (except for **strategic infrastructure**) to the future;
  - o **Supporting job creation** rather than training for the unemployed;
  - o **Supporting central urban areas in priority**. This might sometimes occur at the expense of less developed parts of the regions, which would prove not being able to efficiently use support resources.

- ~~Me~~ it occurs that, as in Poland, regional development programmes represent a substantial share of the average annual Gross Fixed Capital formation (10% in Podlaskie, Wielkopolskie) **real leverage potential** should be fully utilized. The **EU Structural Funds** being the main source of funding for these regional programmes, **strategic orientations** chosen by a country **such as Ireland** could be replicated. In particular:
  - o **Strong investment in higher-education**
    - Which enables a region to progressively shift from cost competitiveness (e. back-office' activities) towards higher added-value activities (e. R&D centres)
  - o **National Consensus** (public-private-civil society) around economic recovery programmes. This is also one of the key point of Denmark or Sweden governance culture (see 5.2. and 5.3)
  - o **Targeting of key sectors of development through FDI.**
- Finally, in **regions similar to Podlaskie**, the **modernisation of agriculture** is essential. Without doubt, several NMS regions present strong **potential in the international agribusiness sector.**

## 6.5.5 Central region : Rhône-Alpes (France)

### 6.5.5.1 Socio-economic fundamentals

- NUTS 2 region
- Increasing share of France's population (9.7% between 95 and 2004)
- Density = 13 hab/km<sup>2</sup>
- Strategic geographical location (common borders with other Swiss and Italian dynamic regions)
- One of France and Europe's economies leading region
- Share of France GDP = 9.65% (9% between 95 and 2003)
- But Rhône-Alpes GDP/head follows a constant decreasing trend in relation to the French national average, from 116% in 95 to 105% in 2002.
- Second more innovative region in France : R&D expenditure represent 2.5% of GDP; supported by private firms.
  - o EU regions ranking for technological and scientific upgrades' = 5<sup>th</sup>
  - o EU regions ranking for patents application' = 19<sup>th</sup>
  - o One of EU's leading region in ICT
- Strong and diversified industrial base (metal, plastic, textile, mechanical construction, electronics, pharma, biotech, etc.) with numerous leading multinationals. Industry =

- 25.5% of GW (France =19% Financial services, etc. =28.9% France =29.9% France)
- Second largest exporting region of France (45% between 96-2004)
- Productivity increase =18% (1995-03)
- Unemployment rate =8.8% in 2004 (decreased by 27% since 95)
- Risks: growing demographic unbalances between rural and urban areas; heterogeneous territorial distribution of public services, unemployment rate; lack of support for geographically concentrated SMEs.

#### 6.5.5.2 Governance<sup>49</sup>

- The Region is the most recently created level of local authority in France (1972)
- Since 198, Regional Councils are elected
  - o Besides, the CESR (Regional Economic and Social Council) is a consultative body issuing opinions and reports on all aspects of regional policy. It gathers designated members from firms, civil society, labour unions, etc.
- Regional Councils are associated in designing the National Plan and autonomous when implementing their own 5-year spatial planning plans.
- Regional Councils' resources come from taxes, with about 3% (housing tax, professional tax, tax on real estates, tax on driving licenses, etc.) They also receive a 'decentralization' allocation from the Central State (around 41%). The rest of resources come from other income and borrowing.
- Rhône-Alpes is composed of 8 departments. Departments are responsible for health and social services, while municipalities deal with schools, proximity services, etc.
- Constitutional Law of 2003 has increased Regions' competencies:
  - Regions received parts of infrastructure management (i.e. ports and airports) vocational training, training of social workers
- Competencies of Regions:
  - o Economic development: Regions grant direct subsidies (for start-up; employment aid) and indirect subsidies (i.e. credit guarantees to individuals, facilities or land renting at advantageous price, tax discount for fragile enterprises)
  - o Spatial planning
  - o Regions have extended competencies in the fields of Agriculture (i.e. trainings) Transports, Education (i.e. participating with the Central State via the Plan Etat-régions' to the development of higher education and research; maintenance of secondary education facilities) Environment and Culture, Public Health

#### 6.5.5.3 Regional policy

Strategy: Rhône-Alpes region has a strong international focus. In this field it has three complementary objectives: promoting the international openness of Rhône-Alpes citizens

<sup>49</sup> This part is based on information collected by the ESPON contact point in France (Nicolas Gaubert, UMS- RIAE)

and firms; increasing the territory's attraction; participating to international development (e.g. Rio and Johannesburg protocols) Rhône-Alpes has particular tight relations with other economic engines of the EU. For instance, in 2006, Rhône-Alpes presides the Eur Motors' association (Baden-Baden, Stuttgart, Catalonia, Lombardia)

In its 2005 budget, the Regional Council defines key lines: employment and education (Lisbon agenda) developing transports (focus on railway) reducing internal, urban-rural, disparities; Citizens personal development (education, sports and culture) strengthening international position (tourism, Lyon-Turin railway link)

The 2005 Regional Council budget expenditures were distributed as follows (in EUR Million)

Transports	53	3%
Secondary and Higher Education	428	25%
Vocational training	270	16%
Economy, Employment and Research	128	8%
Spatial planning and environment	112	7%
Administration costs	96	6%
Debt refunding	8	5%
Culture and Sport	47	3%
Health and Social Action	7	0,4%
<b>Total</b>	<b>1,704</b>	

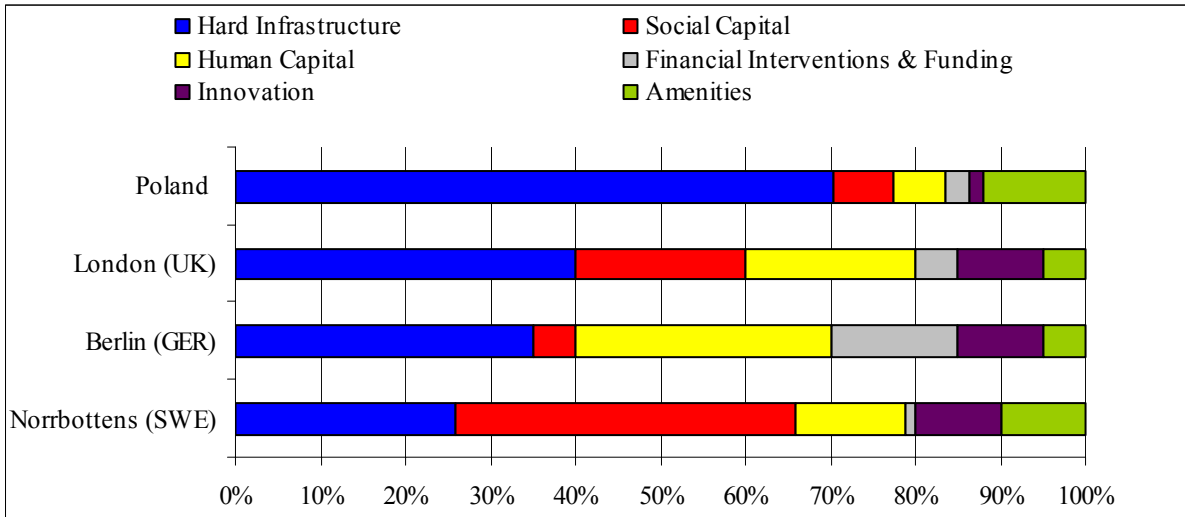
Rhône-Alpes biggest strength lies in its Regional Innovation System. Educational institutions form the base of the system: 14% of French engineers graduate from Rhône-Alpes. Innovation is technical, but also organisational, social, managerial. Private firms are strongly involved into public programmes.

Rhône-Alpes benefited from **low** SF spending (bottom 3% beneficiaries) and achieved a change in GDP per capita **below** national average (ESPON 2.2.1)

## 6.6 Conclusion

The quantitative analysis of the drivers of regional competitiveness delivered results for 5 regions (Poland = 2 case study regions)





**Figure 67 Relative Financial Efforts into Drivers of Competitiveness in 5 regions**

In a nutshell, chart 3 summarises some pieces of information enabling to partially answer our key question: how are financial means allocated among competitiveness drivers and in what kinds of regions?

Less developed regions with respect to the European average, such as Polish regions, mainly base their regional development policy on the implementation of ‘hard infrastructure’ but also amenities. If it is relatively logical that these regions have to develop an efficient infrastructure which is an underlying condition for their economic development, it is nevertheless surprising to observe the limited share of financial means allocated to human and social capital. Indeed, the strengthening of human capital is a prerequisite for the development of a sufficient absorption capacity necessary to benefit from technological advances developed elsewhere.

London as the best performing metropolitan region allocates important and almost equal shares of financial means to the development of human and social capital. This observation is coherent regarding on the one hand, the scope of social polarization and exclusion and, on the other hand, the relative inadequacy of supply and demand for qualification.

The latter argument is even more relevant for Berlin for which the development of high tech sectors and knowledge intensive services is somewhat hampered by a lack of qualified local workforce. In this context it is not surprising that Berlin strongly bases its development policy on the upgrading of human capital. It can also be observed that Berlin’s regional policy relies relatively importantly on financial interventions and funding.

Finally, the peripheral Swedish region of Norrbottens clearly bases its regional development policy on the strengthening of 'soft' infrastructure, basically social capital. With respect to the working hypothesis, Norrbottens exhibits clearly the most modern policy approach with little investment in 'hard' infrastructure and almost inexistent direct financial subventions and funding.

## 7 Conclusions: So what is regional competitiveness ?

In the light of the absence of a project focusing exclusively on the economics of European regional development and the geography of this economics, this project was launched to answer a very long series of questions in a very short time. Each of these questions would have merited a research project of its own right, as each touches upon the many complex issues concerning the driving forces behind the localisation of activities and the performance of regional economies.

Given the short time available to this project, we have concentrated on the analysis and summary of existing research, translating it to the needs of ESPON, whilst including new, original research wherever possible and thereby endeavouring to advance the state of knowledge accordingly. Our analyses have obviously only scratched on the surface of most of the questions and much remains to be done, possibly within ESPON II.

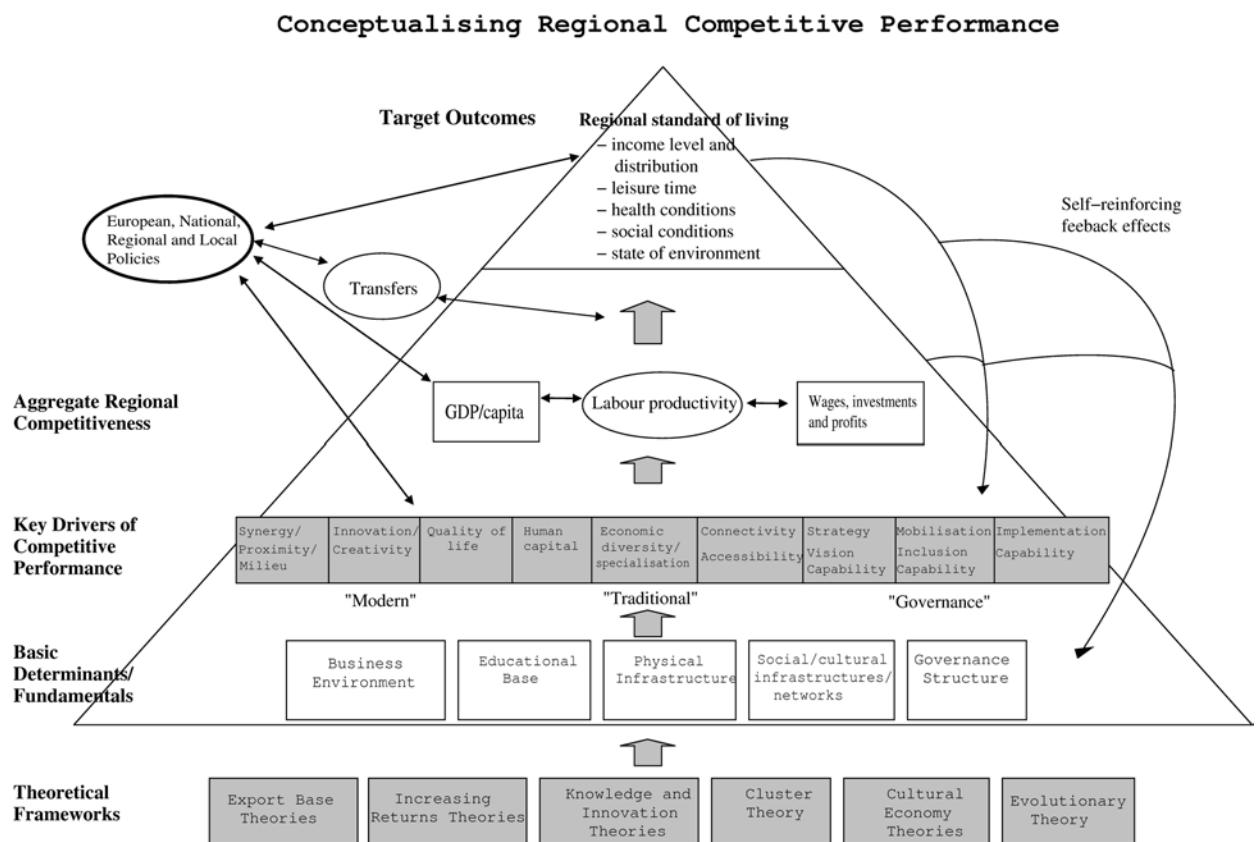
One can, however, identify one main central thread that links all these questions: the notion of regional competitiveness. This (together with regional cohesion) is a key concept behind much of current policy thinking within the European Commission and amongst Member States and guides many of the programmes of regional development currently being devised. We will, therefore, end our report with an exploration of this notion by exploring the following questions concerning regional competitiveness in the light of our research:

- What is regional competitiveness?
- What influences it?
- Who benefits from it?
- What can/should policy do about it?

### Towards a definition of regional competitiveness

*CAVEAT: In the following we will often speak of regions as if they were 'collective actors'. This is, obviously, a gross simplification as regions are just (artificial) containers of human activity, in the form of individuals, enterprises, policy makers, etc, representing many conflicting interests and struggles for power. [I would argue that regions are not containers, but socially, economically and politically produced. As such they are not pre-given entities with fixed boundaries, but fluid, open and relational entities, the precise definition of which depends on the purpose in hand] 'Regions' as such do not do anything ! However, we will make this simplification for the sake of the argument about regional competitiveness (and implicitly assuming that in a democratic society the policies pursued by a region's political power holders should represent the common interest).*

Contrary to what some authors, and notably political institutions seem to suggest, the notion of regional competitiveness' is far from straightforward to define. This is especially true as it is not a static state, but a complex dynamical process. We will, therefore, present our understanding of the idea with the help of an adaptation of the diagram already presented in chapter 3 (figure 56) each element of which is an integral part of the whole definition<sup>50</sup>. It is important to understand that this diagram embodies a whole series of feedback effects from one level' to another, thus making this a continuously evolving system. In the following, we will describe each level from top to bottom.



**Figure 68 Conceptualising Regional Competitive Performance**

**1) Target Outcomes**

Regional competitiveness cannot be correctly defined if it is not embedded in the larger picture of regional development and well-being of a region's population. We assume that a key goal of increasing regional competitiveness is to enhance the standard of living of the entire population of the region. In other words, the ultimate measure of a region's

50 This diagram is adapted from Martin, 2005.

competitiveness must embrace the different dimensions of what constitutes a high standard of living, which is not just about high per capita incomes, but also about low levels of income inequality, high levels of health, good social conditions and a good quality of environment. That is, we consider that at least the following elements play a role in the definition of standard of living:

- material wealth, represented by income levels and distribution
- leisure time
- health
- social inclusion
- environment

These general objectives have to be taken into account when thinking about the concept of competitiveness and what it means in terms of policy. In the following we present some maps in relation to these elements.

## 2) Aggregate regional competitiveness

What are the elements which allow us to measure the competitiveness of a region, to observe its evolution in comparison with other regions? We propose three perspectives on this question:

- GDP/capita is the classical indicator of economic performance. It is a very crude measure of the entire (not only the active) population's productivity. This gives an idea of the total amount of production achieved. It can obviously be influenced by sheer mass in the form of the activity rate (if a greater proportion of the population works, one can assume that they will produce more) or in form of invested capital (a region with many expensive and modern machines will probably be able to produce more than one without). It can also be influenced by more efficiency, or productivity (if one person produces more per working hour, then at equal number of both of persons working and of persons living in a region, the GDP/capita will increase. Finally, GDP/cap can also be influenced by its denominator, i.e. demographic developments of the region's population (if all of the in-migrants into a region are economically active at productivity levels comparable to the existing ones) then GDP/cap will rise, the same if all the non-active people emigrate, if the remaining population continues to produce at the same levels. However, one can obviously consider as one of the aspects of regional competitiveness the ability of a region to attract active persons. Dynamic regions tend to be areas of net in-migration. The in-migrants also tend to be the more enterprising and skilled groups. These net inflows in effect help to raise the full employment growth ceiling of the region, thereby also attracting capital, and thus raising the innovation and technological

base of the region.

- A high productivity region permits (but not necessarily implies) a higher rate of average wages and profits, the latter possibly, but not necessarily, enhancing the rate of investment. Does, investments and profits give an idea of the 'quality' of the regional economic regulation between those elements i.e. the balance between supply and demand. Do the revenues created allow the distribution of gains to workers and entrepreneurs? Is there enough money to invest into future production? Will there be more internal demand in the future?
- Finally, but most importantly, productivity, and notably labour productivity, gives an idea of the efficiency of the work performed in the region. For a stable (active) population, this is the element which provides an intensive increase in production, as opposed to an extensive growth such as through an increase in the size of the active population. However, rising productivity does not have to be translated into higher production. It can also be translated into less work, if the region's society decides to be satisfied with the current levels of production. Historically, this has led to a significant reduction of daily (and yearly) working hours in many countries, compensated by higher productivity. Higher productivity can also be translated into other, socially useful (but not GDP-raising) work if one imagines that a society decides that the current level of production is enough and that the remaining hours should then be spent in form of a 'societal service'. This might seem far-fetched (it does actually exist in the form of military or civil social service in some countries) but it is just an example of the fact that more productivity does not necessarily have to lead to more GDP/cap.

It is the combination of these three aspects that relates to a region's competitiveness, which, therefore, is not limited to its sole capacity to compete on international markets. Hence, unless a region can attract more active population or more investment in physical capital, the only possible way to increase competitiveness seems to be the increase of labour productivity.

### 3) Key drivers of competitive performance

Now that we have identified a series of elements that allow us to describe the level of competitiveness of a region, it is important to understand what determines this level. What makes one region more productive than another? Why do some regions attract more immigration and/or more investments than others? During our intensive discussions amongst the team, we have identified the following key drivers' of regional competitiveness, belonging to three different types:

### 1) Traditional' or Basic'

- Economic diversity /specialisation
- Human capital
- Connectivity/Accessibility

### 2) Modern'

- Synergy, proximity, milieux'
- Quality of life
- Creativity /Innovation

### 3) Governance'

- Strategy /Vision capability
- Mobilisation /Inclusion capability
- Implementation capability

Each of these drivers obviously presents fairly complex realities and, thus, leaves sufficient scope for highly differentiated policies adapted to each region. It is not possible to define "good practise" or "ideal" benchmarking values for these drivers, as their effect can differ quite strongly (even in contradictory directions) between different regions. The above list, therefore, has as sole ambition to frame the discussion and to provide an idea for policy, but also for future research.

## **The shifting economic, technological and political context of regional development**

Regions are obviously not isolated entities, and in the current political context of Europe, they are still strongly embedded in their national context. Our analysis has shown most of the differences of growth rates between European regions can be explained by the differences of growth rates between countries. Understanding the general macro-economic and political context is, therefore, indispensable if one wishes to understand the development of regions.

## **Policies and their influence**

### **1) Macro-economic policies**

Although macro-economic policies such as the monetary policy performed by the ECB are not foremost concerned with regional development, they may have significant effects on regional economies. The main question is which types of regions benefit most from EU wide policies and which regions benefit less? A identification of such region types could contribute to the definition of 'competitive regions'.

Empirical research has not provided clear results so far and it is difficult to identify regional 'winners' and 'losers' in the context of EU-level macro-economic policies. However, one might argue, at least from a theoretical point of view, that a diversified industry structures and a high mobility of the labour force should be enhanced by EU policies. This is especially important if the underlying forces of European integration drive regional specialisation. However, there are no clear evidence that the European integration, e.g. through the introduction of the common market, enhances regional specialisation.

We have offered examples of two tools which can help explore the impacts of macro-level policies, without giving absolute answers. Such tools should be further explored in the future.

### **2) Regional policies**

The difficulty of evaluating the impact of macro-level policies is multiplied by several orders of magnitude when trying to evaluate the impact of regional policies. This is mainly due to the fact that across Europe there are many different regional policies in many different governance contexts and to collect information on them all and to elaborate an exhaustive analysis of such policies would be a tremendous task. By definition, we do not face this problem with macro-economic policies which are the same for all regions.

In this project, we have used case studies to explore some elements of regional policy in some regions. Although it is difficult to compare regions and to extract general conclusions out of a few cases, we, nevertheless, present some ideas concerning policies for different types of regions.



## 8 Proposals for policy recommendations

### 8.1 Introduction

In the light of the very important complexity of the subject of regional economic development, it is difficult to provide precise policy recommendations across all European regions. We therefore, present below a series of reflections which should guide policy making, but which cannot substitute for thorough research and policy debate at regional level, done by those who know their regions best.

### 8.2 At regional (micro-economic) level

1. Our study demonstrates that European Regions are characterized by a great diversity, as much in economic structures (see our Typology) as in development (from a factor 1 to 8, even more at NUTS 3 level) or workforce skills, not to mention the legacies from the past, the existence or absence of a strong regional identity, and a great number of other parameters. In our opinion, a regional policy should be based on a good knowledge of those differentiated realities in order to bring the best answers possible to local realities. We think it is unreasonable, not to say counterproductive, to believe some general recipes or a list of best practice' collected here and there might become a model to be applied everywhere. One and the same measure, taken in different regional contexts and realities, can lead to opposite results. Even in what could be considered prerequisites in economic development, that is sound communication infrastructures, studies show that, when a sufficient regional frame is lacking, an improved accessibility –for example due to the construction of a motorway –can result in an effect opposite to expectations by depriving the region from its labour force through increasing work commuting or depopulation instead of contributing to local development! Optimizing the impacts of regional policies inevitably requires a deep knowledge of the region's strengths, weaknesses and dynamics.
2. However, we must admit this knowledge of regional realities is still too limited, not only in theoretical but also in empirical terms. The results and difficulties encountered in our study –but equally in other studies than ESPON –show we should head for four complementary directions:

(1) The first consists in increasing our effort to collect and elaborate data on a fine regional scale. Too many basic data are still missing or too tedious to collect to reach

a satisfying regional expertise level. No good knowledge of regional realities is possible without a minimum of exhaustive homogeneous data, on sufficient temporal series easily accessible on the whole of the European territory.

2) The second consists in intensifying fine studies on the structures, strengths, weaknesses and dynamics of the regions as currently conducted by ESPON.

3) Thirdly, and this aspect is nowadays cruelly missing, we think it necessary to work out the conceptual and practical tools of a true regional macro-economy –if not a true regional accountancy –as was the case in the elaboration of national macro-economic tools after World war 2. The Europe of the Regions will be efficiently built only if it is based upon and has control over its regions' macro-economy. A true monitoring of the regions' development, but also a real assessment of the economic impact of European regional policies will only be possible with the help of those tools. Today the Regions' productions are more or less well known, but no one really knows what remains within the Region and what leaves the Region and where, what gets in the Region and from where. The various cross regional transfers are not at all under control. The same is true as regards incomes, since even if we are roughly acquainted with the Regions' household incomes, we do not know much about what they are spent on and where, etc.

4) Finally, it is not enough to multiply Regions' radiographies to understand their strengths, weaknesses and dynamics, but it would be more than necessary to study the different regulation modes at regional level. Just like at national level, regulation modes exist at regional level. The comprehension and the development of territorial cohesion depend on an improved knowledge of regional regulation modes. If the elaboration of a regional macro-economy is an essential stage in the comprehension of regulation modes, this should however not be considered as a precondition. Indeed, exploration studies of regional regulation modes can be of great help to work out the tools of a regional macro-economy. Understanding what a regions experiences and how it regulates its development mode will allow a better understanding of the tools that are necessary to elaborate the regional macro-economy itself.

- 3 This macro-economy at a finer level than the national level is all the more necessary as our study shows that regional competitiveness –understood here as the capacity for development in a larger sense - cannot be limited to a single indicator but depends on a multiplicity of factors, above all on their inter-relations. Regional regulation modes exist at regional level. A country's competitiveness is not limited to

the test of the world's markets. The example of two of the main economies in the last years is enough to show the problem is much more complex: in spite of its high competitiveness on external markets and considerable trade surpluses, Germany's growth remains sluggish while the USA, despite their trade deficits, enjoy an above average growth. The same is true at regional level. The idea to reduce regional competitiveness to the world's markets test seems incredibly simplistic and caricatural to us, not to say very prejudicial, especially if that test determines EU regional policy. The 'International markets test' can of course represent a factor among others, for certain economic sectors and under certain circumstances, etc., but we are sure that focusing the whole EU regional policy on that single criterion not only will be detrimental to the regional economic cohesion but will very often result in a de-structuration of territorial cohesion between European regions. The results of our study show that more development goes together with more regulation, suggesting that it is precisely the multiplicity of factors and the quality of their interrelations –that is, the regulation mode –that help bring about a sound development potential.

4. We have highlighted a general convergence around the EU mean during the Keynesian-Erdist period (1945-1980) at the level of big regional structural types. Then there was a break, even some dynamic of divergence, from the neo-liberal regulation (1980 to now). There is consequently a real risk of increase in regional disparities and weakening of territorial cohesion effort. Therefore, it seems transfers, especially those bound to EU regional policies to promote regional development, should not be considered mere aid, if not aid at a loss, since they actually contribute to bring social, economic and spatial cohesion where it is missing, which benefits in return the whole region's competitiveness.
5. At a more concrete, more local level, our explorations indicate that *investment* has a strong regional component. This is all the more significant as our literature review shows a large part of the jobs are created by new, generally small-sized, enterprises. Investment can undoubtedly represent one of the levers of a dynamic regional policy. Regions should resort to all kinds of levers and factors to favour investment. Unfortunately, in this field, fiscal and/or social dumping is too quickly envisaged, as is the supply of infrastructures or discount establishment conditions to attract new investors. Our analyses have strongly underlined this is no advisable way to go. Social dumping inevitably leads to a lack of total demand resulting in a fall of investments, the exact contrary of what is expected. As to fiscal dumping, its impacts are cancelled as soon as all the regions act in the same way, but it also deprives regions of political means through reducing their receipts. As far as discount supply is concerned, one has too often seen new investors use it for competition or

resort to regional aid and delocalise once the latter was exhausted. Creating an environment favourable to investment, establishing and perpetuating new enterprises is not possible without developing a policy aimed at new expanding markets or valorizing local potentials by promoting education, research-development, inter-firm cooperation, access to capital, dialogue between social actors, stimulating projects, etc., all measures that increase the know-how and productivity gains, or likely, when they generalize, to initiate a virtuous process in which all regions are in a win-win relationship.

### 8.3 At the general macro-economic level

- a. Our general macro-economic analysis of the regulation modes since World War 2 shows it is just as essential to ensure firm profitability (the competitive supply aspect) as the population's purchasing power (global demand aspect). A good economy not only makes profits when producing, but also through being able to sell what it produces. Indeed, it is from a macro-economic point of view nonsense, as is often the case today, that countries reduce their production costs by reducing their total wage bill in order to be more competitive on international markets since this only leads to curb global demand. It is this weak global demand resulting from a general curb of wages in the added value that explains the apathetic character of European growth for several years. This diagnosis is underlined by the OECD<sup>51</sup>, though too timidly. Indeed, this internal demand brought about by restrictive wage policies explains the low investment level (and therefore the low firm demand) and thus the weak growth rates. The headlong rush into globalisation is a self-maintaining effect of the neo-liberal regulation mode since the 1980s. Internal demand is an essential component of the good health of an economy. Now that firm profitability has been restored, a new dynamic must be established by restoring the mechanisms of productivity gains redistribution through internal demand. It should not be forgotten that trade outside the ESPON sphere only amounts to about 10% (percentage assessed in added value, not in turnover). It is nonsense to massively reduce internal demand, and consequently the EU internal growth dynamics, by compressing wage costs, especially in the name of competitiveness on markets that only represent a marginal percentage of total demand! In the future, emerging economies such as China or India might become the large consumers of the world, but currently most of Europe's production is still consumed in Europe.
- b. Indeed, all European texts speak of improving competitiveness, not only at EU level, but also at the level of each country of each European region, but that notion covers in reality very diverse aspects: productive competitiveness, fiscal competitiveness, wage

<sup>51</sup> OECD *Economic Outlook*, n°79, May 2006. Available at : <http://www.oecd.org/document/40,230,en264920118203758111,00.html>

cost competitiveness, competitiveness in quality, etc. Unfortunately, today competitiveness is only seen from the angle of labour cost, on the pretext of being competitive on international markets or to attract external investments. This results in a strengthening of the current depressive spiral. At much at national as at regional level, we think it would be a big mistake to regard the challenge of globalisation exclusively from the angle of wage competitiveness. We will never be able to compete with Bengali workers in that field! It is therefore imperative to develop all possible means to invest massively in all sectors generating productivity gains, but with a double aim: ensuring capital profitability requirements but also the increase of wages and collective services of good quality. Meeting capital profitability only, as is the case today, leads in mid-term to a macro-economic deadlock.

- c. Boosting a process of substantial productivity gains supposes at the same time investing in all sectors that can generate them as efficiently as possible (investments in education<sup>52</sup>, R&D, new ICTs, knowledge economy, quest for productivity gains in the tertiary sector: all those elements contain productivity sources –truly not as substantial, from a structural point of view, as those obtained by the generalisation of Fordism in the industry sector between 1945 and 1970, but nevertheless real, as could be seen the last years in the USA or the Scandinavian countries) but also achieving expansion investments according to the Kaldor-Verdoorn law, only possible if Europe's internal demand is boosted.
- d. To boost Europe's internal demand, it seems necessary to re-establish a norm for gain redistribution such as what was achieved in the immediate post-war period in order to ensure a tri-redistribution of productivity gains between firms, wage earners and State. It is time to stop the distortion of income distribution in favour of capital since it proves destructive in the long run as it depresses internal demand without for all that boosting investments. The terms of that norm can be diverse; they can be conditioned by different parameters such as the guarantee of a minimal profitability for firms or differentiated policies according to the opening of economic sectors to international competition, etc. However, whatever these terms may be, it seems essential to restore that principle as, as we have pointed out, it is the only way the two components of the economic cycle (a profitable supply and a sufficient solvent demand) will be able to go hand in hand and bring about a true virtuous circle in the end.
- e. Today, this prospect of economic environment stability in the long run is dramatically

<sup>52</sup> The USA spends 21,000 \$ per student and per year on education, and France hardly 8000, which results in increasing the technological gap between the two countries even more.

affected by drifts and dangers bound to the financialisation of the economy and the rise of financial actors in economic decisions. ~~When~~ a financial director takes over the management to put shareholders' satisfaction first, the financial logic prevails over the industrial logic, short-term profits overcome medium and long term investments. It seems thus also necessary to restore an environment giving priority to long against short term, in other words, to establish new governance rules imposing to come back to profitability requirements compatible with economic reason and to differentiate their objectives according to their investment outlooks. In the same way, Europe must reduce the damaging effects of fiscal and social competition because it is destructive in the long run.

- f. If we plead for boosting productivity gains and their equitable redistribution, we cannot ignore the weight of the current globalisation and the increased competition on international markets. ~~We~~ are no longer in a post-war context, where the self-centred development process was essential and where international trade was refocused and regulated between the USA-Euro-pe-~~a~~-Japan triad. Competition from emerging countries is a reality, and even if Europeans will never be more competitive than Chinese in terms of labour costs (the more so as this policy dangerously curbs total demand, which is so essential to the completion of the economic circuit) we can do our best to diversify our activities in innovating products and, this way, better protect ourselves against competition from emerging countries. It is quite possible to implement specific policies in the sectors that are most concerned. Imbalance in the production structure, such as only industry (in Germany) or only services (in the UK) must be avoided. ~~High~~ level industries have to be coupled with the development of services. ~~Falling~~ back on not very sophisticated sectors can favour growth and employment in the short run, but in the end those jobs show a low productivity, contrary to jobs resulting from specialization. ~~A~~ lack of international specialization brings about long-term impoverishment of countries.
- g. ~~When~~ we speak of mass investments, we also include public contracts and, more generally, a true industrial policy favoured by public authorities. ~~Almost~~ all the great technological advances in the 20<sup>th</sup> century such as nuclear power, the invention of computers, internet, etc. were supported by public funding. This is all the more true because neo-liberal regulation drastically restricts the horizon of enterprises to the short term. This support should not be limited to the definition of a real industrial policy but should also offer adequate rules and policies of support to new entrepreneurs desirous to launch innovating projects but also back innovation within existing firms. The field of economic policy is gigantic, and the economy needs State support to a large extent: to finance research and education, to favour the emergence of innovation poles, to offer stimulating conditions to firms and investments, etc. ~~Arise~~ in education expenditure increases human capital, labour

force skills, and consequently potential growth in the medium term. Therefore, one should not proclaim, on one hand, knowledge economy should be promoted and, on the other hand, disinvest in education (including wage earners' training and recycling) in the name of budget cuts, reduction of public expenditure or productivity rise in public services. Higher education, but also post-university education, applied and fundamental research, should receive particular support as battlefields of knowledge. If all these measures fail to be taken, if the necessary investments leading to long term productivity fail to be achieved, if productivity gains are not redistributed according to restrictive regulation norms in order to ensure a rise in demand, the EU economy runs the risk of new crises, and of a continuing evolutionary decrease of growth with all their negative socio-economic consequences.

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ESPON project 3.4.2  
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 Final Report  
 October 2006

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Final Report  
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Volume 3  
Annexes

## Table of Contents

1	Annex I : Meta analysis .....	5
2	Annex II : Methodology of the Drivers of Competitiveness Analysis .....	10
3	Annex III : Case studies .....	19
4	Annex IV : Financial means spent on drivers of regional competitiveness – Walloon Region (based on 2005 regional budget) .....	192
5	Annex V : National and regional incentives in 10 New Member States and 2 accession countries .....	198
Figure 1	Net migration flows in London and the UK.....	23
Figure 2	Gross Value Added per head, current basic prices, 2001 (UK = 100) .....	24
Figure 3	GVA per head – average annual growth rate between 91 and 2001 .....	25
Figure 4	GVA per head - Annual growth rate between 91 and 2001 .....	26
Figure 5	London employment as share of the UK.....	29
Figure 6	Specialisation of London’s activities in the UK.....	30
Figure 7	R&D intensity (R&D expenditures/GDP) .....	33
Figure 8	R&D expenditure – share by institutional sectors .....	34
Figure 9	Patent applications to the EPO per million inhabitants and share of high tech patents .....	35
Figure 10	London’s position within the UK landscape in terms of patent application to the EPO per million inhabitants (2000) .....	35
Figure 11	UK regional trade - exports to the EU .....	37
Figure 12	Evolution of population (1990=100).....	55
Figure 13	Annual internal migration balance of Berlin – average 1991-1993 (arrivals – departures) .....	55
Figure 14	Migration balances of Berlin in % of total population – average 1991-1993 .....	56
Figure 15	Average annual GDP/capita growth rate (1991-2004).....	57
Figure 16	Slowing convergence between regions in Germany (1991-2004).....	58
Figure 17	Länder Gross Domestic Product per Head in 2004 .....	58
Figure 18	Core German Cities Gross Domestic Product per Head (2004) .....	59
Figure 19	Share of sectors in Berlin’s GVA (in current prices): 1991-2003 .....	60
Figure 20	Relative concentration of large enterprises with external control capacity in urban regions in 2002 ..	62
Figure 21	Average of annual variation of employment (1991-2004).....	63
Figure 22	Annual employment variations in Berlin and Germany (1991-2004) .....	63
Figure 23	Core German cities - unemployment rates in 2001 .....	64
Figure 24	R&D intensity (R&D expenditures/GDP) .....	66
Figure 25	R&D expenditure – share by institutional sectors .....	66
Figure 26	Patent applications to the EPO per million inhabitants and share of high tech patents .....	67
Figure 27	Berlin’s position within the German landscape in terms of patent application to the EPO per million inhabitants (2002) .....	68
Figure 28	Ratio Public Debt / GDP (2004).....	69
Figure 29	Berlin’s public debt.....	70
Figure 30	<i>Administrative division of Valle d’Aosta</i> .....	108
Figure 31	Firm taxation system.....	131
Figure 32	Norbotten’s employment structure in 1960 and 2000 .....	139
Figure 33	Change of selected indicators for Wielkopolskie region for 1999-2004 (Poland =100%) .....	154
Figure 34	Evolution of employment in industry and construction,2000-2004 .....	159
Figure 35	Change of selected indicators for Podlaskie region for 1999-2004 (Poland =100%) .....	169
Figure 36	Evolution of employment in industry and construction,2000-2004 .....	175
Figure 37	Rhone-Alpes infrastructures .....	177
Figure 38	Rhone-Alpes employment .....	180
Figure 39	Rhone-Alpes Industry .....	181

Table 1	Wallonia Regional Budget structure.....	12
Table 2	Analysis of Wallonia Economy Budget.....	13
Table 3	Wallonia Economy budget and drivers of competitiveness .....	13
Table 4	Area, population and density .....	20
Table 5	Gross Fixed Capital formation (GFC) at NUTS 2 level.....	27
Table 6	Employment distribution among sectors .....	28
Table 7	Unemployment rate in London and Berlin (LFS adjusted series).....	31
Table 8	London’s balance of trade with the rest of the UK (2004).....	36
Table 9	Net Contribution of London to UK public finance (2003/04) .....	38
Table 10	Total government expenditures by region (2003/04).....	39
Table 11	Identifiable expenditures by region & type of service (2003/04) .....	39
Table 12	Consolidated budget requirements for GLA (2005/06) .....	42
Table 13	Breakdown of LDA budget themes into drivers of competitiveness .....	43
Table 14	The structural fund endowments in the UK and London compared to Germany and Berlin .....	44
Table 15	Breakdown of London Objective 2 programme (2000-2006) into drivers of competitiveness.....	45
Table 16	Berlin’s share of total employment in Germany, 1939-1989 .....	52
Table 17	Supra-regional services in city-regions, year 1996 .....	61
Table 18	Berlin’s expenditure budget 1994-2001 .....	71
Table 19	Breakdown of the ‘Economy, Labour and Women’ Budget of Berlin Land (2006) into drivers of competitiveness .....	75
Table 20	Breakdown of the Objective 1 and 2 programmes Budgets (2000-2006) into drivers of regional competitiveness .....	76
Table 21	Financial efforts towards drivers of competitiveness, Norbotten Year 2005.....	144
Table 22	General characteristic of Wielkopolskie region .....	154
Table 23	Financial means spent on drivers of regional competitiveness – Podlaskie region (allocation 2004-2006).....	162
Table 24	Financial means spent on drivers of regional competitiveness – Wielkopolskie region (allocation 2004-2006).....	163
Table 25	General characteristic of Podlaskie region .....	168
Table 26	SWOT analysis of innovativeness in Podlaskie region.....	173

## **1 Annex I : Meta analysis**

### **Location and relocation of firms and enterprises with the European Union**

#### **1 Introduction<sup>1</sup>**

The number of literature reviews based on meta-analysis has increased during the last decades, especially within the fields of medicine and social sciences. The use of meta-analysis within the medical profession has also been supported and encouraged by the American Statistical Association, even when they are based on small samples, i.e. a small number of studies (Hunt (1997), page 96). For instance, meta-analysis has been used to analyze and summarize the efficiency of coronary bypass surgery (Held, Yusuf and Furberg (1989)) and the risk of second hand smoke (He, Vupputuri, Allen, Prerost, Huges and Whelton (1999)). Within the field of economics, meta-analysis has been applied to analyze the relationship between minimum wages and employment of low-wage workers (Card and Krueger (1995)), price elasticities on gasoline demand (Epsey (1998)), and the relationship between years of schooling and earnings (Ashenfelter, Harmon and Oosterbeek (1999)), just to name a few.

Even though the use of meta-analysis is widely accepted as a method to summarize and analyze research results within different fields, the method has limitations. In the following, we will discuss the pros and cons of meta-analysis.

#### **2 Relevant studies**

Irrespective of the form of the review, narrative or meta-analysis, one of the most important issues relate to the selection of studies to be included. One frequently used selection criteria are to include studies published in journals with referee system. The referee system has its obvious advantages; the results are critically reviewed by other researchers in order to detect errors and incorrect interpretations of the results. The use of Internet and online databases such as EconLit (economics) makes it nowadays a relatively easy task to find relevant studies published in referee journals. However, this approach has its limitations as there is a possibility that published studies constitute a biased sample of

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<sup>1</sup> The discussion in Appendix A will roughly follow the steps for meta-regression analysis outlined in Stanley (2001) and Florax *et al.* (2002).

what has actually been found by researchers. For instance, it might be the case that editors and referees tend to reject insignificant results (see McCloskey (1985) and McCloskey and Ziliak (1996)). This problem could be overcome by including unpublished work in the analysis. Even though such an approach would better represent the knowledge, unpublished working papers and unpublished manuscripts are more difficult to attain. However, the problem of including relevant studies and a representative selection of studies are not unique for meta-analysis but also present in narrative literature reviews.

### **3 Heterogeneity of studies**

In medicine and the sciences, replication of previous experiments is often used in order to legitimate results. Replicative studies are also often rewarded publication within these disciplines. Economics and the social sciences do not have the same tradition of replication. Instead, studies do in many cases have to be 'original' or 'innovative' in order to be of interest. For the meta-analyst, it is far from obvious how to account for this heterogeneity across studies. In most cases, such heterogeneity is accounted for by the inclusion of fixed or random effects. However, the problem of heterogeneity becomes even more difficult considering the fact that studies differ with respect to quality. As in the problem with including relevant studies, the problem of heterogeneity across studies is not unique for meta-analysis but also present in narrative reviews.

### **4 Number of studies in the review**

As mentioned above, the expansion of research publications within nearly every field has increased dramatically during the last decades. For the reviewer, this means that in most cases it will be (at least if the review is in the form of an article and not a book) impossible to include and comment all studies within the field. Let us use the excellent review of the empirical growth literature by Temple (1999) to illustrate our point. In his review, Temple tries to pin down what are major findings within the empirical literature on economic growth. In particular, based on previous research, Temple tries to answer 6 questions: 1) How is the world income distribution evolving? 2) Do countries converge to steady state path and, if so, how quickly? 3) How rapidly do returns to inputs like physical capital diminish? 4) Are poor countries poor mainly because they lack inputs, or because of technology differences? 5) Why do growth rates differ over long periods? and 6) What happens in the long run? This is an ambitious task, especially considering the fact that the article is only 40 pages long (the reference list not included).



In relation to the number of publications within other fields of economics, the empirical literature on economic growth since the famous papers by Barro and Sala-i-Martin (Barro (1991) and Barro and Sala-i-Martin (1992)) is probably best describes as a 'big bang'. Searching through EconLit's data base for journal articles on economic growth gives 998 hits. That's empirical papers on economic growth published in journals connected to the EconLit data base between 1991 and 1999! In all, Temples' review includes 138 references divided on 6 different questions, which is quite much for a narrative literature review. However, it would have been nearly impossible to review, comment and critically analyze all 998 studies. Not to mention the difficult task of analyzing and summarize what are the driving factors behind the different results. This is where meta-analysis has its main advantages; to in a systematic way handle a large set of results from previous studies and formally, using statistical methods, test to what extent the different results are driven by the research method applied, type of data, number of observations, which region etc.. However, it is a cumbersome work for the meta-analyst to read and develop a data base consisting of 998 studies.

## **5 Finding a common metric**

One of the most delicate issues in conducting a meta-analysis is to find a common metric across studies. Although two different studies fall within the same literature, definitions of key variables are likely to differ. For instance, again using the empirical growth literature as an example, income growth may be measured as the growth rate of average personal income, average household income, Gross Regional Product (GRP), population, new firms etc. Moreover, monetary values in studies based on Swedish data are most often measured in SEK, distance in kilometres and weight in kilograms while monetary values in studies based on U.S. data are likely to be measured in USD, distance in miles and weight in pounds. Another issue is to decide if the size of the effect is of more interest than the significance, or if the review should consider both. If the significance is of main interest, how should significance be measured? Two commonly used measures of the significance of a parameter estimate or mean values are t-statistics and standard deviation, where the first is calculated on the basis of the second. We will return to this issue in more detail when we discuss general econometric issues and model specification. For now we just point at this problem and conclude that this issue deserves serious attention.

## **5 The choice of covariates**

Finding a common metric is maybe the most difficult task, the choice of covariates is slightly easier even though it also deserves serious attention. It seems natural to include

information on the characteristics of the study itself; what kind of data is used (time series, panel data, cross section, what year, number of observations and years, different countries, level of aggregation etc.), what statistical method applied (GMM, fixed or random effects, ARDL, ARIMA, OLS, Maximum Likelihood, spatial effects, parametric or non-parametric etc.), functional form (linear or non-linear) and theoretical methods (is the function to be estimated on reduced or structural form). To test the hypothesis of publication bias (given that the review also include unpublished work), some information on publication status is needed. This could be in the form of a simple dummy variable indicating if the study is published in a journal or is in the form of a working paper. It could also be a set up of different dummy variables or in the form of a continuous impact measure based on a citation index of the study or ranking of the journal.

## 6 General econometric issues and specification

We now turn to a more formal description of a meta-regression analysis. Many empirical studies in economics involves a standard regression equation such as

$$Y = X\beta + u$$

where  $Y$  is a  $(n \times 1)$  vector containing information of the economic variable of interest,  $X$  is a  $(n \times m)$  matrix of explanatory variables,  $\beta$  is the  $(m \times 1)$  vector of coefficients, and  $u$  is the random error term. The main issue is to test the hypothesis that one regression coefficient, let's say  $\beta_1$ , is significantly different from some value, most often different from zero. For instance, in the empirical literature on economic growth, many studies focus on the so called convergence hypothesis where a negative and significant correlation between the initial income level (in our case  $\beta_1 < 0$  and standard deviation of  $s_1 < |\beta_1|/1.96$  to make the parameter estimate significant) and the subsequent income growth rate, which is our dependent variable  $Y$ , is interpreted in support of this hypothesis.<sup>2</sup> If the size of the parameter estimates is of main interest and comparable across studies, the following meta-regression equation will be applied

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<sup>2</sup> However, in a meta-analysis,  $\beta_1$  could also be some other measure like the first or second moment of the variable of interest.

$$(1) \quad b_i = \beta + \sum_{j=1}^J \gamma_j Z_{ij} + v_i$$

where  $b_i$  is the reported estimate of  $\beta_1$  in study  $i$ ,  $\beta$  is the value against which  $\beta_1$  is to be tested (most commonly  $\beta = 0$ ),  $Z$  contain information on characteristics of the different studies,  $\gamma$  are the meta-regression coefficients which reflect the biasing effects of particular study characteristics and  $v_i$  is the meta-regression error term. However, in many cases the meta-analyst will focus not (only) on the size of the effect but (also) the significance of the parameter estimate of interest. If the significance of the results is of main interest, then following meta-regression equation is more appropriate

$$(2) \quad b_i / s_i = \beta / s_i + \sum_{j=1}^J \gamma_j Z_{ij} / s_i + v_i / s_i$$

By concentrating on the reported standard deviations (or more correctly, the t-statistic as  $t = b_i / s_i$ ) of the parameter estimates the meta-analyst avoid the potential problems associated with the fact that variables in different studies are most often measured in different units. That is, for instance, monetary values in studies based on Swedish data are most often measured in SEK, distance in kilometres and weight in kilograms while monetary values in studies based on U.S. data are likely to be measured in USD, distance in miles and weight in pounds.

Another advantage with specification (2) compared to (1) is that (2) focus on the significance of a particular effect instead of size. Irrespective of the size of the effect, if it is not significant, we cannot say that the effect is present.

## 2 Annex II : Methodology of the Drivers of Competitiveness Analysis

The analysis is based on the relative financial efforts a region devotes to each driver. Indeed, when looking for example at the 'Economy' budget of a given region, it contains several instruments that potentially affect different competitiveness drivers.

The methodology was first tested on two Belgian regions, Wallonia and Brussels, and was later extended as an analytical tool for the case studies section.

The methodology of the estimation of financial means devoted to regional competitiveness drivers is presented and then illustrated with the example of Belgium and one of its three Regions, the Walloon Region. The methodology covers the following steps:

- Identification of the Region(s) to be covered by the analysis
- Identification of the budgets of the different levels of authorities spent in a given territory
- Filling the total regional budget
- Filling the Table of Regional Competitiveness Drivers

### ***a. Identification of the Region(s) to be covered by the analysis***

Each country has its own governance structure. The spatial level corresponding to regional economic policies varies from one country to the other. The relevancy of this spatial level depends on the decision autonomy of the administrative authority and the concentration of economic development means. For instance, in France the more relevant spatial unit for regional economic policy is the NUTS 2 'Région'; in Germany the NUTS 1 'Länder' or NUTS 2 'Regierungsbezirke'; in Sweden the NUTS 3 'Län'.

In Belgium, following several waves of State institutional reforms, 'Regions and Communities' have progressively received large responsibilities. They determine independently the allocation of their resources. They are responsible for most policies dealing with economic development (the Federal State is still responsible for core policies such as taxation and wages).

The choice to carry out our analysis at the NUTS 1 level for Belgium was pretty spontaneous as it matches the institutional framework of Belgium. The 'Regional' level in Belgium is the most relevant for our analysis as Regions are responsible for the definition and implementation of most policies dealing directly with economic development. Moreover the Regional budgets provide the total amount of funds disbursed within the limits of the regional territory whether those funds originate from the Federal State (for example for wage subsidies), the Region itself or the European Union Structural Funds.

In Belgium, Regions are responsible for:

- land settlement
- environment, natural resources and water
- housing
- economy
- energy
- employment
- equipments, infrastructures and transports
- agriculture and fishery

- scientific institutions
- international trade
- organization of local authorities ('communes', 'provinces')

And Communities are responsible for<sup>3</sup>:

- All Education levels and Research
- Social Action and Health
- Culture and Sports
- International relations and cooperation
- Etc.

***b. Identification of the budgets of the different levels of authorities spent in a given territory***

The aim is to evaluate the main budget allocations affected to the economic development of a specific region. Indeed, a given investment program or service might be financed and managed by different levels of institutional authorities (local, regional, national, EU). It is necessary to identify all sources of funding that are spent within the selected region, and over which the Regional level of governance has actual decision power.

In Belgium: Flanders (Flemish Community Government); Wallonia (Walloon Region Government; French Community Government)<sup>4</sup>; Brussels (Brussels Region Government, French Community Commission; Flemish Community Commission)<sup>5</sup>. These territorial entities correspond to the NUTS 1 level. We do not take into account the spending of the Municipalities level ('Arrondissements'), at NUTS 3 level.

Federal State contributions are included within these regional budgets. The same is true for European Structural and Cohesion Funds. The possibility of distinguishing the different contributions' weight varies with each Region's standards of budget presentation.

***c. Filling the total regional budget***

The scope of the research is limited to the following traditional policies and budgets: Economy, Employment (if it affects the skills of job seekers or reduces the cost of labour to foster the hiring of unemployed people), Vocational Training, Infrastructures, Transports, Innovation, Research and Technology.

However, according to each regional context, other relevant instruments could be highlighted. For an old industrial region such as Wallonia, this is especially the case for the rehabilitation of industrial brown field area. Education is only considered in its 'vocational training' dimension in opposition with University, Secondary Education, etc. In a similar way, scientific research is only taken into account as far as it is concerned with applied research (not fundamental research).

The information relative to other categories of budgets (Agriculture, tourism, housing, etc.) is interesting as a matter of getting the 'full picture' of the regional policy landscape.

<sup>3</sup> Transfers might occur for reasons linked to financial difficulties of certain entities. For example, the French Community transferred its competence in Social Action and Health to the Walloon Region.

<sup>4</sup> German Community is not accounted. In the case of Wallonia, the French Community does not intervene in economic development. However, in Brussels, vocational training budgets are managed through the two Communities Commissions.

<sup>5</sup> We consider that the spending of the French Community are localized inside Wallonia, although in reality they cover the inhabitants of Wallonia (80%) and the French-speaking inhabitants of Brussels (20%). The problem is the same for the spending of the Flemish Community towards the Flemish-speaking community of Brussels but in much smaller proportion (97% - 3% ratios).

We are thinking in terms of means for actions rather than in terms of means of payment. Thus, at the level of the Budget lines, we take into account the credits that must be utilized within the budgetary year<sup>6</sup> and the credits engaged for multiyear programmes<sup>7</sup>.

<b>Regional Budget (2005)</b>	in 1000 EUR
<b>Regional economic development means</b>	<b>2.068.209</b>
Equipments, Infrastructures and transports	790.505
Economy	300.504
Employment and Vocational training	820.370
Innovation, Technology and Research	156.830
<b>Other regional development means</b>	<b>1.815.687</b>
Agriculture and fishery	146.800
Tourism	40.292
Housing	240.933
Land settlement and patrimony protection	99.249
Environment and natural resources	168.574
Energy and water	20.462
External/international relations	71.372
Administration and government	670.663
Debt services	357.342
<b>Total Regional budget</b>	<b>3.883.896</b>
<i>Specificities to the Walloon Region</i>	
Provisions for European cofinancing 00-06 (FEDER, FES, etc.)	146.069
for Economy and Employment	17.163
for Vocational training	15.134
for Research, technology, relex	770
for Equipement and transport	57.160
Transfers to Local authorities (communes)	1.272.475
Economic and Rural "boost" fund	62.500
Social action and health	669.031
<b>Total Official Regional Budget</b>	<b>6.033.971</b>

**Table 1 Wallonia Regional Budget structure**

Even though our intention is not to compare regional budgets we have to correct some of the budget allocations to ensure the comparability of financial efforts devoted to the drivers. Indeed, regarding the budget presentations, each region has its own particularities and accounting rules.

#### **d. Filling the Table of Regional Competitiveness Drivers**

For a given region, the total volume of Regional Economic Development Means is then distributed between the seven drivers of regional competitiveness. Let us look at the following example: allocating the Economy budget division of the Walloon Region among the Regional Competitiveness Drivers. In the Economy division, we filter out all budget lines that do not have a clearly identifiable impact on competitiveness drivers.

<sup>6</sup> "Crédits non dissociés" in Wallonia budget.

<sup>7</sup> "Crédits d'engagement" in Wallonia budget.

<b>Economy budget (EUR 1000) year 2005</b>	<b>Elimination</b>
Program 1: economic expansion (investment grants, tax exemption, regional bank guarantee, cluster policy)	<ul style="list-style-type: none"> <li>- Expenses for studies, publication, Region's representation, etc.</li> <li>- Special budget line for the dismantling of a nuclear reactor</li> </ul>
Program 2: Reorganization and development (Regional investment fund)	<ul style="list-style-type: none"> <li>- Council for the reorganization of enterprises (operation costs)</li> <li>- Intervention in the cost of the take-over of enterprises facing difficulties (bankruptcy, ...)</li> </ul>
Program 3: Industrial parks	
Program 4: Policy definition and evaluation, Coordination, Information	<ul style="list-style-type: none"> <li>- Studies, participation to conferences, welcoming of European delegations, etc.</li> <li>- Maintenance of web sites and data bases (information over public aid, etc.)</li> </ul>
Program 5: Foreign Direct Investments promotion	
Program 6: SMEs and Independents	<ul style="list-style-type: none"> <li>- Studies, experts services, participation in exhibitions, etc.</li> </ul>
Program 7: Coordination of projects related to the Structural Funds (studies, evaluation, promotion, etc.)	<ul style="list-style-type: none"> <li>- All budget lines</li> </ul>
<b>Total budget = 317.667</b> (including 17.163 EU fund)	<b>Total = 22.610</b>
<b>Adjusted economy budget = 295.057</b>	

**Table 2 Analysis of Wallonia Economy Budget**

Then, each budget line included in the EUR 295.057.000 (Adjusted economy budget) is allocated to a specific driver. Although some budget lines might affect more than one driver, we look at the primary objective of the action and affect the associated budget line to the targeted driver. This work relies on the researcher own judgement and requires a thorough reading of the budget justifications.

<b>Allocation of the adjusted Economy budget (year 2005) to the competitiveness drivers (EUR 1000)</b>	
Hard infrastructure	32.660
Social capital	26.383
Human capital	3.600
Fiscal and financial interventions	176.914
Financing	54.150
Innovation	1.350
Amenities	0
<b>Total</b>	<b>295.057</b>

**Table 3 Wallonia Economy budget and drivers of competitiveness**

The same process is followed for each division of the budget that was considered contributing to the 'Regional economic development means'.

The Employment division is a particular case. There is an important difference between the Employment budget and its 'adjusted' version. Indeed, we only consider the budget lines

that influence the competitiveness drivers either through an improvement of the skills of the workforce (i.e. training for unemployed people) or through a decrease of labour cost as an incentive for private firms to hire unemployed<sup>8</sup>.

Finally, for each identified instrument the origin of the financial means (budget division name) is indicated as well as the various level of governance involved in funding (Regional/National/Europe). For example, the Federal State is involved in the funding of Employment measures such as wage subsidies associated with the recruitment of unemployed. The EU is involved through Structural Fund programs such as 'Objectif 2 for the district of Meuse-Vesdre (Liège)' or 'Objectif 1 phasing out for Hainaut'.

## 2.1 Selection of Case Study regions

For each type of region, a selection of two regions for case studies is proposed. However, this selection might be modified. Any modification would stay within the limits of performance classes. In all the following tables, these performance classes are highlighted by the coloured lines.

### Metropolitan regions:

Country	Regions	Sub-types	VAR <sup>9</sup> UNER	VAR <sup>10</sup> GDP	rank gUNER	rank gGDP
UK	Berkshire, Bucks and Oxfordshire	METRO III CENTRAL	-10%	64%	16	1
<b>UK</b>	<b>Inner London</b>	<b>METRO III CENTRAL</b>	<b>-37%</b>	<b>59%</b>	<b>5</b>	<b>2</b>
UK	Gloucestershire, Wiltshire and North Somerset	METRO III CENTRAL	-44%	58%	2	3
UK	Surrey, East and West Sussex	METRO III CENTRAL	-37%	58%	7	4
UK	Bedfordshire, Hertfordshire	METRO III CENTRAL	-33%	55%	9	5
Spain	Comunidad de Madrid	METRO III CENTRAL	-61%	53%	1	6
Nederland	Utrecht	METRO III CENTRAL	-31%	50%	11	7
Greece	Attiki	PERIPH METRO	-18%	47%	14	8
...	...	...	...	...	...	...
France	Île de France	METRO III CENTRAL	-5%	37%	18	18
Germany	Oberbayern	METRO II CENTRAL	26%	36%	22	19
Belgium	Région Bruxelles-capitale	METRO III CENTRAL	56%	34%	25	20
Italy	Lazio	INDUSTRIEL LEGER, METRO PERICENTRAL, METAL TYPE III	-35%	33%	8	21

<sup>8</sup> Thus, many programs of the Employment budget are not accounted for. For instance, the subvention to "Social insertion" enterprises (EUR 2.549.000), which aims at social and professional integration of much weakened job seekers is not considered. Another example is the Wage subsidies for young workers. The amount dedicated to the private sector (EUR 5.700.000) is taken into account but not the amount related to the public sector (EUR 1.500.000). Similarly, only the part of the budget dedicated to training activities (EUR 120.383.000) of the regional Public Agency for Employment and Training (FOREM) are accounted for (EUR 79.680.000 for other operational costs are not considered).

<sup>9</sup> VAR UNER = decrease of unemployment rate between 95-2004

<sup>10</sup> VAR GDP = growth rate of GDP (PPP)/head between 95-2002



Denmark	København og Frederiksberg Kommuner	METRO PERICENTRAL	-12%	32%	15	22
Austria	Wien	METRO III CENTRAL	71%	30%	26	23
Germany	Hamburg	METRO II CENTRAL	47%	30%	24	24
Italy	Lombardia	METAL-LEGER, INDUSTRIEL LEGER, INTALPIN CENTRAL, METRO II CENTRAL	-32%	29%	10	25
Germany	Darmstadt	METRO II CENTRAL	40%	29%	23	26
Germany	Berlin	METRO II CENTRAL	80%	11%	27	27
<b>Number of records</b>			<b>27</b>			

Best performance region: Inner London (UK). Extended to Greater London to enable relevant comparison with the:

Worst performance region: Berlin (Germany)

### Central regions :

Country	Regions	Sub-types	VAR UNER	VAR GDP	rank gUNER	rank gGDP
Luxemburg	Luxemburg (Grand-Duché)	BANKING	66%	65%	32	1
Spain	Illes Balears	TOURIST CATALAN	-20%	50%	9	2
Spain	Cataluña	LIGHT METAL, TOURIST CATALAN, INT METAL TYPE 1	-41%	46%	3	3
<b>France</b>	<b>Rhône-Alpes</b>	<b>METAL TYPE 2, INT METAL TYPE 2, INT FRANCE EXTERNAL, INT ALPINE WESTERN</b>	<b>-14%</b>	<b>36%</b>	<b>11</b>	<b>4</b>
Belgium	Vlaams Gewest	LIGHT INDUSTRY, CHEMICAL PORTS	0%	36%	13	5
Austria	Vorarlberg	LIGHT INDUSTRY	21%	34%	21	6
Italy	Toscana	LIGHT INDUSTRY	-37%	33%	6	7
Germany	Bremen	METAL TYPE 2	42%	32%	28	8
...	...	...	...	...	...	...
Germany	Düsseldorf	NORTH RHINELAND	13%	25%	19	24
Germany	Mittelfranken	CHMETAL TYPE 1	42%	25%	29	25
Germany	Schwaben	CHMETAL TYPE 1	49%	25%	31	26
Germany	Oberfranken	METAL TYPE 2	70%	23%	33	27
Germany	Arnsberg	NORTH RHINELAND	26%	23%	24	28
Germany	Rheinessen-Pfalz	METAL TYPE 2	5%	21%	14	29
Germany	Köln	NORTH RHINELAND	8%	20%	16	30
Germany	Detmold	METAL TYPE 2	46%	20%	30	31
Germany	Münster	METAL TYPE 2	21%	20%	22	32
Germany	Hannover	METAL TYPE 2	30%	15%	27	33
<b>Number of records</b>			<b>33</b>			

In the case of central regions only one region will be analysed: Rhône-Alpes (France). This was included for the interest of including the centralized French regional model in the case studies.

