The ESPON 2013 Programme

Applied Research Project 2013/1/2

EDORA

(European Development Opportunities
for Rural Areas)

Final Report Annex 1 Part 23

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EDORA Database Description

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1. INTRODUCTION

To create information and evidence on territorial challenges and opportunities for success for the development of Europe's rural regions requires a cross thematic approach that is able to develop a better understanding of the development opportunities and challenges the diverse types of rural regions in Europe are facing. To achieve this goal the project aims at analyzing the drivers, patterns and trends of rural changes in the areas of demography, employment and human capital, structural changes, accessibility of services, climate change and environmental issues, rural business clusters, development opportunities relating to cultural heritage and urban rural linkages. Hence, detailed regional data describing the main trends and patterns in the fields outlined above are needed. Therefore, the setting up of a database structured according to the mentioned themes – feeding into all the empirical tasks of the project and contributing the overall ESPON 2013 database with detailed indicators about Europe's rural regions is one pivotal task.

The following chapters addresse the overall structure and the concise content of the EDORA database, the decision on the spatial reference, year of reference and method of missing value treatment used as well as the regional coverage of the database. In addition some database and data manipulation tools are presented that have been developed within activity 2.21 – development of indicator database – to ease data handling, integration and analysis.

2. LAYOUT AND STRUCTURE OF THE EDORA DATABASE

2.1. Layout of the EDORA database

The EDORA database is spreadsheet based and consists of several MS-Excel tables. Each data table is complemented by a separate metadata table. The EDORA database is composed of two sections.

1. Section one (internal project database) contains the internal project database. It is divided in 11 several folders named according to the thematic fields covered by the project (Demography, Employment, Urban Rural Relationships, Rural Business Development, Cultural Heritage, Services of General Interest, Institutional Capacity, Farm Structural Change, Climate Change). Each folder contains tables containing "enhanced Regio variables" that are raw data mainly derived from one or a combination of several publicly available statistical data sources. In addition to the thematic fields, the section also contains a sub-folder with the enhanced Regio variables selected for the future perspective and typology analysis. All in all section one of the database forms the basis for data based analyses and indicator building within the project and is not meant for publication or integration in the overall ESPON 2013 database.

2. Section two contains the core EDORA database. It consists of several spreadsheets (xls-files) with variables including the corresponding metadata information that have been defined or computed within the scope of the EDORA project. The naming of the data tables identifies for which task the indicator collection was built (e.g. EDORA_FP_INDICATOR.xls / METADATA_EDORA_FP_INDICATOR.xls for indicators used for the Future Perspective task). For easy integration of the data and metadata tables into the ESPON 2013 database the data tables as well as metadata tables have been formatted and structured according to the ESPON 2013 database project specifications described below.

2.2. Structure of the EDORA data- and metadata- tables

The data and metadata tables are in accordance with the ESPON 2013 database project data and metadata specifications released on April 17th 2009. For clarification the main aspects of these specifications are reflected in the following paragraphs. Thereby the explanation of the ESPON 2013 database specifications are taken – in part literally - from the "Guidelines for metadata adapted to territorial units within ESPON 2013 projects" compiled by the ESPON 2013 database project team.

2.2.1 Structure of data tables

Figure 1 gives an example of the main structure of the data tables within the EDORA database.

Figure 1: Structure of the data tables

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	id	level	GDP_eur	categ	GDP_eur	categ	GDP_eur	categ	GDP_eur	categ	GDP_eur	categ	GDP_eur	categ	GDP_eur	category7	
2	TEMPORAL_START		2000		2001		2002		2003		2004		2005		2006		
3	TEMPORAL_END		2000		2001		2002		2003		2004		2005		2006		
4	AT111	NUTS3	569,488763	1	597,702603	1	615,525666	1	645,705883	1	657,788543	1	680,426966	1	706,096386	1	
5	AT112	NUTS3	2503,7484	1	2582,29661	1	2748,83134	1	2808,37833	1	3070,41937	1	3164,59586	1	3265,28140	1	
6	AT113	NUTS3	1519,378224	1	1573,950188	1	1678,303794	1	1693,872282	1	1692,723974	1	1728,262294	1	1768,00347	1	
7	AT121	NUTS3	4623,766897	1	4706,514226	1	4704,933194	1	4861,590354	1	5111,668838	1	5289,126416	1	5721,858675	1	
8	AT122	NUTS3	4605,966062	1	4729,759005	1	4821,200077	1	4965,522466	1	5136,068212	1	5313,546307	1	5573,78431	1	
9	AT123	NUTS3	3486,73856	1	3548,702871	1	3689,53575	1	3822,269242	1	3954,916701	1	4149,161499	1	4373,718933	1	
10	AT124	NUTS3	4009,638089	1	4043,484588	1	4132,457209	1	4218,095793	1	4431,813555	1	4516,569861	1	4675,392826	1	
11	AT125	NUTS3	1724,455893	1	1731,182561	1	1707,462223	1	1743,627016	1	1823,29867	1	1794,861997	1	1891,815769	1	
12	AT126	NUTS3	4699,420446	1	4862,586311	1	4933,037746	1	5076,088542	1	5577,475067	1	5765,314293	1	6192,602552	1	
13	AT127	NUTS3	9300,936299	1	9006,798273	1	9393,256834	1	9600,452365	1	10319,82611	1	10911,25135	1	11728,81575	1	
14	AT130	NUTS3	56754,62481	1	58422,10886	1	60814,22357	1	61542,18347	1	63021,66029	1	66179,01491	1	68743,28992	1	
15	AT211	NUTS3	6963,46415	1	7130,288304	1	7284,128767	1	7350,352238	1	7725,023766	1	8076,323988	1	8464,596392	1	
16	AT212	NUTS3	2294,082613	1	2368,645913	1	2412,90918	1	2403,680169	1	2548,758738	1	2615,148339	1	2811,218436	1	
17	AT213	NUTS3	2634,523583	1	2750,507053	1	2877,994932	1	2986,357009	1	3124,392239	1	3265,605439	1	3562,644748	1	
18	AT221	NUTS3	11201,17544	1	11442,55208	1	11495,36952	1	12098,48954	1	12717,23117	1	13407,63022	1	14123,49954	1	
19	AT222	NUTS3	1622,101091	1	1663,586358	1	1721,924632	1	1737,043234	1	1859,840994	1	1934,721373	1	2025,535925	1	
20	AT223	NUTS3	3610,231853	1	3735,59811	1	3677,499488	1	3700,753473	1	3835,020964	1	4186,901331	1	4594,750887	1	
21	AT224	NUTS3	4348,966506	1	4577,906306	1	4678,541204	1	4716,885066	1	4948,485697	1	5074,897371	1	5340,652006	1	
22	AT225	NUTS3	3020,579193	1	3125,72713	1	3224,594553	1	3370,151355	1	3562,199924	1	3695,173523	1	3887,526124	1	
23	AT226	NUTS3	2099,38598	1	2127,353946	1	2144,931198	1	2129,564144	1	2208,07598	1	2224,430081	1	2383,568462	1	
24	AT311	NUTS3	4919,705779	1	4986,490591	1	5203,188714	1	5345,883462	1	5673,625339	1	6005,073224	1	6295,258034	1	
25	AT312	NUTS3	17388,07816	1	17952,47301	1	18479,68003	1	19026,25907	1	19719,06414	1	20831,27712	1	21864,88867	1	
26	AT313	NUTS3	2819,207247	1	2903,344022	1	2932,122519	1	2966,495415	1	3109,625772	1	3253,395493	1	3476,370331	1	
27	AT314	NUTS3	3710,36155	1	3748,999696	1	3889,934444	1	3969,332292	1	4168,717289	1	4435,540222	1	4706,2496	1	
28	AT315	NUTS3	5133,315799	1	5144,77431	1	5255,231674	1	5259,641702	1	5446,281087	1	5945,133491	1	6216,802124	1	
29	AT321	NUTS3	412,72624	1	396,250111	1	427,429886	1	430,103137	1	414,776703	1	451,767986	1	475,127021	1	
30	AT322	NUTS3	3849,144986	1	3873,953596	1	3981,963397	1	4114,174222	1	4225,399038	1	4455,520133	1	4710,387186	1	
31	AT323	NUTS3	10733,10718	1	10878,0617	1	11066,66913	1	11289,93093	1	12034,06954	1	12501,87426	1	13241,67958	1	
32	AT331	NUTS3	854,49402	1	906,560231	1	915,762995	1	917,700781	1	953,764612	1	1047,781095	1	1129,323102	1	
33	AT332	NUTS3	7720,486982	1	7918,842362	1	8122,275171	1	8240,510744	1	8502,92242	1	9072,629946	1	9529,630558	1	
34	AT333	NUTS3	912,350385	1	925,377721	1	935,694958	1	946,448034	1	984,817413	1	1083,299098	1	1155,84341	1	
35	AT334	NUTS3	2366,54789	1	2432,990706	1	2552,398673	1	2701,136153	1	2857,966751	1	2986,842083	1	3091,82587	1	
36	AT335	NUTS3	5771,172499	1	6030,451942	1	6289,64185	1	6493,56227	1	6757,311374	1	7254,552156	1	7775,975213	1	
37	AT341	NUTS3	2269,606465	1	2430,62917	1	2536,616241	1	2537,497941	1	2754,827089	1	2918,176988	1	3077,460703	1	
38	AT342	NUTS3	7075,831921	1	7242,079536	1	7502,449431	1	7592,591879	1	7851,922621	1	8237,273271	1	8713,026084	1	

Source: ESPON 2013 database project

- The first column is dedicated to the NUTS code.

- The second column is dedicated to the NUTS level describing the territorial unit (NUTS0, NUTS1, NUTS2, NUTS3)

- From the 3rd column onwards the variable/indicator values are saved. Thereby the indicator code is mentioned in the first line followed by the period of reference in the second and third lines. The second line defines the temporal start (1st January of the year) and the third line the temporal end (31st December of the year). In the case of indicators measured at precise instants of time the temporal start and the temporal end will be the same. For indicators measured over a time-period they will be different.

- The linkage between data and data source has to be precise in the data model. Thus just after the column describing the values of the indicator, a corresponding column called “category” is introduced which makes the link between the value and the data scope (described by “label” in the metadata file).

- If data is missing for a region and indicator the corresponding cell remains empty (no -9999, N/V, etc.).

2.2.2 Structure of metadata tables

Each data spreadsheet is accompanied by a separate metadata spreadsheet that is composed of metadata about the whole dataset (dataset_metadata, see figure 2), metadata about each indicator (section identification) and metadata about each record (section lineage/scope) (indicator_metadata, see figure 3).

Figure 2: Structure of the dataset_metadata tables

	A	B	C	D	E	F	G
1	**Metadata information**						
2	**point of contact**						
3		**email**	manager@espondb.eu	an email			
4		**organization**	"ESPON 2013 Database project"	ESPON internal project name ou "ESPON DB 2013"			
5		**last update date**	15/04/2009	a date : DD/MM/YYY			
6	**data filename**	ESPON_basic_indicators_2003.xls					
7	**Constraint information**	This rubrique is optional : fill if the data comes with a particular right for use and diffusion					
8	**copyright**	ESPON 2013 Program	free text : the copyright attached to the provided data				
9	**use rights**	free	free text : usage is authorized				
10	**access rights**	free	free text : further diffsuion of this dataset is authorized				
11	**metadata read right**	yes	boolean : indicates whether metadata could be exposed on ESPON DB web site				
12	**Maintenance information**						
13	**productionRegular**	Yes	if some new acquisition are planned out for some sub-set of units, precise this by free text				
14	**productionFrequency**	yearly	indicates to the user if can can expect further acquisition of those data, and in which time.				
15	**Spatial representation Information**						
16	**nomenclature**	NUTS	or WUTS, or UMZ, etc...				
17	**version**	2003	free text				
18							

Source: ESPON 2013 database project

Figure 3: Structure of the indicator_metadata tables

	A	B	C	D	E	F	G
1	**Identification**						
2	**code**	activ					
3	**name**	Active population			free text		
4	**units**	Thousands inhabitants			free text or choose in a list		
5	**Methodology**				free text, Methodology used to caclulate the		
6	**abstract**	Economically active population (both sex) (15 years and over)			free text		
7	**language**	english					
8	**Classification**						
9		**theme***	Economy, social	use a thesaurus (GEMET, SDMX or other)			
10		**keywords***	Active, work force	use a thesaurus (GEMET, SDMX or other)			
11	**Temporal extent**						
12		**start**	2003				
13		**end**	2003				
14	**Lineage**						
15	**scope**						
16		**label**	1				
17		**temporal**					
18			**start**	2003			
19			**end**	2003			
20		**lineage**					
21			**provider**	EUROSTAT			
22			**date**	07/2007			
23			**URL**	http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_3			
24			**methodology**				
25		**Reliability**					
26			**Official**	Yes	yes / no		
27			**estimation**	No	yes / no		
28			**Quality**	High	low - medium - high		
29							
30	**scope**						
31		**label**	2				
32		**temporal**					
33			**start**	2004			
34			**end**	2004			
35		**lineage**					
36			**provider**	EUROSTAT			
37			**date**	07/2008			
38			**URL**	http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_3			
39			**methodology**				
40		**Reliability**					
41			**Official**	Yes	yes / no		
42			**estimation**	No	yes / no		
43			**Quality**	High	low - medium - high		

Active population is measured at a precise instant of time: 2003

The instant of measure of label (or source) 1 and 2* is 2003, e.g. the same than the indicator

The instant of measure of label 2 is 2004. It means that data of territorial units defined by label 2 describe active population in 2004 instead of 2003.

Source: ESPON 2013 database project

From a thematic point of view, some indicators can not be understood without taking into account the whole dataset instead of a single indicator. This is for example the case for age pyramids. As for such indicators it makes more sense to describe the different indicators composing the dataset within one indicator_metadata table instead of creating a indicator_metadata table for every single indicator they are saved as a so called contingency table (see figure 4).

Figure 4: Structure of the indicator_metadata contingency tables

	A	B	C	D	E	F	G
1	**Identification**						
2	**LIST OF HOMOGENEOUS INDICATORS CLASSED IN A CATEGORY (age pyramid, or CSP for example)**						
3	**code**	**name**	**abstract**				
4	AGE_0-4_m	0-4 years, males	Population aged between 0 and 4 years, males				
5	AGE_5-9_m	5-9 years, males	Population aged between 5 and 9 years, males				
6	AGE_10-14_m	10-14 years, males	Population aged between 10 and 14 years, males				
7	AGE_15-19_m	15-19 years, males	Population aged between 15 and 19 years, males				
8	AGE_20-24_m	20-24 years, males	Population aged between 20 and 24 years, males				
9	AGE_25-29_m	25-29 years, males	Population aged between 25 and 29 years, males				
10	AGE_30-34_m	30-34 years, males	Population aged between 30 and 34 years, males				
11	AGE_35-39_m	35-39 years, males	Population aged between 35 and 39 years, males				
12	AGE_40-44_m	40-44 years, males	Population aged between 40 and 44 years, males				
13	AGE_45-49_m	45-49 years, males	Population aged between 45 and 49 years, males				
14	AGE_50-54_m	50-54 years, males	Population aged between 50 and 54 years, males				
15	AGE_55-59_m	55-59 years, males	Population aged between 55 and 59 years, males				
16	AGE_60-64_m	60-64 years, males	Population aged between 60 and 64 years, males				
17	AGE_65-69_m	65-69 years, males	Population aged between 65 and 69 years, males				
18	AGE_70-74_m	70-74 years, males	Population aged between 70 and 74 years, males				
19	AGE_75-79_m	75-79 years, males	Population aged between 75 and 79 years, males				
20	AGE_80+_m	80+ years, males	Population above 80 years, males				
21	AGE_0-4_f	0-4 years, females	Population aged between 0 and 4 years, females				
22	AGE_5-9_f	5-9 years, females	Population aged between 5 and 9 years, females				
23	AGE_10-14_f	10-14 years, females	Population aged between 10 and 14 years, females				
24	AGE_15-19_f	15-19 years, females	Population aged between 15 and 19 years, females				
25	AGE_20-24_f	20-24 years, females	Population aged between 20 and 24 years, females				
26	AGE_25-29_f	25-29 years, females	Population aged between 25 and 29 years, females				
27	AGE_30-34_f	30-34 years, females	Population aged between 30 and 34 years, females				
28	AGE_35-39_f	35-39 years, females	Population aged between 35 and 39 years, females				
29	AGE_40-44_f	40-44 years, females	Population aged between 40 and 44 years, females				
30	AGE_45-49_f	45-49 years, females	Population aged between 45 and 49 years, females				
31	AGE_50-54_f	50-54 years, females	Population aged between 50 and 54 years, females				
32	AGE_55-59_f	55-59 years, females	Population aged between 55 and 59 years, females				
33	AGE_60-64_f	60-64 years, females	Population aged between 60 and 64 years, females				
34	AGE_65-69_f	65-69 years, females	Population aged between 65 and 69 years, females				
35	AGE_70-74_f	70-74 years, females	Population aged between 70 and 74 years, females				
36	AGE_75-79_f	75-79 years, females	Population aged between 75 and 79 years, females				
37	AGE_80+_f	80+ years, females	Population above 80 years, females				
38							
39	**Methodology**		Methodology used to caclulate the indicator (in the case of complex indicators, typologies)				
40							
41	**language**	english					
42	**units**	Inhabitants			free text or choose in a list		
43	**Classification**						
44		**theme***	demography	use a thesaurus (GEMET, SDMX or other)			
45		**keywords***	population	use a thesaurus (GEMET, SDMX or other)			
46	**Temporal extent**						
47		**start**	2005				
48		**end**	2030				

List of indicators of the contingency table

Source: ESPON 2013 database project

For a more detailed description of the ESPON 2013 database data table specifications please refer to the "Guidelines for metadata adapted to territorial units within espon 2013 projects" compiled by the ESPON 2013 database project team in April 2009 released on the ESPON intranet.

3. CONTENT OF THE EDORA DATABASE

In following, the data sources and contents of section one (internal project database) and section two (core EDORA database) of the EDORA database are described.

3.1. Main data sources

The indicators contained in the core EDORA database are based on the collected enhanced REGIO variables contained in the internal project database and which have been extracted from following main data sources (see variable respectively indicator metadata tables contained in the database for a variable per variable/indicator per indicator overview of data sources).

(a) Eurostat New Cronos REGIO Database

The REGIO database, a domain of the General Statistics of the New Cronos Database, is a harmonised regional database maintained by the Statistical Office of the European Communities. It contains the following 13 different socio-economic data collections: agricultural statistics, demographic statistics, economic accounts, education statistics, labour market statistics, migration statistics, science and technology, structural business statistics, health statistics, tourism statistics, transport statistics, labour cost statistics and information society statistics. Depending on the specific data topic, data is available at the NUTS 0, NUTS 1, NUTS 2 or NUTS 3 levels.

(b) ESPON Database Public Files

The ESPON (European Spatial Planning Observation Network) Database Public Files (version March 2006) provided by the finalised ESPON projects, covering the EU27 as well as Switzerland and Norway, provide regional information on the NUTS 0, NUTS 1, NUTS 2 and NUTS 3 levels. It includes a selection of indicators, summarised in thematic tables organised in two sections - ESPON Basic Indicators and ESPON Project Indicators, based on the themes and categories of the ESPON Data Navigator. The status of the indicators is based on the duration and finalisation of different ESPON projects. Therefore, the time range of the indicators presented varies as well as the use of different NUTS references (version 1999 and version 2003). In general the ESPON Database represents a concerted action of the Transnational Project Groups, and is co-ordinated and maintained by the cross-thematic ESPON projects – Integrated Tools for European Spatial Development (Project 3.1) and Spatial Scenarios and orientations in relation to the ESDP and EU Cohesion Policy (Project 3.2).

(c) Rural Development in the European Union - Statistical and Economic Information - Report 2007

The Rural Development in the European Union report (Directorate-General for Agriculture and Rural Development, 2007) was generated by the Directorate-General for Agriculture and Rural Development in November 2007. It provides, at national and regional levels, statistical and economic information covering the three objectives of Rural Development Policy 2007-2013. It also gives a synthesis of the implementation of Rural Development Policy for the programming period 2000-2006 both in terms of budget and measures monitoring.
The report contains statistical and scientific information on the main features of rural areas, as well as administrative information on the status of the implementation of Rural Development Policy (physical and financial monitoring of the measures). In order to ensure the highest relevance of the data to current issues in rural development, priority has been given to the set of the CMEF baseline indicators. Where possible and relevant, time series have been elaborated for these indicators. Prospects are also presented for a selection of some of them (http://ec.europa.eu/agriculture/agrista/rurdev2007/index_en.htm).

(d) European Cluster Observatory project

The European Cluster Observatory provides a wide variety of data on clusters in Europe and is divided into the four main sections:

- Cluster mapping: regional clusters based on 38 cluster categories (agglomeration of employment in co-located industries) in 259 NUTS 2 regions. This section now also incorporates cluster organisations;

- Cluster organisations: maps and lists of regional/local private-public partnerships focused on cluster improvements;

- Cluster policies: reports on national and regional cluster policies and programmes;

- Cluster library: including cluster cases and other cluster-related documents.

(e) Regional Innovation Scoreboard variables

The European Innovation Scoreboard (EIS) benchmarks on an annual basis the innovation performance of Member States, drawing on statistics from a variety of sources, including the Community Innovation Survey. It is increasingly used as a reference point by innovation policy makers across the EU (http://www.proinno-europe.eu/admin/uploaded_documents/RIS_2009-Regional_Innovation_Score-board .pdf).

(f) Service indicators generated by the Institute of Spatial Planning (IRPUD)

The Institute of Spatial Planning at the University of Dortmund maintains a collection of different indicators about general services indicators that have been collected or computed within the scope of different research projects. The website of IRPUD can be reached via following link: www.raumplanung.uni-dortmund.de/irpud/en/about/

(g) Indicators generated for the "Study on Employment in Rural *Areas" (SERA)*

Copus, et al (2006) conducted a "Study on Employment in Rural Areas". Within the scope of this study several indicators describing the performance of rural areas throughout Europe have been collected and calculated. Detailed information about the SERA study can be found on following webpage: http://ec.europa.eu/agriculture/ publi/reports/ruralemployment/sera_report.pdf

(h) Statistical Yearbook 2008 from Croatia

Annually, the Republic of Croatia publishes a core collection of regionalized socio-economic indicators. For the project the current statistical yearbook from 2008 has been used.

(i) Online database of the Turkish Statistical Institute

The statistical office of Turkey maintains an online database with regionalized socio-economic data for Turkey. The database can be accessed via following link: http://www.turkstat.gov.tr

(j) State Statistical Office of Macedonia (FYROM)

Similar to Turkey, the Statistical Office of Macedonia maintains an online database containing some core socio-economic indicators. All in all the data available on-line

are very limited and some sections of the online database are only published in Cyrillic. The database can be accessed via following link: http://www.stat.gov.mk/english/glavna_eng.asp

3.2. Section one: internal project database

Section one of the EDORA database (internal project database) contains the indicators (enhanced Regio variables) that have been identified as potentially useful by the thematic experts at the beginning of the project. All in all the internal project database contains approximately 1373 single indicators (thereof approximately 800 single NACE indicators). The data tables in section one are not meant for integration in the ESPON 2013 database and are structured close to the ESPON 2013 database specifications. For an overview about the data sources, year of reference etc. please see the metadata tables accompanying each single data table contained in section one. A detailed overview of the indicators respectively groups of indicators contained in this section is given in annex 1.

3.3. Section two EDORA indicator database

Section two of the EDORA database contains the core EDORA database. It consists of a collection of indicators used for the country profiles, the future perspectives analysis and the regional typology. The data tables in this section are meant for integration in the ESPON 2013 database and are structured according to the ESPON 2013 database specifications described above.

3.3.1 Country profiles indicators

Following indicators are contained in the EDORA_COUNTRY_PROFILES_DATA table. For a detailed description of the single indicators please consult the corresponding metadata table in the EDORA indicator database. For a detailed description of data availability please see annex 2.

Indicator	Base year	Indicator	Base year
OECD R/U	2006	NACE v11210 k	2006
population total	2001	NACE v16110 c	2006
population 0_14 A	2001	NACE v16110 d	2006
population 15_64 A	2001	NACE v16110 e	2006
population >64 A	2001	NACE v16110 f	2006
Age dependency rate A	2001	NACE v16110 g	2006
Population change	2001, 2007	NACE v16110 h	2006
population total	2007	NACE v16110 j	2006
population 0_14	2007	NACE v16110 k	2006
population 15_64	2007	Empl. High/medium tech Media	2004
population >64	2007	Empl. High/medium tech EU25	2004
Age dependency rate B	2007	firms with own website	2002
natural pop. increase A	2001	Area	2000
natural pop. increase B	2006	Evolution density	2000-2006/2007
natural pop. increase change	2001,-2006	Density	2006, 2007
Net migration A	2001	Daily pop. accessible by car	1999
Net migration B	2006	broadhand access	2008
Net migration change	2001- 2006	internet at home	2008
ISCED 0_2	2007	students ISCED_0	2005, 2006
ISCED 3_4	2007	students ISCED_1	2005, 2006
ISCED 5_6	2007	students ISCED_2	2005, 2006

Indicator	Base year	Indicator	Base year
LLL in Rural Areas	2000	students ISCED_3	2005, 2006
empl. rate T15_64	2007	students ISCED_4	2005, 2006
empl. rate TM15_64	2007	students ISCED_5_6	2005, 2006
empl. rate TF15_64	2007	hospital beds	2005
empl. rate T15_24	2007	Evolution hospital beds	2000-2005
empl. rate >T45	2007	density of hospitals	2004
empl. rate T45_54	2007	hospital beds per head	2004
empl. rate T55_64	2007	doctors per inhabitant	2004
Emp_primary	2005	time to nearest hospital	2004
Emp_secondary	2005	time to nearest university	2004
Emp_tertiary	2005	density of motorways	2004
Unemployment rate	2006, 2007	density of trunk road	2004
Unemployment	2006, 2007	density of railways	2004
Unemployment	2002	time to nearest airport	2004
Unemployment evolution	2002, 2007	Total Holdings	2005
unempl. evolution T> 15	2000-2005	Holdings < 2 ESU	2005
unempl. evolution T 15_24	2000-2005	Holdings 2 to 100 ESU	2005
unempl. evolution T >25	2000-2005	Holdings >100 ESU	2005
unempl. evolution M> 15	2000-2005	Change total holdings	2000-2005
unempl. rate T>15	2006, 2007	Change holdings less 2 ESU	2000-2005
unempl. rate TM>15	2006, 2007	Change holdings 2 to 100 ESU	2000-2005
unempl. rate TF>15	2006, 2007	Change holdings over 100 ESU	2000-2005
unempl. rate T15_24	2006, 2007	Holders full time	2000, 2005
unempl. rate T>25	2006, 2007	Change Holders full time	2000-2005
LTU A	2007	Economic Farm Size	2007
LTU B	2002	Farmers with OGA	2003
Evolution of LTU	2002-2007	holders > 55	2007
NACE v11210 c	2006	holders < 35	2007
NACE v11210 d	2006	change holders > 55	2000-2005
NACE v11210 e	2006	change holders < 35	2000-2005
NACE v11210 f	2006	agricultural education	2000
NACE v11210 g	2006	GDP Mio.	2005
NACE v11210 h	2006	GDP PPS	2005
NACE v11210 j	2006	GDP EU average	2005

3.3.2 Future perspective indicators

Following indicators are contained in the EDORA_FP_DATA table. For a detailed description of the single indicators please consult the corresponding metadata table in the EDORA indicator database. For a detailed description of data availability please see annex 3.

Indicator	Indicator
population density 2007	unemployment rate 2008
net migration (rate) 2001-2005	% employment in primary sector 2006
natural increase (rate) 2001-2005	% GVA from primary sector 2006
% of population >65 2006	ratio of secondary to private services employment 2006
child dependency rate 2006	ratio of secondary to private services GVA 2006
aged dependency rate 2006	average farm holding size 2005
dependency rate (total) 2006	% of holdings <2 ESU 2005
GDP per capita 2006	% of holdings >100 ESU 2005
economic activity rate 2008	access to natural areas 2008
employment rate 2006	bed places per capita 2006-2008

3.3.3Typology indicators

Following indicators are contained in the EDORA_TYPOLOGY_DATA table. For a detailed description of the single indicators please consult the corresponding metadata table in the EDORA indicator database. For a detailed description of data availability please see annex 4.

Indicator	Indicator
% Employment in primary activities 2006	% of holdings <4 ESU 2005
% private sector employment in primary activities 2006	ratio of GVA from NACE CE to GK 2007
% private sector GVA from primary activities 2006	ratio of GVA from NACE CE to GP 2007
% GVA from primary activities 2006	ratio of GVA from NACE CF to GP 2007
AWU as a % of total private employment 2007	ratio employment in NACE CE to GK 2007
% of employmet in hotels and catering 2007	ratio employment in NACE CE to GKP2007
bed places per capita 2006-2008	net migration (rate) 2001-2005
nights spent by residents per capita 2008	GDP per capita 2007
nights spent by non-residents per capita 2008	average annual change in GDP 1995-2006
nights spent (total) per capita 2008	aerage annual change in total employment 1995-2006
access to natural areas 2008	unemployment rate 2008
% of holdings with OGA 2005	

4. DECISION ON SPATIAL REFERENCE, YEAR OF REFERENCE AND MISSING VALUE TREATMENT

The spatial reference is NUTS 2006. As already expressed in the “Wye Group Handbook on rural Households’ Livelihood and Well-Being” much of the EU – wide available data does not go beyond NUTS 2. This is a recurring problem for many of the required variables, with data for several only provided at country level rather than

district level or even regional level. Even when data is collected at NUTS 2 or NUTS 3 level there are problems with lack of harmonization. Data may exist, for example, for some countries in the year 1994 and 1996, and yet, for others it is only available for 1995 and 1997, thus making country comparisons for the same year impossible. To add further confusion to the issue, in the years that NUTS 3 or NUTS 2 data exists there are often internal country data gaps. Althought data may be provided at either NUTS 2/3 for a certain year, it might not be a "full set", with possibly one fifth of the data missing (United Nations, 2007, p. 112).
Therefore following two ways have been utilized to mitigate the "data gaps problem":

1. As far as possible for most of the enhanced Regio variables the most recent year data is available for one region has - in addition to the reference year choosen – also been defined in order to get data sets with as few data missing as possible.

2. Missing data at NUTS 3 level have been filled by existing data of the corresponding superordinate NUTS 2 region. (Accordingly treated datasets are marked in the data and metadata files of the enhanced Regio variables).

It was consciously decided for this approach and against the more sophisticated ESTI framework for estimating missing values recommended in the "ESPON Handbook on Data Collection" for following reasons:

- Because of the amount of enhanced Regio variables indicated as needed by the thematic experts it is quite impossible to perform the missing value computation procedures on all indicators in the time allocated and available for indicator acquisition and database maintainance.

- Previous experiences with EU-wide data sets have shown, that either data at a specific NUTS level are totally missing for regions belonging together so that spatial estimation procedures can not be applied or that quite often data gaps in time series are huge so that values computed based on available values would not make much sense (e.g. computation of 2007 value out of 2000 value and 2006 value as the only years with data available).

5. REMARKS DUE TO CHANGES IN THE NUTS CLASSIFICATION JANUARY 2008

The NUTS nomenclature was introduced in the EU in 1980 as a basis for statistical data collection. It covers the member states of the EU as well as the EFTA- and CEC- countries. It is a geocode standard for referencing the administrative divisions of countries for statistical purposes. The NUTS divisions are oriented on the administrative divisions within the countries but it does not necessarily correspond with it.
In practice, however, the definition is not easily applicable as there are two problems with these units that should be beard in mind when working with NUTS as a spatial and statistical reference:
First they are based on national statistical units. While for example the size of NUTS 3 areas averages out to about 5000 km² in the New Member States, they come down to 1000 km² in rural and 100 km² in urban areas in Germany. So, when comparing countries the NUTS units differ in size, population, economic strength, etc. and are therefore not really comparable across nations. Second, many NUTS units consist of both urban and rural areas. Applying these units when analysing rural areas will, therefore, neither provide genuine urban nor genuine rural areas (cp. Bjørnsen, et al: 2007).