### Intermediate regions:

Country	Regions	Sub-types	VAR UNER	VAR GDP	rank gUNER	rank gGDP
Spain	Pais Vasco	INT METAL TYPE 1	-49%	56%	3	1
Spain	Comunidad Valenciana	INT VALENCE	-43%	52%	6	2
Spain	Comunidad Foral de Navarra	INT METAL TYPE 1	-47%	50%	5	3
Spain	Aragón	INT METAL TYPE 1, PERIPH IBERIAN	-58%	49%	1	4
Sweden	Uppsala län	INT SCANDINAVIAN	-29%	43%	11	5
Austria	Burgenland	INT METAL TYPE 2	100%	41%	49	6
<b>Denmark</b>	<b>Ringkøbing amt</b>	<b>INT SCANDINAVIAN</b>	<b>13%</b>	<b>40%</b>	<b>43</b>	<b>7</b>
Denmark	Viborg amt	INT SCANDINAVIAN	-5%	40%	36	8
France	Bretagne	INT FRANCE EXTERNAL	-26%	40%	21	9
France	Limousin	INT FRANCE EXTERNAL	-13%	40%	30	10
...	...	...	...	...	...	...
Germany	Oberpfalz	INT METAL TYPE 2	22%	29%	45	41
Germany	Niederbayern	INT METAL TYPE 2	26%	29%	46	42
Denmark	Bornholms amt	INT SCANDINAVIAN	0%	29%	38	43
Austria	Salzburg	INT ALPINE CENTRAL	19%	29%	44	44
Sweden	Örebro län	INT SCANDINAVIAN	-29%	29%	13	45
Sweden	Södermanlands län	INT SCANDINAVIAN	-29%	26%	14	46
Sweden	Västmanlands län	INT SCANDINAVIAN	-29%	25%	15	47
Denmark	Vestsjællands amt	INT SCANDINAVIAN	2%	22%	39	48
<b>Italy</b>	<b>Valle d'Aosta</b>	<b>INT ALPINE WESTERN</b>	<b>-49%</b>	<b>18%</b>	<b>2</b>	<b>49</b>
<b>Number of records</b>		<b>49</b>				

Best performance region: Ringkøbing amt (Denmark)

Worst performance region: Valle d'Aosta (Italy)

### Periphery regions:

Country	Regions	Sub-types	VAR UNER	VAR GDP	rank g(UNER)	rank g(GDP)
Ireland	Southern and Eastern	PERIPH IRISH	-65%	90%	1	1
Greece	Voreio Aigaio	PERIPH GREEK	90%	84%	48	2
<b>Ireland</b>	<b>Border, Midlands and Western</b>	<b>PERIPH IRISH</b>	<b>-57%</b>	<b>69%</b>	<b>3</b>	<b>3</b>
Greece	Peloponnisos	PERIPH GREEK	51%	66%	44	4
Greece	Ipeiros	PERIPH GREEK	53%	64%	45	5
Greece	Notio Aigaio	PERIPH GREEK	78%	62%	46	6
Spain	Cantabria	PERIPH IBERIAN	-40%	57%	10	7
Greece	Kentriki Makedonia	PERIPH GREEK	33%	57%	40	8
Spain	Región de Murcia	PERIPH IBERIAN	-42%	56%	9	9

Italy	Abruzzo	PERIPH ITALIAN, LIGHT INDUSTRY	-11%	29%	33	40
Sweden	Kalmar län	PERIPH SCANDINAVIAN	-35%	29%	22	41
Sweden	Gotlands län	PERIPH SCANDINAVIAN	-35%	27%	23	42
Sweden	Dalarnas län	PERIPH SCANDINAVIAN	-28%	26%	27	43
Sweden	Västernorrlands län	PERIPH SCANDINAVIAN	-43%	24%	7	44
Sweden	Västerbottens län	PERIPH SCANDINAVIAN	-36%	21%	15	45
<b>Sweden</b>	<b>Norrbottnens län</b>	<b>PERIPH SCANDINAVIAN</b>	<b>-36%</b>	<b>21%</b>	<b>16</b>	<b>46</b>
Sweden	Jämtlands län	PERIPH SCANDINAVIAN	-43%	19%	8	47
Sweden	Hallands län	PERIPH SCANDINAVIAN / INT SCANDINAVE	-37%	17%	14	48
Sweden	Gävleborgs län	PERIPH SCANDINAVIAN	-28%	16%	28	49
<b>Number of records</b>			<b>48</b>			

Best performance region: Border, Midlands and Western (Ireland)

Worst performance region: Norrbottens län (Sweden)

### **Selection results inside New Member States space (Medium Potential Typology):**

Country	Region	Type (99)	NUTS	VAR GDP	ranking
Slovakia	Kosický kraj	4	3	66%	1
Hungary	Nyugat-Dunántúl	6	2	66%	2
Slovakia	Banskobystrický kraj	4	3	65%	3
<b>Poland</b>	<b>Wielkopolskie</b>	<b>5</b>	<b>2</b>	<b>64%</b>	<b>4</b>
Hungary	Közép-Dunántúl	6	2	60%	5
Slovenia	Podravska	6	3	58%	6
Slovenia	Zilinský kraj	4	3	58%	7
Slovenia	Osrednjeslovenska	6	3	57%	8
...	...	...	...	...	...
Slovenia	Pomurska	6	3	39%	30
Poland	Lubuskie	4	2	38%	31
Hungary	Dél-Alföld	6	2	36%	32
Cyprus	Cyprus	6	2	35%	33
Czech Rep.	Jihovýchod	5	2	33%	34
Poland	Opolskie	5	2	31%	35
Czech Rep.	Severovýchod	5	2	31%	36
Czech Rep.	Jihozápad	6	2	28%	37
Czech Rep.	Střední Morava	5	2	23%	38
Czech Rep.	Moravskoslezsko	4	2	19%	39
Czech Rep.	Severozápad	5	2	13%	40
<b>Number of records</b>		<b>40</b>			

One region is selected within the 'Medium Potential Endowment' type (grade 4 to 7), as presented above in section 1); and another is selected within the 'Low Potential Endowment' (Grade 8 to 10). In total, the 'Potential Endowment' typology contains 65 recorded regions (7 'high'; 40 'Medium'; and 18 'Low')<sup>11</sup>. Regions were ranked according to the growth of GDP/head (in PPP between 1995 and 2002).

Best performance region: Wielkopolskie (Poland)

Worst performance region: Opolskie (Poland)<sup>12</sup>

## 2.2 Notes about data availability and definition (case study selection)

247 territorial units were identified and each of them has been associated with one type of region, and GDP/head and unemployment rate values. For reasons of data insufficiencies, 55 territorial units are not considered.

For most countries, the NUTS 2 level was used, given that comparison is the easiest at this level of spatial division. However some exceptions need to be highlighted. In Belgium, NUTS 1 level was used, since the three institutional regions are quite homogenous. For instance, the Walloon region (NUTS 1) is composed of 5 'Provinces' (NUTS 2); 4 presenting the same sub-type (Sub-central with public services support). Although the most relevant political regional level in Germany could have been the 'Länder' (also NUTS 1), it was not possible to work at this level because of the diversity of their economic structure. For instance, the 'Land' Bayern (NUTS 1) is composed of seven 'Regierungsbezirke' (NUTS 2) ranging from Metropolitan, Non metropolitan central; Sub- central and Intermediate regions.

In Denmark and Sweden the NUTS 3 level was used as it is certainly the most relevant level for regional governance. Moreover, Denmark does simply not provide data for the NUTS 2 level. Finland was finally not studied because of the difficulty caused by substantial changes in the country's NUTS definitions.

The regional data we used come from EUROSTAT database. The variables taken into account are: Gross Domestic Product per inhabitant (in Purchasing Power Parity) between 1995 and 2002; unemployment rate between 1995 and 2004. Unfortunately, some data were not available for these years. In the case where data were only missing for a few years, we made simple estimation. But when data were lacking for too long periods of time, the regions were not included in the analysis. As mentioned above, only the GDP/head indicator was finally used for selection.

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<sup>11</sup> In Second Interim Report, another selection was proposed within the "Medium Potential Endowment" category only. However, a visit of the team in the supposed best performing region of Kosický kraj, in Slovakia, led to surprising observations. Kosický kraj's economy largely relied on the activities of one US steel producer, and followed the fluctuation of the demand of emerging economies. Far from being competitive, GDP/head growth rate hides the fragility of this region's economy. Therefore it was decided to switch to another performing region of Poland.

<sup>12</sup> Among 18 regions belonging to the « Low potential » type, Podlaskie ranks 13.

## **3 Annex III : Case studies**

### **WP 3.3 – Case study LONDON**

Samir Al-Assi, DULBEA

#### **Historical heritage and regional specificity**

The industrial revolution of the 19<sup>th</sup> century shifted the production towards the East End and outer suburbs of London. At the same time, Inner London became a centre for international commodity trade and financial services, a mutation which was partly due to the strong development ship transport and related activities.

During the Second World War (SWW), London faced serious damages. More than a third of the City of London's space was destroyed and the London Docks were largely demolished. Following the post SWW reconstruction, manufacturing declined in the 60s, and the Docklands region of East London was abandoned. London successfully met the challenge of its des-industrialization and transformed into a service metropolis. The deregulation of the financial services industry of the mid-90s clearly helped London to exploit its historical potential in this sector.

During the post war period, strong immigration waves from ex-British colonies intensified the cosmopolitan character of the city. Since the mid-80s, London has experienced a further major surge of international in-migration. Today, London can be characterised as Europe's most internationalised city with the highest percentage of foreign language residents.

#### **Territory and governance**

##### *Territorial unit*

The area of the London region covers about 1,572 km<sup>2</sup> which is roughly the double of the area of Berlin's Land (891 km<sup>2</sup>). The capital region of London which corresponds to the administrative Greater London Authority (NUTS 1) comprises two sub-regions, Inner and Outer London, both defined as NUTS 2 regions. The total area of Inner London covers 319

km<sup>2</sup> and has a higher population density than Outer London<sup>13</sup>, which is close to 9000 inhabitants per km<sup>2</sup>.

2002	area (km <sup>2</sup> )	population (1000)	Density (hab/km <sup>2</sup> )
London	1572	7355	4679
Inner London	319	2867	8987
Outer London	1253	4488	3582
Berlin (Land)	891	3390	3803

Source: Eurostat

#### **Table 4 Area, population and density**

At this stage it is also worth noting that ESPON 1.1.1. qualifies London (and Paris) as a Metropolitan European Growth Area of 'Global Node'.

#### **Devolution process in the UK**

In the UK, the major constitutional developments that started in the late 90s have brought the design and implementation of economic development close to the regional level. They also have 'enhanced the need for a more coordinated approach to policymaking and have resulted in a series of 'concordats' and 'understandings' between the different territorial levels' (Yuill, Wishlade, 2001).

The decentralisation process in the UK<sup>14</sup> is often described as asymmetric as there are fundamental differences between the arrangements in each country (Scotland, Wales and Northern Ireland) and in the English regions. The decentralisation process started with Scotland, Wales and Northern Ireland due to historical tensions 'between the principles of the sovereignty of Parliament and self-government for the peripheral nations' (Hogwood P, 2003).

Subsequently, the executive bodies of the Regional Development Agencies (RDAs) were formally launched in eight English regions on 1<sup>st</sup> April 1999. The ninth was established on 3<sup>rd</sup> July 2000, in London, following the creation of the Greater London Authority (GLA). Similar bodies already existed in Scotland, Wales and Northern Ireland.

RDAs aim at 'coordinating regional economic development and regeneration, improving the competitiveness of the English regions and reducing imbalances within and between regions'. The Department of Trade and Industry (DTI) has the lead responsibility for

<sup>13</sup> Many of the suburbs of Outer London were built in the 1920s and 1930s when the population and the demand for housing rapidly increased.

<sup>14</sup> For an analysis of the political dynamic behind the devolution process, see for instance Herrschel T., Newman P. (1999).

sponsorship of the RDAs and for regional aid policy (except in London, where the control was given to the Mayor).

Aside the RDAs, the Government also encouraged the development of non-elected 'Regional Chambers', also called 'Regional Assemblies'. These are voluntary bodies which examine the work of RDAs (Parliament and Constitution Centre, 2003) and which are in charge of Regional Planning, Advocacy and Development Policies.

The Office of the Deputy Prime Minister (ODPM) is responsible for regional policy within England, and aims at promoting sustainable development especially with respect to urban and regeneration issues. The ODPM works through the nine Government Offices for the Regions (GOs)<sup>15</sup>. GOs draw together the work of 10 Government Departments and implement regional policies which contribute to achieve Regional Economic Performance (REP) targets jointly set by ODPM/Treasury/DTI. The key target is the trend rate of growth of Gross Value Added (GVA) per capita.

Regional Assemblies, Government Offices and the RDAs operate within the same boundaries. In conclusion, economic development policy has become a very much devolved matter, although the Central government retains the control over State aid, including the EU structural funds programmes.

### **Greater London Authority**

London was administered by the Greater London Council (GLC), with 32 boroughs as second tier, until it was abolished in 1986. Then, until 2000, London had no formal city-wide government with council and mayor, but rather 32 boroughs and the City of London as a single tier of city government. However, in effect, it was the UK Central government that took the role of city-wide government and coordinated central services such as police, public transport, major roads, taxis, health care, colleges, art funding.

In July 2000 the Greater London Authority (GLA) has been created as London's governing body. It is composed of an elected Mayor and an Assembly. The Mayor is elected for the constituency of 'Greater London' for a fixed term of four years. In London, the Mayor's mandate is quite unique in Britain since he has both, wide ranging representative as well as executive functions. He sets policies, the GLA budget and makes board appointments. The London Assembly is a scrutinizing body with 25 elected members in 14 constituencies.

The GLA has four main responsibilities that are in the hands of specialized boards: (1) Transport of London, (2) the Metropolitan Police Authority, (3) the London Fire and Emergency Authority, (4) and the London Development Agency. The GLA's other

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<sup>15</sup> GO were established in 1993 is a response of the central government to the increasing influence of EU regional policies and funding.

responsibilities include environment, culture, media and sport, public health and inward investments. The GLA also has a 'general power to promote economic and social development of London' (Travers, 2005).

The Boroughs councils are directly elected for a four-year term. They are composed of 50 to 80 members. The party having the majority forms an administration. Boroughs are responsible for schools, social services, most social housing, local planning, local roads, environment provision and economic regeneration.

According to Travers (2005), since 2000, the Mayor of London has adopted a series of policies linking together economic and social competitiveness, as illustrated in his *London Plan* (London's physical development plan over 20 years). Unlike Berlin's leader, the Mayor of London is seen as having less control over the needed resources to secure economic competitiveness and social cohesion. He must work with many other players: the national government, government agencies (i.e. English Partnership), 33 Boroughs and other semi-official bodies. For instance, training, education and the largest planning decisions are in the hands of the central government. Travers (2005) describes the Mayor of London as 'a relatively strong Mayor with a relatively weak upper tier of government'.



**Socio economic fundamentals**

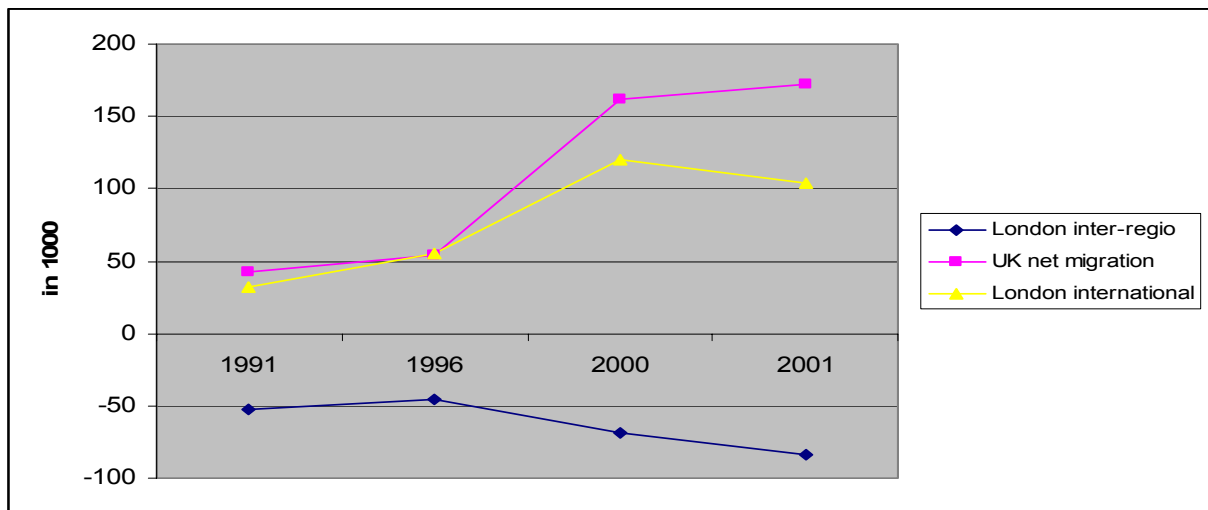
*Population*

Between 1982 and 2002, London’s population increased by about 8.7% while at the UK level a population growth of 5.2% was recorded. Within the UK regional landscape, South West, East, South East, Northern Ireland and East Midlands recorded higher population growth rates than London. However during the more recent period 1991-2002, London has clearly the highest population growth (7.7%) and largely outperformed the national average (3.1%).

Today, with 7.3 millions inhabitants London concentrates about 12% of UK’s population, ranking it just after the South East region which accounts for 14%.

The origin of London’s population growth is less related to interregional migration but rather to international population net inflows. In 2001, 244,000 persons left London for another UK region while 160,000 persons moved to London (negative balance of 84,000). At the same time, London is UK’s most important destination of for international immigrants. In 2001, about 60% of UK’s immigrants settled down in London (positive balance of 104,000 persons).

At date, about 29% of London’s population belong to ethnic minorities (2001 Census). The corresponding percentage at the UK scale is limited to 8%.



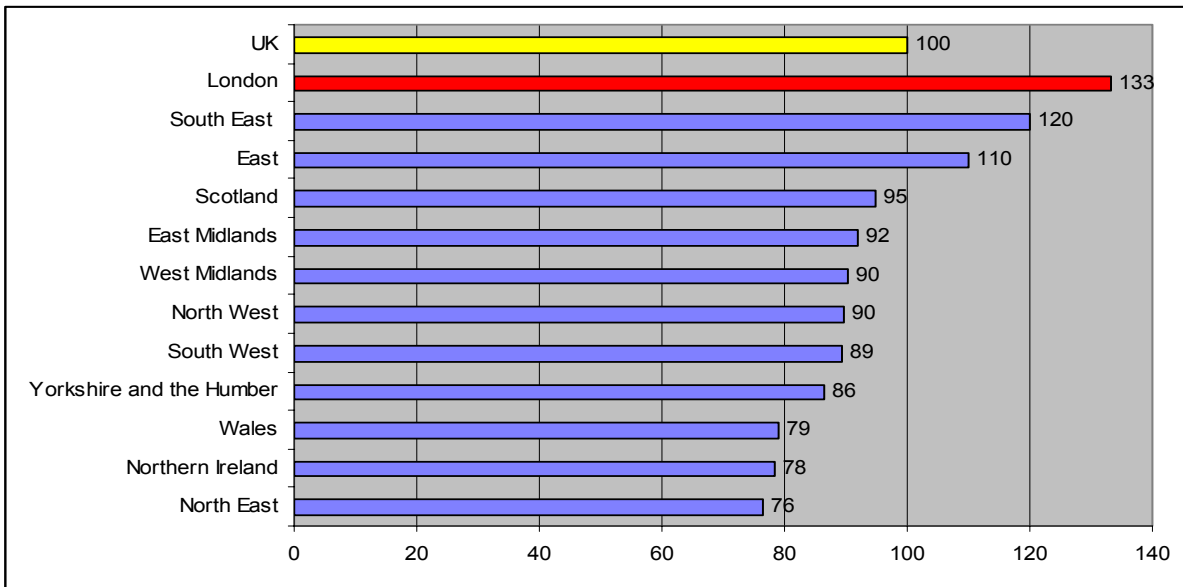
Source: Office for National Statistics

**Figure 1 Net migration flows in London and the UK**

At this stage it is worth mentioning some related aspects from ESPON 1.1.4. which qualifies London’s population structure and growth as very favourable and states that high sustainability both in the short and the long term are ensured by high in-migration, young population, and a sufficient replacement rate.

**Wealth creation capacity**

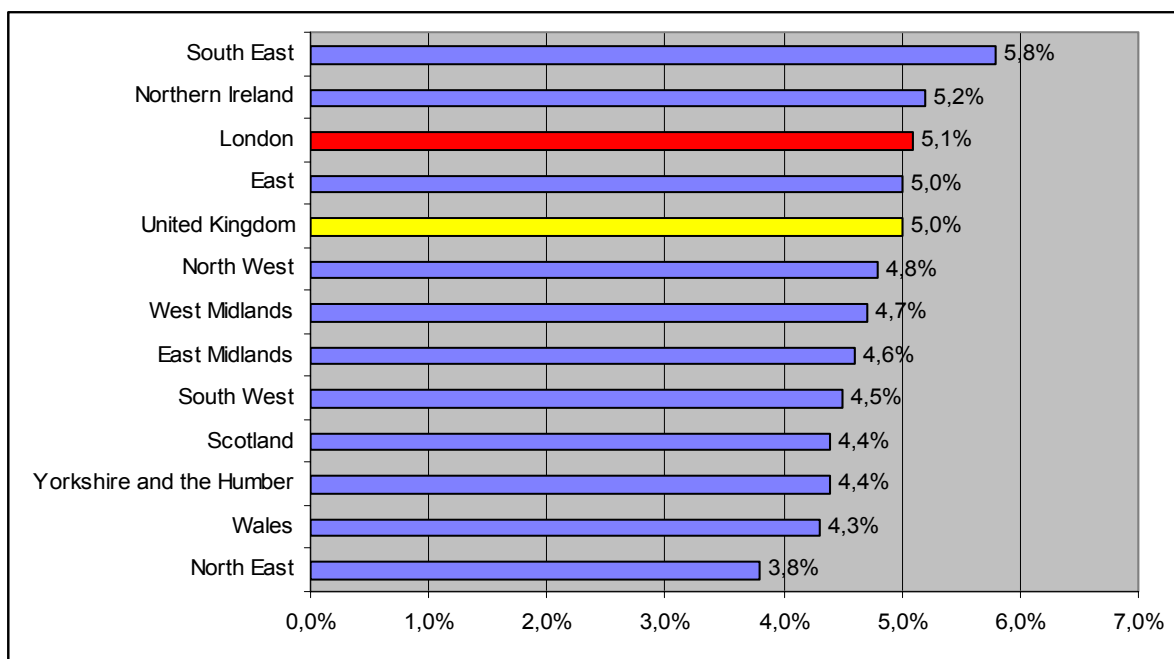
London can be considered as the engine of UK’s economy. In 2001, London accounted for about 16.5% of UK’s GVA, a value that ranks it just before the South East (16.3%). As illustrated by Figure 2, GVA per head of London was about 33% higher than the national average, 11% higher than the level achieved by South East, and 70% higher than GVA per capita of North East, UK’s less well performing region.



Source: Office for National Statistics

Note: Regional GVA refer to the place of residence rather than the working place. Therefore the estimates are not biased by commuting.

**Figure 2 Gross Value Added per head, current basic prices, 2001 (UK = 100)**

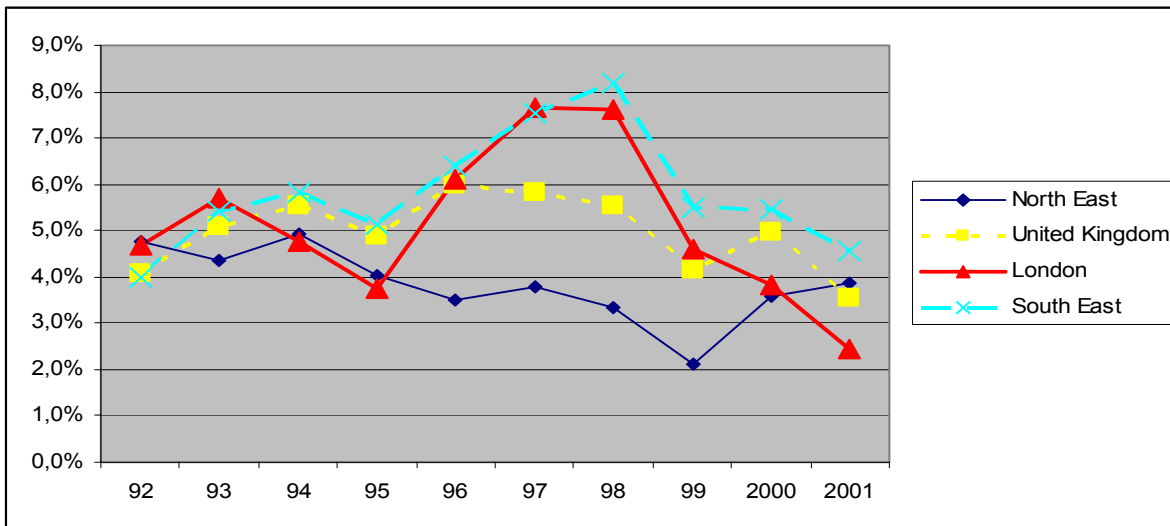


Source: Office for National Statistics

**Figure 3 GVA per head – average annual growth rate between 91 and 2001**

London has also been a key source of growth for the UK economy during the last decade (Figure 3), although other regions also reached higher than UK average GVA per capita growth rates especially the South East. Over the period 1991-2001, the average annual growth rate of GVA per capita was about 5.2% in London compared to 5% at the national level.

In considering the level of GVA per capita (Figure 2) and its evolution (Figure 3) simultaneously, it gets evident that the UK regional landscape is characterised by increasing regional disparities. Indeed, wealthy regions such as London, the South East, and the East record the best growth performances while the latter are below the national average for relatively lagging regions. Northern Ireland however constitutes an exception and seems to be in the way of catching up.



Source: Office for National Statistics

**Figure 4 GVA per head - Annual growth rate between 91 and 2001**

Throughout the 90s London’s growth was primarily driven by the expansion of financial and business services sectors which was particularly solid between 1995 and 1999. As illustrated in Figure 4, the beginning of the new century was marked by a relative slowdown mainly due to the collapse of the high-tech boom which had comparatively stronger repercussions on the economy of London.

Finally, it is also worth noting that London’s aggregate productivity lead is the result of a stronger productivity in each of the major sectors. In other terms, London’s performance is not just the result of a stronger concentration of sectors that typically generate higher added values. If London had the same employment distribution as the UK on average, with its actual labour productivity in different sectors, London would still have a lead of 20% in output per job compared with the prevailing 27% in 2003 (OEF, 2005).

**Investment**

The UK is a favourite place of choice for foreign direct investment (FDI) and London plays a key role in this picture. In terms of stock of inward investment, the UNCTAD ranks the UK second after the United States, with USD 772 billion at the end of 2004. This is about 50% higher than the stock of inward investment in Germany. In terms of investment flows within Europe, the Ernst & Young European Investment Report estimates that in 2004 the UK remained the leading location for FDI with a share of 19.5% of total investment projects, just before France with 17% and Germany with 6%. France is the leading location for manufacturing investments while the UK has the lead for non-manufacturing investments. However, the UK lead in this field has declined from 31.5% in 2000 to 25% in 2004.

Globally, in 2004, non manufacturing investment accounted for 59.3% of all FDI projects reported across Europe (Ernst & Young, 2005).

According to Ernst & Young (2005), the flow of service sector investment to Western European economies is currently mitigating the impact of manufacturing investment migrating to Eastern Europe. In this context it is not surprising that the so-called service-cities are attracting a high proportion of these non-manufacturing investments. In 2004, the top regional location for inward investment was London (153 projects against 563 for the UK), before regions such as Paris (136 projects; rank 2), or Catalonia (50 projects; rank 6). Berlin does not appear in the top 10.

in Millions of EUR	1998	2000
<b>GFC</b>		
Germany	420,124	451,440
GFC Berlin / GFC Germany	4%	4%
United Kingdom	222,996	260,744
GFC London / GFC United Kingdom	17%	18%
<b>GFC/GVA</b>		
Germany	25%	<b>25%</b>
Berlin	27%	<b>23%</b>
United Kingdom	19%	<b>20%</b>
London	17%	<b>18%</b>

Source: Eurostat data

**Table 5 Gross Fixed Capital formation (GFC) at NUTS 2 level**

Since foreign investment is a component of total investment it is worth considering also total fixed capital formation. Globally, London concentrates about 18% of total national Gross Fixed Capital Formation<sup>16</sup>. Even if this share may seem important it is due to the heavy economic weight of London within the UK landscape. In terms of investment rates (ratio of Gross Fixed Capital formation and Gross Value Added) London remains (18%) behind the UK average (20%) and far behind Berlin (23%). This observation is partly related to the service-metropolis character of London and its specialisation in activities with relative low capital intensities.

<sup>16</sup> GFC = Investment, both foreign and national, in assets which are used repeatedly or continuously over a number of years to produce goods.

## Economic Structure

While thirty years ago, about one fourth of London's total employment was concentrated in the manufacturing sector, the latter represented only 6.6% in 2001. In London the contraction of industrial employment (-70%) has been faster than in the UK (-55%). Today, those manufacturing activities which remain in London are relatively knowledge intensive requiring face-to-face contacts and a fast speed of information and knowledge exchange (OEF, 2005). Over 40% of manufacturing employment is concentrated in the printing and publishing sector.

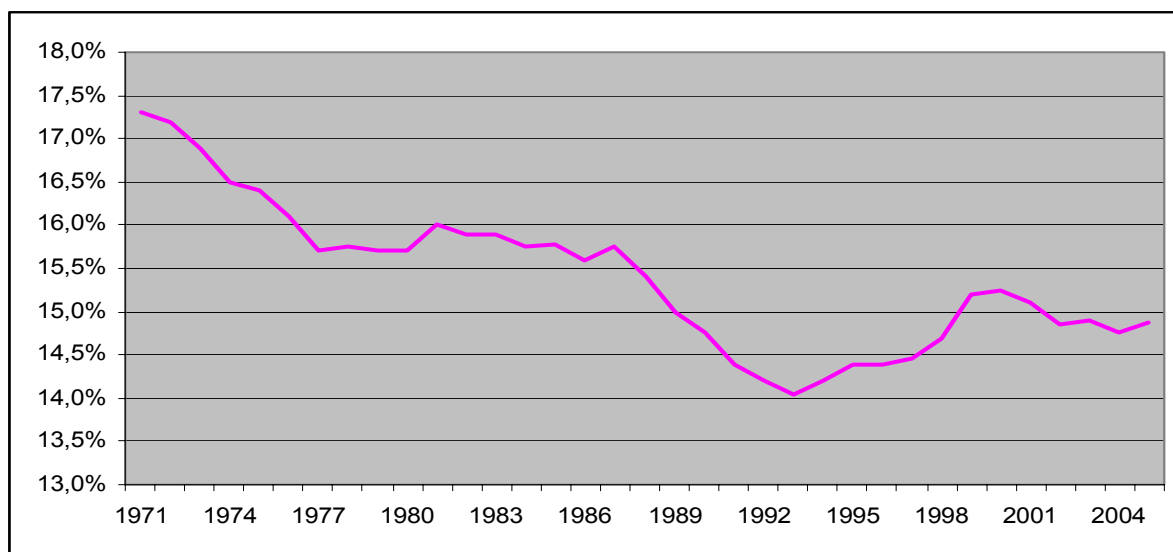
London's des-industrialisation went ahead with a continuously strong development of financial services which secured its position as one of the three principal world financial centres with New-York and Tokyo. But the strongest growth in employment can be observed for the business services sector (accountancy, law, advertising, consultancy, IT, R&D, recruitment, security, office cleaning, etc.) with 0.5 million more employees than in 1971. Between 1971 and 2001, the share of financial and business services in total employment has doubled both in the UK and in London.

Sectors	1971		1991		2001		2005	
	London	UK	London	UK	London	UK	London	UK
Manufacturing	22,5	30,5	9,3	17,4	6,6	13,7	5,4	5,4
Other production (incl. Construction)	7,6	12,9	6,3	10,7	5,1	8,6	5,5	5,5
Distribution & hotels	19,7	19,4	20,5	22,5	21	23,2	21,2	21,2
Transport & communications	10,9	6,9	8,6	5,9	8	6,2	7,5	7,5
Financial & business services	15,9	9	27,2	15,6	33,1	19,3	32,1	32,1
Non-market & personal services	23,1	20,3	27,8	27,1	26,2	28,5	28,3	28,3

Source: OEF (2005 numbers are estimates)

**Table 6 Employment distribution among sectors**

As illustrated in Figure 6, London's strong economic performance over the past decade is in strong contrast with its economic development during the seventies and until the beginning of the nineties. Indeed, during this period, London lost both, people and jobs. The trend remained downward until 1993, when London began an impressive turnaround with about 850,000 new job creations during the ten following years. Figure 5 illustrates the evolution of London's employment share in total UK employment. This share dropped from 17.4% in 1971 to a bottom of 14% in 1993 followed by an increase to 15% in 2004.



Source: OEF, 2005

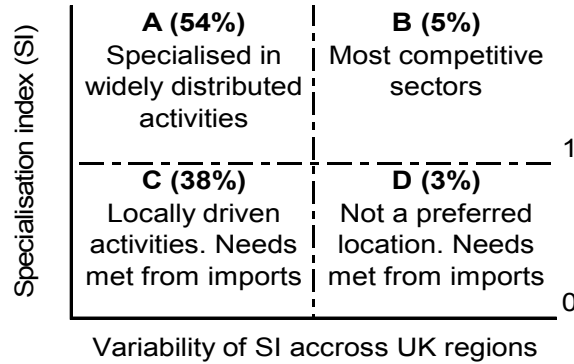
**Figure 5 London employment as share of the UK**

The impressive growth performance of London during the 90s was mainly driven by the high-tech boom. When the latter collapsed at the beginning of the new century, it generated a depression of global financial markets. Therefore, between 2000 and 2002, almost 100,000 net jobs were lost in (OEF, 2005). It is yet not evident whether employment returned to an upward trend since the recovery of 2003 was followed by another shake-out in 2004.

Moreover, in terms of employment, financial and business services have somewhat lost on importance (Table 6). If in 2005 the latter represented 32.1 % of London's total employment, this percentage was with 33.1% slightly higher in 2001.

### **Specialisation**

London's economy is driven by sectors for which it has competitive advantages over other parts of the UK or other regions of the world. The OEF (2005) identifies London's competitive profile applying a methodology that measures the region's the degree of specialization in a given sector and the sector's degree of spatial dispersion within the UK.



Source: OEF (2005), based on the Annual Business Inquiry of 2003

**Figure 6 Specialisation of London’s activities in the UK**

Activities that fall in quadrant A are those that are widely and relatively evenly spread through the UK (low standard deviation of the SI), but for which London has a strong specialization. For these activities, London appears to be more involved than required to meet the local demand. With 2.1 million jobs, these activities account for 54% of total employment in London and cover the sectors of accountancy, law and business consulting.

London’s key specialities are those which are situated in quadrant B covering sectors for which London is strongly specialised and which are spatially relatively concentrated. Unsurprisingly, London’s most competitive sectors are those which are related to its capital markets, to its air transport hub and to its host role for UK and international media and the publishing industry. Globally, these sectors represent about 5% of total employment.

Quadrant C covers the sectors for which London has no real specialisation and which are relatively evenly distributed over the UK. It is interesting to observe that the health and education sectors are situated in this quadrant. Despite London’s international reputation in these areas, the relatively low specialisation index may be related to the commuting workforce using public services at their living palace rather than their working place.

Finally, quadrant D covers activities which are spatially relatively concentrated but for which London does not achieve a high specialisation index. This is especially the case for manufacturing of motor vehicles and defence activities. For industries situated in quadrant C which account for about 3% of employment, London has limited comparative advantages and is not the preferred location.



## Labour market and social conditions

Unemployment measures and comparisons are always a subject to controversy. It is worth noting that the LFS methodology which is used here may underestimate the 'real' unemployment rate since it excludes people who do not anymore actively seek for a job (most problematic long term form of unemployment) or people who might be under training during the survey<sup>17</sup>. However, LFS data allow for a reasonable comparison between European regions, which would not be possible with other data due to varying definitions of unemployment.

	1999	2000	2001	2002	2003	2004
<i>in %</i>						
<b>Germany</b>	<b>8.4</b>	<b>7.8</b>	<b>7.8</b>	<b>8.7</b>	<b>9.9</b>	<b>10.3</b>
Berlin	14.8	14.1	15	15.9	17.9	18.4
<b>United Kingdom</b>	<b>6</b>	<b>na</b>	<b>5</b>	<b>5.1</b>	<b>5</b>	<b>4.7</b>
London	7.6	7.3	6.5	6.8	7	6.8
Inner London	9.5	9.4	8.5	9.1	9	8.9
Inner London - West	6.8	6.6	6.3	7.4	7.2	6.6
Inner London - East	11.1	11.3	9.9	10.2	10.1	10.4
Outer London	6.5	5.9	5.3	5.4	5.8	5.5
Outer London - East&North	7.1	6.2	5.8	6.1	6.1	5.1
East						
Outer London - South	5.6	5	4.5	4.5	5.7	5
Outer London - West&North	6.5	6.3	5.4	5.4	5.7	6.2
West						
<i>Ratio</i>						
Germany/UK	1.4	na	1.6	1.7	2.0	2.2
London/UK	1.3	na	1.3	1.3	1.4	1.4
<b>Berlin/London</b>	<b>1.95</b>	<b>1.93</b>	<b>2.31</b>	<b>2.34</b>	<b>2.56</b>	<b>2.71</b>
Inner London - East / UK	1.85	na	1.98	2.00	2.02	2.21

Source: Eurostat Regional statistics

**Table 7 Unemployment rate in London and Berlin (LFS adjusted series)**

Table 7 illustrates that between 1999 and 2004, the average UK unemployment rate has decreased at a faster speed than in London. Despite its role of economic engine London faces an unemployment rate of about 7% which is almost two times higher than the one observed at the national level.

<sup>17</sup> LFS data come from household surveys. Unemployed persons are all persons aged from 15 to 74 who were not employed during the reference week, who had actively sought work during the past four weeks and who were ready to begin working immediately or within two weeks. The UK Office for National Statistics also use LFS data.

Most minority ethnic groups have unemployment rates more than twice as high as can be observed for the white population. The Bangladeshi community has the highest unemployment rate with 24% in 2001. The latter is about 19% within the community of Black Africans. At the same time, the employment level of the white population is close to the national average (unemployment rate of 5.1%).

A closer look with respect to the employment situation within London reveals significant divergences across the London boroughs. Excluding the very specific case of the City of London borough, none of the Inner London boroughs has a better performance than the national average. The worst situation is observed in the 9 Inner London – East boroughs, where the 10.4% unemployment rate in 2004 is more than two times higher than in Greater London. Tower Hamlets, Newham, Hackney and Haringey have the lowest employment rate in the UK (below 60% in 2004).

London's contrasting picture of robust wealth and job creation capacity on the one hand and the relatively high level of unemployment on the other hand is obviously related to the high population growth but also to the inadequacy between supply and demand of qualification on the internal job market. While London has a higher proportion of graduates than the UK, it also has a higher proportion of people with no or low qualification (below NVQ level 2). At the same time, London offers relatively less jobs for unskilled occupations than the UK on average (OEF, 2005).

While the OEF (2005) forecasts an additional job creation of about 450,000 by 2015, it does not expect the employment rate to change significantly (6.8%). New jobs primarily benefit to well-qualified commuters and less to inhabitants of the disadvantaged Inner London boroughs.

Table 7 also compares the unemployment situation of UK and London with the one in Germany and Berlin. As a result of different economic trends, the German unemployment rate is more than twice as high as the UK rate in 2004. Compared to Berlin, London does not show any sign of alarming unemployment. Between 1999 and 2004, the slow decrease of London's unemployment rate in parallel to a fast increase of Berlin's unemployment rate lead to very high levels of relative unemployment ratios. In 2004, the unemployment rate in Berlin was about 2.7 times higher than in London.

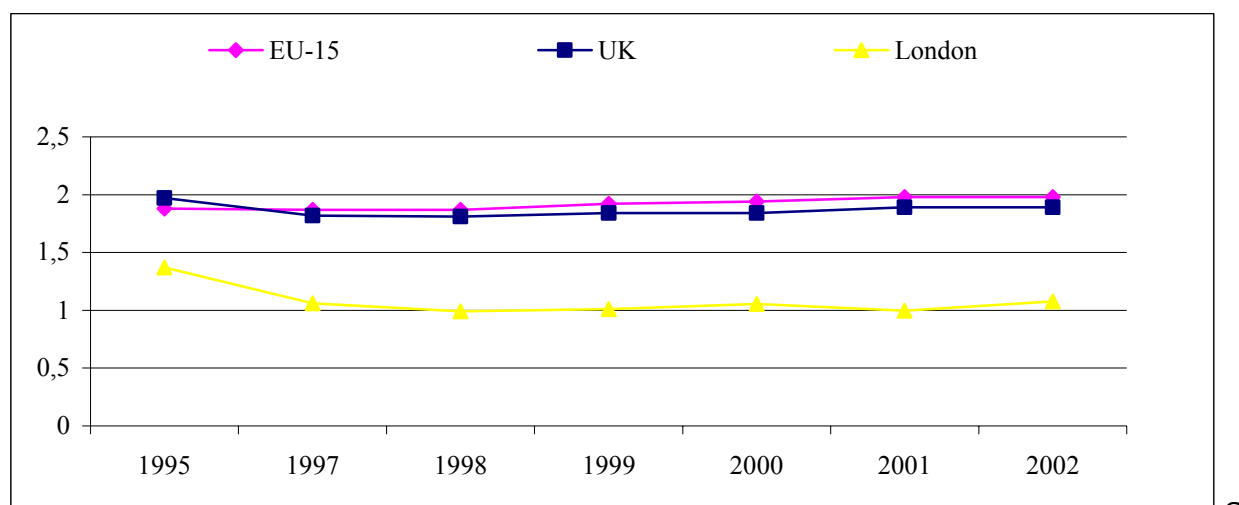
### **Social deprivation**

Polarisation between rich and poor is far more marked in London than anywhere else in the UK. The most important explanatory factor for London's high rates of poverty of both children and working age adults is related to unemployment.

Poverty which can be measured by the income, unemployment rate or social benefit receipts has strong ethnic and spatial dimensions (GLA, 2002). When poverty is defined as a household income which amounts to less than 60% of the national average household income, it appears that in Inner London about 30% of working age adults, 36% of pensioners and 53% of children of are living in poverty. The respective percentages for Outer London are much lower: 19% of working age adults, 21% of pensioners and 33% of children. When concentrating on ethnic minorities the situation is even worse. About 73% of Pakistani and Bangladeshi children and 55% of black children are living in income poverty not only in London but also at the national level.

### Knowledge Creation and Innovation Capacity

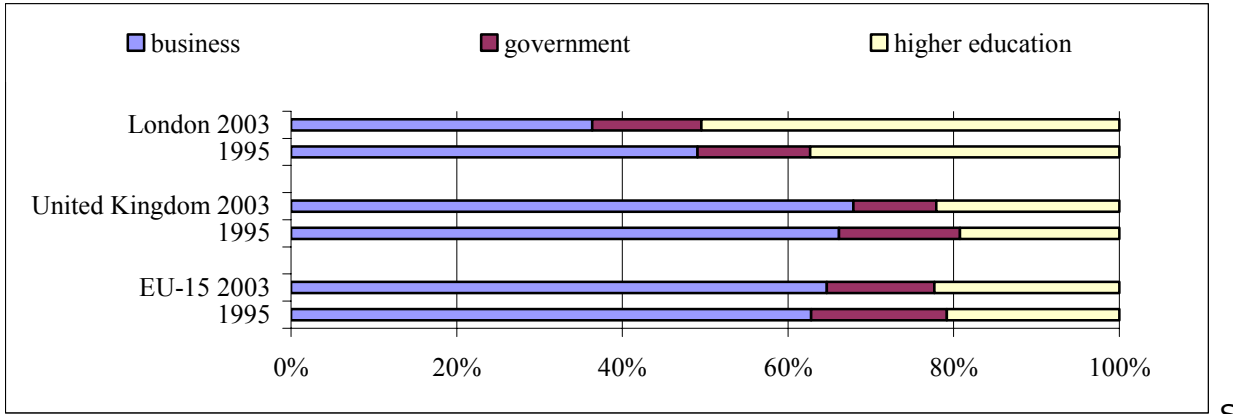
London’s R&D intensity is surprisingly low and turns around 1% of GDP, that is about half the R&D investment in relation to GDP observed at the national and the European levels. Moreover, as illustrated by Figure 9, the share of business R&D in total R&D expenditures is extremely low and accounts for less than 40% in 2003<sup>18</sup>. London’s R&D activities are clearly driven by universities which play an increasing role in terms of R&D investment.



Source : Eurostat

**Figure 7 R&D intensity (R&D expenditures/GDP)**

<sup>18</sup> Given these observations, it is rather unlikely that London but also the UK will match the Lisbon objective in 2010 of an R&D intensity of 3% and a share of private R&D of two thirds.



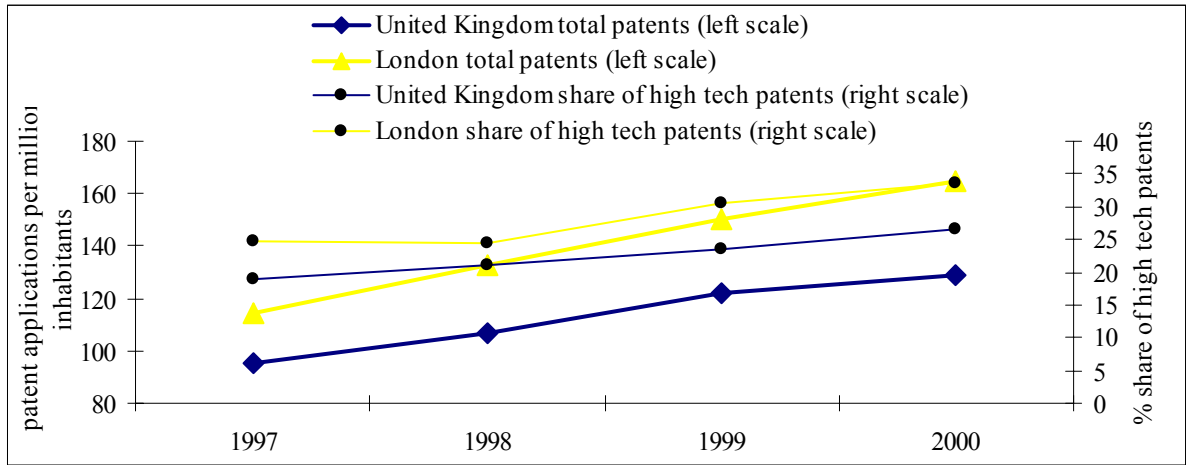
Source : Eurostat

**Figure 8 R&D expenditure – share by institutional sectors**

Nevertheless, London’s R&D output, proxied by patent application to the European Patent Office (EPO) per million of inhabitants, is important especially regarding high tech sectors<sup>19</sup>. Given that its R&D intensity is about half the one of the national level, one may expect a lower R&D output. Figure 9 indicates the opposite. With a lower level of input, London produces a higher level of output which indicates an important R&D productivity. It may well be the case that London benefits from important urbanisation and/or localisation externalities which speed up the knowledge flows and thus its innovation capacity. As far as high tech R&D output is concerned, London achieves with 34%<sup>20</sup> a much higher share compared to the UK level of about 26%.

<sup>19</sup> However, London does not perform as well as Berlin, where the number of patent applications to the EPO per million inhabitants is about 200.

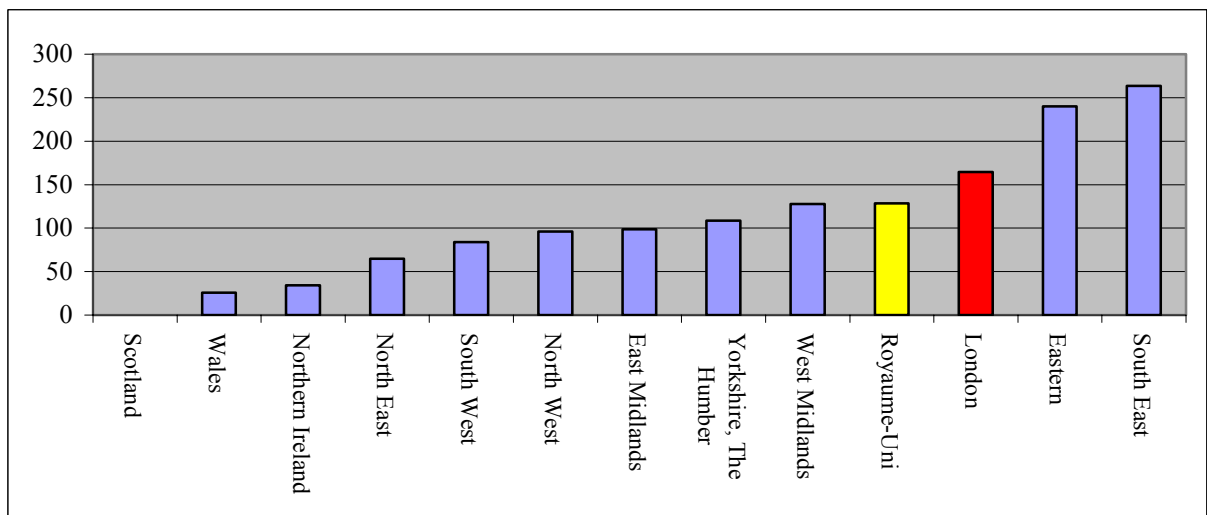
<sup>20</sup> Berlin’s share of high tech patents in total patents is about 29%.



Source : Eurostat, Note: High tech patent applications cover the following sectors: Computer and automated business equipment, Micro-organism and genetic engineering, Aviation, Communication technology, Semiconductors, Laser.

**Figure 9 Patent applications to the EPO per million inhabitants and share of high tech patents**

The comparison of UK’s NUTS I regions in terms of patenting activity is illustrated in Figure 10. At this level of spatial disaggregation London is largely outperformed by the South East region driven by Berkshire, Bucks and Oxfordshire and the Eastern region driven by East Anglia. London’s patenting performance is closer to the national average than UK’s most innovative regions.



Source : Eurostat

**Figure 10 London’s position within the UK landscape in terms of patent application to the EPO per million inhabitants (2000)**

## Other specific aspects

### Trade

The influence of London on the rest of the UK's economy can be highlighted by its internal trade linkages. The Oxford Economic Forecasting (OEF, 2005) estimates that London spent around £110 billion on goods and services imported from the rest of the UK in 2004 but exported for an amount of about £125 billion leaving it with a trade surplus of £15 billion. While London is clearly a net importer for goods produced by primary and secondary sectors, its specialisation as a service-metropolis is confirmed when considering its important trade surplus for the tertiary sectors and especially for financial and business services.

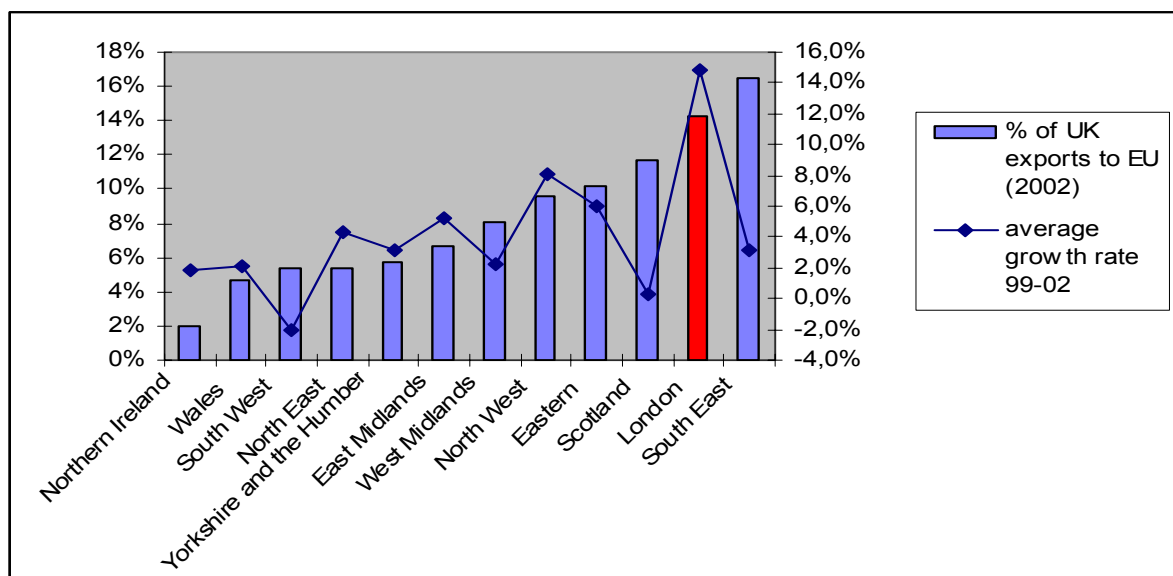
Sector	(X - M) in £ billion	X	M
Agriculture	-2,8	0	2,8
Mining and quarrying	-2	0,2	2,2
Manufacturing	-24,6	13,8	38,4
Electricity, gas and water	-1,2	2,2	3,4
Construction	-4,8	6,3	11,1
Wholesale and retail trade	6,9	13	6,1
Transports and communication	7,8	10,4	2,6
Financial and business services	23,6	66,3	42,7
Other services	11,9	13,1	1,2
<b>Total</b>	<b>14,8</b>	<b>125,3</b>	<b>110,5</b>

Source: OEF estimates

**Table 8 London's balance of trade with the rest of the UK (2004)**

According to OEF (2005) 'the impact of London on the UK economy is greater than that of a typical economic capital city on its hinterland'. London is a 'world-city' that enhances the whole UK potential. London represents the lion's share of European headquarters for global companies, offering jobs that would not be offered without the metropolitan character of the city. A similar argument can be put forward regarding tourism.

London's leading position in the UK economy is also apparent with respect to its international trade position. In 2002, London accounted for 14% of UK's total exports to the EU. Between 1999 and 2002, it showed the strongest average annual growth in exports (14.8%) of all UK regions. However, South East remained UK's most export oriented region. As far as imports are concerned, London's imports from the EU also represent about 14% of UK's imports while the South East share (29%) is higher than its export share.



Source: Office for National Statistics

**Figure 11 UK regional trade - exports to the EU**

**Summary and policy implications**

London is undoubtedly an international service metropolis and, as Paris, one of the two global nodes of Europe. For the last 15 years, London benefited from the UK’s sustained economic growth. In turn, London has feed the growth of the rest of UK, through its internal trade linkages within the UK or through its magnet position for tourism and FDI. Economic growth has also translated into net job creations even if its unemployment rate is above the national average.

Confronting the estimates for new job creations (450,000 - 600,000) and net for population inflows (800,000) by 2015, it appears that the key challenge for London’s public authorities is to ‘accommodate growth’. The main constraints are congestion, with heavy pressure on the transport infrastructures and extremely high costs associated to housing and commercial spaces. Finally, one of the urgent problems to which are confronted most metropolitan centres are social, spatial and ethnic polarisation materialised by high unemployment and poverty rates striking large segment of the resident population.

## Regional development priorities, policies and impacts

### *Regional policies and budgets*

- Public income and spending

Oxford Economic Forecasting (2005) estimates that in 2003/2004 the net tax export from London to the UK public finances ranged between £8 and £16 billion, despite the deterioration of public finance at the national level. Other estimates (Greater London Authority, 2002) suggest that London's tax export in 2003/2004 was between £1 billion and £7 billion.

2003/04	London (£ bn)	UK total (£ bn)	London's share of UK (% UK)
<b>Total Revenues</b>		418,9	
Residence-based	71,2		17,0%
Workplace-based	80,7		19,3%
<b>Total Expenditure</b>		455,2	
Minimum	62,8		13,8%
Maximum	64,9		14,3%
<b>Net Contribution</b>		-36,3	
Minimum	8,4		
Maximum	15,8		

Source: HM Treasury budget report, OEF calculation

**Table 9 Net Contribution of London to UK public finance (2003/04)**

The net fiscal contribution of London is a direct result of Londoners' high tax bill, accounting for an estimated (OEF, 2005) 17-19% of government revenues (£71-£81 billion) in 2003/2004. While the UK public finance presented a deficit of £36.3 billion, the estimated overall public finance balance of London was positive ranging between £6 and £16 billion. The OEF (2005) estimates also indicate a continuously deteriorated of the fiscal balance of London since 1999 which however still remains positive. For the future, there may be a risk that Londoners have to bear a disproportionate share of future tax increases (OEF, 2005).

Public spending per capita in London is significantly higher than in the rest of the UK. This observation is due to the urban and capital-city nature of the region but also to London's relatively high unemployment. On the other hand, public spending per employed person in London is estimated to be about 7% lower than the UK average.



<b>2003/2004</b>	Min (£ bn)	Max (£ bn)	Min (£ per head)	Max (£ per head)
East	34,2	35,4	6.300	6.500
East Midlands	27	28,9	6.400	6.800
(...)				
<b>London</b>	<b>62,8</b>	<b>64,9</b>	<b>8.500</b>	<b>8.800</b>
Scotland	42,5	45,2	8.400	8.900
Northern Ireland	15,8	16,4	9.300	9.700
<b>Total UK Managed Expenditures</b>	<b>455,2</b>	<b>455,2</b>	<b>7.200</b>	<b>7.200</b>

Source: PESA 2005, OEF calculations

**Table 10 Total government expenditures by region (2003/04)**

The investigation of identifiable expenditure per capita desaggregated according to specific functional services gives further insight. Together, public order & safety and transport explain 60% of the difference between expenditures per capita in London and the UK. The higher than average spending per capita in health and education is probably due to the presence of large and high standard hospitals and universities. It is however interesting to note that London has a much lower expenditure per capital in the field of enterprises and employment policies. The UK Central government expenditure for enterprises and employment include, among others, the Regional Selective Assistance Scheme (Investment grants). Moreover, despite London's problems of unemployment and serious deprivation in some boroughs, its level of social protection spending is not higher than the average spending at the UK level.

<b>2003/04</b>	Public order & safety	Enterprises & employment	Transport	Health	Education & Training	Social Protection
	(£ per head)	(£ per head)	(£ per head)	(£ per head)	(£ per head)	(£ per head)
East	259	87	190	1.098	895	2.232
East Midlands	306	126	193	1.091	975	2.344
(...)						
<b>London</b>	<b>596</b>	<b>104</b>	<b>683</b>	<b>1.440</b>	<b>1.210</b>	<b>2.541</b>
Scotland	360	290	341	1.456	1.102	2.874
Northern Ireland	692	243	210	1.367	1.322	3.103
<b>UK</b>	<b>366</b>	<b>174</b>	<b>273</b>	<b>1.255</b>	<b>1.031</b>	<b>2.550</b>

Source: PESA 2005, OEF calculations

**Table 11 Identifiable expenditures by region & type of service (2003/04)**

### *Regional Selective Assistance UK*

Regional Selective Assistance (RSA) is part of a package of the UK government's Regional Policy and is its main scheme for financial assistance to industry. It provides discretionary grants to companies creating or safeguarding employment in the Assisted Areas (AAs). RSA also aims at improving the competitiveness of the AAs. To be eligible for RSA, projects have to demonstrate a potential positive impact on employment and need to prove that a given investment would not take place without an investment grant.

By the early 1990s, the traditional 'north-south' gap that characterized the UK regional landscape for a long time has been substantially reduced by gradual regional economic convergence. Therefore, in 1993, RSA redraw the map of AAs. The revised map acknowledged for the first time small Intermediate AAs in London (plus Thanet as Development Area) and in the South. At the same time 'longstanding' AAs, mainly in Wales have not been eligible any more.

DTI, the Scottish Executive and the National Assembly for Wales have ordered an evaluation of RSA interventions during the period 1991-1995. The principal aim was to assess the policy impact in terms of net additional job creation in AAs as well as the cost-effectiveness<sup>21</sup>. Globally the evaluation report regarding the effectiveness and efficiency of RSA interventions is positive. Over the period 1991-1995, £ 1.1 billion have been granted to 5,377 projects, which were expected to create or safeguard 210,000 jobs. Applying a subsidy rate of about 12.5%, the grants generated a total of £ 8.8 billion capital investment with an average cost per project amounting to £ 1.6 million. After adjusting for deadweight (20% of projects would have gone ahead without RSA assistance), displacement and inter-industry linkages (20% of additional jobs have been 'attracted' from elsewhere), the estimates indicate that 84,000 net jobs have been created as a results of RSA subventions between 1991 and 1995. The associated cost of one job creation is about £ 13,095, an amount which is considered as cost efficient.

The evaluation also concludes that RSA played an important role in attracting internationally-mobile investment into the UK, a more implicit objective that the government targeted though the support scheme. Indeed, the evaluation highlighted that about 18% of the projects would have been realised outside the UK without the RSA support scheme. RSA has also contributed to increase the AA's competitiveness. Over a third of assisted companies realised a major-technical advance, which, through copying and imitation by competitors, might have had a wider UK-impact.

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<sup>21</sup> Given that London only accounts for a very small 1% proportion of all RSA supported projects in the period 1991-1995, it is not possible to draw differentiated observations with respect to other regions.

## Policy strategy

### *Economic development strategy (EDS)*

The Mayor of London<sup>22</sup> has a legal responsibility (Greater London Authority Act 1999) to define and implement a development strategy covering transport, planning and development, economic development and regeneration, culture, and a range of environmental issues including bio-diversity, ambient noise, waste disposal and air quality.

This case study essentially concentrates on the economic development and regeneration aspects. The current Economic Development Strategy (EDS), entitled Sustaining Success (published in January 2005) focuses on four major investment themes: (1) places and infrastructure (2) people (3) enterprise (4) and promoting London.

<p><b>Places and Infrastructure</b></p> <ul style="list-style-type: none"> <li>- Support the delivery of the London Plan, to promote sustainable growth (...)</li> <li>- Deliver an improved and effective infrastructure (...)</li> <li>- Deliver healthy, sustainable, high quality communities and urban environments</li> </ul>	<p><b>People</b></p> <ul style="list-style-type: none"> <li>- Tackle barriers to employment</li> <li>- Reduce disparities in labour market outcomes between groups</li> <li>- Address the impacts of concentrations of disadvantaged.</li> </ul>
<p><b>Enterprise</b></p> <ul style="list-style-type: none"> <li>- Address barriers to enterprise start-up, growth and competitiveness</li> <li>- Maintain London’s position as a key enterprise and trading location</li> <li>- Improve the skill of the workforce</li> <li>- Maximise the productivity and innovation potential of enterprises.</li> </ul>	<p><b>Marketing and promotion</b></p> <ul style="list-style-type: none"> <li>- Ensure a coherent approach to marketing</li> <li>- Co-ordinate effective marketing activities across London</li> <li>- Develop London as a top international destination and principal UK gateway for visitors, tourism and investment.</li> </ul>

The EDS sets out an action plan covering the 2005-2016 period. EDS aims at bringing actors together and at improving networking. Therefore the action plan recommends how organisations with an interest in London, whether public, private or voluntary, could act together. The London Development Agency (LDA) is the Mayor’s principal tool to implement EDS successfully.

<sup>22</sup> His vision for London’s future may be summarised as follows: London should strengthen its position “as a sustainable world city with strong long-term economic growth, social inclusion and environmental improvement”.

### *The Greater London Authority Budget and the LDA*

The Greater London Authority (GLA) sets a budget for each of the four following functional bodies and its own administration tasks: (1) Transport for London (TfL), (2) the London Development Agency (LDA), (3) the Metropolitan Police Authority (MPA), and (4) the London Fire and Emergency Planning Authority (LFEPA).

Globally, the GLA budget (2005/2006) amounts to £9,077 million and represents about 14% of total public expenditures in London (£ 63,000 million).

Within the GLA budget, Transport accounts for 55.7% of total expenditures and the Police and Fire-fighters for 39%. The LDA budget represents 4.2% of total expenditures and amounts to £ 379 millions, a sum which is relatively limited in relation to the scale of London's economic challenges.

<b>2005/2006 (£ millions)</b>	<b>MPA Police</b>	<b>LFEPA Fire &amp; emergency</b>	<b>TfL Transport</b>	<b>LDA</b>	<b>GLA administration</b>	<b>Total</b>
Expenditures	3,114	449	5,033	<b>377</b>	69	9,042
Allowance for contingencies			26	<b>2</b>	0.1	28.1
Reserves to be raised for meeting future expenditure		1.4			5.3	6.7
<b>Total expenditure</b>	<b>3,114</b>	<b>450</b>	<b>5,059</b>	<b>379</b>	<b>74</b>	<b>9,077</b>

**Table 12 Consolidated budget requirements for GLA (2005/06)**

In line with the EDS, the LDA pursues economic sustainable development encompassing people, places, businesses, marketing and promotion, which protects environment and ensures equity. LDA also supports the delivery of other 'Mayoral' strategies such as the Childcare Strategy and the London Plan.