Apart from problems that may arise from the heterogeneity of the NUTS regions one might also be confronted with data allocation problems when analyzing data collected at different years or for different projects as a result of the revisions the NUTS regions have been subjected to 1999 (NUTS 1999), 2003 (NUTS 2003) and 2008 (NUTS 2006). Especially the 2008 revision has significant consequences for the EDORA project as especially at NUTS 3 level mayor code changes took place as reaction to local government reforms in the Member States, so that data collected prior to 1st January 2008 can not be allocated 1:1 to the new regions. As reaction some database operators as for example EUROSTAT withdrew any data for regions where data could not be allocated 1:1 to the new regions so that for this regions data will only be available if it has been collected anew.
In order to mitigate the data allocation problem data with NUTS 1999 and NUTS 2003 as spatial reference are approximately allocated to the current NUTS version (NUTS 2006) in such a way that regions that came into effect by splitting 2003 NUTS regions have been assigned to the corresponding single 2003 NUTS region with the help of a table provided by DG-Agri. Furthermore 2006 NUTS regions that came into effect as a result of minor border changes (visually recognized by comparing old and new regions within a GIS) within NUTS 2003 regions have been assigned to the NUTS 2006 region whose area corresponds for the most part to the new NUTS 2006 area.

Because of the recent change in the NUTS geocode there will be inevitably regions with data gaps as either an allocation of data collected prior to the change in the geocode is not possible or data for outdated geocodes are not available anymore until new data have been collected. Because for some regions an allocation of NUTS 2003 values to NUTS 2006 values can only be done approximately the allocated data will not be 100% exact for the regions affected (e.g. for regions with minor border changes which as a result will affect the regions area). Nevertheless at present this seems to be the only practical solution to prevent having a lot of regions with missing data for indicators that are only available for NUTS 2003.

6. REGIONAL COVERAGE OF THE EDORA DATABASE

The EDORA database covers the 27 EU Member States as well as Norway, Iceland, Liechtenstein, Switzerland, Macedonia, Croatia, and Turkey. Whereas especially for the last three states the data coverage as well as data availability is extremely fragmentary.
As shown in an analysis about the availability and quality of data on Western Balkans and Turkey amongst others within the scope of the ESPON 2013 FOCI report (2008) and ReRisk study (2008) the data situation for these countries can be summarized as follows:

- **Albania:** No official NUTS classification exists but Albania's prefectures could be assimilated to NUTS 3.

- **Bosnia and Herzegowina:** No official NUTS classification exists. Bosnia's and Herzegovina's administrative units can not be associated with corresponding NUTS levels because the magnitudes of the population of the units belonging to each administrative level are dissimilar.

- **Serbia:** No official NUTS classification exists. National demographic and economic data is publicily available from the Serbian Statistical Yearbook, which contains most necessary demographic and economic data.

- **Croatia:** Croatia has already adopted the EU NUTS classification. Experiences in former projects revealed that although EUROSTAT included

Croatia's NUTS regions as entity in its New Cronos Regio Database data are missing nearly for all socio-economic themes. Agricultural data as well as selected socio-economic data are available. Nevertheless an analysis of the current statistical yearbook as well as online available data files showed, that for most of the indicators requested by the thematic experts within the project either no data was available or the indicators available are defined different compared to the EUROSTAT indicators.

- **Former Yugoslav Republic of Macedonia (FYROM):** FYROM has already adopted the EU classification of spatial units in NUTS. Experiences in former projects revealed that although EUROSTAT included Croatia's NUTS regions as entity in its New Cronos Regio Database data are missing nearly for all socio-economic themes. All in all overall data accessibility for FYROM is more limited than in the rest of the Western Balkan countries, since the Website of the statistical office is in most parts only available in Cyrillic and several attempts to contact the statistical office failed.

- **Montenegro:** No official NUTS classification exists. Basic socio-economic data are publicly available online.

- **Kosovo:** No official NUTS classification exists. As stated in the FOCI assessment the districts could in principle be assimilated to NUTS 3 units but not without difficulties. Basic socio-economic data are publicly available online.

- **Turkey:** Although NUTS regions are well established in Turkey, and statistical data is already included in EUROSTAT's New Cronos Regio Database, experiences in other projects have shown that the overall data availability for Turkey is still very fragmentary – i.e. most of the data are missing- throughout all NUTS levels and socioeconomic themes. Basic socio-economic data is publicly available online.

All in all as already stated within the ESPON 2013 FOCI and ReRisk projects the data situation concerning the Western Balkan Countries can be globally defined as poor whereas data seems for the most part only be available at country level as there is generally no break–down of data to lower administrative levels (cp. ReRisk inception report, 2008). Furthermore with exception of Croatia and FYROM all other countries have not adopted the NUTS system, yet, which hinders the development of a sound and in a scientific sense reliable data basis comparable to the established NUTS system considerably. In addition an allocation of Western Balkan countries' administrative regions to somehow self defined NUTS-equivalents – which is besides well beyond the scope and feasibility of the project - will inevitably result in data useless for other purposes or projects as such an allocation will in all likelihood not be comparable to similar efforts done in other projects or for other purposes. Furthermore several requests to the thematic experts within the project revealed that there was no real need for additional national data for the above mentioned countries in order to complete their tasks.

Taking into consideration all this aspects it was decided not to dissipate one's energies with trying to compile data files for the above mentioned regions not needed to achieve the actual project targets. So, considering the urgent overall data needs of the thematic experts the building of a sound operational core project database had been given priority.

7. DATA MANIPULATION TOOLS DEVELOPED

In order to ease the data acquisition process as well as the data analysis several tools have been developed within the scope of activity 2.21 – development of indicator database. The tools are programmed in perl and with SDMT as exception are command tool based. Following developed tools are provided together with the database as they might be helpful for future data processing purposes. They might be copied shared with others, used or altered. Please be aware that the tools are provided on a as they are basis without any warranty of any kind, functionality or fitness for any purpose express or implied. In no circumstance can the author, the vTI or the EDORA project team be held liable for damage of any kind resulting from the use of or in connection with the use of any of the given information, regardless of whether it is direct or indirect damage, resultant damage or specific damage including profit loss or damage resulting from the loss of data. This applies even in cases in which a representative of the vTI or EDORA project team has been made aware of such possible damage.

The perl *.pl files can only be used together with a perl interpreter, the executable *.exe files can be used on every up-to-date windows computer.

7.1. RecentYear

This program is meant to process Eurostat time-series *.tsv-files so that additional columns are added automatically which contain the value of the most recent year data is available for every region contained in the original time-series *.tsv-file, the flag for this date and the temporal reference. The tool is command tool based and self-explaining.

7.2. ESTI_TIME

This program estimates missing data in time series based on data available before and after the year missing. The calculation procedure follows the rules defined within the ESPON project 3.2 for estimating missing values based on temporal dimensions. It aso performs a simple probability check based on a consideration if the value is within the range of a user defined interval of standard deviation(s) below and above the mean of the available values. In the resulting file all estimated values bear the flag E. All values that are possible outliers due to the above mentioned rule bear the flag WE. The tool is command tool based and self-explaining. The input file must be a tsv-file that has following structure: NUTS_code TAB year1 TAB year2 TAB...; the header must contain the years in the same order as they are recorded in the EUROSTAT tsv-files. The input file may not contain any non numeric values except in the header and ID column but empty values are allowed.

The program performs following computations:

a) value time 1 < value time to estimate < value time 2

This method uses the two closest neighbours placed in time before and after the value to be estimated. It uses following calculation method:

value to be estimated = value t1 + (value t2 – value t1)/t2-t1 * (t-t1)

b) value time to estimate < value time 1 < value time 2

This method uses the two closest neighbours placed in time after the value to be estimated. It uses following calculation method:

value to be estimated = value t1 - (value t2 – value t1)/t2-t1 * (t1-t)

b) value time 1 < value time 2 < value time to estimate

This method uses the two closest neighbours placed in time before the value to be estimated. It uses following calculation method:

value to be estimated = value t2 - (value t2 – value t1)/t2-t1 * (t-t2)

7.3. SPATIAL_REPLACEMENT

This program either summarizes values of regions with the same region code (e.g. you have NUTS 3 regions and want to have the NUTS 2 values) or it fills gaps in subordinate regions based on superordinate region values.
For the second option (fill gaps based on superordinate region values) you can either indicate a weight file (A weight file is a file containing percentages of superordinate region values that shall be applied to calculate missing values in subordinate regions based on this percentage by calculating the missing value based on the weight and available superordinate and subordinate region values. The weight file should look like this: NUTS_CODE tab Weight). If no weight file is indicated than if more than one subregion value is missing, the missing value will be calculated by subtracting available subregion values from the overall superordinate region value and deviding the result by the amount of regions missing (equal distribution to all missing regions).

The tool is command tool based and self-explaining. The input file must be a tsv-file that has following structure: NUTS_code TAB year1 TAB year2 TAB...; the header must contain the years in the same order as they are recorded in the EUROSTAT tsv –files (e.g. NUTS_ID 2001 2000 1999). The input file may not contain any non numeric values except in the header and ID column but empty values are allowed.

7.4. TSV_SEPARATE_FLAG

The program separates flags and data. The program reads original Eurostat *.tsv files and separates data from flags by adding a extra column for the flags for each date. Furthermore the program eliminates the "a00" expression in the Eurostat *.tsv year headers as well as the "\time" field indicating that in the *.tsv-file the time is indicated horizontally. In addition the program also separates the region code from the data descriptions that is separated by commas in the *.tsv-files. The ":" for missing data are preserved and have to be replaced by an appropriate numeric expression manually prior to implementing the outputfile in any database. The tool is command tool based and self-explaining.

7.5. TSV_SEPARATE_FLAG_AFTER_MOST_RECENT

The program does the same operations as the program TSV_SEPARATE_FLAG but it takes the output of the program RecentYear as input file. The tool is command tool based and self-explaining.

7.6. EUROSTAT_tsv_TO_ESPON

The program iterates over all EUROSTAT tsv-files contained in a directory and imports them into XLS-sheets that are in accordance with the ESPON 2013 database specifications. Furthermore the program drafts the metadata tables as required by ESPON 2013 database automatically. As not all required metadata can be read

directly from the tsv-file some manual metadata editing is required after the processing of data. The program eliminates all flags that might be contained in the tsv-files. Be aware that in order to function properly the EUROSTAT tsv-files must have the tsv-ending e.g. "example.tsv". If a tsv-file contains more rows or columns than MS-Excel is able to handle the program might not function as expected.

7.7. SDMT

The SDMT (Simple Data Mapping Tool) is a quite powerful tool. It has been developed within the vTI outside the EDORA project. It provides an interface capable of visualizing space-oriented SQL1-queries if connected with a MS-Access database. So the tool can be used as visualization frontend to MS-Access. Furthermore it enables to load data from csv-files ans MS-Excel sheets, too. Besides other functions the software is able to perform simple cluster analysis tasks on selected data (still experimental) and simple typology constructions. The program is mainly intended to provide an easily understandable “on the fly” overview of the spatial distribution of data but not to perform sophisticated spatial analyses or to draw publication quality maps. The tool allows to import polygon shapefiles for data visualization. For a detailed description of the SDMT, the required format of the input data- and shapefiles as well as its full functionality please refer to the manual provided together with the tool.

[1] SQL = Structured Query Language.

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ANNEX 1: OVERVIEW OF ENHANCED REGIO VARIABLES IN SECTION 1 OF EDORA DATABASE

availability for Croatia (HR) via Crostat's Statistical Yearbook 2008
available for Turkey (TR) via Turkstat's online database

A) Demography

- Total population in 1000 persons (for years 1990-2008)
- Birth in 1000 persons (for years 1990-2008)
- Death in 1000 persons (for years 1990-2008)
- Male population (for years 1990-2008, 2001, 2007)
- Female population (for years 1990-2008, 2001, 2007)
- Total population 0 – 14 (for years 1990-2008, 2001, 2007)
- Male population 0 – 14 (for years 1990-2008, 2001, 2007)
- Female population 0 – 14 (for years 1990-2008, 2001, 2007)
- Total population 15-64 (for years 1990-2008, 2001, 2007)
- Male population 15-64 (for years 1990-2008, 2001, 2007)
- Female population 15-64 (for years 1990-2008, 2001, 2007)
- Total population 65+ (for years 1990-2008, 2001, 2007)
- Male population 65+ (for years 1990-2008, 2001, 2007)
- Female population 65+ (for years 1990-2008, 2001, 2007)
- 5-Years age classes (total, male, female)
    - Total population 0 – 4 (for years 1990-2008, 2001, 2007)
    - Total population 5 – 9 (for years 1990-2008, 2001, 2007)
    - Total population 10 – 14 (for years 1990-2008, 2001, 2007)
    - Total population 15 – 19 (for years 1990-2008, 2001, 2007)
    - Total population 20 – 24 (for years 1990-2008, 2001, 2007)
    - Total population 25 -29 (for years 1990-2008, 2001, 2007)
    - Total population 30 -34 (for years 1990-2008, 2001, 2007)
    - Total population 35 – 39 (for years 1990-2008, 2001, 2007)
    - Total population 40 – 44 (for years 1990-2008, 2001, 2007)
    - Total population 45 – 49 (for years 1990-2008, 2001, 2007)
    - Total population 50 – 54 (for years 1990-2008, 2001, 2007)
    - Total population 55 – 59 (for years 1990-2008, 2001, 2007)
    - Total population 60 – 64 (for years 1990-2008, 2001, 2007)
    - Total population 65 – 69 (for years 1990-2008, 2001, 2007)
    - Total population 70 -100 (for years 1990-2008)
    - Total population 70 – 74 (for years 1990-2008, 2001, 2007)
    - Total population 75 – 79 (for years 1990-2008)
    - Total population 80 – 84 (for years 1990-2008)
    - Total population 85 – 89 (for years 1990-2008)
    - Total population 90 – 94 (for years 1990-2008)
    - Total population 99 (for years 1990-2008)
    - Total population 100 (for years 1990-2008)
    - Total population 110 (for years 1990-2008)
    - Population male (for years 1990-2008)
    - Population male 0 – 4 (for years 1990-2008, 2001, 2007)
    - Population male 5 – 9 (for years 1990-2008, 2001, 2007)
    - Population male 10 – 14 (for years 1990-2008, 2001, 2007)
    - Population male 15 – 19 (for years 1990-2008, 2001, 2007)
    - Population male 20 – 24 (for years 1990-2008, 2001, 2007)
    - Population male 25 -29 (for years 1990-2008, 2001, 2007)
    - Population male 30 -34 (for years 1990-2008, 2001, 2007)
    - Population male 35 – 39 (for years 1990-2008, 2001, 2007)

- Population male 40 – 44 (for years 1990-2008, 2001, 2007)
- Population male 45 – 49 (for years 1990-2008, 2001, 2007)
- Population male 50 – 54 (for years 1990-2008, 2001, 2007)
- Population male 55 – 59 (for years 1990-2008, 2001, 2007)
- Population male 60 – 64 (for years 1990-2008, 2001, 2007)
- Population male 65 – 69 (for years 1990-2008, 2001, 2007)
- Population male 70 -100 (for years 1990-2008)
- Population male 70 – 74 (for years 1990-2008, 2001, 2007)
- Population male 75 – 79 (for years 1990-2008)
- Population male 80 – 84 (for years 1990-2008)
- Population male 85 – 89 (for years 1990-2008)
- Population male 90 – 94 (for years 1990-2008)
- Population male 99 (for years 1990-2008)
- Population male 100 (for years 1990-2008)
- Population male 110 (for years 1990-2008)
- Population female (for years 1990-2008)
- Population female 0 – 4 (for years 1990-2008, 2001, 2007)
- Population female 5 – 9 (for years 1990-2008, 2001, 2007)
- Population female 10 – 14 (for years 1990-2008, 2001, 2007)
- Population female 15 – 19 (for years 1990-2008, 2001, 2007)
- Population female 20 – 24 (for years 1990-2008, 2001, 2007)
- Population female 25 -29 (for years 1990-2008, 2001, 2007)
- Population female 30 -34 (for years 1990-2008, 2001, 2007)
- Population female 35 – 39 (for years 1990-2008, 2001, 2007)
- Population female 40 – 44 (for years 1990-2008, 2001, 2007)
- Population female 45 – 49 (for years 1990-2008, 2001, 2007)
- Population female 50 – 54 (for years 1990-2008, 2001, 2007)
- Population female 55 – 59 (for years 1990-2008, 2001, 2007)
- Population female 60 – 64 (for years 1990-2008, 2001, 2007)
- Population female 65 – 69 (for years 1990-2008, 2001, 2007)
- Population female 70 -100 (for years 1990-2008)
- Population female 70 – 74 (for years 1990-2008, 2001, 2007)
- Population female 75 – 79 (for years 1990-2008)
- Population female 80 – 84 (for years 1990-2008)
- Population female 85 – 89 (for years 1990-2008)
- Population female 90 – 94 (for years 1990-2008)
- Population female 99 (for years 1990-2008)
- Population female 100 (for years 1990-2008)
- Population female 110 (for years 1990-2008)

B) Employment

- employment rate 15 years and over (total) (for year 2007)
- employment rate 15 to 24 years (total) (for year 2007)
- employment rate 25 years and over (total) (for year 2007)
- employment rate 25 to 34 years (total) (for year 2007)
- employment rate 35 to 44 years (total) (for year 2007)
- employment rate 45 to 54 years (total) (for year 2007)
- employment rate 15 to 64 years (total) (for year 2007)
- employment rate 65 years and over (total) (for year 2007)
- employment rate 15 years and over (male) (for year 2007, 2006)
- employment rate 15 to 24 years (male) (for year 2007, 2006)
- employment rate 25 years and over (male) (for year 2007, 2006)
- employment rate 25 to 34 years (male) (for year 2007)
- employment rate 35 to 44 years (male) (for year 2007)
- employment rate 45 to 54 years (male) (for year 2007)

- employment rate 15 to 64 years (male) (for year 2007)
- employment rate 65 years and over (male) (for year 2007)
- employment rate 15 years and over (female) (for year 2007, 2006)
- employment rate 15 to 24 years (female) (for year 2007)
- employment rate 25 years and over (female) (for year 2007)
- employment rate 25 to 34 years (female) (for year 2007)
- employment rate 35 to 44 years (female) (for year 2007)
- employment rate 45 to 54 years (female) (for year 2007, 2006)
- employment rate 15 to 64 years (female) (for year 2007)
- employment rate 65 years and over (female) (for year 2007)
- employment growth in % 2000 - 2007
- employed persons 15 years and over (total) (in 1000 persons for year 2007, 2006)
- employed persons 15 to 24 years (total) (in 1000 persons for year 2007, 2006)
- employed persons 25 years and over (total) (in 1000 persons for year 2007)
- employed persons 25 to 34 years (total) (in 1000 persons for year 2007)
- employed persons 35 to 44 years (total) (in 1000 persons for year 2007)
- employed persons 45 to 54 years (total) (in 1000 persons for year 2007)
- employed persons 15 to 64 years (total) (in 1000 persons for year 2007)
- employed persons 65 years and over (total) (in 1000 persons for year 2007)
- employed persons 15 years and over (male) (in 1000 persons for year 2007)
- employed persons 15 to 24 years (male) (in 1000 persons for year 2007)
- employed persons 25 years and over (male) (in 1000 persons for year 2007)
- employed persons 25 to 34 years (male) (in 1000 persons for year 2007)
- employed persons 35 to 44 years (male) (in 1000 persons for year 2007)
- employed persons 45 to 54 years (male) (in 1000 persons for year 2007)
- employed persons 15 to 64 years (male) (in 1000 persons for year 2007)
- employed persons 65 years and over (male) (in 1000 persons for year 2007)
- employed persons 15 years and over (female) (in 1000 persons for year 2007)
- employed persons 15 to 24 years (female) (in 1000 persons for year 2007)
- employed persons 25 years and over (female) (in 1000 persons for year 2007)
- employed persons 25 to 34 years (female) (in 1000 persons for year 2007)
- employed persons 35 to 44 years (female) (in 1000 persons for year 2007)
- employed persons 45 to 54 years (female) (in 1000 persons for year 2007)
- employed persons 15 to 64 years (female) (in 1000 persons for year 2007)
- employed persons 65 years and over (female) (in 1000 persons for year 2007)
- employment all sectors in total numbers (for year 2005, 2006)
- employment in sector I in total numbers (for year 2005)
- employment in sector II in total numbers (for year 2005)
- employment in sector III in total numbers (for year 2005)
- employment L to P in total numbers (EMP) (for year 2005)
- employees all sectors in total numbers (for year 2005, 2007)
- employees in sector I in total numbers (for year 2005, 2007)
- employees in sector II in total numbers (for year 2005, 2007)
- employees in sector III in total numbers (for year 2005, 2007)
- employees L to P in total numbers (EMP) (for year 2005)

- unemployment growth 2002 – 2007
- unemployment rate 15 years and over (total) (for year 2007, 2006)
- unemployment rate 15 to 24 years (total) (for year 2007, 2006)
- unemployment rate 25 years and over (total) (for year 2007, 2006)

- unemployment rate 15 to 24 years (male) (for year 2007)
- unemployment rate 25 years and over (male) (for year 2007)
- unemployment rate 15 to 24 years (female) (for year 2007)
- unemployment rate 25 years and over (female) (for year 2007)
- unemployment rate 15 to 24 years (total) (for year 2002)
- unemployment rate 25 years and over (total) (for year 2002)
- unemployment rate 15 to 24 years (male) (for year 2002)
- unemployment rate 25 years and over (male) (for year 2002)
- unemployment rate 15 to 24 years (female) (for year 2002)
- unemployment rate 25 years and over (female) (for year 2002)
- unemployed persons 15 years and over (total) in 1000 persons (for year 2007, 2007, 2007)
- unemployed persons 15 to 24 years (total) in 1000 persons (for year 2007, 2007)
- unemployed persons 25 years and over (total) in 1000 persons (for year 2007, 2007)
- unemployed persons 15 years and over (male) in 1000 persons (for year 2007, 2007)
- unemployed persons 15 to 24 years (male) in 1000 persons (for year 2007)
- unemployed persons 25 years and over (male) in 1000 persons (for year 2007)
- unemployed persons 15 years and over (female) in 1000 persons (for year 2007, 2007)
- unemployed persons 15 to 24 years (female) in 1000 persons (for year 2007)
- unemployed persons 25 years and over (female) in 1000 persons (for year 2007)
- unemployed persons 15 years and over (total) in 1000 persons (for year 2002)
- unemployed persons 15 to 24 years (total) in 1000 persons (for year 2002)
- unemployed persons 25 years and over (total) in 1000 persons (for year 2002)
- unemployed persons 15 years and over (male) in 1000 persons (for year 2002)
- unemployed persons 15 to 24 years (male) in 1000 persons (for year 2002)
- unemployed persons 25 years and over (male) in 1000 persons (for year 2002)
- unemployed persons 15 years and over (female) in 1000 persons (for year 2002)
- unemployed persons 15 to 24 years (female) in 1000 persons (for year 2002)
- unemployed persons 25 years and over (female) in 1000 persons (for year 2002)
- development of long term unemployment rate 2002 – 2007
- long term unemployment rate 2002
- long term unemployment rate 2007, 2006
- development of long term unemployed persons 2002 – 2007
- long term unemployed persons 2002 (in 1000 persons)
- long term unemployed persons 2007 (in 1000 persons)

C) Rural Business Development

- Structural Business Statistics, 2-Digit NACE classes
    - For each class: number of local units (registered legal entities C, D, E, F, G, H, I, J, K for 2007)
    - For each class: growth rate of employment in %
    - For each class: number of persons employed (C, D, E, F, G, H, I, K for 2007)

    - For each class: share of employment in manufacturing total
- wages and salaries NACE class in Euro per year (for year 2004)
- wages and salaries NACE class b in Euro per year (for year 2004)
- wages and salaries NACE class c in Euro per year (for year 2004)
- wages and salaries NACE class c_to_k in Euro per year (for year 2004)
- wages and salaries NACE class c_to_o_not_l in Euro per year (for year 2004)
- wages and salaries NACE class ca10 in Euro per year (for year 2004)
- wages and salaries NACE class ca11 in Euro per year (for year 2004)
- wages and salaries NACE class ca12 in Euro per year (for year 2004)
- wages and salaries NACE class cb13 in Euro per year (for year 2004)
- wages and salaries NACE class cb14 in Euro per year (for year 2004)
- wages and salaries NACE class d in Euro per year (for year 2004)
- wages and salaries NACE class da15 in Euro per year (for year 2004)
- wages and salaries NACE class da16 in Euro per year (for year 2004)
- wages and salaries NACE class db17 in Euro per year (for year 2004)
- wages and salaries NACE class db18 in Euro per year (for year 2004)
- wages and salaries NACE class dc19 in Euro per year (for year 2004)
- wages and salaries NACE class dd20 in Euro per year (for year 2004)
- wages and salaries NACE class de21 in Euro per year (for year 2004)
- wages and salaries NACE class de22 in Euro per year (for year 2004)
- wages and salaries NACE class df23 in Euro per year (for year 2004)
- wages and salaries NACE class dg24 in Euro per year (for year 2004)
- wages and salaries NACE class dh25 in Euro per year (for year 2004)
- wages and salaries NACE class di26 in Euro per year (for year 2004)
- wages and salaries NACE class dj27 in Euro per year (for year 2004)
- wages and salaries NACE class dj28 in Euro per year (for year 2004)
- wages and salaries NACE class dk29 in Euro per year (for year 2004)
- wages and salaries NACE class dl30 in Euro per year (for year 2004)
- wages and salaries NACE class dl31 in Euro per year (for year 2004)
- wages and salaries NACE class dl32 in Euro per year (for year 2004)
- wages and salaries NACE class dl33 in Euro per year (for year 2004)
- wages and salaries NACE class dm34 in Euro per year (for year 2004)
- wages and salaries NACE class dm35 in Euro per year (for year 2004)
- wages and salaries NACE class dn36 in Euro per year (for year 2004)
- wages and salaries NACE class dn37 in Euro per year (for year 2004)
- wages and salaries NACE class e in Euro per year (for year 2004)
- wages and salaries NACE class e40 in Euro per year (for year 2004)
- wages and salaries NACE class e41 in Euro per year (for year 2004)
- wages and salaries NACE class f in Euro per year (for year 2004)
- wages and salaries NACE class g in Euro per year (for year 2004)
- wages and salaries NACE class g50 in Euro per year (for year 2004)
- wages and salaries NACE class g51 in Euro per year (for year 2004)
- wages and salaries NACE class g52 in Euro per year (for year 2004)
- wages and salaries NACE class h in Euro per year (for year 2004)
- wages and salaries NACE class i in Euro per year (for year 2004)
- wages and salaries NACE class i60 in Euro per year (for year 2004)
- wages and salaries NACE class i61 in Euro per year (for year 2004)
- wages and salaries NACE class i62 in Euro per year (for year 2004)
- wages and salaries NACE class i63 in Euro per year (for year 2004)
- wages and salaries NACE class i64 in Euro per year (for year 2004)
- wages and salaries NACE class j in Euro per year (for year 2004)
- wages and salaries NACE class j65 in Euro per year (for year 2004)
- wages and salaries NACE class j66 in Euro per year (for year 2004)
- wages and salaries NACE class j67 in Euro per year (for year 2004)
- wages and salaries NACE class k in Euro per year (for year 2004)

- wages and salaries NACE class k70 in Euro per year (for year 2004)
- wages and salaries NACE class k71 in Euro per year (for year 2004)
- wages and salaries NACE class k72 in Euro per year (for year 2004)
- wages and salaries NACE class k73 in Euro per year (for year 2004)
- wages and salaries NACE class k74 in Euro per year (for year 2004)
- wages and salaries NACE class l in Euro per year (for year 2004)
- wages and salaries NACE class m in Euro per year (for year 2004)
- wages and salaries NACE class m_n_o in Euro per year (for year 2004)
- wages and salaries NACE class n in Euro per year (for year 2004)
- wages and salaries NACE class o in Euro per year (for year 2004)
- wages and salaries NACE class o90 in Euro per year (for year 2004)
- wages and salaries NACE class o91 in Euro per year (for year 2004)
- wages and salaries NACE class o92 in Euro per year (for year 2004)
- wages and salaries NACE class o93 in Euro per year (for year 2004)
- Employment by professional status in 1000
- Employment by professional status in 1000
- Employment by professional statusFamily workers in 1000
- Employment by professional statusFamily workers in 1000
- Employment by professional statusFamily no response in 1000
- Employment by professional statusFamily no response in 1000
- Employment by professional statusFamily employees in 1000
- Employment by professional statusFamily employees in 1000
- Employment by professional statusFamily self employed in 1000
- Employment by professional statusFamily self employed in 1000
- Human Ressources in Science and Technology - Core 2004in % of the EU average
- Human Ressources in Science and Technology - Core 2003in % of the EU average
- Human Ressources in Science and Technology - Core 2002in % of the EU average
- Human Ressources in Science and Technology - Core 2001in % of the EU average
- Human Ressources in Science and Technology - Core 2000in % of the EU average
- Participation in life-long learning 2004in % of the EU average
- Participation in life-long learning 2003in % of the EU average
- Participation in life-long learning 2002in % of the EU average
- Participation in life-long learning 2001in % of the EU average
- Participation in life-long learning 2000in % of the EU average
- Employment in medium-high and high-tech manufacturing 2004in % of the EU average
- Employment in medium-high and high-tech manufacturing 2003in % of the EU average
- Employment in medium-high and high-tech manufacturing 2002in % of the EU average
- Employment in medium-high and high-tech manufacturing 2001in % of the EU average
- Employment in medium-high and high-tech manufacturing 2000in % of the EU average
- Employment in high-tech services 2004in % of the EU average
- Employment in high-tech services 2003in % of the EU average
- Employment in high-tech services 2002in % of the EU average
- Employment in high-tech services 2001in % of the EU average
- Employment in high-tech services 2000in % of the EU average
- Business R&D expenditures 2002in % of the EU average

- Business R&D expenditures 2001in % of the EU average
- Business R&D expenditures 2000in % of the EU average
- Business R&D expenditures 1999in % of the EU average
- Business R&D expenditures 1998in % of the EU average
- Public R&D expenditures 2002in % of the EU average
- Public R&D expenditures 2001in % of the EU average
- Public R&D expenditures 2000in % of the EU average
- Public R&D expenditures 1999in % of the EU average
- Public R&D expenditures 1998in % of the EU average
- EPO patent applications 2002in % of the EU average
- EPO patent applications 2001in % of the EU average
- EPO patent applications 2000in % of the EU average
- EPO patent applications 1999in % of the EU average
- EPO patent applications 1998in % of the EU average

D) Rural-Urban Relationships

- Life long learning in rural areas in % (for year 2007)
- Arrivals - NUTS 2 - annual data; B002 Arrivals of non-residents; A100 Hotels and similar establishments (for year 2007)
- Arrivals - NUTS 2 - annual data; B002 Arrivals of non-residents; B100 Other collective accommodation establishments, Total (for year 2007)
- Arrivals - NUTS 2 - annual data; B002 Arrivals of non-residents; A100 Hotels and similar establishments + B100 Other collective accommodation establishments, Total (for year 2007)
- Stock of vehicles by category at regional level all vehicles (except trailers and motorcycles) in 1000 vehicles (for year 2007)
- Stock of vehicles by category at regional level motorcycles (> 50cm3) in 1000 vehicles (for year 2007)
- Stock of vehicles by category at regional level passenger cars in 1000 vehicles (for year 2007, 2007)
- Stock of vehicles by category at regional level goods road motor vehicle in 1000 vehicles (for year 2007)
- Stock of vehicles by category at regional level road tractors in 1000 vehicles (for year 2007)
- Stock of vehicles by category at regional level trailers and semi-trailers in 1000 vehicles (for year 2007)
- Stock of vehicles by category at regional level special vehicles in 1000 vehicles (for year 2007)
- Stock of vehicles by category at regional level total utility vehicles in 1000 vehicles (for year 2007)
- Stock of vehicles by category at regional level buses in 1000 vehicles (for year 2007, 2007)
- Employment and commuting among NUTS level 2 regions same region in 1000 persons (for year 2007)
- Employment and commuting among NUTS level 2 regions other regions in 1000 persons (for year 2007)
- Hotel beds in total numbers (for year 2007)
- Other beds in total numbers (for year 2007)
- Hotel nights spent by residents in total numbers (for year 2007)
- Hotel nights spent by non residents in total numbers (for year 2007)
- Other nights spent by non residents in total numbers (for year 2007)
- Other nights spent by residents in total numbers (for year 2007)
- No. Of hospital days in total numbers (for years 2000 to 2007)
- Length of railway network in km (for year 2001)
- Length of road network in km (for year 2001, 2007)