Considering its relatively limited budget in comparison to the scale of London's economy, much of the LDA impact depends on its capacity to make selective interventions, leveraging its budget and brokering solutions from other private and public resources.

### **Drivers of regional competitiveness**

This section draws on the methodology defined in the previous chapter (WP 3.1.), and attempts to answer the question of the type of policies implemented by the metropolitan region of London. The analysis is based on the relative financial means that Greater London

Authority invests in regional competitiveness drivers and highlights the effective priorities of its economic development policy. First, the London Development Agency's £379 million budget (EUR 550 million) is analysed. Second, it is assessed how the Structural Fund spending matches the identified competitiveness drivers.

It is worth noting that given the limited time and data availability, the analysis does not cover the totality of economic development means spent within the GLA territory but concentrates on the means and competencies managed by the responsible regional authority for London which is precisely the GLA<sup>23</sup>.

#### *Drivers of regional competitiveness – LDA*

The LDA 2005/2006 Corporate Plan breaks down the budget into the 4 central investment themes of the EDS which are as previously mentioned (1) places and infrastructure (2) people (3) enterprise (4) and promoting London. This breakdown provides useful information since it closely matches the identified 'drivers of regional competitiveness' (WP 3.1).

<b>Drivers of regional competitiveness</b>	<b>Corresponding EDS Themes</b>	<b>Corresponding EDS sub-themes</b>	<b>budget 2005/06 (£ mio)</b>	<b>Share of total</b>
<b>Hard or tangible infrastructure</b>	Infrastructures and places	Mixed use, Workspace/Employment, Infrastructure improvement	146.9	<b>42%</b>
<b>Social Capital</b>	People, Knowledge and enterprise, Promotion and marketing	Barriers-discrimination, Liaison, Promotion and marketing	38.1	<b>11%</b>
<b>Human Capital</b>	People, Knowledge and enterprise	Soft skills, Hard skills, Business advice, Knowledge transfer	129.1	<b>37%</b>
<b>Fiscal and financial interventions</b>	NOT IDENTIFIED	NOT IDENTIFIED		
<b>Financing</b>	Knowledge and enterprise	Intermediary finance	10.4	<b>3%</b>
<b>Innovation support</b>	NOT IDENTIFIED	NOT IDENTIFIED		
<b>Amenities</b>	Infrastructures and places	Public space, Land remediation	23.2	<b>7%</b>
LDA economic development budget			<b>347.8</b>	100%
Childcare			4.1	
Housing (local people)			23.2	
Implementation			11.6	
<b>TOTAL LDA budget</b>			<b>386.6</b>	

**Table 13 Breakdown of LDA budget themes into drivers of competitiveness**

<sup>23</sup> The analysis does not cover the UK Central government expenditures for Enterprises and Employment in London (see Table 10).

The breakdown of LDA's expenditures with respect to the competitiveness drivers is reported in Table 13. The repatriation of financial means which reflects the effective priorities of the development policy indicates that LDA is largely implementing a so-called modern regional development policy aiming at strengthening 'soft' infrastructure. Even if 'hard' infrastructure accounts for about 42% of the budget, taken together, the financial efforts with respect to human and social capital amount to 48%. It can also be observed that direct financial incentives play a very limited role and represent only 3% of total expenditures. Unfortunately, more analysis would be needed to identify the intensity of innovation support. Given that innovation support is transversally allocated, it was not possible to isolate the associated share of total spending.

#### *Drivers of regional competitiveness – Objective 2*

For the programming period 2000-2006, the UK concentrates 7.8% of EU Structural Funds out of which a very small part of about EUR 0.28 billion benefits to London. This amount represents only 0.75% of the GLA expenditure budget cumulated for these 6 years.

2000-2006	The Four Structural Funds				
in billion EUR	Obj 1	Obj 2	Obj 3	Com init	Total
UK	6,2	4,7	4,6	0,96	16,5
<b>London</b>	0	<b>0,27</b>	0	0,01	0,3
Germany	20	3,7	4,6	1,6	29,9
<b>Berlin</b>	<b>0,72</b>	<b>0,4</b>	0,19	0,015	1,33
Total EU SF	150	22,5	24,5	13	210

**Table 14 The structural fund endowments in the UK and London compared to Germany and Berlin**

Parts of 13 London boroughs are eligible for the Objective 2 programme<sup>24</sup>. The areas under the Objective 2 programme represent a total population of just over 853.000 people. The primary objective of the programme is to redress the imbalance in London's economy by tackling barriers to economic opportunity in key areas suffering industrial decline, urban deprivation, low economic activity and social exclusion. It focuses on three priorities: community economic development; business development and competitiveness measures; and improvement in infrastructure, premises and environment. The strategy also incorporates four cross cutting themes: equal opportunities; supporting innovation; sustainable development; ensuring local benefit. The program strategy was prepared prior

<sup>24</sup> London as a whole also benefits from the INTERREG III B cooperation initiative for "North West Europe" and the INTERREG III C – West Zone interregional initiative. The URBAN II programme is assisting the Stockwell area of London in its regeneration. Objective 3 funding designed to support education, training and employment policies also covers the region.

to the emergence of a regional policy agenda with the creation of the London Development Agency and its Regional Economic Strategy.

<b>Drivers</b>	<b>Corresponding Measures in Objective 2 SPD</b>	<b>(EUR mio)</b>	<b>Share</b>
<b>Hard Infrastructure</b>	M.3.1 Strategic Sites, Infrastructure & Environment (ERDF)	70,143	<b>40%</b>
	M.3.2 Expansion & Improvement of Premises for SMEs (ERDF)	36,003	
<b>Social Capital</b>	M.1.1 Building economically sustainable communities (ERDF)	14,525	<b>30%</b>
	M.1.2 Developing Community Business & Infrastructure (ERDF)	14,525	
	M.2.1 Advice & Mentoring for SME Start Ups (ERDF)	21,096	
	M.2.2 SME Business Development Programmes (ERDF)	24,332	
	M.3.3 Marketing (ERDF)	4,988	
<b>Human Capital</b>	M.1.3 Community Skills Development (ESF)	11,265	<b>11%</b>
	M.2.7 Developing a Competitive Workforce (ESF)	11,943	
	M.3.4 Ensuring Local Benefits (ESF)	5,372	
<b>Fiscal and financial interventions</b>		NA	
<b>Financing</b>	M.2.3 Funding for Growth (ERDF)	21,956	<b>9%</b>
	M.2.8. Micro-loans for business start-ups (ESF)	2,419	
<b>Innovation support</b>	M.2.4 Adopting New Technology, E-Commerce & ICT (ERDF)	19,838	<b>11%</b>
	M.2.5 Product, Process & Technology Innovation (ERDF)	5,175	
	M.2.6 Environmental Technology: Development & Application (ERDF)	4,695	
<b>Amenities</b>	NA		
<b>TOTAL SF budget</b>		<b>268,275</b>	<b>100%</b>

**Table 15 Breakdown of London Objective 2 programme (2000-2006) into drivers of competitiveness**

Table 15 indicates an estimation of the allocation of Objective 2 means to the different drivers of competitiveness. The mid-term evaluation of the London Objective 2 programme (2000-2006) and its updated version of December 2005 have been used as sources of information for the analysis<sup>25</sup>. Considering the allocation of means, the previously observation of a 'soft'-infrastructure oriented 'modern' development policy is largely confirmed. 'Soft' infrastructure in terms of social and human capital and innovative support accounts for about 52% of expenditures. As far as social capital is concerned, the proportion of 30% should be interpreted with care since it includes policy measures which also aim at strengthening human capital but for which a desaggregation was not possible. Nevertheless, the strong message that can be derived from the analysis is that London is largely implementing a development policy based on human and social capital improvements which are undoubtedly fundamental ingredients of regional competitiveness.

<sup>25</sup> The titles of the measures corresponding to the drivers are indicated and explanations about the instruments and activities supported by these measures are provided in the appendix.

## *Summary*

The analysis of the LDA budget and the Structural Fund for Objective 2 provide useful inputs to assess actual policy priorities and their matching with respect to competitiveness drivers. Based on the aforementioned budgets, it can be concluded that currently London invests around 40% of its economic development financial means in hard infrastructures (i.e. workspace, incubators, business parks, training centres, business resource centres, derelict land brought into use, etc.). About 20% of means are allocated to the improvement and the development of social capital (i.e. fighting discrimination, advice and consultancy support for social enterprises, community businesses, women and Black and Minority Ethnic, supporting community networks and neighbourhood partnerships; promoting London for inward investments, etc.). The strengthening of human capital and skills (i.e. training and job brokerage schemes, business consulting, higher-level skills development in particular sectors/clusters, etc.) account for another approximately 20% of expenditures. About 10% are allocated to innovation support (ICT, e-business, R&D support, etc.). Less than 5% of financial means are devoted to financing instruments (micro-loans for start-ups, equity for SMEs, etc.) and more than 5% to amenities (public space, land remediation, etc.). Finally, the direct subsidisation of business investments is not managed by the regional level but is still in the hands of the central government through the RSA scheme.

## **Specific urban policies**

### *Transport policy*

London has to face an important congestion problem. Every day about 725,000 people commute into London (17% of jobs) and another 240,000 commute out of London. Congestion constrains business development and individuals. About 97% of companies in London declare that the productivity of their staff is either seriously or somewhat reduced by the problems faced by commuting (late arrival at work, stress, missed meetings, etc.) (CoL, 2003). Average road traffic speeds in Central London have been on a downward trend for several decades. At the same time, delays, cancellations and overcrowding are frequent with respect to Underground and Railroad services. Clearly, London's transport network is under great pressure and there is a long-run risk for the future development of London's economy in case this problem could not be resolved especially given the projected increase of population, employment and commuters.

Given this situation, the Mayor of London introduced the world's largest congestion charging scheme, applying pricing mechanisms to roads. One measure that has been introduced to reduce congestion is the congestion charge that came into effect in February 2003. The charge is of £8 on weekdays between 7am and 6:30 pm.



It is estimated that the congestion charge fell by 30% soon after the introduction of the scheme. This measure seems not having displaced the congestion to other GLA areas. For instance, it is estimated (OEF, 2005) that the 'number of seconds lost per vehicle km' decreased from 120, within Central London, in 2000 to 92.3 in 2004, within the Congestion Charge Zone (98 in the rest of Central London). In parallel, it appears (OEF, 2005) that bus services in and around the charging zone went through an above average improvement in 2003. Available evidence suggests that the congestion charge has had a more or less neutral cost effect for companies.

### *Real estate policy*

The expected future growth of both population and jobs over the next decade is likely to generate increasing pressures on the housing market and the commercial property market. Regularly, the place of the Green-belt within the planning system is debated as a way to accommodate future growth.

The employment slowdown following the 2000 financial markets correction, and the limited recovery since then, had a substantial impact on rents. In addition to that, the boom in the completion of office space in Central London led to substantial increase in vacant property and thus falls in office rents. However, office costs in London are still typically at least twice as high as the UK average. Internationally, the West End is the most expensive office location in the world, before Tokyo and the London City. The GLA estimates the stock of London office space at 27.4 million square metres in 2002 and projects a need for an additional 7-9 million square metres by 2016. Commercial property development is essentially planned in the traditional Central London and in the Docklands (i.e. Canary Wharf).

As far as housing is concerned, the Mayor's London Plan sets an annual minimum target of 23,000 additional homes, in order to accommodate the expected additional 800,000 inhabitants by 2016. The lack of affordable homes is having a serious effect on many Londoners. The Mayor's Plan has set a 50% target of affordable homes. The LDA owns 850 hectares across London out of which 304 hectares in the Lower Lea Valley where the building of 30,000 homes is planned. About 18,000 units are underway or approved to be ready by 2007. An additional 9,000 homes will be realised from the Olympics Legacy. LDA infrastructure projects, such as the Thames Gateway project, are based on an integrated view of development, with creation of homes, workplaces, jobs, skill trainings and environment improvement.

## Conclusion

London offers a strong contrast between, on the one hand, its overall solid economic performance and, on the other hand, the highest concentration of unemployment rates and child poverty in the UK (see 3.1.4). Moreover, the most commonly cited constraints for London's economic development are the jamming of its transport infrastructures and the high cost of space. This, considered with the expected expansion of London's population (about 800,000 by 2016) and additional jobs (about 450,000 – 600,000 by 2016) puts stress on the future challenges of the city.

Within this context, regional policy aims at 'accommodating growth', as stated in the Economic Development Strategy (EDS) of the Mayor of London. The current regional authorities in London are relatively new and were created in the wake of the UK devolution process in the late 90's. The Greater London Authorities (GLA) and the Mayor do however enjoy a higher degree of legitimacy and autonomy than the other English regions. The nature of the UK governance system is nevertheless still strongly centralized: the GLA own taxes only represent 8% of its budget resources (2005/06 budget), which amount to around 14% of total public expenditure in London. Transport is clearly the most important responsibility for the regional authorities. This competency alone represents 57% of the GLA expenditure.

The London Development Agency (LDA), the Mayor's main economic tool, accounts for a small 5% of the GLA budget. Its strategy is aligned with the EDS strategy and is close to the drivers of productivity identified by the UK central government for its regional policy framework. The LDA programs invest in infrastructure, people, enterprises, and in the marketing of London. Taken together with the funding of the EU Structural Funds (Objective 2), their breakdown into the drivers of regional competitiveness are close to the so-called shift of modern regional policy.

At least 40% of resources are invested in Human Capital and Social Capital. The GLA, LDA and Single Programming (SPD) documents reflect a real concern to support clearly identified disadvantaged groups of people: women, handicapped and ethnic minorities. However, there is no evidence that the GLA's regional policy has any significant influence on the most urgent issue: the social, ethnic and spatial polarization of the city.

Due to its international metropolitan position, and the high cost of space, investment in economic infrastructure remains high, with 40% of expenditures. It seems London has made the choice to shift away from direct subsidies to support firms' investments. Instead, funding instruments such as loans and micro-loans (5%) are promoted. Finally, public investments in innovation do not appear particularly high (although it has to be acknowledged that this might be due to difficulties to identify the corresponding items in the

budgets), confirming the picture of a region with lower level of R&D input than the UK average (see 3.4.2)<sup>26</sup>.

London's effective congestion charging scheme introduced in 2003 is an interesting experience for other large cities suffering from congestion.

London's regional economic policy, as conducted by the GLA, appears well designed for helping the city to take up its future challenges, with some reservations concerning the innovation field.

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<sup>26</sup> But London also shows a higher level of output than the UK average.

## Web Sites

[www.statistics.gov.uk](http://www.statistics.gov.uk) (Office for National Statistics)

[www.lda.gov.uk](http://www.lda.gov.uk) (London Development Agency)

[www.london.gov.uk](http://www.london.gov.uk) (Greater London Authority)

[www.odpm.gov.uk](http://www.odpm.gov.uk) (Department for Communities and Local Government)

[www.dti.gov.uk](http://www.dti.gov.uk) (Department of Trade and Industry)

<http://forum.europa.eu.int/irc/dsis/regportraits/info/data/en/index.htm> (EU web site: Portrait of the Region)

## Appendix

Explanations about breakdown of Objective 2 measures into drivers:

<b>Drivers of regional competitiveness</b>	<b>Corresponding Measures in Objective 2 SPD</b>	<b>Explanations about instruments (Activities supported under the Measures)</b>
<b>Hard or tangible infrastructure</b>	M.3.1 Strategic Sites, Infrastructure & Environment (ERDF)	Infrastructures improvements, workspace and incubators, business parks upgrades, training centres, business resource centres, derelict land brought into use.
	M.3.2 Expansion & Improvement of Premises for SMEs (ERDF)	Same as M.3.1 with focus on SMEs. Strong representation of community-led projects and disadvantaged client groups.
<b>Social Capital</b>	M.1.1 Building economically sustainable communities (ERDF)	Supporting community networks and neighbourhood partnerships; developing capacity building; encouraging participation of local residents (there is also basic skills development)
	M.1.2 Developing Community Business & Infrastructure (ERDF)	Advice and consultancy support for social enterprises and community businesses (there is also workspace development)
	M.2.1 Advice & Mentoring for SME Start Ups (ERDF)	Supporting local organisations to deliver start-up advice, especially to women and BME
	M.2.2 SME Business Development Programmes (ERDF)	Supporting existing SMEs. Complement London's business support organizations activities. Focus on specific disadvantaged groups and specific sectors.
	M.3.3 Marketing (ERDF)	Building on opportunities created through M.3.1 and M.3.2. Promoting business retention and inward investments inside Objective 2 area.
<b>Human Capital</b>	M.1.3 Community Skills Development (ESF)	Basic skills training and job brokerage schemes to improve employability. Targeted at disadvantaged individuals and BME.
	M.2.7 Developing a Competitive Workforce (ESF)	Supporting higher-level skills development in particular sectors/clusters as well as for women, BME, disadvantaged communities. Training and employment services. Includes wage subsidies.
	M.3.4 Ensuring Local Benefits (ESF)	Ensuring that residents of Objective 2 area benefit from job opportunities created under M.3.1 and M.3.2. Training and job brokerage schemes. Includes wage subsidies.

<b>Fiscal and financial interventions</b>	NA	NA
<b>Financing</b>	M.2.3 Funding for Growth (ERDF)	Providing access to finance and creating new financial instruments to improve access to finance for SMEs
	2.8. Micro-loans for business start-ups (ESF)	
<b>Innovation support</b>	M.2.4 Adopting New Technology, E-Commerce & ICT (ERDF)	Improving innovation through ICT and e-business amongst SMEs through the provision of advice, training, products and access to ICT facilities.
	M.2.5 Product, Process & Technology Innovation (ERDF)	Supporting the development of innovative products, processes and services. Includes product realisation and testing centres to share high costs of innovation.
	M.2.6 Environmental Technology: Development & Application (ERDF)	Similar to M.2.5. but with specific environmental technology focus. Mainly projects for testing or implementing innovative methods for waste management and recycling.
<b>Amenities</b>	NA	NA
<b>TOTAL SF budget</b>	<b>694 000 488</b>	<b>Euro</b>

### WP 3.3 –Case studies BERLIN

Samir Al-Assi, DULBEA

#### Historical heritage and regional specificity

The economic importance of the Berlin metropolis (geographic area of the current city) before the Second World War (SWW) can be illustrated by the city's share of total employment in Germany.

Year	1939	1961	1989
	share in %		
Producing sector	8.7	4.7	3.8
Trade and transport	10.6	5.5	5.3
Services	15.9	8.3	5
Government	16.5	7.7	7.1
<b>Total employment share</b>	<b>10.3</b>	<b>5.6</b>	<b>5</b>
<b>Population share(a)</b>	<b>7.3</b>	<b>4.5</b>	<b>4.3</b>

Source: Gornig and Häussermann (2002), (a) Tacitus Historical Atlas

**Table 16 Berlin's share of total employment in Germany, 1939-1989**

In the 1920s and 1930s, the district *Mitte* in the city centre, was the expression of Berlin's economic vitality, and even today, economic rebuilding is concentrated around symbolic sites such as Friederichstrasse and Potsdamer Platz. At that time, the spatial distribution of private and public services was highly concentrated in this small area. Because of the proximity of business and government, the area became even known as the 'City' (Gornig and Häussermann, 2002).

Berlin's metropolis character is clearly visible in the area of services. The city was the German centre of financial services, publishers and cultural institutions. It was probably even the world's centre of film, radio and television production (Gornig and Häussermann, 2002). In 1939, Berlin concentrated about 16% of total Germany's service employment. But even in the industrial sector its share was consistent (8.7%) due to the presence of large electrical and machine-building companies such as Siemens or AEG.

The division of the city after the end of the SWW induced fundamental modifications. The city space had been deeply affected. For instance, 'Mitte' which had once been the vital downtown of the pre-war metropolis has become a border area. Berlin lost its attractiveness and was hit by heavy waves of delocalization. Large industrial companies relocated in regions such as Munich and Stuttgart. Hamburg and Munich became the new media centres of West Germany, Banks moved to Frankfurt am Main, insurance companies to Munich and the political leadership to Bonn. Although East-Berlin became the capital of the German Democratic Republic (GDR), the city suffered severe population and employment losses. By 1961, the year of the Berlin's Wall construction, the city's share of total employment in Germany accounted only for 5.6%, that is, about half of the 1939 level. This decline persisted until the fall of Berlin's Wall.

Up until reunification, West Berlin had lost almost all regional economic importance. The only exceptions were a heavily subsidized cultural and industrial sector. The share of unqualified employees in West Berlin was three times as high as in comparable regions (Gornig and Häussermann, 2002). The main employer was the city administration which

received 50% of its funding from the Federal Republic of Germany (FRG). In contrast, East-Berlin had been transformed into the dominant metropolis of the GDR at the expense of the other urban centres of Dresden and Leipzig.

After reunification, Berlin was relatively left behind. In 1989 its share in total employment in Germany was limited to 5%, and the city had lost any of its special functions in the area of services. While in 1939 Berlin concentrated about 16% of Germany's service employment, this share declined to about 5% in 1989 (Table 16).

Immediately after the German reunification, experts all over the world anticipated extremely positive development perspectives for Berlin's economy. (Gornig and Häussermann, 2002). Euphoric expectations of growth were based on a foreseen expansion of the service sector. About 200,000 new jobs were expected to be created within the next decade. As a consequence of these anticipations, the city witnessed a particular boom in the number of new building and office space projects. However, as highlighted in the next sections, the actual economic development after reunification is in sharp contrast with this previous wave of optimism.

## **Territory and governance**

### *Territory*

Within the Federal Republic of Germany (BRD, Bundesrepublik Deutschland), Berlin is one of the 16 Länder, defined as NUTS 1 region.

Berlin acquired the dual status of Land and city under the terms of its constitution which entered into force on 1<sup>st</sup> October 1950 and is still valid today. Berlin is sub-divided into 12 districts (Regierungsbezirke), each of which has its own administration and district assembly (Bezirksverordnetenversammlung).

### **Governance structure**

After the fall of the wall, Berlin inherited the system of governance that previously operated in West-Berlin. Berlin has two directly-elected tiers of government. The first tier is the Parliament headed by a governing mayor. The second tier is the level of the 12 Regierungsbezirke. The Federal government also has limited but growing service responsibilities.

Berlin's Parliament is composed of 165 members. The executive branch is a group of Senators appointed by the governing party or coalition. Berlin's Parliament legislates for a full range of domestic policy matters and has significant financial freedom (see public debt). The city-government is responsible for a wide range of services: justice, police, scientific research, health, education, culture, transport, social housing, planning, economic regeneration, environment, local governments, even elements of the social security, etc. The 12 Regierungsbezirke also have some powers and responsibilities: street cleaning, lighting, waste collection, environmental services. However, they operate within the limits of Berlin Parliament's legislation and their financing is entirely derived from the city Parliament. Thus, even if Berlin's Regierungsbezirke have some degree of autonomy, the sub-national Land level is the main statutory authority for regional matters, including supervising the Regierungsbezirke.

Geographically, Berlin is surrounded by the Land of Brandenburg. Berlin's economic development is particularly affected by the discontinuity between the Land-city of Berlin and

its surrounding predominantly rural hinterland of Brandenburg. A key political landmark was the 1996 referendum for the creation of a single Berlin-Brandenburg region, which was accepted by Berlin's voters but rejected by the Brandenburg voters. In the context of the critical relations between Berlin and Brandenburg, Hauswirth et al. (2003) identify major disincentives for cooperation which are of institutional and financial nature. According to Hauswirth et al. (2003), the Berlin-Brandenburg region offers an interesting insight into the complexities and potential inefficiencies of multi-scalar governance if the coordination is weak. Development planning and economic policy are essential areas of Land competencies that require intergovernmental cooperation and coordination. However, latent difficulties of cooperation between Berlin and Brandenburg emerge from diverging and competing financial and political concerns (Hauswirth et al., 2003).

After the failed merger attempt between the two Länder<sup>27</sup>, the two concrete institutionalised forms of cooperation were a joint Land Regional Planning Body (*Landesplanungsabteilung*) and a joint employment office to improve access to regional jobs. These forms of cooperation can be qualified as 'soft' cooperation in the sense that it does not imply financial commitments. Constitutional structures lock the Länder and local governments into competition for resources. 'Hard' cooperation implying financial commitments is much more difficult and almost absent. 'Hard' cooperation would mean to steer the budgets of the two Länder and to define and implement joint regional objectives. In other European countries, central governments intervene to make such strategic investment decisions. But in the German federal system, this kind of intervention is impossible, because of the high autonomy of local governments. Moreover, a persistent disincentive for cooperation is the lack of mechanism for sharing revenues from new development.

For both local and Land public finances, tax-paying residents and businesses are of major importance. After the failed attempt to merge Berlin and Brandenburg, the two heads of the respective Länder anticipated the inevitability of increased competition for attracting and retaining tax-paying residents and business investors (p.127 Hauswirth et al., 2003). There are three sources of income for the Land: tax revenue, income from public-sector economic activities including fees and charges, intergovernmental transfers. The latter include tax sharing between government tiers and horizontal equalization payments between Länder to reduce disparities between them. The precarious situation of Berlin and Brandenburg is illustrated by their need for borrowing. Berlin has been facing several factors that explain its difficult financial situation: rapid reduction of federal subsidies after reunification, industrial decline and net losses of jobs, Germany's recession in the second half of the 90s, rising expenditures and investment in the eastern part of the city for unification projects and a decreasing number of residents many leaving to the Brandenburg area. Given the difficult economic and financial situation of Berlin and the competition for resources, it is not surprising that Berlin resents non-residents using its expensive infrastructures without financial compensation (Hauswirth et al., 2003). In 2003, it was estimated that around 103,000 commuters were coming from Brandenburg to Berlin while only 51,000 Berliners commuted to Brandenburg.

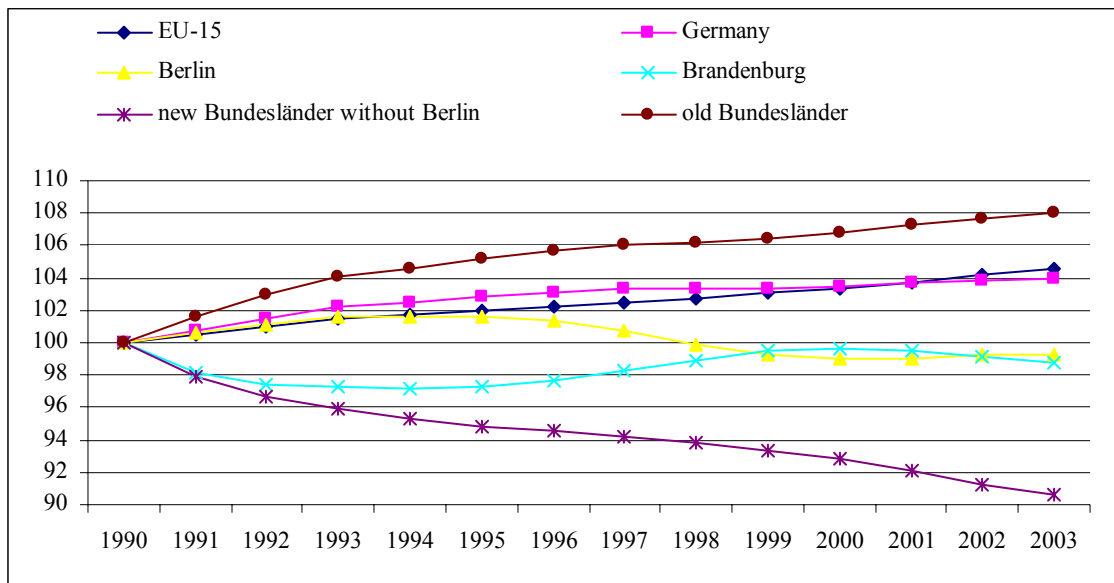
## **Socio economic fundamentals**

### *Population*

Since the reunification, on the 3<sup>rd</sup> October 1990, Germany's population has increased by 4%, and has witnessed a substantial immigration movement from the East towards the West. The population of the old Bundesländer increased by about 8% while it decreased by the same percentage in the new Bundesländer.

<sup>27</sup> A new referendum is scheduled in 2006.



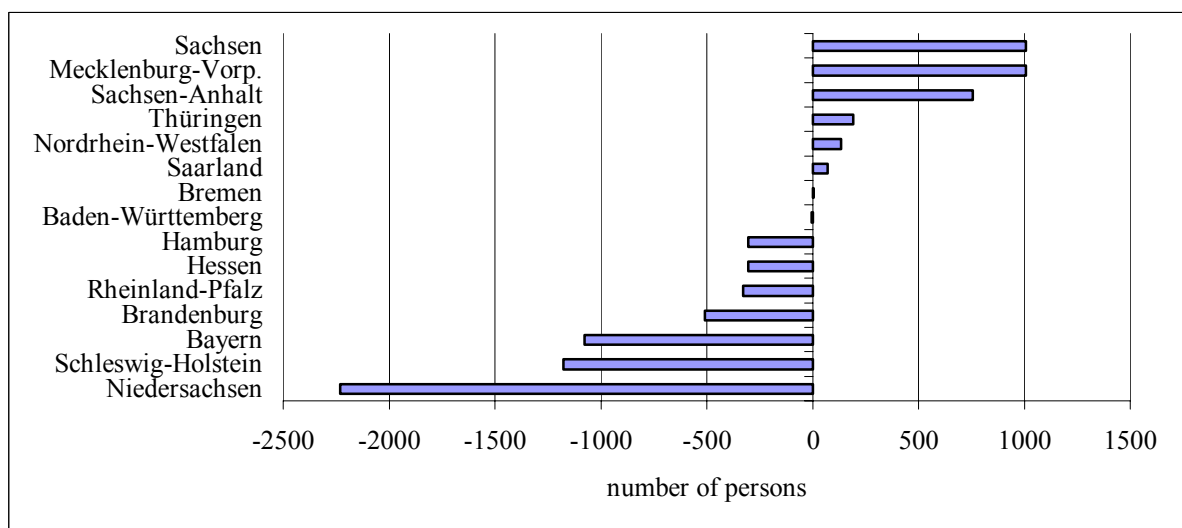


Source of data: Eurostat

**Figure 12 Evolution of population (1990=100)**

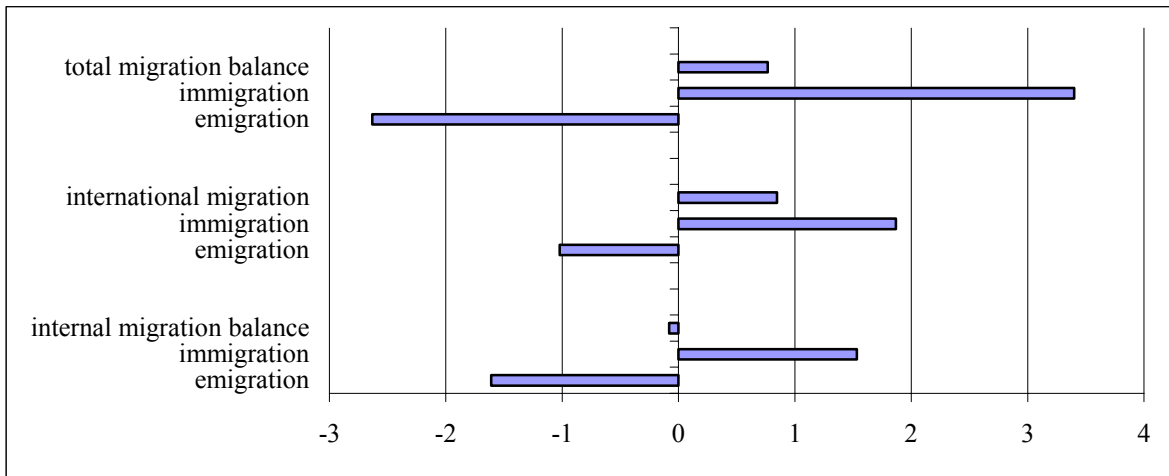
Despite the fact that Berlin’s population globally diminished by about 1% since the reunification, Berlin remains Germany’s largest city with 3,391,000 inhabitants and the highest population density (around 3800 hab/km<sup>2</sup>).

As illustrated in Figure 12, Berlin’s population decline was not steady over the last decade. Indeed, immediately after reunification Berlin benefited from a positive net international migration flow (Figure 14). Berlin’s internal net migration flow was however slightly negative. As illustrated in Figure 13, Berlin became an attractive place for emigrants coming from other new Bundesländer, especially Sachsen, Mecklenburg-Vorpommern and Sachsen-Anhalt. But at the same time, Berliners moved increasingly towards the old Bundesländer and also to Brandenburg, Berlin’s hinterland especially during the period 1994-1998.



Source of data: Eurostat

**Figure 13 Annual internal migration balance of Berlin – average 1991-1993 (arrivals – departures)**



Source of data: Eurostat

**Figure 14 Migration balances of Berlin in % of total population – average 1991-1993**

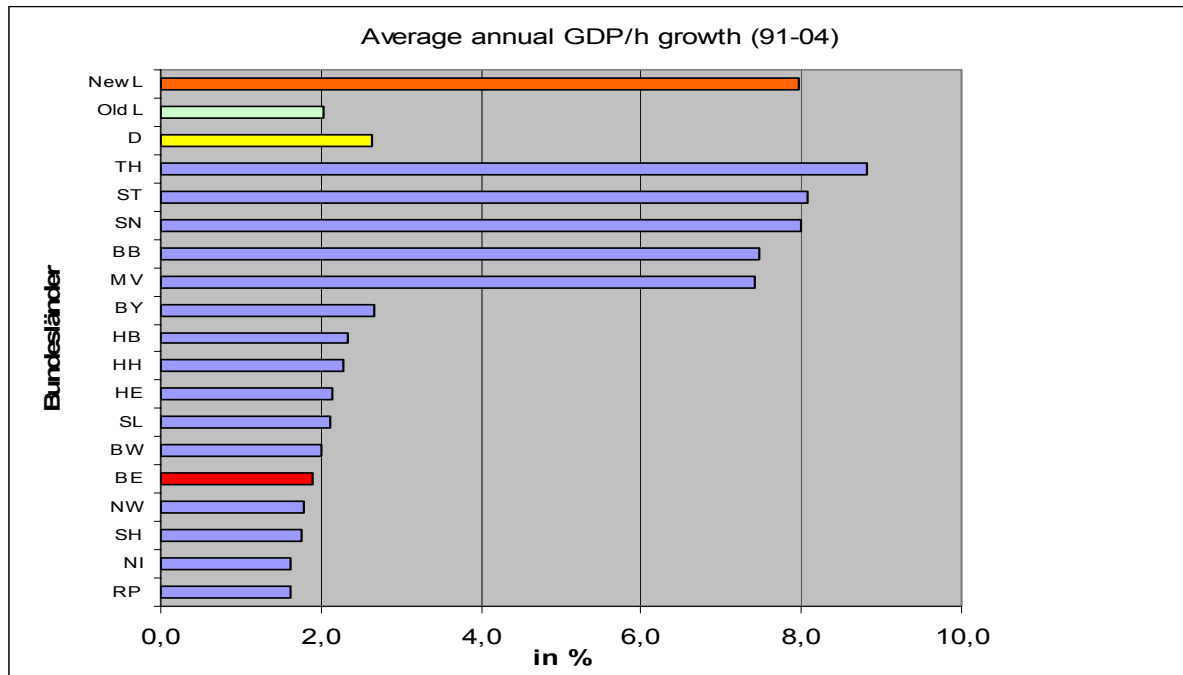
Today, close to 13% of the population are foreigners, mostly from non EU-15 countries. This proportion is not exceptionally high for a German city, but it is increasing. The Turkish community represents 30% of Berlin’s foreign population. The other largest foreign communities are from former Yugoslavia and Poland. A few western districts have a high concentration of immigrants (i.e. more than 34% in Kreuzber) while, with 5.7%, the percentage of immigrants in all Eastern districts is lower.

**Wealth creation capacity**

Between 1991 and 2004, Berlin achieved an average annual growth rate of GDP per capita of about 1.9%. This growth rated ranked it at the 12<sup>th</sup> position among the 16 German Bundesländer. During the same period, the national average GDP per capita growth rate was about 2.6% while it was situated at only 2% in the old Bundesländer.

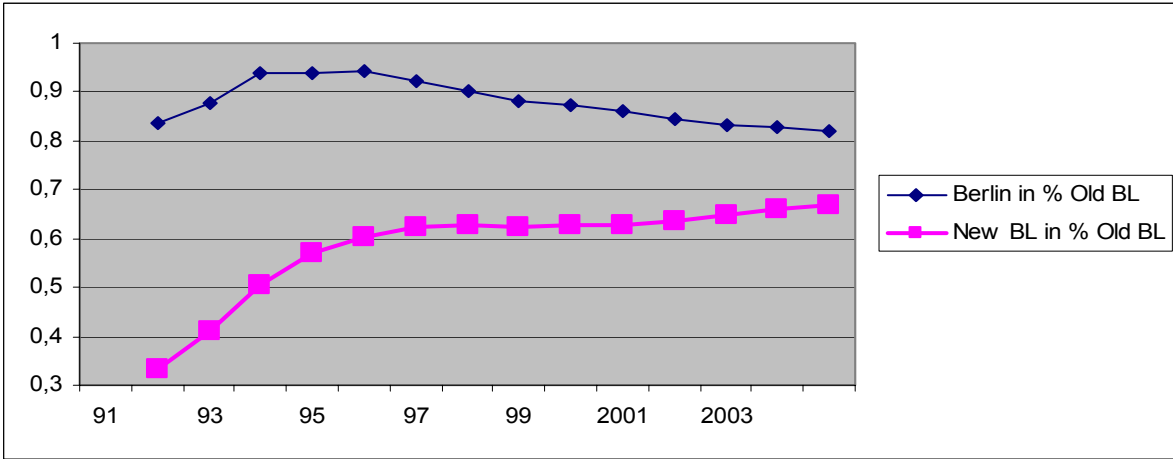
Berlin’s relatively weak performance during the considered period becomes striking when comparing it with the important growth rate achieved on average by the new Bundesländer (Mecklenburg-Vorpommern, Brandenburg, Sachsen, Thüringen, Sachsen-Anhalt). The latter was situated on average at about 8% and was even stronger during the first years after reunification.

However this observation has to be interpreted with caution. The previous section clearly highlighted that after reunification, the new Bundesländer, except Berlin experienced important population declines. Since the evolution of population influences the evolution of GDP per capita, the apparently strong growth performance Thüringen, Sachsen-Anhalt, Sachsen, Brandenburg and Mecklenburg-Vorpommern, may not be the outcome of increased production or wealth creation capacity but simply of diminishing population.



Source: Federal Statistical Office and the statistical Offices of the Länder

**Figure 15 Average annual GDP/capita growth rate (1991-2004)**

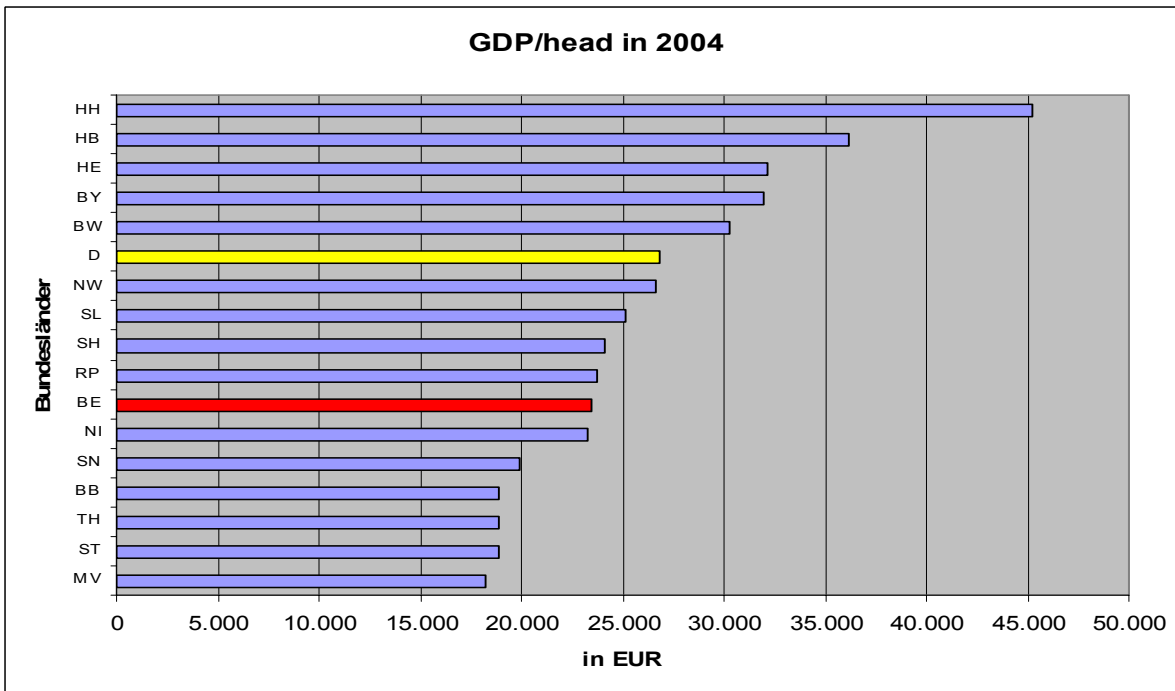


Source: Federal Statistical Office and the statistical Offices of the Länder

**Figure 16 Slowing convergence between regions in Germany (1991-2004)**

Figure 16 illustrates that the process of catching up of the new Bundesländer with respect to the old ones was relatively strong during the first years following reunification. However this convergence process slowed down importantly at the beginning of the second half of the nineties and came to a halt since 1997. Even if at date, Berlin has the highest GDP per capita among the new Bundesländer, it appears that with respect to the old Bundesländer, the region is continuously falling behind since 1996.

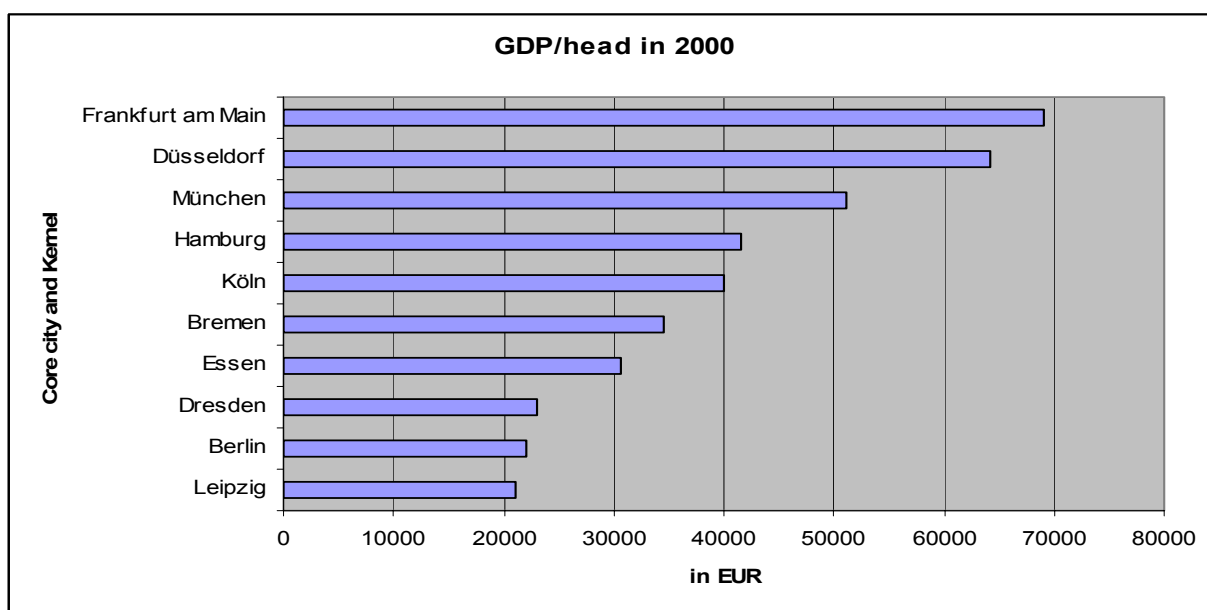
At this stage it is worth noting that according to the estimates of the Operational Program Document for Objective 1 of Berlin (2000/06), only in 2020, East-Germany will reach a level of GDP per capita of about 90% of the level observed in West-Germany.



Source: Federal Statistical Office and the statistical Offices of the Länder

**Figure 17 Länder Gross Domestic Product per Head in 2004**

With a GDP per capita of about 23,460 EUR in 2004, Berlin was far below the national average (26,856 EUR) and only ranked at 10<sup>th</sup> place among the 16 German Bundesländer. Compared to the other new Bundesländer which are all situated at the bottom of the ranking, Berlin is better of. However, in terms of GDP per capita growth it is largely outperformed.



Source: Eurostat Urban Audit data

**Figure 18 Core German Cities Gross Domestic Product per Head (2004)**

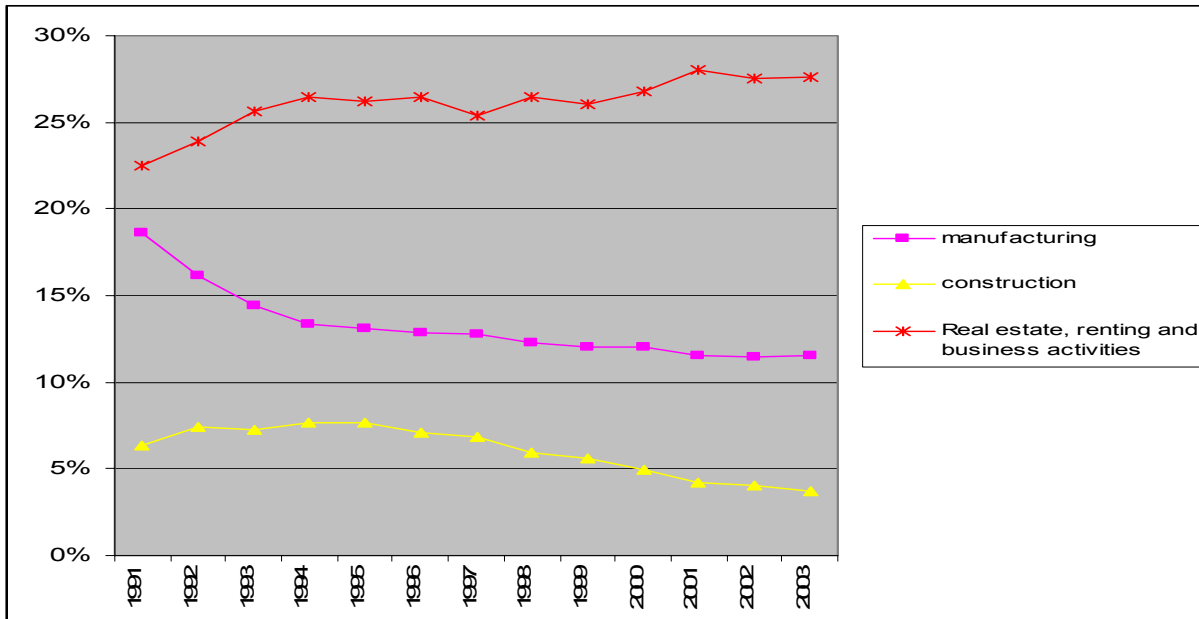
A comparison of Berlin with Germany’s most populated cities (core city and the Kernel) makes even more apparent Berlin’s low GDP per capita. All of West-Germany’s important cities achieve much higher levels of GDP per capita. Frankfurt am Main and Düsseldorf are about three times wealthier than Berlin which is even outperformed by Dresden, one of the main cities of East-Germany.

**Economic structure**

In all large industrial nations (i.e. France, Germany, UK, Japan) throughout the last decades, industrial development was characterized by important productivity gains, decreasing relative contribution to global output and thus, falling industrial employment rates. Most economies placed great hope in the services sector to ensure employment creation and to absorb the labour force liberated by industry.

Berlin has experienced a strong de-industrialization of its economy. During the period 1991-2004, Berlin’s industrial employment decreased from about 472,000 to 227,000 persons. In other terms, it lost more than half of its industrial employment. While during the same period the service sector expanded from 1,190,000 to 1,304,000 employments, the additional gains of 114,000 jobs could not compensate the heavy losses experienced by the industry sectors. Despite the important employment reduction in industry, industrial Gross

Value Added (GVA) decreased only modestly due to important productivity gains (6% annually).



Source: Federal Statistical Office and the statistical Offices of the Länder

**Figure 19 Share of sectors in Berlin’s GVA (in current prices): 1991-2003**

The falling importance of Berlin’s industrial activity is illustrated by Figure 19. Between 1991 and 2003, the share of industrial GVA decreased from 27% to 18%. At the same time, the share of service GVA expanded from 73% to 82%. Figure 19 roughly represents the underlying evolutions of most important sub-sectors. In industry, the manufacturing sector plunged from 19% to 12% of total GVA. With the new federal policy of subsidy reduction, large parts of West Berlin’s industry had to cut back their production and in East-Berlin only a few industrial activities managed the transition to a market economy and to reduce the important technology gap. Moreover, the German economic recession of the 90s did not encourage West German industries to invest in Berlin. The construction sector strongly expanded after the reunification but started to decline from 1995 onwards, and fell from 7.7% to 3.7% of GVA in 2003. The progress of services is essentially explained by the booming ‘real estate, renting and business activities’ sector, rising from 23% of GVA in 1991 to 28% in 2003. It can be assumed that the reconstruction efforts following the reunification in 1991 started to slow down in the mid-90s but that real estate transaction activities never lost their impetus. On the other side, some service sectors usually associated with metropolitan economies have remained weak such as the banking and insurance sectors (5.5% of GVA in 2003) or even have lost on importance such as the transport and telecommunication sectors for which the share in total GVA declined from 5.7% to 4.7% during the period 1991-2003.

Berlin’s declining share of industry in global output associated with an expansion of the service sector does not automatically imply that the economy is engaged in a conversion process towards a ‘service metropolis’. According to Krätke (2004), Berlin is relatively well-off within the new Bundesländer space and has relatively good prospects but can currently not be qualified as a service metropolis since it remains far behind the main West German economic centres. Berlin has a high concentration of low-qualification ‘producer services’ such as cleaning and private security but a much lower concentration of ‘advanced producer services’ than other German urban centres. However, Berlin is developing new ‘islands of

economic growth' in knowledge intensive activities such as the software industry, biotechnology, medical engineering and the media industry.

According to Gornig and Häussermann (2002), the growth in services was particularly fast between 1989 and 1992 especially in West Berlin. From 1993 onwards, the growth slowed down but at the same time shifted spatially towards East-Berlin (Mitte district and eastern districts).

	Berlin	Hamburg	Cologne/Bonn	Frankfurt am Main	Munich
Sectors	employed persons per 10,000 inhabitants				
credit / banking	71	110	94	288	179
insurance	28	87	90	87	125
legal / economic services	70	101	90	141	117
technical / IT services	80	53	63	85	187
advertising	8	32	16	35	21
media	35	72	66	49	114
culture	16	9	6	7	13
restaurants / hotels	95	85	84	109	138
Total	403	549	509	801	894

Source: Gornig and Häussermann (2002)

**Table 17      Supra-regional services in city-regions, year 1996**

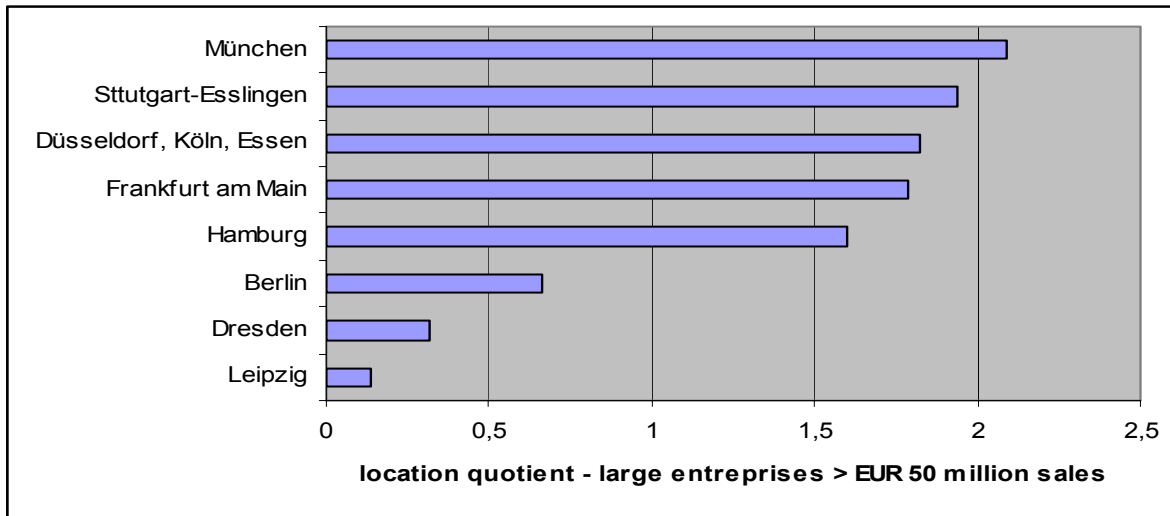
Table 17 compares the importance of service activities among a selection of widely defined city regions and highlights the relative weak position of Berlin. Globally, with respect to its population, Berlin has the lowest employment ratio. The latter is even about two times higher in Munich and in Frankfurt am Main. But the most important gaps can be observed for the insurance sector which is at least tree times more developed in other German city regions, the credit and banking sector which is about four times more important in Frankfurt am Main but also for advertising and the media sector. It is only in the field of culture that Berlin outperforms the other city regions. Thus, Berlin's most important strength lies in the culture industry, in which it has reached the position of a first rank 'city' (Krätke, 2003).

According to the literature the existence of a technology gap with respect to technological leaders is not necessarily a disadvantage for growth. For Abramovitz (1986) a technology gap may open up the possibility for rapid catching up provided that social capability is sufficiently developed. In this context, the relative weakness of some service activities in Berlin gave birth to optimistic expectations in the early 90s about Berlin's capacity to catch up with West-German cities. If it is true that a time series analysis would be necessary to assess whether Berlin is actually engaged in a catching up process, Table 17 nevertheless suggest that at date Berlin has not yet caught up.

At this stage it is worth noting that a high employment ratio in a given service sector and a specific area may be source of localization externalities associated with specialization. An illustrative example is provided by Frankfurt am Main, the leading city for financial services where three of the four largest German main banks are established and which is the site of the European Central Bank. Berlin's relative weaknesses and its difficulty to transform into a service metropolis may reflect that agglomeration externalities are not sufficiently at work.

One way to characterize a service metropolis is the concentration of large company's headquarters, which materialize the decision centres of the economy. The degree of concentration can be measured by the location quotient which is defined as the weight of

headquarters of large companies (sales > EUR 50 millions) with subsidiaries and branches in other cities and regions, in a particular urban economy.



Source: Krätke (2004)

Note: national location quotient=1; A location quotient higher than 1, indicates a higher than average concentration of headquarters within a given spatial entity.

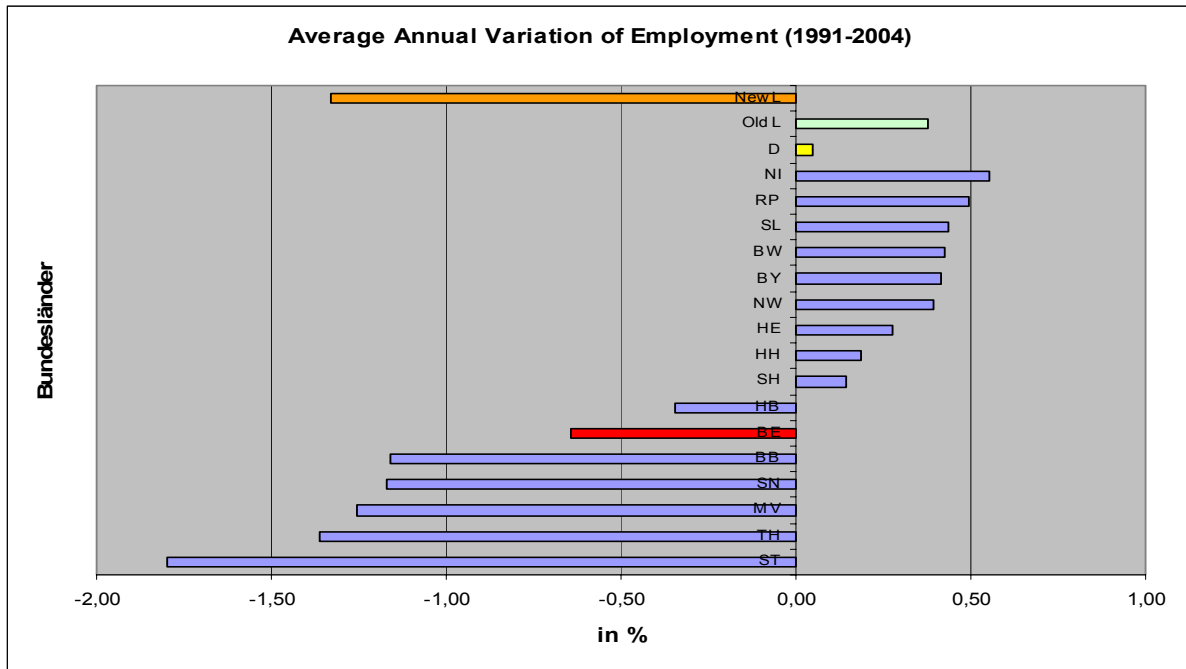
**Figure 20 Relative concentration of large enterprises with external control capacity in urban regions in 2002**

Has Berlin managed to re-attract the company’s headquarters which deserted the city after SWW? According to Krätke (2004), this has not been the case. Figure 20 clearly indicates Berlin’s weak position compared to the national average and other German cities. On average, the latter are about three times more ‘attractive’ for headquarters than Berlin. Munich even reaches a location quotient above 2 while it is limited to about 0.7 for Berlin.

**Labour market and social conditions**

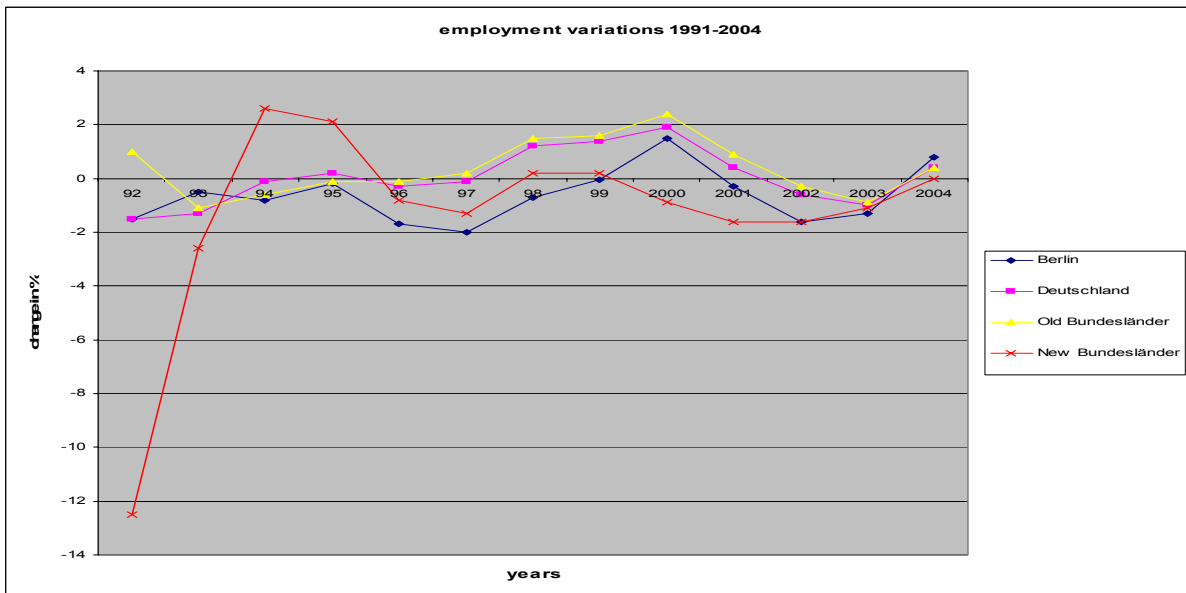
Between 1991 and 2004, both the new Bundesländer and Berlin suffered serious unemployment increase. During this period, the average annual variation of the number of employment was of – 1.33% in the new Länder and of – 0.64% in Berlin. By 2004, Berlin had lost 135,271 jobs from its 1,673,117 jobs recorded in 1991. As a consequence, the unemployment rate increased from 10% in 1991 to 18.7% in February 2006 (data: Statistisches Landesamt Berlin). However, the employment growth was also relatively limited in the old Bundesländer (0.38%) and, as a consequence at the national level (0.05%).





Source: Federal Statistical Office and the statistical Offices of the Länder

**Figure 21 Average of annual variation of employment (1991-2004)**

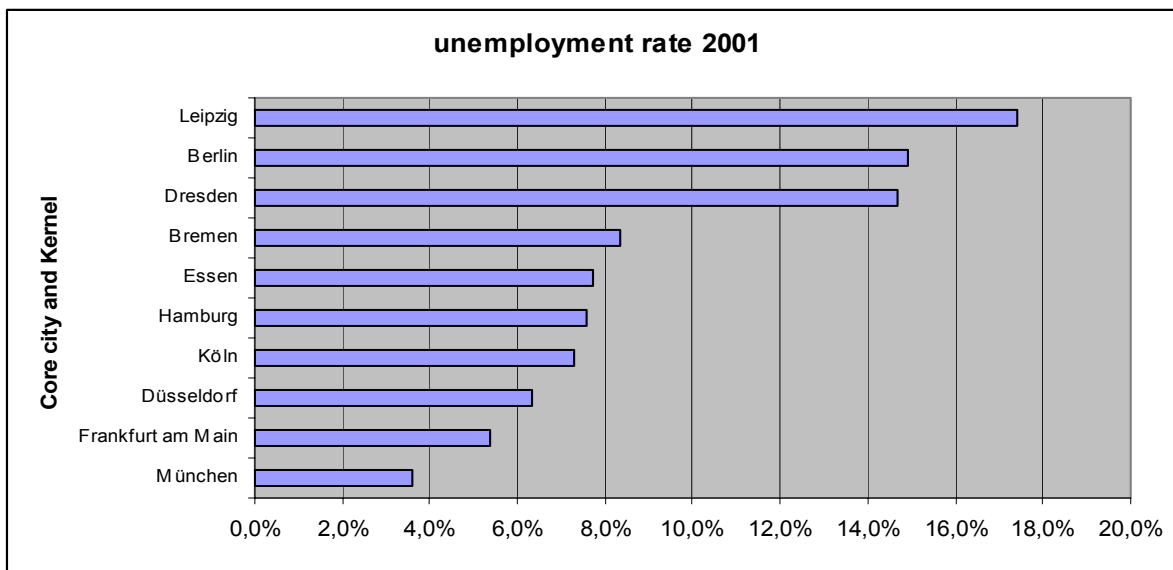


Source: Federal Statistical Office and the statistical Offices of the Länder

**Figure 22 Annual employment variations in Berlin and Germany (1991-2004)**

Berlin, the old and new Länder went all through a sharp readjustment during the first years of reunification. Despite a relatively high rate of job creation during the period 1994-1995 in the new Bundesländer, job losses were heavy the following years, especially since 2000. West Berlin’s economic boom prevented from overall job losses of the Bundesland Berlin. Over the whole period 1991-2004, Berlin actually shows an employment variation close to the German average but at a much lower scale. With the exception of 2000 and 2004, Berlin had to face job losses each single year. Although the overall labour market situation of German was difficult, the old Länder experienced a form of economic recovery between

1997 and 2001 with positive employment growth. The average annual variation of employment during the period 1991-2004 was about +0.05% for Germany, 0.38% for old Länder, -1.33% for new Länder; and -0.64% for Berlin.