- Accessibility time to market by road (ESPON database 2000 – 2006 indicator)
- Accessibility time to market by rail (ESPON database 2000 – 2006 indicator)
- Accessibility time to market by rail and road (ESPON database 2000 – 2006 indicator)
- Share of Internet users to 100 inhabitants regression (ESPON database 2000 – 2006 indicator)
- Proportion of firms with own website regression (ESPON database 2000 – 2006 indicator)
- Percent of households with broadband access (for year 2008)
- Percent of households with internet at home (for year 2008)
- labour costs in EUR per apprentice per year (sum NACE A, B, C_TO_O_NOT_L, L) in Euro per apprentice per year (for year 2004)
- labour costs in EUR per employee per year excluding apprentices (sum NACE A, B, C_TO_O_NOT_L, L) (for year 2004)
- Employment in high tech sectors in percent of total employment, total (for year 2007)
- Employment in high tech sectors in percentage of total employment, female (for year 2007)
- Employment in high tech sectors in percentage of total employment, male (for year 2007)
- Employment in high tech sectors, total in 1000 persons (for year 2007)
- Employment in high tech sectors, male in 1000 persons (for year 2007)
- Employment in high tech sectors, female in 1000 persons (for year 2007)
- Number of students with ISCED 0 in total numbers (for year 2006, 2007)
- Number of students with ISCED 1 in total numbers (for year 2006)
- Number of students with ISCED 2 in total numbers (for year 2006)
- Number of students with ISCED 3 in total numbers (for year 2006, 2007)
- Number of students with ISCED 4 in total numbers (for year 2006)
- Number of students with ISCED 5 to 6 in total numbers (for year 2006)
- Number of students with ISCED 6 in total numbers (for year 2006)
- Economically active population with ISCED 0 to 2, total (for year 2007)
- Economically active population with ISCED 3 to 4, total (for year 2007)
- Economically active population with ISCED 5 to 6, total (for year 2007)
- Economically active population with ISCED 0 to 2, male (for year 2007)
- Economically active population with ISCED 3 to 4, male (for year 2007)
- Economically active population with ISCED 5 to 6, male (for year 2007)
- Economically active population with ISCED 0 to 2, female (for year 2007)
- Economically active population with ISCED 3 to 4, female (for year 2007)
- Economically active population with ISCED 5 to 6, female (for year 2007)

E) Cultural Heritage

No indicators

F) Services of General Interest

- Density of hospitals (for year 2004)
- Hospital beds per head (for year 2004, 2004)
- Doctors per inhabitant (for year 2004, 2007)
- Time to nearest hospital (for year 2004)
- Time to nearest university (for year 2004)
- Share of private internet users (for year 2004)
- Share of business internet users (for year 2004)
- Density of motorways (for year 2004)
- Density of trunk roads (for year 2004)
- Per head provision of trunk roads (for year 2004)

- Density of railway (for year 2004)
- Time to nearest airport (for year 2004)

G) Institutional Capacity

- GDP in Mio. Euro (for year 2005)
- GDP in Mio. PPS (for year 2005)
- GDP in PPS per inhabitant (2005))
- GDP in PPS per inhabitant as percentage of the EU average (for year 2005)
- GDP in Euro per inhabitant (2005, 2006)
- GFP in Euro per inhabitant as percentage of the EU average (for year 2005)
- Dispersion of GDP country NUTS 2 in % (for years 1995 to 2005)
- Dispersion of GDP country NUTS 3in % (for years 1995 to 2005)
- Population 15 years and over with ISCED 0 to 2 in 1000 persons (for year 2007)
- Population 15 years and over with ISCED 3 to 4 in 1000 persons (for year 2007)
- Population 15 years and over with ISCED 5 to 6 in 1000 persons (for year 2007)
- Age dependency rate (for year 2001)
- adults (25_64) with Medium and High educational attainment in % (for year 2007)
- farmers with basic and full education in agriculture attained in % (for year 2000)
- adults (25-64) participating in education and training in % (for year 2007)

H) Climate Change

Climate data for precipitation and temperature (regional averages at NUTS 3) for the last 1000 years are available based on the CRU TS 2.1 climate data set

I) Farm Structural Change

- total number of holdings 2000
- holdings <= 2 ESU in % (for year 2005)
- holdings 2 – 100 ESU in total numbers (for year 2005)
- change in number of total holdings in % 2000 – 2005
- Change in number of holdings less 2 ESU in % 2000 – 2005
- Change in number of holdings 2 to 100 ESU in % 2000 – 2005
- Change in number of holdings over 100 ESU in % 2000 – 2005
- Holders working full time in % (for year 2005)
- Change in Number of Holders working full time in % 2000-2005
- Economic farm size (for year 2005)
- Farmers with Other Gainful Activity in % (for year 2003)
- holders > 55 years (for year 2000)
- holders < 35 years (for year 2000)
- holders > 55 years (for year 2005)
- holders < 35 years (for year 2005)
- change in holders > 55 years 2000-2005
- change in holders < 35 years 2000 – 2005
- farmers with basic and full education in agriculture attained in % (for year 2000)
- total UAA (in ha)
- Specialist cereals, oilseed and protein crops UAA (in ha)
- General field cropping UAA (in ha)
- Specialist horticulture UAA (in ha)
- Specialist vineyards UAA (in ha)
- Specialist fruit and citrus fruit UAA (in ha)

- Specialist olives UAA (in ha)
- Various permanent crops combined UAA (in ha)
- Specialist dairying UAA (in ha)
- Specialist cattle-rearing and fattening UAA (in ha)
- Cattle-dairying, rearing and fattening combined UAA (in ha)
- Sheep, goats and other grazing livestock UAA (in ha)
- Specialist granivores UAA (in ha)
- Mixed cropping UAA (in ha)
- Mixed livestock, mainly grazing livestock UAA (in ha)
- Mixed livestock, mainly granivores UAA (in ha)
- Field crops-grazing livestock combined UAA (in ha)
- Various crops and livestock combined UAA (in ha)
- Non-classifiable holdings UAA (in ha)
- Total number of holdings (for year 2007)
- Specialist cereals, oilseed and protein crops number of holdings (for year 2007)
- General field cropping number of holdings (for year 2007)
- Specialist horticulture number of holdings (for year 2007)
- Specialist vineyards number of holdings (for year 2007)
- Specialist fruit and citrus fruit number of holdings (for year 2007)
- Specialist olives number of holdings (for year 2007)
- Various permanent crops combined number of holdings (for year 2007)
- Specialist dairying number of holdings (for year 2007)
- Specialist cattle-rearing and fattening number of holdings (for year 2007)
- Cattle-dairying, rearing and fattening combined number of holdings (for year 2007)
- Sheep, goats and other grazing livestock number of holdings (for year 2007)
- Specialist granivores number of holdings (for year 2007)
- Mixed cropping number of holdings (for year 2007)
- Mixed livestock, mainly grazing livestock number of holdings (for year 2007)
- Mixed livestock, mainly granivores number of holdings (for year 2007)
- Field crops-grazing livestock combined number of holdings (for year 2007)
- Various crops and livestock combined number of holdings (for year 2007)
- Non-classifiable holdingsSpecialist cereals, oilseed and protein crops number of holdings (for year 2007)
- General field cropping number of holdings (for year 2007)
- Specialist horticulture number of holdings (for year 2007)
- Specialist vineyards number of holdings (for year 2007)
- Specialist fruit and citrus fruit number of holdings (for year 2007)
- Specialist olives number of holdings (for year 2007)
- Various permanent crops combined number of holdings (for year 2007)
- Specialist dairying number of holdings (for year 2007)
- Specialist cattle-rearing and fattening number of holdings (for year 2007)
- Cattle-dairying, rearing and fattening combined number of holdings (for year 2007)
- Sheep, goats and other grazing livestock number of holdings (for year 2007)
- Specialist granivores number of holdings (for year 2007)
- Mixed cropping number of holdings (for year 2007)
- Mixed livestock, mainly grazing livestock number of holdings (for year 2007)
- Mixed livestock, mainly granivores number of holdings (for year 2007)
- Field crops-grazing livestock combined number of holdings (for year 2007)
- Various crops and livestock combined number of holdings (for year 2007)
- Non-classifiable holdings number of holdings (for year 2007)
- Specialist vineyards (ESU:SGM of the holding) (for year 2007)
- Specialist fruit and citrus fruit (ESU:SGM of the holding) (for year 2007)

- Specialist olives (ESU:SGM of the holding) (for year 2007)
- Various permanent crops combined (ESU:SGM of the holding) (for year 2007)
- Specialist dairying (ESU:SGM of the holding) (for year 2007)
- Specialist cattle-rearing and fattening (ESU:SGM of the holding) (for year 2007)
- Cattle-dairying, rearing and fattening combined (ESU:SGM of the holding) (for year 2007)
- Sheep, goats and other grazing livestock (ESU:SGM of the holding) (for year 2007)
- Specialist granivores (ESU:SGM of the holding) (for year 2007)
- Mixed cropping (ESU:SGM of the holding) (for year 2007)
- Mixed livestock, mainly grazing livestock (ESU:SGM of the holding) (for year 2007)
- Mixed livestock, mainly granivores (ESU:SGM of the holding) (for year 2007)
- Field crops-grazing livestock combined (ESU:SGM of the holding) (for year 2007)
- Various crops and livestock combined (ESU:SGM of the holding) (for year 2007)
- Non-classifiable holdings (ESU:SGM of the holding) (for year 2007)
- Specialist cereals, oilseed and protein crops (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- General field cropping (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Specialist horticulture (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Specialist vineyards (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Specialist fruit and citrus fruit (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Specialist olives (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Various permanent crops combined (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Specialist dairying (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Specialist cattle-rearing and fattening (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Cattle-dairying, rearing and fattening combined (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Sheep, goats and other grazing livestock (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Specialist granivores (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Mixed cropping (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Mixed livestock, mainly grazing livestock (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Mixed livestock, mainly granivores (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Field crops-grazing livestock combined (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Various crops and livestock combined (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)
- Non-classifiable holdings (Livestoch units; NBR Number/Absolute value/Unit) (for year 2007)

- Total holdings NBR Number/Absolute value/Unit (for year 2007)
- Zero holdings NBR Number/Absolute value/Unit (for year 2007)
- Less than 2 holdings NBR Number/Absolute value/Unit (for year 2007)
- From 2 to less than 5 holdings NBR Number/Absolute value/Unit (for year 2007)
- From 5 to less than 10 holdings NBR Number/Absolute value/Unit (for year 2007)
- From 10 to less than 20 holdings NBR Number/Absolute value/Unit (for year 2007)
- From 20 to less than 30 holdings NBR Number/Absolute value/Unit (for year 2007)
- From 30 to less than 50 holdings NBR Number/Absolute value/Unit (for year 2007)
- From 50 to less than 100 holdings NBR Number/Absolute value/Unit (for year 2007)
- 100 or more holdings NBR Number/Absolute value/Unit (for year 2007)
- Total Livestock Units NBR Number/Absolute value/Unit (for year 2007)
- Zero Livestock Units NBR Number/Absolute value/Unit (for year 2007)
- Less than 2 Livestock Units NBR Number/Absolute value/Unit (for year 2007)
- From 2 to less than 5 Livestock Units NBR Number/Absolute value/Unit (for year 2007)
- From 5 to less than 10 Livestock Units NBR Number/Absolute value/Unit (for year 2007)
- From 10 to less than 20 Livestock Units NBR Number/Absolute value/Unit (for year 2007)
- From 20 to less than 30 Livestock Units NBR Number/Absolute value/Unit (for year 2007)
- From 30 to less than 50 Livestock Units NBR Number/Absolute value/Unit (for year 2007)
- From 50 to less than 100 Livestock Units NBR Number/Absolute value/Unit (for year 2007)
- 100 or more Livestock Units NBR Number/Absolute value/Unit (for year 2007)

Socioeconomic data for Turkey (national statistical office)

Agriculture

File TR_Agriculture.xls contains following indicators for following years:
Years in file: 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007

Indicators in file:
- Land use : Total arable land and land under permanent crops (hectare)
- Organic farming : Number of holdings
- Organic farming : Area cultivated (Hectare)
- Land use : Total arable land (hectare)

For detailed metadata see: metadata_TR_Agriculture.xls

Economy

File TR_Business.xls contains following indicators for following years:
Years in file: 1995 1996 1997 1998 1999 2000 2001 2007

Indicators in file:
- Number of enterprises according to business registers : Total

- Number of establishments. employment and payments of manufacturing statistics : Number of establishments
- Number of establishments. employment and payments of manufacturing statistics : Annual average number of persons engaged
- Number of enterprises according to business registers : Mining and quarrying
- Number of establishments. employment and payments of manufacturing statistics : Annual average number of employees
- Number of enterprises according to business registers : Manufacturing
- Number of establishments. employment and payments of manufacturing statistics : Annual payments to employees (YTL)
- Number of enterprises according to business registers : Electricity. gas and water supply
- Number of establishments. employment and payments of manufacturing statistics : Total man-hours worked (Hours)
- Number of enterprises according to business registers : Construction
- Number of establishments. employment and payments of manufacturing statistics : Share of annual average number of persons engaged in Turkey (%)
- Number of enterprises according to business registers : Wholesale and retail trade
- Number of enterprises according to business registers : Hotels. restaurants and coffeehouse
- Number of enterprises according to business registers : Transport. storage and communication
- Number of enterprises according to business registers : Financial intermediation enterprise activities
- Number of enterprises according to business registers : Real estate. renting and business activities
- Number of enterprises according to business registers : Education
- Number of enterprises according to business registers : Health and social work

For detailed metadata see: metadata_TR_Business.xls

File TR_GDP.xls contains following indicators for following years:
Years in file: 1995 1996 1997 1998 1999 2000 2001

Indicators in file:
- Gross Domestic Product per capita : Gross Domestic Product per capita (Million TL)
- Gross Domestic Product per capita : Gross Domestic Product per capita ($)

For detailed metadata see: metadata_TR_GDP.xls

File TR_labour_force_1.xls contains following indicators for following years:
Years in file: 2004 2005 2006

Indicators in file:
- Labor force status according to Household Labour Force Survey : Non-institutional civilian population (1000)
- Long-term unemployment [15 years old and over-thousand people] : Unemployed
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Total
- Employment rates by age group [15 years old and over-%] : Total
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : Total
- Employment by economic activity [15 years old and over] : Total
- Employment by educational status [15 years old and over-thousand people] : Total

- Average number of usual weekly hours of work in main job [15 years old and over] : Hours
- Non-institutional population by educational status [15 years old and over-thousand people] : Total
- Employment by full-time/part-time [15 years old and over-thousand people] : Total
- Unemployment by age group [15 years old and over-thousand people] : Total
- Non-institutional population by age group [15 years old and over-thousand people] : Total
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Total
- Employment by status in employment [15 years old and over-thousand people] : Total
- Employment by educational status [Between 25 and 64 years-thousand people] : Total
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Total
- Employment by age group [15 years old and over-thousand people] : Total
- Unemployment rate by age group [15 years old and over-%] : Total
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : Total
- Labor force status according to Household Labour Force Survey : Population 15 years of age and over (1000)
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : Total / Male
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Total / Male
- Employment rates by age group [15 years old and over-%] : Total / Male
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : Total / Male
- Employment by economic activity [15 years old and over] : Agriculture (thousand people)
- Employment by educational status [15 years old and over-thousand people] : Total / Male
- Non-institutional population by educational status [15 years old and over-thousand people] : Total / Male
- Employment by full-time/part-time [15 years old and over-thousand people] : Total / Male
- Unemployment by age group [15 years old and over-thousand people] : Total / Male
- Non-institutional population by age group [15 years old and over-thousand people] : Total / Male
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Total / Male
- Employment by status in employment [15 years old and over-thousand people] : Regular and casual employee
- Employment by educational status [Between 25 and 64 years-thousand people] : Total / Male
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Total / Male
- Employment by age group [15 years old and over-thousand people] : Total / Male
- Unemployment rate by age group [15 years old and over-%] : Total / Male
- Labor force status according to Household Labour Force Survey : Labor force (1000)
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : Total / Female

- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Total / Female
- Employment rates by age group [15 years old and over-%] : Total / Female
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : Total / Female
- Employment by economic activity [15 years old and over] : Industry (thousand people)
- Employment by educational status [15 years old and over-thousand people] : Total / Female
- Non-institutional population by educational status [15 years old and over-thousand people] : Total / Female
- Employment by full-time/part-time [15 years old and over-thousand people] : Total / Female
- Unemployment by age group [15 years old and over-thousand people] : Total / Female
- Non-institutional population by age group [15 years old and over-thousand people] : Total / Female
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Total / Female
- Employment by status in employment [15 years old and over-thousand people] : Employer and own account worker
- Employment by educational status [Between 25 and 64 years-thousand people] : Total / Female
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Total / Female
- Employment by age group [15 years old and over-thousand people] : Total / Female
- Unemployment rate by age group [15 years old and over-%] : Total / Female
- Labor force status according to Household Labour Force Survey : Employed (1000)
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 15-24 / Total
- Employment rates by age group [15 years old and over-%] : 15-24 / Total
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 15-24 age / Total
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Illiterate / Total
- Employment by economic activity [15 years old and over] : Trade (thousand people)
- Employment by educational status [15 years old and over-thousand people] : Illiterate / Total
- Non-institutional population by educational status [15 years old and over-thousand people] : Illiterate / Total
- Employment by full-time/part-time [15 years old and over-thousand people] : Part time / Total
- Unemployment by age group [15 years old and over-thousand people] : 15-24 / Total
- Non-institutional population by age group [15 years old and over-thousand people] : 15-24 / Total
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Illiterate / Total
- Employment by status in employment [15 years old and over-thousand people] : Unpaid family worker
- Employment by educational status [Between 25 and 64 years-thousand people] : Illiterate / Total
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Illiterate / Total

- Employment by age group [15 years old and over-thousand people] : 15-24 / Total
- Unemployment rate by age group [15 years old and over-%] : 15-24 / Total
- Labor force status according to Household Labour Force Survey : Unemployed (1000)
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 15-24 / Male
- Employment rates by age group [15 years old and over-%] : 15-24 / Male
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 15-24 age / Male
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Illiterate / Male
- Employment by economic activity [15 years old and over] : Services (thousand people)
- Employment by educational status [15 years old and over-thousand people] : Illiterate / Male
- Non-institutional population by educational status [15 years old and over-thousand people] : Illiterate / Male
- Employment by full-time/part-time [15 years old and over-thousand people] : Part time / Male
- Unemployment by age group [15 years old and over-thousand people] : 15-24 / Male
- Non-institutional population by age group [15 years old and over-thousand people] : 15-24 / Male
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Illiterate / Male
- Employment by educational status [Between 25 and 64 years-thousand people] : Illiterate / Male
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Illiterate / Male
- Employment by age group [15 years old and over-thousand people] : 15-24 / Male
- Unemployment rate by age group [15 years old and over-%] : 15-24 / Male
- Labor force status according to Household Labour Force Survey : Population not in labor force (1000)
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 15-24 / Female
- Employment rates by age group [15 years old and over-%] : 15-24 / Female
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 15-24 age / Female
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Illiterate / Female
- Employment by educational status [15 years old and over-thousand people] : Illiterate / Female
- Non-institutional population by educational status [15 years old and over-thousand people] : Illiterate / Female
- Employment by full-time/part-time [15 years old and over-thousand people] : Part time / Female
- Unemployment by age group [15 years old and over-thousand people] : 15-24 / Female
- Non-institutional population by age group [15 years old and over-thousand people] : 15-24 / Female
- Employment by economic activity [15 years old and over] : Agriculture (%)
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Illiterate / Female
- Employment by educational status [Between 25 and 64 years-thousand people] : Illiterate / Female

- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Illiterate / Female
- Employment by age group [15 years old and over-thousand people] : 15-24 / Female
- Unemployment rate by age group [15 years old and over-%] : 15-24 / Female
- Labor force status according to Household Labour Force Survey : Labor force participation rate (%)
- Employment rates by age group [15 years old and over-%] : 25 and over / Total
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Less than high school (ISCED 1-2) / Total
- Employment by educational status [15 years old and over-thousand people] : Less than high school (ISCED 1-2) / Total
- Non-institutional population by educational status [15 years old and over-thousand people] : Less than high school (ISCED 1-2) / Total
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 25-34 age / Total
- Employment by full-time/part-time [15 years old and over-thousand people] : Full-time / Total
- Unemployment by age group [15 years old and over-thousand people] : 25 years old and over / Total
- Non-institutional population by age group [15 years old and over-thousand people] : 25-34 / Total
- Employment by economic activity [15 years old and over] : Industry (%)
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Less than high school (ISCED 1-2) / Total
- Employment by educational status [Between 25 and 64 years-thousand people] : Less than high school (ISCED 1-2) / Total
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Less than high school (ISCED 1-2) / Total
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 25 years old and over / Total
- Employment by age group [15 years old and over-thousand people] : 25-34 / Total
- Unemployment rate by age group [15 years old and over-%] : 25 years old and over / Total
- Labor force status according to Household Labour Force Survey : Unemployment rate (%)
- Employment rates by age group [15 years old and over-%] : 25 and over / Male
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Less than high school (ISCED 1-2) / Male
- Employment by educational status [15 years old and over-thousand people] : Less than high school (ISCED 1-2) / Male
- Non-institutional population by educational status [15 years old and over-thousand people] : Less than high school (ISCED 1-2) / Male
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 25-34 age / Male
- Employment by full-time/part-time [15 years old and over-thousand people] : Full-time / Male
- Unemployment by age group [15 years old and over-thousand people] : 25 years old and over / Male
- Non-institutional population by age group [15 years old and over-thousand people] : 25-34 / Male
- Employment by economic activity [15 years old and over] : Trade (%)
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Less than high school (ISCED 1-2) / Male

- Employment by educational status [Between 25 and 64 years-thousand people] : Less than high school (ISCED 1-2) / Male
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Less than high school (ISCED 1-2) / Male
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 25 years old and over / Male
- Employment by age group [15 years old and over-thousand people] : 25-34 / Male
- Unemployment rate by age group [15 years old and over-%] : 25 years old and over / Male
- Labor force status according to Household Labour Force Survey : Unemployment rate of non-agricultural population (%)
- Employment rates by age group [15 years old and over-%] : 25 and over / Female
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Less than high school (ISCED 1-2) / Female
- Employment by educational status [15 years old and over-thousand people] : Less than high school (ISCED 1-2) / Female
- Non-institutional population by educational status [15 years old and over-thousand people] : Less than high school (ISCED 1-2) / Female
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 25-34 age / Female
- Employment by full-time/part-time [15 years old and over-thousand people] : Full-time / Female
- Unemployment by age group [15 years old and over-thousand people] : 25 years old and over / Female
- Non-institutional population by age group [15 years old and over-thousand people] : 25-34 / Female
- Employment by economic activity [15 years old and over] : Services (%)
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Less than high school (ISCED 1-2) / Female
- Employment by educational status [Between 25 and 64 years-thousand people] : Less than high school (ISCED 1-2) / Female
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Less than high school (ISCED 1-2) / Female
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 25 years old and over / Female
- Employment by age group [15 years old and over-thousand people] : 25-34 / Female
- Unemployment rate by age group [15 years old and over-%] : 25 years old and over / Female
- Employment rates by age group [15 years old and over-%] : 25-34 / Total
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : High and vocational high school (ISCED 3) / Total
- Employment by educational status [15 years old and over-thousand people] : High and vocational high school (ISCED 3) / Total
- Non-institutional population by educational status [15 years old and over-thousand people] : High and vocational high school (ISCED 3) / Total
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 35-54 age / Total
- Non-institutional population by age group [15 years old and over-thousand people] : 35-54 / Total
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : High and vocational high school (ISCED 3) / Total
- Employment by educational status [Between 25 and 64 years-thousand people] : High and vocational high school (ISCED 3) / Total

- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : High and vocational high school (ISCED 3) / Total
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 25-34 / Total
- Employment by age group [15 years old and over-thousand people] : 35-54 / Total
- Employment rates by age group [15 years old and over-%] : 25-34 / Male
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : High and vocational high school (ISCED 3) / Male
- Employment by educational status [15 years old and over-thousand people] : High and vocational high school (ISCED 3) / Male
- Non-institutional population by educational status [15 years old and over-thousand people] : High and vocational high school (ISCED 3) / Male
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 35-54 age / Male
- Non-institutional population by age group [15 years old and over-thousand people] : 35-54 / Male
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : High and vocational high school (ISCED 3) / Male
- Employment by educational status [Between 25 and 64 years-thousand people] : High and vocational high school (ISCED 3) / Male
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : High and vocational high school (ISCED 3) / Male
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 25-34 / Male
- Employment by age group [15 years old and over-thousand people] : 35-54 / Male
- Employment rates by age group [15 years old and over-%] : 25-34 / Female
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : High and vocational high school (ISCED 3) / Female
- Employment by educational status [15 years old and over-thousand people] : High and vocational high school (ISCED 3) / Female
- Non-institutional population by educational status [15 years old and over-thousand people] : High and vocational high school (ISCED 3) / Female
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 35-54 age / Female
- Non-institutional population by age group [15 years old and over-thousand people] : 35-54 / Female
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : High and vocational high school (ISCED 3) / Female
- Employment by educational status [Between 25 and 64 years-thousand people] : High and vocational high school (ISCED 3) / Female
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : High and vocational high school (ISCED 3) / Female
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 25-34 / Female
- Employment by age group [15 years old and over-thousand people] : 35-54 / Female
- Employment rates by age group [15 years old and over-%] : 35-54 / Total
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Higher education (ISCED 5-6) / Total
- Employment by educational status [15 years old and over-thousand people] : Higher education (ISCED 5-6) / Total
- Non-institutional population by educational status [15 years old and over-thousand people] : Higher education (ISCED 5-6) / Total

- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Higher education (ISCED 5-6) / Total
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 55 years old and over / Total
- Non-institutional population by age group [15 years old and over-thousand people] : 55 years old and over / Total
- Employment by educational status [Between 25 and 64 years-thousand people] : Higher education (ISCED 5-6) / Total
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Higher education (ISCED 5-6) / Total
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 34-54 / Total
- Employment by age group [15 years old and over-thousand people] : 55 years old and over / Total
- Employment rates by age group [15 years old and over-%] : 35-54 / Male
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Higher education (ISCED 5-6) / Male
- Employment by educational status [15 years old and over-thousand people] : Higher education (ISCED 5-6) / Male
- Non-institutional population by educational status [15 years old and over-thousand people] : Higher education (ISCED 5-6) / Male
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 55 years old and over / Male
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Higher education (ISCED 5-6) / Male
- Non-institutional population by age group [15 years old and over-thousand people] : 55 years old and over / Male
- Employment by educational status [Between 25 and 64 years-thousand people] : Higher education (ISCED 5-6) / Male
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Higher education (ISCED 5-6) / Male
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 34-54 / Male
- Employment by age group [15 years old and over-thousand people] : 55 years old and over / Male
- Employment rates by age group [15 years old and over-%] : 35-54 / Female
- Economically active population (Labour force) by educational status [Between 25 and 65 years-thousand people] : Higher education (ISCED 5-6) / Female
- Employment by educational status [15 years old and over-thousand people] : Higher education (ISCED 5-6) / Female
- Non-institutional population by educational status [15 years old and over-thousand people] : Higher education (ISCED 5-6) / Female
- Economically active population (Labour force) by age group [15 years old and over-thousand people] : 55 years old and over / Female
- Economically active population (Labour force) by educational status [15 years old and over-thousand people] : Higher education (ISCED 5-6) / Female
- Non-institutional population by age group [15 years old and over-thousand people] : 55 years old and over / Female
- Employment by educational status [Between 25 and 64 years-thousand people] : Higher education (ISCED 5-6) / Female
- Non-institutional population by educational status [Between 25 and 64 years-thousand people] : Higher education (ISCED 5-6) / Female
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 34-54 / Female

- Employment by age group [15 years old and over-thousand people] : 55 years old and over / Female
- Employment rates by age group [15 years old and over-%] : 55 and over / Total
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 55 years old and over / Total
- Employment rates by age group [15 years old and over-%] : 55 and over / Male
- Economic activity rate (Labour force participation rate) by age group [15 years old and over-%] : 55 years old and over / Male
- Employment rates by age group [15 years old and over-%] : 55 and over / Female

For detailed metadata see: metadata_TR_labour_force_1.xls

File TR_labour_force_2.xls contains following indicators for following years:
Years in file: 2007 2008

Indicators in file:
- Labor force status summary table [15 age and over-for the years of 2007 and later] : Non-institutional civilian population (1000)
- Employment by economic activity [15 years old and over-for the years of 2007 and later] : Total (1000)
- Labor force status summary table [15 age and over-for the years of 2007 and later] : Population 15 years of age and over (1000)
- Employment by economic activity [15 years old and over-for the years of 2007 and later] : Agriculture (1000)
- Employment by economic activity [15 years old and over-for the years of 2007 and later] : Industry (1000)
- Labor force status summary table [15 age and over-for the years of 2007 and later] : Labor force (1000)
- Employment by economic activity [15 years old and over-for the years of 2007 and later] : Services (1000)
- Labor force status summary table [15 age and over-for the years of 2007 and later] : Employed (1000)
- Employment by economic activity [15 years old and over-for the years of 2007 and later] : Agriculture (%)
- Labor force status summary table [15 age and over-for the years of 2007 and later] : Unemployed (1000)
- Labor force status summary table [15 age and over-for the years of 2007 and later] : Population not in labor force (1000)
- Employment by economic activity [15 years old and over-for the years of 2007 and later] : Industry (%)
- Employment by economic activity [15 years old and over-for the years of 2007 and later] : Services (%)
- Labor force status summary table [15 age and over-for the years of 2007 and later] : Labor force participation rate (%)
- Labor force status summary table [15 age and over-for the years of 2007 and later] : Unemployment rate (%)
- Labor force status summary table [15 age and over-for the years of 2007 and later] : Unemployment rate of non-agricultural population (%)

For detailed metadata see: metadata_TR_labour_force_2.xls

Culture
File TR_Culture.xls contains following indicators for following years:

Years in file: 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007

Indicators in file:
- Theater : Number of theaters
- Public libraries : Number of libraries
- Museums. artifacts and visitors : Number of museums
- Cinema : Number of movie house
- Theater : Seating capacity
- Public libraries : Number of books
- Museums. artifacts and visitors : Available artifacts
- Cinema : Seating capacity
- Cinema : Number of pictures shown
- Public libraries : Number of users
- Museums. artifacts and visitors : Number of visitors
- Theater : Number of theatrical performance
- Cinema : Number of spectators
- Public libraries : Number of users per thousand capita
- Theater : Number of theatergoer
- Theater : Number of theatergoer per performance
- Public libraries : Number of book borrowed
- Cinema : Number of spectators per show
- Public libraries : Number of book borrowed per thousand capita

For detailed metadata see: metadata_TR_Culture.xls

Demography

File TR_Death_2007.xls contains following indicators for following years:
Years in file: 2007

Indicators in file:
- Total / Total
- Male / Total

For detailed metadata see: metadata_TR_Death_2007.xls

File TR_Population_Indicators.xls contains following indicators for following years:
Years in file: 1990 2000

Indicators in file:
- Employed population by economic activity according to General Population Census : Total employed
- Population density : Population density (people per square km)
- Population by. literacy. education level and sex (Population 6 years of age and over) : Total population
- General Population Census city and village population : Total population
- Age dependency ratio : 0-14 age group population
- Labour force by sex according to General Population Census : Population 12 years of age and over / Total
- Population not in labor force according to General Population Census : Total
- Labour force by sex according to General Population Census : Population 12 years of age and over / Male
- Age dependency ratio : 15-64 age group population

- Population by. literacy. education level and sex (Population 6 years of age and over) : Male population
- Employed population by economic activity according to General Population Census : Agriculture / Total
- Labour force by sex according to General Population Census : Population 12 years of age and over / Female
- Age dependency ratio : Age 65 and over population
- Population by. literacy. education level and sex (Population 6 years of age and over) : Female population
- Fertility of female population 12 years of age and over the number of live born children and living children : Number of live born children / Total
- Employed population by economic activity according to General Population Census : Agriculture / Male
- Age dependency ratio : Total age dependency ratio
- Employed population by economic activity according to General Population Census : Agriculture / Female
- Employed population by economic activity according to General Population Census : Industry / Total
- Age dependency ratio : Elderly dependency ratio (Age 65 and over)
- Fertility.infant and child mortality rates. 2000 : Total fertility rate (number of children)
- Age dependency ratio : Youth dependency ratio (Age 0-14)
- Employed population by economic activity according to General Population Census : Industry / Male
- Population by. literacy. education level and sex (Population 6 years of age and over) : Literate but no school completed / Total
- Employed population by economic activity according to General Population Census : Industry / Female
- Labour force by sex according to General Population Census : Employed / Total
- Labour force by sex according to General Population Census : Employed / Male
- Employed population by economic activity according to General Population Census : Construction / Total
- Population by. literacy. education level and sex (Population 6 years of age and over) : Literate but no school completed / Male
- Employed population by economic activity according to General Population Census : Construction / Male
- Population by. literacy. education level and sex (Population 6 years of age and over) : Literate but no school completed / Female
- Labour force by sex according to General Population Census : Employed / Female
- Labour force by sex according to General Population Census : Unemployed / Total
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from primary school / Total
- Employed population by economic activity according to General Population Census : Construction / Female
- Labour force by sex according to General Population Census : Unemployed / Male
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from primary school / Male
- Employed population by economic activity according to General Population Census : Services / Total
- Employed population by economic activity according to General Population Census : Services / Male
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from primary school / Female
- Labour force by sex according to General Population Census : Unemployed / Female

- Labour force by sex according to General Population Census : Population not in labor force / Total
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from primary education / Total
- Employed population by economic activity according to General Population Census : Services / Female
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from primary education / Male
- Employed population by economic activity according to General Population Census : Activities not adequately defined / Total
- Labour force by sex according to General Population Census : Population not in labor force / Male
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from primary education / Female
- Employed population by economic activity according to General Population Census : Activities not adequately defined / Male
- Labour force by sex according to General Population Census : Population not in labor force / Female
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from junior high school or vocational school equal to junior high school level / Total
- Employed population by economic activity according to General Population Census : Activities not adequately defined / Female
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from junior high school or vocational school equal to junior high school level / Male
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from junior high school or vocational school equal to junior high school level / Female
- Labour force by sex according to General Population Census : Unemployment rate / Total (%)
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from high school or vocational school at high school level / Total
- Labour force by sex according to General Population Census : Unemployment rate / Male (%)
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from high school or vocational school at high school level / Male
- Labour force by sex according to General Population Census : Unemployment rate / Female (%)
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from high school or vocational school at high school level / Female
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from higher education / Total
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from higher education / Male
- Population by. literacy. education level and sex (Population 6 years of age and over) : Graduated from higher education / Female

For detailed metadata see: metadata_TR_Population_Indicators.xls

Services of General Interest

File TR_Health.xls contains following indicators for following years:
Years in file: 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007

Indicators in file:
- Number of hospital beds : Number of hospital beds
- Number of health personnel : Specialist physician
- Number of hospital beds : Number of hospital beds per 100 000 capita
- Number of health personnel : Practitioner physician
- Number of health personnel : Dentist
- Number of health personnel : Pharmacist
- Number of health personnel : Health officer
- Number of health personnel : Nurse

For detailed metadata see: metadata_TR_Health.xls

Education

File TR_Nr_students_2008.xls contains following indicators for following years:

Years in file: 2008

Indicators in file:
- Total / Student
- Pre_school / Student
- Primary / Student
- General secondary / Student

For detailed metadata see: metadata_TR_Nr_students_2008.xls

Tourism

File TR_Tourism.xls contains following indicators for following years:

Years in file: 2000 2001 2002 2003 2004 2005 2006 2007

Indicators in file:
- Number of arrivals and nights spent in Tourism Operation Licenced accommodation establishments : Number of arrivals / Total
- Number of arrivals and nights spent in Municipality Licenced accommodation establishments : Number of arrivals / Total
- Number of arrivals and nights spent in Municipality Licenced accommodation establishments : Number of arrivals / Foreigner
- Number of arrivals and nights spent in Tourism Operation Licenced accommodation establishments : Number of arrivals / Foreigner
- Number of arrivals and nights spent in Municipality Licenced accommodation establishments : Number of arrivals / Citizen
- Number of arrivals and nights spent in Tourism Operation Licenced accommodation establishments : Number of arrivals / Citizen
- The Number of Municipality and Tourism Operation Licenced accomodation establishment. room and beds : Municipality licenced / Bed capacity
- Number of arrivals and nights spent in Tourism Operation Licenced accommodation establishments : Number of nights spent / Total
- Number of arrivals and nights spent in Municipality Licenced accommodation establishments : Number of nights spent / Total
- Number of arrivals and nights spent in Municipality Licenced accommodation establishments : Number of nights spent / Foreigner
- Number of arrivals and nights spent in Tourism Operation Licenced accommodation establishments : Number of nights spent / Foreigner
- Number of arrivals and nights spent in Municipality Licenced accommodation establishments : Number of nights spent / Citizen

- The Number of Municipality and Tourism Operation Licenced accomodation establishment. room and beds : Tourism Operation licenced / Bed capacity

For detailed metadata see: metadata_TR_Tourism.xls

Transport

File TR_Transportation.xls contains following indicators for following years:
Years in file: 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

Indicators in file:
- Road lengths : Provincial roads (km)
- Road lengths : Motorways (km)
- Road lengths : Village roads (km)

For detailed metadata see: metadata_TR_Transportation.xls

ANNEX 2: OVERVIEW OF DATA AVAILABILITY FOR COUNTRY PROFILES INDICATORS

Indicator	Base year	Indicator	Base year
OECD R/U	2006	NACE v11210 k	2006
population total	2001	NACE v16110 c	2006
population 0_14 A	2001	NACE v16110 d	2006
population 15_64 A	2001	NACE v16110 e	2006
population >64 A	2001	NACE v16110 f	2006
Age dependency rate A	2001	NACE v16110 g	2006
Population change	2001, 2007	NACE v16110 h	2006
population total	2007	NACE v16110 j	2006
population 0_14	2007	NACE v16110 k	2006
population 15_64	2007	Empl. High/medium tech Media	2004
population >64	2007	Empl. High/medium tech EU25	2004
Age dependency rate B	2007	firms with own website	2002
natural pop. increase A	2001	Area	2000
natural pop. increase B	2006	Evolution density	2000-2006/2007
natural pop. increase change	2001,-2006	Density	2006, 2007
Net migration A	2001	Daily pop. accessible by car	1999
Net migration B	2006	broadhand access	2008
Net migration change	2001- 2006	internet at home	2008
ISCED 0_2	2007	students ISCED_0	2005, 2006
ISCED 3_4	2007	students ISCED_1	2005, 2006
ISCED 5_6	2007	students ISCED_2	2005, 2006
LLL in Rural Areas	2000	students ISCED_3	2005, 2006
empl. rate T15_64	2007	students ISCED_4	2005, 2006
empl. rate TM15_64	2007	students ISCED_5_6	2005, 2006
empl. rate TF15_64	2007	hospital beds	2005
empl. rate T15_24	2007	Evolution hospital beds	2000-2005
empl. rate >T45	2007	density of hospitals	2004
empl. rate T45_54	2007	hospital beds per head	2004
empl. rate T55_64	2007	doctors per inhabitant	2004
Emp_primary	2005	time to nearest hospital	2004
Emp_secondary	2005	time to nearest university	2004
Emp_tertiary	2005	density of motorways	2004
Unemployment rate	2006, 2007	density of trunk road	2004
Unemployment	2006, 2007	density of railways	2004
Unemployment	2002	time to nearest airport	2004
Unemployment evolution	2002, 2007	Total Holdings	2005
unempl. evolution T> 15	2000-2005	Holdings < 2 ESU	2005
unempl. evolution T 15_24	2000-2005	Holdings 2 to 100 ESU	2005
unempl. evolution T >25	2000-2005	Holdings >100 ESU	2005
unempl. evolution M> 15	2000-2005	Change total holdings	2000-2005
unempl. rate T>15	2006, 2007	Change holdings less 2 ESU	2000-2005
unempl. rate TM>15	2006, 2007	Change holdings 2 to 100 ESU	2000-2005
unempl. rate TF>15	2006, 2007	Change holdings over 100 ESU	2000-2005
unempl. rate T15_24	2006, 2007	Holders full time	2000, 2005
unempl. rate T>25	2006, 2007	Change Holders full time	2000-2005
LTU A	2007	Economic Farm Size	2007
LTU B	2002	Farmers with OGA	2003
Evolution of LTU	2002-2007	holders > 55	2007
NACE v11210 c	2006	holders < 35	2007

Indicator	Base year	Indicator	Base year
NACE v11210 d	2006	change holders > 55	2000-2005
NACE v11210 e	2006	change holders < 35	2000-2005
NACE v11210 f	2006	agricultural education	2000
NACE v11210 g	2006	GDP Mio.	2005
NACE v11210 h	2006	GDP PPS	2005
NACE v11210 j	2006	GDP EU average	2005

Following data availability statistic has been calculated automatically based on the country profiles data table, the output is unsorted.

NUTS_LEVEL	Nr. Regions	Available	% Available	Missing	% Missing

NACE v11210 k 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	125	88 %	17	12 %
NUTS 2	321	305	95 %	16	5 %
NUTS 3	1458	1411	97 %	47	3 %

unempl rate T25 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	97	68 %	45	32 %
NUTS 2	321	270	84 %	51	16 %
NUTS 3	1458	1304	89 %	154	11 %

students ISCED 4 200

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	24	71 %	10	29 %
NUTS 1	142	66	46 %	76	54 %
NUTS 2	321	159	50 %	162	50 %
NUTS 3	1458	626	43 %	832	57 %

SCED 3_4 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

population 0_14 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	140	99 %	2	1 %
NUTS 2	321	311	97 %	10	3 %
NUTS 3	1458	1440	99 %	18	1 %

agricultural education 2000

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	0	0 %	34	100 %
NUTS 1	142	2	1 %	140	99 %
NUTS 2	321	248	77 %	73	23 %
NUTS 3	1458	1163	80 %	295	20 %

CE v11210 j 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	125	88 %	17	12 %
NUTS 2	321	305	95 %	16	5 %
NUTS 3	1458	1411	97 %	47	3 %

Empl Highmedium tech EU25 2004

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

Emp_secondary 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	32	94 %	2	6 %
NUTS 1	142	101	71 %	41	29 %
NUTS 2	321	283	88 %	38	12 %
NUTS 3	1458	1343	92 %	115	8 %

population 64 A 2001

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	5	15 %	29	85 %
NUTS 1	142	7	5 %	135	95 %
NUTS 2	321	277	86 %	44	14 %
NUTS 3	1458	1312	90 %	146	10 %

Change holdings less 2 ESU 2000-2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	20	59 %	14	41 %
NUTS 1	142	74	52 %	68	48 %
NUTS 2	321	202	63 %	119	37 %
NUTS 3	1458	912	63 %	546	37 %

population 64 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	141	99 %	1	1 %
NUTS 2	321	311	97 %	10	3 %
NUTS 3	1458	1440	99 %	18	1 %

holders_55 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	24	71 %	10	29 %
NUTS 1	142	72	51 %	70	49 %
NUTS 2	321	164	51 %	157	49 %
NUTS 3	1458	620	43 %	838	57 %

time to nearest airport 2004

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	135	95 %	7	5 %
NUTS 2	321	312	97 %	9	3 %
NUTS 3	1458	1440	99 %	18	1 %

firms with own website 2002

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	0	0 %	34	100 %
NUTS 1	142	17	12 %	125	88 %
NUTS 2	321	226	70 %	95	30 %
NUTS 3	1458	1110	76 %	348	24 %

CE v16110 k 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	140	99 %	2	1 %
NUTS 2	321	320	100 %	1	0 %
NUTS 3	1458	1457	100 %	1	0 %

natural pop increase change 2001

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	108	76 %	34	24 %
NUTS 2	321	250	78 %	71	22 %
NUTS 3	1458	852	58 %	606	42 %

population 15 64 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	141	99 %	1	1 %
NUTS 2	321	311	97 %	10	3 %
NUTS 3	1458	1440	99 %	18	1 %

hospital beds 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	27	79 %	7	21 %
NUTS 1	142	106	75 %	36	25 %
NUTS 2	321	250	78 %	71	22 %
NUTS 3	1458	1200	82 %	258	18 %

NACE v11210 c 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	125	88 %	17	12 %
NUTS 2	321	305	95 %	16	5 %
NUTS 3	1458	1411	97 %	47	3 %

Area 2000

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

NACE v11210 d 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	125	88 %	17	12 %
NUTS 2	321	305	95 %	16	5 %
NUTS 3	1458	1411	97 %	47	3 %

Age dependency rate B 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	141	99 %	1	1 %
NUTS 2	321	311	97 %	10	3 %
NUTS 3	1458	1440	99 %	18	1 %

unempl rate T15_24 2006,2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	94	66 %	48	34 %
NUTS 2	321	246	77 %	75	23 %
NUTS 3	1458	1240	85 %	218	15 %

Total Holdings 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	137	96 %	5	4 %
NUTS 2	321	318	99 %	3	1 %
NUTS 3	1458	1426	98 %	32	2 %

Net migration A 2001

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

*change holders_55 200*0

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	20	59 %	14	41 %
NUTS 1	142	76	54 %	66	46 %
NUTS 2	321	203	63 %	118	37 %
NUTS 3	1458	888	61 %	570	39 %

unempl rate T15 2006, 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	98	69 %	44	31 %
NUTS 2	321	277	86 %	44	14 %
NUTS 3	1458	1317	90 %	141	10 %

NACE_v11210 f 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	125	88 %	17	12 %
NUTS 2	321	305	95 %	16	5 %
NUTS 3	1458	1411	97 %	47	3 %

population 15_64 A 2001

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	5	15 %	29	85 %
NUTS 1	142	7	5 %	135	95 %
NUTS 2	321	277	86 %	44	14 %
NUTS 3	1458	1312	90 %	146	10 %

NACE v11210 g 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	125	88 %	17	12 %
NUTS 2	321	305	95 %	16	5 %
NUTS 3	1458	1411	97 %	47	3 %

natural pop increase A 2001

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

Change holdings_2 to 100 ESU 2000-2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	20	59 %	14	41 %
NUTS 1	142	76	54 %	66	46 %
NUTS 2	321	209	65 %	112	35 %
NUTS 3	1458	926	64 %	532	36 %

Change Holders full time 2000-2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	20	59 %	14	41 %
NUTS 1	142	76	54 %	66	46 %
NUTS 2	321	223	69 %	98	31 %
NUTS 3	1458	1106	76 %	352	24 %

population total 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	141	99 %	1	1 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

holders_35 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	24	71 %	10	29 %
NUTS 1	142	72	51 %	70	49 %
NUTS 2	321	164	51 %	157	49 %
NUTS 3	1458	620	43 %	838	57 %

students ISCED_1 2005, 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	27	79 %	7	21 %
NUTS 1	142	86	61 %	56	39 %
NUTS 2	321	178	55 %	143	45 %
NUTS 3	1458	680	47 %	778	53 %

Emp_primary 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	32	94 %	2	6 %
NUTS 1	142	101	71 %	41	29 %
NUTS 2	321	283	88 %	38	12 %
NUTS 3	1458	1343	92 %	115	8 %

Holdings 100 ESU 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	138	97 %	4	3 %
NUTS 2	321	320	100 %	1	0 %
NUTS 3	1458	1413	97 %	45	3 %

students ISCED_2 2005, 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	27	79 %	7	21 %
NUTS 1	142	86	61 %	56	39 %
NUTS 2	321	178	55 %	143	45 %
NUTS 3	1458	680	47 %	778	53 %

unempl evolution T 15 2000-2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	98	69 %	44	31 %
NUTS 2	321	263	82 %	58	18 %
NUTS 3	1458	1250	86 %	208	14 %

density of hospitals 2004

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	24	71 %	10	29 %
NUTS 1	142	101	71 %	41	29 %
NUTS 2	321	227	71 %	94	29 %
NUTS 3	1458	1066	73 %	392	27 %

students ISCED_3 2005, 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	27	79 %	7	21 %
NUTS 1	142	86	61 %	56	39 %
NUTS 2	321	178	55 %	143	45 %
NUTS 3	1458	680	47 %	778	53 %

GDP EU average 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	29	85 %	5	15 %
NUTS 1	142	98	69 %	44	31 %
NUTS 2	321	277	86 %	44	14 %
NUTS 3	1458	1317	90 %	141	10 %

ISCED 0_2 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

population 0_14 A 2001

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	5	15 %	29	85 %
NUTS 1	142	7	5 %	135	95 %
NUTS 2	321	277	86 %	44	14 %
NUTS 3	1458	1312	90 %	146	10 %

NACE v11210 e 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	125	88 %	17	12 %
NUTS 2	321	305	95 %	16	5 %
NUTS 3	1458	1411	97 %	47	3 %

empl rate T55_64 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	100	70 %	42	30 %
NUTS 2	321	279	87 %	42	13 %
NUTS 3	1458	1320	91 %	138	9 %

NACE_v16110 c 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	140	99 %	2	1 %
NUTS 2	321	320	100 %	1	0 %
NUTS 3	1458	1457	100 %	1	0 %

Density 2006, 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

empl rate TM15_64 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	100	70 %	42	30 %
NUTS 2	321	279	87 %	42	13 %
NUTS 3	1458	1320	91 %	138	9 %

NACE v16110 g 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	140	99 %	2	1 %
NUTS 2	321	320	100 %	1	0 %
NUTS 3	1458	1457	100 %	1	0 %

GDP PPS 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	29	85 %	5	15 %
NUTS 1	142	98	69 %	44	31 %
NUTS 2	321	277	86 %	44	14 %
NUTS 3	1458	1317	90 %	141	10 %

density of railways 2004

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	25	74 %	9	26 %
NUTS 1	142	122	86 %	20	14 %
NUTS 2	321	291	91 %	30	9 %
NUTS 3	1458	1375	94 %	83	6 %

Evolution hospital beds 2000-2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	27	79 %	7	21 %
NUTS 1	142	104	73 %	38	27 %
NUTS 2	321	233	73 %	88	27 %
NUTS 3	1458	1159	79 %	299	21 %

Unemployment evolution 2002-2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	97	68 %	45	32 %
NUTS 2	321	266	83 %	55	17 %
NUTS 3	1458	773	53 %	685	47 %

empl rate T45 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	100	70 %	42	30 %
NUTS 2	321	279	87 %	42	13 %
NUTS 3	1458	1320	91 %	138	9 %

NACE v16110 f 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	140	99 %	2	1 %
NUTS 2	321	320	100 %	1	0 %
NUTS 3	1458	1457	100 %	1	0 %

Empl Highmedium tech Media 2004

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	317	99 %	4	1 %
NUTS 3	1458	1445	99 %	13	1 %

empl rate T45_54 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	100	70 %	42	30 %
NUTS 2	321	279	87 %	42	13 %
NUTS 3	1458	1320	91 %	138	9 %

density of motorways 2004

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	14	41 %	20	59 %
NUTS 1	142	87	61 %	55	39 %
NUTS 2	321	226	70 %	95	30 %
NUTS 3	1458	1014	70 %	444	30 %

Net migration change 2001-2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	109	77 %	33	23 %
NUTS 2	321	250	78 %	71	22 %
NUTS 3	1458	880	60 %	578	40 %

Population change 2001-2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	139	98 %	3	2 %
NUTS 2	321	317	99 %	4	1 %
NUTS 3	1458	1402	96 %	56	4 %

population total 2001

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	141	99 %	1	1 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

NACE v11210 h 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	125	88 %	17	12 %
NUTS 2	321	305	95 %	16	5 %
NUTS 3	1458	1411	97 %	47	3 %

NACE v16110 e 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	140	99 %	2	1 %
NUTS 2	321	320	100 %	1	0 %
NUTS 3	1458	1457	100 %	1	0 %

Evolution of LTU 2002-2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	96	68 %	46	32 %
NUTS 2	321	264	82 %	57	18 %
NUTS 3	1458	1233	85 %	225	15 %

LLL in Rural Areas 2000

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

Age dependency rate A 2001

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	0	0 %	34	100 %
NUTS 1	142	0	0 %	142	100 %
NUTS 2	321	253	79 %	68	21 %
NUTS 3	1458	1234	85 %	224	15 %

Daily pop accessible by car 1999

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	141	99 %	1	1 %
NUTS 2	321	320	100 %	1	0 %
NUTS 3	1458	1458	100 %	0	0 %

empl rate T15_64 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	100	70 %	42	30 %
NUTS 2	321	279	87 %	42	13 %
NUTS 3	1458	1320	91 %	138	9 %

Change total holdings 2000-2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	20	59 %	14	41 %
NUTS 1	142	76	54 %	66	46 %
NUTS 2	321	205	64 %	116	36 %
NUTS 3	1458	885	61 %	573	39 %

unempl evolution T 25 2000-2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	98	69 %	44	31 %
NUTS 2	321	263	82 %	58	18 %
NUTS 3	1458	1253	86 %	205	14 %

empl rate TF15_64 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	100	70 %	42	30 %
NUTS 2	321	279	87 %	42	13 %
NUTS 3	1458	1320	91 %	138	9 %

Economic Farm Size 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	0	0 %	34	100 %
NUTS 1	142	0	0 %	142	100 %
NUTS 2	321	256	80 %	65	20 %
NUTS 3	1458	1219	84 %	239	16 %

density of trunk road 2004

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	136	96 %	6	4 %
NUTS 2	321	313	98 %	8	2 %
NUTS 3	1458	1444	99 %	14	1 %

Unemployment 2002

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	98	69 %	44	31 %
NUTS 2	321	267	83 %	54	17 %
NUTS 3	1458	790	54 %	668	46 %

LTU B 2002

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	98	69 %	44	31 %
NUTS 2	321	266	83 %	55	17 %
NUTS 3	1458	1234	85 %	224	15 %

NACE_v16110 d 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	140	99 %	2	1 %
NUTS 2	321	320	100 %	1	0 %
NUTS 3	1458	1457	100 %	1	0 %

NACE v16110 j 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	140	99 %	2	1 %
NUTS 2	321	320	100 %	1	0 %
NUTS 3	1458	1457	100 %	1	0 %

GDP Mio 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	32	94 %	2	6 %
NUTS 1	142	98	69 %	44	31 %
NUTS 2	321	277	86 %	44	14 %
NUTS 3	1458	1317	90 %	141	10 %

Emp_tertiary 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	32	94 %	2	6 %
NUTS 1	142	101	71 %	41	29 %
NUTS 2	321	283	88 %	38	12 %
NUTS 3	1458	1343	92 %	115	8 %

unempl rate TF15 2006, 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	96	68 %	46	32 %
NUTS 2	321	265	83 %	56	17 %
NUTS 3	1458	1291	89 %	167	11 %

unempl evolution T 15_24 2000-2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	98	69 %	44	31 %
NUTS 2	321	262	82 %	59	18 %
NUTS 3	1458	1249	86 %	209	14 %

Farmers with OGA 2003

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	0	0 %	34	100 %
NUTS 1	142	0	0 %	142	100 %
NUTS 2	321	251	78 %	70	22 %
NUTS 3	1458	1203	83 %	255	17 %

Holdings_2 ESU 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	137	96 %	5	4 %
NUTS 2	321	311	97 %	10	3 %
NUTS 3	1458	1313	90 %	145	10 %

Holders full time 2000, 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	28	82 %	6	18 %
NUTS 1	142	97	68 %	45	32 %
NUTS 2	321	275	86 %	46	14 %
NUTS 3	1458	1308	90 %	150	10 %

Unemployment rate 2006, 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	141	99 %	1	1 %
NUTS 2	321	319	99 %	2	1 %
NUTS 3	1458	1406	96 %	52	4 %

internet at home 2008

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	25	74 %	9	26 %
NUTS 1	142	56	39 %	86	61 %
NUTS 2	321	118	37 %	203	63 %
NUTS 3	1458	437	30 %	1021	70 %

NACE v16110 h 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	140	99 %	2	1 %
NUTS 2	321	320	100 %	1	0 %
NUTS 3	1458	1457	100 %	1	0 %

unempl evolution M 15 2000-2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	31	91 %	3	9 %
NUTS 1	142	98	69 %	44	31 %
NUTS 2	321	261	81 %	60	19 %
NUTS 3	1458	1245	85 %	213	15 %

students ISCED_0 2005, 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	27	79 %	7	21 %
NUTS 1	142	86	61 %	56	39 %
NUTS 2	321	178	55 %	143	45 %
NUTS 3	1458	680	47 %	778	53 %

Holdings 2 to 100 ESU 2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	139	98 %	3	2 %
NUTS 2	321	308	96 %	13	4 %
NUTS 3	1458	1302	89 %	156	11 %

time to nearest hospital 200

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	26	76 %	8	24 %
NUTS 1	142	114	80 %	28	20 %
NUTS 2	321	264	82 %	57	18 %
NUTS 3	1458	1264	87 %	194	13 %

change holders 35 2000-2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	20	59 %	14	41 %
NUTS 1	142	75	53 %	67	47 %
NUTS 2	321	211	66 %	110	34 %
NUTS 3	1458	993	68 %	465	32 %

Evolution density 2000-2006/2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	140	99 %	2	1 %
NUTS 2	321	317	99 %	4	1 %
NUTS 3	1458	1402	96 %	56	4 %

LTU A 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	100	70 %	42	30 %
NUTS 2	321	279	87 %	42	13 %
NUTS 3	1458	1320	91 %	138	9 %

unempl rate TM15 2006, 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	96	68 %	46	32 %
NUTS 2	321	264	82 %	57	18 %
NUTS 3	1458	1286	88 %	172	12 %

empl rate T15_24 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	100	70 %	42	30 %
NUTS 2	321	279	87 %	42	13 %
NUTS 3	1458	1320	91 %	138	9 %

time to nearest university 2004

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	133	94 %	9	6 %
NUTS 2	321	311	97 %	10	3 %
NUTS 3	1458	1438	99 %	20	1 %

OECD RU 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	0	0 %	34	100 %
NUTS 1	142	0	0 %	142	100 %
NUTS 2	321	0	0 %	321	100 %
NUTS 3	1458	1303	89 %	155	11 %

broadhand access 2008

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	25	74 %	9	26 %
NUTS 1	142	56	39 %	86	61 %
NUTS 2	321	118	37 %	203	63 %
NUTS 3	1458	437	30 %	1021	70 %

students ISCED_5_6 2005, 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	27	79 %	7	21 %
NUTS 1	142	86	61 %	56	39 %
NUTS 2	321	177	55 %	144	45 %
NUTS 3	1458	678	47 %	780	53 %

ISCED 5_6 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

Change holdings over 100 ESU 2000-2005

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	20	59 %	14	41 %
NUTS 1	142	75	53 %	67	47 %
NUTS 2	321	220	69 %	101	31 %
NUTS 3	1458	1039	71 %	419	29 %

Net migration B 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

natural pop increase B 2006

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	34	100 %	0	0 %
NUTS 1	142	142	100 %	0	0 %
NUTS 2	321	321	100 %	0	0 %
NUTS 3	1458	1458	100 %	0	0 %

hospital beds per head 2004

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	24	71 %	10	29 %
NUTS 1	142	101	71 %	41	29 %
NUTS 2	321	227	71 %	94	29 %
NUTS 3	1458	1067	73 %	391	27 %

Unemployment 2006, 2007

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	30	88 %	4	12 %
NUTS 1	142	99	70 %	43	30 %
NUTS 2	321	278	87 %	43	13 %
NUTS 3	1458	1198	82 %	260	18 %

doctors per inhabitant 2004

Indicator available for following countries: AT, DK, MT, HR, IT, CZ, ES, FR, BE, EE, NO, PT, TR, MK, GR, SI, PL, EA, UK, IS, NL, EU, SE, BG, LI, CH, CY, IE, LV, FI, DE, LU, LT, RO, SK, HU,

NUTS 0	34	33	97 %	1	3 %
NUTS 1	142	141	99 %	1	1 %
NUTS 2	321	320	100 %	1	0 %
NUTS 3	1458	1458	100 %	0	0 %

ANNEX 3: OVERVIEW OF DATA AVAILABILITY FOR FURURE PERSPECTIVES INDICATORS

code	Variable name	Year of reference
Den	Population Density	2007
Mig	Net Migration (rate)	2001-2005
NI	Natural Increase (rate)	2001-2005
PCPEN	% of population >65	2006
CDR	Child Dependency Rate	2006
ADR	Aged Dependency Rate	2006
DR	Dependency Rate (total)	2006
GDP	GDP per Capita	2006
EARAT	Economic Activity Rate	2008
EMPRAT	Employment Rate	2006
UERAT	Unemployment Rate	2008
PCPRIME	% Employment in Primary Sector	2006
PCPRIMG	% GVA from Primary Sector	2006
CEGKE	Ratio of Secondary to Private Services Employment	2006
CEGKG	Ratio of Secondary to Private ServicesGVA	2006
AHS	Average farm holding size	2005
LT2ESU	% of holdings <2 ESU	2005
GT100ESU	% of holdings >100 ESU	2005
ANA	Access to Natural Areas	2008
BPPC	Bed Places per Capita	2006-2008

Following data availability statistic has been calculated automatically based on the future perspectives indicator table, the output is unsorted.

NUTS_LEVEL	Nr. Regions	Available	% Available	Missing	% Missing

ADR-2006-2006

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1347	100 %	0	0 %

DR-2006-2006

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1347	100 %	0	0 %

NI-20012005-20012005

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1343	100 %	4	0 %

Mig-2001-2005

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1343	100 %	4	0 %

PCPEN-2006-2006

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1347	100 %	0	0 %

PCPRIMG-2006-2006

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1321	98 %	26	2 %

Den-2007-2007

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1291	96 %	56	4 %

EARAT-2008-2008

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1318	98 %	29	2 %

BPPC-20062008

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1332	99 %	15	1 %

EMPRAT-2006-2006

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1319	98 %	28	2 %

UERAT-2008-2008

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1301	97 %	46	3 %

GT100ESU-2005-2005

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1310	97 %	37	3 %

ANA-2008-2008

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1298	96 %	49	4 %

CDR-2006-2006

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1347	100 %	0	0 %

CEGKG-2006-2006

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1321	98 %	26	2 %

PCPRIME-2006-2006

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1187	88 %	160	12 %

AHS-2005-2005

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1317	98 %	30	2 %

LT2ESU-2005-2005

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1317	98 %	30	2 %

GDP-2006-2006

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1347	100 %	0	0 %

CEGKE-2006-2006

Indicator available for following countries: CY, UK, IE, NL, BE, AT, EE, LV, DK, NO, PT, FI, GR, DE, SE, BG, LU, SI, MT, LT, RO, PL, CH, IT, CZ, SK, ES, HU, FR,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1347	1188	88 %	159	12 %

ANNEX 4: OVERVIEW OF DATA AVAILABILITY FOR TYPOLOGY INDICATORS

code	Variable name	Year of reference
PCPrimeE(Tot)	% Employment in Primary Activities	2006
PCPrimeE	% Private Sector Employment in Primary Activities	2006
PCPrimeG(Tot)	% GVA from Primary Activities	2006
PCPrimeG	% Private Sector GVA from Primary Activities	2006
AWUPEmp	AWU as a % of Total Private Employment	2007
HotCat	% of employmet in Hotels and Catering	2007
BPPC	Bed Places per Capita	2006-2008
NSRES	Nights Spent by Residents per capita	2008
NSNON	Nights Spent by Non-Residents per capita	2008
NSTOT	Nights Spent (Total) per capita	2008
ANA	Access to Natural Areas	2008
PCOGA	% of holdings with OGA	2005
LT4ESU	% of Holdings <4 ESU	2007
CEGKGR	Ratio of GVA from NACE CE to GK	2007
CEGPGR	Ratio of GVA from NACE CE to GP	2007
CFGPGR	Ratio of GVA from NACE CF to GP	2007
CEGKEMP	Ratio of Employment in NACE CE to GK	2007
CEGPEMP	Ratio of Employment in NACE CE to GP	2007
NETMIG	Net Migration (rate)	2001-2005
GDPpercap	GDP per Capita	2007
GDPCh	Average annual change in GDP	1995-2006
TotEmpCh	Avg. annual change Total Employ.	1995-2006
Unemp	Unemployment Rate	2008

Following data availability statistic has been calculated automatically based on the typology indicators table, the output is unsorted.