Source: Eurostat Urban Audit data

**Figure 23 Core German cities - unemployment rates in 2001**

At the level of the 'Kernel' spatial unit, the comparison confirms the previously identified trends. Unemployment rates (defined as the ratio between residents unemployed and total economically active population) are much higher in East German cities than in West German ones. In 2001, Berlin's unemployment rate was about four times higher than in Munich.

Despite extensive support since the early 90s aiming at increasing employment, the labour market situation has been suffering huge employment losses, insufficient job creations and important adaptation difficulties. In 1993, Berlin recorded a level of 20 registered unemployed for one job opening. In 1998, this ratio even increased to 34. According to this measure, Berlin is confronted to the widest gap between the number of unemployed and the number of job openings among all German Bundesländer.

The above mentioned figures clearly suggest that Berlin's economy is not yet able to generate sufficient growth opportunities. The media sectors as well as ICT activities have previously been identified as opportunities and strong sectors potentially able to fuel Berlin's economic growth. In this context, it is particularly alarming to observe that for the above mentioned sectors Berlin encounters difficulties to find sufficient, adequate local workforce. The reason is undeniably related to inadequacies regarding the qualification profile of the working age population.

Unemployment and the lack of opportunities often lead to social exclusion and polarization. This is precisely the case for Berlin which presents a strong socio-spatial polarization. The prosperous residential areas of the Western part of the city, as well as some areas close to the city centre which have been going through a gentrification process are in sharp contrast with the older inner city districts of the West, concentrating immigrants. Berlin's 'islands of wealth' are also in sharp contrast with the Eastern parts of the city. Unemployed and poor are largely concentrated in the inner urban districts such as the traditional industrial workers' districts of Wedding, Tiergarten and Kreuzberg.

### *Social deprivation*<sup>28</sup>

Berlin has a higher ratio of people living in poverty (12.8%) than the country as a whole (around 10%)<sup>29</sup>. Poverty level is higher in the West part of Berlin (14.2%) than in the East (10.6%), although the latter median income reaches approximately 92% of West Berlin. Overall, 23.6% of the City's children live under poverty.

The city also has the double percentage of people receiving public assistance (7.3%) in comparison to the national average. Furthermore, the Berliner median income of EUR 1090 stands EUR 150 below the national average.

Poverty strikes foreigners in particular: it is estimated that 39% of the people living in a household with at least one non-German member surveyed fall below the poverty income level. Similarly, the estimated unemployment rate among foreigners is 34%, that is twice as high as the Berliner average.

### **Knowledge creation and innovation capacity**

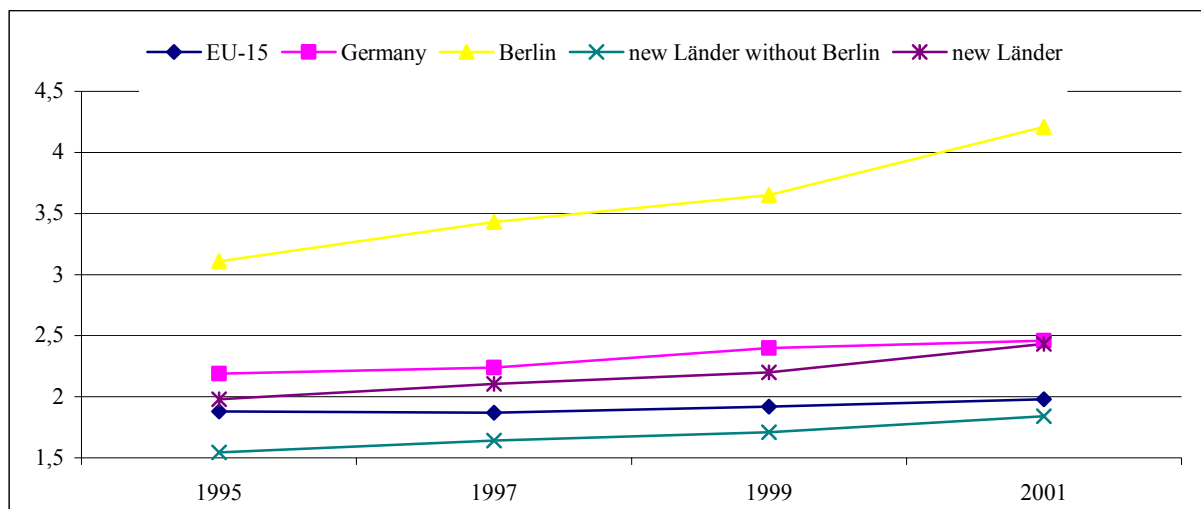
The previous section highlighted that Berlin still faces difficulties to generate new growth potentials. In this context research and development (R&D) plays a key role not only to generate the knowledge base necessary to succeed its technological transition but also to develop its knowledge creation, absorption and transfer capacities.

Given these considerations, Figure 24 suggests that Berlin is actually engaged in a relative positive process of knowledge accumulation. Indeed Berlin's R&D intensity, the share of GDP allocated to R&D activities, is important and increasing. In 2001, total R&D expenditures accounted for more than 4% of GDP.

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<sup>28</sup> The following development are taken out of the OECD "Urban Renaissance Study" over Berlin, 2003. The data are from a local micro-census of the Berlin Senate in 1999.

<sup>29</sup> OECD poverty definition: anyone with an income below 50% of the local median income. Therefore poverty level appears higher in London, partly because of a more severe definition: anyone with an income below 60% of the national average. The limit is set higher, and the national average is lower than the local average.

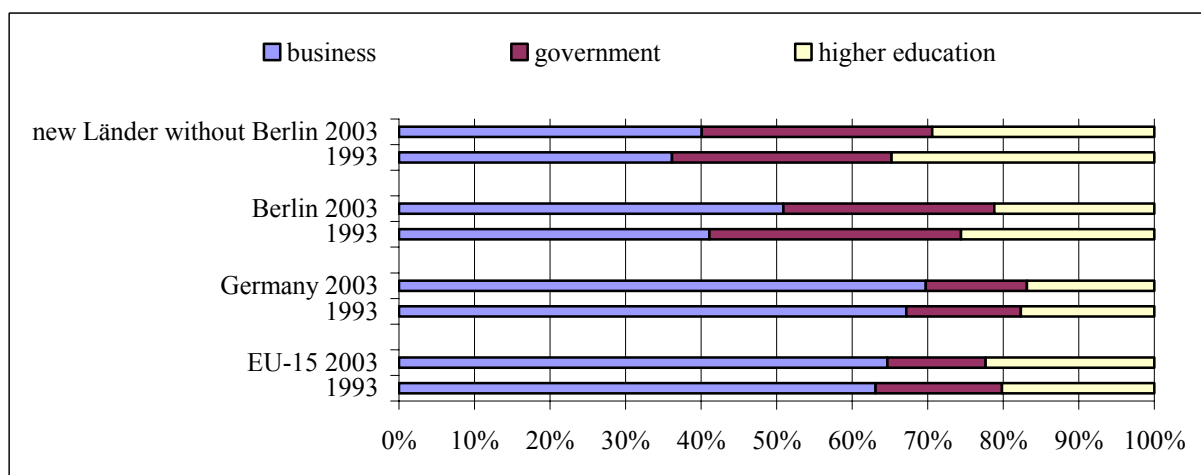


Source : Eurostat

**Figure 24 R&D intensity (R&D expenditures/GDP)**

Berlin outperforms not only the new Länder, and the European average but also the national average which was situated in 2001 at about 2.5% of GDP. Moreover, Berlin’s R&D intensity is relatively fast growing. During the period 1995-2001 it has passed from 3%<sup>30</sup> to more than 4% while the R&D intensity of Germany and Europe has almost remained unchanged.

Given the historical background of the Berlin, it may be expected that public R&D is relatively high compared to private one. Chat 14 illustrates the share of R&D expenditures of institutional sectors which are the government, higher education and the business sector.



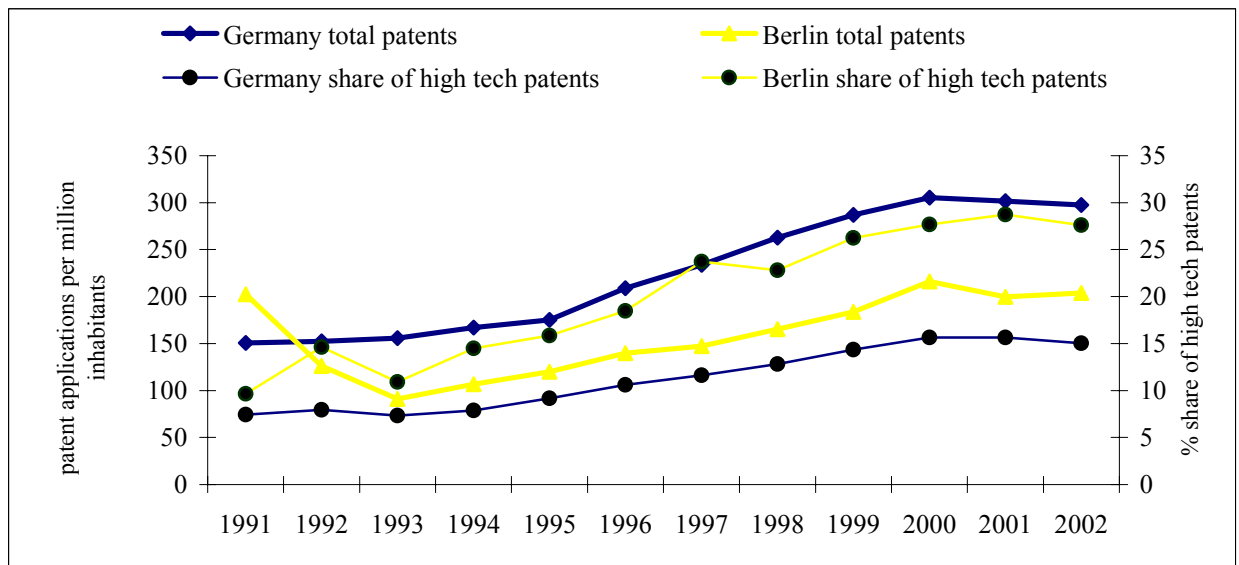
Source : Eurostat

**Figure 25 R&D expenditure – share by institutional sectors**

<sup>30</sup> It is worth noting that already in 1995, Berlin has achieved the Lisbon objective regarding R&D intensity in 2010 which should reach the level of 3%.

As expected, the share of business R&D in Berlin is lower than on average in Germany and in Europe. Nevertheless, it can be observed that during the period 1993-2003 business R&D in Berlin has comparatively more expanded than at the national and the European level. At date, half of Berlin’s R&D expenditures are realized by the business sector<sup>31</sup> while the latter account for only 40% in the other new Länder where the share of government R&D is considerably more important than at the national and the European level. This observation may reflect the East Germany Länder’s historical heritage.

R&D expenditures are generally considered as inputs for innovation, the market introduction of new or improved products and processes. Since data in these fields are difficult to gather, innovation is usually measured by patent applications.

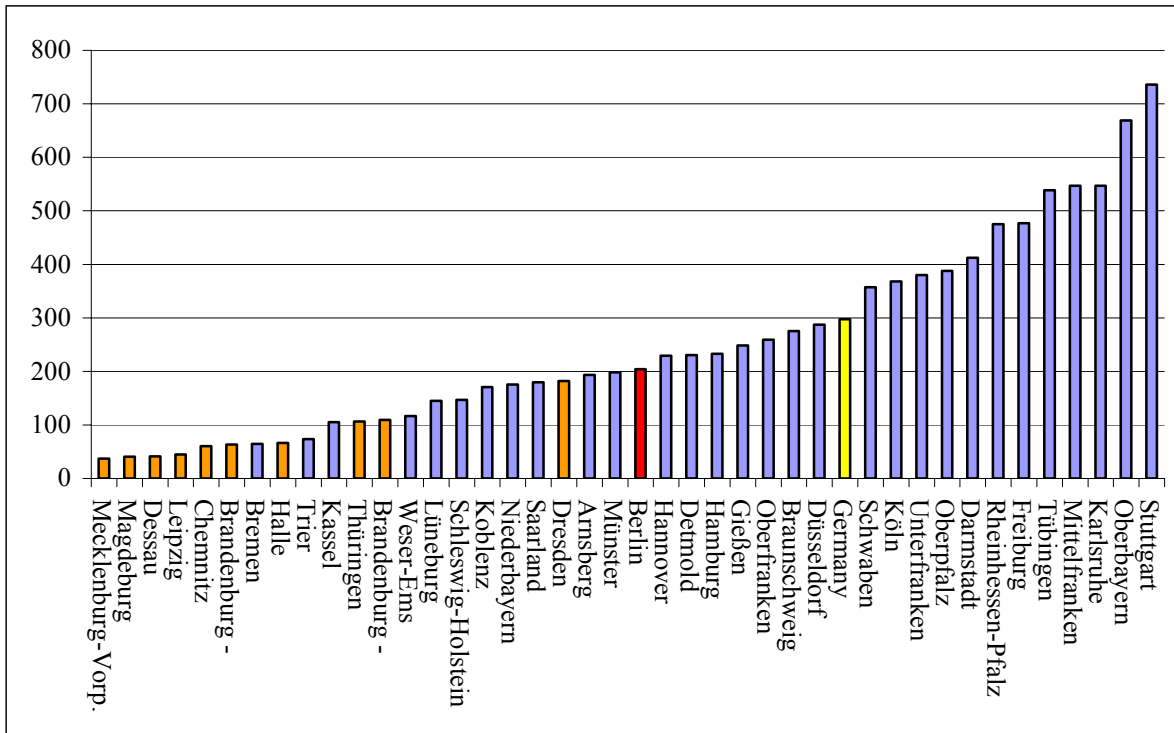


Source : Eurostat ; Note: High tech patent applications cover the following sectors: Computer and automated business equipment, Micro-organism and genetic engineering, Aviation, Communication technology, Semiconductors, Laser.

**Figure 26 Patent applications to the EPO per million inhabitants and share of high tech patents**

Figure 26 illustrates the evolution of patent application to the European Patent Office (EPO) during the period 1991-2002 and the share of high tech patents. Several striking observations can be made. First, although Berlin’s R&D intensity is much higher than the German average, in terms of innovation, Berlin is lagging behind. This situation indicates that Berlin is actually constructing its knowledge base and absorption capacity but is globally less innovative than Germany on average due to a lower global R&D productivity. Second, the years following Germany’s reunification, Berlin’s patenting activity has strongly declined from a level of 200 patent applications per million inhabitants in 1991 to a level of 100 in 1993. This decline is probably related to a wave of delocalization of innovative firms. Since 1993 however, innovation activities started to increase at almost the same speed as on the national level. Third, even if Berlin is globally less innovative than Germany on average, Figure 26 indicates its important share of high tech patents. The latter is situated at about 29% while it is limited to 15% on average in Germany. Moreover, since the beginning of the 90s Berlin is strengthening its position in terms of high tech activities which evolve at a greater speed as at the national level.

<sup>31</sup> In order to meet the Lisbon objective, the share of private R&D should account for two thirds in 2010.



Source: Eurostat

**Figure 27 Berlin’s position within the German landscape in terms of patent application to the EPO per million inhabitants (2002)**

Finally, Figure 27 illustrates Berlin’s position in terms of patenting activity within the German landscape of NUTS II regions. If Berlin is clearly outperformed by Germany’s most innovative regions such as Stuttgart and Oberbayern, its position with respect to the new Länder is very favourable and even approaches the one of Hannover, Detmold and Hamburg.

**Other specific aspects**

Two regional specificities are worth to be mentioned. The first refers to the situation of real estate and the second to the difficult financial situation of Berlin.

*Real estate*

Since the 90s the German state introduced a special subsidy regulation for real estate investments in Eastern Germany that contained a ‘very favourable tax write-off scheme’ (Krätke, Borst, 2000). This regulation supported a wave of real estate investments in Eastern Germany’s cities. In Berlin alone, between 1990 and the end of 2001, the total rental space in the city almost doubled to become Europe’s third largest office market (17.5 millions m<sup>2</sup>).

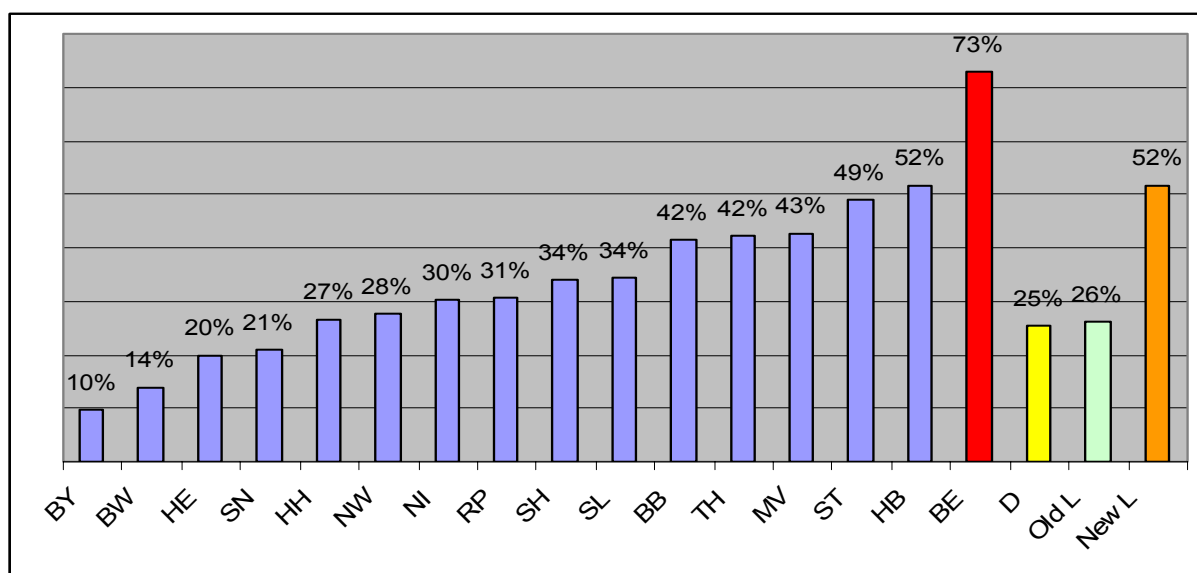
In the case of Berlin, the city’s own financial corporation (Bankgesellschaft Berlin) actively took part in what Krätke (2004) describes as ‘large-scale speculative real estate investments in Eastern Germany’.

However, Eastern Germany quickly experienced a real estate market crisis with large quantities of unoccupied office space and a very strong decrease in rents for new office space.

In Berlin, the conjunction of high real estate investments with lower than expected office space demand explain that renting prices felt by half in 1995 after recording record levels in 1992. By the end of the 90s the average vacancy rate began to fall fuelled by improved economic activity. In 2004, the vacancy rate in Berlin was 10%<sup>32</sup>, with still an estimated 1.2 millions m<sup>2</sup> of unoccupied office space in Berlin.

*Public finance*

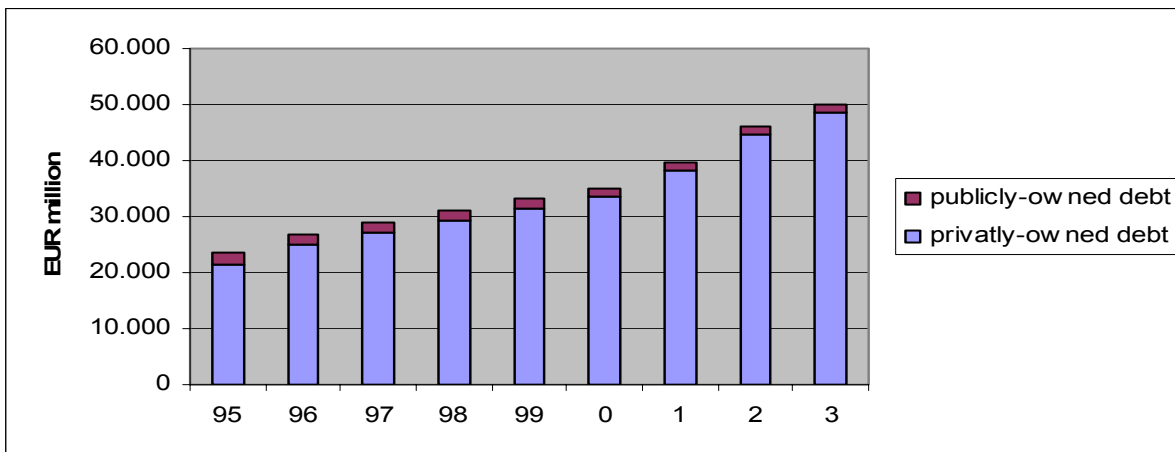
In Berlin, the implementation of public development policies is strongly constraint by its difficult financial situation. In fact, all East-German Länder – except Sachsen – have very high levels of public deficit. In 2004, the new Länder’s public debt ratio in relation to GDP reached 52%, a percentage which is twice as high as in the old Länder. Berlin’s public debt in 2004 reached even 73% of GDP.



Source: Finance Administration of Berlin Senate

**Figure 28 Ratio Public Debt / GDP (2004)**

<sup>32</sup> Deutsche Bank estimations (2004): Vacancy rates in Frankfurt (9%); Hamburg (6%); Munich (4%)



Source: Finance Administration of Berlin Senate

**Figure 29 Berlin’s public debt**

On the 5<sup>th</sup> November 2002 the Berlin’s Senate officially declared that it suffered an ‘extreme emergency budgetary situation’<sup>33</sup>. Its budget deficit and accumulated debt had reached such an importance that it became clear that the Land could not overcome this situation alone. Likewise to the previous cases of the Länder Bremen and Saarland, Berlin’s government hopes to obtain a Federal Constitutional Court decision, forcing the Federal State to take over half of Berlin’s debt. The Constitutional Court decision is expected for this summer 2006. While the court is likely to oblige, the question is whether the court will tell the Federal government to pay up or if it will ask for new rules to stop the states drowning in debt in future (The Economist, May 2006). The objective decided in 2002 by Berlin’s Senate to neutralize the primary deficit (negative balance between expenditures excluding interest payments and debt redemption on the one hand, and revenues excluding bond revenues on the other hand) is supposed to be achieved by 2007. From 2007 ongoing, the restructuring plan requires the budget to be in surplus<sup>34</sup>.

To resolve the debt issue, the options of a Land finance minister are however limited. He/she cannot just apply cost cutting and wait for growth to return. Länder have strong autonomy but most of what they spend is fixed by laws that cannot be change unilaterally, and they cannot alter many tax rates.

<sup>33</sup> On the 27 May 1992 the Federal Constitutional Court defined that a Land is in an emergency budgetary situation if simultaneously: 1) the annual share of total public spending that needs to be financed through new loans (“Kreditfinanzierungsquote”) is higher than twice the national average; 2) the ratio of annual interest payments (cost of the debt) in relation to the taxes is “much” higher than the national average. The budgetary situation is qualified as an “extreme” emergency when the traditional mechanism of transfers between the Länder and the Federal State are not sufficient any more.

<sup>34</sup> At this stage it is worth opening a parenthesis regarding Berlin’s sources of revenue. Out of a total of EUR 16.9 billions of revenues, 49% come from the city’s own taxes and revenues, 21% from other revenues (i.e. administration revenues). The central government accounts for 31% through its system of “Länder equalization (LFA)” and “Federal additional transfers (BEZ)”.



	1994	2001
<b>Areas of responsibilities</b>	Million Euro	
Administration	3,371	3,369
Education, Sciences, R&D, Culture	6,120	4,721
Social security	5,351	5,077
Health, Sport, recreation	2,475	802
Housing, Spatial planning, and transfers to local authorities	2,086	1,972
Food, Agriculture, Forests	39	47
Energy and Water	259	327
Transports and telecommunication	726	510
Economy, Enterprises (Land and Capital investments <sup>1</sup> )	2,110	2,528
Cost of the debt	2,035	3,449
<b>Total</b>	<b>24,571</b>	<b>22,802</b>

Source: Finance Administration of Berlin Senate

**Table 18 Berlin's expenditure budget 1994-2001**

Berlin has already engaged itself in a process of budget restructuring. Between 1994 and 2001, Berlin's spending budget decreased by 8% to reach EUR 22.8 billion. This effort to cut spending was necessary to stop the snowball effect generated by its public deficit and continuous borrowing. Indeed, in 1995, the public debt stock represented 93% of the total public spending budget of the city. By 2001, this ratio already reached 174%. Over the same period the interests payments increased by 41%, from 2 billion to 3.4 billion.

The main spending cuts were realized in education, R&D, sciences and culture (EUR -1.4 billion). This of course, affected Berlin's three universities and the opera houses. The social security budget has also been sharply reduced (EUR - 0.27 billion). Noticeable efforts have been achieved in terms of downsizing the public service staff, cutting salaries and increasing working hours. Simultaneously, the only significantly increase in spending concerned the Economy budget (EUR +0.418 billion).

Krätke (2004) is particularly critical regarding Berlin's public management and especially its local government. He argues that economic policy has not been conducted properly, that Berlin's government participated to the real-estate speculation and even that 'there was an interplay of legal and illegal activities to foster real estate projects'. As Berlin's government is 'trying to consolidate the city's financial situation by making severe cuts in social expenditures, public services, education and research, it might damage the prospects of Berlin's growth sector'. The financial crisis was largely produced by setting up the Bankgesellschaft Berlin that engaged in speculative real estate bonds related to investments in eastern Germany real estate (Krätke, 2004).

### Summary and policy implications

Berlin has lost its dominant position as a consequence of isolation from international development for 40 years (1949-1989). After the reunification, Berlin experienced important socio-economic transformations not only in the Eastern part but also in the Western one.

Today, despite high expectations regarding Berlin's potential to transform itself into a service metropolitan, the city is still lagging behind the West German economic centres. While this is true in terms of wealth creation or concentration of services employment, it also appears that Berlin is engaged in an accelerating process of knowledge accumulation with high rate of R&D expenditures and particular intense innovation in high-tech sectors.

Berlin public authorities face the double challenge of stagnant economic conditions, with high unemployment rate, and the socio-ethnic-spatial polarization problems of a large metropolitan area. In this respect, Berlin has less breathing space than a city like London.

## **Development priorities, policies and impacts**

### *Policy Strategy*

According to the current Governing Mayor, Berlin finds itself in the midst of profound structural changes<sup>35</sup>. Endowed with scarce resources public services require a comprehensive modernization. The roles and task distribution between public and private actors as well as civil society actors are facing a proof-test period.

The 'BerlinStudie'<sup>36</sup> published in 2000 is the core reference document as far as the city's economic development strategy is concerned. The 'BerlinStudie' was an order of the city-state of Berlin and the European commission, and involved a large number of socio-economic actors of the city. The strategy insists on creating synergies between actors and identifies 4 domains of action: 1. Exchange relations (knowledge economy, culture, strengthening Berlin's place in welcoming Eastern Europe immigrants); 2. Competitiveness and work; 3. Social cohesion (social activation, youth's prospects, security); 4. Metropolitan equilibrium (transports, environment, cooperation). The first domain 'Exchange relations' is explicitly oriented towards Eastern Europe States

### *National Regional Policies*

Regional economic policy in Germany has been a joint competence of the Länder and the Federal government since 1969. 'The Basic Law of Germany (Articles 30 and 28) gives the primary responsibility for regional policy to the Länder and districts. The role of the Federal Government is to provide a suitable framework for the restructuring and development activities of the Länder, and, where appropriate, to offer supplementary assistance'<sup>37</sup>.

The key instrument of regional policy in Germany is the Joint Task (*GA – Gemeinschaftsaufgabe*) for the Improvement of Regional Economic Structures (*Verbesserung der regionalen Wirtschaftsstruktur*). The most important instrument is the Investment Grant available in the designated GA areas, with high unemployment rates and low per capita income, in an attempt to downsize interregional disparities.

'The organization of the GA is determined by a Planning Committee under which equal voting power is allocated to Federal and Länder interests. The Planning Committee drafts a multi-annual Framework Plan which details assistance measures, specific eligibility conditions, the spatial coverage of the assisted areas and regional development priorities. The financing of the GA regional policy instruments is shared equally between the Federal

<sup>35</sup> <http://www.berlin.de/rbmskzl/index.html> (Der Regierende Bürgermeister - Senatskanzlei)

<sup>36</sup> <http://www.berlin.de/rbmskzl/berlinstudie/index.html>

<sup>37</sup> ESPON 2.2.1 – Annex Report A, p.265

Government and the Länder. The implementation of regional policy is wholly the responsibility of the Länder<sup>38</sup>.

### *Empirical evidences on Investment subsidies in Germany*

Regional policies based on such investment subsidies have received many critics. One of the main critics is that even if additional investments are induced, the direct impact of investment subsidies is more likely to reduce the demand for labour than to increase it. Investment subsidies raise the cost of labour relative to capital which results in a substitution of capital for labour.

Most of the empirical findings indicate a negligible or even negative employment effect (Daly et al. 1993, Faini and Schiantarelli 1985, Folmer and Nijkamp 1987). However, according to Schalk and Untiedt (1999), the problem of these studies is that they hardly take into account the global output effect due to indirect and induced effects. Schalk and Untiedt (1999), in their econometric analysis of the impacts of regional investment incentives on manufacturing investment, employment and output in the assisted areas of West-Germany between 1978 and 1989 (data for 327 cross-regional units: *Kreise*), distinguish between the substitution and the output effects of input price changes on factor demands. Moreover, their model includes technical efficiency, a central topic in recent regional growth theory, which proved to be an important determinant in regional factor demand analyses. Their results provide empirical evidence that regional investment incentives in West-Germany, unlike in other countries, has had success with both the investment and the employment objectives.

Interestingly, despite the criticism, the whole system of regional capital subsidies in West Germany was carried over to East Germany following German's unification. The three regional policy instruments are capital investment bonus (tax free capital grant), capital grants and accelerated depreciation allowances.

## **Regional Policy tools**

### *InvestitionsBank Berlin*

In Berlin about 60 subsidies/loans programs can be identified in five main categories: investments and working capital; technology, research and development; environmental projects; subsidies within the scope of labour market; Consultancy assistance. A substantial part of these programs is financed by the European Structure Fund and by the Common Task ('GA') of federal and federal-land governments to promote regional economic structures.

A particularity of Berlin offers of business aid is the labour market-related programs, such as the Business start-up loans under the 'Labour market Policy Programme' (ARP) or the Start-up allowance 'Ich-AG' aiming at fostering business creation and self-employment by unemployed people.

Many institutions serve as initial point of contact services to offer information and consultancy for new entrants, existing firms, start-up and technology oriented businesses. Some of the main institutions are the IBB Innovation Advisory Services, Berlin Partner

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<sup>38</sup> Idem

GmbH (marketing for FDI), the Berlin-Brandenburg Business Location Centre, TSB Technologiestiftung Innovationszentrum Berlin, etc.

Investitionsbank Berlin (IBB) is the central subsidy institution of the Federal Land of Berlin. The main objective of Investitionsbank Berlin (IBB) is to support small and medium-sized enterprises and hence to promote structural economic change in the capital city.

Since September 2004, IBB operates as an independent – public law – development bank of the State of Berlin. As a spin-off from the former Landesbank Berlin, this new development is supposed to reflect a wider orientation change in the government assistance<sup>39</sup>.

IBB has a particular focus on individual government assistance for small and medium-sized enterprises operating in the recognized fields of competency of Berlin: biotechnology, medicine, ICT, media and transportation technology.

IBB can extend loans at improved conditions to SMEs, but it also acts as a go-between with the commercial banks. The focus is on increasing loan-based government assistance program instruments via commercial banks domiciled in Berlin, rather than granting subsidies. In 2004, IBB granted EUR 80 million of subsidies and EUR 12 million loans for a total volume of EUR 388 millions investment projects (see Appendix). Being foremost a financial intermediary on the market, IBB recorded EUR 15 billion of Loans and Advances to customers in Assets.

IBB products include the 'IBB Growth Program', 'ProFIT—a program for government assistance of research, innovations and technologies', a loan fund for small and medium-sized enterprises ('KMU-Fonds') as well as a venture capital fund (VC Fonds Berlin).

The 2004 business reports indicates that the approval figures 'again declined in the reporting year'; the noticeable investment restraint of small and medium-sized Berlin enterprises reflecting their strained business situation.

### **Drivers of regional competitiveness**

In order to get a concrete estimation on the way the Land of Berlin invests in drivers of competitiveness, this section analyses the budget the 'Economy' budget of the Land, as well as the structural funds budgets.

#### *Economy budget of the Land*

In 2006, the official budget of the Land of Berlin presented a total spending line of EUR 20,3 billion<sup>40</sup>. In line with what was defined as 'regional economic development' means in this report, the budget division 'Economy, Labour, Women'<sup>41</sup> has been examined. The Economy budget represents 1,08 billion. In total, 447 millions were allocated into drivers. A large part of the budget was not allocated because it contained the funding to the public transport services, funding for the Water Public Agency, large administration costs, specific spending for Women policy and the Labour jurisdictions. Moreover, it has to be acknowledged that the complexity of the budget did not allow identifying some lines with certainty (see Appendix for details).

<sup>39</sup> Statement of the Senator for Economy in "IBB company profile 2004"

<sup>40</sup> Senatsverwaltung für Finanzen, Haushaltsplan von Berlin für die Haushaltsjahre 2006/2007

<sup>41</sup> Einzelplan 13: Wirtschaft, Arbeit und Frauen

<b>Drivers of regional competitiveness</b>	<b>Economy, Labour and Women department (2006 budget) (EUR million)</b>	<b>Share of total</b>
<b>Hard or tangible infrastructure</b>	167.583.000	<b>37%</b>
<b>Social Capital</b>	11.100.700	<b>2%</b>
<b>Human Capital</b>	157.198.300	<b>35%</b>
<b>Fiscal and financial interventions</b>	77.633.000	<b>17%</b>
<b>Financing</b>	3.230.000	<b>1%</b>
<b>Innovation support</b>	31.050.000	<b>7%</b>
<b>Amenities</b>		
<b>Total</b>	<b>447.795.000</b>	

**Table 19 Breakdown of the 'Economy, Labour and Women' Budget of Berlin Land (2006) into drivers of competitiveness**

Investments in amenities are covered by other departments of the Land of Berlin. The table most important information are very weak spending in social capital (2%), high investment in human capital (35%) and a remaining high weight of traditional investment subsidies (17%). The latter are channelled by the IBB.

#### *EU Structural Funds*

The main objective of the European Structural Funds is to reduce the backwardness of less favoured regions. Structural Funds aim at contributing to real convergence in terms of income and employment. This is particularly sensitive in Germany, considering the stagnation of the new Länder's catching up process since the mid-90s.

The operational programs of Objective 1 and Objective 2 are integrated and comparable (see Appendix for detailed budgets). The main objectives of the programs are economic growth and employment. The Operational Programs are based on the same development priorities.

The Objective 1 program covers the whole East Berlin and one Western Berlin Bezirk (West-Staaken). The total Structural Funds contribution is around EUR 700 millions out of a total budget of EUR 1 billion for the period 2000-06. It is 9% less than for the 1994-1999 programming period.

With a Structural Fund contribution of EUR 392 millions, the Objective 2 program covers areas in the Western part of the city. West Berlin is the only city in the European Union to be covered by Objective 1 (transitional support) and Objective 2 at the same time. Around 50% of West Berlin's inhabitants live in the actual Objective 2 area, and 25% in the transitional area.

<b>Drivers of regional competitiveness</b>	<b>Objective 1 2000-06 budget (EUR)</b>	<b>Objective 2 2000-06 budget (EUR)</b>	<b>Total</b>	<b>Share of total</b>
<b>Hard or tangible infrastructure</b>	169.735.878	74.075.900	243.811.778	<b>22%</b>
<b>Social Capital</b>	49.110.000	33.030.000	82.140.000	<b>8%</b>
<b>Human Capital</b>	165.722.984	107.152.000	272.874.984	<b>25%</b>
<b>Fiscal and financial interventions</b>	88.661.590	34.451.000	123.112.590	<b>11%</b>
<b>Financing</b>	12.200.250	6.675.000	18.875.250	<b>2%</b>
<b>Innovation support</b>	154.519.536	95.260.529	249.780.065	<b>23%</b>
<b>Amenities</b>	54.050.250	42.037.000	96.087.250	<b>9%</b>
<b>Total</b>	<b>694.000.488</b>	<b>392.681.429</b>	<b>1.086.681.917</b>	

**Table 20 Breakdown of the Objective 1 and 2 programmes Budgets (2000-2006) into drivers of regional competitiveness**

The breakdown of budgetary means into the drivers is more reliable using the Structural Funds documentation<sup>42</sup>. If we assume the yearly spending of structural funds in Berlin is around EUR 140 millions, it accounts for more than 10% of the annual 'Economy' budget of the Berlin Land, leaving a strong leveraging potential.

In Appendix a table provides the example on how funds are distributed from priorities and measures into the drivers.

### *Conclusion*

Using the estimation for the Structural Funds programs, an adjusted observation of the relative financial efforts of the Land Berlin into the drivers of regional competitiveness emerges.

Via its economic development policy, funded by its own resources, Federal transfers, and the Structural Funds, the Land of Berlin invests around 35% of financial means into the hard infrastructure; around a low 5% in social capital; a high 30% in human capital; between 10% to 15% in innovation; and a still high proportion in direct investment subsidies, with around 15%. The remaining means are invested in amenities related to environment protection (less than 5%).

### **Specific urban policies**

Accelerated physical rehabilitation, especially of private and public housing estate, both in the West and East of Berlin was aiming at rapidly showing to inhabitants the benefits of reunification. New approaches within the context of the federal 'Social City' program attempt to improve the participation of the local population in these rehabilitation programmes. Thus, *Quartiersmanagement* programmes run in 17 different neighbourhoods of Berlin.

The federal 'Social City' programmes aims at fighting social and spatial exclusion in urban environment by involving population in the definition and choice of rehabilitation projects,

<sup>42</sup> Updated Mid-term Evaluation Report of Objective 1 and 2

but also in new measures in the field of training, job and enterprise creation. The *Quartiersmanagement* programmes are 'neighbourhood management', in disadvantaged residential areas, conducted in partnership between public, private and residents actors.

These 'neighbourhood management' teams are often small structures playing a role of coordination, advice and support for projects rather than taking direct initiatives.

## Conclusions

Following the reunification, Berlin went through an intense economic restructuring, that is still far from being completed. The analysis of most of economic indicators leaves a pessimist impression about Berlin's development during the last decade, especially in comparison to the high post-reunification expectations. Nevertheless some indicators, as research and development intensity, also tend to indicate that Berlin simply needs some more time to bank on its first-class advantages in tourism, culture, ICT, biotechnology, research and education. The proclaimed geographical location advantage as an entry door to the Eastern markets is less convincing, as FDI can directly rely on strengthening urban centres in these markets (Warsaw, Budapest, Prague, etc.).

In the context of Berlin's stagnant economy, characterized by high unemployment and strong socio-ethnic-spatial polarization, regional policy's aim is also to 'stimulate growth'. In this respect, Berlin has less breathing space than other metropolitan areas enjoying high economic growth (i.e. London).

The Land institutions are concentrating on two major priorities: the most urgent one is the budget clean up, the most politically uncertain one is the merging with the surrounding Brandenburg Land in order to get an optimal spatial planning unit<sup>43</sup>.

The Land of Berlin own taxes represents around 49% of its budget resources (2006 budget). Despite its high degree of autonomy, numerous and large competencies, Berlin's public authorities action has been limited by the overall German's economic slowdown. More specifically, Berlin's situation is strongly conditioned by the historical burden of the New Länder.

The Senate budget for Economy, Work and Women represents around 5% of the total Land budget. Taken together with the funding of the EU Structural Funds (Objectives 1 & 2), the breakdown of economic development means into the drivers of regional competitiveness does not exactly reflect the so-called modern regional policy.

About 30% of resources are invested in Human Capital, a clear priority for Berlin. However, the Social Capital part looks quite tiny, with only around 5% of expenditures. In particular, disadvantaged groups such as minority ethnic groups are not receiving a priority focus. Economic infrastructure remains high on the agenda, with 35% of expenditures.

After reunification, the Federal government's policy shifted away from massive subsidization that prevailed both in East and West Berlin. Stimulating endogenous development rather than relying on subsidization still ranks high on the public agenda of the Senate and the IBB. Nevertheless, direct investment subsidies still account for a high share of 15% of total expenditures.

Finally, strong public investments in innovation (10-15% of public expenditures) confirm the picture of a region situated far above the German's average R&D spending in relation to GDP (see 3.5).

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<sup>43</sup> Another referendum is planned in 2006.

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- PROGNOS AG, *Aktualisierung der Halbzeitbewertung der Einheitlichen Programmplanung (Ziel 2) des Landes Berlin 2000 – 2006*, 25 November 2005

## Web Sites:

[www.statistikportal.de](http://www.statistikportal.de) (Federal Statistical Office and the statistical Offices of the Länder)

[www.statistik-berlin.de](http://www.statistik-berlin.de) (Land Statistical Office of Berlin)



[www.berlin.de](http://www.berlin.de) Berlin Land Portal

[www.invest-in-germany.de](http://www.invest-in-germany.de) (Portal giving access to Berlin Partner GmbH;  
Business Location Centre Berlin-Brandenburg)

[www.ibb.de](http://www.ibb.de) (InvestitionsBank Berlin)

<http://forum.europa.eu.int/irc/dsis/regportraits/info/data/en/index.htm> (EU web site:  
Portrait of the Region)

## Appendix

### InvestitionsBank Berlin 2004 commitments per programs

<b>Commitments (Million EUR) for the IBB Economic Support 2004</b>	<b>Loans and provisions</b>	<b>Grants and subsidies</b>	<b>Supported Investments Volume</b>
<b>1. Investments support</b>	-	<b>53,3</b>	<b>317,1</b>
Gemeinschaftsaufgabe (GA = Common Task)	-	53,3	317,1
<b>2. Technology support</b>	<b>7,9</b>	<b>18,5</b>	<b>58,7</b>
Environmental development programme	-	0,2	0,2
Innovation Fund of Berlin Land	3,6	-	15,8
Technology investment programme	-	11,3	33,6
Innovation Assistant	-	2,1	-
Subsidy Programme for Research, Innovation, Technologies (ProFIT)	2,7	3,4	7,8
Berlin Future Fund	0,2	0,9	1,3
IBB Future Fund	1,4	0,6	NA
<b>3. Business Start-Up</b>	<b>1,5</b>	<b>0,0</b>	<b>3,5</b>
Micro-Loan	0,01	-	0,02
Start Money	0,1	-	0,5
Business start-up loans under 'labour-market Policy Programme'	1,4	-	3
<b>4. Labour market support</b>	<b>0,05</b>	<b>7,9</b>	<b>8,45</b>
In-house Continuing Training and Flexible Work Organisation	-	5,3	5,7
Tuition fees	0,05	-	0,05
Other measures	-	2,6	2,7
Consultancy Assistance	-	-	-
<b>5. Working capital support</b>	<b>2,2</b>	<b>0</b>	<b>0</b>
Consolidation Fund	0,1	-	NA
Liquidity Fund	2,1	-	NA
<b>Total</b>	<b>12</b>	<b>80</b>	<b>388</b>
<i>Aid intensity in % of investments volume</i>			24%

**Details of the analysis of Berlin Land's Economy budget (2006)**

Senatsverwaltung für Wirtschaft, Arbeit und Frauen <b>Economy, Labour and Women Department</b>	<b>2006</b> Spending
<b>(Chapter 1320) Economy, Technology, Economic planning</b>	44.245.700
Administration costs and other	9.025.000
<b>Affected to drivers</b>	<b>35.220.700</b>
Research and technological development (FEDER funds)	28.587.000
Subsidies to private enterprises (FEDER funds) innovation projects	2.463.000
Subsidies to institutions for economic development; international cooperation	4.170.700
<b>(Chapter 1340) Professional and vocational training</b>	148.160.800
Administrative costs and other	21.943.500
<b>Affected to drivers</b>	<b>126.217.300</b>
<b>(Chapter 1330) Economic support</b>	831.490.500
Administration costs and other	122.297.500
BVG (Public Transport Agency) (capital and financial interests)	375.746.000
Water Public Agency	47.090.000
<b>Affected to drivers</b>	<b>286.357.000</b>
<b>Exhibition site</b>	<b>98.902.000</b>
operational expenses	4.000.000
Interest charges for land acquisition	12.978.000
Other expenses	17.240.000
Acquisition of land and buildings	64.684.000
<b>Projects expenses and subsidies (but not for investments)</b>	<b>29.951.000</b>
International 'Green Week' of Berlin (fair)	230.000
funding to IBB (consolidation and liquidity fund)	3.230.000
Industrial land	1.200.000
Berlin - Marketing (institutions)	6.400.000
Subsidies to firms for particular measures (Land)	750.000
Subsidies to firms for particular measures (ERDF)	1.300.000
Subsidies to SME (Land)	291.000
Subsidies to SME (ERDF)	16.250.000
Subsidies to firms in relation to Berlin Fair	300.000
<b>GRW (Improvement of Economic Infrastructures) - Gemeinschaftsaufgaben (joint Federal-Land program)</b>	<b>157.504.000</b>
industrial and trade areas, transport infrastructure	67.481.000
vocational education (1/2)	30.981.000
Investment subsidies	59.042.000
<b>Other chapters (Administration; Labour jurisdiction; Women)</b>	60.597.800
<b>Total budget 2006 - division</b>	<b>1.084.494.800</b>
<b>Total affected to drivers</b>	<b>447.795.000</b>

**Objective 1 development priorities and variation (1994-1999) and (2000-2006)**

<b>Programming period</b>	<b>1994-1999</b>	<b>2000-2006</b>	<b>variation</b>
Total budget with Berlin's contribution (35%)		1,088,146,000	
<b>TOTAL SF contribution (without TA)</b>	<b>772,792,000</b>	<b>700,695,000</b>	<b>-9%</b>
<b>Priority 1: Strengthening the competitiveness of the economy with special focus on SMEs</b>	<b>179,248,000</b>	<b>187,201,000</b>	<b>4%</b>
1.1. Productive investment	128,093,000	72,949,000	-43%
1.2. Research and (technological) development	50,905,000	84,696,000	66%
1.3. Strengthening of entrepreneurship capacities in SMEs	250,000	29,556,000	+++
<b>Priority 2: Infrastructure</b>	<b>301,632,000</b>	<b>268,647,000</b>	<b>-11%</b>
2.1. Economic oriented infrastructure	218,600,000	56,821,000	-74%
2.2. Knowledge, R&D and information oriented infrastructure	41,957,000	57,975,000	38%
2.3. Formation and professional training oriented infrastructure	41,075,000	27,524,000	-33%
2.4. Urban and local infrastructure (districts with particular needs)	0	87,929,000	+++
2.5. Traffic infrastructure	0	38,398,000	+++
<b>Priority 3: Environment and ecological improvements</b>	<b>53,645,000</b>	<b>54,050,000</b>	<b>1%</b>
<b>Priority 4: Support the potential of human resources and gender equality</b>	<b>230,365,000</b>	<b>183,628,000</b>	<b>-20%</b>
<b>Priority 5: Rural development</b>	<b>7,902,000</b>	<b>7,169,000</b>	<b>-9%</b>

Source: Mid-Term Evaluation Document

**Objective 2 development priorities budget (2000-2006)**

<b>Programming period:</b>	<b>2000-2006</b>	
<b>TOTAL ERDF contribution (without TA)</b>	<b>243,543,429</b>	
<b>TOTAL ESF contribution</b>		<b>149,138,000</b>
<b>Priority 1: Strengthening the competitiveness of the economy with special focus on SMEs</b>	<b>107,266,529</b>	
1.1. Productive investment	24,608,000	
1.2. Research and (technological) development	60,646,529	
1.3. Strengthening of entrepreneurship capacities in SMEs	22,012,000	
1.4. Active and preventive labor market policies		83,523,000
<b>Priority 2: Infrastructure</b>	<b>108,689,900</b>	
2.1. Economic oriented infrastructure	35,058,900	
2.2. Knowledge, R&D and information oriented infrastructure	34,614,000	
2.3. Urban and local infrastructure	39,017,000	

(districts with particular needs)		
2.4. Urban and local infrastructures improvement through socio-professional integration, vocational training, life-long learning		51,165,000
<b>Priority 3: Environment and ecological improvements</b>	<b>27,587,000</b>	
3.2. Environment protection through information and advice		14,450,000
<b>TOTAL SF contributions to objective 2</b>	<b>392,681,429</b>	

Source: Mid-Term Evaluation Document

**Details of the distribution of Objective 1 means to the drivers:**

Objective 1 (source: mid-term evaluation)	SF contributions 2000-2006	Type of drivers affected
Berlin 2000-2006		
<b>TOTAL (without TA)</b>	<b>701.169.488</b>	
<b>TOTAL (without TA and rural development)</b>	694.000.488	
<u>Priority 1: Strengthening the competitiveness of the economy with special focus on SMEs</u>	<b><u>199.460.265</u></b>	
<b>1.1. Productive investment</b>	<b>78.953.297</b>	
1.1.1. Support to private investment – improvement of the regional productive system		Financial interventions
<b>1.2. Research and (technological) development</b>	<b>92.854.441</b>	
1.2.1 Support to R&D	55.813.144	Innovation
1.2.2. Support to ICT	22.003.135	Innovation
1.2.3 Venture Capital Participation Funds	11.250.000	Innovation
1.2.4. Technology consulting	3.788.162	Innovation
<b>1.3. Strengthening of entrepreneurship capacities in SMEs</b>	<b>27.652.527</b>	
1.3.1. Consulting assistance for SMEs	5.743.984	Human Capital
1.3.2. Financial support for firm start-up	9.708.293	Financial interventions
1.3.3. Credit funds for SMEs	12.200.250	Financing
<u>Priority 2: Infrastructure</u>	<b><u>257.316.973</u></b>	
<b>2.1. Economic oriented infrastructure</b>	<b>44.862.878</b>	
2.1.1. Infrastructure upgrading the productive structure	40.887.878	Hard infrastructure
2.1.2. Tourist infrastructure	3.975.000	Hard infrastructure
<b>2.2. Knowledge, R&amp;D and information oriented infrastructure</b>	<b>61.665.095</b>	
Supporting an increased use of the innovation potential		Innovation
<b>2.3. Formation and professional training oriented infrastructure</b>	<b>25.916.000</b>	
<b>2.4. Urban and local infrastructure</b>	<b>81.828.750</b>	

Support to urban and local infrastructure especially in districts with particular need for redevelopment		Hard infrastructure
<b>2.5. Traffic infrastructure</b>	<b>43.044.250</b>	
Road traffic infrastructure		Hard infrastructure
<u>Priority 3: Environment and ecological improvements</u>	<b><u>54.050.250</u></b>	
<b>3.1. Measures improving the environment</b>		
3.1.1. Environmental program		Amenities
<u>Priority 4: Support the potential of human resources and gender equality</u>	<b><u>183.173.000</u></b>	
<b>A: Active and preventive labour market policies</b>	<b>97.576.000</b>	
4.1.1. Combat unemployment of young and avoid long term unemployment of young	50.174.000	Human Capital
4.1.2. Qualification, information and advice	13.616.000	Human Capital
4.1.3. Support employment	33.786.000	Human Capital
<b>B: A society without discrimination</b>	<b>31.675.000</b>	
4.2.1. Qualification, information and advice	6.386.000	Social Capital
4.2.2. Support employment	25.289.000	Social Capital
<b>C: Professional training, life-long learning</b>	<b>15.616.000</b>	
4.3.1. Improvement of the educational professional training system and development of pilot schemes to avoid premature school exit	15.616.000	Human Capital
<b>D: Adaptation capacity and entrepreneurial spirit</b>	<b>21.584.000</b>	
4.4.1. Vocational training, qualification, information and advice	20.871.000	Human Capital
4.4.2. Development of entrepreneurial spirit	713.000	Social Capital
<b>E: Gender equality</b>	<b>15.161.000</b>	
4.5.1. Qualification, information advice, support of employment and business start up	15.161.000	Social Capital
<b>F: Local capital for social affaires</b>	<b>1.561.000</b>	
4.6.1. Small projects aiming at supporting local social developments	1.561.000	Social Capital
<u>Priority 5: Rural development</u>	<b><u>7.169.000</u></b>	

### **WP 3.3 – Case study RINGKOBING Amt**

Åsa Pettersson and John Jørgensen, Nordregio

#### **Historical heritage and regional specificity**

Ringkøbing Amt (County of Ringkøbing) owns its name to Ringkøbing, an old market town lying on the north side of the lagoon-like Ringkøbing Fjord. Ringkøbing has been the seat of a regional government ever since the Danish counties were formed in 1793. Whereas the borderline of Ringkøbing Amt was left untouched by the reform of local authorities in the early 1970s, Ringkøbing is about to lose its regional 'sovereignty' as Ringkøbing Amt is going to be amalgamated in to a larger regional authority, Region Midtjylland (Mid Jutland Region), by January 1<sup>st</sup> 2007. This region will have its regional 'capital' situated in the neighbouring provincial town of Viborg.

The oldest known municipal charter mentioning Ringkøbing dates from 1443, but the earliest archaeological finds establish its origins some time around the mid-13th century. At that time there was no outlet from the western end of Limfjorden to the North Sea, so Ringkøbing Fjord was the only natural harbour in the area. It became one of the most important harbour cities on the west coast of Denmark with trading links extending to Norway, Germany, and Holland. In time, though, especially during the 17th century, the approach at Nymindegab began to fill with sand and moved south. With the opening of the West Jutland railway line and the modern, industrial harbour in Esbjerg in the mid-1870s, shipping for Ringkøbing stopped almost immediately, leaving the town to reinvent itself. It wasn't until a lock at Hvide Sande was constructed in 1931 that Ringkøbing was once again assured of a passage to the North Sea. However, its role as a port for ships was never to return to its former glory. It did, however, become the first small town in Denmark to provide free universal education. That falling off in commerce is what has probably kept Ringkøbing looking as old-fashioned and splendid as it does today.<sup>44</sup>

The transformation to an industrial community has brought population growth and areal expansion in the cities. In the region the textile industry and parts of the metal producing industries have gone through a rather successful transformation. Agricultural businesses, including farming, gardening and forestry, take up most of the land in the county.<sup>45</sup>

<sup>44</sup> <http://www.frommers.com/destinations/ringkobing/2003010001.html> 2006-03-28

<sup>45</sup> Ringkøbing Amt, 2006

## Territory and governance

The Danish 'Amts' (counties) are classified as NUTS 3 level<sup>46</sup>. Ringkøbing is mentioned in the ESPON 1.1.1 project, included in extensive lists of FUAs<sup>47</sup>, PUSHs<sup>48</sup>, PIAs<sup>49</sup>.

Denmark is a decentralised unitary state, and an EU member since 1973<sup>50</sup>. Denmark has a strongly decentralised political-administrative structure. The specificity of the Danish, partly Nordic, governmental regime is characterised by three features which makes it different from many other Western countries:

1. A relative strong autonomy both politically and financially, with the municipality and the central state as the dominant actors. Into it is built a contradiction between local autonomy and national legislation with common standards plus problems concerning central government financial steering.
2. It also includes the administration of the social security and the welfare services plus the physical (also environmental) planning. There have been tendencies to allocate more and more duties and tasks to the municipalities. Recently it also includes local economic policies and integration of refugees. Compared to other countries neither the welfare administration nor the physical/environmental planning is separate structures. In the Danish case this means that today the two systems are linked to local democracy and its autonomy.
3. Since the establishment of the Danish social security system in the 1930s a geographical equalisation of financial resources among the municipalities has been regarded as a necessity in order to help the economically weak municipalities.

The local government structure was modernized in the beginning of the 1970s. During the 1950s and 1960s it had become apparent that the traditional rural districts (sognekommuner) were inadequately placed to solve the tasks related to the emerging welfare state. Furthermore, the municipal privileges that the larger cities had upheld since medieval times were considered outdated. The result of the local government reform in 1970 was that 1 366 rural districts and 86 municipalities (købstadskommuner) were amalgamated into 277 municipalities, two of which were late merged with a neighbouring municipality. At the same occasion the number of counties was reduced to 14 and the counties were strengthened financially and made responsible for hospitals, regional planning and the co-ordination of regional transportation – and later on for the upper secondary schools. For each of these tasks very detailed budgetary information can be easily obtained, whereas it is often rather difficult, if not impossible, to brake down national budgets by

<sup>46</sup> [http://www.cordis.lu/en/src/d\\_018\\_en.htm](http://www.cordis.lu/en/src/d_018_en.htm) 2006-03-29

<sup>47</sup> Functional Urban Areas

<sup>48</sup> Potential Urban Strategic Horizon

<sup>49</sup> Polycentric Integration Area

<sup>50</sup> <http://www.atlapedia.com/online/countries/denmark.htm> 2006-03-29

counties for tasks were the state is the sole responsible. The local government act prepared the groundwork for a decentralised welfare state.

The counties and the municipalities were thought to be large enough to take care of welfare provision and indeed in the following years, more and more tasks were transferred from the state to the regional and the local levels. As counties and municipalities levy their own taxes, and receive grants from the state, the sub national level actually distributes one-third of Danish GNP, which by far places Denmark as the most decentralised welfare state in the world (the second being Sweden, where one-fourth of GNP is distributed by the local authorities). The largest areas of expenditure, accounting for more than 90% of all expenditures in the municipalities are: child care, primary schools, care of senior citizens, and matters concerning roads and administration. Hence, most of the activities that municipalities are engaged with have to do with welfare, rather than growth-oriented issues.

The local government act of the 1970s resulted in a municipal structure with a considerable variation in size (measured by numbers of inhabitants). The largest municipality is the City of Copenhagen with more than half a million inhabitants, whereas the smallest municipalities have about 3 000 inhabitants, most notably in some of the islands. Apart from the islands the smallest municipalities are mostly to be found in the southern part of the country (southern part of Jutland, and on Funen, Lolland, Falster and Western Zealand – and until the voluntary amalgamations in the later years also on the islands of Bornholm and Langeland). This variation in size has given rise to considerable problems concurrently with the fact that more and more (also more complicated) tasks have been transferred to the municipalities.

Hence, many minor municipalities have had to set up inter-municipal cooperations in order to fulfil their obligations, and to reap some benefits from economies of scale. In times of budgetary constraints within the public sector this has fuelled a debate on the appropriate size of municipalities in terms of economic sustainability. Eventually, in 2002 this discussion led to the appointment of a Commission, which was asked to examine the connection between the size and expenditure levels of local authorities.

In June 2004, following some of the recommendations of the Commission, the Danish government (the Liberal Party and the Conservative Party) and the Danish People's Party came to agreement about a reform of the framework for public tasks and public service. With this agreement, a fundamental reform of the public sector will be implemented from 1 January 2007 and onwards. The counties will be dissolved and five regions with elected regional councils will be established. Larger and more sustainable municipalities will be given the responsibility to handle most of the citizen-related tasks.



On 15 November 2005, Danish citizens elected councils in five new regions, which in 2007 will replace the 13 existing counties ('amter'). Ahead of this changeover, Internet-based citizen panels have been set up to help citizens familiarise with the new regions and enable new regional identities to emerge. Following an agreement between the major political parties in June 2004, Denmark is currently implementing a major 'structural reform' of its public sector, consisting in a complete overhaul of the country's regional and local government structure.

According to the municipal reform of the early 1970s Denmark was divided into 14 counties and 275 local authorities, municipalities. The latter included the cities of Copenhagen and Frederiksberg, which are unitary authorities being at the same time regions and local authorities covering both tiers of local government. In 2002 Bornholms Amt at the island of Bornholm was abolished, and a new amalgamated municipality took over the responsibilities of not only the county but also the five hitherto existing municipalities, lowering the number of Danish counties and municipalities to 13 and 271, respectively. With the structural reform, tasks will be transferred from the regional level to the municipal level (i.e. further decentralisation) as well as to the state level (i.e. re-centralisation of certain tasks). The 271 local authorities will be replaced by 98 larger and more sustainable (in terms of their capabilities) municipalities, which will be given responsibility to handle most tasks related to citizen service delivery. The 13 current counties will be dissolved and replaced by 5 bigger regions (North Jutland, Mid Jutland, South Denmark, Sealand, and the Capital Region around Copenhagen), which will be responsible for health care and health insurance, regional development and coordination with business, tourism, transport and environment.

The new Danish regions will become operational from 1 January 2007. Each will have an elected assembly of 41 representatives and will be headed by the chairman of the regional council. Ahead of the first elections, in 15 November 2005, citizens were invited to join regional citizen panels on the Internet. The aim of these panels is to enable citizens to know more about the future regions and their competences, while enabling future regional councillors and civil servants to connect with citizens and learn about their expectations. Ultimately, the regional panels are also expected to help increase participation in the regional elections.

'The dialogue with citizens will give us detailed knowledge about values, attitudes and opinions among the citizens of the different regions. The results of this dialogue will of course not be representative, but we will have an extraordinary possibility of targeted communication with citizens as regards their interest, opinions and knowledge' said Otto Larsen from the Association of Danish Regions.

The dialogue will consist of a continuous debate about regional matters, regional newsletters and five polls. The first poll investigates the citizens and their habits, incomes, ages and opinions about questions such as environment, growth, political parties and

integration. Later on, the panel members will also be asked to provide insight into more concrete issues. In the Capital Region, the goal is to make at least 8 000-10 000 out of the region's 1,6 million inhabitants join the panel.

Typology of Regionalization:

- Regionalization through the existing Local Authorities
- Regional autonomy (Political Regionalization)

A mixture of the two above due to the amalgamation. It has to be remarked, though, that the reform of local authorities will imply a weakening of the regional level, as many tasks are moved either upwards to the national level, or downwards to the municipal level. The coming regional level will have hospital service and regional economic policies as its prime responsibilities.

### **Socio economic fundamentals**

Over the last ten years, the population growth in Ringkøbing county has been stable (roughly from 270 000 to 275 000 inhabitants), corresponding to some 5% of the country as a whole. The GDP has been growing in constant as well as current prices and amounts to 5% of Denmark's GDP. The employment rate has fluctuated slightly from 75,9-78,3% and the unemployment rate a bit more, between 4,08 and 6,82% which is slightly below the national level.<sup>51</sup> The latter forms a stark contrast to the situation in the 1950s and 1960s where the regional unemployment rate was considerably above the national average. Indeed Danish regional policies were introduced in the late 1950s to level out the differences in unemployment rates, most notably in Western Jutland where they were above the national average. Although, regional policies have been beneficial for the industrial development in Ringkøbing county, the improvement of the unemployment situation in the county has also to be seen in relation to the building up of the local welfare state (due the reform of local authorities in the early 1970s and onwards) and to endogenous growth processes within already existing sectors in the regional economy. This transformation of the regional manufacturing base has led to the formation of localized and specialized production complexes, i.e. industrial clusters.

The industrial clusters in Ringkøbing Amt have been analysed and ranked with regards to specialisation in a study:<sup>52</sup>

- Textile and clothing industry (1) got the highest score explained by a high export specialisation, an education level above the national average, the location to Herning and relevant networks.

<sup>51</sup> Statistics Denmark website database

<sup>52</sup> Ringkøbing Amt, 2003

- Electronics (2) came second because of a very high export specialisation and a high education level.
- Wood and furniture industry (3) has a very high degree of specialisation but a relatively low education level compared to the national average.
- Construction elements (4) are considered an important specialisation in the county with a high export level but a low education level.
- Metal and production technology (5) is not as much a regional specialisation: it employs many but the export and education levels are low. Many firms are subcontractors to the windmill industry.
- Conveyance of goods (6) employs relatively many compared to the national average but the education level is significantly low.