NUTS_LEVEL	Nr. Regions	Available	% Available	Missing	% Missing

CEGKEMP-2007-2007

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1350	92 %	110	8 %

AWUPEmp-2007-2007

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1279	88 %	181	12 %

PCOGA-2005-2005

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1303	89 %	157	11 %

ANA-2008-2008

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1317	90 %	143	10 %

PCPrimeETot-2006-2006

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1376	94 %	84	6 %

GDPpercap-2007-2007

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1410	97 %	50	3 %

NSTOT-2008-2008

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1311	90 %	149	10 %

BPPC-2006-2008

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1445	99 %	15	1 %

PCPrimeGPr-2006-2006

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1310	90 %	150	10 %

LT4ESU-2007-2007

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1299	89 %	161	11 %

CEGKGR-2007-2007

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1310	90 %	150	10 %

NETMIG-2001-2005

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1350	92 %	110	8 %

CEGPGR-2007-2007

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1310	90 %	150	10 %

GDPCh-1995-2006

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1410	97 %	50	3 %

PCPrimeGTot-2006-2006

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1391	95 %	69	5 %

PCPrimeEPr-2006-2006

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1350	92 %	110	8 %

CFGPGR-2007-2007

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1391	95 %	69	5 %

NSNON-2008-2008

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1311	90 %	149	10 %

HotCat-2007-2007

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1319	90 %	141	10 %

TotEmpCh-1995-2006

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1348	92 %	112	8 %

NSRES-2008-2008

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1324	91 %	136	9 %

Unemp-2008-2007

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1144	78 %	316	22 %

CEGPEMP-2007-2007

Indicator available for following countries: UK, IS, NL, AT, DK, SE, BG, MT, LI, HR, CH, IT, CZ, ES, FR, CY, IE, BE, EE, LV, NO, PT, TR, MK, DE, GR, FI, SI, LU, LT, RO, PL, SK, HU,

NUTS 0	0	0	0 %	0	0 %
NUTS 1	0	0	0 %	0	0 %
NUTS 2	0	0	0 %	0	0 %
NUTS 3	1460	1376	94 %	84	6 %

The ESPON 2013 Programme

Applied Research Project 2013/1/2

EDORA

(European Development Opportunities
for Rural Areas)

Final Report Annex 1 Part 24

Scientific Working Paper No. 24

A Typology of Intermediate and Predominantly Rural NUTS 3 Regions

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Note: Page numbering is consecutive within the aggregated Final Report document (Parts A, B and C)

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LIST OF ABBREVIATIONS

A-D Accumulating-Depleting
AWU Annual Work Unit
CC Consumption Countryside
D-P Dijkstra-Poelman (Enhanced urban-rural typology of NUTS 3 regions)
ESU European Size Unit
GDP Gross Domestic Product
GVA Gross Value Added
IA Intermediate Accessible
IR Intermediate Remote
ISEZ Intermediate Socio-Economic Zone
NACE Statistical classification of economic activities in the European Community (Nomenclature statistique des activités économiques dans la Communauté européenne).
NMS New Member State
NRE New Rural Economy
MS Member State
PPS Purchasing Power Standard
PR Predominantly Rural
PRA Predominantly Rural Accessible
PRR Predominantly Rural Remote
PU Predominantly Urban

SUMMARY

Introduction

1. The EDORA Typology, (or typologies) play a pivotal role in the project, reflecting the findings of the early conceptual phase and structuring the subsequent analysis of future perspectives and policy implications.
2. The first phase of EDORA has attempted to paint a more accurate picture of contemporary rural socio-economic patterns and trends. It has illustrated the almost infinite variety of local situation and trend, produced by a bewildering range of drivers of change, mediated by local opportunities and constraints. These drivers combine in various ways, and in order to gain some understanding of these, three "meta-narratives" were presented in Working Paper 10. It is important to be clear that these meta-narratives are not exhaustive or inclusive of all the ways in which individual regions experience change. Neither is it possible to associate one meta-narrative with a particular type of region. All three, (and others not specified in WP10) may be at work, to some extent, in any individual region. The meta narratives thus play the role of "heuristic devices" to help us explore the processes of change through an ideographic approach.
3. The rural development policy literature is populated by stereotypes, some being more or less representative "stylised facts" and others being anachronistic "fallacies". Whilst recent policy design and implementation has attempted to incorporate a degree of flexibility to meet local circumstances (menu-based approaches, neo-endogenous approaches and so on), generalisations still have a very important role to play in policy design and targeting. It is extremely important that "stylised fallacies" should be superseded by generalisations which are more accurately representative of contemporary rural Europe. The EDORA typologies are an important element of that process of refreshing the stereotypes which underlie policy design and implementation.

The EDORA Analysis Framework: Overview and Links to the Theoretical Discourse.

4. The EDORA typologies are implemented at NUTS 3, and (in terms of the OECD classification) cover all Intermediate and Predominantly Rural regions. This accommodates the inclusion of the Dijkstra-Poelman (D-P) modified OECD typology, as specified in the technical specification of EDORA. It also reflects the theoretical arguments for not separating rural areas from the adjacent small and medium-sized towns with which they interact within local and regional economic networks. The EDORA typologies thus cover the areas of Europe which broadly equate to Gade's (1991, 1992) concept of an Intermediate Socio-Economic Region (ISEZ) and Saraceno's (1994) "Local Economy".
5. Instead of a single typology this working paper proposes an "analysis framework" in the form of three typologies reflecting three important dimensions of differentiation among non-urban regions. These are:
    - Rurality/accessibility.
    - Degree of economic restructuring.
    - Socio-economic performance (accumulation or depletion).

   These three dimensions have been represented diagrammatically as "the EDORA cube".
6. The first typology (the D-P classification according to rurality and accessibility) covers the EU27 plus Norway and Switzerland. At present the other two typologies cover the EU27, but it is planned to extend them to NO and CH in a later version of this paper.
7. The Structural typology derives its rationale in part from the second meta-narrative described in Working Paper 10 – "Economic Competitiveness and Global Capital". The long-term evolution of economic structures in non-urban areas (away from primary and

secondary activities and towards the expansion of market services) can be seen as the most recent phase of a long historical process of global/spatial division of labour. It also draws on the discourse regarding territorial and sectoral policy, the concept of "consumption countryside", and the importance of countryside public goods. The four types of non-urban region which are proposed reflect the constraints imposed by the availability of NUTS 3 data. They are:

- Agrarian Economies
- Consumption Countryside
- Diversified (with important Secondary Sector)
- Diversified (with important Market Services Sector).

8. The third (performance) typology derives mainly from the urban-rural meta-narrative, and places regions on a continuum between "depletion" and "accumulation" of various kinds of capital (human, financial, fixed, and so on). Although initially specified as a continuous variable, it is also presented in four categories.

The Data Used and Classification Method.

9. The Structural and Performance typologies have been developed using a deductive disaggregative approach, which offers greater transparency in the definition of types, reduces the risk of "agrarian bias" due to data availability, and allows types to be predefined according to theoretical or policy requirements.

10. The first step in both the Structural and Performance Typologies was to explore the regional patterns associated with potentially useful variables and indicators. As part of this process indicators in which there were substantial missing data problems, or which produced maps which seemed to be unduly affected by harmonisation issues were discarded.

11. The outcome of this procedure was the selection of 27 raw data variables (predominantly from the Eurostat REGIO database) which were combined in various way to generate 17 ratio indicators. Those indicators which relate to a single point in time were extracted for the most recent year (in each member state) for which data was available. In most cases the great majority of regions had data for the same year, most commonly 2006, but ranging from 2005 to 2008. A small number of change variables was also incorporated, these related to the period 1995-2006. The number of missing data cells was minimised in various ways, (substituting data from another year, use of NUTS 2 averages, and so on). All the indicators were converted to normalised (Z) scores, using the non-urban (NUTS 3) mean and standard deviation.

12. The first 13 indicators were used to define the four Structural types, using a simple multi-criteria procedure based upon the Z scores. Thus:
    - Agrarian regions were defined as those in which all three indicators of the relative importance of agriculture (% employment in the primary sector, % of GVA from primary sector, and AWU as a percentage of total employment) exceeded the EU27 non-urban region mean.
    - Consumption Countryside regions were defined by 8 indicators, in three groups, relating to tourism capacity and intensity, access to natural areas, and "peri-productivist" (i.e small scale and diversified) agriculture.
    - The remaining regions were deemed to be "diversified" and were separated into two groups on the basis of the ratio of the GVA derived from Secondary activities to that from market services.
13. The geographical distribution of the above four Structural types reveals (in very broad-brush terms) an degree of association with peripherality. The Agrarian regions occupy an arc "on the edge of Europe", from Finland, south through the Baltic States, Poland, Slovakia, Romania, Bulgaria. And Greece, and then through S Italy, SW France, and into the southern and western half of the Iberian peninsular. The Consumption Countryside

regions occupy most of the Nordic Member States, much of Germany, Slovenia, Austria, parts of Italy, S France, coastal Spanish and Portuguese regions, and the more rural parts of the UK and Ireland. The Diversified regions tend to be more accessible. Those in which Secondary activities are dominant are found in the Czech Republic, Hungary, Slovenia, around Madrid and in the north of Spain, in parts of Germany and the English Midlands. Diversified (market Services) regions are rather conspicuous in northern and central France, but are also scattered across N Germany, N Italy, parts of the UK, and close to national capitals in the New Member States.

14. The remaining five indicators, (net migration, GDP per capita, average annual change in GDP, average annual change in total employment, and unemployment rate) were used to generate a synthetic regional performance indicator. This was achieved by simply calculating the unweighted mean of the Z scores. The synthetic indicator may be used either as a continuous variable, or converted to four ranges; “depleting”, “below average performance”, “above average performance”, and “accumulating”. The criteria were simply defined by the mean, and 0.5 standard deviations above/below the mean.

15. The geographical pattern of performance scores shows a very clear concentration of Depleting regions in the eastern New Member States and the New German Lander. Below average scores are also found in southern Italy, western Spain, Portugal, central and NE France, and the northern parts of the Nordic Member States and UK. The highest rates of “accumulation” are found along the Mediterranean coast of Spain, and north of Madrid, in Ireland (clearly a result which is unlikely to stand once more recent data is available), southern England, northern Netherlands. Above average performance is widespread among the French and German regions, Austria, N Italy, and adjacent New Member States, such as the Czech Republic and Slovenia.

16. The ability of the D-P and Structural types to differentiate between groups of non-urban regions in terms of their socio-economic performance was explored, as one means of assessing their validity as a part of the process of constructing new “stylised facts”, which can play a role in structuring the Future Perspectives and Policy Implications tasks of the second half of the EDORA research. This was carried out through a series of t-tests to assess whether the means and variances of the performance indicators associated with the various D-P and Structural types were consistent with the probability that the types were sampled from different populations. In general terms the results show that the structural typology has greater power to discriminate between non-urban regions in terms of their performance than does the D-P typology.

17. The same t-test procedure is used to explore the potential usefulness of combining the D-P and structural typologies into a single classification. It was found that the various configurations for combining the two typologies which were assessed resulted in reduced discrimination in terms of performance indicators. This is probably due to the small number of regions in some of the combined types. It was concluded that the statistical analysis served to confirm the earlier theoretical arguments for not separating Intermediate and Predominantly Rural regions within the structural typology. However the multi-criteria methodology used means that there are no particular practical barriers to presenting the structural types for the Intermediate and PR regions separately where policy considerations render this desirable.

Using the “EDORA Cube” to “triangulate” Rural Europe.

18. The analysis presented here is by no means exhaustive, further detail is reserved for the Future Perspectives working paper (WP24). Three simple approaches are followed:
    - Observation of the relative “weight” of the types within the D-P and Structural typologies.
    - Cross tabulation of types between all three typologies.

- Comparison of the D-P and Structural typologies in terms of some basic indicators of socio-economic performance.

19. The D-P typology could be said to be rather “unbalanced”, in terms of the relative “weight” of the different types. It is dominated by the Intermediate Accessible group, which accounts for almost half the regions, more than a third of total area, two-thirds of population, and more than two thirds of GDP. At the other extreme is the Intermediate Remote group, which comprises only 23 regions, and only 2% of land area, population and GDP. The Predominantly Rural Accessible (PRA) and Remote (PRR) groups account for 264 and 147 regions respectively. The former contains roughly a third of total area, a quarter of the population and 22% of non-urban GDP. The latter occupies 28% of total area, but has less than 10% of population, and only 8% of GDP.

20. The Structural Typology is rather less “skewed” in terms of the distribution of regions and total area. However, in terms of population (42%) and GDP (48%) the Diversified (Market Services) group is substantially larger than any of the other four. The Diversified (Secondary) group contains 22% of area, and 24% of both population and GDP. The Agrarian group comprises almost a quarter of the total non-urban area, and almost one-third of the agricultural area, but only 22% of population, and a mere 13% of GDP. Finally, the Consumption Countryside group occupies 22% of total area, but a much smaller share (9%) of agricultural land, of population (12%) and GDP, (15%).

21. Cross-tabulation of the three typologies suggests relationships between rurality, structure and performance. The following are some of the more interesting findings:
    - Common combinations of D-P and Structural classifications are: Intermediate Accessible with Diversified (Market Services) and Intermediate Accessible with Diversified (Secondary). Predominantly Rural Remote regions are commonly classified as Agrarian, and Intermediate Remote is often associated with Consumption Countryside.
    - Cross-tabulation of D-P and Structural types in terms of location quotients for GDP with respect to population reveals the relatively low productivity of the Agrarian regions and the relatively high productivity of Consumption Countryside regions (regardless of rurality category). Intermediate Accessible regions in the Diversified (Market Services) group exhibit very high location quotients for GDP in respect to population.
    - Almost 60% of the population of Intermediate Accessible regions was in the “above average” or “accumulating” groups of the Performance typology. In all three of the remaining D-P types the majority of the population lived in regions classified in the “below average” and “depleting” groups.
    - A similar cross-tabulation of the Structural and Performance typologies shows that more than half the population of the Agrarian group lived in “depleting” regions, and only one sixth lives in regions in the two positive performance categories. At the other end of the scale the Consumption Countryside and Diversified (Market services) groups have almost 70% and 66% of their populations in regions in the two positive performance categories. The Diversified (Secondary) group has almost 40% of its population in the above average performance group, but less than 20% in accumulating regions.

Conclusions:

22. The typologies presented in this working paper are not intended to be “general purpose”; they have been created with two overall objectives in mind:
    - To develop broad generalisations about rural Europe which might helpfully supersede the “stylised fallacies” which have all too often, in the past, influenced the design and implementation of European policies for non-urban areas.
    - To provide a simple but appropriate framework for analysis for the Future Perspectives (Activity 2.26) and Policy Activities (2.31 and 2.32).

23. With respect to the first of these, it has been shown that:
    - Regions in which the primary sector plays a major role in the local economy are mainly concentrated in an arc stretching around the eastern and southern edges of the EU27.
    - The rest of the European space is characterised by a patchwork of three types of rural area, Consumption Countryside, Diversified (Secondary) and Diversified (Market services). Of these the last seems to be to some extent associated with the most accessible areas.
    - Broadly speaking there is a tendency for the Agrarian regions to be relatively low performers, showing many of the characteristics of the process of socio-economic "Depletion". The Diversified (Secondary) regions also tend to be relatively poor performers, perhaps because they are dependent upon declining manufacturing industries.
    - The Consumption Countryside regions and the Diversified (Market Services) group are both high performers, and likely to continue to "accumulate" in the immediate future.

24. These are very simple, broad-brush generalisations, which, of course, cannot "do justice" to the wealth of local variation in rural areas across the ESPON space, or to the infinite number of possible combinations of drivers, opportunities and constraints. Nevertheless within the context of the debate about the future of European (cohesion) policy for rural areas, it would seem that the four Structural Types may be more useful as stereotypes than the prevalent, but outdated association of rural exclusively with Agrarian rural economies, or even with the Consumption Countryside. The rather different needs and potentials associated with Diversified rural economies (whether strong in secondary activities or market services) would seem to deserve far more attention in the context of the policy debate than they have heretofore received.

25. As a first step, the use of the structural typology as a framework for the Future Perspectives analysis and subsequent Policy tasks will allow the validity of these broad generalisations to be further assessed.

26. The final section of the report provides a tentative discussion of the way in which a combination of the Typologies and the Meta Narratives might serve as the basis for a rationale for differential intervention which better reflects the diversity of rural Europe. Such differentiation would work best as part of a neo-endogenous place-based rural policy, in which the combination of "measures" in any individual region would ideally be a matter for decision at a regional level, within the context of support from the national and EU levels.

1. INTRODUCTION

1.1. Aims and objectives of EDORA

The EDORA project belongs to the first strand of the ESPON 2013 programme: “Applied research on territorial development, competitiveness and cohesion: Evidence on European territorial trends, perspectives and policy impacts”. As such it is intended to “create information and evidence on territorial challenges and opportunities for success for the development of regions.” It requires a cross-thematic and applied approach.

The over-arching aim of the project is to develop a better understanding of the development opportunities and challenges facing diverse types of rural areas in Europe. The underlying demand for such knowledge is to support targeted policy development, relating (inter alia) to job creation and social change. In particular, insights should support the practical implementation - across a range of policy fields – of spatial development principles which have evolved out of perspectives presented in the Fifth Cohesion Report, and elaborated in the recent Territorial Cohesion Green Paper. In particular the project should support the further integration of the Lisbon and Gothenberg agendas into the post-2013 Common Agricultural Policy (CAP).

Three key issues are fundamental to the project specification;

- the need to better understand patterns of differentiation, between different kinds of rural area,
- the nature of the different opportunities for development which each of them faces, and,
- the way in which such opportunities depend upon, and may be strengthened by, interaction between rural and urban areas.

Addressing these issues requires a research approach which fully reflects recent conceptual advances, and constructs hypotheses derived from contemporary interpretations of the process of rural change in the full range of European rural environments. At the same time it requires a comprehensive utilisation of available data sources, so that robust and empirically valid findings can form a firm foundation for policy recommendations.

Two key research questions have been set by the technical specification of this project:

- What are the development opportunities of diverse types of European rural areas and how can these resources contribute to improved competitiveness, both within the respective countries and on a European scale?
- What are the opportunities for increasing regional strengths through territorial cooperation, establishing both urban-rural and/or rural-rural partnerships, supporting a better territorial balance and cohesion?

There is a very clear policy rationale for this project’s focus upon rural differentiation, drivers of change, opportunities and constraints. It has three main elements:

- The 2000 Lisbon agenda, which sets overarching objectives for growth through building a competitive knowledge economy, increasing employment, through innovation and entrepreneurship, whilst respecting and enhancing social cohesion.
- The Gothenburg Agenda, which seeks to ensure that growth is compatible with environmental objectives.
- The Fourth Cohesion Report, and, more recently the Green Paper on Territorial Cohesion which have drawn attention to regional specificities as a potential resource, which may provide an alternative to agglomeration, as a foundation for economic development.

1.2. Generalisations, Stereotypes and "Stylised Fallacies" relating to Rural Change

The underlying rationale for the EDORA project stresses the need to recognise the diversity of rural areas, their recent trends, and potential future development. This both resonates with the policy concept revealed by the sub-title of the Territorial Cohesion Green Paper (EC 2008) "Turning Territorial Diversity into Strength", and also implies that an idiographic approach has a role to play in highlighting the inadequacies of commonly held stereotypes about rural areas, rural change, and policy diagnoses. Hodge (2004) notes that "stylised fallacies" (rather than an adequate evidence-base) all too often drive the rural policy debate.

Despite the role played by "menu-based approaches" to Rural Development (as in CAP Pillar 2 under Regulation 1698) and the acknowledgement of the role of local and regional agencies in the design of development programmes (especially, for example, in LEADER), *such generalisations still play a key role in policy design and implementation*. All too often these are less evidence-based than anachronistic stereotypes, often perpetuated by powerful interest groups.

Such rural stereotypes have often been quite negative, and have included, for example:

- The *agrarian countryside*, in which the role of land-based industries is overestimated at the expense of other forms of economic activity which are of greater and increasing importance to socio-economic development.
- The *"rural exodus":* characterised by out-migration and demographic ageing. This ignores the fact that many rural areas show in-migration, population increase and relatively young age structures.
- Rural *"dependency culture"* – an attachment to policy supports and compensation for disadvantage as the main policy option. In reality many rural areas, even remote ones, show evidence of dynamism, innovation and growth.
- Rural *labour markets* are commonly associated with *segmentation*, in which a dominant "secondary" component, characterised by low levels of human capital, insecurity, low activity rates (especially for females), disguised unemployment, and high levels of self-employment. All of these characteristics are certainly present in some (but by no means all) rural areas.
- Similarly, rural areas are often perceived as characterised by *barriers to entrepreneurship*, whilst the impacts of *globalisation processes are believed to be predominantly negative* (whilst they are positive for many large cities).

Clearly rural change is an extremely complex and nuanced phenomenon; the more that policy makers can understand of the details of the local experience, and that more policy can accommodate the full range of regional differences, the more effective it will be. It is not desirable that one set of "stylised fallacies" be replaced by generalisations which, although they are closer to contemporary realities, introduce a new set of inflexibilities.

Nevertheless, it is apparent that the debate concerning policy options for "non-urban" Europe cannot be sustained by a phenomenological approach alone; broad generalisations have an important role to play. It is therefore very important that the debate begins to move away from anachronistic stereotypes, and is informed by generalisations which are soundly based upon up-to-date evidence. It is hoped that the conceptual phase of EDORA may make a contribution to development of more appropriate "stylised facts" and meta-narratives of change, to support development policy for rural and intermediate areas in Europe. Although subject to a range of limitations in terms of available data, and weaknesses associated with the regional framework, such generalisations may (at least in part) be given a geographical manifestation in the typologies and "analysis framework" developed in this working paper.

1.3. The Role of Typologies in EDORA

One of the key consequences of the agrarian tradition of European rural development research is the relative abundance of data relating to farm structures, productivity and employment, contrasting with the relative scarcity of harmonised regional indicators measuring aspects of the rest of the rural economy and society, including the key issues of quality of life and access to services, which are the focus of Axis 3 of the Rural Development Regulation. A simple inductive approach, starting from a review of the available data, would therefore be particularly risky for EDORA, since the balance of the available empirical information could cause the analysis, like many before it, to gravitate towards farming and related issues. Whilst it is recognised that primary industries still dominate rural Europe in land-use terms, it was a specific requirement of the terms of reference for EDORA (p6) that: "Particular attention shall be paid to development opportunities *outside the agriculture and forestry sectors*." This explains the EDORA consortium's preference for a more "deductive" approach, in which the emphasis upon empirical evidence remains very strong (in the ESPON tradition), but in which a preliminary conceptual stage has the vital role of establishing the direction and balance of data collection and analysis.

The detailed structure of the second (research) workpackage of EDORA is shown in Figure 1. The work programme is divided into three phases, Conceptual, Empirical, and Policy Orientated. The typology is a pivotal component in the empirical work, reflecting the findings of the Conceptual phase, and providing the underlying structure for both Future Perspectives, and Policy Analysis.

The conceptual element of the EDORA research methodology is represented by activities numbered from 2.11 to 2.13. In Activity 2.11 the aim has been to identify the key drivers of change, opportunities, and constraints (D.O.C.) in the context of 9 themes (reported in Working Papers 1-9). Activity 2.12 (Working Paper 10) has attempted to synthesise these in terms of a limited number of "Meta-Narratives", which are illustrative of the many complex ways in which the processes identified in the thematic analyses interact with each other in the real world. Activity 2.13 has contributed to the understanding of the D.O.C and "Meta-Narratives", by exploring the processes of change within a set of "exemplar regions".

The findings of the conceptual phase are intended to guide and illuminate the empirical element of EDORA. For example the choice of the Exemplar Regions (2.24) was designed to capture a wide range of different kinds of change, and to provide real-world evidence of the Meta-Narratives.

At this point it is necessary to acknowledge the fact that the findings of the conceptual phase of EDORA have taken a slightly different form than that envisaged at the planning stage, and that some adjustments are necessary in subsequent tasks. When designing the project methodology it was assumed (with hindsight, simplistically) that the "Meta-Narratives" of 2.12 could specify a limited number of typical development paths which are commonly followed by a limited number of different types of rural areas (which could then form the basis of the typology). In the sense that the types were to be defined by different "development paths" the typology would portray the geographical pattern of rural socio-economic dynamics within the "ESPON space".

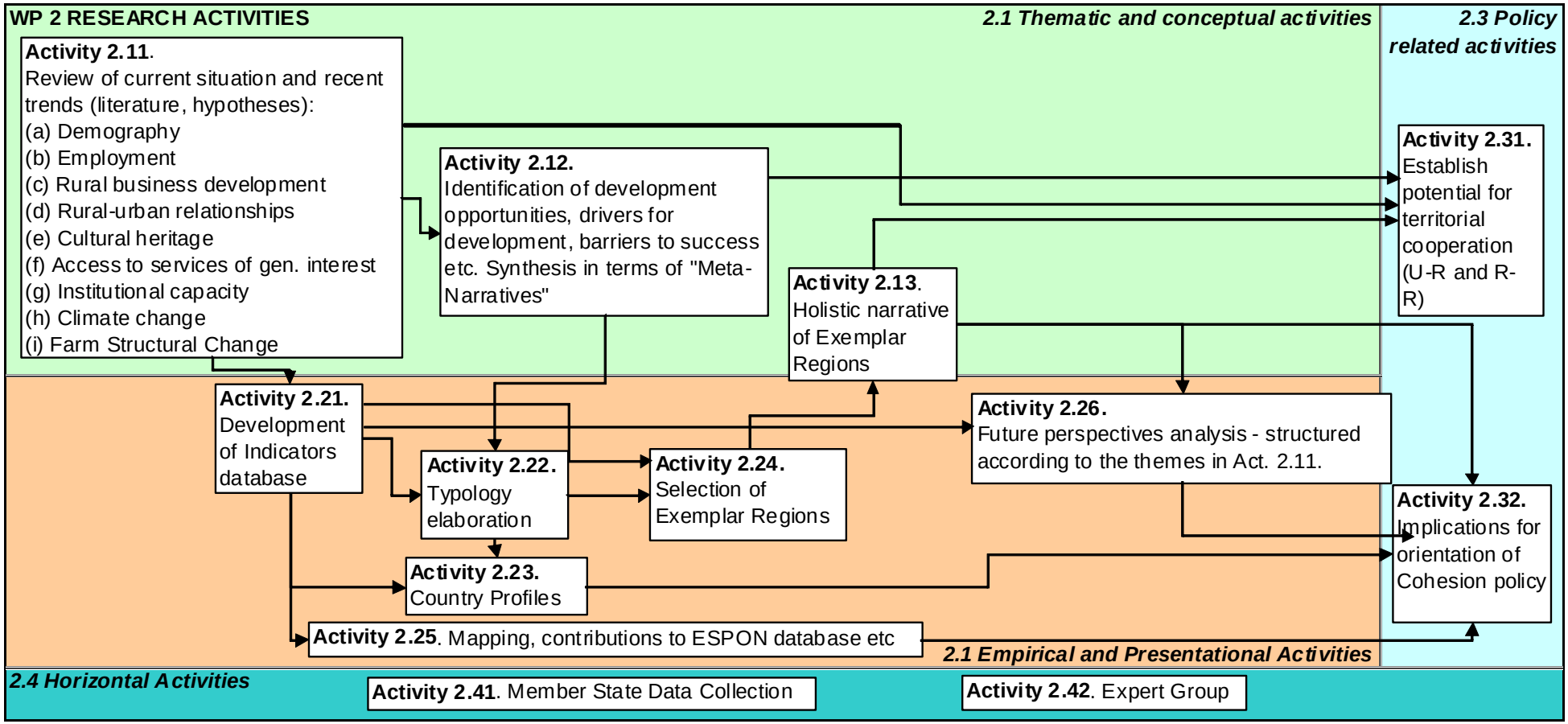


Figure 1: Structure of EDORA Work Package 2

In fact the Meta-Narratives which are presented in Working Paper 10 should rather be considered as “heuristic devices”, which help us to understand the way in which different facets of rural change interact. Thus the three Meta-Narratives described (urban-rural, agricultural restructuring, and capitalist penetration) do not represent an exhaustive list of discrete regional development paths. Nor are they associated in a one-to-one way with different kinds of rural areas. Rather they may, in various (unique) combinations, help us to understand change in individual rural areas. One consequence of this is that it is not possible to have a simple direct relationship between the Meta-Narratives and the methodology of the EDORA typology.

At the time the Inception Report was written, the typology (Activity 2.22) was envisaged as an attempt to map the geography of the most common development paths identified by the conceptual activities described above (2.11, 2.12, 2.13). After reflecting on the findings of the thematic reviews of rural change, and what may be learned about more synthetic processes of change, as illustrated by the Meta-Narratives, the role and conception of the typology has been re-specified in terms of three (interlinked) classifications, reflecting the main kinds of environment within which change operates, in terms of

(a) rurality/accessibility,
(b) progress of economic restructuring, and,
(c) an overall assessment of socio-economic performance.

As such it is considered to be well adapted to fulfil its role as a means of structuring the subsequent “Future Perspective” and Policy Analysis tasks. Furthermore, although it incorporates a very considerable cartographic component, it should not be thought of as a single map, but as a more comprehensive three-dimensional analytical framework (see section 2.2 below).

2. METHODOLOGY

2.1. Some Preliminary Considerations

Before embarking upon any regional typology-building exercise it is necessary to make some basic choices to specify the analysis. These include deciding on the geographical coverage and the spatial units to be used, and selecting a statistical approach/methodology. In the case of EDORA the degree of flexibility on these issues is quite tightly constrained.

2.1.1 Geographical coverage and units.

As in all ESPON 2013 projects, the requirement is to cover (as far as is possible) the "ESPON space". This currently includes the EU27, Norway, Iceland, Switzerland, Lichtenstein, the Western Balkans and Turkey. This working paper is based upon analysis of EU27+NO+CH+TR[1]. The analysis for the non-EU27 countries is necessarily simplified, due to data constraints. It has not yet proved feasible to include the Western Balkans.

The geographical units for the analysis are NUTS 3 regions. Not only is this the preferred level of analysis for ESPON 2013 projects, but it is fixed by the incorporation of the existing, (Dijkstra and Poelman 2008) modified OECD Rural-Urban typology, which is implemented at this level.

Since this is specified as a typology of "rural areas", most of the analysis excludes those regions defined by the OECD classification as "Predominantly Urban". It thus focuses on the "non-urban" regions of Europe, (including both Intermediate and Predominantly Rural regions – see below) rather than "rural areas" *per se*. This choice follows partly from the specification of NUTS 3 regions as the units of analysis.

Much has been written about the disadvantages of NUTS 3 regions as a geographical framework for analysis rural socio-economic phenomena and change. The OECD classification, - and the Dijkstra-Poelman (D-P) variant - is a rather imprecise tool for separating urban and rural areas. Very few NUTS 3 regions are exclusively rural (or urban). Intermediate regions exhibit a wide variety of spatial configurations - some having nucleated settlement patterns combined with sparse hinterlands, others more uniform (moderate) densities. Most Predominantly Rural (PR) regions incorporate medium-sized towns. In addition there are a range of comparability issues (within the OECD and D-P classes) which derive from the Modifiable Areal Unit Problem (MAUP).

However, from a more theoretical perspective, rural areas cannot, in any case, be separated from adjacent settlements, with which their economy is closely connected by a complex web of daily interactions[2]. It thus does not make very good sense to try to focus exclusively on rural areas as distinct from the (small-medium sized) towns embedded within them, and with which they are very much integrated in terms of their economic life. As long ago as 1991 Ole Gade (Gade 1991, 1992, also Appendix 3) developed a descriptive spatial model of the "Intermediate Socio-Economic Zone" (ISEZ[3]). In 1994 Saraceno similarly argued for a "local economy" approach as the key to understanding "the present logic of spatial differentiation" in Italy. The ISEZ was first conceived in a US context, and some of the details would not perhaps transfer "neatly" to the politically much more complex European space. It nevertheless may well provide a useful foundation upon which to build a new framework of "stylised facts" about the emerging economic geography of non-metropolitan Europe. Thus the concept of an integrated and indivisible "non-metropolitan" regional economic entity, may

[1] LI is also included where data availability allows.
[2] This is the rationale for the emphasis upon urban-rural interaction in Task 3.1 of EDORA.
[3] In an earlier version Gade uses the term "region" rather than "zone", and the abbreviation is ISER.

turn out to be a key to better understanding regional economic development, and very relevant to the issues treated by EDORA.