The results of the analysis indicate that the following measures could improve the situation:

- An increased dialogue between educational bodies in order to supply the education demanded by the industries
- 'ERFA' ('experience') groups (i.e. professional networks) focussing their activities on export, marketing, design and management development
- An increased supply of further education in the county, e.g. engineers and computer specialists
- Recruiting highly-qualified staff from outside the county
- Increasing the connections between firms and education centres
- Extending the research activities connected to the CAMS (Center for Applied Management Studies, Copenhagen Business School)

No regional time series of new established firms have been available in this study. In Denmark as a whole, 173 600 new firms were established between 1990 and 2000, corresponding to some 16 000 a year on (average although steadily increasing). After 1995, the tendency has been that construction and installation have increased the most, followed by knowledge services. Most new establishments have taken place in the capital area and Århus (the second largest city), and least in the counties of Ringkøbing and Viborg. Also with consideration taken to the number of new firms in relation to the size of the population, Ringkøbing stays low on the list.<sup>53</sup>

The active promotion of foreign direct investments (FDI) started only in 1989 by the establishment of Invest in Denmark (IDK). Unlike in many other countries, financial subsidies have played a very limited role in Danish FDI promotion. This is in keeping with the 'liberal' approach in Danish industrial policies, e.g. national and regional subsidies were discounted in 1991 and within the European Objective 2 programmes, the role of investment grants has been limited.<sup>54</sup>

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<sup>53</sup> Koch and Bøegh Nielsen, 2003

<sup>54</sup> Halkier, 2003

Although the Danish regions display a rather homogenous pattern of regional inequality a comparison between the Danish regions shows that Ringkøbing Amt in some instances has rather dismal preconditions. For an example, the share of the workforce that has an academic degree, and the growth herein, is the lowest in the country. Also, when it comes to school attendance, the average numbers of years that the employed persons have gone to school – and the growth herein over a ten-year period – are the lowest in the country. Somewhat paradoxically, however, the R&D activities in private companies in Western Jutland (which Ringkøbing Amt is a part of) are ranking third out of seven regions compared in a recent national study. This has to do with the rather successful transformation of some of the mature industries identified earlier on: Textile has moved 'upstream' relying on design and branding, while production has been outsourced; and in the case of metal producing, some firms have been shifting from agro-machinery to suppliers for the wind mill industry, a sector where Denmark has been able to establish a leading position at the world market. Also, the establishment of a supporting infrastructure, for an example counselling and advising institutions mainly directed towards smaller, innovative and/or entrepreneurial firms, helps explaining the foundation of the rather successful transformation of the regional economy.

### **Summary and policy implications**

From a European perspective, Denmark has a good balance between regions. An important explanation is the geographical advantage and a dense and efficient infrastructure. This implies that peripheral areas in Denmark, in comparison with those in other countries, have easy access to the goods and services provided in the bigger cities. Over the last 30 years, a significant decrease of the regional income differences has taken place. This can be explained by employment growth in the public sector, which is a result of the construction of the welfare state, and traditional industries moving out from the bigger cities to the cheaper land and labour of the provincial areas. Another explanation is the location of national governmental offices, allocated between regions.

Technological development, migration and the market forces are moving towards less spread settlement, i.e. economic development tends to concentrate into town areas. The challenge for future regional policy is therefore to maintain the good development in the towns and yet improve the competitiveness of peripheral areas<sup>55</sup>.

### **Regional development priorities, policies and impacts**

The overall objective for Danish regional policy is to secure good and equal living conditions for the whole population, no matter where you live. All areas should be attractive for development and employment so that the population and economic activities can be

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<sup>55</sup> Indenrigs- og Sundhedsministeriet, 2003

geographically spread. The main strategy is to generally improve the conditions for local entrepreneurship in both the public and the private sector. Regulations and administrative procedures should be simplified and innovative behaviour among citizens, firms and public institutions should be encouraged. Targeted measures should be taken in regions which are not developing so well.

### **Policy strategy**

In the last decades Ringkøbing Amt has been characterised by low unemployment and good adjustment ability. Weaknesses include a relatively low education level and low degrees of innovation and new firms. Business development challenges are related to the transfer from an industrial society into a global knowledge economy which implies an increased demand for human resources and qualifications and consequently a risk for excluding people from the labour market. The labour-intensive and manual production is expected to decrease significantly which requires adjustment. Furthermore, the ageing population is leaving the labour market; hence the labour force within the county borders is diminishing.

The overall objective is to promote a sustainable business development which contributes to create growth in the firms and thereby better competitiveness, increased earnings and good employment possibilities. The county council expresses its hope and intention to cooperate with other actors in the business development area.<sup>56</sup>

### **Danish regional policy**

Since the early 1990s, a dramatic change in the aims and methods of Danish regional policy has taken place. In the late 1950s, the central government started to implement financial incentive programmes designed to redistribute economic activity within the country by making it attractive to invest in designated 'problem regions' with high unemployment levels and a limited degree of industrialisation. As from the 1980s these measures have, with few exceptions, changed into 'framework measures', i.e. collective measures (such as advisory services and networks between public and private actors) open to most or all firms. Since 1991, the main components of spatial economic policy have been a host for regional and local initiatives, supplemented by EU's Structural Funds focussing on improving the competitiveness of firms within each region.

The delivery of national economic development policies is primarily the responsibility of the National Agency for Enterprise and Housing (NAEH), which reports directly to the Ministry of Economic and Business Affairs (MEBA). The Danish Trade Council (DTC), sponsored by the Ministry of Foreign Affairs, operates on a national basis whereas its inward investment

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<sup>56</sup> Ringkøbing Amt, 2001

promotion agency, Invest in Denmark (IDK) has licensed a country-wide network of Regional Investment Promotion Agencies (RIPA).

The main national advisory services for economic development does, however, have a clear regional dimension, applying both to the networks of Technology Information Centres (TIC) and Contact Points for Entrepreneurs (CPE). Until recently there have been 16 TICs in Denmark – at least one in each region, acting as self-governing institutions ruled by a set of regulations laid down by the MEBA. The overall objective of each TIC was to contribute to the development of the businesses and industries of the region in which it was located. Their services to SMEs and entrepreneurs have been free of charge and limited in time which means they have had an important role as catalysts.

The CPE initiative was inspired by sub national attempts to create a one-door approach to support new firms and entrepreneurs. The creation of CPEs brought a wide range of sub national actors together in pursuit of entrepreneurship support. An evaluation, commissioned by the NAEH, showed that the quality of advice suffered because co-funding rules made it unattractive for local government officials to refer clients to private providers. The evaluation also saw a lack of integration between the CPEs and other business development services as a major drawback. At the same time, the increased sub national emphasis on new firms and entrepreneurship was noted with approval. An integrated system has replaced the CPEs and the TICs as from 2004, hence it is too early to conclude whether the merger of the two institutions have resulted in more efficient advisory system.

Invest in Denmark (IDK) has initiated a country-wide network of Regional Investment Promotion Agencies (RIPA). Although the interest seems to be growing, less than half of the 13 RIPAs have fulltime staff. The network resembles a franchise arrangement where the central government gives a license to a limited number of sub national actors to promote their locality vis-à-vis potential foreign investors. However, only in the case of Greater Copenhagen have considerable resources been mobilised in order to undertake proactive promotion abroad.

The Regional Business Development Initiatives (RBDI) each involves an in-depth study of the strengths and weaknesses of particular areas. These form the basis for concrete development projects brought forward by local and regional actors in partnership with the central government, focusing primarily on improving the framework conditions for business development within the region concerned. The worry about an over-emphasis in the capital region was the driving force behind the largest initiative, covering Jutland and Funen (see below), which well illustrates the spectrum of activities ranging from collaborative projects crossing administrative borders between regions within the programme area to support for local projects of major significance. Many projects focus on particular sectors or

technologies, but also institution building (e.g. joint inward investment promotion and specialised knowledge institutions concentrating on key aspects of regional development).<sup>57</sup>

The Jutland-Funen initiative predated the government's overarching Regional Growth Strategy of 2003, which also aims at ensuring a balanced regional development in Denmark, thus enabling all parts of the country (hence not only the capital region) to contribute to growth by improving the general conditions for growth that affect the entire country. This includes lower tax rates on employment income, smooth and efficient capital and labour markets, fewer administrative burdens and favourable conditions for education and research. Despite the balanced regional growth strategy it is acknowledged that a special regional effort is needed: a number of geographically marginal areas have had difficulties keeping up with the growth rates of the rest of the country. The marginal areas comprise 15 small and medium-sized regions with relatively low income levels and a population summing up to some 9% of the national total. Efforts in marginal areas need to be focused, comprehensive and cross-sectoral, involving both public and private sectors. The government therefore suggests setting up special regional growth partnerships in marginal areas to draw up development strategies. National and EU funding is available to support strategy and development projects in the marginal areas.<sup>58</sup>

A White Paper in 2003 proposed the setting up of Regional Growth Alliances (RGA) to operate exclusively in areas officially designated as peripheral. The organisational model resembles that of large RBDIs, with inter-tier collaboration via political steering and administrative working groups, the geographical scale of the RGAs is smaller and the number of projects each alliance will undertake is likely to be fewer.<sup>59</sup>

The positive experiences with Regional Growth Alliances have led to the government to decide that all five new regions should implement so-called growth foras, i.e. three-partite foras, or public-private partnerships, that will prepare strategies for regional economic policies. The growth strategies will be integrated in the regional development plans, which will be decided upon in the regional councils.

As a consequence of the national 'framework' perspective implemented from the 1980s and onwards the counties will have to define their own regional policies in order to make the best use of the measures provided through various national programmes, and in order to mobilize and coordinate the activities of regional actors.

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<sup>57</sup> Halkier, 2003

<sup>58</sup> The Danish Government, 2003

<sup>59</sup> Halkier, 2003

## Ringkøbing policy and instruments

In 2001, the county council of Ringkøbing Amt presented eight objectives for business development, which still are valid. The overall aim is to contribute to creating a good framework and to meet the needs for development, innovation and adaptation to global competition. The perspective is broad and includes sustainable growth within all sectors. The eight objectives are<sup>60</sup>:

1. To keep, attract and develop the labour force by investing in education and culture
2. To promote business development including innovation, growth and the establishment of new firms
3. To promote the skills level of the region through e.g. research, competence clusters and internationalisation investments
4. To promote infrastructure within ICT and transport
5. To make visible the strong industrial position of energy and environment businesses
6. To continue developing a sustainable and available tourism
7. To promote cooperation and co-ordination between municipalities, organisations, firms, etc., to achieve an optimal effect of used resources
8. To contribute to secure rural areas being attractive to live and running business in

Guidelines and measures for the achievement of these objectives are presented, and plans of action are worked out and adjusted yearly, although not quantified as targets, indicators, etc.

A general programme for business development, FUTURA, has been established to advise and support new firms, e.g. by financial aid to hire consultants. Furthermore, a 'contact point for entrepreneurs' (CPE, see above) has been pointed out in Ringkøbing Amt by the Ministry of Economic and Business Affairs, which implies to assemble and offer activities (consultation, courses and networking) by financial means from the ministry. Innovation projects are entitled to assistance and consultation from the HIH Development A/S in Herning. Ringkøbing Amt supports the Competence Centre West (Kompetencecenter Vest) with the objective to help small and medium sized enterprises with renewal, adaptation and innovation. The County of Ringkøbing has also invested in broadband all over the county in order to promote the use of information technology.

Ringkøbing Amt considers itself a mediator between business development actors – local and regional, private and public – and a disseminator of knowledge. The actors include EURA Ltd. (the Regional Development Company of Ringkøbing county), the EU Centre, Technological Information Centre (TIC), and the Regional Labour Market Council (RAR). Cooperation activities also include making the Mid West Centre of Denmark

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<sup>60</sup> Ringkøbing Amt, 2001



(Landsdelscenter Midt-Vest) an engine for the whole region.<sup>61</sup> The latter have been approved by the National planning authorities and this implies that there is an overall strategy to seek to locate high-order public and private services in the region.

The business development council of Ringkøbing Amt advises the county council in business development issues and suggests related strategies and activities.<sup>62</sup>

Today, ca. 15 MDKK a year are pooled to strengthen business development policy in Ringkøbing Amt. Four business actors receive support from this pool: the business service centre of Ringkøbing Amt (RES), the Regional Development Company of Ringkøbing county (EURA), the tourist group of West Jutland, and the EU Centre in Herning.<sup>63</sup>

EURA (mentioned above) is the Regional Development Company of Ringkøbing county, established in 1993 as a non-profit share-holding company. The shareholders are the county, the municipalities and a number of private and public companies in Ringkøbing county. EURA has one office located in the county and one EU office in Brussels. EURA's role is to implement the County's business development policy acting for the county authorities as the key actor in the field of fundraising and project development. This involves two types of objectives:

- To help the business community as well as public institutions in the county finance and manage a number of development projects in different fields
- To undertake strategic studies and development activities on behalf of the County authorities on issues of, inter alia, innovation and business development, information technology, and internationalisation, thus indirectly supporting the SMEs of the region.

EURA is an officially certified 'Business Innovation Centre' (BIC) and is thus a member of a network of 150 European business development centres organised in EBN, the European Business & Innovation Centres Network. Being an EBN member increases EURA's opportunities of establishing contacts all over Europe, which results in even better service and a higher quality towards customers and cooperation partners. The main raison d'être for EURA is its business development and innovation activities vis-à-vis local SMEs, where EURA has extensive experience in management and organisational development consulting, including introduction of new management tools and new technology, to adapt to the increasing international competition. This includes, among other things, SWOT analyses, organisational development, business planning, human resource development, marketing, information dissemination, and training activities related to all of the activities mentioned.

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<sup>61</sup> Ringkøbing Amt, 2001

<sup>62</sup> <http://www.ringamt.dk/Internet/RingAmtP1.nsf/BrowserForside?Openframeset> 2006-03-28

<sup>63</sup> <http://www.ringamt.dk/Internet/RingAmtP1.nsf/BrowserForside?Openframeset> 2006-04-20

Ringkøbing Amt is also part of the 'Jysk-Fynske' Business Development Initiative, a geographically defined cooperation between eight counties and 173 municipalities on Jutland (Jylland) and Funen (Fyn), a catalyst with the aim of strengthening the position as 'an attractive and dynamic region'. A central objective is to strive for balance between the capital region and the west of Denmark. The four prioritised areas are: education and competence, entrepreneurship, innovation and research, and IT. Activities include researcher contacts (to disseminate knowledge and experience between research environments and firms) and IT investments.<sup>64</sup>

The regional plan of 2005 for Ringkøbing Amt<sup>65</sup> has a broader focus and seeks to improve the living conditions in the region. The plan focuses on five themes:

1. *Towns and settlement*, with the objectives:

- To ensure the best possible service within the shortest possible distance in the whole region
- To enable enlargement and economic as well as population growth
- That public and private service for the whole part of the region are established in the 'Landsdelscenter Midt-Vest' so that Ringkøbing Amt can have a say in national and international contexts
- To actively support the firms' efforts as regards environmental management
- To maintain the structure of town centres and decentralised supply of shops
- To offer a varied supply of goods and increase the level of purchases within the county
- To develop tourism and outdoor life possibilities
- To improve the possibilities for disabled to take part in outdoor life
- To expand recreation areas near towns, improve communications and bridle paths

2. *The open landscape*, with a number of objectives related to special consideration to nature and landscape (scenic and biological values); unspoiled areas; the cultural environment; the zone near the coast; water areas; ground and drinking water; and afforestation.

3. *Industry in the open land*, with a number of objectives related to agriculture; water catchments; raw material extraction; and aquaculture.

4. *Technical installations*, where the objectives include transport; windmills; electricity and natural gas grids; and national defence exercise areas.

<sup>64</sup> <http://www.jylland-fyn.dk/wm1395> 2006-05-09

<sup>65</sup> Ringkøbing Amt, 2006

5. *Waste and waste water*, including objectives about waste activities; polluted areas; recycling of polluted earth; supplying earth to raw material ditches; and wastewater cleansing.

Guidelines for the achievement of these objectives are presented although barely quantified as targets, indicators, etc.

#### *Specific skills policy examples*

Herning-Ikast fits the academic description of an 'industrial district': where the textile and clothing industry is characterised by small, self-owned firms with close cooperation between actors and a number of locally adjusted services within finance, export and education. Following the agricultural crises of the 1920-1970s, these activities emanated from a tradition of domestic knitwear production and as a necessary side-line occupation for entrepreneurial and well-educated peasant proprietors with small lots. The local market of the 1930s developed into an export market in the 1950s. The situation with small firms, cooperation and business support is still prevailing. However, as a result of moving the labour-intensive parts of the production to the Far East, Eastern Europe and former Soviet Republics, the textile and clothing industry lost its leading position (measured by the number of jobs) in the area in favour of iron and metal industry.<sup>66</sup>

The textile and clothing industry in the region has managed, however, to move up-stream. Today, quite a few firms have established themselves as designers of apparel that are sold all over Europe. Labels such as Jackpot, Cottonfield, Jack and Jones and Vila are designed in the region, while the production has been outsourced, at first to countries in Eastern Europe, lately to Asian countries, most notably China and Vietnam.

The success of the textile and clothing industry builds upon the legacy, i.e. the specialization describes above, but it certainly also benefits from newly set-up institutions, such as TEKO, which is providing vocational training programmes in close collaboration with the firms in the textile and clothing industry.

Industries like wood and furniture, nutriment and stimulant, and construction and installation employ many, and the dynamics of the region has been preserved. Measures to re-educate the unemployed have proven successful although the education level as a whole is still the lowest in Denmark.

In the 1990s, when labour market policy actors were asked to describe their perception of Ringkøbing county's structural situation, they were mainly positive. They related to characteristics like spirit of enterprise, cooperation ability, high work ethics, sobriety, and a

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<sup>66</sup> Mailand, 2001

common view that unemployment is something unacceptable, but also to long distances, bad infrastructure and the low education level. The willingness to cooperate was explained by the fact that many of the employers have been employed at factories themselves and have therefore a better understanding for the situation of the employees and that there is a culture of informal relation. On the other hand, there were those who thought that the spirit of enterprise is declining, implying that the established firms survive whereas the new ones are short-lived. It is also indicated that there is a regional pride and scepticism towards Copenhagen and the central government.<sup>67</sup>

### **Coherence of Regional Policies**

While the central government has had the upper hand with regard to authority and finance, it has been widely recognised that, in terms of information about needs and opportunities, sub national actors often have an advantage. Halkier<sup>68</sup> sees three distinct approaches to inter-organisational co-ordination would appear to be in evidence:

- The franchise approach, where sub national actors are licensed to perform particular tasks that are to the benefit of both themselves and the national level
- The contracting out approach, where sub national actors receive a grant for performing a particular task according to agreed specifications
- The project framework approach, where vertical links between the different tiers of government and horizontal links between ministries and organisations form the basis for collaboration around a series of one-off development projects with a particular spatial focus, as seen in the RBDIs and RGAs.

It is interesting to note that the two first options have been used in the context of fairly well-defined and standardised tasks, whereas the last has been chosen in situations where both problems and solutions are more difficult to determine in advance and a good deal of room for manoeuvre is necessary to facilitate the process. The other way around, the abandonment of 'softer' forms of co-ordination experimented with in the late 1990s would seem to suggest that the co-ordination ambitions of the national level have increased over the years, and/or that experience demonstrated to the NAEH and the central government that more was required in order to persuade sub national actors that concerted efforts were more important than the political benefits of sponsoring 'their own' development bodies.<sup>69</sup>

Each year the government presents a report on regional policies to the parliament. A recurrent theme in those annual reports (*Regionalpolitisk redegørelse*) is a discussion of the effects of national, regional policies as well as the regional effects – whether intended or unintended – of national policies. The latter analysis often proves that national, sectoral policies can work against, and some times even neutralize the effects of regional policies. In

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<sup>67</sup> *ibid*

<sup>68</sup> Halkier, 2003

<sup>69</sup> *ibid*

themselves, however, the annual reports show that there is an awareness of the difficulties in coordinating national and regional activities.

While formulating strategies for formation and strengthening of regional industrial clusters another difficulty in establishing a coordinated effort nationally and regionally has become clear. When agencies at the national level analysed Danish clusters they identified 149 clusters<sup>70</sup> and 29 clusters<sup>71</sup>, respectively. Furthermore, regional agencies often identified even more clusters, probably in order to obtain the largest possible support in case national cluster policies were introduced<sup>72</sup>. Eventually, the difficulties in coming to an agreement on the exact number of clusters that would be eligible meant that larger, coordinated schemes never surfaced.

### **European Structural Funds Programmes**

The Objective 2 of Ringkøbing Amt comprises the areas of Thyholm and Venø with some 3 900 inhabitants and the transition areas of Thyborøn-Harboøre, Lemvig, Ulfborg-Vemb and Holmsland with some 36 200 inhabitants. The objective area has a narrow business structure with many small firms, a low rate of inhabitants between 20 and 39 years, and a low education level. The area has historically been dominated by fishery and agriculture and exposed to structural change. To improve the employment situation, there is need for new knowledge-based production and tourism. The Objective 2 programme aims at supporting a positive, long-term development by the implementation of projects departing from the strengths and weaknesses of the area, and which create and maintain employment. Private SMEs are entitled to Objective 2 funding for product development and advisory activities with special focus on export and (within tourism) to prolong the season and improve the utilisation of capacity. The total funding in the area amounts to 8 MDKK.<sup>73</sup>

The mid-term evaluation stated that there was no reason to change the overall strategy or division of priorities. It was, however, suggested to transfer money from direct business support to framework measures, but to allow for direct loans from a venture fund.<sup>74</sup>

The conclusions of a follow-up on the mid-term evaluation of Objective 2, can be summarised as follows:

- Most of the effect goals have been achieved, as regards the number of created jobs, course participants, projects, etc., but the development has not been turned around
- Objective 2 has strengthened the supported areas qualitatively (Increased the education level of the population; Increased the regional supply of competence development

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<sup>70</sup> National Planning Agency, *Landsplanafdelingen*, Ministry of Environment, 2001

<sup>71</sup> National Agency for Enterprise and Construction, *Erhvervs- og Boligstyrelsen*, 2003

<sup>72</sup> Odgaard, 2003

<sup>73</sup> Erhvervs- og Boligstyrelsen et al, 2002

<sup>74</sup> Indenrigs- og Sundhedsministeriet, 2004

- courses; Strengthened regional co-operation; Strengthened the competitiveness of the enterprises)
- Objective 2 has mostly created low-skilled jobs

On the whole the implementation of Objective 2 was evaluated as satisfactory, with the following areas for improvement in the future:

- Unrealised potential for improved interaction with alternative sources of finance
- Need for improved involvement of research and knowledge institutions
- Strengthened exchange of experience across projects
- Firmer framework for future information activities
- Network projects and bridge-building projects have better effects
- Framework programmes create lasting structures for addition of knowledge and capital
- Efficient enterprise projects develop the organisation and business processes
- Promising multi-fund projects
- Competence development in small enterprises requires mediators<sup>75</sup>

Within the national set-up for Structural Funds, a considerable degree of variation is allowed for between the regions as regards the way in which the policy process is organised. However, the key components of the partnership appear to be much the same across the various Objective 2 regions: regional business organisations, trade unions, local authorities and public research and training institutions tend to dominate the picture, both in the policy design phase and through the different kinds of input to the implementation process, including membership of steering committees and advisory bodies.<sup>76</sup>

Ringkøbing county as a whole is part of Objective 3, which regards the development of human resources in a broad sense (employment, education and entrepreneurship).<sup>77</sup>

Furthermore, the European Agricultural Guidance and Guarantee Fund (EAGGF) has one rural development programme and a LEADER+ programme for the whole of Denmark.<sup>78</sup> The midterm evaluation of LEADER+ shows a running programme with (under the circumstances of delay) satisfactory provisional results. The programme is considered highly relevant. The evaluators stress, that the degree of homogeneity between Danish regions is high, which can be explained by the small size of the country, and that regional policy over the years have been conducted in the direction of the welfare state (decentralised administrative structure) and a transfer income system. Some mean, however, that this has been breaking up over the last years. LEADER+ demonstrates a broad, successful partnership and good use of endogenous resources. This is considered necessary – but not sufficient – for a

<sup>75</sup> Teknologisk Institut for Erhvervs- og Byggestyrelsen, 2005

<sup>76</sup> Halkier, 2003

<sup>77</sup> Ringkøbing Amt, 2006b

<sup>78</sup> European Commission, 2003

successful programme. The political intention and economy is also essential and need higher priority at regional and national levels.<sup>79</sup>

There is also a sector programme for supporting development and adaptation within communities that have been depending on fishery. This programme is carried out in collaboration with the neighbouring Viborg county, MEBA as well as Ministry for Food, Agriculture and Fishery.<sup>80</sup>

## Conclusions

A number of factors contribute to the complex institutional patterns at regional level. On the one hand, it has been argued that placing development activities outside mainstream government activities has formed a confidence-building measure, separating encouragement and support from the controlling and regulatory functions of local government vis-à-vis private firms. On the other hand, until the early 1990s the legal status of sub national development initiatives was unclear: local and regional governments were therefore inclined to think that formal support to the activities of others would be safer than directly acting themselves. Whilst it was always clear what sub national governments were not allowed to do (i.e. grant financial subsidies to individual firms), it was not clarified until 1992 what they actually could do. The parliamentary act of 1992 designated collective business services (or framework measures, targeting all firms or groups within an area) as the field in which regional and local authorities could engage.<sup>81</sup>

To conclude, quoting Halkier<sup>82</sup>:

- *The years before 1991 where regional policy was predominantly a top-down activity conducted by central government and coordination was not a major issue simply because only one type of regional policy was pursued on a significant scale;*
- *The decade of the 1990s where central government had only a limited role in the direct implementation of regional policy, but continued to establish the regulatory framework for the activities of sub national actors, not only with regard to the European Structural Funds (at a quite detailed level) but also concerning the activities sponsored by regional and local government;*
- *The period post 2000 where central government was no longer satisfied with trying to bring about a greater degree of coordination of sub national efforts through gentle prompting, but instead became directly involved in trying to reshape the organisational set-up for economic development policy in the regions, either through bodies sponsored by the national level or through active participation in inter-tier networks.*

<sup>79</sup> Teknologisk Institut

<sup>80</sup> Hanstholm kommune et al., 2004

<sup>81</sup> Halkier, 2003

<sup>82</sup> ibid

All of these coordination strategies employ network-type relations to promote the agenda of central government, in that they rely on asymmetrical resource dependencies between national and sub national actors to move towards the desired outcome.<sup>83</sup>

The use of 'framework' measures reflects the steering mechanism that corresponds to a devoluted and decentralised, unitary state: By using 'framework' measures national guidelines can be sketched out without infringing on the local authorities' possibilities to manoeuvre and formulate their strategies and local economic policies in collaboration with local and regional actors. This feature, coupled with the rather consensual political culture, is probably putting a damper on vertical and horizontal conflicts as compared to most other countries. In something of the same vein it should be stressed that the relatively homogeneous regional structure is keeping the conflicts within the realm of regional politics at a comparatively low level, although several associations such as the association of smaller islands, the association of poorer municipalities, and association of rural districts are doing their best to keep territorial and regional questions higher on the national political agenda.

The reform of local authorities will bring about new ways of collaborating at the regional level. In the future the regional growth foras, which will prepare regional economic policies and strategies, and the regional councils that will decide upon regional development plans, which will have to comply with national measures and priorities, will be the main components in setting up a new agenda for developmental policies for the Danish regions. Hereby, the government seeks to improve the coordination of the regional and national resources. Whether this will hamper or aggravate conflicts on regional issues – vertically as well as horizontally – has yet to be seen.

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## Appendix

<b>Net expenses of the <i>Ringkøbing Regional budget (2005)</i></b>	<b>in 1000 EUR</b>
<b>Regional economic development means</b>	
Traffic and infrastructure	21,175
Economy	0
Education and culture	81,616
Innovation, technology and research	0
<b>Other regional development means</b>	
Agriculture and fishery	
Tourism	
Housing	
Land settlement and patrimony protection	
Environment and natural resources	
Energy and water	
External/international relations	
Town development, dwelling and the environment	7,686
Administration, etc.	45,015
Hospitals and health insurance	440,077
Social and health services	75,087
Debt services	
<b>Total regional budget</b>	<b>670,656</b>
EUR/DKK = 7,4	

### **WP 3.3 – Case study VALLE d'AOSTA**

Prof. Maria Prezioso, Ing. Francesco De Mitri (SEFeMEQ, Tor Vergata)

#### **Historical heritage and regional specificity**

Mountain is the characteristic element of the landscape in the Region Valle d'Aosta. The higher tops of Europe are present (Monte Bianco, Monte Rosa, Cervino, Monte Gran Paradiso). The territory extends on 3262 km<sup>2</sup> and 60% are situated above the 2000 s.l.m. The 50% of the territory is used in pastures and forests, while a percentage of 8.7% is inhabited stably. From a morphologic point of view, the area is structured around the fluvial system of Dora Baltea. The central valley, Valle d'Aosta, is the main settled axis, not only for obvious orographic reasons, but also thanks to the greater street accessibility. In this valley is concentrated beyond 79% of the population, 73% of the local units and 82% of the employment.

More than 5% of the territory is classified as reserve for flora and fauna protection and, approximately, 1200 km of ski tracks are found within regional valleys. Tourism plays a key role in the regional economy, contributing to elevate the income of the inhabitants, one of the highest of Italy. The abundant presence of water led to the development of hydroelectric industry, but also iron mining and chemical industries are important. The cultivated areas are dedicated in maximum part to bovine forage, favouring a rich production of butter and cheese. Valle d'Aosta has progressively acquired a meaningful role in the economy of Italy, thanks to the realization of railway connections that concurred in the relationships between Italy, France and Switzerland.

Earth of encounter and cultures that has rendered the region Valle d'Aosta a bilingual community, in which the perfect parity of Italian and French languages exists. The daily speech language is the franc-provenzale and in the Lys valley a Germany minority is also present: the Walser. From always the region has been placed as earth of communication in the Europe map-road, through the two alpine passes (Small and Great San Bernardo or the Monte Bianco Tunnel), that have transformed the region in an important corridor of international traffic. Valle d'Aosta is traditionally a hinge region between the Mediterranean world and the central European and French-speaking regions.

## Territory and governance

### *Territorial unit*

Italy is subdivided into 20 administrative regions (NUTS 2), grouped in five great geo-economic areas. Each administrative region is subdivided, at NUTS 3 level, in provinces. Region Valle d'Aosta is placed north-west of the Italian Peninsula and confines with France to the west, Switzerland to the north and the Piemonte Region to the south. By special Statute of 26 February 1948 (National Constitution), Valle d'Aosta is constituted in independent Region, with particular legislative and administrative autonomy.

In order to analyse territorial impacts of EU economic policies, all Italian regions, including Valle d'Aosta, are NUTS2 level. Particularly, Valle d'Aosta is the only region in Italy having a single province at NUTS 3 level. It coincides with the NUTS 2 level.

### *Governance structure*

In Valle d'Aosta, the system of local autonomy is confirmed by a regional law of 1998. This law has produced a complete reorganization of the regional government towards federalism. This new organisation is based on the subsidiarity principle, participation and solidarity. This law identifies: i) **municipality** as basic level of government, attributing it a great part of administrative and regional functions; ii) **Mountain Community** as intermediate level for the services organization delegated from both the municipalities and the Region. Mountain Communities are a reference subject of the local autonomy system and have got some legislation tasks in matter of planning and coordination of economic and social activities. Moreover, the Valle d'Aosta Region is made up of (Figure 30) 74 municipalities, 8 Mountain Communities and the capital region, Aosta.

As an autonomous Region at NUTs 2 level, Valle d'Aosta delivers laws in matter of:

- Employment
- Urban and rural local policies;
- Agriculture and forestry, environment;
- Roads, railways and transport, public services, urban planning
- Mineral and thermal waters, public waters, hunting and peach, increment of the typical products, handicraft;
- Tourism and protection of the landscape;
- Technical/professional instruction, cultural activities, libraries and museums of local agencies, fairs and markets;
- Guides, schools of ski and the alpine bearers;
- Toponymy.



### *Wealth creation capacity and economic structure*

In the last ten years (the 1995-2004), GDP to going rates has increased from 2714 MIO euro to 3680 MIO euro, becoming equal to 0.28% of the national GDP.

To the date of the Italian National Census in 2001, the Region counted beyond 60,800 attachés, occupied for approximately 4.6% in agriculture, for 11.94% in the industry and the remaining part in services and some fields of specialization: hotels and restaurants, public administration, energetic productions, constructions and extraction of non metalliferous minerals.

Altogether, in terms of Gross Value Added (GVA), in the period considered (1995-2004), agriculture has had a constant course. In fact in 1995, it represented 1.3%, calculated on the total of the GVA at constant prices, and in 2004 it increased until 1.5%.

The primary activity turns out composed gives approximately 6.600 companies, but their number, like the one of the SAU, appears in tendential contraction. The field is characterized by companies nearly exclusively conducted directly from the cultivator, of limited dimensions and located in a dispersed way on the territory. It is distinguished by high production costs. Breeding, still the preponderant activity of the field in terms of PLV, turns out in sensitive contraction. In the herbaceous cultivations forages prevail, while sowed fields are practically absent. The 'fontina' cheese remains the topic product, even if evidences important cryticity; screw-wine production and fruit are strategic sectors.

The forest surface covers 27% of the territory; forest resources are important above all for the action of safeguard acclimatize them and of maintenance of the social functions. Observing the attached table, it is evident that the industrial field remains constant, even if in the 1998-2002 period there has been a decrease, remarkably comes down the field of the constructions, from 10.1% of 1995 to 4.9% of 2004, increases the fields of the transports, the financial services and above all of public administration.

Also the exports have had a remarkable increase in the considered period therefore as the inner investments are increase you of 11%. A contribution clearly negative is given from the productivity (calculated like relationship between GVA and occupied active population) that is diminished of 5.4% arriving in 2003 to 42.877 Euro.

As far as the number and the creation of the companies reference to the data of the census of the industry of 2001 and the intermediate data of 1996 has been made. In this period inter-census they are increases you the workers self-employed but diminish of 10% the attachés in the medium small companies, pass from the 70 to 60%. On the contrary they increase from the 6.1 to 15.2% attachés in the great enterprise, greater of 200 dependent. The coherence of the data comes maintained from the percentage of unit that increases of

6% for those constituted from the single owner, diminishes the assigned units from 2 to 49 (from 55% of 1996 to 48% 2001) and increases the great enterprises.

With these considerations it can be noticed that the occupation rate passes from 62.1% of 1995 to 67% of the 2004, while that one of unemployment is halved, passing from the 7,2 to 3%, given that confronts with the national rates demonstrates the advantage to you of the region (Italy unemployment rate is 8%). The conclusion is given from expenses invested for R&D in which it is looked at in a 2003 remarkable jump of quality for the investments realizes to you from the companies, and in proportion also from the public sector. However these investments too much turn out to be low, for which Valle d'Aosta would have to invest mainly in R&D.

#### *Knowledge creation capacity and innovation*

As far as the Regional Innovation System, Valle d'Aosta evidences criticality elements that characterize performances regional :

- Valle d'Aosta clearly shows an index of innovation considerably inferior to the national average
- Eurostat data confirm that through the public and private R&D expenses in relation to GDP. Valle d'Aosta only accounts for 0.71%; which is low in comparison to other northern Italy regions (Piemonte 1.65%, Lombardy 1.16%), but not to Veneto (0.53%) ( source Eurostat, 2000)
- The number of patents registered at the European Patent Office also confirms the low R&D position of Valle d'Aosta, between 2000 – 2002 only 25 patents, on the contrary in Piemonte 1500.
- Valle d'Aosta is not a part of the Central Government 'Programs for scientific and technological' of 2003;
- The presence of innovation of public only related to Public Administration and to e-governement.

The reduced Region's dimensions, therefore, of the local market are on the side of the question and on the side of the offer (especially of characterized local staff), more rather render the performance than political stiff to realize centres of technological search and the same spread and adoption of the new technologies; the same Valle d'Aosta athenaeum appears oriented towards a varied offer, but it deprives of the technological, present exclusively on the plan of the Didactics in the agreement with the Polytechnic of Turin that locally is involved a limited number much of students. In fact the expense for R&D in 2004 is equal hardly 0.37% of the total GDP.

#### *Summary and policy implications*



Valle d'Aosta is low density region into mountain and border territory; it has got small and very small size municipalities and these poles are not able to generate city/urban effect. On the other hand, Valle d'Aosta has got some important places of weakness and productive systems, characterized from a high standard of living and life-quality. Their safeguard and strengthening could constitute some difficulty towards the change.

The regional border has allowed a sure cultural symbol, as well as the proximity to the 'francophone' world, that translate itself in economic-productive advantages. After the enlargement, the regional fiscal benefits (i.e. international trade) reduced and this new condition risks to reveal a weakness point. As well as it is reducing the idea of Valle d'Aosta as a central European region (the 'crossroads of Europe' remains a theoretical idea), not only because the centre of Europe is placed elsewhere, but also because the spatial and economic localisation vantages prefer more accessible areas.

The main economic-productive benefit that traditionally derived to the region from geography has been in fact its proximity to the rich markets of the Pianura Padana and to the Turinese manufacturing system; on the contrary, its being bridgehead towards the French market can be considered more a objective that a data, much more than the tracing of the transeuropean corridors that interest the national territory determines ulterior marginality to the region, than it directly does not turn out been involved, on the contrary of that it happens to the adjacent regions (Piemonte, Rhone-Alpes and Switzerland).

Other element that hinders the economy of the Val d'Aosta, is the increased competitiveness of tourist localities in European regions (new competitors) that uncovered and they have asserted the vocation for winter sports and that they propose a lot winning, is like quality of the services but above all like prices (Pyrenees, Tatra Mounts, Slovenia).

Finally, the infrastructural level must rather be considered low, with regards to both airport and railways, and the rather elevate costs for tunnels crossing. Valle d'Aosta is therefore a region that has lost competitive advantages in order to discover one far region from the fast ways of the European communication, also being inside of it but however alpine region.

## **Regional development priorities, policies and impacts**

### *Policy strategy*

It objects to you main of the region Valle d'Aosta, in period 2004-2006, have been above all revolts towards the cohesion and labour market. The main objective was that one to contribute to the development of the occupation favouring the employment, the equal

opportunities, the entrepreneurship and the investment in the human resources. The POOR. (Operations Regional Plan) it established therefore three priorities of participation, to level of objects to you total:

- Equal opportunity
- Local Development
- Society of the information

In chapter following the participation axes are described better.

As a result of the previous experiences, the strategic document for 2007-2013 has thought fundamental, to stress and emphasise the following priorities fields:

- Tourism
- Infrastructures' valorisation
- Diversification of the agricultural activity
- Globalization and market
- Entrepreneurship and competitiveness
- Ability to programming
- Culture and environment

These topics partially converge towards the new Structural Funds goals.

The modifications of economic and social context carry to consider as crucial some challenges for future regional development: the opening of applying some models of governance; a focalized policy on young people (Lisbon Strategy); the definition of an urban-rural integrated model based on agriculture, tourism and culture; network systems. The strategic vision of Valle d'Aosta as 'node of nets and excellence centre' emerges, in the next years to develop both inside an integrated region; outside a totally interconnected one; and an active role and attractive ability. Valle d'Aosta retains these as its quality and excellence values to obtain competitive advantages on the base of own resources' sustainable use.

## **Regional policies and Drivers of regional competitiveness**

### *Public expenditures structure 2004-2006*

In order to estimate destined expenses in biennium 2004-2006 Regional Operating Program (P.O.R has been considered.). For this period it is previewed for objective 3 the appropriation of 94.325.874 million Euro of resources totals, of which 93.248.981 million public resources and 1.076.893 million private resources. These priorities are developed inside of a program structure that is articulated in AXIS, object specific and measures.

The total objects identify the five priority AXIS:

AXIS A – development and political promotion of the labour market in order to fight and to prevent unemployment.

AXIS B – promotion of equal opportunity for all in the access at the market of the job, with particular attention to the social exclusion.

AXIS C – promotion and improvement of the professional formation

AXIS D – force promotion competent job of the innovation and the adaptability in the organization of the job.

AXIS E – improvement of the access and the participation of the women at the market of the job.

AXIS F - accompaniment of the programs operated to you.

For every AXIS they have been shared the following percentages of financing, regarding the total of the P.O.R.:

AXIS A	€ 30.683.685	32,9%
AXIS B	€ 5.923.553	6,4%
AXIS C	€ 22.053.843	23,7%
AXIS D	€ 22.614.750	23,1%
AXIS E	€ 9.404.780	10,1%
AXIS F	€ 3.645.263	3,9%
Total	€ 94.325.874	100%

#### *Public expenditures structure 2006-2007-2008*

As far as multi-years budget 2006-2007-2008, of the region it can be seen as it concentrates itself on expenses to support in next the three years. In particular the budget is articulated on four large ones understood them of expense, of continuation these comes described with the relative engagements of expense for the three years indicates:

	<b>2006</b>	<b>2007</b>	<b>2008</b>
<b>OPERATION EXPENSES</b>	340683242	328274712	335353901
<i>% of total</i>	15,16	14,61	14,73
<b>PARTICIPATION EXPENSES</b>	981472667	1008808219	1013630278
<i>% of total</i>	43,69	44,90	44,52
<b>NOT DIVISIBLE COST</b>	160844091	135417069	153715821
<i>% of total</i>	7,16	6,03	6,75
<b>SPECIAL ACCOUNTING</b>	774239000	774142000	773965000
<i>% of total</i>	34,46	34,46	34,00
<b>Total (Eur)</b>	<b>2.257.239.000</b>	<b>2.246.642.000</b>	<b>2.276.665.000</b>

We then consider the inserted expense in chapter of participation expenses. These are the sum of two tipologie of participations:

<b>PARTICIPATION EXPENSES</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
PARTICIPATIONS TO GENERAL CHARACTER	243.381.896,00	228.648.613,00	233.497.341,00
PARTICIPATIONS TO SPECIFIC CHARACTER (SECTOR)	738.090.771,00	780.159.606,00	780.132.937,00
<b>Total</b>	<b>981.472.667,00</b>	<b>1.008.808.219,00</b>	<b>1.013.630.278,00</b>

The participations to specific character evidence, which it will be the model of development of which the region it means to equip itself and describe the participation fields. In these specific participations it is possible to estimate the priorities that Valle d'Aosta previews to respect. The participation fields are therefore:

SECTOR 1 ORDER OF THE TERRITORY AND PROTECTION OF THE ATMOSPHERE

SECTOR 2 ECONOMIC DEVELOPMENT

SECTOR 3 SOCIAL EMERGENCY

SECTOR 4 SOCIAL PROMOTION

SECTOR 5 PROFESSIONAL FORMATION

In these fields of participation, the relative data can be expressed to following drivers of competitiveness, with the percentages reported to the participations of budget, in the course of next the three years:

For instance, social security expenses should not be included in the Social Capital driver.)

DRIVERS	2006	2007	2008
<b>Hard or tangible infrastructure</b>	<b>34,05</b>	<b>40,46</b>	<b>38,36</b>
<b>Social capital</b>	<b>19,38</b>	<b>21,47</b>	<b>21,62</b>
<b>Human capital</b>	<b>20,07</b>	<b>17,87</b>	<b>18,03</b>
<b>Fiscal and financial interventions</b>	<b>4,94</b>	<b>1,16</b>	<b>1,06</b>
<b>Innovation support</b>	<b>0,63</b>	<b>0,49</b>	<b>0,46</b>
<b>Amenities</b>	<b>20,93</b>	<b>18,55</b>	<b>20,47</b>

It is evidenced that the greater part of expenses concentrates on the voice 'Hard or tangible infrastructure.

### **Coherence of regional policies**

In Italy, some European Directives and Programmes (e.g., Urban II, Interreg III, Leader +, Cadses, etc.) are also realised by special strategic Ministerial planning as the Accordo di programma/1995 (programmatic agreement) or the PRUSST/1998 (Urban restructuring program for the sustainable development of territory).

Italian national laws, such as 142/90; 241/90; the 'Bassanini' (laws 59/97 and 127/97, L.D. 143/97), the *Delegation Decree* created by Bassanini (L.D. no. 112 of 27/1/98 par. 55), L.D. 60/98 (created on the subject of agriculture and fishing), law no. 34 of 20.11.98, law 265/99 and law 267/00 have been overlapped and replaced through the integration of the plan regulation, in which a series of tools have been set up in order to put into effect the fundamental, negotiate programming for metropolitan governance:

institutional understandings for programmes, only between the State and regions for long-term, action plans agreements for framework programmes, State/regions/provinces for defining an executive programme by means of territorial pacts (local bodies and public and private parties on a specific objective), area contracts (entrepreneurs/unions for developing crisis areas), programme agreements, programme contracts (State/businesses or DIM for industrial development), articles of intent, services conferences<sup>84</sup>.

Under these conditions, there are several policy positions. They require flexibility and an open system as well as the capacity to co-operate on different levels according to the various principles:

1. *of subsidiarity* that entrusts the treatment of governmental problems to a lower, efficient administrative level and relaunches the planning of vast areas and sustainable development;
2. *of sustainability* also shared by the Maastricht Treaty in terms of ethic principle. Establishing itself on options of inter-generation ethics on environmental subjects imposes governing the spontaneous forces present on the market, by placing constraints on the consumption of natural resources and adopting long-term, efficient, fair allocation criteria. These criteria should only be translated into coherent plans and projects on an adequate scale: over-municipal and local (e.g. inviolability of periurban spaces, fight against social segregation, economic development promotion);
3. *of new territorial scales* pertinent to policies, since obsolescence was decreed, not only technical but also political-institutional, on the binomial combination *structural planning* (of the over-local area)/*planning of the uses of the land* (communal level);
4. *of the amplitude and peculiarities* taken on by settlement diffusion processes in the territories surrounding large cities, seeing that polycentric urban structures in small/medium sized networks show the same occurrences as suburbanisation and periurbanisation in large-sized networks (favoured by the bottom up development of economic activities that consumes rural territory and unites settled areas) and

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<sup>84</sup> These are examples of the new trend *Agreement for the metropolitan city of Bologna in 1994* (Bologna and 49 communities) divided into three areas: **a)** economic, territorial (from ec. devel. to strat. plan. of occupation and infrastructures); **b)** social-cultural (health, sports, assistance, etc.); **c)** administrative-financial (taxes, management, etc.), which experimentally produce the *Report on conditions of sustainability of the expectations of the vast Bologna area*; the *Territorial Metropolitan Outline Director* in 1997; the document for *the global region in 1997*. A polycentric view arises from here (10 areas of intercommunity aggregation) with Bologna as the gateway to Europe.

interurban mobility grows as relations become complex. This has already caused crises in historical polycentrism in many European regions.

The Italian subsidiary organisational and the relevance of different administrative bodies are explained in the setting up of so many political 'arenas' with a precise perspective on geographic scale, though in different contexts (Prezioso, 2000, 2003, 2006):

- a) international/continental = State
- b) sub-national = region
- c) intergovernmental in vertical relations = State and regions
- d) intra-State in horizontal relations = Ministerial
- e) interlocal
- f) intersectoral
- g) of relations between executive and legislative powers
- h) of ideological/party-political competition
- i) of public/private relations

into which occurrences are inserted that have been treated in a sectional manner to date:

- *interurban mobility*
- *extensive suburbanisation* caused by planning deregulation, new location preferences of businesses and families, growing territorial specialisation and the intensification of real estate competition and spatial segregation. This outlines a scenario that opposes EU principles of sustainability (Cf. Doc. SDEC – European Spatial Development Outline, 1997)
- *the integration of relations 'from the top' and 'from the bottom'* for governing the complexity on a national scale. This concerns an interactive model (diagonal model) for integrating policies of the centre with those of local systems in order to safeguard specificities by creating large options (as in France, Holland, Great Britain) (Gibelli, 1998). For example, plans for transport can be integrated with those for the land (the right business in the right place)
- *the structure and management to be handed over to metropolitanisation*

The **polycentric issue** takes its place in the global-local debate as well as the constitutional debate on federalism, being the place of an evolution of scattered settlements (both urban and others) whose systems are reorganised, but still maintain features and an individuality capable of connoting vital self-production.

Consequently, the relative planning regime is the scheme of regulations that brings the identity of the places and their resource potentials to the attention of decision-makers/strong powers; it is the 'bottom up' plan that makes balanced relations (environmental and economic) **sustainable** with other identities.

There are no limits on threshold or economic and pre-established quantitative capacities that are capable in themselves of making a plan sustainable and predicatively imposing

geographic borders to support administrative borders. But limits do exist other than those already established by the settled population over time. Only preliminary knowledge of the initial, total environmental values (natural and anthropic) can supply such limits.

It was inevitable that the necessity arise to repropose the location as a central place in more recent metropolitan policies in terms of value (cultural, political, social). Hereto is added a historical sign over and above those of the project, in order that not one but several cities be visible once again as agoras (recentralisation of the decision-making space, valid for both large-sized businesses and capital cities) that are open to innovative impulses and conflicts that culture and social hardship generate without losing the possibilities to decide and control.

Thus, in federalism, a political region cannot exist without location and political reason cannot surpass the location.

Therefore, the search for a location as a sector of the plan was unsatisfactory. On the contrary, federalist experiences made them a unifying element linking the various beliefs that concur and will continue to concur in defining an operative formula for wide-spectrum governance.

In Italy, the experience of structural funds, social cohesive funds, PRUSST (plan for urban renewal for a sustainable development of the territory) and programme agreements has often referred to 'deterritorialisation' of economic and social development due to 'lack of environment' as if all programming in progress did not need contextualisation and did not originate from this.

Contrary to environmental territorialisation, there is the action that transforms a place into a centre, which is perhaps immediately thereafter decreed abandoned (the population moves its residence or domicile, as shown by censuses), because knowledge of the acceptance or refusal of the development model or relative plan may already be inherent in the action that concludes the process.

To date, the political and scientific culture of the plan has only partially admitted the existence of these conditions and only in abbreviating the aggregate forms of their type or typicality or in the conservation of the landscapes.

The absence of these and other, even minimal, references in the plans produced in recent years for vast areas has limited the possibility of reaching the objective of integration. This objective can only be reached through direct survey of the data and/or occurrence, by placing the weight of responsibilities on another integration variable against which the plan has always indirectly been measured: the economy.

Thus, the economy has 'gone through' the plan counting on a dimension – the homogenous space – that has no territory, by dictating general laws that the market transforms into particular behaviour; at the same time, it organises the market by operating on production supply and demand and therefore, directs production by dictating market laws. If this is

true, then the economy also directs territorial behaviour of production, which is almost always in visible forms of economic landscape, i.e. in places.

In the past, the economy tended to ignore this syllogism because it did not seize short-term temporal simultaneity, seeing that the type of landscape or its typicality answers to laws of long-term change. Such laws hinder the morphology of locations from being remodelled in the immediate future when market conditions change.

In more than one argument/suggestion as well as plan, the network model has been resorted to, or rather locations (junctions) that are organised hierarchically to reply to functional needs. This is done if it will lead to draining the demand for the economies (on an external scale) of urbanisation that entrepreneurial activity demands of the originating territory

### ***EU Level***

Dir. CEE/92/43 – ecological network and Protection Special Zones (in Valle d’Aosta called ‘Natura 2000’)

### ***National Level***

- Law 17 august 1942, n. 1150 – National urban and territorial planning
- Law 59/1997 – Public administration reform
- D. Lgs. 112 /1998 – Deliver of national functions from the State to regions and local bodies
- L. 265/1999 - local autonomies
- L. 267/2000 – Unique Text about the local autonomies (provincial, metropolitan and municipal levels)
- D. Lgs. 42/2004 - Cultural Heritage (landscape and environment included)
- ARTT. 117 e 118 of Italian Constitution and their recently revision 2001 (n. 3) and 2005
- SEA and EIS Unique Environmental Ministry Text, February 2006

### ***Regional Level***

- L.R. n. 14 del 18/06/1999 – EIA regional law
- L.R. 15/2001 - Regional Development Program
- R.L. 19 december 2005, n. 35 – Regional territorial government



## Conclusions

In conclusion, it has been thought useful to compile a SWOT analysis of the Region. It has evidenced, at the present moment, what are the regional characteristics (strengths, weakness, opportunities, threats), considering the future challenges that will regulate the markets:

<b>Strengths:</b>	<b>Weakness</b>
<ul style="list-style-type: none"> <li>• High level of environmental protection</li> <li>• High level of employment</li> <li>• High GDP</li> <li>• Good equipment of infrastructures</li> <li>• Strong Social Cohesion</li> <li>• Borderline with Swiss and French centres of research</li> <li>• recent institution of University</li> <li>• urban-rural woven</li> <li>• trans-national cultural interests</li> <li>• High quality of the food producing</li> </ul>	<ul style="list-style-type: none"> <li>• reduced territorial dimension</li> <li>• limited demographic density;</li> <li>• fragmentation and the dispersion of the population in small urban centres</li> <li>• tourist offer typologies based on small isolated locations</li> <li>• dearth of level lands</li> <li>• low level of infrastructures with particular regard to railways and airports</li> <li>• low approached at wide band nets</li> <li>• mountain position and morphology of</li> <li>• insufficient interrelation with the over border centres</li> <li>• insufficient interest of the SMEs for the innovation</li> <li>• elevate costs in order to cross mountain passes</li> <li>• limited integration between agriculture and tourism</li> </ul>
<b>Opportunities</b>	<b>Treaths</b>
<ul style="list-style-type: none"> <li>• tourism</li> <li>• development tourist reception and adequate structures</li> <li>• University development</li> <li>• high specialization industry development</li> <li>• major Participation to Co-operation networks and projects</li> <li>• Use of Directed Foreign Investments</li> <li>• Development Transnational Agreements</li> <li>• Tourist development in row optical</li> <li>• Globalization of the tourist offer</li> </ul>	<ul style="list-style-type: none"> <li>• competitiveness loss of the regional enterprises</li> <li>• Competition of other countries</li> <li>• technological Gap with other regions</li> <li>• Isolation</li> <li>• Excessive tertiary</li> <li>• Marginalization in R&amp;D</li> <li>• Insufficient attraction for foreign SMEs takeover</li> <li>• decrease in productivity</li> <li>• expensive prices with regard to tourist Offer</li> </ul>

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## Appendix

### Breakdown of budget into drivers

Budget	2006	2007	2008
<b>Hard or tangible infrastructure (HTI)</b>			
PROGRAM 03 VIABILITY	14.797.700	30.066.500	27.989.500
PROGRAM 05 OTHER PUBLIC WORKS INTERVENTIONS	2.633.853	7.817.853	12.567.853
PROGRAM 06 SOIL'S DEFENCE	13.565.000	13.015.000	12.415.000
PROGRAM 02 AGRICULTURAL INFRASTRUCTURES	43.695.680	53.531.680	58.952.680
PROGRAM 14 TRANSPORT'S FIELD INTERVENTIONS	37.671.400	55.039.400	39.860.400
TOTAL	112.363.633	159.470.433	151.785.433
<b>Social capital (SC)</b>			
PROGRAM 02 CONSTRUCTION HOUSING INTERVENTIONS	8.226.785	9.676.785	3.616.785
PROGRAM 02 HEALTH STRUCTURES	8.775.000	26.050.000	31.760.000
PROGRAM 03 SOCIAL WELFARE	45.036.500	46.167.000	47.355.000
PROGRAM 04 SOCIAL SERVICES	1.930.743	2.725.000	2.825.000
TOTAL	63.969.028	84.618.785	85.556.785
<b>Human capital (HC)</b>			
PROGRAM 08 COOPERATION ACTION	8.115.600	7.535.600	7.565.600
PROGRAM 16 JOB'S POLICIES INTERVENTIONS	5.186.659	18.091.946	18.091.946
PROGRAM 01 CULTURE & EDUCATION - SCHOOL MANAGEMENT	5.394.500	6.271.000	6.759.500
PROGRAM 02 CULTURE & EDUCATION - STUDY'S RIGHT	4.388.000	4.329.500	4.339.500
PROGRAM 03 CULTURE & EDUCATION- SCHOOL STRUCTURES	5.923.000	7.385.500	7.281.500
PROGRAM 04 CULTURE & EDUCATION- SCHOOL INTERVENTIONS	17.783.500	21.248.000	21.733.000
PROGRAM 01 PROFESSIONAL FORMATION	19.432.741	5.555.663	5.555.663
TOTAL	66.224.000	70.417.209	71.326.709
<b>Fiscal and financial interventions (FFI)</b>			
PROGRAM 17 PROGRAMMI COMUNITARI COFINANZIATI	16.298.796	4.588.844	4.205.000
TOTAL			
<b>Innovation support (IS)</b>			
PROGRAM 03 AGRICULTURAL GROWTH INTERVENTIONS	1.108.820	1.318.820	1.278.820
PROGRAM 04 TECHNICAL CARE	845.500	530.500	530.500
PROGRAM 06 AGRICULTURAL INNOVATIONS	114.226	88.148	21.021
TOTAL	2.068.546	1.937.468	1.830.341
<b>Amenities (A)</b>			
PROGRAM 07 FOREST PRESERVE	3.180.018	5.244.139	5.523.439
PROGRAM 08 PARKS, REVERSES, ENVIRONMENTAL GOODS	7.590.900	8.540.900	9.415.400

PROGRAM 09 ENVIRONMENT AND SUSTAINABLE DEVELOPMENT	23.854.500	21.816.500	21.481.500
PROGRAM 05 CULTURAL ACTIVITIES - LIBRARIES AND ARCHIVES	485.400	485.400	485.400
PROGRAM 06 CULTURAL AND SCIENTIFIC ACTIVITIES	8.127.840	8.434.840	8.299.340
PROGRAM 07 CULTURAL ACTIVITIES - MUSEUMS, CULTURAL AND ENVIR. GOODS	21.833.500	24.527.500	31.727.500
PROGRAM 08 CULTURAL ACTIVITIES - CULTURAL MARKETING	4.005.950	4.055.950	4.055.950
TOTAL	69.078.108	73.105.229	80.988.529

### **WP 3.3 –Case study: Ireland (Border, Midlands and Western)**

Marcel Roelandts, IGEAT

#### **Introduction**

As we mentioned in our case study (p. 250 of Vol. 2), according to our selection criteria we had initially chosen Border, Midlands and Western. After investigating, it appears that this NUTS 2 level has no real administrative counterpart as such in Ireland. Few data are thus available at this scale. Consequently, we have decided to settle for Ireland. This choice may be debatable, notably because regional entities with limited decision-making power cannot be treated on an equal footing nor compared with a sovereign national entity. Meanwhile, on one hand, regional decision-making realities are quite diverse and, on the other hand, Ireland, in view of its size, is often held up as an example (generally to be followed) in the literature on regional economic development. We have thus considered it a good idea to deal with that case with all necessary reservations in order to draw lessons on possible or impossible comparisons.

A long time one of the poorest countries in Europe, the small Republic of Ireland benefits from an incredible growth. Far behind the European average (= 100) before its entry into the Common Market in 1973 (in 1960 Ireland's index was equal to 57, and in 1973 to 56), Ireland has undergone a slow catching-up process following its admission (in 1990 the Irish index reached 68). However, from that date on, Ireland has experienced a genuine economic take-off since in the space of thirteen years, between 1990 and 2003, the country ended up with an index of 124 (a gain of 56 points!) and ranked second behind Luxembourg.

This amazing performance should nevertheless be much relativized, especially because of the macroeconomic consequences of the tax dumping which appear clearly from our mapping of Behrens indicator (see report). Indeed, in 2001, the surplus of Ireland's balance of goods and services amounted to 14.9% of its GDP vs. 1.6% for France and Italy and 1.9% for Germany<sup>85</sup>. In 2001 for example, Ireland's foreign payments on profits made in the country amounted to a net 16.7 billion \$, that is, 16% of its GDP or 4,300 dollars by inhabitant! In comparison, France receives a net income of 4.9 billion \$ from its foreign investments, i.e. 0.4% of its GDP. Ireland finds itself therefore in a very exceptional position: in terms of GDP by inhabitant, Ireland is supposed to have become one of the richest countries in the EU (see above), but, if one considers only the incomes that remain in the country, the results are quite different! Thus, even if Ireland has improved a lot since the late 1980s, an Irishman still has a much lower income, on the average, than some other

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<sup>85</sup> 5,3% for the Netherlands, 3,3% for Belgium and more than 20% of the GDP for Luxembourg.

European citizens. This by far reduces the scope of the Irish miracle (even if quite real) and proves the effects of tax dumping (see below). It is now clear why the south of Ireland, where 73% of the population and 75% of the economy are concentrated, appears in dark blue on the map of Behrens indicator (since in the latter the external balance is deducted)!

The Irish miracle is often highlighted, notably at regional level, for several reasons. First of all, a great deal of Ireland's revenues (some apparently, others quite really) come close to the classic diagram of the model of development and neo-liberal macro-economic policy. This success and the similarity with the current economic paradigm are sufficient to explain the interest and the publicity organized around the Irish case. Moreover, this country, owing to its small size, belongs to the same category as many other European areas, so much in surface as in population (4.1 million inhabitants). Therefore, Ireland is quite often considered as an example to follow in terms of regional development. It is essentially in this double respect that Ireland has become the star of the macro-economic and regional policy and it is thus interesting to discuss this issue more in detail.

The aim of our brief synopsis will be to try to highlight the key elements of the Irish success and to see if this success can be generalized.

### **A true miracle...**

Modernization was quite necessary because the country showed a significant backwardness compared to its neighbours as it was for long reduced to a role of supplier of low skilled workforce and farm products to Great Britain. Ireland has known, during the 1960s, a GDP growth similar to that of the other European countries, from 4 to 5%, and could therefore develop at the same pace as the others but without catching up with them. In spite of a sudden rise of foreign investments in up-to-date (electronics, chemicals, pharmaceuticals) sectors after it joined the EU in the 1970s and a quick restructuring in the agriculture and food sectors, Ireland could only slightly narrow the deviation from EU mean over that period. The slackening of growth affecting all developed societies in the course of the 1970s was partly softened by European funds and a high State debt, which explains the slow catching up of Ireland compared to the European average between 1968 and 1990. Seen as the worst European pupil in the 1970s and 1980s, Ireland has indisputably experienced an amazing evolution since the 1990s, with all economic indicators progressively getting out of the red. Moreover, Ireland has now become the best pupil in the EU class, leaving all other member countries far behind.

## Some elements of the miracle

From the 1970s, the weak economic growth did not allow Ireland to supply jobs to all. Only 31% of the population had a job until the mid-1980s. With 17.5% of unemployed in 1987, the country was in a very bad condition in the second half of the 1980s. Today, there are only 4% of unemployed, the rural population has strongly fallen, and the female activity rate has risen. The working population has considerably increased since 1990 to reach a historical peak of 2 million people in 2005. Currently, the potential working population has increased while unemployment has gone down. Whereas the high level of emigration – a permanent historical feature since the Great Famine in 1848 – has at all times helped reduce the pressure of unemployment, for the first time from 200 years Ireland experienced significant net immigration in the 1970s. A lot of Irish emigrants nowadays believe they could earn more if they returned to their native country. Foreign immigrants are generally young and skilled. Talent drain, correlative to high emigration levels, is no more than an old memory. A large proportion is working in unskilled personal services. Another sociological progress is to be found in the fact that Irish women a long time stayed at home, while today their activity rate is close to the European average, increasing the active population just as much.

Although the trade balance is positive, it is greatly distorted by transfer pricing: the balance of payments is not nearly as positive.

Moreover, this success was obtained with respect for the convergence criteria of the Maastricht Treaty, allowing the Republic of Ireland to be among the first group of countries to adopt the Euro currency.

The average growth rate of Ireland's GDP has reached 6.9% during the 1990s and still amounted to 5.1% in 2005. While in most European countries growth remains weak and the level of unemployment a source of concern, the recovery of the former EU sick man arouses much jealousy, and many questions about the reasons for Ireland's success.

## Explanatory factors of Ireland' success

The first element that comes in mind is the aid allocated by the EU, which certainly played a considerable role. Indeed, Dublin receives, through the structural and cohesion funds, about five times more than its contribution to the Brussels budget, and Ireland's accrued net income from Europe amounts to several per cent of the GDP. Dublin's *Economic and Social Research Institute* has calculated that the European funds are considered to have added 3 to 4% to the GDP over the whole period between 1995 and 1999<sup>86</sup>. Whereas the Irish

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<sup>86</sup> Estimates of the impact of European aid on growth vary quite a lot from study to study, and it is almost impossible to form a precise opinion within the framework of this report. But whether undervalued or strongly overvalued, they are unanimously believed to have had a positive impact on the Irish growth.



government adopted budgetary restrictions in order to cut public deficit, the European funds ensured the continuation of major public investment programmes, notably in infrastructures. But the EU aid alone cannot explain the Irish miracle: on one hand, Portugal and Greece have also taken much advantage of the EU funds, without for all that experiencing the same vigorous growth, and, on the other hand, those funds were allocated prior to the 1990s and cannot, consequently, account for the specificity of Ireland's take-off at that time.

In fact, in terms of political decisions, the true turning point dates from 1987, with the adoption of the Programme for national recovery, which gained the agreement of unions and management and the opposition's support. That programme not only extended previous measures, but also planned new policies, such as:

- an 8% devaluation of the national currency
- a drastic cut in public expenditure (indeed, from 1982 to 2002, public expenditure will be reduced by almost one half in the space of 20 years, decreasing from 57 to 30% of the GDP)
- a stabilization of labour costs according to neo-liberal prescriptions: a decrease of employers' contributions and an increase in net after tax wages
- tax on manufacturing and export services profits had been 10% since 1980 (a record at European level) and was increased to 12,5% in 2003 (when all business profits were brought under the one tax regime), favouring considerably the attraction of foreign investment and firms
- a good use of EU funds to support growth, notably through investment in education and training, as well as in infrastructures.

This national consensus took place in a macro-economic context very favourable to foreign and Irish companies: a) a unit wage cost much lower than the EU average and wage restriction negotiated between unions and management; b) very low employers' social security contributions; c) a social legislation generally less restrictive than in the big European countries.

This real national consensus programme widened and extended considerably previous measures, which could consequently display their positive affects at two major levels:

On one side, Ireland's ability to valorize the opportunity to be at the same time a gateway for non-European companies and a platform for back-office tasks for European firms. Indeed, since 1983, the government had pursued a real industrial policy, notably aiming at attracting foreign firms in advanced sectors (before 1980 the tax rate on foreign firms was zero: it was increased to 10% in that year but remains quite attractive compared with the rates charged on the continent): computing, electronics, financial services, pharmaceutical firms... In reality, because of Ireland's small size, the capture of a small share of total FDI flows is enough to have a big impact.

On the other side, the country doubled its efforts to catch up with the rest of Europe from the 1960s, i.e. 20 years later, in the field of education.

The results were spectacular: today, almost half of the young people choose third-level education after the secondary school, which ranks Ireland first of the OECD countries. The number of young graduates in science from universities or technical high schools in proportion to the active population is now a bit higher than in Japan or Korea. The education system, which actually took off in the 1960s, was designed to back the industrial development of the country and to meet the needs of the foreign firms one tried to attract on the Irish soil. The level of skills of the workforce has considerably risen and a true university research has been established, as well as technical and biological courses of study, and so on. Thanks to its university effort, Ireland begins to be able to receive R&D centres. The country has become a world centre for the production of pharmaceutical and biological products, and has also attracted the world's leaders in the ICT sector (IBM, Intel, Dell). Combined with advanced equipments brought by foreign companies, the growing skills of the labour force have given rise to considerable productivity gains.

By drastically lowering companies' taxation rates and by making every effort in the field of education to increase its workforce's skills, Ireland has gathered all ingredients likely to attract multinational companies. The least one can say is that the cocktail was incredibly successful. Foreign investments have literally boomed: Ireland has the highest direct investment<sup>87</sup> per capita in Europe. Most are American multinational firms (English demands it), which have established themselves on the Irish territory, followed by British and German firms. About 40% of the American investments in Europe in the field of electronics went to Ireland. Those firms did not choose Ireland for its geographical situation of course, neither for its domestic market, relatively insignificant. It was the ideal means to have access to the European market, while producing in a country where social and fiscal costs are limited: in 1998, the seats of American multinationals established in Ireland have made 5 times more profits than those in the rest of the EU (this is mostly due to a large extent to transfer price manipulation: inflation of profits stated in Ireland involves a reduction of profits declared elsewhere in the EU). Production is thus essentially turned toward exports: two thirds of the Irish exports are achieved by multinationals. Essential driving force of the Irish economic activity, the multinationals were about 1,200 in 1998. They employed 150,000 people and injected 69 billion francs per year in the economy (10,5 billion euros). Altogether, they represented at that date 76% of the production and 45% of the industrial jobs in the country<sup>88</sup>.

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<sup>87</sup> Direct investments abroad represent the creation or the purchase of a company or a production unit on a foreign territory.

<sup>88</sup> In the computing sector only, the market is flooded by Irish products: one third of the computers and 60% of the PC softwares sold in Europe are assembled in the small Republic. Besides, a large part of the Irish imports are intended to re-exportation: these can be, as in computing, electronic components which will be assembled on the Irish territory before being dispatched to the European market. Call centers and teleservices represent

## Downsides

As in every miracle, there is a downside. Miracles can have disagreeable aspects, and if we point out some of them, it is to satisfy a desire of objectivity, because they couldn't cast doubt upon the Irish success:

- Ireland is the third most inegalitarian country in the industrialized world, after Italy and the United States: in spite of a general rise in the standard of living, one third of the Irish population still lived under the poverty line in 1995 (this is of course a relative measurement of the deviation from the average income which, for its part, has progressively increased). Regional inequalities within Ireland remain very strong. Ireland is divided into two parts: relatively less developed areas in the north, the west and the centre, and wealthy areas in the east and the south. The good results of the economy hide in fact the heterogeneity of its prosperity: the catching-up process has benefited all sectors and all parts of the society but to different extents.
- Public services are not very efficient: health is underfinanced, casualty departments are overloaded, road and rail infrastructures lag behind.
- Irish households are among the most heavily in debt because of their consumption frenzy.
- Ireland's broadband penetration rate is one of the weakest in Europe.
- Office rent increase becomes appreciable and Dublin is no longer as attractive, from that point of view, as it used to be.

## Policy implications

In the end, the Irish recipe owes its success to a mix of different policies: some of these, definitely interventionist and keynesian, such as the adoption of a Programme for national recovery supported by all social components, agreements between unions and managers, a true industrial policy, a voluntarist investment in education and training, EU aid, etc., and others, of neo-liberal type, such as tax exemption measures, wage restraint, low social contributions and taxation of companies' profits, reduction of public expenditure, etc.

On the whole, thus, the Irish recipe is not the purely neo-liberal development model as often presented. In our opinion, the existence of a national consensus and of agreements between social partners represent the strong points of the Irish model and lead us to irremediably think of what happened at the end of World war 2 with the adoption of the Keynesian-Fordist interventionism in a context of strong national harmony (even if the content of the agreement is quite different: see 'Macro-economic framework' in report). This

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another expanding sector. Ireland is currently the European leader in the field of teleservices. Avid for young flexible multilingual people, about 60 call centres based in Ireland employed more than 6,000 people in 1998.

consensual specificity in Ireland is out of place in the current period, which is quite marked by everyman for himself principles. This is due to two more specific factors: the first, such as in the immediate afterwar period, is made of a real growth potential facilitating the adoption of a consensus. The second is linked to the social history of the country: Ireland, traditionally rural, did not have a true working class such as France or Britain, which explains the absence of a Communist party and powerful unions carrying wage claims (even if some trade unions have become relatively powerful in several sectors). Social agreements are therefore most of the time favourable to managers, such as *Partnership 2000*, which ensured wage restraint for the coming years.

### **A true miracle... but not for all that a model!**

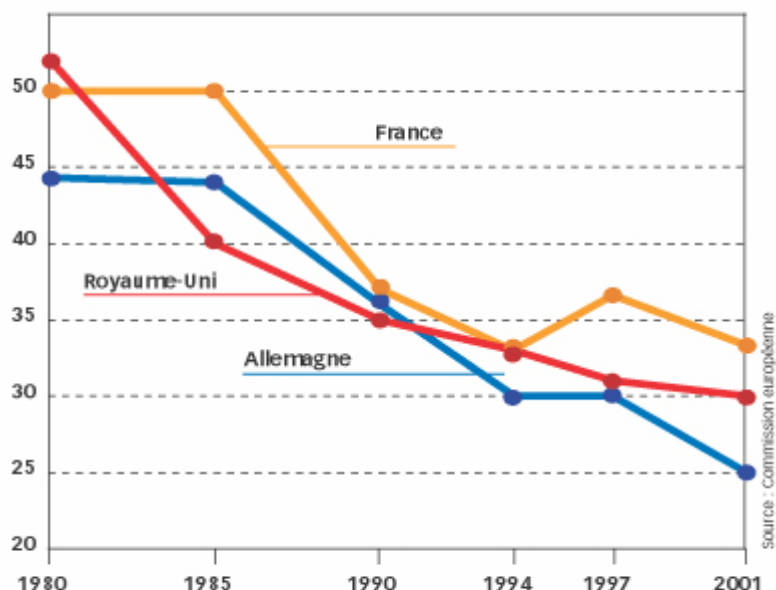
As we have noticed, the Irish recipes are unquestionably a success. The question that should be posed now is: can that success be generalized to apply to other countries? Is it a development model that can serve as an example in regional development? The latter is a crucial question, and posing it naturally means answering it because, obviously, regional and national levels have completely different prerogatives. For example, the Regions may not define social legislation, taxation system, etc. They currently seldom have the competence to be able to reproduce the Irish recipes. The following discussion will therefore not be aimed at that very level but will start from the presupposition that Regions have this competence or their respective States decide to adopt the Irish recipes.

Without being able to enter into a detailed analysis in the framework of the present report, it seems clear to us that the number of Irish recipes that can be generalized are few, especially many of those aiming at providing a comparative advantage in terms of taxation or wage competition. We will limit ourselves to discussing those two examples and we will try to explain why that type of recipe cannot be generalized to all countries and/or regions.

Since the neo-liberal turning point in 1980, the tax on companies' profits has been decreasing by about 1% per year in Europe. At such a rate, that tax should have completely disappeared by 2030 (see graph below)!

This is the consequence of the intense tax dumping in which the EU States engage in the absence of regulation. The effects of that unleashed competition are twofold.

Nominal corporation taxation rate (in %)



**Figure 31 Firm taxation system**

First, the location of company headquarters has an immediate impact from the point of view of taxation. As for employment, the effect appears more limited, except on the location of highly skilled jobs and high added value services. For political reasons, small countries are preferred to big ones to host the headquarters of firms born from intra-European mergings, but the numerous very profitable legal and fiscal systems offered by small EU countries also play a major role in the case of multinationals and holding companies because these have the possibility to undervalue their profits by increasing the provisions of their subsidiaries' commitments, to benefit from internal capital flows through speculating on interest rates, to overvalue the selling price of their services to their subsidiaries, etc. Obviously, the big groups juggle with their investments and locations in order to capitalize on the tax dumping in the EU-15. Multinationals have most of all the possibility to escape tax<sup>89</sup>.

In addition, tax dumping also has a considerable impact on the location of the production base itself, even if many other factors also play a role. The most striking case precisely concerns Ireland, which Microsoft, Intel, Dell and others massively elected as a base to serve their European market. Language and labour cost undoubtedly played a role in their choice, but also the fact that Ireland is by far the UE country where profit taxation is the lowest (see table).

<sup>89</sup> Among 66 corporation tax systems recognized as particularly problematic in 1999 by the so-called *Primarolo Report* (from the name of the chairwoman of the group in charge of working it out), 8 could be found in the Netherlands (7 of which in Dutch tax havens), 5 in Belgium, 5 in Ireland, 4 in Luxembourg, vs. only 2 in France, none in Germany and in the UK (but 16 in tax havens under British rule).

EFFECTIVE TAXING RATE OF PROFITS IN 2001 (in %)	
Ireland	10,5
Sweden	22,9
Finland	26,6
Denmark	27,3
Italy	27,6
Austria	27,9
Greece	28,0
United Kingdom	28,3
European average	28,5
Portugal	30,7
Netherlands	31,0
Spain	31,0
Luxembourg	32,2
Belgium	34,5
France	34,7
Germany	34,9
Source : European Commission	

In this downward spiral, small countries rank first, especially Ireland where company profit taxation is three times inferior to the UE average! Figures leave no doubt as to the effects of tax dumping: in Ireland, foreign investments went up from 2.6 billion \$ in 1985 to 75 billion \$ in 2001, including numerous factories and physical investments<sup>90</sup>. The strategy of US multinationals is characteristic: they lay a small third of their European investments in the UK and its tax havens (Jersey, etc. cf. *Primarolo Report*), 18.3% in the Netherlands, 7.5% in Belgium-Luxembourg and 5.2% in Ireland, vs. 5.5% in France and Italy. These divergences mainly result from the fiscal maximization massively achieved by multinationals, notably American, to gather the profits of their European operations in Ireland on account of the weak taxation rate prevailing there<sup>91</sup>. According to Eurostat, when

<sup>90</sup> The inventory of foreign investments in the Belgium-Luxembourg entity only weighed 18 billion \$ in 1985, three and a half times less than in France, vs. 482 billion \$ in 2001, i.e. one and a half time more than France (yet most of the time in the form of holdings lacking a true economic substance in the country itself). Over the same period, foreign investments in the Netherlands, which has only 16 million inhabitants, rose from 25 billion \$ in 1985 – two and a half times less than France – to 284 billion \$ in 2001, almost as much as in France and nearly three times more than in Italy.

<sup>91</sup> Mainly by imposing high prices to their subsidiaries of the continent for the goods and services produced in Ireland. Indeed, a growing share of imports and exports in the EU results from trade operations between subsidiaries of a same group: in France 41% of industrial goods exports and 36% of the imports were concerned as soon as 1999. Consequently, the profits made by such and such subsidiary in such and such country mostly depend on the prices which the head-office decides to apply to its purchases from such and such country. Theoretically, a multinational is not entitled to boost its prices and is obliged to operate with its subsidiaries as if these were independent firms. But in practice, it is very difficult to prove anything because the goods and services exchanged are generally specific to each firm. Moreover, if the tax controllers of different EU members

an average European wage earner of the industry produces a figure of 100, a Frenchman produces 102 but an Irishman 216... The most productive after the Irish are the Finnish, yet with only 139. We will not insult the Irish if we consider that such a huge difference seems incredible, even if the Irish production facilities are quite recent on account of the influx of foreign capital in the latest decade. In fact, that gap probably does not reflect so much the quantity of goods produced by each Irish wage earner as the price policy pursued by multinationals to concentrate their profits on the island.

Now it is clearer why tax dumping is bound to have a decreasing efficiency and cannot represent an economic development model that can be generalized to all countries. The Irish case is extreme by its scope, but shows perfectly the growing unefficiency of the corporation tax system in front of the spreading of firms. Small countries indeed benefit from the situation: even when they strongly lower their level of corporation tax system, they succeed in globally increasing their tax revenues due to the resulting capital influx and profits. In view of this situation the big countries can hardly compete as they would for their part be losers<sup>92</sup>.

More basically, the generalization of such a measure finds a limit in its principle itself because, if all countries aligned themselves with the Irish tax rate, they would not only lose tax revenues but Ireland would see its comparative advantage in firm attraction disappear and its mix of recipes damaged. Generalizing this type of recipes amounts to cancelling their benefits! With a relatively fixed total volume of annual FDI, if other countries/regions were to follow Ireland's lead, all we would have is a redistribution of an existing cake. The success is due to the unique character of those measures and thus to the differential created with the continent. Finally, it is really because Ireland is only a small country, and consequently only represents a limited threat for the economic balance of the other EU countries, that the Irish recipes playing on competitiveness through comparative advantages could be tolerated... when not promoted by European transfers!

A similar reasoning is appropriate as far as wage restraint is concerned. Indeed, the Irish mix of recipes has evolved considerably. Of course, the amazing development of Ireland in the latest years is partly due to a competitiveness-cost (wage, tax, etc.) advantage at many levels (more and more combined with factors which have progressively increased Irish workers' productivity). Meanwhile, faced with the disappearing or progressive decrease of the European funds volume and of the tax differential for companies (downward alignment in all countries and European homogenization policy in this matter), and with the adjustment of wage rates (see table below), Ireland had to soften its strategy through

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really had to start inspecting the books of each firm for each product, this would lead to a process of economically very expensive disputes, notably due to the resulting uncertainty climate.

<sup>92</sup> Some invoke the fact that if States have abolished many tax exemptions, this did not result in a significant decrease of global return on corporation tax. This is rather an appearance than a reality, due to the marked improvement of companies' profits since the 1993 recession, with notably a strong cut in the companies' financial burdens. The fully harmful impacts of that race for the smallest taxation rates are still to come.

trying to diversify its industrial base, to develop local specialized subcontractors in order to increase the added value produced locally. In short, Ireland tries to replace its cost competitiveness model by a competitiveness grounded on productivity accompanied by wage increases. This is indeed the only strategy which eventually makes it possible to combine a sufficiently profitable production with a rising standard of living, thus a domestic demand (see 'Macro-economic framework' in report) sufficiently solvent to absorb the increasing production and to generate expansion investments and thus new productivity gains. In the long run, the best approach to national/regional economic development is to invest in local human and technical resources with a view to fostering indigenous enterprise.

EVOLUTION OF THE HOURLY WAGE COST BETWEEN 1985 AND 2001 IN THE FIRMS SECTOR (1985=100)	
Greece	560
Korea	470
Portugal	434
Sweden	259
Spain	253
United Kingdom	241
Italy	222
Finland	220
Ireland	214
Denmark	202
European Union	201,6
Luxembourg	193
Euro zone	187,5
USA	187,1
Austria	179
Belgium	177
Germany	163
France	157
The Netherlands	155
Japan	125
Source : OECD	



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### **WP 3.3 – Case study NORRBOTTENS LÄN**

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#### **Historical heritage and regional specificity**

The industrialization of Norrbotten has since the outset of the late nineteenth and early twentieth century to a large extent been based on the county's natural resources. For instance, raw materials and resources such as ore, forest and the rivers height of fall has all been, and to some extent still are, of great importance for the basic industry. An abundance of natural resources created a few large enterprises in the mining- forestry- and hydroelectric power industries. The subsequent development of the wood, pulp and paper industry as well as the iron and steel industry were to a large extent based on the county's supply of raw materials. Another distinctive trait was that the bulk of investments made relied on state funding or venture capital from outside the region. The branch structure that evolved was characterised by a low degree of processing, highly export oriented and consequently sensitive to economic fluctuations.

Even today, the natural resources constitute an important base for the companies and the employment in Norrbotten although there has been a marked shift towards the service industry and implementation of new technologies such as ICT in the basic industry. The boom on the raw material markets partly due to the ongoing globalisation, and in particular the rapid economic development in China and India has strongly favoured the mining, iron and steel industry. Another newly emerged industry is the automotive testing industry, which exploit the regions harsh winter climate.

#### **Territory and governance**

Since the Scandinavian countries have a strongly decentralized regional policy this case study is conducted at the territorial unit type NUTS 3. Following the typology of State Structures and Regionalization, developed in ESPON 3.2, Sweden is characterized as a decentralized unitary state with a regional decentralization. In terms of the devolution of spatial planning powers the structure is classified as a strong local municipality level with relatively weak central state (ESPON 2.3.2).

To get a clear picture of competence distribution between the Central State, County Administrative Board, County Council and Local Authorities we will give a short description of their respective levels of governance, even though they to some extent are overlapping both in terms of the geographical area and responsibilities.

At the local level, the 290 local authorities are legally or contractually responsible for matters relating to the inhabitants and their immediate environment, such as: social services; childcare and preschools; eldercare; support for the physically and mentally disabled; primary and secondary education; planning and building issues; health and environment protection; refuse collection and waste management; emergency services; and finally water and sewerage. There are also a number of other activities the local authorities can accomplish on a voluntary basis, for example: leisure activities, cultural activities, apart from libraries which are a statutory responsibility; housing; energy; industrial and commercial services.

At the regional level, the 20 county councils major task is health care, which accounts for almost 90 percent of their activities. Other responsibilities include regional development and growth, tourism and culture, as well as public transport within the Län. Each county council contains several local authorities, which are both appointed in general elections every fourth year. Local authorities and county councils are entitled to levy taxes in order to finance their activities; on the other hand the county administrative board has no such independent powers of taxation.

The regional and local operations of the government are divided into 21 counties (Län) and the county administrative board represents the state at the regional and local level. The government appoints the members of the county administrative board and the county governor. At the regional level the county administrative board is entrusted with formulating tasks, priorities and strategies with reference to the regional policy.

## **Socio economic fundamentals**

### *Population*

Norbotten's Län as a whole has experienced a decrease in population during the last decade, mainly due to the negative net migration, which has persisted since the early 1990s. This development has led to some minor changes in the age structure where those aged over 60 year has increased by two percentage points, and at the same time there has been decrease in the population aged under 20 by 1.5 percentage points. On balance Norbotten's share of the Swedish population has declined by 0.2 percentage points, from 3.0 in 1995 to 2.8 in 2004.

### *Wealth creation capacity*

Norbotten's GDP is 7 110 million euro and accounts for 2.6 percent of the Swedish GDP in 2004, which is 0.4 percent less than in 1995. In terms of GDP in constant prices per capita the quotient has increased annually by 2.9 percent during the same time period, but this is to a large extent the result of a declining population. Turning to the economic structure in

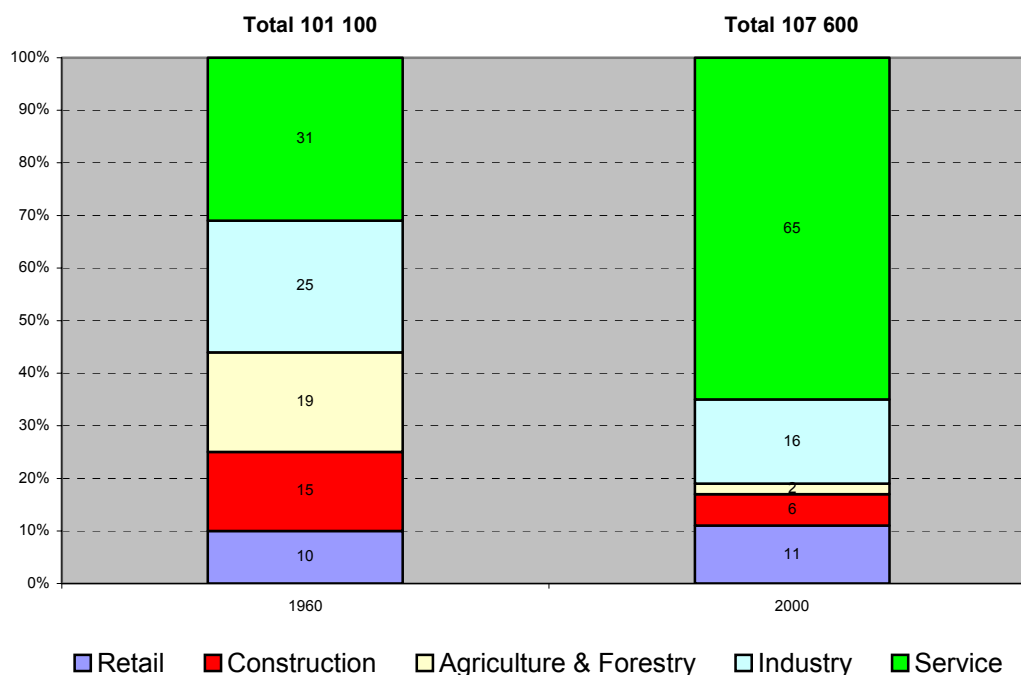
terms of the three broad aggregates Agriculture & Forestry, Industry, and Services there are no marked differences between the county and the nation. Less than three percent of the gross regional product and two percent of the national GDP stems from Agriculture & Forestry. One third and nearly two thirds of the gross regional product is attributed to Industry and Services respectively.

The size distribution of the companies in Norrbotten is almost the same as that of the nation during the time period from 1995 to 2003. In the size class of 1-4 employees accounts for 73 percent of the firms, which is four percent below the national level. The following two size brackets 5-9 and 10-49 employees accounts for 12 and 13 percent respectively, two percent above the national level in both cases. At the county and national level 2.4 and 2.3 percent are medium sized companies with 50-249 employees. Finally in the last bracket with over 250 employees, which represent large companies, the national and county figure is less than one percent.

In terms of employment shares, the size distribution of the companies display only minor differences between the county and national level. The smallest size class represents 15 percent of employment at both the national and regional level. In the next bracket 5-9, the employment share amount to 10 and 9 percent for the county and nation respectively. For the 50-249 brackets the employment ranking is reversed with 26 percent at the county level, one percent less than the national. The 10-49 bracket accounts for 32 percent of the employment in Norrbotten, which is three percent above the national level. Large companies with over 250 employees display the opposite employment pattern, encompassing 20 percent at the national level and three percent less in Norrbotten. The small enterprises with fewer than 50 employees represents 98 percent of all companies and employs 62 percent of the labour force in Norrbotten, while the corresponding national figures are 97 and 55 percent.

#### *Economic Structure and labour market*

The most dramatic change in the labour market from the 1960s to the year 2000 has been a marked shift from agriculture and forestry, manufacturing industry and construction to the service industry as can be seen in Figure 32. This increase in total employment and change in employment composition is mainly the result of an increased female labour participation rate due to the expansion of the public sector and the structural change up to the mid 1980s. In the more recent time period the employment rate has slowly improved after the economic decline in the early 1990s by nearly five percent to 0.73 in 2004 and has thus followed the same pace of improvement as the nation, which has an employment rate of 0.76 so there is still a slight difference in levels. Unemployment figures shows a similar pattern of reduction by nearly halving the unemployment rate both at the national and county level from 8.2 and 10.2 percent respectively to 4.2 and 5.3 percent.



**Figure 32 Norbotten’s employment structure in 1960 and 2000**

**Regional development priorities, policies and impacts**

*Towards regional development policy in Sweden*

Since the outset of the Swedish regional policy in the 1950s it has gradually changed both in terms of geographical scale and the scope of activities. Initially the focus was primarily on government grants to the industry in designated areas. The shift have been towards a wide range of regionally adapted measures complimentary to policy measures such as transportation-, educational- and labour market policies which cover the entire country, even though the main emphasis is still on designated areas.

This might give the impression of a rapid and far-reaching alteration of the Swedish regional policy. But it should be stressed that it have been incremental and the impetus behind the changes stems from divers causes. At the mid 1960s the Swedish regional policy faced two broad challenges, migration from rural to urban areas and overheating. A main driving force was the structural change in the forest and agricultural sectors, transforming from labour intensive to capital intensive industries caused lay-offs. At the same time other capital intensive industries in urban areas caused an overheating in the national economy and the regional policy aimed at mitigate the overheating by investment grants to the setting up of

new industries in areas with a declining employment. Hence, if it to a certain extent was successful, the regional policy was in concordance with the general economic policy.

The 1970s bear the stamp of an international recession and two oil crises accompanied with domestic rapid wage increases. This was a severe blow to the shipyard-, mining-, steel-, pulp- and paper industries. In order to compensate for the negative economic effects of the recession, the government launched a series of measures to uphold the activities and employment in those industries throughout the country. This is an example of what was then called a 'bridge over policy' in the awaiting of more favourable domestic and international economic conditions. Gradually the package solution for the crisis shifted in focus from industries hit by the crisis to measures promoting the setting up of new industries.

A rapid expansion of the public sector during those years was a vital part in securing the situation on the labour market. Furthermore, approximately 10000 jobs at 40 public authorities were relocated from Stockholm to 16 different localities throughout the country. In the mid 70s the scope of regional policy widened to include certain spheres of employment policy.

During the 1980s the Swedish regional policy developed into a pronounced cross-sector policy area where literally all policy areas should consider the regional dimension. To achieve this alignment of a regional dimension within all policy areas there was a strong focus on cross-sector coordination. For instance, the areas such as education and research and development paid more attention to its impact on regional development.

In the 1990s one continued to stress the catchword cross-sector coordination as a means to regional equity and development. Apart from that, the political perspectives and working methods changed significantly. Primarily due to: the economic decline, Sweden became a member of the EU, and a shift in perception of the driving forces to foster growth.

The beginning of the 1990s was characterized by a weak economic growth, which put a serious strain on the compensating and redistributive policy conducted during the 1970s and 1980s. The economic situation called for economy measures that subsequently enforced restrictions in public spending and ultimately in the welfare state/system.

There were also a growing awareness of the importance of the local and regional milieu for firm competitiveness and growth. Yet another concurrent impetus was a gradual change from a top-down to a bottom-up perspective which gave greater prominence to the fact that every region contribute, and has to contribute, to the national growth.

Sweden entered the EU in 1995 and alterations in the means and method of working was an imperative necessity for a number of reasons. Regional policy was no longer just a national

policy area but had to adapt to and comply with EC antitrust directives. EU structural and regional policy also indirectly affected the policy area through the co-funding principle, which to some extent governs the direction, scope, shaping and geographical delimitation of the national regional policy.

The EU membership contributed to a new mode of working, primarily in the direction towards programme control and a more comprehensive view of the regional policy. This meant that greater emphasis being placed on growth and long-term development strategies.

The realization of Regional growth agreement in 1998 is as an example of a shift in policy where EC structural funds to a large extent served as a model to the Swedish implementation. Regional growth agreements are designated to contribute to improved collaboration between regional and local bodies. The goal is to make the most of the particular conditions in each region and thus promote the type of long-term growth that favours the creation of new enterprises and new jobs.

Yet another example is the formation of partnership in the design and implementation of growth agreement, involving a range of private sector entities, NGOs, as well as regional and local authorities. This can be seen as an expression of a growing consensus about the importance for regional competitiveness of good governance, in the sense of efficient institutions, productive relationships between the various actors involved in the development process and attitudes towards business and enterprises.

### *Policy strategy*

In 2001 a new policy area – regional development policy, replaced the regional policy. According to the Government Bill 'En politik för tillväxt och livskraft i hela landet' 2001/02:4 (A policy for growth and viability throughout Sweden) it is a mean of establishing and developing a coordinated policy for the whole country which can be adapted to regional needs and prerequisites adapted to regional needs and conditions.

Furthermore, the Government Bill proposes that regional development policy objective is: Well-functioning and sustainable local labour market regions with an acceptable level of service in all parts of the country.

'Well-functioning local labour market regions' means that every region is as attractive as possible for people and enterprises and allows the most to be made of the potential and vital forces existing in every region.

'Sustainable' means that the policy should contribute towards sound economic, social and ecological conditions for present and future generations.

'An acceptable level of service in all parts of the country' means that measures taken should contribute to people and companies in all parts of Sweden having access to adequate commercial and public services.

The strategies for implementation comprise the following five areas; developing guidelines for government bodies and authorities whose activities contribute towards achieving the objective of regional development; clearer regional responsibility in some policy areas and a developed overall view; clearer distribution of responsibility between government and local authorities; learning processes and programmes as instruments for development; and regional benchmarking as a driving force for change.

Moreover, the Government Bill continues to stress the importance of coordinating the national regional development policy with the EU structural and regional policy. As of 2004, the start of the new programme period, the Regional growth agreements is labelled Regional growth programmes. These regional growth programmes are appointed the main instrument of the new policy. It will contain analyses, objectives and regional priorities as well as a plan on the financing, implementation and evaluation of the programme. The activities to be undertaken are required to be sustainable from economic, social and ecological perspectives. Additionally, government funds set aside for regional development should as far as possible be coordinated within the framework of the programme for growth. The guiding principle for the work will be the prerequisites for growth in trade and industry. It will be undertaken between 2004 and 2007 and coordinated in time with the long-term planning of the infrastructure.

#### *Policy measures to promote regional development*

The measures are divided in five areas and aim to achieve the proposed objectives for the new policy. Some of the measures cover the whole country while others are geographically limited. According to the Bill the government deems that both types of measures are required, partly to clarify the need to strengthen all local labour market regions in the country and contribute to sustainable national growth, and partly to give special directed support to certain geographical areas.

The five policy measures are: stronger regions and local authorities; increased knowledge and skills; greater enterprises and improved entrepreneurship; local development and more attractive life environments; and an acceptable level of service throughout the country.



### *Regional growth programme for Norrbotten*

Norbotten's regional growth programme is led by a steering committee comprised of fourteen representatives from a number of regional and local bodies. The steering committee is responsible for establishing guidelines and monitors the implementation of the growth programme. The County Governor is the steering committee's chairman, the regional and local political sphere have four representatives from the Association of Local Authorities, and two representatives from the County Council. The other regional members are representatives of the County Labour Council (LAN), Luleå University of Technology, the Chamber of Commerce (Handelskammaren), the Federation of Private Enterprises (FR), the Sami parliament, the Swedish Trade Union Confederation (LO), and the Swedish Confederation of Professional Employees (TCO).

The growth programme has three overall objectives: regional cooperation; regional joint mobilisation; and regional diversity. To achieve growth and employment in Norrbotten efforts are targeted towards strategic cooperation/promotion and development of businesses, enhancing the attractiveness of the region, and to secure and improve the level of skills and competence among the labour force through for example vocational training.

### **Drivers of regional competitiveness**

There are in a true sense no regional budgets in Sweden since the country doesn't have a federal structure. Nevertheless, it is to some extent possible to classify the policy instruments in function of the drivers of competitiveness that they affect. As we have seen in previous sections there are three different political bodies that are engaged in the regional development policy process at the county level: the fourteen local authorities in Norrbotten; the county council; and the county administrative board. The main instrument of coordination is the regional growth programme, which is financed by the joint pooled funds of the partnership. This is one source of information that captures the bulk of financial resources from the county council and the county administrative board devoted to regional development. This is also the case regarding the means from EU structural funds under Objective 1 and INERREG as well as the investment grants provided by the Swedish Agency for Economic and Regional Growth (NUTEK). However, there are additional financial means supplied by public authorities such as the Swedish road administration and the Swedish national rail administration that has a substantial impact with reference to infrastructure, and the county labour board in relation to human capital, both affecting drivers of competitiveness.

It's important to stress that even though the information related to drivers of regional competitiveness covers the main part of financial resources devoted to regional

development, there are some minor entries unaccounted for such as the individual local authorities industrial and commercial services, so in that sense it isn't exhaustive.

	EUR 1 000	Means (% total in EUR)
Hard or tangible infrastructure	44 816	26.3
Social capital	66 931	39.2
Human capital	22 184	13.0
Fiscal and financial interventions	2 174	1.3
Financing	0	0
Innovation support	18 069	10.6
Amenities	16 481	9.7
<b>Total</b>	<b>170 655</b>	<b>100</b>

**Table 21 Financial efforts towards drivers of competitiveness, Norbotten Year 2005**

As can be seen from the Table, the infrastructure and social capital entries account for almost two thirds of the competitiveness drivers. The infrastructure measures are primarily targeted towards capacity enhancing investments in the rail, road and ICT network, and a small fraction approximately two percent is allocated to traffic safety measures. Under the heading of social capital the whole lot is allocated to the promotion of entrepreneurship and the entrepreneurial milieu within the region. The private means allocated to this budget entry is by far the largest, in the order of 51 percent and amounts to 20 percent of the total budget.

One third of the total budget is to be paid to human capital, innovation support and amenities. The resources are nearly equally divided between skill and competence enhancing programmes, support to cluster and innovation systems and to foster the attractiveness of the region, respectively.

Fiscal and financial interventions which is the smallest budget entry accounts for just over one percent and is provided by the county administrative board and the Swedish Agency for Economic and Regional Growth (NUTEK) if it concerns larger projects.

The detailed tables of financial means allocated to competitive drivers for the Norrbotten region is relegated to the appendix.

There are a number of public agencies that serves as channels of technological transfer, for instance Nutek, the Swedish Governmental agency for innovation systems (Vinnova), Invest in Sweden Agency (ISA), and ALMI.

ALMI offers market oriented complementary financing and business development consultation for small and medium-sized companies and innovators. ISA is the government agency assisting and informing foreign investors about business opportunities in Sweden. In particular, ISA provides tailor made information and practical advise on how to proceed when setting up a business; introductions to contacts among Swedish authorities, utility providers and service companies such as lawyers, accountants, relocation specialists and recruitment companies; and finding companies for possible joint ventures or other form of cooperation.

Vinnova's particular area of responsibility is innovations linked to funding in the R&D field. For example, projects that develop knowledge, know-how and expertise to promote better use and application of existing research results in innovation systems; funding excellence centres to develop universities as research resources for industry and the public sector by creating strong and internationally-attractive environments that offers scientific excellence; encourage the cooperation between universities, companies, research organisations and public bodies that, on the basis of a regional perspective, develop innovation systems; and funding incubators that are linked to universities.

Examples of the previously mentioned authorities involvement in Norbotten are: ISA's engagement in Swedish Winter Test Region were companies such as VAG (Volkswagen Audi Group), BMW, Mercedes, GM, Daimler Chrysler and Bosch conduct their winter automotive testing; Vinnovas support to a project at Luleå University of Technology about the processing of wood into advanced wood products for the construction industry, and the furniture and furnishing industry. Yet, another example is the cooperation between the mining industry, Luleå University of Technology and local ICT/telecom companies has made it possible to conduct mining operations using a joystick and a control panel located above ground.

## Conclusions

The regional policy in Norrbotten has transformed from a policy characterised by state-led design primarily focusing on redistributive issues and relying on government grant towards a policy based on cross-sector coordination, multi annual regional growth programmes, with strategies that are to an increased degree influenced by a bottom-up perspective, and partnership based consensus oriented formulations of policy needs and priorities. Much of the re-orientation has come about in response to periods of severe economic conditions and the influence of EU structural funds. Whether the new regional development policy and its consequences for Norrbotten is connected to economic success or not, is yet hard to discern and might lead to premature conclusions.

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**Appendix**

	Instruments	Explanations about instruments	in EUR 1000	Level of governance	Public authority	Means (% total in EUR)
<b>Hard or tangible infrastructure</b>  23,7	Road network	Capacity enhancing investments	15.455	National	Swedish road administration	9,5
	Road network	Traffic measures safety	3.285	National	Swedish road administration	2,0
	Railroad network	Capacity enhancing investments	19.063	National	Swedish national rail administration	11,8
	Railroad network	Traffic measures safety	539	National	Swedish national rail administration	0,3
				0	County administrative board	
<b>Social capital</b> (Supporting networking, cooperation, coordination, information networks)  41,3		Promotion of entrepreneurship & entrepreneurial milieu	13.990	Region	County administrative board*	8,6
		"	1.627	Region	County council	1,0
		"	575	Local	Municipalities	0,4
		"	5.210	National	Other National public funding	3,2
		"	7.888		EU structural funds*	4,9
		"	868		EU structural funds**	0,5
		"	2.704		Other EU grants	1,7
		"	34.069		Private	21,0
<b>Human capital</b> (skills and competencies; cost of labour incentives)  13,7		Skill & competence enhancing programs	12.242	Region	County labour board	7,6
		"	476	Region	County council	0,3
		"	240	Local	Municipalities	0,1
		"	3.140		Private	1,9
		"	288	Region	County administrative board*	0,2
		"	616	Region	County administrative board**	0,4
		"	1.463	National	Other National public funding	0,9

		"	2.863		EU structural funds*	1,8
		"	855		EU structural funds**	0,5
<b>Fiscal and financial interventions</b> (investment grants, tax exemption, etc.)			0			
<b>Financing</b> (supply of capital, credit, bank guarantees)			0			
<b>Innovation support</b> (R&D support, technologies diffusion, etc.) 11,2		Cluster and innovation systems support	3.459	Region	County administrative board*	2,1
		"	842	Local	Municipalities	0,5
		"	3.993	National	Other National public funding	2,5
		"	6.629		EU structural funds*	4,1
		"	514		EU structural funds**	0,3
		"	2.631		Private	1,6
<b>Amenities</b> (quality of life, entertainment, culture, etc.) 10,2	Attractive region		745	Region	County council	0,5
	"		582	Local	Municipalities	0,4
	"		1.893	Region	County administrative board*	1,2
	"		1.790	National	Other National public funding	1,1
	"		5.466		Private	3,4
	"		4.728		EU structural funds*	2,9
	"		1.277		EU structural funds**	0,8
<b>Total</b>			162.006			100

County administrative board\*: Grant 33:1

County administrative board\*\*: Other grants

EU structural funds\*: EU grants allocated by the Swedish public authority

EU structural funds\*\*: EU cross national grants allocated by a public authority in Rovaniemi, Finland

### **WP 3.3 – Case studies POLAND – 2. Wielkopolskie region**

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#### **Preliminary remark**

This document presents two Polish regions. From the European point of view both regions are peripheral and underdeveloped (below 75% of EU GDP). Podlaskie is among five least developed EU regions and is located on Poland's eastern border. Wielkopolskie is more western and always was among best developed regions of Poland. Because of elements of centralisation of current development policy certain parts of analysis are identical for both regions (Voivodships) in the two case study documents.

#### **Historical heritage and regional specificity**

Wielkopolskie region was the place of formation of the Polish state in 9th and 10th centuries. The first capitals of Poland are located here (Gniezno and Poznań). From the very beginning it belonged to most competitive regions and today it is the third strongest region in Poland with exceptionally polycentric settlement structure, fast developing services, differentiated industrial structure and vivid entrepreneurial tradition, good quality soils and agriculture, well developed educational centres and interesting culture. It is the third strongest economic region of Poland characterised by increasing dynamism.

Wielkopolskie region is the second largest Polish voivodship (NUTS2 region). Its size (29.825 sq km) makes it almost as big as Belgium or Brandenburg region. With the population of 3,34 Million it is the third largest Polish region, larger than Latvia and almost as big as Ireland or Lithuania. Due to its size its landscape varies, but in general it is rather flat but differentiated area. In the north and west there are fast developing tourist centres in the areas reach in lakes, rivers, forests and other places of interest. Within the region more than 600 historical castles, palaces and manors (among them objects of exceptional value like for instance Rydzyna, Kórnik or Gołuchów residences turned into museums with a rich art collections), numerous botanical gardens and historical parks, rich and lively folk tradition make it one of the most interesting regions of Europe. Wielkopolskie and in particular city of Poznan have undertaken vigorous promotional campaign on European level.

The region is located in Western Poland on the crossroad of important road and railway corridors (main: Berlin-Warsaw-Moscow and Szczecin-Prague). The airport of Poznań offers regular connections to Brussels, Koeln, Muenchen, Frankfurt/Main, London, Copenhagen and Vienna, not to mention Polish airports. Region borders with mostly relatively well developed regions. For centuries it was a border region, but today it's separated from the border with Germany by a small Lubuskie region. It lies ca 250 km from Berlin, 350 km from Prague and 300 km from Warsaw. It has dense network of regional roads and railways.

The capital of Wielkopolskie is Poznań (600 thousand inhabitants) with modern economic structure, well educated population and numerous cultural establishments and monuments. Throughout the region there are 6 towns of the size 63-108 thousand inhabitants (Leszno, Gniezno, Ostrów Wielkopolski, Piła, Konin and the largest Kalisz)

## **Territory and governance**

### *Territorial unit*

Contemporary regional division of Poland was introduced in 1999 (16 voivodships). Following the administrative reforms of 1999, Poland has been divided into 16 voivodships (regions), 373 poviats (districts) and 2,489 communes (gmina). Additionally, there are 65 urban communes endowed with poviat rights (larger towns). At the regional level public authorities are constituted by Marszalek and Voivode. Wielkopolskie, as 15 other Polish regions has a regional assembly called Sejmik elected by regional constituency for 4 years, with councilmen, Board Members, vice presidents and president (called Marszalek). By law, regional self-government authorities have several tasks that should be achieved through development strategy and can be described shortly as:

- Stimulating economic activity in line with sustainable development
- Strengthening of innovativeness and competitiveness of the region (incl. development and maintenance of technical, educational, health and social infrastructure on the regional level),
- Protection of regional cultural and natural values
- Shaping up and protecting spatial structures (spatial development).

Voivode Office is a regional representative of Polish Government. It is responsible for control of all self-government units and supervision of central institutions in the region, such as: police, fire-brigades, border guards, Tax Office.

Formally Poland is decentralised country. One has to note, however, that being unitary state, it made a decision to create regional self-government with significant responsibilities. Its share in public finances despite steady increase is not considered proportional to the tasks. The process of strengthening of regions as territorial unit is well visible over last 7 years. Current situation may be described as regional decentralisation.



The region is divided into 'statistical' NUTS 3 subregions (with no public authority on this level), counties and municipalities, governed by local elected authorities.

Wielkopolskie region contains one Metropolitan European Growth Area (Poznan), and three regional/local FUAs (Kalisz, Konin, Leszno) (ESPON 1.1.1, p. 128). It is also characterized as having low urban influence and medium human interaction (ESPON 1.1.2, p.29).

### *Governance*

Following the administrative reforms of 1999, Poland has been divided into 16 voivodships (regions), 373 poviats (districts) and 2,489 communes (gmina). Additionally, there are 65 urban communes endowed with poviat rights (larger towns). In the process of preparation to accession regions were classified as NUTS 2 level.

At the regional level public authorities are constituted by Marshall and Voivode. Marshal's Office is a self-government and is responsible for economic development of the whole region. Its role is to create regional policy development, social affairs, foreign affairs, environmental protection, regional communication, regional health sector, regional spatial planning, distribution/implementation of Structural Funds and Central Government Funds financing regional policy, finance institutions of regional reach, etc. Voivode Office is a regional representative of Polish Government. It is responsible for control of all self government units and supervision of central institutions, such as: police, fire-brigades, border guards, Tax Office.

Lower level commune (gmina) and poviat (district) have only self-government. Poviat is responsible for: poviat's communication, land evidence, Labour Office, high schools, poviat's health sector. Gmina is responsible for: local tax, local communication, local technical infrastructures (e.g.: water supply, trash), local social affairs, primary schools, building, local spatial planning, evidence of local firms.

## **Socio economic fundamentals**

### *Population*

Wielkopolskie region has shown positive evolution of population due to neutral to positive migration balance and natural increase (ESPON 1.1.4, p.33). Wielkopolskie is a large region with large population of 3,4 Mio. Its density is below national average because of large forests, marshes and hilly areas in northern part of the region, where density is below 70 people per sq.km. Urban population prevails.

### *Wealth creation capacity and economic structure*

Due to both location, urbanisation and long lasting tradition of entrepreneurship it attracts significant part of FDI (over 9% in 2003; Strategy) with very strong preference for agglomeration of Poznan area. Among investors are Jeronimo Martins, Volkswagen, Reemtsma AG, MAN, Glaxo Group, Wrigley, Nestle, Alcatel, Philips and many other.

Investment outlays are equal to over 12% of the whole country. GDP is higher than Poland's average (105%) and shows growing disparities on NUTS 3 level (the highest growth rate of NUTS 3 city of Poznan). In 2002 internal disparities reached the level of almost 1:3 (Strategy).

The region has internally differentiated economic structure. Most of employment is in market services (34,2%), followed by industry and construction (32,3%), agriculture (17,7%) and non-market services.

Main branches of industry are: food industry (1/3 of production sold), automotive, pharmaceutical, household equipment, ceramic. Agriculture in the region has relatively good farm structure and is considered the most modern in Poland. And yet only 58% of existing farms (defined as 1 ha and more) produce mainly for the market; the rest being subsistence farms.

There is relatively stable share of regional firms in Poland's total (9,2%). Visible increase in shutdowns in 2001 was related to the peak of stagnation period of the Polish economy. It was however accompanied by increase of new businesses established.

Most of the spending on R&D of the Wielkopolskie region (equal to 0,46 % GDP, that is four times less than in EU 15) comes from public sources. The private sector share increases steadily.

<b>PART</b>	Notice: different time series in different parts		
<b>DEMOGRAPHY</b>	<b>1998</b>	<b>2003</b>	<b>2004</b>
Surface in km <sup>2</sup>	29826	29826	29826
Population [in 1000]	3 351	3 360	3 365
in % of country	8.7%	8.8%	8.8%
Population density	112.4	112.7	112.8
Population age over 65 (%)	10.3	11.8	11.8
Population age below 25 (%)	37.7	34.1	34.6
<b>PRODUCTION</b>	1998	2002	2003
GDP in mln EUR (current prices)	13 988	19 076	17 647
GDP (base year 1998 in EUR)	100	136	123
In % of country	9.1	9.1	9.2
GDP per capita (in EUR)	4174	5685	5252

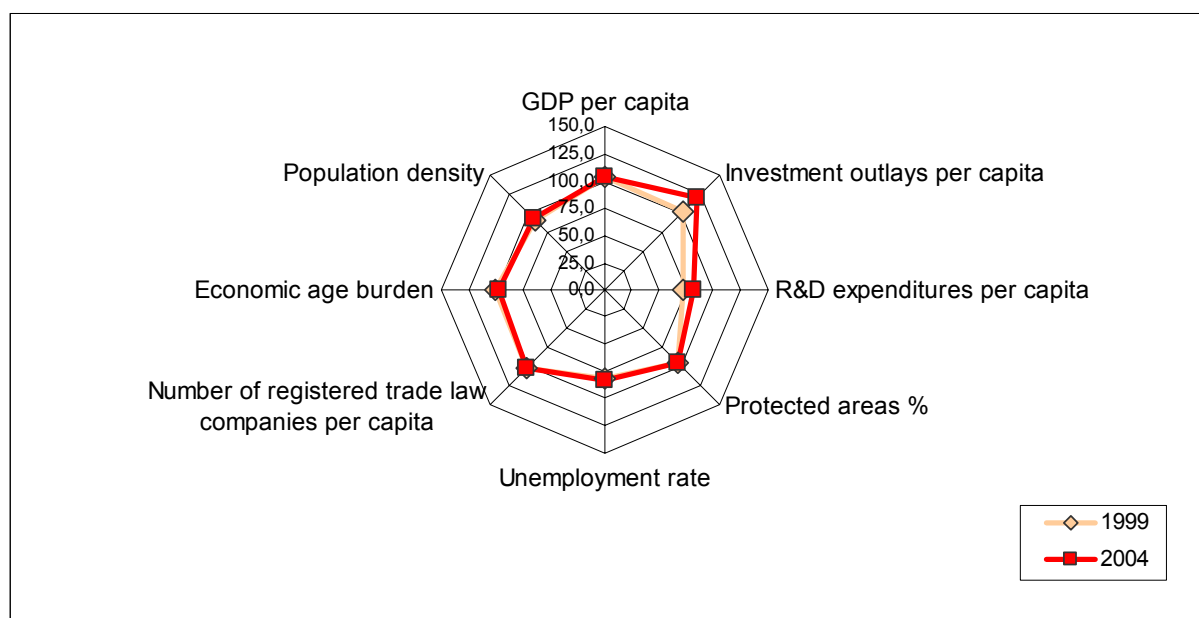
GDP per capita (Poland = 100%)	105.4	103.7	104.8
<b>ECONOMIC STRUCTURE</b>	1998	2002	2003
GVA agriculture (mln EUR; %)	831.5 13.5%	826.3 15.1%	709.9 15.0%
GVA industry and construction (mln EUR; %)	4617.7 10.2%	5224.6 9.9%	5060.8 11.0%
GVA market services (mln EUR; %)	4948.4 8.2%	7552.6 8.4%	6779.7 8.3%
GVA non-market services (mln EUR; %)	1560.1 8.0%	2413.9 8.4%	2210.2 8.4%
Employment agriculture (1000; %)	357.8* 15.3%	212.5 17.9%	209.6 17.7%
Employment industry and construction (1000; %)	449.7* 31%	378.0 31.9%	383.4 32.3%
Employment market services (1000; %)	384.6* 36.4%	405.0 34.2%	405.4 34.2%
Employment non-market services (1000; %)	190.9* 14.9%	189.4 16.0%	186.9 15.8%
Export (mln EUR)	-	-	-
<b>GROSS FIXED CAPITAL FORMATION</b>	1999	2001	2002
Total investment outlays (in mln EUR)	2436.9	3236.2	2989.9
- % of the country	9.3%	13.0%	12.1%
Foreign direct investment, stocks (in mln EUR)	1010.7	1706.8	1969.0
- % of the country	8.6%	8.5%	8.4%
Capital investment (indigenous) (in mln EUR)	-	-	-
<b>PRODUCTIVITY</b>	1998	2002	2003
GVA/employed (EUR)	8646.0*	11851.6	12746.8
<b>CREATION OF FIRMS</b>	1999	2000	2001
Number of new firms	36 339	31 701	34 531
Number of shutdowns	17 011	15 872	23 491
% of employment	-	-	-
% of units	99.8%	99.8%	99.8%
% of employment of country	-	-	-
% of units of country	9.2%	9.2%	9.2%
<b>LABOUR MARKET</b>	1998	2003	2004

Employment rate	47.3 (1999)	47.5	46.8
Unemployment rate	15.4*	17.1	15.9
<b>R&amp;D SECTOR</b>	<b>1998</b>	<b>2003</b>	<b>2004</b>
R&D (mln EUR)	62.0	84.2	81.4
R&D public (%)	79.3%	88.6%	76.8%
R&D private (%)	20.7%	21.4%	23.2%
% of GDP	0.44%	0.46%	0.46%

\* data not comparable change in methodology

Source: compiled by authors based on CSO (Central Statistical Office) data

**Table 22 General characteristic of Wielkopolskie region**



Source: compiled by authors based on CSO data

**Figure 33 Change of selected indicators for Wielkopolskie region for 1999-2004 (Poland = 100%)**

Figure 33 suggests that most indicators are close to Poland's average, but between 1999 and 2004 best visible change was relating to increase in R&D expenditures and investment outlays per capita.

### *Summary and policy implication*

The relatively good performance of the region may be explained by a set of factors:

- Beneficial location on important transeuropean transport corridors,
- Strong agglomeration of Poznan and balanced settlement structure,
- Balanced structure of economy,
- Relatively high level of education and skills,
- Inflow of FDI,
- Proximity of German border,
- Relatively high saturation of SMEs,
- Culture of entrepreneurship,
- Relatively big and modern farms.

### **Regional development priorities, policies and impacts**

#### *Policy strategy*

The Development Strategy of Wielkopolskie Voivodship was adopted in 2000 and updated in December 2005 by Regional Assembly.

The general goal of the strategy is as follows: Improvement of the quality of the space of the region, educational system, labour market, economy and social sphere, resulting in improved level of life of inhabitants. Four strategic goals were developed:

1. Adjustment of the (regional) space to challenges of XXI century
2. Increased effectiveness of utilisation of regional development potentials
3. Growth of competences of inhabitants and employment promotion
4. cohesion and social safety improvement (Strategy).

The strategy covers wide range of development issues and is based on rich evidence and coherent methodology, though aforementioned strategic goals can not be said to be very clear (Gorzela, Jalowiecki 2001). It has to be stressed, however, that these are followed by detailed description of operational goals and activities and implementing and monitoring system.

#### *Drivers of regional competitiveness*

Polish system of public expenditure is decentralised. In general 5 different group of actors are involved in the system. The first group is state budget and particular ministries. The

second public agencies at central level with separate budgets within state budget. The remaining three groups are self-governments at regional, county and municipality level combining own revenues as well as state grants and subsidies. Other important feature is that funds from European Union and other donor countries are separate line outside state budget.

The most important programme regulating public expenditures at regional level is Integrated Regional Operational Programme for 2004-2006 (IROP). The programme combines funds from different group of public actors, private resources as well as Structural Funds. Therefore conducted analysis cover only this instrument as the most important public expenditure scheme at the regional level. However, expenditures related to business support are conducted mainly in the framework of sectoral operational programme Improved Competitiveness of Enterprises. The programme is not territorially oriented therefore it is not possible to access exact value of spending in given region.

#### *Public expenditures structure 2004-2006*

The Integrated Regional Operational Programme consists of 4 priorities. These are:

- Priority I. Development and modernisation of the infrastructure to enhance the competitiveness of regions – 59.4 % of the entire funding
- Priority II. Strengthening the human resources development in regions– 14.8 % of the entire funding
- Priority III. Local development – 24.5 % of the entire funding
- Priority IV. Technical assistance – 1.3% of the entire funding.

The most important fact is that the distribution of funds between priorities will be the same in each Polish region in the period 2004-2006. Therefore the implementation of the programme should not be considered as a factor of economic performance differentiation across regions. The estimated breakdown of funds in categories reflecting drivers of regional competitiveness seems to be the following: (For details see Tab. 2 in Annex):

- Hard or tangible infrastructure: 70.1%
- Social capital: 7.3%
- Human capital: 6.2%
- Fiscal and financial interventions: 2.7%
- Innovation support: 1.5%
- Amenities: 12,3%.

The most important type of expenditure is development and modernisation of hard or tangible infrastructure. It's worth to mention that this action has been neglected for many years and as a result technical infrastructure is poorly developed even in comparison to other Polish regions. This type of public expenditure is supported by means devoted to

development of social and human capital. However, low quality of life caused that the share of spending on amenities is comparable to human and social capital. On this background the share of spending on firm financing (grants, supply of capital and guarantees) was very low c.a. 2.7%. Moreover activities related to innovation support were nearly completely neglected – only 1.5%.

On the assumption that the expenditures within sectoral operational programme Improved Competitiveness of Enterprises will have the same proportion to expenditures in the framework Integrated Regional Operation Programme in each region this breakdown might be adjusted for the purpose of the project in the following way:

- Hard or tangible infrastructure: 54.3%
- Social capital: 5.0%
- Human capital: 4.2%
- Fiscal and financial interventions: 23.6%
- Innovation support: 3.6%
- Amenities: 9.2%

These are very raw estimation that indicates significant increase of fiscal and financial interventions up to 23.6%. However, if taking into account other sectoral operational programmes this breakdown would change significantly also in the other categories (i.e. human resources - Sectoral Operational Programme Human Resources). The main problem to provide such a balance at regional level is that all SOP are horizontal not regional measures.

### **Regional Operational Programme for 2007-2013**

The new operational programmes at the regional level for the next programming period are now under preparation. The general assumption outlining the preparation is that each of the voivodship (region) will have separate operational programme strictly adjusted to particular region needs identified in the development strategy.

The first draft of Wielkopolskie ROP 2007-2013 adopted in March 2006 does not include expenditures plan yet . Thus we can not analyse the structure of goals in financial terms.

### ***Regional Innovation System***

Wielkopolska develops dynamically despite the fact that spending on R&D is slightly lower than in Poland (not to mention EU 15). It is slowly increasing since 1999. At the moment R&D spending in the region is equal to ca 0,46% (Poland 0,59%, EU 15 - 1,81%). It represents 8% of total R&D spending in Poland. This fact is mentioned as a problem in

regional development strategy that stresses importance of innovation for the future (Strategy, 2005). In line with Lisbon strategy till 2010 disbursement on R&D in Poland should reach the level of 3% of DGP (similarly in Wielkopolskie). Specific feature of Poland and Wielkopolska is the fact that - opposite to practice in well developed countries - most of financial resources (70%) is being spent on technical equipment and initial phase of production process rather than on pure R&D. It has to be noted that R&D spending in medium sized and large industrial enterprises in the region only in 2003 increased by 60%, that is three times faster than Poland's average (Strategy 2005). Main source of financing of innovation in industry are own resources (80%) and bank loans (15%).

In the region there is a prevailing feeling that relatively large R&D potentials is concentrated in 90% in Poznań is underutilised. Possible explanation of this situation seems to be in the fact that still most of resources for R&D comes from the budget and is channelled through public (centralised) R&D sector which is considered non-effective and in need of radical restructuring. If so, increased spending by private sector would make the pace of development of Wielkopolskie (third most dynamic Polish region) even faster.

What is more, Strategy stresses in conclusions lack of satisfactory cooperation between science, R&D and regional economy, shortage of specialised innovation support system and low innovativeness in the region. These conclusions can be easily applied to every Polish region (due to centralisation of R&D financing).

There are two processes that mark already started change in this respect: adoption of the Regional Innovation Strategy and support to innovation within the structural policy of the EU which adds to national R&D spending since late 2004.

Regional innovation system has been developed and described in Regional Innovation Strategy (RIS) adopted by the regional authorities in 2004. The diagnosis shows relatively strong innovative potential among R&D units, weak situation in the enterprise sector, relatively well developed delivery system which often does not meet businesses' expectations. The SWOT analysis covers four spheres: business sector, R&D, support (intermediate) institutions and less developed areas. In some cases it lacks ability to concentrate on and select key issues.

Strategic goals of the RIS are defined as:

- Integration for innovation (horizontal)
- Increase of business ability to implement innovation
- Better use of regional R&D potential for competitiveness growth
- Establishment of modern innovative infrastructure. (RIS)

Regional Innovation Strategy with few improvements may create chances to increase competitiveness of the region (see Gorzelak et al, 2006). It depends to a high degree on a national innovation support policy and its implementation.

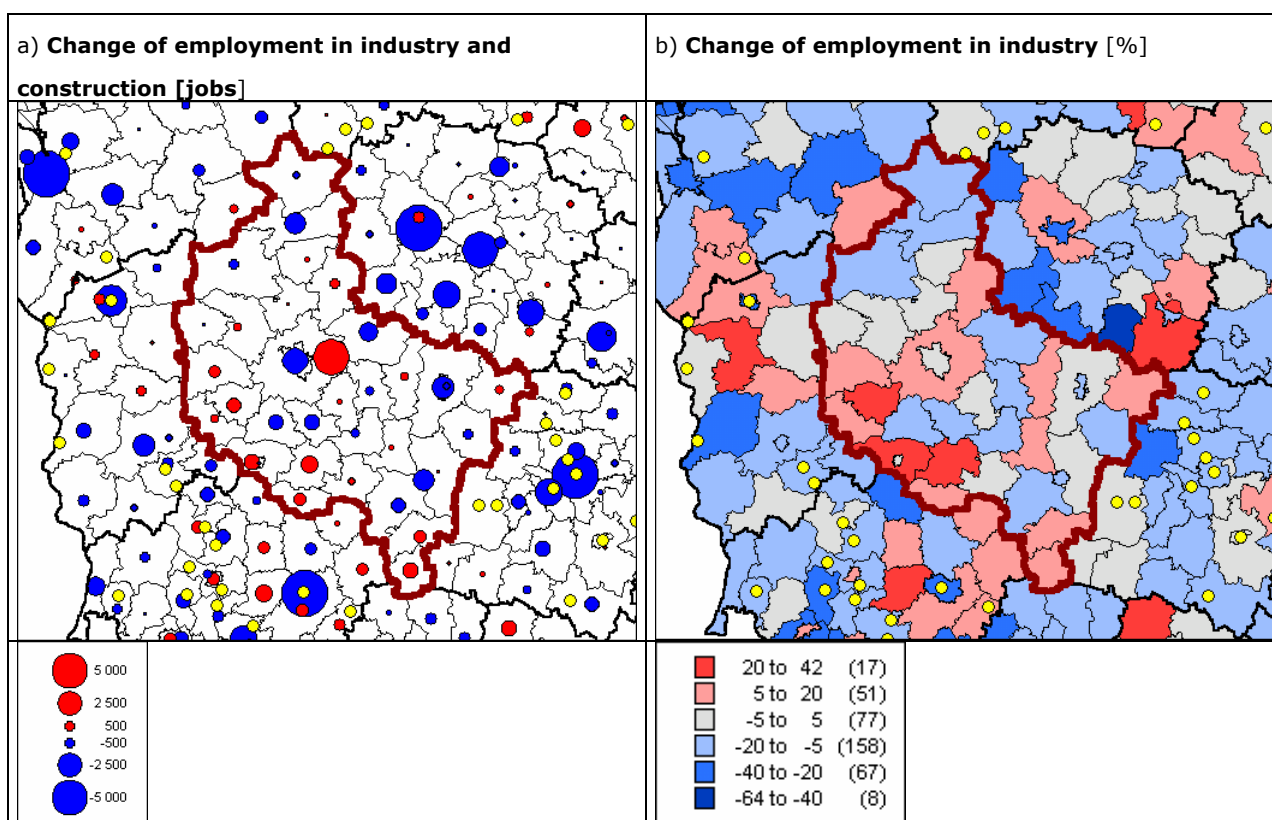


### Impacts of regional policy

#### Synthesis of studies and evaluation

In general the interregional economic policy have very small territorial impact in Poland (see Kozak, Smetkowski 2006). The intraregional policy have also small influence on pattern of economic activity so far. The main reason is that public expenditures within Integrated Regional Operational Programme (2004-2006) have small share in GDP (ca. 0.7%). In fact the expenditures coordinated by Marshall Office c.a. 110 mln EUR might be consider as insignificant in comparison to private investments outlays in the last period 2004-2006. The private investments outlays would be approximately at least 10 times more in the period.