Although far from ideal, for a variety of practical reasons, (in particular the requirement to retain comparability with the Dijkstra-Poelman typology), the "non-metropolitan" or "ISEZ" regions of the EU27 will be defined as all regions outside the PU, (i.e. all intermediate and predominantly rural regions).

2.1.2 Statistical Approach/Methodology

There are broadly two methodological approaches to regional typologies (Copus *et al* 2008):

(a) Inductive aggregative approaches.
(b) Deductive disaggregative approaches.

The former is more commonly used in academic studies, for a variety of reasons, including the availability of "off the shelf software", and an assumption that it is more "objective". In a policy context, however, the second, deductive, approach has a number of advantages, including the greater transparency of the classification process, and the facility to predefine types which are relevant from a policy standpoint (*ibid*).

Within the EDORA context, where the types we are looking for are to some extent "pre-defined" by the conceptual phase of the project, where inductive procedures are risky due to the "agrarian bias" in the data resource, and where it is important to ensure that the outcome is meaningful in a policy context, a deductive, disaggregative approach seems most appropriate.

2.2. The EDORA Cube – more of a Framework for Analysis than a single Typology

2.2.1 The Technical Specification as the Starting Point

In addition to building on the findings of previous EDORA research activities, and seeking to provide a structural component of subsequent tasks, the typology must address the project specification. The latter states (p6) that the modified OECD Urban-Rural typology, developed by Lewis Dijkstra and Hugo Poelman "shall be the starting point for this applied research project." The D-P typology is a classification of NUTS 3 regions in terms of their degree of "rurality", (as indicated by the proportion of regional population in densely populated sub-regions), and of access to urban areas.

It is not appropriate or necessary to enter into a discussion here of the relative merits of defining rurality in this way, or of the merits of distinguishing remote and accessible rural areas. Both these issues are explored in the literature already[4], and in any case the adoption of the D-P typology is a fixed point deriving from the project specification. However it is important to state that the authors accept the D-P typology as an appropriate starting point because it has an easily comprehended rationale, and because the basic OECD classification is widely accepted and used to discriminate between NUTS 3 regions in terms of degree of rurality. In saying this we are fully aware of the many and varied criticisms which have been levelled against the OECD classification. However we feel that it is a pragmatic solution, which is unlikely to be substantially improved upon in the near future, given the "fundamentally flawed[5]" nature of the NUTS statistical region framework.

[4] See for example ESPON project 1.1.2 Urban-Rural Relations, or Bryden *et al* 2004

[5] David Freshwater, OECD (one of the authors of the typology), speaking at a recent seminar organised by DG Regio. ("How does cohesion policy support rural development" – Brussels 1st October 2009 http://ec.europa.eu/regional_policy/conferences/urban_development/index_en.cfm?nmenu=1)

2.2.2 Structure and Performance as additional dimensions

The D-P typology thus provides the "first dimension" of the EDORA analysis framework. Two further dimensions have been added, taking into consideration both the theoretical/conceptual findings of Activities 2.11 and 2.12, together with the substantial limitations in terms of availability of NUTS 3 data.

The second dimension seeks to capture the most important, "broad brush", differences in economic structure between the Intermediate and Predominantly Rural regions of the ESPON space. The third dimension considers variations in socio-economic "performance". This approach is illustrated in Figure 2.

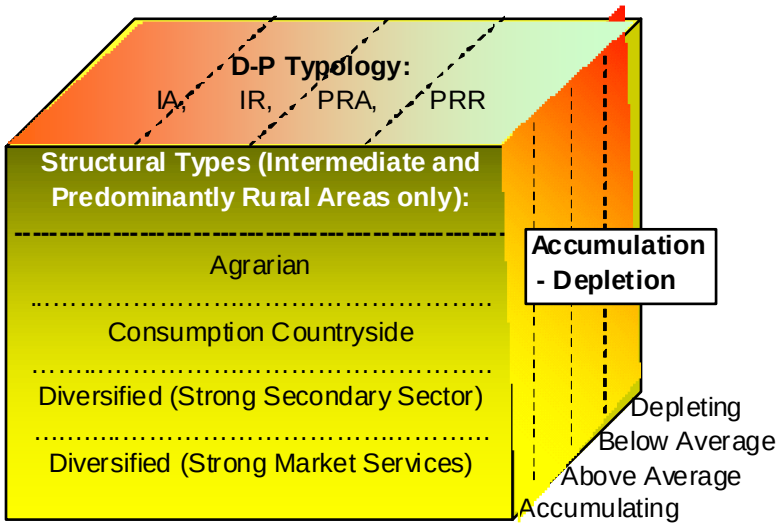


Figure 2: The EDORA Cube – a 3 dimensional framework for analysis
Note: IA = Intermediate Accessible, IR = Intermediate Remote
PRA= Predominantly Rural Accessible PRR = Predominantly Rural Remote

The first two dimensions reflect the "current" situation (2005-07), whilst the third dimension is partly based upon change indicators for the 1995-2006 period. There is thus a lag of up to five years, and the typology cannot (for example) capture recent recession impacts.

Clearly these three aspects of variation (rurality, structure and performance) interact considerably. Since the relationships between them are complex and variable, it is arguably not appropriate (from a theoretical point of view) to collapse them into a single typology. Furthermore statistical analysis presented in section 2.7 shows that merging the Structural and Rurality dimensions reduces their capacity to differentiate (in an objective and statistically significant way) between groups of regions in terms of their socio-economic "performance". Therefore three separate perspectives, associated with rurality, structure and performance are retained. It will be shown below (in section 3), that they allow an instructive "triangulation" of the complex pattern of variation in rural Europe.

2.2.3 Defining the Structural Types.

The definition of the Structural Types has inevitably represented a compromise between a deductive process, broadly informed by the conceptual phase of the project, and a pragmatic assessment of what is feasible with available regional data. It also reflects a key debate from the rural policy context.

To explain the background to the types in more detail, it is perhaps easiest to begin with the influence of the policy context, in which the debate in recent years has been characterised by

a tension between “Sectoral” and “Territorial” approaches (Copus and Dax 2008). The choice between these is of course predicated on the relative importance of “land-based” or primary sector industries. In recent years the recognition that the primary sector is a significant source of employment and income in a decreasing minority of Intermediate and Predominantly Rural regions has led to an emphasis upon the role of “multi-functional” agriculture as the guardian of landscape and environmental public goods which form the basis of a range of recreation and tourism activities. These are supported mainly through agri-environmental policies, but also interventions to support farm diversification, especially in relation to tourism and recreation. By contrast, those who favour “broad” territorial rural policy, addressing the needs of the full range of activities which take place in the European countryside, point to the fact that in many regions the economy has already diversified, and that here the structure has much in common with that of urban areas. This phenomena has sometimes been described by the term “New Rural Economy” (NRE).

The outcomes of the conceptual phase of the project, including the Thematic and Synthetic Working Papers (1-10), and the Exemplar Region reports, also provide several useful pointers for the definition of structural types:

- They bring forward evidence to illustrate the role of landscape and environment-based activities (outside or in association with farming and forestry). This new form of rural economy is neatly described by the term “Consumption Countryside”.
- Accounts of “rural restructuring” often emphasise the increasing importance of tertiary (service) activities, at the expense of secondary (and of course primary) production.

The process of structural change in the countryside is closely related to the second meta-narrative described in Working Paper 10 –“Economic Competitiveness and Global Capital”. It seems to be driven by a form of globalised “spatial division of labour” (Massey 1984) between non-urban areas in Europe and competing low-cost regions (both rural and urban) in emerging developing countries. The relative decline of agriculture and manufacturing, together with the rise of market services are part of a long-term structural evolution which historical geographers such as Richard Peet (1969, 1971, 1972), and economic historians such as Immanuel Wallerstein (1974) tell us began at least one hundred and fifty years ago, with the emergence of the “Modern World System” (Ibid).

The above policy context and broad generalisations regarding structural change must be kept in mind when considering available data sources on which to base definitions of structural types. It has often been acknowledged that NUTS 3 regional analysis of socio-economic patterns and trends is very constrained by the availability of data at this level. Missing data, questionable “harmonisation” of definitions, and periodic changes in the NUTS 3 boundaries all weaken and limit the possibilities. A review of the most promising/relevant data tables in the Eurostat Regio database was therefore carried out, in order to identify variables and indicators which are sufficiently complete and reliable to be included in a typology covering the Espon space. The details of the outcome will be described below, and at this point it is sufficient to highlight the central role played by Regional Accounts data on Employment and Gross Value Added (GVA). These have been produced for a number of years, and are complete enough, and apparently consistent enough, to provide some core indicators, around which others can be gathered.

Taking account of the above policy, conceptual, and empirical considerations and following a careful examination of regional patterns of available indicators, four “Structural Types” are proposed:

(i) Agrarian economies.
(ii) Consumption countryside.
(iii) Diversified (with important Secondary Sector).
(iv) Diversified (with important Market Services Sector).

In (iv) public sector services are excluded since (although they are important sources of economic activity in many rural regions) their relative importance in any particular Member State (MS) is very much affected by national political traditions, and trans-national comparisons are rather difficult to interpret.

2.2.4 The Performance Axis

The third axis of the proposed EDORA analysis framework is socio-economic "performance". It derives its rationale mainly from the first (urban-rural) meta-narrative. Unlike the first two dimensions, this is essentially envisaged as a continuum, between the two poles of "Accumulation" and "Depletion" (Copus 2006). Regions in the former category receive human capital by net in-migration, financial and fixed capital by investment, and are characterised by relatively high levels of income. Depleting regions have a net outflow of population, disinvestment, and low incomes. Although conceived as a continuous variable, the range may be divided into discrete types to allow more convenient presentation of results (see below).

2.3. The Underlying Classification Rationale and Methodology

This section provides a broad overview of the rationale and methodology of the EDORA analysis framework (typologies). Further detail on the specific indicators and their treatment follows in sections 2.4 - 2.6.

The underlying rationale and methodology was developed after exploring the regional patterns revealed by maps of a range of indicators derived from Eurostat Regio data. This was an iterative process; the understanding of spatial patterns gained through statistical mapping being used to suggest key indicators, and to narrow down the choice by eliminating redundancy. Thus by a process of "informed experimentation" the following procedures were devised:

Structural typology: A stepwise decision tree was used as follows:

- "Agrarian" regions were first identified, (using a composite indicator of the importance of primary sector activity).
- Secondly, within the non-agrarian residual, regions in which "Consumption Countryside" development seem important were identified (using a composite indicator of access to environmental assets, tourism capacity, and farm diversification)[6].
- The remaining regions were denominate as "diversified", and, (using an indicator defined as the ratio of Secondary Sector to Market Services GVA) they were subdivided into;
    - those in which secondary activities are important, and
    - those in which market services have become dominant.

Accumulation – Depletion Scores and Categories:

- 5 performance indicators were converted to Z scores, and an unweighted average calculated.
- This continuous variable was converted to a set of discrete categories (for easier comparative analysis), using -0.5, 0 and +0.5 (standard deviations) to define the ranges.

[6] There is in fact a small overlap between the Agrarian and Consumption Countryside types. 99 regions fulfil both the criteria for Agrarian and Consumption Countryside. Such regions are found mainly in GR, BG, RO, and PT.

2.4. The Typology Indicators.

2.4.1 Variables and Indicators

Before providing a catalogue and description of the indicators used in the typology it is perhaps helpful to make a distinction between "variables" and "indicators". Indicators have been said to possess the following defining characteristics (Copus *et al* 2003):

(i) They are normally quantitative.
(ii) They have "*a representative and simplifying function, …to encapsulate complex processes, rather as an executive summary may provide a simple concise overview of a complex, closely argued discussion*" (Ibid p15)
(iii) They have a monitoring capability "*They are designed to answer the question "How might I know objectively whether things are getting worse or better*" Tubridy (2002).
(iv) In an environmental context there are often critical thresholds, in a socio-economic context these may be replaced by political target, or a benchmark such as (for example) a national average.
(v) They have a didactic function, they teach and inform about an issue.

Indicators may be "composite"; i.e. based upon more than one raw data variable. In the context of sustainability, Jesinghaus describes such *composite indicators* as the tip of the "information iceberg", emphasising that the goal of an overall "index" (in this case of sustainability) can only be achieved after much "invisible" development work on raw data, processed data, statistics and indicators. Other writers describe the same process in terms of an "information pyramid", with raw data at the base, overlain successively by *statistics*, *indicators*, an *indicator set* and an *index* (Pastille 2002 p15, Montmollin and Altwegg 2000 p5).

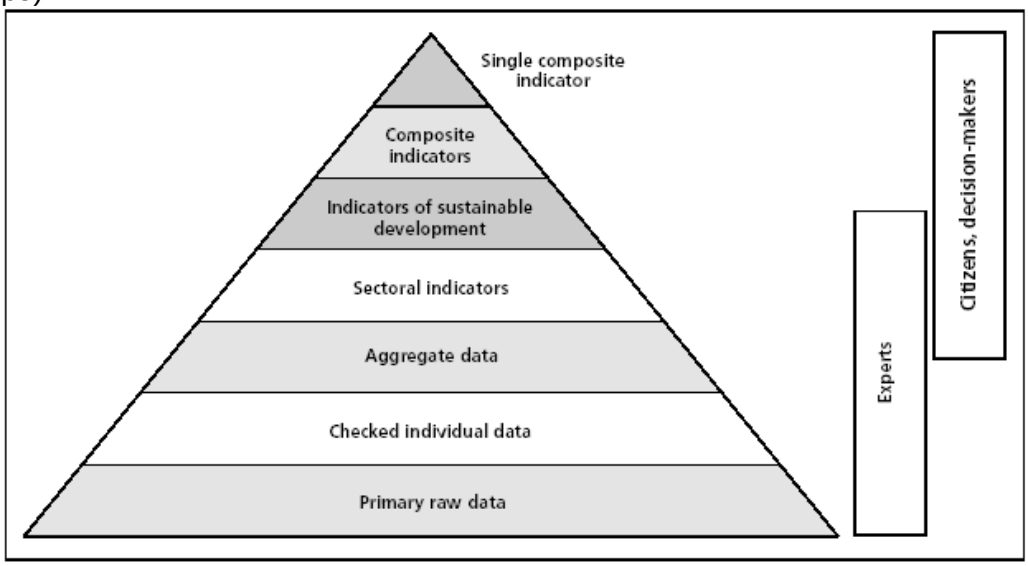


Figure 3: The Information Pyramid
(Source:Montmollin and Altwegg 2000 p5)

In the context of the EDORA typology much of the "invisible" work with (primary) raw data has already been carried out by National Statistical Offices and by Eurostat. Our task is;

(i) to "add value" to raw data variables by expressing them in the form of ratios or percentages – thus forming "indicators",
(ii) (where appropriate), to combine several indicators to form a "composite" or "synthetic" indicator, and finally,
(iii) to devise a set of classes or types of regions using thresholds informed by both conceptual and policy considerations.

2.4.2 Raw Data Variables and "enhancement".

As already stated, the starting point in the search for "raw" data which could be used for the Structural and Performance dimensions of the EDORA analysis framework was the Eurostat REGIO database. The list of 34 variables provided in Table 1 shows that the data derives from ten different REGIO tables. Several additional (non-REGIO) sources are cited. Two of these trace their roots to REGIO, and one has been generated by analysis carried out by DG Regio for the Territorial Cohesion Green Paper. National sources have been used to provide data in NO and CH.

Of the thirteen European sources used, eight provide data at NUTS 3 region level, two provide data only at NUTS 2 level, and one contains NUTS 3 data for all MS except Germany, where the level is NUTS 2. The use of NUTS 2 data has thus been minimised. The only way to use such data is to apply NUTS 2 ratio indicators to all constituent NUTS 3 regions. This carries with it a strong risk of "blurring" differences between urban and rural regions, since many NUTS 2 are composed of regions in more than one D-P category.

Almost all the tables have some missing data in the most recent available year (which varies from 2006 to 2008). In order to minimise the number of "missing data" cells in the database, each of the columns of raw data combines data for the most recent year available for each Member State (MS).

The raw data variables extracted from REGIO and the other sources have thus been "enhanced" to create a NUTS 3 database with the minimum number of missing data cells.

2.4.3 Inclusion of Non-EU27 Countries of the ESPON Space

Few of the variables are available for regions in non-EU27 MS. The D-P typology currently extends to Norway and Switzerland only. Turkey's regions are classified in the OECD (PU/I/PR) typology, but not with the D-P subdivision according to access to a city. It has therefore proved possible to include NO and CH in all three typologies (but on the basis of fewer indicators and simplified criteria). TR has also been included in the Structural and Performance typologies (although with lower "confidence levels").

Table 1 : The "Raw Data" Variables used to generate the Typology Indicators

No.	Short Name	Description	Units	Source	Base Year/ Period	No. of Missing Data Regions*	Comments
V1	TOTPOP	Total Population	'000's	Regio: Table reg_d3avg	2007	0	
V2	TOTPOPNUTS2	Total Population of NUTS 2 Region	'000's	Calculated from ESPON (2008)	2001-05	0	The Mig. and N.I. rates given in ESPON 2008 were applied to V2
V3	MIG	Net Migration	'000's	Calculated from ESPON (2008)	2001-05	0	ditto
V4	CHILD	Persons <15 years	'000's	Regio: Table reg_d2avg	2005	0	The percentage of total population at NUTS 2 was applied to the NUTS 3 total population.
V5	PENS	Persons >65 years	'000's	Regio: Table reg_d2avg	2006	0	ditto
V6	WAP	Working age population (15-65)	'000's	Regio: Table reg_d2avg	2006	0	ditto
V7	GDP(PPS)	GPD (PPS)	€mio.	Regio: Table reg_e3gdp	2006	26	NO data (1998, 2006) estimated by apportioning NO total (reg_e3gdp) to regions on the basis of regional figures (in NOK) extracted from http://www.ssb.no/fnr_en/
V8	GDPCH	Average annual change in GDP	%	Regio: Table reg_e3gdp	1995-2006	26	1995-2006 is base period, shorter periods used according to data availability by region
V9	TOTGVA	Total GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE A-P
V10	TOTGVA(PR)	Total Private Sector GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE A-K
V11	PRIMGVA	Primary Sector GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE A-B
V12	C-E GVA	Secondary Sector GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE C-E
V13	C-F GVA	Secondary Sector GVA (inc. Constr.)	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE C-F
V14	G-K GVA	Market Services GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE G-K
V15	G-P GVA	Service Sector GVA	€mio.	Regio: Table reg_e3vabp95	2006	45	Defined as NACE G-P
V16	TOTEMP	Total Employment	'000's	Regio: Table reg_e3empl95	2006	0	Defined as NACE A-P CH data extracted from http://www.bfs.admin.ch/bfs/portal/en/index/regionen/regionalportraets.html
V17	TOTEMPPr	Total Private Sector Employment	'000's	Regio: Table reg_e3empl95	2006	26	Defined as NACE A-K
V18	PRIMEMP	Primary Sector Employment	'000's	Regio: Table reg_e3empl95	2006	0	Defined as NACE A-B. CH data extracted from website above
V19	C-E EMP	Secondary Sector Employment	'000's	Regio: Table reg_e3empl95	2006	0	Defined as NACE C-E. CH data extracted from website above
V20	G-K EMP	Market Services Employment	'000's	Regio: Table reg_e3empl95	2006	26	Defined as NACE G-K
V21	G-P EMP	Service Sector Employment	'000's	Regio: Table reg_e3empl95	2006	0	Defined as NACE G-P. CH data extracted from website above
V22	TOTEMPCH	Avg. annual change Total Employ.	%	Regio: Table reg_e3empl95	1995-2006	28	1995-2006 is base period, shorter periods used according to data availability by region
V23	UNEMP	Unemployed persons	'000's	Regio: Table reg_lfu3pers	2008	203	
V24	AWU	Annual Work Units	AWU	Regio: Table reg_ef_r_nuts	2007	68	DE data is for NUTS 2
V25	SBSEMPTOT	Total Persons Employed	No.	Regio: sbs_r_nuts03	2007	28	NUTS 2 data
V26	SBSHOTCAT	Employed in Hotels and Catering	No.	Regio: sbs_r_nuts03	2007	28	ditto
V27	BP	Bed Places	No.	Regio: Table tour_cap_nuts3	2006-08	15	Average of 2006-08
V28	ANA	Access to Natural Areas	Combined	Territorial Cohesion Green Paper EC	2008	30	NO regions have been given the same score as the nearest SE region
V29	NSRES	Nights Spent by Residents	No.	Regio: tour_occ_nin2	2008	47	Nuts 2 data
V30	NSNON	Nights Spent by Non-Residents	No.	Regio: tour_occ_nin2	2008	60	ditto
V31	NSTOT	Nights Spent (Total)	No.	Regio: tour_occ_nin2	2008	60	ditto
V32	PCOGA	% of holdings with OGA	%	Rural Development in the EU Chapter 3	2005	44	NO data supplied directly by Eurostat.
V33	LT4ESU	Number of holdings <4 ESU	No.	Regio: Table reg_ef_r_nuts	2007	29	DE data is for NUTS 2
V34	TOTESU	Total holdings (ESU size dist.)	No.	Regio: Table reg_ef_r_nuts	2007	27	ditto

Notes

* Calculated for EU27+NO+CH. (0 missing data = data for 1349 regions)

2.4.4 The Typology Indicators

The 34 raw data variables (Table 1) were used to generate 23 ratio indicators, which are listed in Table 2. Maps of each of these indicators are provided in Appendix 1.

Table 2: The Typology Indicators

No.	Short Name	Description	Variables used	Base Year	Intermed. and PR Mean	PU Region Mean	EU27 Mean
Ag1	PCPrimeE(Tot)	% Employment in Primary Activities	V18,V16	2006	10.45	1.65	7.60
Ag2	PCPrimeE	% Private Sector Employment in Primary Activities	V18,V17	2006	13.94	2.36	10.19
Ag3	PCPrimeG(Tot)	% GVA from Primary Activities	V11,V9	2006	4.78	0.85	3.51
Ag4	PCPrimeG	% Private Sector GVA from Primary Activities	V11,V10	2006	6.23	1.12	4.57
Ag5	AWUPEmp	AWU as a % of Total Private Employment	V24,V16	2007	13.12	2.02	9.76
CC1	HotCat	% of employmet in Hotels and Catering	V26,V25	2007	9.57	9.85	9.66
CC2	BPPC	Bed Places per Capita	V27,V1	2006-8	86.36	35.65	69.93
CC3	NSRES	Nights Spent by Residents per capita	V29,V1	2008	342.75	284.79	323.90
CC4	NSNON	Nights Spent by Non-Residents per capita	V30,V1	2008	232.41	145.18	204.16
CC5	NSTOT	Nights Spent (Total) per capita	V31,V1	2008	575.33	431.96	528.89
CC6	ANA	Access to Natural Areas	V28	2008	125.92	91.50	114.79
CC7	PCOGA	% of holdings with OGA	V32	2005	37.40	37.94	37.57
CC8	LT4ESU	% of Holdings <4 ESU	V33,V34	2007	48.31	39.27	45.46
NR1	CEGKGR	Ratio of GVA from NACE CE to GK	V12,V14	2007	0.61	0.52	0.58
NR2	CEGPGR	Ratio of GVA from NACE CE to GP	V12,V15	2007	0.39	0.34	0.38
NR3	CFGPGR	Ratio of GVA from NACE CF to GP	V13,V15	2007	0.51	0.42	0.48
NR4	CEGKEMP	Ratio of Employ. in NACE CE to GK	V19,V20	2007	0.67	0.47	0.60
NR5	CEGPEMP	Ratio of Employ. in NACE CE to GP	V19,V21	2007	0.36	0.27	0.33
AD1	NETMIG	Net Migration (rate)	V3,V1	2001-05	0.25	0.31	0.27
AD2	GDPpercap	GDP per Capita	V7,V1	2007	19,067	28,918	22,257
AD3	GDPCh	Average annual change in GDP	V8	1995-2006	4.10	3.88	4.03
AD4	TotEmpCh	Average annual change in Employment	V22	1995-2006	0.43	0.70	0.52
AD5	Unemp	Unemployment Rate	V23,V6	2008	5.44	5.57	5.48

2.5. The Structural Typology

Of the 23 indicators listed in Table 2, the first 18 indicators were used to define the four structural types. The procedure used to define the structural types was as follows.

1. The mean and standard deviation for all EU27 “non-urban“ (i.e. Intermediate or Predominantly Rural) regions were calculated, and used to convert all indicators into Z scores. Predominantly Urban regions were excluded from this and further analysis.
2. **Agrarian Regions**: - These were defined as those regions in which all three indicators Ag1-Ag3 were above the “rural mean” (i.e. all three Z scores >0). These are mapped in Map 1 (below).
3. The 8 **Consumption Countryside** (CC) indicators were reduced to three composite indicators, relating to:
    a. Tourism Capacity and Intensity CC1-CC5,
    b. Access to Natural Areas, (CC6), and
    c. Peri-Productivist Agriculture (CC7-CC8).

    The score for each of these groups of indicators was taken as the largest of the constituent indicators. Regions in which at least two groups of indicators had a Z score above the “rural” average were placed in the “Consumption Countryside” category. The Consumption Countryside scores are shown in Map 2.
4. The remaining regions were deemed to be neither Agrarian, nor characterised by “Consumption Countryside”, but “Diversified”.
    a. Some of these still have a relatively important secondary sector.
    b. In others the market services sector has developed more prominently.

These two types were distinguished by calculating the ratio GVA from NACE categories C-E (secondary) to that deriving from G-K (market services). This ratio is shown in Map 3. Where this ratio was above the "rural" average (i.e. Z score >0) the region was placed in the "**Diversified – Strong Secondary Sector**" group. The remaining regions were placed in the "**Diversified – Strong Market Services"** group[7].

The above procedure resulted in the simple four-fold structural classification of " Non-Urban" regions shown in Map 4. This reveals (in very "broad brush" terms) a degree of association of the first two types with peripheral or less accessible regions[8], and of the diversified types with more "central" regions.

Agrarian regions are concentrated in an eastern and southern arc, stretching from the Finland, the Baltic States, through Poland, Slovakia, Romania, Bulgaria and Greece, S Italy, Corsica, SW France, southern and western Spain, and eastern Portugal.

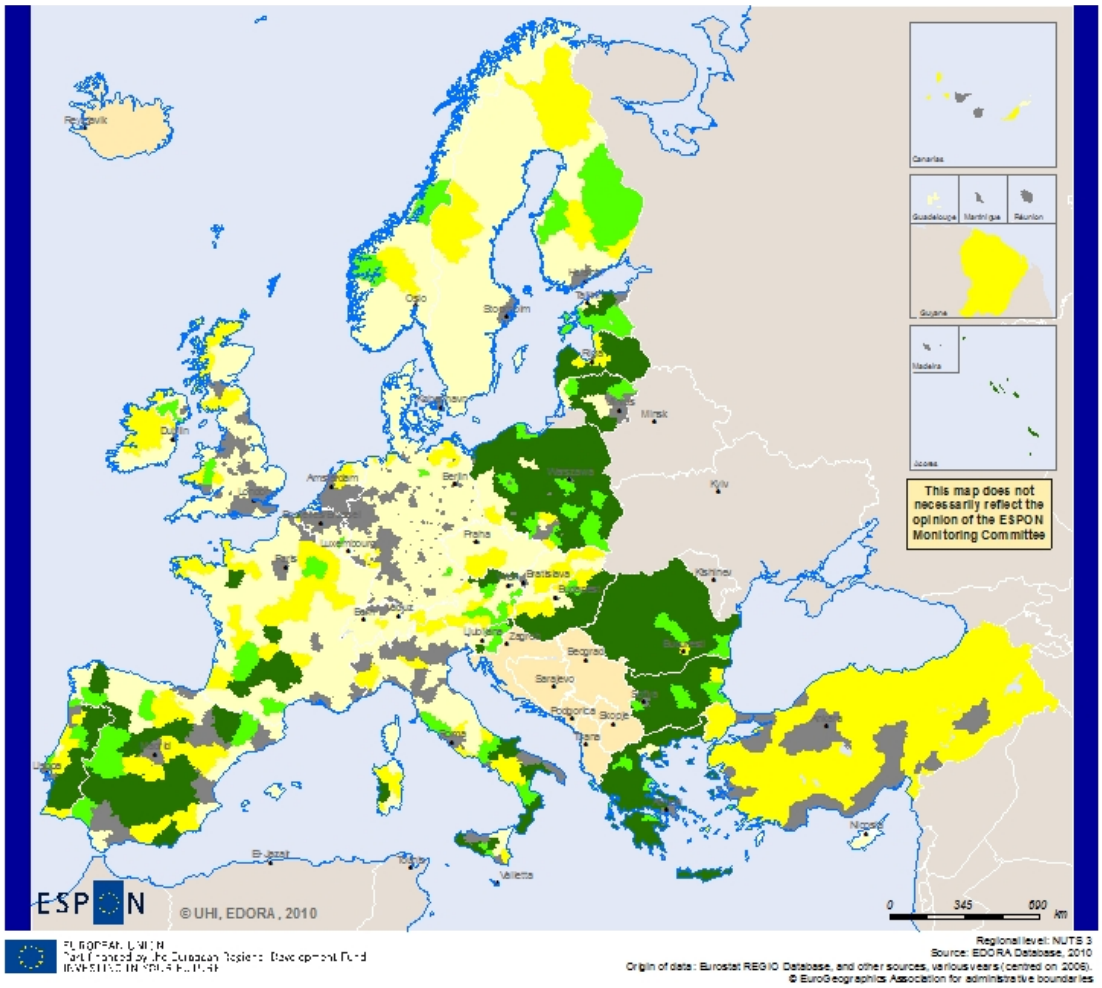
Consumption Countryside regions are often closely associated with Agrarian ones. Indeed some Mediterranean regions, especially in Greece, meet the criteria for both types. Consumption Countryside regions cover much of Sweden and Finland, more accessible coastal areas of the Baltic States, parts of Slovenia, Austria, much of eastern and southern Germany, much of central and southern Italy, Corsica, southern and central France, eastern and northern Spain, the coastal regions of Portugal, and most of the less densely populated parts of the UK and Ireland.

The **Diversified (Strong Secondary Sector)** regions are found in the Czech Republic, Slovenia, and Slovakia, northern and Eastern Germany, around Madrid, and in northern Spain, and the English Midlands.

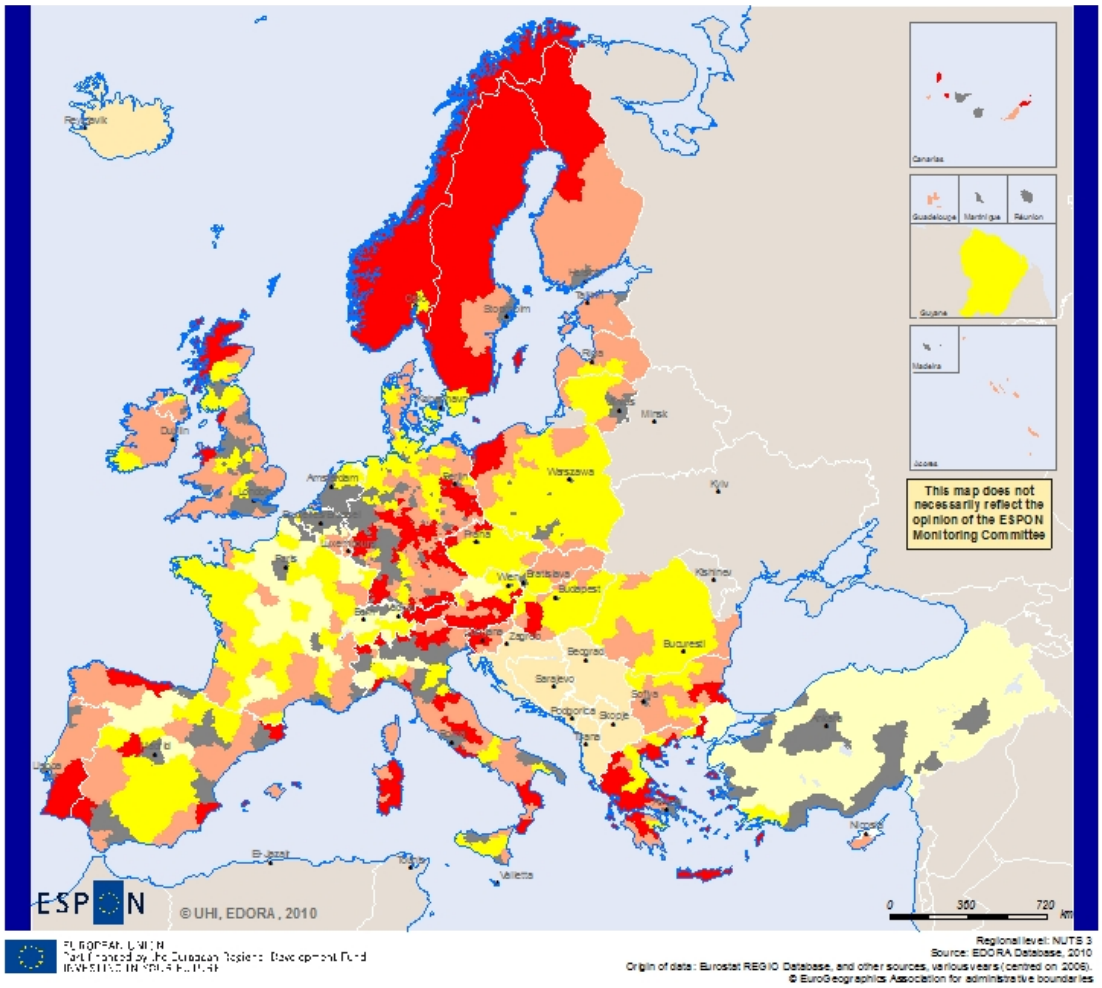
The last category – **Diversified (Strong Market services)** is conspicuous in northern and central France, northern Germany, southern Denmark, the Skåne region in the extreme south of Sweden, parts of central England, southern Scotland, and in a few regions of Spain and Italy. In the New Member States this type of region is associated with regions close to national capitals (Budapest, Bucharest, Vilnius).