Unlike most Polish regions Wielkopolskie is not having any Special Economic Zone. Nevertheless, a number of modern manufacturing centres in proximity to Poznan (capital city) and in cities situated in south part of the region have been developing quite rapidly in recent years.



Source: compiled by authors

**Figure 34 Evolution of employment in industry and construction, 2000-2004**

## Conclusions

In general the interregional economic policy has small territorial impact in Poland. Polish regions were established in 1999, so their experience is very interesting, but still limited. Also because of the fact that decentralisation of tasks and responsibilities were not followed by proportional increase in public finances made available to regional authorities. As a result in financial planning of regional development they depend on financial resources made available for investment projects through central government (including structural operations) or municipalities.

Despite all the differences between two analysed regions (demographic, social, economic, location etc) they also share certain similarities.

First of all, in the current programming period they are subject to the same development policy using exactly the same instruments in the same financial proportion regardless of specific regional feature<sup>93</sup>.

Secondly, both regions have developed development strategies and regional innovation strategies. As far as quality is concerned Wielkopolskie made a better job.

Thirdly, due to a division of public finances between various levels of public administration and small share of regional authorities in its implementation of those strategies depends most of all on results of implementation of Integrated Regional Development Programme which absorbs most of financial resources on regional and local level as cofinancing of structural funds.

Fourthly, the shape and pace of development of regions in question to a large extent depends on spontaneous processes taking place in economy. Even incentives like Special Economic Zones are not able to influence external investors to change the taste and invest in peripheral Eastern regions like Podlaskie instead of looking for opportunities in better endowed and linked with the markets agglomeration regions like Wielkopolskie.

It is relatively difficult to evaluate territorial impact of European regional policy in Poland. The disbursement has reached ca 10% after 20 months of implementation. The financial resources have been allocated according to population (80%) plus unemployment in selected districts (10%) and GDP in the region (10%). Therefore the support per capita is higher in for instance Podlaskie region than Wielkopolskie. That was supposed to strengthen less developed regions suffering also from unemployment. Initial experience with absorption of money made available to Polish regions suggests that absorptive capacity not necessarily is correlated with level of underdevelopment (Stan Wdrazania 2006).

At the moment the preparation of individual Regional Operational Programmes is not finished yet. For the first time regions have a chance to adjust regional policy instruments to their own development strategy. What impact shall it have on territorial development remains to be seen.

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<sup>93</sup> The division of financial resources was based on three criteria: population (80%), unemployment rate in selected districts (10%) and regional GDP (10%)

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## Appendix

Number	Activity	Structural Funds EUR (1000)	%	Type
<b>PRIORITY 1</b>	Development and modernisation of the infrastructure	65 409	59,5%	
1.1	Modernisation and development of regional transport system	31 785	28,9%	Hard and tangible infrastructure
1.2	Environment protection infrastructure	10 757	9,8%	Hard and tangible infrastructure
1.3	Regional social infrastructure	9 612	8,7%	Hard and tangible infrastructure
1.4	Development of tourism and culture	7 946	7,2%	Hard and tangible infrastructure
1.5	Information Society infrastructure	5 309	4,8%	Hard and tangible infrastructure
1.6	Public Transport Development in Agglomerations	0	0,0%	n/a
<b>PRIORITY 2</b>	Strengthening the human resources development	16 447	15,0%	
2.1	Development competencies linked to the regional labour market and long life learning	4 950	4,5%	Human capital
2.2	Equalising educational opportunities - scholarship programmes	2 805	2,6%	Social capital
2.3	Vocational reorientation of persons leaving agriculture sector	2 310	2,1%	Social capital
2.4	Vocational reorientation of workforce affected with restructuring processes	2 916	2,7%	Social capital
2.5	Entrepreneurship promotion	1 816	1,7%	Human capital
2.6	Regional Innovation Strategy and transfer of knowledge	1 650	1,5%	Innovation support
<b>PRIORITY 3</b>	Local development	28 025	25,5%	
3.1	Rural areas	14 685	13,4%	Hard and tangible infrastructure & Amenities
3.2	Areas undergoing restructuring	4 090	3,7%	Hard and tangible infrastructure & Amenities
3.3	Degraded urban, post-industrial and post-military sites	2 182	2,0%	Hard and tangible infrastructure
3.4	Micro-enterprises	2 976	2,7%	Financing
3.5	Local social infrastructure	4 092	3,7%	Amenities
	<b>Total</b>	<b>109 881</b>	<b>100%</b>	

Source: compiled by authors based on initial draft of ROP 2007-2013.

**Table 23 Financial means spent on drivers of regional competitiveness – Podlaskie region (allocation 2004-2006)**

Number	Activity	Structural Funds EUR (1000)	%	Type
<b>PRIORITY 1</b>	Development and modernisation of the infrastructure	11662	59,5%	
1.1	Modernisation and development of regional transport system	56644	28,9%	Hard and tangible infrastructure
1.2	Environment protection infrastructure	19208	9,8%	Hard and tangible infrastructure
1.3	Regional social infrastructure	17052	8,7%	Hard and tangible infrastructure
1.4	Development of tourism and culture	14112	7,2%	Hard and tangible infrastructure
1.5	Information Society infrastructure	9408	4,8%	Hard and tangible infrastructure
1.6	Public Transport Development in Agglomerations	0	0,0%	n/a
<b>PRIORITY 2</b>	Strengthening the human resources development	29400	15,0%	
2.1	Development competencies linked to the regional labour market and long life learning	8820	4,5%	Human capital
2.2	Equalising educational opportunities - scholarship programmes	5096	2,6%	Social capital
2.3	Vocational reorientation of persons leaving agriculture sector	4116	2,1%	Social capital
2.4	Vocational reorientation of workforce affected with restructuring processes	5292	2,7%	Social capital
2.5	Entrepreneurship promotion	3332	1,7%	Human capital
2.6	Regional Innovation Strategy and transfer of knowledge	2940	1,5%	Innovation support
<b>PRIORITY 3</b>	Local development	49980	25,5%	
3.1	Rural areas	26264	13,4%	Hard and tangible infrastructure & Amenities
3.2	Areas undergoing restructuring	7252	3,7%	Hard and tangible infrastructure & Amenities
3.3	Degraded urban, post-industrial and post-military sites	3920	2,0%	Hard and tangible infrastructure
3.4	Micro-enterprises	5292	2,7%	Financing
3.5	Local social infrastructure	7252	3,7%	Amenities
	<b>Total</b>	<b>196000</b>	<b>100%</b>	

Source: calculated on the basis of IROP Programme Complement 2004-2006.

**Table 24 Financial means spent on drivers of regional competitiveness – Wielkopolskie region (allocation 2004-2006)**

### **WP 3.3 – Case studies POLAND – 1. Podlaskie region**

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#### **Preliminary remark**

This document presents two Polish regions. From the European point of view both regions are peripheral and underdeveloped (below 75% of EU GDP). Podlaskie is among five least developed EU regions and is located on Poland's eastern border. Wielkopolskie is more western and always was among best developed regions of Poland. Because of elements of centralisation of current development policy certain parts of analysis are identical for both regions (Voivodships) in the two case study documents.

#### **Historical heritage and regional specificity**

Till XVI century Podlaskie region was sparsely populated and covered by primeval forests and swamps, which extended from the Bug to the Niemen River. This border area was under the ethnic influence of Polish, Ruthenian and Lithuanian cultures. Throughout the XVI century the progressive colonization of Podlaskie forests was observed. During that time, about 40% of all towns founding took place in the voivodship. After the Third Partition of Poland in 1795 Podlaskie become a part of Russian Empire. In XIX century Tsar authorities established a tariff boundary between the Polish Kingdom and Russian Empire. In order to avoid high tariffs, some Polish manufacturers moved their businesses from the Kingdom to the district area of Białystok, where they found adequate natural conditions for non-tariff sale on the huge Russian and Far East markets. Thus the process of industrialization on these lands was begun. This led to the creation of a powerful centre of textile industry. However, the most intensive modernisation and industrialisation processes in the region took place after World War II. The number of large industry plants were founded: mainly dairy companies as well as tobacco and sugar factories. The capital of the region become an important centre of machinery and textile industry. Since 1989 the privatisation and restructuring processes have begun. These led to shut-down some of factories and reduction of employment in the others to improve of efficiency, but causing social problems mainly in the form of unemployment.

## **Territory and governance**

### *Territorial unit*

As a result of Polish regional governance structure the most suitable for analysis of territorial impacts of EU economic policies as well as location of economic activities are NUTS2 level.

The chosen region - Podlaskie voivodship (NUTS 2 region) - is situated in the north-east part of Poland on the borderland with Lithuania and Belarus in the territory of over 20 000 square kilometres.

Podlaskie is a region with one transnational/national Functional Urban Area (FUA) (Bialystok) and 2 regional/local FUAs (Suwalki and Lomza) (ESPON 1.1.1: 128). It is also a region qualified as having low urban influence and medium human intervention (ESPON 1.1.2: 29). However, based on national data, Podlaskie should be re-qualified as having low, instead of medium, level of human intervention (largest area in Poland covered by national parks).

### *Governance structure*

Following the administrative reforms of 1999, Poland has been divided into 16 voivodships (regions), 373 poviats (districts) and 2,489 communes (gmina). Additionally, there are 65 urban communes endowed with poviat rights (larger towns).

At the regional level public authorities are constituted by Marshall and Voivode. Marshal's Office is a self-government and is responsible for economic development of the whole region. Its role is to create regional policy development, social affairs, foreign affairs, environmental protection, regional communication, regional health sector, regional spatial planning, distribution/implementation of Structural Funds and Central Government Funds financing regional policy, finance institutions of regional reach, etc. Voivode Office is a regional representative of Polish Government. It is responsible for control of all self government units and supervision of central institutions, such as: police, fire-brigades, border guards, Tax Office.

Lower level commune (gmina) and poviat (district) have only self-government. Poviat is responsible for: poviat's communication, land evidence, Labour Office, high schools, poviat's health sector. Gmina is responsible for: local tax, local communication, local technical infrastructures (e.g.: water supply, trash), local social affairs, primary schools, building, local spatial planning, evidence of local firms.

## **Socio economic fundamentals**

### *Population*

The peripheral location of Podlaskie voivodship is reflected by small number of inhabitants (1.2 mln) as well as very low population density approx. 60 people per square kilometre. The urban population accounts for 59% (slightly below Polish average) and are concentrated first of all in capital city - Bialystok (291 000 inhabitants).

Although ESPON 1.1.4 attributes Podlaskie region with positive evolution of inhabitants number due to positive migration balance and natural increase, national data show a negative evolution of inhabitants number as well as negative migration balance.

### *Wealth creation capacity, economic structure*

The region is underdeveloped and the level of GDP per capita is low (75% of Polish average). Furthermore the role of agriculture sector is greater than in any other region of Poland. This is a result of favourable agrarian structure (relatively large farms) that compensates less favourable soil and climatic conditions. The main branch of agriculture is milk production benefiting from large areas of grasslands and pastures. Recently, the west part of the region has been transforming into a dairy products cluster that affected traditional socio-economic structure of countryside. The industry is relatively poorly developed – the main branch is manufacture of food products; beverages and tobacco. Other important branches are traditional labour intensive: manufactured of wood and wood products as well as manufactured of agriculture and forestry machinery. As a result level of automation in production processes is very low. However, relatively well developed, in comparison to other Polish regions, are non-market services sector. This is a result of capital city (Bialystok) importance as medical and academic centre.

ESPON 2.1.2 typology (p. 81) categorizes Podlaskie as a region with low R&D intensity (less than 25% of EU average. Despite of generally low investment outlays on infrastructure and buildings per capita, expenditures on R&D have recently been growing and the region position in whole country has been strengthening. This is a result of involvement of public R&D centres and higher schools. Research and development activity of private business is low mainly because low share of large firms in size structure of firms (saturation of trade law companies per 1000 inhabitants is one of the lowest in the country). Surprisingly average monthly salaries although lower than average situated voivodship in the middle position among Polish regions and has been growing in recent years. Owing to peripheral location the influx of foreign direct investment to the region is very low – only 0.5% of Poland's total.



As a result of large average area of farm, agriculture is main source of income for rural population. Therefore the number of employees per 1000 inhabitants is relatively high and employment rate is one of the highest in the country. In the other hand the unemployment rate is relatively low, because of absorption of labour market surpluses by agriculture sector and traditional out migration. On the other hand the share of population is post-working age is the highest in the country (16.6%).

The change of socio-economic structure of all Polish regions to large extent in last 5 years follows general trends in national economy. As a result the position of the region in comparison to the rest part of country has been quite stable in last period (Table 25).

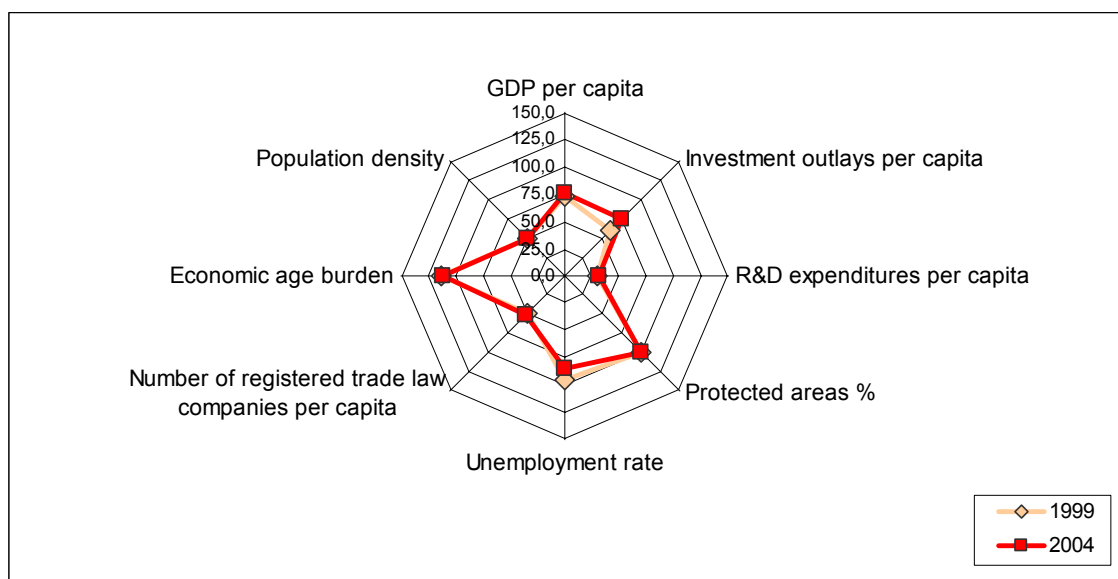
	Notice: different time series in different parts		
<b>DEMOGRAPHY</b>	<b>1998</b>	<b>2003</b>	<b>2004</b>
Surface in km <sup>2</sup>	20 180	20 180	20 180
Population [in 1000]	1223.8	1 205.1	1202.4
in % of country	3.2%	3.2%	3.1%
Population density	60.6	59.8	59.6
Population age over 65 (%)	13.1	14.2	14.3
Population age below 25 (%)	38.2	35.2	34.5
<b>PRODUCTION</b>	1998	2002	2003
GDP in mln EUR (current prices)	3 786	5 119	4 589
GDP (constant prices in comparison to EUR)	100	135	121
In % of country	2.5	2.4	2.4
GDP per capita (in EUR)	2 953	3 840	3 548
GDP per capita (Poland = 100%)	78.1	77.3	75.9
<b>ECONOMIC STRUCTURE</b>	1998	2002	2003
GVA agriculture (mln EUR; %)	341.8 5.6%	258.6 4.7%	236.2 5.0%
GVA industry and construction (mln EUR; %)	868,8 1.9%	1069,5 2.0%	963,9 2.1%
GVA market services (mln EUR; %)	1329.3 2.2%	2034.0 2.3%	1776.5 2.2%
GVA non-market services (mln EUR; %)	662.4 3.4%	945.4 3.3%	861.7 3.3%
Employment agriculture (1000; %)	118.6* 29.5%	139.8 35.3%	139.6 35.9%

Employment industry and construction (1000; %)	97.0* 24.3%	74.9 19.0%	74.0 19.0%
Employment market services (1000; %)	109.8* 27.3%	107.6 27.3%	104.6 26.9%
Employment non-market services (1000; %)	76,4* 19.0%	71,3 18,1%	70,5 18,2%
Export (mln EUR)	-	-	-
<b>GROSS FIXED CAPITAL FORMATION</b>	1999	2001	2002
Total investment outlays (in mln EUR)	550,9	549,7	568,2
- % of the country	2,1%	2,2%	2,3%
Foreign direct investment, stocks (in mln EUR)	62,8	108,0	95,7
- % of the country	0,5%	0,5%	0,4%
Capital investment (indigenous) (in mln EUR)	-	-	-
<b>PRODUCTIVITY</b>	1998	2002	2003
GVA/employed (EUR)	6236.8*	9596.0	9475.1
<b>CREATION OF FIRMS</b>	1999	2000	2001
Number of new firms	10 972	8 917	9 538
Number of shutdowns	4 410	4 371	5 555
% of employment	-	-	-
% of units	99.8%	99.8%	99.8%
% of employment of country	-	-	-
% of units of country	2.4%	2.4%	2.4%
<b>LABOUR MARKET</b>	1998	2003	2004
Employment rate (1999)	49.1 (1999)	45.7	47.1
Unemployment rate	10.8*	16.9	16.1
<b>R&amp;D SECTOR</b>	1998	2003	2004
R&D (mln EUR)	5.2	9.9	8.9
R&D public (%)	63.8%	95.1%	87.0%
R&D private (%)	36.2%	14.9%	13.0%
% of GDP	0.14%	0.19%	0.19%

\* data not comparable change in methodology

Source: compiled by authors based on CSO (Central Statistical Office) data

**Table 25 General characteristic of Podlaskie region**



Source: compiled by authors based on CSO data.

**Figure 35 Change of selected indicators for Podlaskie region for 1999-2004 (Poland =100%)**

Figure 35 shows that over last years main changes in the Region position referred to increase of investment outlays per capita and reduction of unemployment rate.

### Summary and policy implications

The relatively weak performance of the region might be explained by set of interrelated factors, among others:

- large share of labour intensive agriculture in GVA and as a result low regional productivity,
- peripheral location and as a result low inflow of foreign direct investment,
- low skills and low level of human resources in line with traditional industry branches,
- low saturation of SMEs and unpromising motives of set-up the business rather as a result of necessity than opportunity,
- low R&D expenditures conducting mainly by public institutions,
- insufficient investment outlays and poorly developed technical infrastructure.

However, according to INCLUDE (Industrial Cluster Development) project (INTERREG IIIB CADSES) four main clusters of activity in Podlaskie region might be highlighted: food and beverage industry, wood processing and furniture, medical equipment and machinery for

agriculture. Especially, one cluster might be considered as quite promising for region development. This is a food and beverages industry, which take advantage of developed agriculture production. The competitive advantage factors of this sector are among others: highly specialised dairy production, long tradition and consolidation of cooperatives, relatively low labour costs, specialised education system developed and clearly traceable production chain.

## **Regional development priorities, policies and impacts**

### *Policy strategy*

The Strategy Development of Podlaskie Voivodship Development was adopted in 2000 and up-to-dated in 2006 by Marshal's Office. The general aim of the strategy is to make the socio-economic cohesion and regional competitiveness greater. These will be done by creation of good conditions for regional development. The strategic goals are the following:

1. Increase of investments attractiveness of the region
2. Development of human resource in line with labour market demand
3. Increase of competitiveness of regional firms in national and international dimensions
4. Protection of natural environment
5. Development of tourism taking advantage of natural environment and cultural heritage
6. Cross-border location as an asset
7. Development of agriculture and creating conditions for multifunctional rural development

The strategy also indicates actions to be undertaken in three priorities: technical infrastructure, social infrastructure, economic base. However, according to G. Gorzelak and B. Jalowiecki (2001) evaluation of regional development strategies of Polish voivodships, the scope of the Podlaskie strategy consist of 'all possible to imagine aspect of socio-economic development including the most basic and routine activities'. This may indicates small impact of the strategy implementation on economic development of the region.

### *Drivers of regional competitiveness*

Polish system of public expenditure is decentralised. In general 5 different group of actors are involved in the system. The first group is state budget and particular ministries. The second public agencies at central level with separate budgets within state budget. The remaining three groups are self-governments at regional, district and local level combining

own revenues as well as state grants and subsidies. Other important feature is that funds from European Union and other donor countries are separate line outside state budget.

The most important programme regulating public expenditures at regional level is Integrated Regional Operational Programme (IROP). The programme combines funds from different group of public actors, private resources as well as Structural Funds. Therefore conducted analysis cover only this instrument as the most important public expenditure scheme at the regional level. However, expenditures related to business support are conducted mainly in the framework of sectoral operational programme Improved Competitiveness of Enterprises. The programme is not territorial oriented therefore it is not possible to access exact value of spending in given region.

#### *Public expenditures structure 2004-2006*

The Integrated Regional Operational Programme consists of 4 priorities. These are:

- Priority I. Development and modernisation of the infrastructure to enhance the competitiveness of regions – 59.4 % of the entire funding.
- Priority II. Strengthening the human resources development in regions– 14.8 % of the entire funding.
- Priority III. Local development – 24.5 % of the entire funding.
- Priority IV. Technical assistance – 1.3% of the entire funding.

The most important fact is that the distribution of funds between priorities will be the same in each Polish region in the period 2004-2006. Therefore the implementation of the programme should not be considered as a factor of economic performance differentiation across regions. The estimated breakdown of funds in categories reflecting drivers of regional competitiveness seems to be the following: (For details see Tab. 2):

- Hard or tangible infrastructure: 70.1%,
- Social capital: 7.3%,
- Human capital: 6.2%,
- Fiscal and financial interventions: 2.7%,
- Innovation support: 1.5%,
- Amenities: 12,3%.

Financial means spent on drivers of regional competitiveness – Podlaskie region (planned expenditures 2004-2006) are presented in Appendix.

The most important type of expenditure is development and modernisation of hard or tangible infrastructure. It's worth to mention that this action has been neglected for many years and as a result technical infrastructure is poorly developed even in comparison to other Polish regions. This type of public expenditure is supported by means devoted to

development of social and human capital. However, low quality of life caused that the share of spending on amenities is comparable to human and social capital. On this background the share of spending on firm financing (grants, supply of capital and guarantees) was very low c.a. 2.7%. Moreover activities related to innovation support were nearly completely neglected – only 1.5%.

On the assumption that the expenditures within sectoral operational programme Improved Competitiveness of Enterprises will have the same proportion to expenditures in the framework Integrated Regional Operation Programme in each region this breakdown might be adjusted for the purpose of the project in the following way:

- Hard or tangible infrastructure: 54.3%,
- Social capital: 5.0%,
- Human capital: 4.2%,
- Fiscal and financial interventions: 23.6%
- Innovation support: 3.6%.
- Amenities: 9.2%.

These are very raw estimation that indicates significant increase of fiscal and financial interventions up to 23.6%. However, if taking into account other sectoral operational programmes this breakdown would change significantly also in the other categories (i.e. human resources - Sectoral Operational Programme Human Resources). The main problem to provide such a balance at regional level is that all SOP are horizontal not regional measures.

#### *Regional Operational Programme for 2007-2013 (project)*

The new operational programmes at the regional level for the next programming period are now under preparation. The general assumption outlining the preparation is that each of the voivodship (region) will have separate operational programme strictly adjusted to particular region needs identified in the development strategy.

The first draft of expenditures plan for Podlaskie voivodship in 2007-2013 allows to conduct initial analysis on the funds breakdown. This might be the following:

- Hard or tangible infrastructure: 54.5%,
- Social capital: 15.8%,
- Human capital: 8.6%;
- Fiscal and financial interventions: 6.4%;
- Innovation support: 2.5%;
- Amenities: 11.7%.

In comparison to 2004-2006 period the expenditures on social and human capital may increase significantly at expense of hard infrastructure in next programming period. Also spending on financial support for enterprises will increase. Nevertheless, innovation support activity will be still the last important type of policy.

*Regional Innovation System*

Nevertheless, Podlaskie region as almost all other Polish regions has begun to developed Regional Innovation system. As a result regional innovation strategy was adopted in 2005. The strategy among others provides assessment regarding innovativeness level of Podlaskie voivodship (see tab.3):

<b>Strengths:</b>	<b>Weakness</b>
<ul style="list-style-type: none"> <li>• Fast growth of employed in R&amp;D sector, but mainly in new private higher schools,</li> <li>• relatively high share of revenues from selling new and modernised products, but mainly in food industry.</li> </ul>	<ul style="list-style-type: none"> <li>• R&amp;D conducted by only 12% of firms (of which permanently 5%),</li> <li>• In public R&amp;D sector mainly basic not applied research,</li> <li>• Low expenditure on R&amp;D,</li> <li>• Low number of own patents as well as patent acquiring,</li> <li>• Low export of new and modernised products (3.2%),</li> <li>• Low number of institutions supporting business activity.</li> </ul>

Source: based on Regional Innovation Strategy, 2005.

**Table 26 SWOT analysis of innovativeness in Podlaskie region**

Based on these premises the following strategic goals were formulated:

- Increase of competitiveness driven by innovations,
- Adoption of institutional mechanism supporting innovativeness,
- Pro-innovativeness transformation of R&D institutions.

As a result the following projects were proposed to be implemented: virtual incubator of crafts, industrial parks, industrial clusters, databases of demand on applied research, regional Agency for Innovation Development, enterprises incubators at higher schools, Loans Funds, trainings and advising centres. Some of this initiatives are at the stage of organisation.

However, its too early to provide even initial assessment on strategy implementation. Ex-ante evaluation (Gorzalak et al., 2006) positively highlighted analytical part in the diagnosis as well as structure of strategic goals, but criticised unclear implementation and monitoring

system. It should be stressed that without necessary improvement in this field the strategy might have small impact on regional innovativeness.

## **Impacts of regional policies**

### *Synthesis of studies and evaluation*

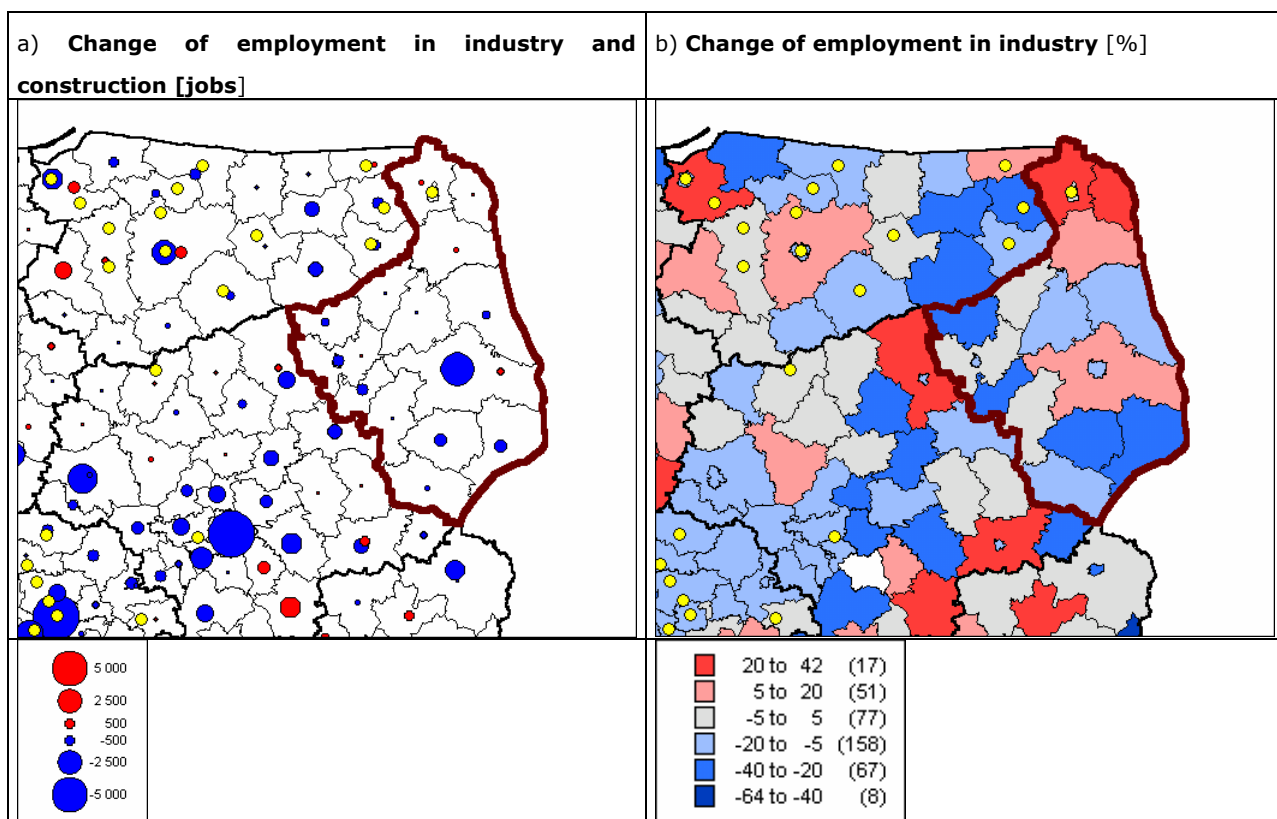
In general the interregional economic policy have very small territorial impact in Poland (see Kozak, Smetkowski 2006). The intraregional policy have also small influence on pattern of economic activity as far. The main reason is that public expenditures within Integrated Regional Operational Programme (2004-2006) have small share in GDP (ca. 0.7%). In fact the expenditures coordinated by Marshall Office c.a. 110 mln EUR might be consider as insignificant in comparison to private investments outlays in the last period 2004-2006. The private investments outlays would be approximately at least 10 times more in the period.

The assessment of instruments supporting region and local developed provides the following picture. The region was one of many benefiting from special economic zone programme. The sub-zones of one of the first zone Suwalska Special Economic Zone was situated in north part of the region. The detailed mid-term evaluation of the Suwalska SEZ (Smetkowski 2000) provide the following conclusions:

- SEZ (especially sub-zone located in Podlaskie voivodship) was not an important factor of regional development,
- some negative effects of SEZ operation like re-location of firms and enclave effect (cathedral in the desert) have occurred,
- SEZ attracted mainly small and medium size Polish firms from traditional industries (production of building materials and furniture etc.).

Furthermore, deindustrialisation processes were still prevailing in the 2000-2004 period (see figure 36). However, it seems that creation of the zone moderate this effect in north part of the region. Nevertheless, because of negative substitution and relocation effects this might happened at the expense of other parts of the region.





Source: compiled by authors.

**Figure 36 Evolution of employment in industry and construction, 2000-2004**

Other initiatives like Suwalski Technology Park and other industrial parks and incubators have usually local impact, which at this stage of their development is impossible to evaluate.

**Conclusions**

See Case Study of Wielkopolskie Region.

**Bibliography**

See Case Study of Wielkopolskie Region.

### **WP 3.3 – Case study RHONES ALPES**

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#### **Historical heritage and regional specificity**

The territorial surface of Rhone-Alpes is similar to that Switzerland, Belgium and Netherlands. It is nearly developed in 45.000 km<sup>2</sup>. The regional capital is Lyon (1.648.000 inhabitants), the second French city by spatial, political and cultural dimension. Grenoble and Saint Etienne are others two centralities of remarkable importance. These cities are encircled from a SM size cities' network; they form a lively and dynamic territory and economy. In fact Rhone-Alpes region is placed to the head of the great European economic regions, producing to a advanced GDP, that is 3.5 higher than European one. This second French region in relation to surface and population produces alone an 1/10 of national GDP, as well as its firms with regard to national total of SMF. Rhone-Alpes is equipped of a great economic powerful, producing innovation.

Industry is the regional driving force and offers a lot diversified activities. Also some firms working into traditional fields (chemical, textile, mechanical) have known to adapt themselves to the innovations, emergent activities (electronic, ICT, biotechnologies, etc). Bordering on strongly industrialized countries and regions, as Switzerland and the Northern of Italy, Rhone-Alpes benefits of a strategic position in Europe, strengthened by the international airport of Lyon-Saint Exupery and the high speed railway Lyon- Turin in course to realise (Figure 37).

In every case, its physical localisation in the middle area between Paris and the 'Cote d'Azur' is ideal to make Rhône-Alpes as a cross region into Western Europe, where also mountains constitute a greater regional attractions both by the winter sports and the summer tourism.



Source: Schema regional de developement economique 2005

**Figure 37 Rhone-Alpes infrastructures**

Rhône-Alpes has the biggest world ski-district, with 220 winter sports places. Some of them are well known at international level (Chamonix, Courchevel, Val d' Isère, Les Arcs, Tignes, Megève). The quality of the Rhône-Alpes region natural spaces and landscape is unique: it is constituted from eight natural parks, between which two national parks (the Vanoise and the Ecrins). In added, the exceptional beauty, variety and wealth of landscapes by the Mont Blanc glaciers as well as the 'provencale Drôme' olives. Also the water represents a precious resource; in particular it furthers: wellness tourism, with 17 thermal localities (Evian, Thonon, Divonne, Aix-les-Bains.); the river and lake tourism; several nautical activities as rafting, canoe, etc. The history, the culture and the food constitute some of the main riches of Rhône-Alpes, as well as monumental historical quarters (Lyon, Chambéry, Annecy), a rich museum network of Fine Arts and trades (Chambéry, Grenoble, Saint-Etienne, Lyon), the handcraft and the local traditions, the gardens in the heart of the cities.

## Territory and governance

In spite of the incontestable progresses in order to accept decentralization as constitutional model in the 80's and the 90's, France is again a centralist country. Nevertheless, some associationism organisations provided for national law (from 1996) were realised, including Rhône-Alpes region:

- Urban Communities (i.e., in Lyon), that project, realise, manage urban and territorial, infrastructural, economic planning. In this case the involved municipalities are obliged to realise the common plan;
- Districts;
- Co-operative intra-urban associations (or Syndicates) to make urban restructuring.

These new organisations added at the traditional subsidiarity French division but they have detracted at national level major part of fiscal contributions. Into Rhone-Alpes region, 1/3 of real fiscal contribution goes to sustain local development, by CESR integrated strategies.

In fact, in France decentralisation means the action transferring administrative competences at local systems and acts on the base of three decentralisation, deconcentration, delocalisation. Really, this new organisation acts in France from 1992 ('General Orientation Law') and it is no possible to compare Rhone-Alpes with homologous European region, because French regions have many competences and limits.

France is broken up in 26 regions, that are divide in 100 departments. These are split in 342 'arrondissements', divided in cantons or municipality. Rhone-Alpes region is therefore classifiable like a NUTs 2 and a south- eastern region of France, it border with Provence to South, Languedoc-Roussillon to South-West, Auvergne to West, Bourgogne and Franche Comté to North, and Switzerland to North-East and Italy to East.

In this context, Rhône-Alpes has tried from 1986 (date of first regional political vote by universal suffrage) to carry out a prominent role both in France, where it is recognized like the second region after Ile-de-France; and in Europe.

The regional government is constituted from two assemblies:

- the General Council: elected by universal suffrage for six years, constituted from the regional councilmen, deputy- president and President;
- the Regional Economic and Social Council (CESR): CESR is a consultative assembly that re-unites personality of the associate-professional world.

On its territory, composed from 8 departments, the region exercises the following powers:

- building and management of advanced education Institutes;
- job training;
- economic development and employment;
- territorial management

- public transport at regional, local, municipal level, etc.

As into all French regions, also the Rhône-Alpes Departments and the Municipalities are communities that freely auto-manage by the elected councilmen. The Departments have competences about social health and services, and the departmental administration. The Municipalities exercise their competences on the primary and maternal schools, on the proximity services, the urban planning, the urban patrimony and the municipal police.

## **Socio economic fundamentals**

### *Population*

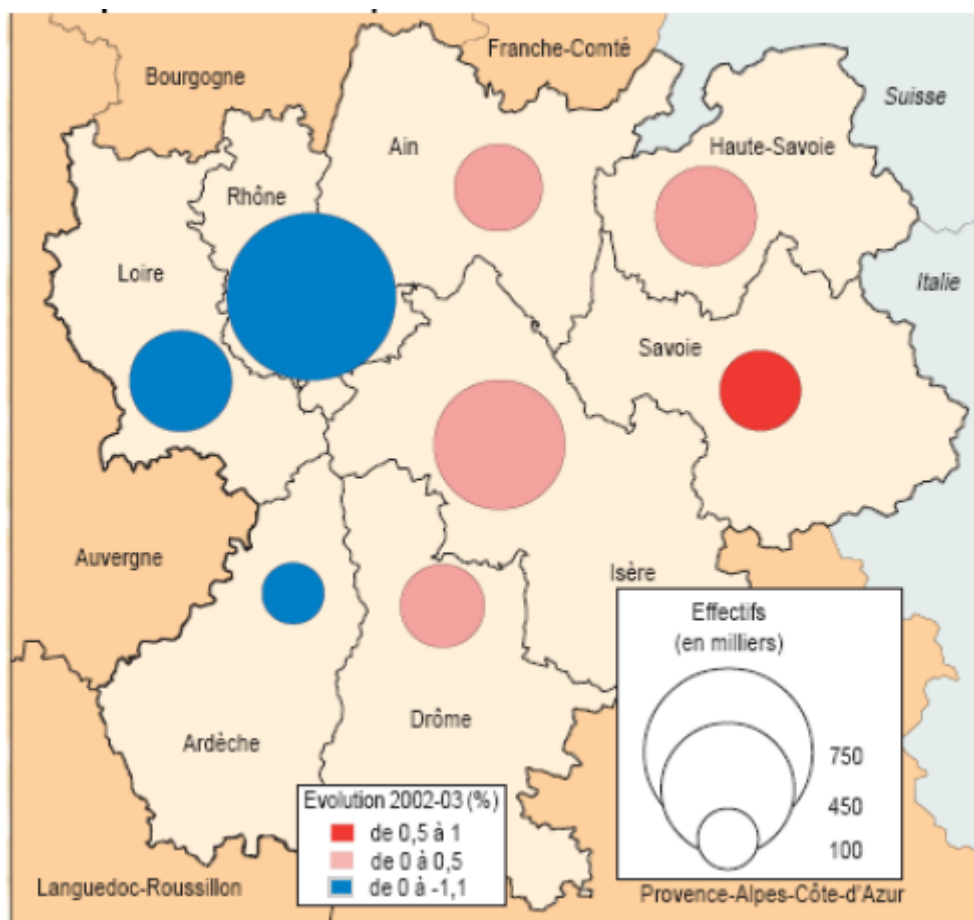
The number of inhabitants from 1995 to 2004 is increased of 6,70 % and the density, at 2004, is 134,9 inhab/km<sup>2</sup>. In the same period the over '60 age population is increased of 4,5%, while the under '20 are decreased of 1%.

### *Wealth creation capacity and economic structure*

The region has got a long industrial tradition, that allows to conjugate tradition and innovation, by agreement with university, research centres, great world-wide groups and SME. Rhone-Alpes is French leader with regard to metal-bearing industry and relative transformation sector, mechanical construction, chemistry and plastic transformation sector. In the same way, a remarkable textile and clothing industry are placed, as well as electronic and electrical constructions, pharmaceuticals and health industry. The Region is at high international level for its competences in the innovative fields of biotechnology, nanotechnology and eco-technology.

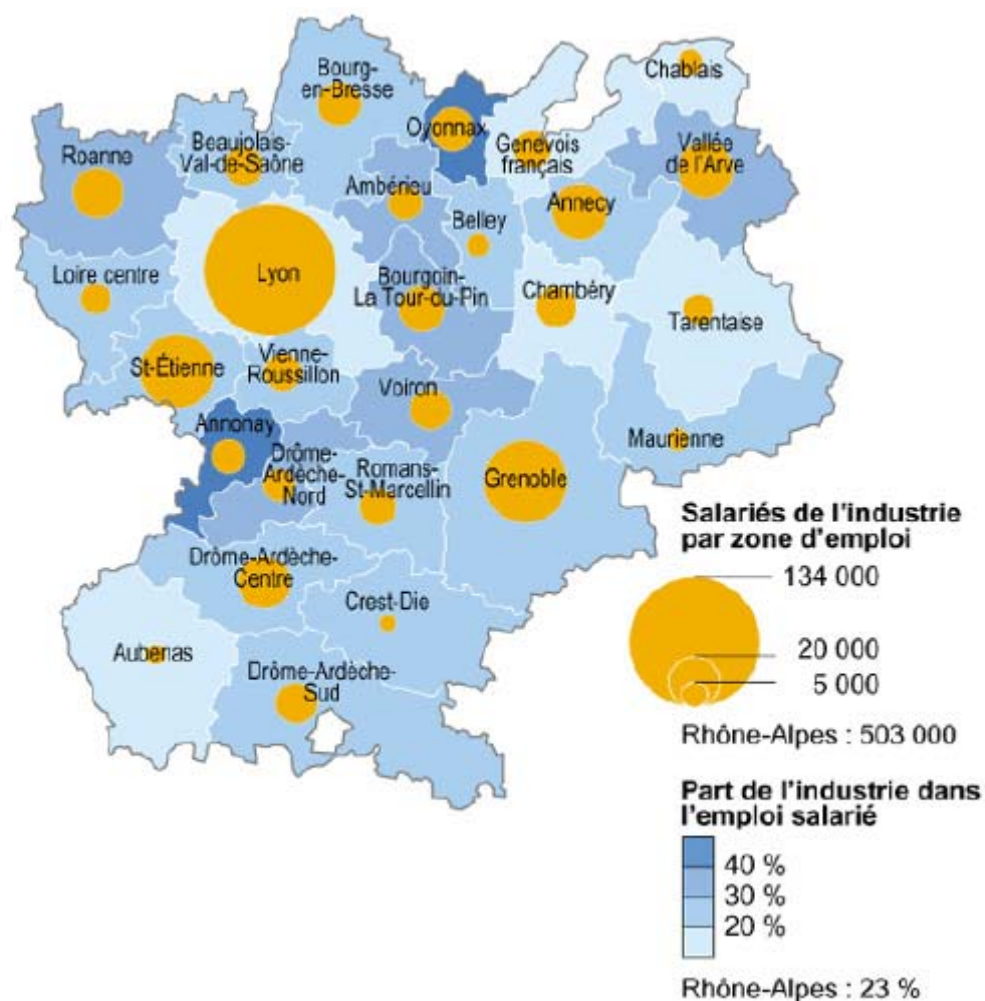
Rhone-Alpes is the second French region with regard to exports; for this, several international industrial international companies are localised into: Aventis, Elf Atochem, Seb, Renault Trucks, Alcatel, Alstom, Danone, Mérieux, Plastic Omnium, Bayer Cropscience, Atari. By 900 foreign enterprises presents, the Region participates totally to the attraction of FDI. Essential element of its economy is ITC, that characterizes all the fields of the activity of the citizens, the enterprises, the centres of research and the university's development.

The GDP is increased of 33% and it represents beyond the 9% of total French GDP. The regional economic structure is based on services and industry (respectively the 28,3% and 25,5%); but the Public Administration is also one of the main employment sector (20,4%). From 1996 to 2004, the export has been an increase of 45% and shows a great regional capacity. At the same time the productivity, from 1995 to 2003, is increased of 18%. These factors increased the employment rate, to about 40%) and a structural balanced unemployment rate at 8% (Figure 38).



Source: Schema regional de developement economique 2005

**Figure 38 Rhone-Alpes employment**



Source: Insee 2005

**Figure 39 Rhône-Alpes Industry**

An important part of the regional employment is still in the 'traditional' activities, as manufacturing industries (29% of the regional total value) and the handicraft. These enterprises, considered historical activities too, are often isolated by fast evolution and no favourable local milieu. Nevertheless, they play a key role in some regional areas in which they weigh strongly on the employment and the development of the territory. 2/3 of handicraft enterprises are placed in urban zones; but 10% are localized in disadvantaged rural zones. Here they participate in key-way to realise the general territorial economic equilibrium. Their role in the rural areas development is essential. For some of them, these categories of enterprise offer the exclusive possibility of development. These SME are confronted to the new shapes of competition but they cannot acquire the leader position, and must assume secondary positions in the regional economy. Consequently they do not contribute sufficiently to the renewal of the job offer and their investments are more light, with a negative impact on the activities. As an example between 1990 and 2000 the number of handicraft enterprises does not stop to diminish in order to become stabilized

itself around to 92.000 enterprises (against more than 100.000 only 15 years before). The effort will be to lead these enterprises towards the progress, necessary to mobilize the human resources and financial institutions: internationalization, innovation, strategy.

The formation will be determining for the evolution of these enterprises.

Rhone-Alpes benefits of a position leader (in terms of employment and production) on numerous activities that testify the diversity of its levels of development: in agriculture (preparation of the biological products, fruits-vegetables and dairy products), in the wine-cultivation, in the industry (chemical, electrical material, electronics, textile, plastic, metallurgical and transformation of the metals, mechanics), in the energy (renewable energy, hydroelectric, nuclear), or in the activities tied to the mountain.

Rhône-Alpes benefits of some privileged situations. I.e., into zone delimited from Alps, the central Massif and the Rhone valley, agricultural productions of high quality were developed. Moreover, the region is the first electric power French producer. The 75 % of territory is covered from superficial agricultural and forests. This high percentage of agricultural lands translates in a great diversity of vegetable productions, included fruit ones. The qualified industries value high productivity agriculture, and they carry innovation in many fields:

- dairy industry, in which Region is national leader;
- breeding industry, that constitutes 28% of the French agricultural and food industry;
- wine-culture, that is driving sector, with approximately 40.000 hectares of high quality vineyards;
- mineral waters, of which the region produces fifteen important labels.

#### *Knowledge creation capacity and innovation*

Rhône-Alpes is the second French region and the fifth European one dedicated to the research. Rhone-Alpes has a strongly concentration of operators in this field. Such characteristic is confirmed from the presence of approximately 230.000 university students into public and regional follows courses. Main objective is reinforcing the ties between research and enterprises; at this scope a regional agency for I&R and Development has been created. In the Region the opening towards the international/global scenarios is relevant: approximately 10% of the students spent a part of their formation into foreign country by regional aids and partnership actions with several global regions. In this way, co-operation network was developed between researchers and students.

With regard to the investments in R&D, from 1995 to 2001, the relative percentage is increased of 54% and the larger part of investments is permitted from private sector. The R&D spending, in 2001, has been equal to 2,5 of total regional GDP.



## *Environment*

Rhône-Alpes region is placed at the cross of different climatic influences (Mediterranean, continental and alpine). It benefits of a biological patrimony and rich and diversified landscape, which is a tourism's lever in the summer and winter. The natural spaces are 57% of the territory and for a large part they are protect areas (2 national parks, 6 regional natural parks, 30 natural reserves).

The greater regional ambition is to conciliate economic development, innovation and environmental protection, looking at durable development more the sustainable one. This principle/ambition is the head spin of the regional economic development; it supports the territorial communities and the associate-economic actors, who develop the policies of natural resources conservation: protection of water environments, prevention and innovation to limit the desertification, planning and development of the renewable energies, protection of the biodiversity, prevention of the risks and air's quality, consideration of the small and averages enterprises and their impacts on local milieu, creation of specific educational programs in the field of the environment protection and public making aware.

## **Regional development priorities, policies and impacts**

### *Policy strategy*

Rhône-Alpes traditional opening to the foreign markets, its economic and cultural dynamism, favoured by its geographic position, have concurred to undertaking several co-operation projects with other regions in the world. Moreover regional vocation and international experience favour the specific development of solidarity programs, particularly with underdeveloped countries. Through international policy, the region pursues three complementary objectives:

- Favours the international opening of 'ronalpines' citizens and citizenships (students, enterprises, researches, artists...)
- Increasing the territory's attraction to become driving force into European Union;
- Participating to the reduction of world-wide and economic difference, that accompanies the disadvantaged regions in their regional plans of development.

In conformity with the international protocols of Rio and Johannesburg, the Region means to bring its contribution to global development; 0.7% of its budget is assigned to aid development and international solidarity in light of 2010.

Entertaining some durable relationship networks in Europe, this ambition is translated with grips relations with both Switzerland, in particular with the regional Community Franc-Genevan; and the Piemonte region in Italy. Rhône-Alpes participates actively to the works

of the 'Four Motors for Europe' plan to the flank of its partner Bade-Wurtemberg (Germany), Catalogna (Spain) and Lombardia (Italy). Moreover it has entertained of the relations with the Polish region of Malopolska and the Hungarian Transdanubiana.

Rhone-Alpes is moreover member of numerous European institutions and associations. In the North of America (Québec, Ontario and Pennsylvanie), in the South America (Parana of Brasil and Cordoba in Argentine), in China (Municipality of Shangai), like in India (Karnataka), the region helps the ronalpin people to weave their ties of cooperation. Moreover the region is active in the free euro-Mediterranean exchange zones and with fair-loyal plans in Africa and the Asian.

In order to facilitate the exchanges, the region has established some thematic and geographic programs, encouraging university, students, teacher and researchers to operate exchanges with the entire world. In the economic world it allows the entrepreneurs to enter in important markets in Europe and in Asia, thanks to the action of the ERAI (Entreprise Rhone-Alpes International).

### **Regional policies and Drivers of regional competitiveness**

#### *Public expenditures structure 2004-2005*

The budget relative to 2005 has been created by Regional Council, it has as main targets the follow key lines:

- For an active region: mobilizing the energies about the employment and education (Lisbon Strategy)
- For an innovative region: setting conditions for emphasizing all regional potentials and capabilities (Lisbon Strategy)
- For a 'trait d'union region': comparing itself with everybody, comparing itself in every place
- For an open region: working into earth of democracy and of Europe

The region has considered the education as the main sector of development. As a matter, the majority of investments are for human capital and for transports.

<b>General budget 2005</b>	
Functions	In Mio EUR
Professional formation	270
Secondary teaching	427,77
Culture, sport, entertainment	47
Health –social action	6,55
Territory and environment	112,58
Transports	535,15
Economic actions	127,99
Debt-finances	81
General services	96
totale	1704,34

Considering only the investments, we obtain the following matrix, that resumes the drivers of competitiveness, in comparison with the drivers of 2004:

<b>drivers of competitiveness</b>	<b>2004 %</b>	<b>2005 %</b>
Hard or tangible infrastructure	26,84	18,01
Social capital	0,82	1,30
Human capital	41,27	54,91
Fiscal and financial interventions	10,22	6,52
Innovation support	7,60	5,64
Amenities	13,25	13,61
	100%	100%

In this matrix it's evident that the majority of resources are employed for human capital. The R&D occupy also a good percentage and shows, in the budget of 2005, that the region considers the Innovation as a priority strategic objective.

### *Regional Innovation System*

The innovation is at the centre of regional economic dynamics. Rhone-Alpes is placed to the fifth position in Europe for technological and scientific upgrades. Moreover it is at 19<sup>o</sup> place of the UE patents list. This testifies the Rhone-Alpes creative ability. The strong technical guideline of Ronalpins is reflected on the economic development: I.g., the 14% of the French engineers are formed in the region. The Innovation is not only technological but also organisative, managerial and social; the innovation is developed, as the great participation of enterprises to the collective action programs has demonstrated. In fact this is a total innovation, because it does not only allow to market new products, but also new processes and more productive and competitive organizations. Rhone-Alpes, with 60.000 employers, is one of the main European poles of the computer and IC industry at high added value. It is leadership in the services on line production (e-government services) and knowledge economy. The regions is pioneer with regard to e-learning. 27.000 employers are concentrate into 1800 enterprises around Lyon region; while Granola concentrates some activities at high technological contents. However, the Region points to innovation in all its shapes.

It leads towards both futuristic activities selecting emergent high technology; and the new creative activities, as services to person or new entrepreneurial shapes (co-operatives of production, activity and employment, supportive and equalise trade.). The strategic guidelines of regional policy, approved in 2002, stretch to develop ICT for excellence, competitiveness, economic attraction. Therefore, regional policy has fixed, the following points with regards to innovation:

- Pursuing the efforts lead in the optical of 'clusters of search' and multiplying the meeting occasions between industry/laboratories and concrete co-operation;
- Linking regional initiatives to favourite innovative and economy research, in the light of new global policies. The development regional agency and the innovation play an essential role in this function;
- Supporting the plans created by the structures, clusters and poles dedicated at competitiveness, through this innovation policy;
- Emphasising the efforts for the creation of public or private research laboratories, identifying the fields for which the reinforcement of the competence's centres is strategic;
- Leading of the collective actions that allow to develop the innovation in other fields, beyond the technology (the services, social, organization).

The regional strategy of the innovation would be able to sustain the social regional changes in handicraft, agriculture, tourism and services, too. In the regional programs economic development is defined as employment creator and service for all territories, collective engagement for the sustainable development of the region. This ambition is founded on the development of a coherent and loyal economy, in which the creation of sustainable wealth it is all the levels subdivided. This loyal economic development passes through several partnerships, the increases of competences and 'knowing by doing'. Regional programs maintain and create more job at high added value, evidencing the competitiveness, the excellence fields, dynamics of the innovation and the social dialogue. In this context the larger cities of the region will have a key-role in creating territorial towing effects. To arriving at best levels of international competitiveness and activating integration policy of the ITC with regards to SME, are two main levers to make Rhone-Alpes as one of the first regions of Europe. The strategic guidelines of the policy 'Technology of the information and the communication', approved from the assembly of July 2002, are those to develop the ITC of the region for the Excellence, the competitiveness, the economic attraction and the daily use of the inhabitants. The Region has lowered the costs of the use of the services, facilitating the multiplication of these near the companies and the privates. Therefore it has the objective to continue with complementariness and subsidiarity with other assets. The regional participations on this policy have been:

- Supporting the development for the cover of the mobile telephony
- Supporting the development of the services.

As far as infrastructures the region has tried to extend the logon to the ADSL on the greater part of its territory, also in the mountainous territory.

## Conclusions

The main characteristics of Rhone-Alpes Region are:

- demographic dynamism
- one strongly diversified economy
- a developed tertiary and determinant tourist field
- an apparatus of advanced formation and capillary search
- an image of excellence

To these strong points, it must add strategic a geographic position that it covers a double role:

- European interface that works long the North-South and alpine median Europe (Switzerland and Italy) axis;
- Connection point with all border regions.

Rhone-Alpes has the historical fortune to arrange favourable geography in terms of balanced anthropic net by Lyon metropolitan net, efficient cities, Grenoble and Saint Etienne, seven agglomerations with size 50 - 110.000 inhabitants, and 30 medium size cities with 10 - 50.000 inhabitants. Moreover a mosaic of interconnected towns and villages and rural spaces offers true development and territorial competitiveness.

The cohesion and the development of the region are threatened from some criticism that renders it vulnerable. In the first place, the real risks appears with regards to territorial organization, particularly in the rural zones threatened from social breaches and re-conversion basins, but also in the urban milieu and the periurban zones, and increasing metropolization in the area of Lyon, alpine and Rhone valleys, emphasising the existing demographic imbalance.

Several social indicators translate this dualism, with regard to poverty and concentration of immigrations, in the quarters of social de-aggregation, in the non homogeneous territorial distribution of the public services or unemployment rate (inferior in front of national average, but with a elevated absolute value). Moreover the motor of the economic development is not the remedy to the structural weaknesses: the de-localization of the great central companies places, the insufficient consideration of the small enterprises, reinforce the dispersion of the economic development actors, that renew more slowly respect of the research. The geographic concentration does the SME much sensitive respect to conjuncture variations.