[7] In a few countries indicator NR1 was not available, and here NR2-5 were substituted.

[8] However it must also be recognised that the pattern may also be interpreted in terms of an association of a low level of structural change with the New Member States.



Map 1: Agrarian Rural Economy Indicators

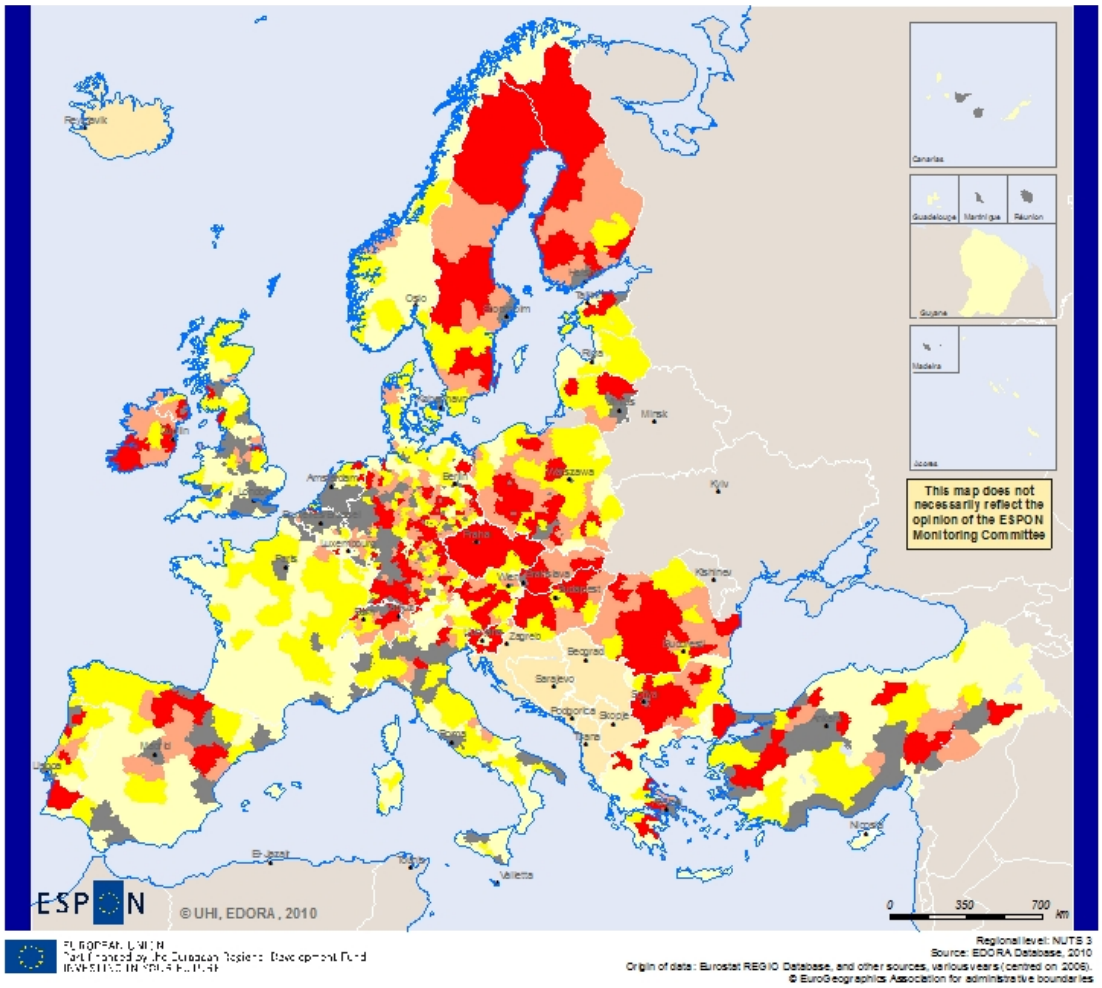


Number of Indicators Exceeding the EU27 Average

- No Data
- 0
- 1
- 2
- 3
- PU Regions

Note:
This map shows the number of the following indicator groups with at least one indicator exceeding the EU27 (Non-Urban) NUTS3 mean:
(i) Tourism capacity and intensity
(ii) Proximity of natural public goods
(iii) Peri-productivist agriculture

Map 2: Consumption Countryside Indicators

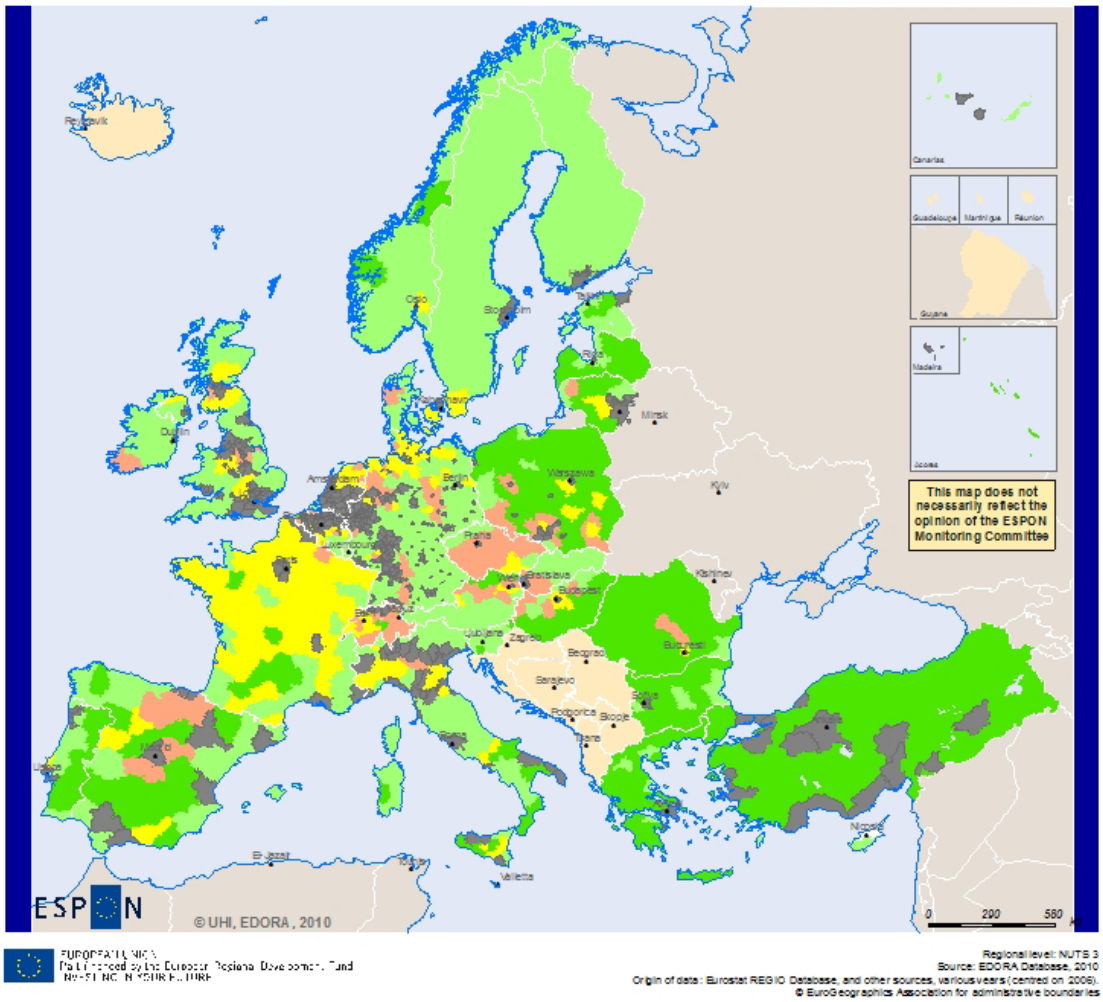


Ratio NACE C-E:G-K

- No Data
- >-0.5
- -0.5 - 0.0
- 0.1 - 0.5
- >0.5
- PU Regions

Note:
In order to accommodate both GVA and Employment indicators the data is expressed in normalised values (Z Scores), based upon the EU27 (Non-Urban) NUTS 3 Mean and Standard Deviation. Both GVA and Employment indicators are expressed as the ratio of NACE categories C-E (manufacturing) to G-K (Private Services). Priority is given to GVA data, Employment data being used where GVA data is missing.

Map 3: The Secondary to Market Services Ratio (GVA)



Map 4: The Structural Typology

2.6. The Accumulation-Depletion (Performance) Typology

Five indicators were used in the calculation of a composite regional performance indicator. These were;

(a) net migration,
(b) GDP per capita,
(c) average annual change in GDP,
(d) average annual change in total employment,
(e) and unemployment rate.

Particular care is needed when using annual change indicators, which can be very much affected by short-term adjustments which can give misleading impressions. An example of this is the rapid increase in GDP for many of the NMS12 regions, which reflect accession effects rather than strong economic performance *per se*. For this reason indicator (c) has been excluded for regions where (b) is below the "non-urban" mean.

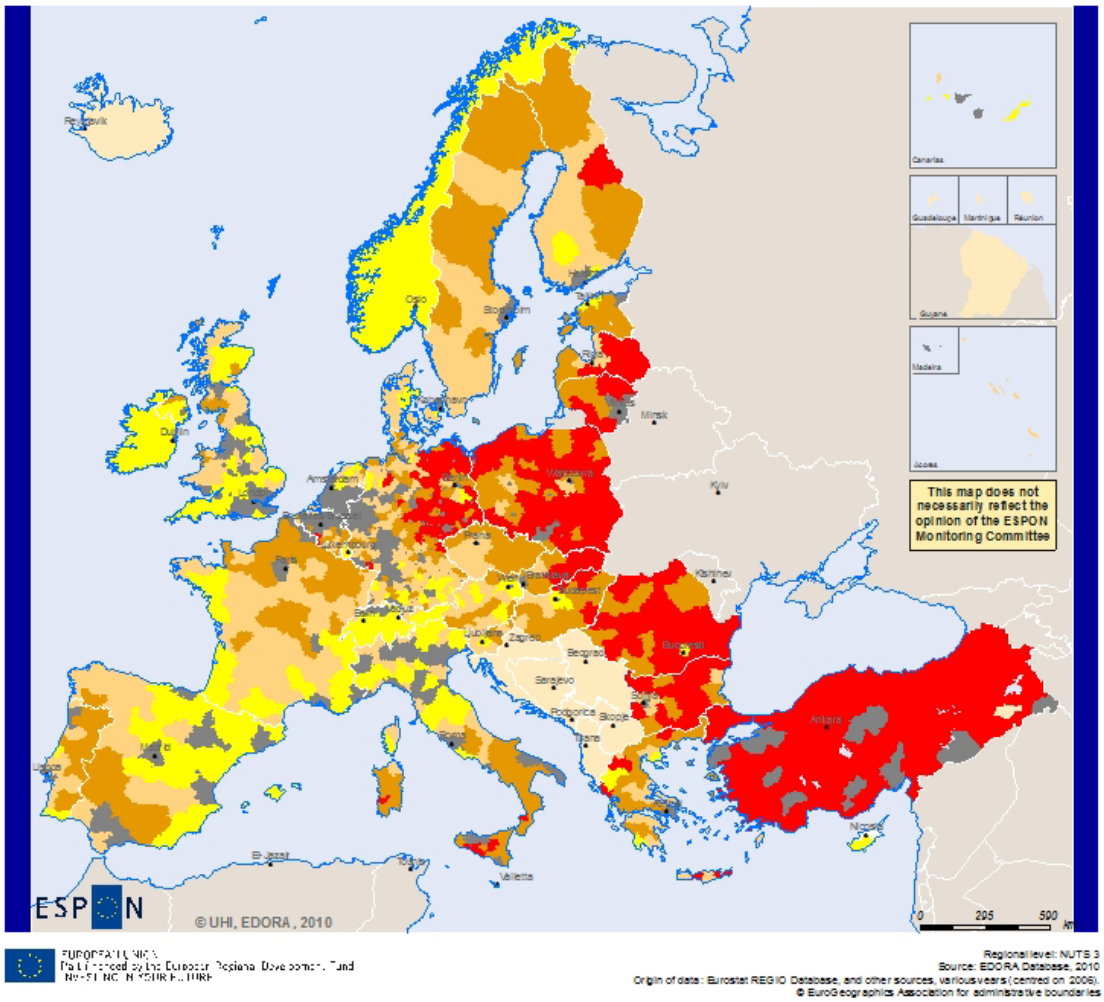
The composite indicator was simply calculated as the average of the normalised (Z) scores for the five indicators[9].

The geographical pattern of performance scores is shown in Map 5. This shows a very clear concentration of Depleting regions in the eastern New Member States and the New German Lander. Below average scores are also found in southern Italy, western Spain, Portugal, central and NE France, and the northern parts of the Nordic Member States and UK. The highest rates of "accumulation" are found along the Mediterranean coast of Spain, and north of Madrid, in Ireland (clearly a result which is unlikely to stand once more recent data is available), southern England, northern Netherlands. Above average performance is widespread among the French and German regions, Austria, N Italy, and adjacent New Member States, such as the Czech Republic and Slovenia.

Where discrete performance classes are required these were defined by the average standardised score, the four groups being:

1. <-0.5 (i.e. more than half a standard deviation below the "non-urban" mean)
2. -0.5 to 0 (i.e. less than half a standard deviation below the "non-urban" mean)
3. 0 to +0.5 (i.e. less than half a standard deviation above the "non-urban" mean)
4. <-0.5 (i.e. more than half a standard deviation above the "non-urban" mean)

[9] In CH, and TR there are many gaps in the data. In CH the A-D score is based only upon Net Migration and Unemployment, whilst for TR on GDP per capita and GDP change are present. The A-D scores, ant typology codes for these countries are therefore not comparable with those for EU27 and NO.



Map 5: The Performance Typology

2.7. Statistical Analysis of the D-P and Structural Typologies, and Relationships between them.

Before using the "EDORA cube" to provide a framework for a "broad-brush" review of socio-economic performance across "non-urban" Europe (section 3) it will be helpful to provide a simple statistical assessment of the "independence" of the D-P and Structural types. The distinctiveness of the types may be assessed in a variety of different ways. For example the statistical differences between the types of each typology may be tested on the basis of the indicators used in the classification. Alternatively (since this would involve a degree of circularity of reasoning) it is perhaps more valid to examine the statistical significance of differences between types in terms of socio-economic performance. Ultimately the validity and usefulness of the typologies is determined by their ability to distinguish groups of regions which are performing differently. Arguably, in this context, a "good" typology is one in which the types are defined by indicators which in some way reflect the key processes of performance differentiation. The following section therefore presents some simple comparisons between and within the D-P and Structural typologies, using the five performance indicators, and the synthetic Depletion-Accumulation index.

Significant Differences in Performance between D-P Types.

Figure 4 shows the results of a series of t tests[10] to assess the statistical significance of differences in the means of the five performance indicators, and the synthetic A-D index, for each of the 11 possible combinations of the five D-P urban-rural types. The values in the matrices are essentially the probabilities that the indicators in the two types (column and row headings) came from a population with the same mean. Thus the values in the diagonal are 1, since when a type is compared with itself there is a 100% probability that the sample is from the same population. Elsewhere in the table a result of >0.1 (shaded red) is indicative that there is a probability of >10% that the two types do not represent distinct populations in terms of the given performance indicator. Combinations shaded pink have a probability of between 5% and 10%.

Thus, for example in the first matrix, it is evident that in terms of net migration (NETMIG) there is no significant difference (at the 90% probability level) between the PU regions and those in either the IA or the IR types. Four other possible combinations show no significant difference in migration rates at the 90% level. The IA and PRR "pass the test" at the 90% significance level, but not at the 95% level. This leave three possible combinations of D-P types which show a statistically significant difference in terms of net migration rates (at the 95% level).

Considering the first five matrices in Figure 4 it becomes clear that the D-P typology distinguishes between regions best in terms of GDP per capita (GDPCAP) and employment change (EMPCH). At the other extreme, there are only two combinations of types showing a significant difference at the 95% level in the unemployment (UNEMP) matrix. GDP change (GDPCH), like NETMIG, occupies an intermediate position.

[10] The Excel TTEST function was used, specifying the two-sample equal variance (homoscedastic) variant. Two tailed tests were carried out.

NETMIG	PU	IA	IR	PRA	PRR
PU	*1.00*				
IA	0.97	*1.00*			
IR	0.76	0.81	*1.00*		
PRA	0.00	0.01	0.20	*1.00*	
PRR	0.04	0.06	0.39	0.87	*1.00*

GDPCAP	PU	IA	IR	PRA	PRR
PU	*1.00*				
IA	0.00	*1.00*			
IR	0.00	0.00	*1.00*		
PRA	0.00	0.00	0.17	*1.00*	
PRR	0.00	0.00	0.26	0.57	*1.00*

GDPCH	PU	IA	IR	PRA	PRR
PU	*1.00*				
IA	0.04	*1.00*			
IR	0.01	0.08	*1.00*		
PRA	0.23	0.49	0.03	*1.00*	
PRR	0.04	0.54	0.22	0.27	*1.00*

TOTEMPC	PU	IA	IR	PRA	PRR
PU	*1.00*				
IA	0.19	*1.00*			
IR	0.24	0.13	*1.00*		
PRA	0.00	0.00	0.02	*1.00*	
PRR	0.82	0.53	0.37	0.01	*1.00*

UNEMP	PU	IA	IR	PRA	PRR
PU	*1.00*				
IA	0.17	*1.00*			
IR	0.12	0.02	*1.00*		
PRA	0.99	0.19	0.08	*1.00*	
PRR	0.86	0.37	0.04	0.84	*1.00*

A-D Index	PU	IA	IR	PRA	PRR
PU					
IA	N/A	*1.00*			
IR	N/A	0.46	*1.00*		
PRA	N/A	0.00	0.46	*1.00*	
PRR	N/A	0.07	0.94	0.17	*1.00*

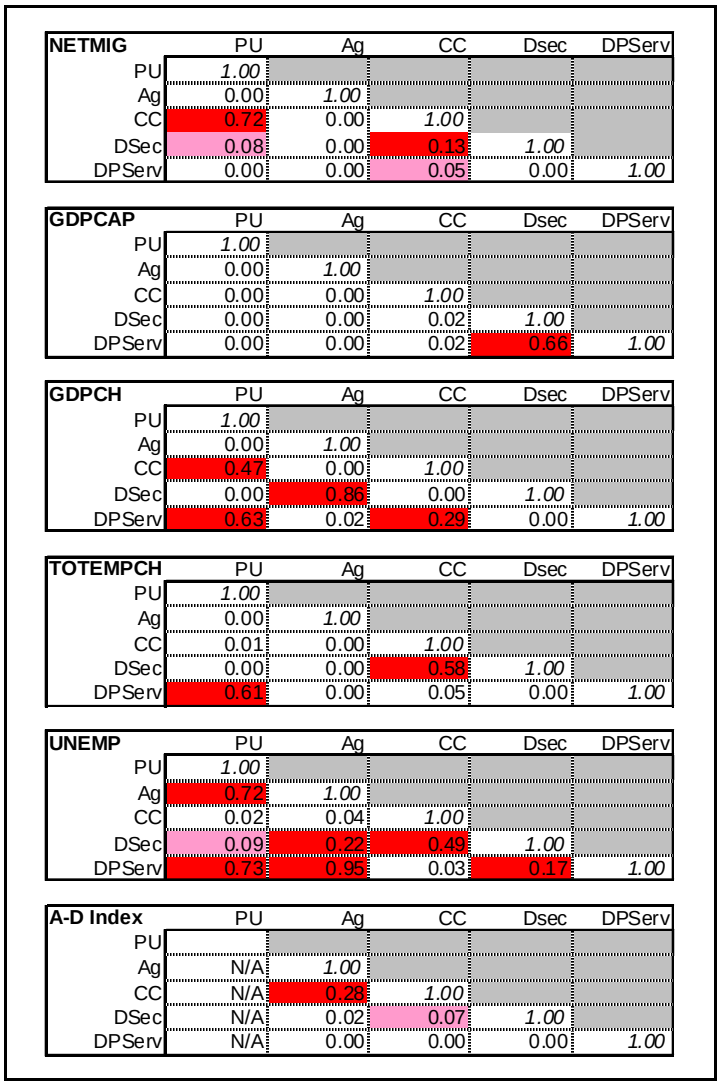
Figure 4: Probability Matrices, showing the results of t-tests to assess the difference between D-P types in terms of Accumulation-Depletion Indicators.

In the final (A-D index) matrix, the number of possible combinations is reduced to six, since the index was not calculated for PU regions. The majority of the valid combinations show no significant difference at the 90% level. The PRA and IA types show a significant difference at the 95% level, and the IA and PRR types show a significant difference at the 90% confidence level.

Significant Differences in Performance between Structural Types.

The same testing procedure was applied to the Structural Typology (Figure 5). The results suggest that the latter has better discrimination in terms of each of the individual performance indicators, and of the A-D synthetic index. In terms of GDP per capita, for example, all combinations except one (the two diversified types) show a significant difference at 95%. In the A-D Index matrix only one of six possible combinations (Agrarian and

Consumption Countryside) fails to show a significant difference at 90%. One other combination (CC and Diversified Secondary) fails at the 95% level.



NETMIG	PU	Ag	CC	Dsec	DPServ
PU	*1.00*				
Ag	0.00	*1.00*			
CC	0.72	0.00	*1.00*		
DSec	0.08	0.00	0.13	*1.00*	
DPServ	0.00	0.00	0.05	0.00	*1.00*

GDPCAP	PU	Ag	CC	Dsec	DPServ
PU	*1.00*				
Ag	0.00	*1.00*			
CC	0.00	0.00	*1.00*		
DSec	0.00	0.00	0.02	*1.00*	
DPServ	0.00	0.00	0.02	0.66	*1.00*

GDPCH	PU	Ag	CC	Dsec	DPServ
PU	*1.00*				
Ag	0.00	*1.00*			
CC	0.47	0.00	*1.00*		
DSec	0.00	0.86	0.00	*1.00*	
DPServ	0.63	0.02	0.29	0.00	*1.00*

TOTEMPCH	PU	Ag	CC	Dsec	DPServ
PU	*1.00*				
Ag	0.00	*1.00*			
CC	0.01	0.00	*1.00*		
DSec	0.00	0.00	0.58	*1.00*	
DPServ	0.61	0.00	0.05	0.00	*1.00*

UNEMP	PU	Ag	CC	Dsec	DPServ
PU	*1.00*				
Ag	0.72	*1.00*			
CC	0.02	0.04	*1.00*		
DSec	0.09	0.22	0.49	*1.00*	
DPServ	0.73	0.95	0.03	0.17	*1.00*

A-D Index	PU	Ag	CC	Dsec	DPServ
PU					
Ag	N/A	*1.00*			
CC	N/A	0.28	*1.00*		
DSec	N/A	0.02	0.07	*1.00*	
DPServ	N/A	0.00	0.00	0.00	*1.00*

Figure 5: Probability Matrices, showing the results of t-tests to assess the difference between Structural types in terms of Accumulation-Depletion Indicators.

Potential to Combine the D-P and Structural Typologies

The above procedure for testing the statistical significance of performance differences between types can also be used to explore the potential benefits of combining the two typologies. It might be argued, for example, that despite (possible) structural similarities PR regions are, prima facie, very different, from Intermediate ones, and that the Structural Typology should therefore be applied to the Intermediate and PR regions, or to each of the D-P types separately.

Figure 4 provides some initial indications that such a combination of the two typologies might not provide additional discrimination, since a number of the combinations which fail the t test at 90% involve both intermediate and PR types.

A more direct approach to this question is to separate the Intermediate and PR regions and repeat the t-tests on the Structural types combinations. The results (Figure 6) for the A-D index are illustrative of those associated with the individual indicators (provided in Appendix 2). In fact, contrary to intuition, when applied to the two OECD types separately, the

Structural Typology appears to lose some of is discriminatory power. Thus within the intermediate group of regions (top left quadrant) three combinations fail at the 90% level, and also within the rural group (bottom right), the same number of six combinations fail at this confidence level.

A-D Index		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Inter-mediate	Ag	**1.00**								211
	CC	**0.00**	**1.00**							212
	DS	**0.00**	**0.80**	**1.00**						213
	DpS	**0.00**	**0.19**	**0.18**	**1.00**					214
Rural	Ag	0.49	0.00	0.00	0.00	**1.00**				311
	CC	0.00	0.58	0.92	0.07	**0.02**	**1.00**			312
	DS	0.00	0.62	0.58	0.93	**0.00**	**0.48**	**1.00**		313
	DpS	0.00	0.08	0.19	0.00	**0.00**	**0.12**	**0.12**	**1.00**	314
		211	212	213	214	311	312	313	314	

Figure 6:Probability Matrix, showing the results of t-tests to assess the difference between the OECD and Structural types in terms of the Accumulation-Depletion Index

Taking the idea of merging the two typologies a step further, Figure 7 shows the relationships between structural types within each D-P type. The results (in the large blocks adjacent to the diagonal) are broadly similar(in terms of the proportion of statistically significant differences) to those for the OECD types above.

A-D Index		Accessible Intermediate				Remote Intermediate				Accessible Rural				Remote Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	**1.00**																211
	CC	**0.00**	**1.00**															212
	DS	**0.00**	**0.86**	**1.00**														213
	DpS	**0.00**	**0.11**	**0.27**	**1.00**													214
Remote Inter-mediate	Ag	0.72	0.02	0.02	0.00	**1.00**												221
	CC	0.00	0.11	0.14	0.10	**0.00**	**1.00**											222
	DS	0.74	0.1	0.11	0.00	**0.57**	**0.01**	**1.00**										223
	DpS	:	:	:	:	:	:	:	:									224
Access. Rural	Ag	0.64	0.00	0.00	0.00	0.51	0.00	0.81	:	**1.00**								311
	CC	0.00	0.11	0.25	0.00	0.04	0.03	0.13	:	**0.00**	**1.00**							312
	DS	0.00	0.3	0.51	0.79	0.03	0.49	0.15	:	**0.00**	**0.14**	**1.00**						313
	DpS	0.01	0.10	0.13	0.00	0.15	0.01	0.21	:	**0.00**	**0.37**	**0.10**	**1.00**					314
Remote Rural	Ag	0.08	0.00	0.00	0.00	0.58	0.00	0.43	:	0.03	0.00	0.00	0.13	**1.00**				321
	CC	0.00	0.10	0.26	0.58	0.01	0.42	0.07	:	0.00	0.01	0.95	0.01	**0.00**	**1.00**			322
	DS	0.55	0.4	0.52	0.14	0.08	0.07	0.46	:	0.42	0.59	0.43	0.77	**0.87**	**0.32**	**1.00**		323
	DpS	0.07	0.7	0.75	0.32	0.10	0.08	0.08	:	0.03	0.96	0.55	0.66	**0.26**	**0.45**	**0.38**	**1.00**	324
		211	212	213	214	221	222	223	224	311	312	313	314	321	322	323	324	

Figure 7: Probability Matrix, showing the results of t-tests to assess the difference between the all possible combinations of D-P and Structural types in terms of the Accumulation-Depletion Index

The probable explanation for the absence of statistical significant differences in many of the cells in Figure 7 is the relatively small number of regions in some combinations of D-P and Structural types (see Table 3 below). The IR type is particularly small, with only 23 regions. Combining the IR type with another D-P type might reduce the problem of small sample sizes. On the basis of the pattern of results in Figure 4 it could be argued that the best way to combine types would be to retain the two accessible types (IA and PRA) and to merge the two remote types (IRR and PRR). Figure 8 shows the results of t-tests between this simplified D-P typology and the Structural typology. Although there is some improvement on those exhibited by the combined (full) D-P and Structural typologies (Figure 6) a third of all combinations are not significant at 90% and almost half are not significant at 95%.

A-D Index		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.00	1.00											212
	DS	0.00	0.86	1.00										213
	DpS	0.00	0.11	0.27	1.00									214
Access. Rural	Ag	0.64	0.00	0.00	0.00	1.00								311
	CC	0.00	0.16	0.25	0.00	0.00	1.00							312
	DS	0.00	0.39	0.51	0.79	0.00	0.14	1.00						313
	DpS	0.01	0.10	0.13	0.00	0.00	0.37	0.10	1.00					314
Remote	Ag	0.09	0.00	0.00	0.00	0.01	0.00	0.00	0.09	1.00				401
	CC	0.00	0.04	0.15	0.36	0.00	0.00	0.84	0.01	0.00	1.00			402
	DS	0.85	0.10	0.10	0.00	0.70	0.15	0.12	0.28	0.69	0.03	1.00		403
	DpS	0.10	0.55	0.53	0.12	0.04	0.80	0.39	0.86	0.31	0.02	0.16	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

Figure 8: Probability Matrix, showing the results of t-tests to assess the difference between combinations of a simplified version of D-P and the Structural types in terms of the Accumulation-Depletion Index

Having thus explored the statistical relationships between the D-P and the Structural typologies it is concluded that:
(a) The Structural Typology provides slightly greater discrimination between regions in terms of their socio-economic performance (as reflected in the five indicators incorporated in the A-D index) than the D-P typology. Although we cannot claim to have proved so conclusively, this seems to suggest that sectoral structure is a more influential determinant of regional performance than is degree of rurality or accessibility. This is certainly an issue which deserves to be further explored.
(b) That merging the D-P and Structural typologies cannot result in types which discriminate well between regions in terms of socio-economic performance. Simplification by combining types within the A-D typology provides only a partial solution to the lack of discrimination caused by the small number of regions in some categories.

In conclusion, the above statistical analysis points to the retention of the Structural and D-P typologies as separate dimensions of the analysis framework which has been termed “the EDORA Cube”.

3. TRIANGULATING RURAL EUROPE: WHAT CAN THE EDORA CUBE TELL US?

3.1. Introduction

In this section the three dimensions of the "EDORA cube" will be used to build up a picture of the major patterns of variation between different kinds of rural area across Europe. This will be achieved through three approaches:

(i) By comparing the relative size and "weight" of the different types of region using some basic indicators of physical area, population, and economic activity.

(ii) By cross- tabulating the three dimensions of the EDORA cube, and observing the distribution of regions according to rurality, economic structure, and performance.

(iii) By comparing the D-P and Structural types according to some basic indicators of socio-economic "performance".

This analysis will involve both indicators already employed in the definition of types, but also some additional indicators.

3.2. Comparing the Relative Size and "Weight" of the D-P and Structural Types

The left hand column of pie charts in Figure 9 illustrates the relative size or "weight" of the four Intermediate and Predominantly Rural types in the Dijkstra-Poelman typology. (Predominantly Urban regions are excluded from this analysis[11]).

It is immediately apparent that the **Intermediate Accessible** group of regions dominate the Intermediate and PR areas of Europe, accounting for almost exactly half the regions, more than a third of total area, and almost two-thirds of population. The population of these accessible and "mixed" or "rurban" regions is also relatively productive and wealthy, since they account for more than two thirds of GDP. The relatively fertile and productive capability of the land in these regions is illustrated by the fact that although they account for just 38% of total area, they boast 46% of agricultural land.