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**Appendix : Rhône-Alpes 2005 budget**

REGIONAL BUDGET 2005	IN 1000 EUR		TOTALE SUB FUNZIONE
	CP	CF	
<b>General services</b>			
General Administration	6766	80345	87111
Actions regional, european, int. unexpecteds	1600	5650 1540	7250 1540
<b>Formation and apprentice</b>			
professional formation	700	125000	125700
apprentice	10300	134300	144600
<b>Teaching</b>			
common services		700	700
medium teaching	265400	73401	338801
superior teaching	27700	22000	49700
other services	1000	37575	38575
<b>Culture-sport-entertainment</b>			
cultural and artistiques activ. heritage	10000	25000 2300	35000 2300
sports	4800	4900	9700
<b>Health- social action</b>			
health	1750	1600	3350
social action	1600	1600	3200
<b>Territorial management</b>			
urban policies	6000	3500	9500
agglomerations- middle town	500	700	1200
rural spaces	23700	13700	37400
habitat	16700	2500	19200
ICT	8000	6580	14580
other actions		2300	2300
<b>Environment</b>			
transverse actions	400	6600	7000
waste actions	2800	800	3600
water policies	3500	1000	4500
Energy policies	7000	3000	10000
natural heritage	800	1400	2200
other actions	300	800	1100
<b>Transports</b>			
Common services		1000	1000
common transports	176500	325850	502350



roads	27100		27100
other transports	4400	300	4700
<b>Economic actions</b>			
transverse economic actions	14974	17116	32090
R&D	16336	20570	36906
agriculture, fishing, food	11100	12780	23880
industries, handmade,	10890	2700	13590
commerce			
tourism, thermal	9455	12072	21527
			1623250
DEBT SERVICES			81000
<b>TOTAL</b>			<b>1704250</b>

#### **4 Annex IV : Financial means spent on drivers of regional competitiveness – Walloon Region (based on 2005 regional budget)**

year 2005	Instruments	Explanations about instruments	Budget in EUR	Budget division	Level of governance	Means (% total)
	Instruments correspond to the actions pursued within the regional economic policy. Instruments should be linked to specific budget lines.	Give brief information in order to understand what is the content of the instrument	1000	Source of the budget allocation according to the Region budget structure (Economy, Equipments, etc.)	Several level of governance can finance the instrument (Local/Regional/National/EU structural funds)	
<b>Hard or tangible infrastructure</b>	Industrial parks	Acquisition and equipment of land and buildings to host economic activities	32.660	Economy	Region/FEDER	2,2%
	Telecommunications (i.e. optic fiber network)		13.447	Equipment and transports	Region	0,9%
	Roads network		201.752	Equipment and transports	Region	13,4%
	Water canals network		63.498	Equipment and transports	Region	4,2%
	Electrical, electromechanic and IT equipments of roads (and water canals)		62.387	Equipment and transports	Region	4,1%
	Public transports (bus, regional airports, etc.)		433.749	Equipment and transports	Region	28,8%
				4.267	Administration and government	Region
<b>Social Capital</b> (Supporting newtorking, cooperation, coordination, information circulation)	Promotion of entrepreneurship 'spirit'		2.070		Region	0,1%
	Subsidy for projects promoting SME's development (focus on wood, stone, food)	Subsidies go to associations, foundations, industry pooling, federations, etc.	2.022	Economy	Region	0,1%
	Social economy subsidy	Subsidies to Consultancies in Social Economy, Social Economy cooperatives, information actions	1.600	Economy	Region	0,1%

year 2005	Instruments	Explanations about instruments	Budget	Budget division	Level of governance	Means (% total)
	Wallimage (promotion of cinema production in WR)		800	Economy	Region	0,1%
	Local Development Agencies	Multitude of small institutions (public or in partnership) providing business support services ('intercommunales', and associations). This credit partially covers the operational costs of 52 LDA	2.763	Eco/Empl	Region	0,2%
	Exports and FDI promotion (AWEX and OFI)		57.965	Economy/ Comex	Region	3,8%
	Promotion of innovation and sciences (i.e. Museum of Scientific Adventures PASS)		6.000	Research and Technology	Region	0,4%
	Clustering promotion (awareness rising, expenses supporting animation of the cluster) (150000 EUR/cluster)		2.093	Economy	Region	0,1%
	Impulsing network economy / cluster support	The objective is to strenghten the SMEs economic and social environment, through the development of services: Information, guidance, cluster animation, ICT utilization, etc.	11.981	Economy / Provisions for European Cofinancing	Region / Phasing out objectif 1 / Objectif 2 / Interreg / Leader+	0,8%
	Business network venture capital	Two networks exist: WaBAN and BAMS			Region - FEDER	0,0%
	Annual symposium over SME's financing				Region	0,0%

year 2005	Instruments	Explanations about instruments	Budget	Budget division	Level of governance	Means (% total)
Human Capital (skills and competencies; cost of labour incentives)  15%	Consulting subsidies (SME's)	Subsidies for technological transfers, e-business, etc.)	3.600	Economy	Region	0,2%
	Wage subsidies for young workers (Contrat de premier emploi, 'first job convention')	Decrease in the social contributions of EUR 400-1000/quarter. Young (<26) and unqualified job seeker (lower than secondary school degree)	7.500	Employment	Region / Federal	0,5%
	Wage subsidy for job seeker / specific SME project development	Project development in sustainable environment, energy, new technological processes, etc.	2.304	Employment	Region	0,2%
	Voucher for training - entreprise creation (chèque création)	Enables the job-seeker to follow trainings in relation with his entrepreneurial project	600	Vocational training	Region	0,0%
	Subsidies for Professional trainings through operators (135) and enterprises		25.044	Vocational training	Region	1,7%
	References centres (19)	Each training centre is specialized in a particular sector and benefits from the collaboration of several partners (Region, Universities, E.U. Firms, etc.)	5.473	Vocational training	Region	0,4%
	Equipment, extension or construction of References centres and training centres		15.134	Voc Training / Provisions for European Cofinancing	Region/FEDER (Objectif 1 phasing out, Objectif 2, URBAN)	1,0%
	Training activities of FOREM, operational costs (Public Agency fo Employment and Training)		120.383	Vocational training	Region	8,0%
	Agricultural training centres		1.025	Vocational training	Region	0,1%
	Training institutions for independants and SMEs		33.968	Vocational training	Region	2,3%
	Equipping schools with computers (Cyberschools and Cyberclasses programmes)		12.104	Equipment and transports	Region	0,8%

year 2005	Instruments	Explanations about instruments	Budget	Budget division	Level of governance	Means (% total)	
Fiscal and financial interventions (investment grants, tax exemption, etc.)  12%	Decrease of Regional fixed asset taxes (décret 22 Octobre 2003) (revenue loss)	Impact estimated is 1,150 EUR of revenue loss	1.150	Economy	Region	0,1%	
	Investment grants for environment and energy	Incentives for energy saving or environmental-friendly investments	2.000	Economy	Region	0,1%	
	Investment grants for Large Enterprises	Support to the Industrial parks policy	37.300	Economy	Region	2,5%	
	Investment grants for buildings and land		21.800	Economy	Region	1,4%	
	Wage subsidies for Small Enterprises	For each new job created by a SME, it can receive a EUR 3250 premium. Limited to 9 new jobs.	16.660	Economy	Region	1,1%	
	Grants for individuals' project study phase	Support the very first steps of innovative projects	1.600	Economy	Region	0,1%	
	Investments grants for SME's		96.054	Economy	Region	6,4%	
	Incentives for using water canals transports (boats, transshipment points, etc.)		1.500	Economy	Region	0,1%	
	Financing (supply of capital, credit, bank guarantees)	Fulfilment of regional guarantees underwriting credits taken by firms	Since 1991, only firms located in Development Zones can benefit from the Region's guarantee to take out credits	1.150	Economy	Region	0,1%
		'Invest' (funds dedicated to spin-off)	Public investment funds (Capital participations)	5.000	Economy	Region	0,3%
4%	SOWALFIN (Regional Investment Fund) / SMEs	Provides subordinated loans, venture capital and bank guarantees to SMEs. Sowalfin's total assets is around EUR 1 billion.	12.500	Economy	Region	0,8%	

year 2005	Instruments	Explanations about instruments	Budget	Budget division	Level of governance	Means (% total)
	SOWALFIN (Regional Investment Fund.)	Provides credits and capital to companies facing reorganization or for their development	35.000	Economy	Region	2,3%
	Quality and certification subsidies (SME)	For SMEs implementing Quality Assurance Systems	500	Economy	Region	0,0%
<b>Innovation support (R&amp;D support, technologies diffusion, etc.)</b>	Incentives for E-business and ICT integration in SMEs		1.350	Economy	Region	0,1%
	Research centres (including technologic advising for businesses)		8.171	Research and Technology	Region/FEDER/ Eureka	0,5%
	Subsidies to Universities		43.281	Research and Technology	Region/FEDER/ Eureka	2,9%
9%	Subsidies to SMEs		5.500	Research and Technology	Region/FEDER/ Eureka	0,4%
	Subsidies to Enterprises	FIRST program	61.952	Research and Technology	Region / FEDER / Objectif 1 / Eureka	4,1%
	Walloon Technological Agency (AWT) - enterprises services		765	Research and Technology	Region	0,1%
	Fund for research and technologies	The fund is financed through revenues generated by the Region's action in research and technology. Financing the transfer of firms' research results into market products.	9.000	Research and Technology		0,6%
	Technological innovation and research support		4.301		Region/FEDER	0,3%
<b>Amenities (quality of life, entertainment, culture, etc.)</b>	Renovation and decontamination of disused industrial sites	subsidies to firms, public companies (CAW) and municipalities	14.126	Land settlement	Region / phasing out objectif 1 / objectif 2	0,9%
1%						
<b>TOTAL</b>			<b>1.506.849</b>			

## **5 Annex V : National and regional incentives in 10 New Member States and 2 accession countries**

**Marek Kozak and Maciej Smetkowski (EUROREG)**



Country	Major economic data	Taxation incentives	Other incentives	Business climate	Commentary
Cyprus	<p><b>2005</b>                      GDP growth 3,8%                      GDP per capita (dollars) 21,600 US \$                      Inflation rate 2,3%                      Export 1237 bn \$ f.o.b.                      Import 5552 bn \$ f.o.b.                      FDI inflow 904 mil \$ (2003)</p> <p><b>Taxes</b>  <b>CIT</b> 10 % ( earlier - on-shore companies 20 and 25 % , offshore -4.25 %.)  <b>VAT is 15 %.</b></p> <p><b>Social security:</b>                      employer's 8% of the salary.                      employee's 6.3% of the salary.</p>	<p>Foreign Direct Investment                      The general advantages offered by Cyprus are enhanced by considerable tax incentives such as:                      -Low corporation tax with a maximum of only 25 percent                      -Significant initial investment and annual depreciation allowances                      -Exemption from customs and excise charges for operations in the Industrial Free Zone                      -Taxation of expatriates employed in the Industrial Free Zone at half the rates applicable to locals.</p> <p>The major fiscal incentives offered to <b>offshore enterprises</b> are as follows:                      -Offshore companies as well as offshore branches managed and controlled from Cyprus are taxed at only 4,25 percent of their profits                      -Offshore branches which are managed and controlled from abroad and offshore partnerships are totally exempt from corporation or income tax                      -The beneficial owners of offshore companies, branches and partnerships are not liable to additional tax on dividends or profits over and above the amount paid or payable by the respective legal entities                      - Expatriate employees of offshore enterprises living and working in Cyprus are taxed at half the rates , applicable to locals ie from 0 to 20 percent</p> <p>-Expatriate employees of offshore enterprises living and working outside the island are exempt from income tax if they get paid through any bank in Cyprus or are taxed at , one tenth of the rates applicable to locals if they get paid directly abroad</p> <p>-No capital gains tax is payable on the sale or transfer of shares in an offshore company</p> <p>-No estate duty is payable on the inheritance of shares in an offshore company.                      Those eligible for relief are:</p> <p>- Offshore enterprises operating continuously from fully-fledged and fully-staffed offices which are open during normal working hours and separate from private residences;                      -full-time expatriate employees of the above</p>	<p>Foreign investors can also take advantage of other incentives. These include: industrial training schemes; export promotion services; bonded warehouses; and industrial estates which offer plots at very low rentals. Investors from the European Union may have access to the EC International Investment Partners Scheme (ECIP). This scheme offers financial support for joint ventures in Cyprus.</p>	<p>Cyprus is an ideal place to set up a holding company which will be able to receive dividends free of any deductions, or at a lower rate, by taking advantage any one of the numerous conventions which Cyprus has negotiated to prevent double taxation, or the European Directive concerning the commercial fiscal regime applicable to mother companies and subsidiaries of different member states. This company may also be exempted from deductions or capital gains taxes payable in Cyprus. Dividends may finally be expatriated free of any supplementary tax for the company.</p>	

<p>Czech Republic</p>	<p><b>2004</b>                  GDP growth- 4.0 %                  GDP per capita (USD, PPP) - 18,500                  Inflation rate (%) - 2.8                  Exports 78.37 bln \$. (2005 est.)                  Imports 76.59 bln \$(2005 est.)                  FDI inflow 2583 mln \$                  FDI cumulative 36 bn \$ (2003)  <b>Taxes</b>  <b>CIT</b> - 26% for tax periods ending in 2005 and 24% for tax periods ending in 2006 and thereafter.</p>	<p>enterprises who live and work in Cyprus during most of the year and whose remuneration exceeds CYPounds 6.000 per annum.                  -An eligible expatriate may acquire a second duty free car for the use of his family if his salary, as declared to the Department of Inland Revenue, is more than CYPounds 10.000 per annum.</p> <p><b>Shipping Business</b>                  Shipowners are initially attracted to the Cyprus Register by the inexpensive registration and annual fees and the excellent services offered. Other important incentives are:                  - No tax on profits from the operation of a Cypriot registered vessel or on dividends received from a shipowning company                  - No capital gains tax on the sale or transfer of a Cypriot registered vessel or the shares of a shipowning company                  - No estate duty on the inheritance of shares in a shipowning company                  - No income tax on the emoluments of officers and crew                  - No stamp duty on ship mortgage deeds or other security documents.</p>	<p><b>Manufacturing</b>  <i>Job creation and training and retraining grants</i>                  The size of the job creation grant depends on the unemployment rate in the district where the investment is made, and ranges from zero in areas with unemployment below the national average to a maximum of CZK 200,000 per employee in districts with unemployment more than 50% higher than the average. The same applies to training and retraining grants, which range from zero to a maximum of 35% of total training and retraining costs.  <i>Site support</i>                  This incentive is available on a national basis subject to availability of suitable sites, and the site should be selected prior to submitting the application for investment incentives. The incentive is granted by the government to the municipality and/or the private developer in the form of subsidies for development of site infrastructure and the transfer of land from state ownership to the municipality at an</p>	<p><b>Investment protection</b>                  The Czech Republic is a member of the Multilateral Investment Guarantee Agency (MIGA), an international organization for protection of investment belonging to the World Bank-IMF group. The country has signed a number of bilateral international treaties which support and protect foreign investments, for example with the United States, Germany, UK, France, Austria, Switzerland, Italy, Belgium,</p>	
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<p><b>VAT</b> - 19%, 5%, 0%  <b>Social security:</b>  Employer-35%.  Employee- 12.5%.</p>	<p>CZK 100 million, depending on the unemployment rate.  - Half of the investment minimum (above) must be covered by the investor's own equity.  - At least 40% of total investment must be made into machinery.  - The proposed production must meet all Czech environmental standards</p>	<p>advantageous price. From 1998 to 2003, the incentive resulted in the creation of 80 industrial zones where sites are readily available to investors.</p> <p><b>Business support services and technology centres</b></p> <p><b>Subsidy for business activity</b>  Paid yearly up to 50% of eligible business expenses (either wage or capital expenditures on tangible and intangible assets);  Paid during a period of maximum 10 years, up to the ceiling of state aid (calculated using either the employees' two-year average wages within the first 3 years or using expenditures on tangible and intangible assets within 5 years).  <b>Subsidy for training and re-training</b>  Paid yearly at a level of 35% (30% in Prague) of special training costs and 60% (55% in Prague) of general training costs. Special training refers to training through which employees gain knowledge and skills that can be used only within the investor's project and cannot be easily transferred to other companies. General training refers to training by which employees gain general knowledge and skills that can be used also outside the investor's project;  Paid during the period of maximum 3 years (or 5 years if the investor creates more than 100 new jobs)  Maximum level of training subsidy is CZK 100 000 per employee (or CZK 150 000 per employee if the investor creates more than 100 new jobs)</p> <p><b>Eligibility criteria</b>  Type of project  Technology Centres, Software Development Centres, Expert Solution Centres, Headquarters  - min investment – 15 mil. CZK  - min Newly created jobs – 15  Amount recipient must finance with own resources - CZK 7.5 mil.  Call Centres, High-tech Repair Centres, Shared Services Centres (except Headquarters)  - min investment – 30 mil. CZK  - min Newly created jobs – 150  Amount recipient must finance with own resources - CZK 15 mil.</p>	<p>Luxembourg,  Netherlands, Finland,  Norway and Denmark.</p>	
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<p>Estonia</p>	<p><b>2004</b>                  GDP growth: 7.8 %                  GDP per capita: EUR 6,679                  Inflation (CPI): 3.0%                  Exports: 4.7 bn Euro                  Imports: 6.7 bn Euro                  FDI inflow 676,5 mil Euro</p>	<p>Estonian fiscal incentive for investors is competitive tax system</p>	<p><b>Job Cration Support Programme for Regions Worst Affected by Unemployment</b></p> <p><i>Financial support for new job creation</i>                  Granted at the rate of CZK 200,000 per each newly created job up to 50% of total eligible costs actually incurred (total gross wages and salaries paid out over two years to employees in new jobs created by the project);  <i>Financial support for employee training or retraining</i>                  Granted at the rate of 35% of eligible costs actually incurred for employee training or retraining, but to a maximum of CZK 30,000 per each newly created job.</p> <p><b>Eligibility criteria</b>                  The investment must be made into new production or the provision of specific services (customer support centres and shared service centres) or the expansion of existing production or the expansion of the provision of existing specific services.                  - The project must be located in a region with an average unemployment rate exceeding 14%.                  - The investor must invest at least CZK 10 million into tangible and intangible fixed assets (except leases).                  - Half of the investment minimum, i.e. CZK 5 million, must be covered by the investor's own capital.                  - At least 10 new jobs must be created.                  - All above conditions must be fulfilled within two years of the date the support agreements are concluded.</p>	<p><b>Industrial Parks</b>                  The recent trend in industrial property markets are industrial parks. There is less and less industry in central city of Tallinn, manufacturing companies and factories are moving to the more suitable locations in outskirts or</p>	
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<p>Hungary</p>	<p><b>2004</b>                  GDP growth - 4.0%                  GDP Per capita (ppp): 14,900 USD                  Inflation rate -3.7% (2005 est.)                  Exports -\$61.75 billion f.o.b. (2005 est.)                  Imports - \$64.83 billion f.o.b. (2005 est.)  <b>Taxes</b>  <b>CIT</b> 16%  <b>Social security:</b></p>	<p>Rate of tax benefit: maximum the intensity ratio defined in EU regulation less all other direct subsidies.  <b>Maximum intensity ratios are:</b>                  Defined by regions:                  - 35% in Budapest                  - 40% in Pest County                  - 45% in Western Transdanubia (except 6 less developed small regions in the area)                  - 50% in all other regions of Hungary                  Defined by size of investment:                  - Up to EUR 50 million worth of investment – no further restriction in addition to regional preferences is applicable                  - Between EUR 50-100 million worth of investment – 50% of the regionally allowed intensity ratio is applicable</p>	<p>Grants for Creating a skilled Workforce                  All companies established in Estonia can apply for financial support for the following employee training projects:                  - improving the qualifications for employees                  - professional training of new employees in connection with the expansion of business activities of a company                  - acquisition of new specialties and skills required for modernizing production activities                  The rate of the grant depends on the size and location of a company, the nature of the training, and can be no more than 70% of the cost of the training project.</p> <p><b>Research and Development Grants</b>                  - provide up to 25% of product development costs directly related to a project                  - provide up to 50% of industrial research costs directly related to a project</p>	<p>even farther.                  Tallinn and its immediate vicinity has three areas under development for manufacturing facilities and warehouses:                  Peterburi road, Pärnu road in Laagri and Tartu road between the city boundary and Jüri.                  The biggest industrial parks in and around Tallinn are Jüri Industrial Park, Tánassilma Technological Village, Dvigatel Industrial Park, Keila Industrial Park and Muuga Industrial Park. The total areas of the parks vary from 30 to 80 hectares and companies can purchase grounds with areas from 2000 up to 23 000 square meters with purchase price around 22-25 EUR per square meter.                  Besides Tallinn also Tapa Industrial Park and Tartu Science Park are the most promising projects.</p>	<p>Hungary provides full-range <b>protection against expropriation, nationalization and any arbitrary acts.</b>                  The law forbids expropriation. Such action is executable only in case of acute national concern.                  Hungary has entered into several bilateral and multilateral <b>investment</b></p>
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<p>Employee -pension contribution 8.5% - in 2005 the basis of the contribution cannot exceed HUF 16440 per day (annual maximum HUF 6 000) health care contribution (4%) -unemployment contribution 1 % Employer -social security 29% -unemployment contribution 3 % -contribution to state training fund 1.5% -health care tax HUF 3,450 per month per employee (as from November 1, 2005 HUF 1950) <b>Simplified Entrepreneurial Tax (EVA)</b> EVA is a flat tax paid on sales revenue. Only private entrepreneurs and those business entities can opt for this form of taxation that have been in business for at least two years, with an annual income (including VAT) that does not exceed 25 million HUF (approx. 94,000 EUR), where all of the owners are individuals, does not hold shares in any other corporations (with the exception of publicly traded shares) and which have no EU tax number. Tax rate is 15%</p>	<p>- Over EUR 100 million worth of investment – 34% of the regionally allowed intensity ratio is applicable Example: Maximum intensity ratio for an EUR 135 million investment in Budapest (35%): 50 million * 35% + (100-50 million) * 35% * 50% + (135-100 million) * 35% * 34% Defined by sectors: Sensitive sectors are described in accordance with EU regulations, for which further decreased state subsidies or no subsidies at all are granted. <b>For tax incentives:</b> - Investment amount is HUF 3 billion (cca. EUR 12.1 million) anywhere in Hungary OR HUF 1 billion (cca. EUR 4.03 million) in priority regions of the country or in an area handled by a higher education institution or the Hungarian Academy of Sciences, with the purpose of carrying out basic research, applied research or experimental development - Realizing job creating investments, if investment involves the creation of new facilities or expanding existing capacities, and is operated for five years after the start up of investment. - Length of tax benefit: maximum 10 years (from the first year after the activation of the investment plus the subsequent nine years, or – upon request of the taxpayer – from the year of activation of the investment plus the subsequent nine years) - Utilisation of tax benefit: maximum 80% of the payable tax can be tax benefit each year. -Application for tax benefit: application should be submitted at the Ministry of Finance, which will approve and authorize the tax benefit if applicant meets all the requirements meet the criteria of relevant laws described above. Decision is made within 60 days upon receipt of application,</p>	<p>- Research and development, innovation is also of primary importance. Grants for applied cooperative research and technology development activities, as well as the strengthening of corporate R&amp;D capacities and innovative skills are available. <b>Special Package for Large Investors Conditions for eligibility:</b> - Manufacturing projects of min. EUR 50 million - Regional service centre established with a total investment of min. EUR 25 million - Min. 100 new jobs created <b>Eligible costs:</b> - Purchase of machines and equipment - Site acquisition and the cost of related infrastructure - Intangible assets needed for the project - Wage cost of new employees for the first 24 months (services) <b>Project Evaluating Criteria</b> - Size of investment - Number of created new jobs - Proportion of Hungarian suppliers - Level of technology and innovation - Proportion of training costs - Skill level of employed labour force - Environmental impacts - Financial impact on the Hungarian economy</p>	<p><b>protection treaties</b> with strategically important investor countries.  No investment permit of any kind is needed in Hungary for foreign investors, but business entities must be registered with the local court. Apart from the registration and reporting requirements, no licenses or permits are needed for the establishment and operations of foreign businesses. Some exceptions, however, exist in case of privatization of state-owned assets or certain foreign exchange transactions, when the Hungarian Privatization and State Holding Company, in the former case, or the National Bank of Hungary, in the latter case, are competent and authorized to negotiate or issue licenses.</p>
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Latvia	<p><b>VAT:</b> 25%, 5%, 15%</p> <p><b>2004</b>                  GDP growth 7,8%                  GDP per capita 4 215 EUR (12 800dol)                  Inflation rate 2,9%                  Exports: \$5.749 billion f.o.b. (2005 est.)                  Imports \$8.559 billion f.o.b. (2005 est.)                  FDI cumulative 2,3 bn USD                  FDI inflow 981 milions USD</p> <p><b>Taxes</b>  <b>CIT</b> 15%(since 2005)  <b>VAT</b> 18%, 9%, 0%  <b>Social security</b>                  -Employer - 24.09%.                  -Employee - 9%.</p>	<p><b>Corporate Income Tax rebates are applied in the following cases:</b>                  - Companies carrying out large, state-supported investment projects (more than LVL 10 million (EUR 15.6 million) within a three year period) receive a tax allowance equal to 40% of the total investment;                  - Carry-forward of losses for 5 years is allowed for tax purposes;                  - Relief for losses within a group of companies maybe utilised by tax group companies.                  - Double declining depreciation rates up to 70% are applied for technological equipment.                  - Corporate income tax may be reduced by the amount of corporate tax paid in foreign countries. The reduction may not exceed the amount of tax calculated in Latvia on the income gained abroad (not more than 25 per cent of the foreign source income)                  - Corporate income tax relief for agricultural companies                  - Corporate income tax relief for employment of convicted persons                  In addition, local authorities can grant support of up to 90% Property Tax reductions for investment projects conforming to their local/regional development strategies and zoning requirements.</p> <p><b>There are four special economic zones (SEZ) across the country.</b> The basic incentive package available for companies establishing within these zones includes the following:                  -80 or 100% rebate on real estate tax                  -80% rebate on corporate income tax on income derived within the zone                  -80% rebate on withholding tax for dividends, management fees and payments for use of intellectual property                  -VAT at 0% for most goods and services supplied in within free zones, including storage                  -VAT, excise tax and customs duty exemption on import in free zones from foreign countries and on export to free zones abroad                  -expatriates who pay social insurance in their home countries may pay social insurance on a fixed amount, currently 15 minimum monthly salaries per annum</p>	<p><b>Support for the development of new products and technologies</b>                  Under the programme, support is provided for the development of new and/or significantly improved and /or improved existing products, services, or technological processes                  - Financial support remaining as of 1 November, 2005, in LVL: 8.5 millions                  - Applicant entitled to Aid: An enterprise registered in the Commercial Registry of the Register of Enterprises of the Republic of Latvia (SMEs and Large enterprises)                  - All sectors can be covered by support excluding the following:  <ul style="list-style-type: none"> <li>▪ Retail and wholesale trade;</li> <li>▪ Transportation;</li> <li>▪ Agricultural production;</li> <li>▪ Fishing industry production.</li> </ul>                 - Upper limit of the financial support available for a particular project, in LVL: 150 000                  - Support intensity: SMEs – 45%                  Large enterprises – 35%</p> <p><b>Support for modernisation of business-related infrastructure</b>                  Under the programme, support is provided for developing new laboratories and improvement of the existing ones.                  Financial support remaining as of 1 November, 2005, in LVL: 3,3 millions                  - Applicant entitled to Aid: An enterprise registered in the Commercial Registry of the Register of Enterprises of the Republic of Latvia (SMEs and Large enterprises)                  - All sectors can be covered by support excluding the following:  <ul style="list-style-type: none"> <li>▪ <b>Steel industry;</b></li> <li>▪ <b>Artificial fibre production;</b></li> <li>▪ <b>Retail and wholesale trade services;</b></li> <li>▪ <b>Transportation sector;</b></li> <li>▪ Agricultural and fishing industry production</li> </ul>                 - Upper limit of the financial support available for a particular project, in LVL: 1 500 000</p>	<p>Latvia is ranked among the top countries worldwide in terms of business start-up time, according to the recently published World Bank report Doing Business 2005 (Oxford University Press), which analyses business regulation in approximately 130 countries across the globe                  According to the Commercial Law and the Civil Codex of Latvia, any enterprise with foreign capital, as a legal entity, is entitled to the same rights and duties as any local entity. For the last six years Latvia's Government has been cooperating successfully with the Foreign Investors Council in Latvia (FICIL) – a non-government organisation which unites the largest businesses from different countries and sectors that have made significant investments in Latvia's economy.                  Five foreign Chambers of Commerce in Latvia have also joined FICIL. The mission of FICIL has been to improve the business environment in Latvia by way of an active dialogue with the government.</p>
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		<p>- Support intensity: SMEs – 65% Large enterprises – 50%</p> <p><b>Support for consulting and participation of enterprises in international exhibitions and trade missions'</b> Under the programme, support is provided for participation of enterprises in international exhibitions, fairs, and trade missions. Financial support remaining as of 1 November, 2005, in LVL: 2,85 millions</p> <ul style="list-style-type: none"> <li>- Applicant entitled to Aid: Small and medium-size enterprises (SMEs) registered in the Commercial Registry of the Register of Enterprises of the Republic of Latvia</li> <li>- All sectors can be covered by support excluding the following:             <ul style="list-style-type: none"> <li>▪ Agricultural production;</li> <li>▪ Fishing industry production;</li> <li>▪ Hunting.</li> </ul> </li> <li>- Upper limit of the financial support available for a particular project, in LVL: 10 000</li> <li>- Support intensity: 50%</li> </ul> <p><b>Subprogramme 'Consulting services' of the programme 'Support for consulting and participation of enterprises in international exhibitions and trade missions'</b> <b>Under the programme, support is provided for the following kinds of consulting services:</b></p> <ul style="list-style-type: none"> <li>- <b>Implementation of the Latvian and European Union standards according to the requirements existing in areas of work safety, environment and consumer rights protection;</b></li> <li>- <b>Working out preliminary designs in construction;</b></li> <li>- <b>Drawing up marketing strategies, development programmes and plans;</b></li> <li>- <b>Carrying out market research;</b></li> <li>- <b>Analysis and audit of accounting and management systems;</b></li> <li>- <b>Protection of the intellectual and</b></li> </ul>		
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<p>Lithuania</p>	<p><b>2004</b>                  GDP per capita 5219 Euro                  GDP growth 6,7%                  Inflation rate 2,9%                  Exports 10,95 bn USD                  Imports 13,33 bn USD (est. 2005)                  FDI cumulative – 4,7 bn Euros  <b>Taxes</b>                  CIT- 15%. A company that produces agricultural products is taxed at 0%.  <b>VAT</b> 18%; 9% 5%  <b>Social security:</b>                  The employer deducts 3% from the employee's gross salary as the social insurance contribution paid by the employee. Social insurance contributions are not deducted while</p>	<p>The standard profit tax rate applied to legal entities is 15%. Small enterprises with an annual income not exceeding LTL 500,000 and an average number of employees not exceeding 10 are subject to a 13% profit tax rate, moreover, a company (individual company or partnership) with an average number of employees not exceeding 10 and the income not exceeding LTL 1 million (approx. EUR 289.620) per tax year has a right to apply zero income tax rate to the amount of LTL 25,000 (approx. EUR 7,240) and a 15% profit tax rate to the remaining amount of profit.  <b>Free economic zones</b>                  At present, Kaunas FEZ and Klaipeda FEZ are operating according to the laws of the Republic of Lithuania. Siauliai FEZ is subject to the Law on Liquidation of Siauliai Free Economic Zone.                  Lithuanian and foreign enterprises may develop their business in free economic zones. <b>FEZ enterprises may enjoy the following incentives:</b>                  - If investments reach the amount of EUR 1 million, and at least 75% of the company's income during the tax period that the limit of EUR 1 million was reached in consisted of income from manufacturing, processing, warehousing activities performed within the zone, from wholesale of goods warehoused within the zone or provision of services related to the activities carried out on the territory of the zone, the company is granted exemption from profit tax for the first 6 tax periods (years), whereas in the subsequent 10 tax periods (years) it is subject to a 50% reduction in profit tax.                  - Exemption from VAT, road tax, and real estate tax may</p>	<p><b>industrial property rights (obtaining and protecting production licences or patents).</b>                  Financial support remaining as of 1 November, 2005, in LVL: 2,1 millions                  - Applicant entitled to Aid: Small and medium-size enterprises (SMEs) registered in the Commercial Registry of the Register of Enterprises of the Republic of Latvia                  - All sectors can be covered by support excluding the following:  <ul style="list-style-type: none"> <li>▪ Agricultural production;</li> <li>▪ Fishing industry production;</li> <li>▪ Hunting.</li> </ul>                 - Upper limit of the financial support available for a particular project, in LVL: 10 000                  - Support intensity: 50%</p>	<p>The Law on Investment provides for the following types of foreign investment in the Republic of Lithuania:                  1. Establishing of an undertaking, acquisition of capital or a part thereof of an undertaking registered in the Republic of Lithuania.                  2. Acquisition of any type of securities.                  3. Building, acquisition of fixed assets or increase of their value.                  4. Lending funds or other assets to undertakings where the investor owns a part of the capital entitling it to control the undertaking or exert a considerable influence upon it.                  5. Conclusion and implementation of concession and leasing contracts.                  Lithuania signed</p>	
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<p>Malta</p>	<p>computing the employee's income tax, which is deducted from the gross salary. The employer must also pay social insurance contributions equal to 31% of the gross salary.</p>	<p>be applicable irrespective of the amount of the investment in a FEZ.  <b>Small enterprises</b>                  An enterprise with gross income below LTL 500,000 (EUR 144,810) during a tax year and with an average number of employees not exceeding 10 has the right to apply a 13% profit tax (the standard rate is 15%), or a company (individual company or partnership) with an average number of employees not exceeding 10 and the income not exceeding LTL 1 million (approx. EUR 289,620) per tax year has a right to apply zero income tax rate to the amount of LTL 25,000 (approx. EUR 7,240) and a 15% profit tax rate to the remaining amount of profit.</p>	<p>Enterprises introducing <b>back office operations</b><sup>94</sup> may be entitled to tax credits according to the eligible expenditure incurred on pre-approved projects. These tax credits consist of a deduction from the tax payable on profits derived from back office operations. The applicable tax credit is based on the type of investment:                  - immovable property - 0.35% Multiplied by the number of individuals engaged as additional employees                  The total tax credit may not exceed the following percentage of total expenditure:                  - for SMEs 50%                  - for large enterprises 40%  <b>E-business tax credits</b> encourage and support the development and uptake of e-commerce as a means to promote a modern and dynamic business environment as part of Malta's regional development.                  The applicable tax credit is based on the type of investment:</p>	<p><b>2005 est.</b>                  GDP - growth: 1.4%                  GDP - per capita:                  ppp - \$18,800                  Inflation rate                  (consumer prices):                  2.8%                  Exports:                  \$2.744 billion f.o.b.                  Imports:                  \$3.859 billion f.o.b.                  FDI cumulative                  322.0 mln USD                  FDI inflow                  333.0 mln USD  <b>Taxes</b>                  CIT 35% (2005)                  VAT 18%, 5%  <b>Social security:</b></p>	<p>bilateral agreements on the promotion and protection of investments.                  The Agreement on use of Local Currency and the Agreement on Legal Protection for Guaranteed Foreign Investments between the Multilateral Investment Guarantee Agency (MIGA) and Lithuania are in force. Repatriation of profits derived from currency earnings (in both foreign and local currency) is not restricted. There are guaranteed rights to withdraw profits, royalties and interest in convertible currencies.</p>	<p>Malta has concluded tax treaties with a number of countries (mainly European but including Canada and Australia), which enhance the incentives provided by Maltese domestic legislation. Most of these treaties ensure that profits generated in Malta are either exempt from tax in the country of residence of the investor, or that such a country will provide a tax credit for the Malta tax spared as a consequence of the incentives Malta</p>
		<p><b>The Business Promotion Act (BPA)</b><sup>95</sup> replaces the Industrial Development Act and has been in force since 2001. It introduces greater scope and flexibility to the incentives available for the promotion of business, and covers a wider range of qualifying sectors and activities than before.                  The BPA provides incentives for those industries demonstrating growth and employment potential that are engaged in manufacturing (including software development), repair, improvement and maintenance activities. The incentives available under the Business Promotion Act and Regulations may be subdivided under two categories namely, tax related incentives (1) and non-fiscal related incentives(2)</p> <p><b>Related tax Incentives (1)</b>  <b>Reduced Rates of Income Tax</b>                  -This incentive applies only to qualifying</p>	<p><b>Malta</b>                  Malta has concluded tax treaties with a number of countries (mainly European but including Canada and Australia), which enhance the incentives provided by Maltese domestic legislation. Most of these treaties ensure that profits generated in Malta are either exempt from tax in the country of residence of the investor, or that such a country will provide a tax credit for the Malta tax spared as a consequence of the incentives Malta</p>	<p>Malta has concluded tax treaties with a number of countries (mainly European but including Canada and Australia), which enhance the incentives provided by Maltese domestic legislation. Most of these treaties ensure that profits generated in Malta are either exempt from tax in the country of residence of the investor, or that such a country will provide a tax credit for the Malta tax spared as a consequence of the incentives Malta</p>	<p>Malta has concluded tax treaties with a number of countries (mainly European but including Canada and Australia), which enhance the incentives provided by Maltese domestic legislation. Most of these treaties ensure that profits generated in Malta are either exempt from tax in the country of residence of the investor, or that such a country will provide a tax credit for the Malta tax spared as a consequence of the incentives Malta</p>	

<sup>94</sup> Back Office Operations refers to those activities whereby a company provides services to enterprises established outside Malta within an outsourcing agreement.

<sup>95</sup> Business Promotion Act contains both fiscal and non-fiscal incentives. It is places in this column for clarity and differentiation from regular tax incentives for investors

<p>Employer 10% Employee 10%</p>	<p>Information Technology (Hardware and Software) - 17.5 % Related capital expenditure (for projects that provide an enabling platform for other enterprises to perform electronic transactions) - 10.5 %</p> <p><b>Professional Capacity Building</b> These tax credits encourage specialisation in the fields of science and technology and facilitate the employment of highly qualified and specialised personnel Tax Credits are available to support enterprises financing the studies of employees at a post-graduate level and also to individuals who embark on such personal development on their own initiative.</p> <p>The applicable tax credit is based on the type of investment: Tuition costs and wages of employees having their studies financed by the enterprise. - 17,5% The company's share of the employee's social security contribution for the first 36 months of employment when recruiting additional highly qualified employees holding approved qualifications in a relevant post - . 100%</p> <p><b>Research and Development</b> In order to stimulate R&amp;D in Malta, enterprises carrying out R&amp;D may be entitled to various tax credits according to the nature of the specific investments.</p> <p>The applicable tax credit is based on the type of investment -Wages of personnel employed in R&amp;D activities 35% -Instruments and equipment 35% - Land and premises 14 - External consultants 35 - External consultants engaged in an application for EU funds 17,5 - Overheads and other R&amp;D expenses 10,5 - Wages and tuition expenditures leading toward an R&amp;D relevant qualification 17,5  - Employer's social security contribution in respect of each R&amp;D qualified personnel 100 - plant and machinery - 1.75% multiplied by the number of individuals engaged as additional employees</p>	<p>companies engaged in those particular activities listed under the Business Promotion Regulations. These activities include pharmaceuticals, plastics, biotechnology, electronic and electrical equipment. -Such qualifying companies benefit from a highly favourable tax rates, valid up to 31/12/2008. The applicable taxable rates are 5%, 10% or 15%.</p> <p><b>Investment Tax Credits</b> This incentive, in terms of which the tax payable is reduced and even eliminated, may be availed of only by those qualifying companies that are entitled to benefit from reduced rates of income tax.</p> <p>Investment tax credits are calculated as follows: Either (a) 50% of investment on capital equipment; Or (b) 50% of the first 2 year wage costs of new jobs created. Note: For SMEs the applicable percentage is increased to 65%. Tax credits unutilised during a particular year are carried forward to the following year and increased by 7%. The combination of the above incentives would normally result in minimal or no taxes being paid for a number of years. This incentive will continue to be available after the 31st December 2008.</p> <p><b>Value Added Incentive Scheme</b> This incentive is applicable to those qualifying companies that are not eligible for reduced rates of income tax, and consists of a scheme whereby such companies benefit from reduced rates of income tax related to the increase in value added derived from their activities. The applicable rates being of 5%, 10% or 15%. The reduced rates of tax apply to part or indeed a multiple of the increased profit when compared to a base period. For new companies, since the base period would be Nil, all the profits in the initial three years would be taxed at the reduced rate of 5%. This incentive will no longer be available after the 31st December 2008.</p> <p><b>Investment Allowances</b> Tax deductions in addition to normal tax depreciation are provided as follows: • Plant and machinery - 50% of the investment;</p>	<p>provides.</p>
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		<p>• Industrial buildings or structures - 20% of the investment.</p> <p><b>Reduced Rates of Tax on Reinvested Profits</b> The tax on profits that are reinvested in projects approved by Malta Enterprise is reduced by 19.25% from 35% and by 17.5% from 35% in the case of hotel operations.</p> <p><b>Incentives for Job Creation</b> The creation of new jobs for particular persons (e.g. persons unemployed for more than two years, disabled persons etc), would entitle a company to an additional tax deduction based on the wage cost of such persons.</p> <p><b>Non-fiscal Related Incentives (2)</b></p> <p><b>Provision of Immovable Property</b> Malta Enterprise approves the allocation of industrial buildings at competitive rates of rent.</p> <p><b>Soft Loans</b> Qualifying companies may be assisted by low interest rate loans covering up to 75% of the qualifying expenditure undertaken by the company.</p> <p><b>Loan Interest Rate Subsidies</b> Alternatively, companies may qualify for a subsidy on the interest rate payable on loans taken up from licensed financial institutions to acquire additional assets.</p> <p><b>Loan Guarantees</b> Malta Enterprise may guarantee up to 75% of loans taken up by qualifying companies to finance the acquisition of assets.</p> <p><b>Training Assistance</b> Qualifying companies may benefit from substantial training assistance. Depending upon whether a company is classified as a large enterprise or an SME, such assistance may vary from 35% to 80% of costs incurred on training.</p> <p><b>Work Permits</b> Indefinite work permits are granted to shareholders (or their nominees) holding more than 40% of the equity. Definite work permits for specialists are granted according to company requirements.</p> <p>The business support available to foreign and local companies also includes a <b>host of export marketing services</b> which in effect allows</p>		
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<p>Slovakia</p> <p>GDP per capita - 6100 USD          GDP growth in stable prices (%) - 5,3 (III q 2004)          Inflation rate (%) 7,5          Export 27,8 bn \$          Import 29,2 bn \$          FDI (mil USD) - 11 464,5</p> <p><b>Taxes</b>  <b>CIT</b> 19%. (effective since January 1<sup>st</sup> 2004)  <b>VAT</b> 19%(effective since January 1<sup>st</sup> 2004)  <b>Social security:</b>          Employer 35,20%          Employee 13,40%</p>	<p><b>State aid may be provided in favour of a project in the following forms:</b><sup>96</sup></p> <p>A. Indirect forms</p> <ul style="list-style-type: none"> <li>- Tax relief on the income tax of legal persons</li> <li>- Transfer of a real estate title from the state or municipality at a price lower than the market value</li> </ul> <p>B. Direct forms</p> <ul style="list-style-type: none"> <li>- Financial grant to cover Investment costs for type C projects (thereinafter as FG),</li> <li>- Allowance for newly created jobs</li> <li>- Training allowance.</li> </ul> <p>In the event that the Investor applies for tax relief, he has to meet, as well as the essential terms defined within rules, criteria stated within particular legal regulations<sup>97</sup>. <b>On the date of the adoption of these rules, these are mainly the following criteria :</b></p> <p>(i) Investment costs must be of a minimum amount of 400 million SKK;          (ii) The investor must contribute at least 200 million SKK of Investment costs from his equity capital.          If the Investor carries out a project within a region where the unemployment rate is at least 10 % according to the statistics register of the Centre of Labour, Social Affairs and Family (Green and yellow zone), as of the last day of the preceding calendar half year, then the amounts described in (i) and (ii) above are decreased by half.</p>	<p>companies to benefit from:</p> <ul style="list-style-type: none"> <li>• A range of overseas promotional activities</li> <li>• Participation in Business Missions and Trade Fairs abroad</li> <li>• Access to market research and business information services</li> </ul> <p><b>SMEs</b> employing up to 100 employees may benefit from a <b>Loan Guarantee</b> of up to 50% of a bank loans required to finance capital expenditure. Loan guarantees will be issued for a maximum of 10 years, never exceeding Lm150,000 but usually up to Lm50,000. The aim of this support measure is to facilitate access to Finance for SMEs undertaking investment in Capital Expenditure.</p> <p><b>Slovak territory is divided into 3 zones:</b>  <i>Green zone:</i> regions with an unemployment rate above 15% (in the period from 10/2004 – 9/2005 there are 29 regions)  <i>Yellow zone:</i> regions with an unemployment rate from 10% to 15% (in the period from 10/2004 – 9/2005 there are 24 regions)  <i>Red zone:</i> regions with an unemployment rate up to 10% (in the period from 10/2004 – 9/2005 there are 26 regions)</p> <p><b>There are 3 preferred types of investments as well:</b>  <i>Type A</i>          - Processing industry: Investment Projects introducing new production and the assembly of components as well as final products, eventually repairs.          - Distribution and logistics centres: Centralized handling in the area of service activities.  <i>Type B</i>          - Strategic investments in high-tech sectors with network externalities (information and communication technologies - ICT, biotechnology, nanotechnology, etc.): this concerns projects which will markedly contribute to the development of the high-tech sector, which bring about network externalities (i.e. a situation when</p>	<p>Slovakia signed Double Taxation Prevention Treaties</p>	
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<sup>96</sup> To learn more: [www.sario.sk/upload/docs/Rules\\_state\\_aid\\_provision\\_AJ.pdf](http://www.sario.sk/upload/docs/Rules_state_aid_provision_AJ.pdf)

<sup>97</sup> Primarily in Act No. 565/2001 Coll. on investment incentives and on the changes and complements of some laws as amended, Act No. 595/2003 Coll. on income tax as amended, and Act. No. 366/1999 Coll. on income taxes as amended

	<p><b>Max limit of tax relief</b></p> <p><i>Bratislava region</i>                  Red zone: A 0%, B 20%, C 20%</p> <p><i>Other regions</i>                  Red zone: A 0%, B 33%, C 44%                  Green zone: A 44%, B 49,5%, C 50%                  Yellow zone: A 38,5%, B 44%, C 50%</p>	<p>the productivity of a given subject is increased by the close proximity of other subjects or businesses, universities, research institutions, and so on, alternatively where the presence of the given subject increases the productivity of other businesses). It mainly concerns sectors with a large technological component, for example information technology, nanotechnology, and biotechnology.</p> <p>- Centres of strategic services: Centres of shared services (centralization of support activities, for example, human resources, ICT, sales, and so on), customer centres and technical assistance centres, call centres (centres ensuring customer service by means of telephone, fax, e-mail, internet).</p> <p><b>Type C</b></p> <p>- Research and development centres, technological centres, centres of technological development: Research and development activity that is not directly attached or linked to industry or another commercial activity, or the development of new products, processes and services that will lead to a significant improvement in existing products, processes and services.</p> <p><b>Regional aid % of project cost</b>                  red zone: A – 0%, B 20%, C 20%                  greek zone: A 40%, B 45% C 50%                  yellow zone: A 35%, B 40%, C 50%</p> <p><b>Regional aid % of real estate price lower than market value</b>                  A (green+yellow zone) 3%                  (red) 0%                  B (all zones) 6%                  C (all zones) 15%</p> <p><b>Allowance provision for newly created jobs</b>                  The intensity of the maximum allowance amount for newly created jobs will depend on the location of the project realization in the Slovak Republic as well as on the project type. In all cases, assistance will be provided to a</p>		
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		<p>maximum of 30 % of labour costs per annum for every created job and in any case an absolute maximum amount of assistance per job will be defined.</p> <p>Assistance will be granted as follows:</p> <ul style="list-style-type: none"> <li>• <b>Green and yellow zone:</b> Assistance will be granted for project types A and B where a minimum of 30 % of employees will be appointed from among registered job applicants. The absolute maximum amount of assistance for one job is 125 thousand SKK. If, among employees from among registered job applicants, a minimum of 10 % of disadvantaged job applicants is appointed, then the maximum allowance for one job is 150 thousand SKK.</li> </ul> <p>In the event of the realization of Projects A and B within regions with a registered average unemployment rate of more than 20% and completion terms according to first and second clause, the absolute maximum allowance per single job is 200 thousand SKK.</p> <ul style="list-style-type: none"> <li>• <b>Red zone:</b> An allowance will only be provided for type B projects where a minimum of 10 % of employees must be appointed from among registered job applicants. The absolute maximum allowance per single job is 100 thousand SKK.</li> </ul> <p><b>Large investments</b>          In conformity with the Multi-sector framework of the regional aid for large investment projects, it is necessary in the case of investments exceeding 50 million EUR (hereinafter only „large investments“) to further limit the amount of state aid as follows:</p> <p><b>Limit of the aid amount for large investments</b>          Acceptable amount of aid equals to: <math>R\% \text{ out of } (50 \text{ million EUR} + 0,5 * B + 0,34 * C)</math>          R = regional maximum limit (for Bratislava region – 20%, for other regions in the Slovak Republic – 50 %)          B = sum of eligible costs exceeding 50 million EUR but not exceeding 100 million EUR          C = sum of eligible costs exceeding 100 million EUR</p>		
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<p>Slovenia</p>	<p><b>2004</b>                  GDP growth 4.2 %                  GDP per capita 13,103 Euros                  Inflation rate 3,6 %                  Exports 12,587 mln Euro                  Imports 13,878 mln Euro                    FDI inflow 5,633 mil Euro                  FdI cumulative 4 bn Euro</p>	<p><b>Relieves for capital investments</b></p> <ol style="list-style-type: none"> <li>1. A taxpayer may reduce the tax base by 10% (20% in 2004 and 2005) of the amount invested in equipment (except for investments in passenger cars, furniture and office equipment) and intangible fixed assets up to the amount of the tax base and only for investments made in Slovenia.</li> <li>2. A taxpayer may reduce the tax base by further 10% of the amount invested in equipment for research and development (20% in equipment and intangible long-term assets in 2004 and 2005) up to the amount of the tax base.</li> <li>3. The taxpayer may reduce the tax base over a five-year period for the fiscal period arising from the unexercised right to a tax relief.</li> </ol>	<p><b>Government FDI Cost-Sharing Grant Scheme for 2005</b></p> <p>Foreign companies making direct investments in Slovenia may apply for financial grants. The purpose of the Invitation for Applications is to boost attractiveness of Slovenia as a location for foreign direct investment by lowering entry (start-up) costs to the investors whose investment will have a positive impact on new employment, knowledge and technology transfer, facilitation of balanced regional development, and will foster alliances between foreign investors and Slovenian companies.</p>	<p>According to the <b>IMD World Competitiveness Yearbook</b>, which defines the environment for bribery and corruption according to six survey indicators, listed under 'Government Efficiency' and 'Business Efficiency', Slovenia is gradually improving. The extent of the black economy and corruption in the public sphere are the greatest hindrances to Slovenia's progress in this area. According to IMD World Competitiveness Yearbook 2005, Slovenia ranks 52nd among 60st the most competitive countries.</p>
<p><b>Taxes</b>  <b>CIT</b> 25%                  The standard rate of <b>VAT</b> in Slovenia is 20%. There is a reduced rate of 8.5%.  <b>Land tax</b> 2%  <b>Social security:</b>                  The employer's contribution to national insurance is 16.1% and that of the employee - 22.1%.</p>	<p><b>Relieves for additional employment</b></p> <ol style="list-style-type: none"> <li>1. For taxable persons who within the financial year employ on a permanent basis and for at least two years:                         <ul style="list-style-type: none"> <li>• trainees or other workers who conclude their first employment contract,</li> <li>• workers registered with the employment service for at least 6 months prior to concluding the employment contract,</li> <li>• workers who hold a doctorate (Ph.D.) and were not employed in any company before that, the taxable base is lowered by an amount equal to 30% of the wages paid to these employees, for a maximum period of the first 12 months of their employment.</li> </ul> </li> <li>2. For taxable persons who employ disabled persons the taxable base is lowered by an amount equal to 50% of the gross wages paid to the disabled persons. For taxable persons who employ disabled persons with a disability of 100% and deaf and dumb persons the taxable base is lowered by an amount equal to 70% of the wages paid to these persons.</li> </ol>	<p>Grants are available for <b>investments in industry, strategic services</b> (Customer Contact Centres, Shared Services Centres, Logistics and Distribution Centres, Regional Headquarters) and <b>R&amp;D</b>. Incentives are eligible for up to 40% (35% in Osrednjeslovenska region) cost of infrastructure and utility connections, cost of construction or purchase of buildings, as well as purchase of new machinery and equipment. In the year 2005, there are allocated approx. EUR 3,75 million.</p> <p>These investment projects and new jobs shall remain located in the Republic of Slovenia for no less than 5 years.</p>	<p>Grants are available for <b>investments in industry, strategic services</b> (Customer Contact Centres, Shared Services Centres, Logistics and Distribution Centres, Regional Headquarters) and <b>R&amp;D</b>. Incentives are eligible for up to 40% (35% in Osrednjeslovenska region) cost of infrastructure and utility connections, cost of construction or purchase of buildings, as well as purchase of new machinery and equipment. In the year 2005, there are allocated approx. EUR 3,75 million.</p>	
<p><b>Depreciation Allowance</b></p> <p>Expenditure on plant and machinery generally qualifies for annual writing-down allowances. The depreciation allowance on buildings and equipment are quite favourable. Depreciation may not exceed the level arrived at using straight-line depreciation methods and the set annual depreciation rates. The highest annual depreciation rate for building projects is 5%, equipment, vehicles and machinery 25% (passenger cars 12.5%, computer and computer equipment 50%), other investments 20% (goodwill 10%).</p>	<p><b>Local Incentives</b></p> <p><b>Municipalities</b> may offer different forms of incentives, which are negotiated <b>on a case-by-case basis</b>. These incentives may include easy access to industrial sites, utility connections and holidays from local taxes.</p> <p><b>Employment Incentives</b></p> <p>The <b>Employment Service of Slovenia</b> carries out a series of measures for encouraging employment, through which it advises and finally supports employers that employ <b>new workers</b>. Employers who intend to hire unemployed workers may apply for <b>free training and retraining</b> provided by local employment offices through Slovenia.</p>	<p><b>Local Incentives</b></p> <p><b>Municipalities</b> may offer different forms of incentives, which are negotiated <b>on a case-by-case basis</b>. These incentives may include easy access to industrial sites, utility connections and holidays from local taxes.</p> <p><b>Employment Incentives</b></p> <p>The <b>Employment Service of Slovenia</b> carries out a series of measures for encouraging employment, through which it advises and finally supports employers that employ <b>new workers</b>. Employers who intend to hire unemployed workers may apply for <b>free training and retraining</b> provided by local employment offices through Slovenia.</p>	<p><b>Local Incentives</b></p> <p><b>Municipalities</b> may offer different forms of incentives, which are negotiated <b>on a case-by-case basis</b>. These incentives may include easy access to industrial sites, utility connections and holidays from local taxes.</p> <p><b>Employment Incentives</b></p> <p>The <b>Employment Service of Slovenia</b> carries out a series of measures for encouraging employment, through which it advises and finally supports employers that employ <b>new workers</b>. Employers who intend to hire unemployed workers may apply for <b>free training and retraining</b> provided by local employment offices through Slovenia.</p>	



<p>Romania</p>	<p><b>2004</b>                  GDP growth – 8,3%                  Inflation rate – 9,3%                  Exports 18935 mln Euro                  Imports 24258 mln Euro                    FDI inflow 5,183 mln Eur,                  FDI cumulative 15,040 mln Eur    <b>Taxes</b>  <b>CIT</b> 16%, (became effective as of January 2005)  <b>VAT</b> - 19 %, 9%  <b>Social security:</b>                  employee                  - Social Security contributions - 9.5%                  - Health Fund Contribution – 6.5%                  -                  Unemployment Fund Contribution – 1%                  employer</p>	<p><b>Loss Carried Forward</b>                  A taxpayer may carry forward the loss incurred in one accounting period by reducing the tax base for the following five years, but only up to the amount of the tax base for the fiscal period.</p> <p><b>Allowance for Employing</b>                  A taxpayer may claim a reduction of the tax base at the rate of 30% of the salary for the employees who were never employed or who were registered with the Employment Office of Slovenia for 12 months or they hold a doctorate (Ph.D.) and were not employed in any company before that. The workers have to be employed for at least 2 years. The total cumulative allowances may not exceed the amount of the tax base.</p> <p><b>FREE ZONES</b>                  The present free zones are: Sulina, Constanta Sud, Basarabi, Galati, Giurgiu, Braila and Curtici.                  1. Exemption from payment of custom duties for carrying the goods from one free zone to another.                  - All financial transactions carried out in hard currency for the activities developed in the free zones.                  - The state owned goods and the related services that are in the administration of the Free Zones may be subject to concession upon concluding a Concession Agreement for up to 49 years. The above-mentioned assets that are in the administration of the Free Zones may also be leased based on a Lease agreement concluded with the Free Zone Administration.                  - For the investments within the Free Zones, the operators may benefit from a state aid up to 65% of the value of the investment.                  - Exemption from paying VAT for:                  a. imported goods that are introduced into the Free Zone for the sole purpose of being stored in the Free Zones                  b. trade operation inside the Free Zones or between merchants inside and outside the Free Zone                  c. exit of imported goods from the Free Zone                  d. services in connection with the above activities.                  2. Investors that develop activities within a free zone, that started their investments with a value exceeding USD 1 mil., before July 1, 2002, in manufacturing industry, benefit from exemption for paying tax on profit</p>	<p><b>Direct investment</b>                  1. Exemption from the payment of custom duties for the technological machinery, installations, equipment, measuring and control apparatus, automation equipment and software products purchased from Romania or abroad, necessary for achieving the investment, which are according to the list approved by joint Order of the Minister of Development and Prognosis and Minister of Public Finances, providing the goods are new, respectively they have been produced 1 year at most prior to their bringing to Romania and they have never been utilized. As well, starting from January 1, 2002, Romania abolished the custom duties for the industrial goods imported from the EU on the basis of the European Agreement ratified by Law No. 20/1993 - reinforced by the Fiscal Code;                  2. Carrying forward the fiscal loss during the following 5 years from the taxable profit - reinforced by the Fiscal Code;                  3. The use of accelerated depreciation, according to the specific legislation in force, with no obligation for a prior approval from the local fiscal authorities - reinforced by the Fiscal Code;                  4. Other incentives that can be granted by the local authorities - reinforced by the Fiscal Code</p> <p><b>Compliance condition</b>                  1. Are done after the coming into force of the Law, natural or legal persons, subjects of</p>	<p>Romania signed Agreements on Promotion and Protection of Investment and Arrangements Preventing Double taxation</p>	
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<p>- Social Security contributions: 31.5 % - 41.5 % ( - Health Fund: 7 % - - Unemployment Fund: 3% - National Labour Accidents and Professional Diseases: 0.5 % - 4 % - Labour Chamber commission: 0.25 or 0.75 %</p>	<p>until December 31, 2006. The investors that have changed their shareholding structure with more than 25% within a year do not benefit from the above-mentioned incentive. 3. 5% tax on profit until December 31, 2004. Companies operating in <b>industrial parks</b> benefit from the following incentives, reinforced by the Fiscal Code: 1. Exemption from payment of taxes for modifying the land destination or land withdrawal from the agricultural use for the industrial park's land 2. Deduction of 20 % of the value of the investments made in the industrial parks by December 31, 2006 for constructions, building rehabilitation, internal infrastructure and connection to the public utility network 3. Tax exemption for the land and buildings within the industrial parks 4. Tax deduction granted by the local public administration authorities for the real estate used by the industrial park 5. Other incentives that can be granted by local authorities For their establishment and operation, the <b>scientific and technological parks</b> benefit from the following incentives: 1. Tax reduction granted by the local authorities for the fixed assets and land given to the park for its use, as well as other incentives, which may be granted according to the law, by the public local authority; 2. Exemption from payment of taxes for modifying the land destination or land withdrawal from the agricultural use for the land used in the scientific and technological parks; 3. Deferred payment of VAT for materials, equipment and connecting to the public utilities during the investment period until the opening of the park; 4. Development programs for infrastructure, investment and providing equipment granted by the central and local public administration, private companies and foreign financial assistance; 5. Donations, concessions and structural funds for development. The companies operating in the scientific and technological parks benefit from the following incentives: 1. Favorable location conditions and infrastructure and communication use, by payment on installment basis, ensured or facilitated by the administrator for a determined functioning period 2. Tariff reduction or free of charge services offered by the administrator.</p>	<p>private law 2. The contribution to the direct investments with significant impact on economy consists only in liquidities in lei or convertible foreign currency 3. Are completely finalized within 30 months at the latest as of their statistic registration with the Ministry of Development and Prognosis 4. Do not infringe the environmental protection legislation 5. Do not violate the interests of security and national defense of Romania 6. Do not harm public order, health or morality. In order to benefit from the incentives provided by this law, the investors should make a registration of their investment project, only from the statistical point of view at the corresponding Regional Development Agency. New direct investments, qualifying as being of major importance to the national economy, shall be also presented to the Department for the Relation with the Foreign Investors. <b>SMEs</b> 1. Possibility to carry forward the fiscal loss during the following 5 years from the taxable profit; 2. The SMEs have priority access to the assets of the Regies Autonomes, companies or National Companies and state owned companies; 3. The use of accelerated depreciation, according to the specific legislation in force, for machines, installations, equipment and know-how providing that the enterprise does not register losses; 4. The SMEs have priority access to the public acquisition of goods, benefiting of 50% discount. <b>Compliance Conditions</b> In order for the companies to benefit from the incentives provided by this Law, they must comply with the following conditions: 1. Have a medium annual number of employees less than 250 2. Make an annual turnover up to 8 million EURO or the result of the annual balance sheet does not exceed 5 million EURO. 3. To be independent, meaning that they are not owned more than 25 % by another company</p>		
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<p>Bulgaria</p>	<p><b>2004</b>                  GDP growth – 5,6%                  GDP per capita                  9000\$ (2005 est.)                  Inflation rate –                  6,1%                  Exports f.o.b. 11,67                  bn \$                  Imports f.o.b. 15,9                  bn \$                  FDI inflow 2487,5                  mln \$  <b>Taxes</b>  <b>CIT</b> - 15% (2006                  expected rate: 12%)  <b>VAT</b> 20%, 0%  <b>Real estate tax</b> -                  0.15%.</p>	<p><b>Tax credit for investment in depressed regions</b>                  Companies investing in depressed regions enjoy  <b>reduction of the corporate tax by 10%</b> of the                  amount invested in acquisition, modernization or                  reconstruction of fixed assets including buildings,                  equipment, transmitters, electricity networks,                  telecommunication lines, machines, production facilities,                  transportation facilities, (excluding personal cars), road                  cover, computers and peripheral devices, software and                  the right to use software. The cost of intangible assets                  should not accede 25% of the acquisition costs of the                  fixed assets. The acquired assets could not be disposed                  for a period of 5 years, except in cases of reorganization                  of the company. The tax credit can be used for a period                  of 5 years.</p>	<p>or group of companies that can be qualified as                  SMEs.</p> <p>The new <b>Encouragement of Investment Act</b>                  regulates the terms and procedures for                  investing in Bulgaria. The law equally applies to                  Bulgarian and foreign investors.                  The value thresholds are set forth in the Rules                  on the Enforcement of the Encouragement of                  Investment Act as follows:                  1. first class - investment over BGN 70                  million.                  2. second class - investment from BGN 40                  million to BGN 70 million, and                  3. third class - investment from BGN 10                  million to 40 million;                  General preference applied to all classes of                  investment is shortening the time limits for                  provision of administrative services to certified                  investors for realization of their investment                  plans. On presentation of a certificate for                  investment class, central and territorial                  executive authorities, and local self-government                  authorities shall provide administrative services                  within time limits by one third shorter than the                  ones provided for in the legislation.                  For <b>3rd-class</b> investment InvestBulgaria                  Agency provides information services to                  investors as follows:                  - pre-developed information materials;                  - information about potential partners in the                  country;                  - information about all administrative                  procedures concerning the implementation of                  the investment project.                  For <b>2nd-class</b> investment InvestBulgaria                  Agency provides investors with:                  - information services as mentioned above;                  - individual administrative servicing with respect                  to all central and regional bodies of the                  Executive.                  Investors have the opportunity to authorize                  officials of the Agency to obtain from the                  corresponding competent bodies on investors’                  behalf and on investors’ account any documents                  necessary for implementation of the particular                  investment project as may be required under                  the existing legislation.                  For <b>1st-class</b> investment, the InvestBulgaria</p>	<p>International Treaties                  Convention for the                  establishment of                  Multilateral Investment                  Guarantee Agency;                  Convention for the                  establishment of                  International Center for                  Settlement of                  Investment Disputes;                  Convention for the                  establishment of the                  World trade                  organization;                  Bilateral investment                  promotion and                  protection treaties;                  Double tax treaties.:</p>	
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<p>Poland</p>	<p><b>2004</b>                  GDP growth 5.4%                  GDP per capita 12,700 \$                  Inflation 3.5%.                  Imports 87.9 bn \$                  Exports 73.8 bn \$                  FDI inflow 7858 mln \$                  FDI cumulative 84 477 mln \$  <b>Taxes</b>  <b>CIT</b> 19%,  <b>VAT</b> - 22%; 7% or 3%; 0%.  <b>Social security:</b>                  Employer 19.8%-22.7%                  Employee 18.71%</p>	<p>There are 14 SEZs in Poland - Katowicka, Kamiennogórska, Kostrzyńsko - Słubicka, Krakowska, Legnicka, Łódzka, Kielecka, Pomorska, Słupska, Starachowicka, Suwalska, Tarnobrzaska, Wałbrzyska, Warmińsko - Mazurska.  <b>Corporate income tax exemption</b>, related to income from activities conducted in SEZs under the permit, is considered to be regional aid granted under the Act on SEZs.  <b>Amount of admissible state aid</b>                  The admissible amount of aid cannot exceed the <i>maximum intensity of aid</i> for a given region, as stipulated in the state aid regulations. The intensity indicates the allowable share of regional aid in costs (investment outlays), which qualify for being covered by such aid.                  The intensity of aid allowed on the majority of Poland's territory is 50%, except for:</p> <ul style="list-style-type: none"> <li>• Kraków (a part of the Kraków SEZ), Wrocław and the Gdańsk-Sopot-Gdynia agglomeration - 40%</li> <li>• Warsaw and Poznań - 30%</li> </ul> <p>The 50% intensity means that when investing in a zone, entrepreneurs may obtain aid not exceeding 50% of the investment outlays. For small and medium enterprises, as defined by the Economic Activity Law, the index is increased by 15 percentage points (to 65%, 55% and 45% respectively).  <b>Small enterprise</b> - shall mean an entrepreneur who in at least one of the two recent financial years:                  - had an average annual employment of less than 50, and                  - showed an annual net turnover from sales of goods, products and services and from financial operations of no more than a zloty equivalent of 10 million Euro, or a balance-sheet assets total, as at the end of either of these two years, of no more than a zloty equivalent of 10 million euro.  <b>Medium-size enterprise</b> - shall mean an entrepreneur who in at least one of the two recent financial years:                  - had an average annual employment of less than 250, and                  - showed an annual net turnover from sales of goods, products and services and from financial operations of no more than a zloty equivalent of 50 million Euro, or a</p>	<p>Agency assists investors as follows:                  - individual informational and administrative services                  - assistance with real estate 'titling' issues                  infrastructure building support</p>	<p>Poland signed Arrangements Preventing Double Taxation</p>	
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		<p>balance-sheet assets total, as at the end of either of these two years, of no more than a zloty equivalent of 43 million Euro.</p> <p>For small and medium-sized enterprises (SMEs) the maximum aid intensity is increased by additional 15 percentage points.</p> <p>For <b>large investment</b> projects the aid level is reduced. The admissible amount of aid for a large investment project (qualifying expenditures exceeding EUR 50 million) will be calculated according to the formula:</p> <p>Maximum amount of aid = <math>R \times (50 + 0,50B + 0,34C)</math></p> <p>Where:</p> <p>R is the maximum aid intensity allocated to the given area;</p> <p>B is the qualifying expenditure between EUR 50 million and EUR 100 million;</p> <p>C is the qualifying expenditure above EUR 100 million.</p> <p>The maximum intensity of aid in the automotive sector granted to projects that involve an amount of aid exceeding EUR 5 million, is reduced to 30% of the corresponding regional aid intensity.</p> <p><b>Conditions:</b></p> <p>Investments may benefit from regional aid on the following conditions:</p> <ul style="list-style-type: none"> <li>- business activity related to the particular investment should be conducted for a period of at least 5 years since date of the completion of the investment project,</li> <li>- in case of aid for job creation newly created jobs should be maintained for at least 5 years from the date of the completion of the investment.</li> </ul> <p>Every case of regional investment aid must be notified to the European Commission if the aid proposed for the project exceeds the maximum admissible aid that an investment of EUR 100 million may obtain under the rules described above (for Poland the figure generally stands at EUR 37.5 million). Proposed aid scheme cannot be put into effect before the Commission takes a decision authorizing such aid.</p> <p>Individually notified projects will not be eligible to investment aid in either of the following two situations:</p> <ul style="list-style-type: none"> <li>a) the aid accounts for more than 25% of the sales of the product concerned before the investment or will, after the investment, account for more than 25%; or</li> <li>b) the capacity created by the project is more than 5% of the size of the market measured using apparent consumption data of the product concerned, unless the average annual growth rate of its apparent consumption over the last five years is above the average annual growth rate of the European Economic Area's GDP.</li> </ul>		
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**Sources of information:**

<b>COUNTRY</b>	<b>NAME OF ORGANISATION</b>	<b>WEB</b>
BULGARIA	Bulgarian Foreign Investment Agency	<a href="http://investbg.government.bg/">http://investbg.government.bg/</a>
CYPRUS	Cyprus Centre for International Business Investment and Business Development	<a href="http://www.cosmosnet.net/azias/cyprus/business/main.html">www.cosmosnet.net/azias/cyprus/business/main.html</a>
CZECH REPUBLIC	Czech Agency	<a href="http://www.czechinvest.org">www.czechinvest.org</a>
ESTONIA	Estonian Investment Agency	<a href="http://www.investestonia.com">www.investestonia.com</a>
HUNGARY	Hungarian Investment and Trade Development Agency	<a href="http://www.itd.hu">www.itd.hu</a>
LATVIA	Latvian Investment and Development Agency	<a href="http://www.lida.gov.lv">www.lida.gov.lv</a>
LITHUANIA	Lithuanian Development Agency	<a href="http://www.lida.lt">www.lida.lt</a>
MALTA	Malta Enterprise	<a href="http://www.maltaenterprise.com">www.maltaenterprise.com</a>
POLAND	Polish Information and Foreign Investment Agency	<a href="http://www.paiiz.gov.pl">www.paiiz.gov.pl</a>
ROMANIA	Romanian Agency for Foreign Investment	<a href="http://www.arisinvest.ro">www.arisinvest.ro</a>
SLOVAKIA	Slovak Investment and Trade Development Agency	<a href="http://www.sario.sk">www.sario.sk</a>
SLOVENIA	Slovenian Trade and Investment Promotion Agency	<a href="http://www.investslovenia.org">www.investslovenia.org</a>
ALL	CIA the World Factbook 2005	<a href="http://www.cia.gov/cia/publications/factbook/geos/">www.cia.gov/cia/publications/factbook/geos/</a>