At the other extreme (in terms of "weight") are the **Intermediate Remote** regions, of which there are only 23. They account for only 2% of land area, the same proportion of agricultural land, and of population and GDP.

The **Predominantly Rural Accessible** group is the second largest (264 regions). It accounts for roughly a third of both total area and of agricultural land. However these regions contain only a quarter of the "non-urban region" population of the EU, and produce only 22% of its GDP.

Finally, 147 regions are classified as **Predominantly Rural Remote**. These regions occupy 28% of the total non-urban area, but have less than a fifth of the total farmland. Their share of population is just 9%, and they produce only 8% of non-urban GDP.

In the right-hand column of Figure 9 the same information is provided for the four types in the EDORA Structural Typology. Here the "slices" of the pie charts are rather more even in size, signifying a less "skewed" distribution of size and "weight" between the types.

The largest group of regions (447) is the **Consumption Countryside** type. This group accounts for 50% of area, and 42% of agricultural area. Over 40% of the non-urban population lives in these regions, and they account for almost a half of non-urban GDP.

[11] These graphs also exclude TR, CH and NO.

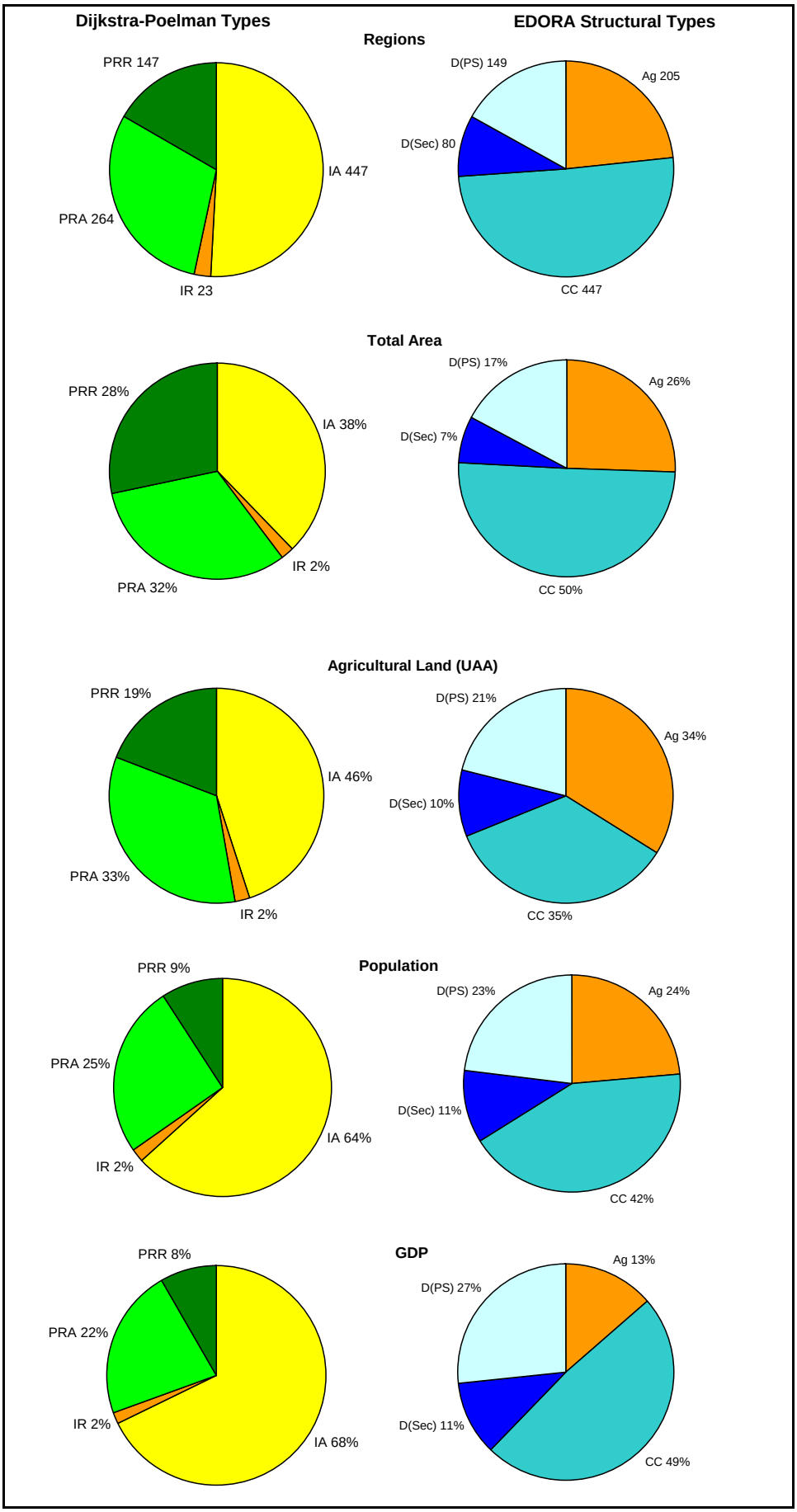


Figure 9: The Relative Size and "Weight" of the D-P and Structural Types

The **Agrarian** type applies to 205 regions, 26% of land area and 34% of agricultural area. This group's share of population is smaller, at 24%, and its share of non-urban GDP only a little over half that, at 13%.

The **Diversified (Market Services)** group has fewer regions (149), and just 17% of area, but accounts for a rather larger share of population (23%). At the same time it generates a much greater share of (non-urban) GPD, at 27%.

Finally the **Diversified (Secondary)** group contains 80 regions, and accounts for 17% of total area, and 21% of agricultural area. Just over one-tenth of the non-urban population lives in these regions, and they account for an equivalent proportion of GDP.

3.3. Cross-Tabulating the Types

One of the most informative uses of the three "dimensions" of the EDORA analysis framework is through cross-tabulation, which reveals relationships between rurality, structure and performance. In the following section cross-tabulation will first be carried out between the Dijkstra-Poelman and the EDORA Structural Types. Subsequently the relationships between rurality/structure and performance (Accumulation-Depletion) will be explored.

3.3.1 Dijkstra-Poelman and EDORA Structural Types

The first cross-tabulation presented (Table 3) simply shows the number of regions in each combination of the Dijkstra-Poelman and EDORA Structural types. By far the largest number of regions is in the Intermediate Accessible/Consumption Countryside combination. There is also a large number of regions in the Intermediate Accessible/Diversified (Market Services) combination. PR accessible regions are also commonly in the Consumption Countryside type, although a significant proportion are Agrarian. Of the Predominantly Rural Remote regions a large number are in the Agrarian structural category, and almost as many in the Consumption Countryside group. At the other extreme very few regions combine the Remote categories in the Dijkstra-Poelman typology with the two Diversified structural types.

Table 3: Cross Tabulation of D-P and Structural Types:- Number of Regions

Structural Types → / Dijkstra-Poelman ↓	Agrarian	Consumption Countryside	Diversified (Secondary)	Diversified (private services)	All Structural Types
Intermediate Accessible	49	227	59	112	**447**
Intermediate Remote	9	11	2	1	**23**
Predominantly Rural Accessible	71	145	17	31	**264**
Predominantly Rural Remote	76	64	2	5	**147**
All Intermediate and Rural	**205**	**447**	**80**	**149**	**881**

Perhaps more informative that the simple cross-tabulation of counts of regions are the patterns of population and GDP illustrated by Table 4 and Table 5. A simple way to combine and compare these patterns is by calculating "location quotients" (Table 6). The interpretation of these quotients is simple: A quotient of 1 indicates that the Type's share of GDP matches its share of population. A quotient less than 1 indicates a smaller share of than population, and vice versa.

Table 4: Cross Tabulation of D-P and Structural Types:- Percentage of Population

Structural Types → / Dijkstra-Poelman ↓	Agrarian	Consumption Countryside	Diversified (Secondary)	Diversified (market services)	All Structural Types
Intermediate Accessible	7.77	28.07	7.90	19.56	**63.30**
Intermediate Remote	1.00	0.73	0.24	0.10	**2.07**
Predominantly Rural Accessible	10.07	10.23	2.25	2.81	**25.36**
Predominantly Rural Remote	5.04	3.21	0.41	0.61	**9.27**
All Intermediate and Rural	**23.88**	**42.25**	**10.79**	**23.08**	**100.00**

Table 5: Cross Tabulation of D-P and Structural Types:- Percentage of GDP

Structural Types → / Dijkstra-Poelman ↓	Agrarian	Consumption Countryside	Diversified (Secondary)	Diversified (market services)	All Structural Types
Intermediate Accessible	4.26	32.15	8.39	23.12	**67.92**
Intermediate Remote	0.64	0.78	0.11	0.09	**1.62**
Predominantly Rural Accessible	5.32	11.70	2.34	2.91	**22.27**
Predominantly Rural Remote	3.43	3.79	0.31	0.67	**8.19**
All Intermediate and Rural	**13.65**	**48.42**	**11.15**	**26.78**	**100.00**

Perhaps the most striking features of Table 6 are the very low quotients for the Agrarian regions (regardless of D-P type). These underline the fact that the regions of Europe where the primary sector continues to play an important role in the economy (many of these are in the NMS12) are characterised by a low level of GDP. Similarly, Diversified (Secondary) regions which are remote show GDP location quotients of less than 1.

Table 6: Cross Tabulation of D-P and Structural Types:- Location Quotients (GDP/Population)

Structural Types → / Dijkstra-Poelman ↓	Agrarian	Consumption Countryside	Diversified (Secondary)	Diversified (market services)	All Structural Types
Intermediate Accessible	0.55	1.15	1.06	1.18	**1.07**
Intermediate Remote	0.64	1.07	0.46	0.86	**0.78**
Predominantly Rural Accessible	0.53	1.14	1.04	1.03	**0.88**
Predominantly Rural Remote	0.68	1.18	0.75	1.10	**0.88**
All Intermediate and Rural	**0.57**	**1.15**	**1.03**	**1.16**	**1.00**

At the other extreme all the Consumption Countryside combinations generate between 7% and 18% more GDP than the average for all non-urban regions. Intermediate Accessible regions which are in the Diversified (Market services) structural type are another exceptionally productive combination.

3.3.2D-P and Structural Types Cross-Tabulated with A-D Types

Table 7 is a slightly different cross tabulation compared with the preceding ones. The rows represent the D-P "rurality types, and the columns the four "performance categories". The figure in each cell of the table shows the percentage of the total population in that D-P type which is in regions with that level of (A-D) performance. The final column sums the percentage population across the two positive A-D types, providing an overall indicator of performance for that D-P category.

Table 7: Cross Tabulation of D-P and A-D Types:- Percentage of Population

A-D Types → / Dijkstra-Poelman ↓	Depleting	Below Average	Above Average	Acumulating	% in Positive Types
Intermediate Accessible	13.03	26.60	33.22	27.16	**60.37**
Intermediate Remote	30.23	45.31	12.45	12.00	**24.46**
Predominantly Rural Accessible	32.24	28.53	25.56	13.67	**39.22**
Predominantly Rural Remote	22.12	34.73	31.82	11.33	**43.15**
All Intermediate and Rural	**19.10**	**28.23**	**30.71**	**21.95**	**52.67**

Thus in the Intermediate Accessible group of regions the largest share of population was in Above average regions, and overall 60% of the population was in "above average" or "Accumulating" regions. It is noticeable that this is the only D-P type in which a majority of the population was in regions in the positive performance types. In the Intermediate Remote category three-quarters of the population lived in Depleting or Below Average regions. However, as we have seen, relatively few regions are in this category. In both the PR region types roughly 60% of the population lived in the two negative performance types.

Table 8 shows a similar cross-tabulation, this time the rows show the structural types. The relatively negative situation in the Agrarian regions is graphically illustrated by the fact that almost half the population is found in Depleting regions. A further 40% lives in below average regions, and only a tenth lives in regions in the two positive performance categories.

Table 8: Cross Tabulation of D-P and Structural Types:- Percentage of Population

A-D Types → / Structural Types ↓	Depleting	Below Average	Above Average	Acumulating	% in Positive Types
Agrarian	47.36	40.63	9.26	2.74	**12.01**
Consumption Countryside	9.77	23.08	36.50	30.65	**67.15**
Diversified (Secondary)	22.05	22.36	34.37	21.22	**55.59**
Diversified (market services)	5.57	27.58	40.60	26.26	**66.86**
All Structural Types	**19.10**	**28.23**	**30.71**	**21.95**	**52.67**

It is rather interesting to see that the structural type with the largest share of population in regions in the two positive performance categories (over 67%) is Consumption Countryside. Very close behind is the Diversified (Market services) category, in which two thirds of the population is in the positive categories. The Diversified (Secondary) category has almost 56% in the "above average" group, but more than 20% of its population in each of the below average performance categories.

4. SOME TENTATIVE IMPLICATIONS FOR COHESION POLICY

The three typologies presented above are, as stated in section 1, intended as more appropriate generalisations to supersede the "stylised fallacies" which appear to play a continuing role in the design and priorities of rural development policy, both at the national and the EU level. This being the case it is appropriate to conclude this working paper with some tentative consideration of policy implications.

It is important to state by way of introduction, that the following tables, and the discussion based on them, are intended to illustrate an approach to rural cohesion policy design and prioritisation which is founded both upon "state of the art" concepts, and upon detailed empirical observation of regional conditions. As such are they are "impressionistic", rather than comprehensive or objective. They are based loosely upon the findings of the nine thematic reviews (WP1-9), the synthesis (WP10) the Exemplar Region reports (WP11-22) and the Country Profiles (WP25), together with the author's experience. Nevertheless they will, I hope, show what may be done within the context of an appropriately resourced EU policy framework, based upon such principles.

4.1 Basic Principles – Macro and micro scale patterns and supporting potential.

Rural cohesion policy should reflect the principle of supporting each region to attain its potential;

(i) within the context of the challenges presented by the three meta narratives of change described in WP10, and

(ii) taking account of specific constellations of local and regional assets (both tangible and intangible), which determine the capacity for development.

The first of these contextual factors, the three meta-narratives, show a degree of systematic macro-scale variation across Europe, and can therefore be described within the framework of the EDORA typologies. The second (assets and capacity) varies in a more unsystematic way across Europe. Its impact can therefore only be adequately assessed through some form of local or regional audit, as part of a neo-endogenous process for specifying intervention "mixes" at a region level. This is beyond the scope of this working paper, and the discussion which follows will focus primarily upon the role which the typologies might play in rural cohesion policy design and targeting.

4.2 Cohesion Implications of the Meta-Narratives in different types of region

Table 10 cross-tabulates the types of the D-P and Structural typologies[12] against the three meta-narratives of WP10. In the body of the table the key implications relating to rural territorial cohesion of each combination of region type and meta-narrative are briefly stated. In some cases the same implications apply to more than one type of rural region. The background colour reflects the author's overall assessment of whether the implications are mainly positive (blue), mainly negative (pink) or mixed and fairly balanced (yellow).

Table 9: **Cohesion Implications of the EDORA Meta Narratives by D-P and Structural Type.**

Type/ Meta-Narrative	Agri-Centric	Urban-Rural	Globalisation (Restructuring)
IA	Increased production efficiency (in agriculture), but reduced employment, and potential environmental issues	Increasing interaction with PU regions, counterurbanisation of both population and economic activity.	Increasing integration into the global economy brings new opportunities, and development of NRE.
IR			
PRA			
PRR	Marginalisation of small farms in remote areas, reduced employment. Shift from production to multifunctionality where access and landscape quality permits.	Continued out-migration and ageing of population leads to depletion of human and social capital. "Pump effect" of Transport infrastructural improvements	Remote areas struggle with global networking, restructuring lags behind, low rates of growth, and income, high unemployment. Success depends very much on human and social capital etc.
Agrarian	Increased efficiency and competitiveness in agriculture) of some areas, marginalisation of others. Reduced employment and environmental issues.	Increased urban demand for some products in accessible regions, but depletion of human and social capital by out-migration in remoter regions.	Globalisation of agricultural markets means smaller profit margins. Restructuring towards the NRE is slow due to human capital constraints and lack of entrepreneurial culture.
Consumption Countryside	Shift from production to multifunctionality – especially provision of rural amenities. Declining farm employment. Degree of success depends on quality of environment and accessibility.	Increasing demand for "rural amenities" from urban populations, but depletion of human and social capital by out-migration in remoter regions.	Global competition for agriculture offset by expansion of (international) demand for tourism and recreation.
Diversified (Secondary)	Increased efficiency and competitiveness, but reduced employment and environmental issues. Overall impact positive due to small role of agric. In the regional economy.	Commuting and counterurbanisation of economic activity means that the local economy of these regions increasingly difficult to differentiate from PU regions. Prospects for growth and prosperity are also shared. Potential for environmental issues and culture/community conflicts.	Most of these regions are in NMS12. They are characterised by slow restructuring, as a result of deficits in human capital, and various other "intangible assets".
Diversified (Market Services)			These regions are already benefitting from globalisation, they have already adapted their economic structure.

[12] The performance (A-D) typology has been excluded from this exercise, since its types imply nothing about the reasons for differential performance and cannot be meaningfully cross-tabulated with the three meta narratives.

4.2.1 The D-P Types

With regard to the D-P typology according to rurality, it is hard to distinguish between the first three types (**IA, IR, and PRA)**, in terms of the likely impacts of the three meta-narratives. This is in part a consequence of the fact that the IR category is very small (see section 3.2). The impact of the Agri-Centric narrative will be mixed, since increased production efficiency will be offset by negative employment impacts and (poptential) environmental impacts of intensive systems. The relative importance of the Agri-centric meta narrative will be relatively low here, since (with some exceptions in the PRA category) agriculture is a relatively small element of the regional economy.

The urban-rural meta-narrative seems likely to have a generally positive impact on these D-P types, as they are net gainers in terms of population and economic activity, due both to counter-urbanisation and in-migration from remoter regions. The Globalisation meta narrative (here interpreted mainly in terms of economic restructuring effects) is also likely to have predominantly positive impacts upon these types of non-urban region.

The **PRR** regions are assumed to experience the neta-narratives in a generally negative way, with marginalisation of small farms in the Agri-Centric narrative, continued "rural exodus" demographic ageing, and perverse impacts of transport infrastructure improvements under the Urban-Rural narrative, and general difficulty of participating in the benefits of globalisation, due to remoteness and infrerior IT connectivity.

4.2.2 The Structural Types

The **Agrarian** region type is assumed to have a mixed, but on balance, negative experience of the three meta-narratives. Thus the Agri-Centric narrative is obviously very important here, producing increased efficiency and competitiveness, but with reductions in employment, possible environmental impacts, and the marginalisation of some areas unable to keep up with para-productivist trends. The Urban-Rural narrative suggests possible increases in (urban and sub-urban) demand for some accessible Agrarian regions, but at the same time a risk of losses of human and social capital from less accessible regions as ex-farm labour migrates to other parts of Europe in search of work. Globalisation of agricultural markets will put pressure upon the Agrarian regions either to become more competitive, or to restructure towards secondary or tertiary activities. However these regions will not be well placed for the latter in terms of human and social capital, and progress is likely to be slow.

Table 10: Relative (cohesion) impact of the EDORA Meta Narratives across the D-P and Structural Typologies

Meta-Narrative Type	Agri-Centric	Urban-Rural	Globalisation
IA	X	XX	XX
IR	X	X	X
PRA	XX	X	XX
PRR	XX	**XXX**	**XXX**
Agrarian	**XXX**	XX	X
Consumption Countryside	XX	**XXX**	X
Diversified (Secondary)	X	XX	**XXX**
Diversified (Market Services)	X	XX	**XXX**

The **Consumption Countryside** seems likely to be affected in a mixed/balanced way by all three meta-narratives. The overall picture is one of a shift away from conventional productivist agriculture towards an emphasis upon multifunctionality, exploiting countryside amenities and public goods through leisure and tourism activities. The globalisation of

tourism and recreation industries will offer new opportunities, though the ability of each region to benefit will depend upon the quality and quantity of its environmental assets. On the negative side many such regions are likely to continue to experience net out-migration, associated with ageing, and the inevitable depletion of human and social capital.

The two types of **Diversified** regions seem likely to have similar and positive responses to the Agri-Centric and Urban-Rural meta narratives. The negative employment impacts of the Agri-Centric narrative may easily be absorbed by other parts of the economy, since agriculture's role is relatively small in these regions. As the Urban-Rural narrative progresses, the economies of diversified regions are increasingly difficult to distinguish from those of adjacent PU regions, and they will therefore follow similar development trajectories. The Globalisation narrative seems likely to affect the **Diversified (Secondary)** regions in a negative way. Most of these regions are in the NMS12, and having relatively low levels of human and social capital, they will adapt and adjust relatively slowly. The **Diversified (Market Services)** regions, on the other hand, are already enjoying the fruits of restructuring, and having already developed an "intangible assets" base for future global participation, seem to have a relatively bright future.

4.3 Some tentative suggestions for Cohesion Policy Responses

As noted earlier, a territorial cohesion policy for rural areas which enables each region to develop its potential needs to take account of two kinds of regional conditions (both assets and challenges), those which are broadly associated with the interaction of the meta narratives of change and the type of region (and are therefor to some extent systematic in their distribution), and those which are more localised and unique. Only the first of these is discussed here, the second requires some form of regional audit of development assets. This will be explored within the context of Activity 3.2 (Cohesion Policy Implications).

Table 10 can provide a starting point for an exercise in considering what form of intervention might be best suited to respond to the cohesion implications of the meta narratives within each type of non-urban region. This is summarised in Table 12. Whilst this is partial and subjective, it is nevertheless illustrative of the sort of "clean sheet" or "first principles" approach which would be helpful in the search for a more appropriate balance in EU rural policy.

The contents of each cell in Table 12 are simply (and only) a reflection of the contents of the equivalent cell in Table 10. Thus, for example, (re)training of former farm workers is a direct response to the reduction in agricultural employment associated with the Agri-centric narrative, and measures to strengthen entrepreneurship and IT aspects of human capital could be a response to the depletion issues caused by the Urban-Rural narrative in PRR regions.

Two summary points may be derived from Table 12. Firstly, the analysis suggests that the priority areas for rural cohesion policy should be PRR, Agrarian, and Diversified (Secondary) regions. Secondly, conventional rural development measures (such as those within CAP Pillar II, Axes 1 and 2, are generally less prominent than those addressing the wider rural economy (i.e. closer to Axis 3). This is of course not unexpected or new. However, Table 12 goes further, in that it suggests that a focus on sectoral measures may be more appropriate in the Agrarian, Consumption Countryside and PRR regions, whilst in other types of region a more "territorial" approach would be a better response to the issues raised in Table 10.

Table 11: Linking Meta Narratives, Intervention Priorities and the Typologies

Type/ Meta-Narrative	Agri-Centric	Urban-Rural	Globalisation (Restructuring)
IA **IR** **PRA**	o Agri-environmental measures. o (Re)training of former farm workers.	o Land use planning. o Environmental policy. o Housing policy for "traditional" rural low income groups.	o Support for "traditional" rural population which is left behind by the NRE (education and training, community development).
PRR	o Farm structures policy o Local and quality products marketing o LFA support? o Training o Diversification schemes	o **Broadband provision.** o **Human capital development (entrepreneurship, IT)** o **Business network support for SMEs** o **Support for diversification.**	o **Broadband provision.** o **Human capital development (entrepreneurship, IT)** o **Business network support for SMEs** o **Support for diversification.**
Agrarian	o **Farm structures policy** o **Local and quality products marketing** o **Training** o **Diversification schemes**	o Local and quality products marketing. o Human capital development (entrepreneurship, IT)	o Support for diversification o Human capital development (entrepreneurship, skills for new activities). o Inward investment of NRE activities.
Consumption Countryside	o Diversification schemes o Training (hospitality services etc) o Local and quality products marketing o LFA support?	o Diversification schemes o Training (hospitality services etc) o Local and quality products marketing	o Diversification schemes o Training (hospitality services etc) o Local and quality products marketing.
Diversified (Secondary)	o Agri-environmental measures. o (Re)training of former farm workers.	o Agri-environmental measures. o (Re)training of former farm workers. o Housing policy for "traditional" rural low income groups.	o **Diversification schemes.** o **Human capital development (entrepreneurship, IT)**
Diversified (Market Services)			o **Measures to preserve local cultures, strengthen communities etc**

4. SOME CONCLUDING OBSERVATIONS

As stated earlier in this working paper, the underlying objectives of Activity 2.22 included:

(a) The development of some broad generalisations about rural Europe which could supersede the "stylised fallacies" which have all too often, in the past, influenced the design and implementation of European policies for non-urban areas.
(b) To provide a simple but appropriate framework for analysis for the Future Perspectives (Activity 2.26) and Policy Activities (2.31 and 2.32).

With respect to (a), it has been shown that:

(i) Regions in which the primary sector plays a major role in the local economy are mainly concentrated in the NMS12, the Baltic States and parts of Finland, Greece, Italy, and Spain. There appears to be some correspondence between the incidence of "Agrarian" regions and peripherality.
(ii) The rest of the European space is characterised by a patchwork of three types of rural area, Consumption Countryside, Diversified (Secondary) and Diversified (Market services). Of these the last seems to be to some extent associated with the most accessible areas.
(iii) Broadly speaking there is a tendency for the Agrarian regions to be relatively low performers, showing many of the characteristics of the process of socio-economic "Depletion". The Diversified (Secondary) regions also tend to be relatively poor performers, perhaps because they are dependent upon declining manufacturing industries.
(iv) The Consumption Countryside regions and the Diversified (Market Services) group are both high performers, and likely to continue to "accumulate" in the immediate future.

These are very simple, broad-brush generalisations. They cannot, of course "do justice" to the wealth of local variation in rural areas across the ESPON space, or to the infinite number of possible combinations of drivers, opportunities and constraints identified in the earlier conceptual phase of EDORA research. Nevertheless within the context of the debate about the future of European (cohesion) policy for rural areas, it would seem that the four Structural Types may be more useful as stereotypes than the prevalent, but outdated association of rural exclusively with Agrarian rural economies, or even with the Consumption Countryside. The rather different needs and potentials associated with Diversified rural economies (whether strong in secondary activities or market services) would seem to deserve far more attention in the context of the policy debate than they have heretofore received.

As a first step, the use of the structural typology as a framework for the Future Perspectives analysis and subsequent Policy tasks will allow the validity of these broad generalisations to be further assessed.

The final section of the report provides a tentative discussion of the way in which a combination of the Typologies and the Meta Narratives might serve as the basis for a rationale for differential intervention which better reflects the diversity of rural Europe. Such differentiation would work best as part of a neo-endogenous place-based rural policy, in which the combination of "measures" in any individual region would ideally be a matter for decision at a regional level, within the context of support from the national and EU levels.

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APPENDIX 1: ADDITIONAL RESULTS FOR THE STATISTICAL ANALYSIS (SECTION 2.7)

1. Results of t-tests to assess the difference between the OECD and Structural types: Individual Performance Indicators.

NETMIG

		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Intermediate	Ag	1.00								21
	CC	0.00	1.00							22
	DS	0.00	0.13	1.00						23
	DpS	0.00	0.70	0.04	1.00					24
Rural	Ag	0.18	0.00	0.00	0.00	1.00				31
	CC	0.00	0.16	0.54	0.09	0.34	1.00			32
	DS	0.00	0.81	0.55	0.60	0.01	0.76	1.00		33
	DpS	0.00	0.39	0.74	0.16	0.00	0.86	0.70	1.00	34
		21	22	23	24	31	32	33	34	

GDPCAP

		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Intermediate	Ag	1.00								211
	CC	0.00	1.00							212
	DS	0.00	0.81	1.00						213
	DpS	0.00	0.84	0.92	1.00					214
Rural	Ag	0.12	0.00	0.00	0.00	1.00				311
	CC	0.00	0.98	0.76	0.79	0.00	1.00			312
	DS	0.00	0.18	0.26	0.10	0.00	0.09	1.00		313
	DpS	0.00	0.06	0.10	0.02	0.00	0.01	0.92	1.00	314
		211	212	213	214	311	312	313	314	

GDPCH

		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Intermediate	Ag	1.00								211
	CC	0.01	1.00							212
	DS	0.19	0.55	1.00						213
	DpS	0.00	0.13	0.13	1.00					214
Rural	Ag	0.09	0.05	0.94	0.08	1.00				311
	CC	0.01	0.45	0.30	0.40	0.00	1.00			312
	DS	0.50	0.00	0.04	0.00	0.04	0.00	1.00		313
	DpS	0.00	0.03	0.02	0.29	0.03	0.17	0.00	1.00	314
		211	212	213	214	311	312	313	314	

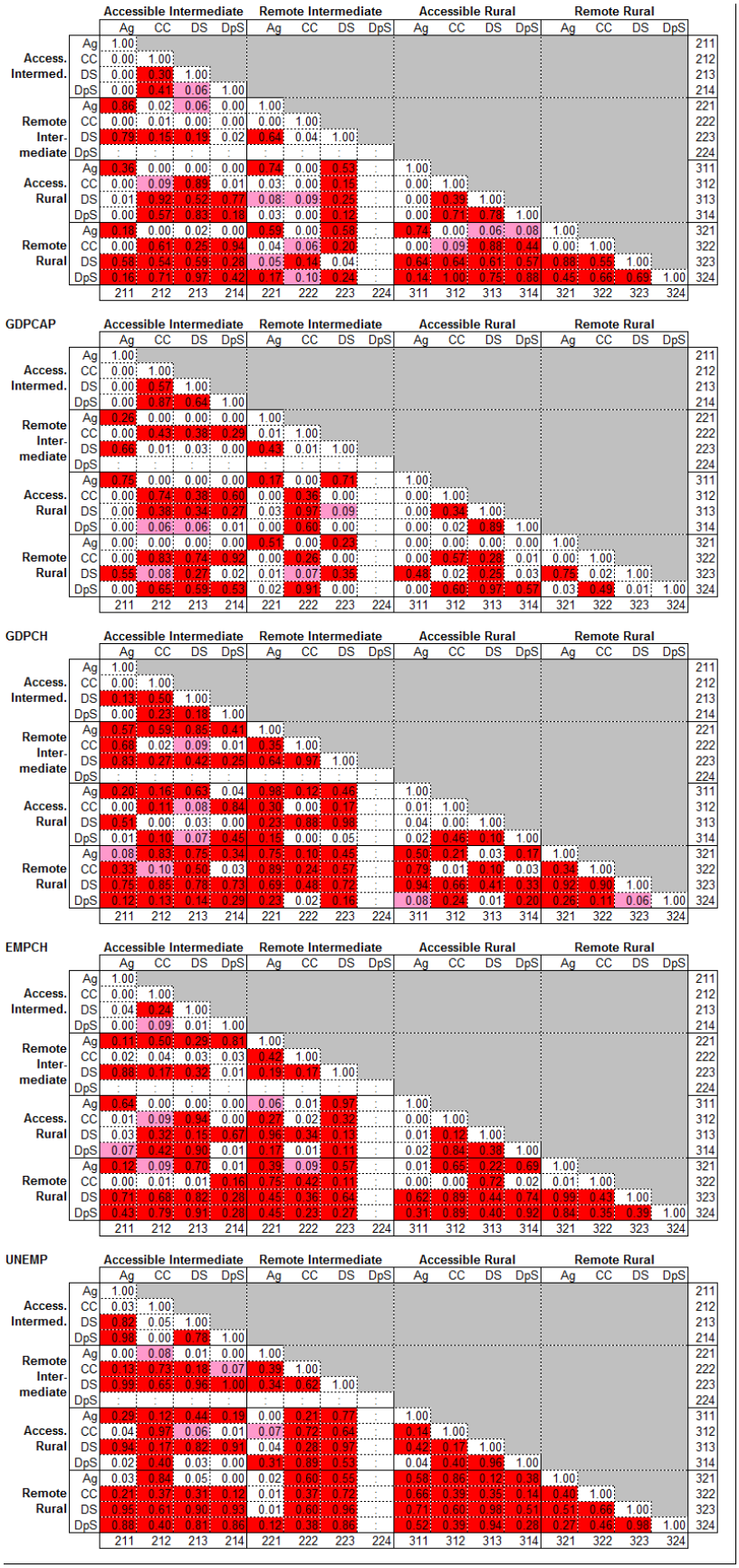
EMPCH

		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Intermediate	Ag	1.00								211
	CC	0.00	1.00							212
	DS	0.12	0.12	1.00						213
	DpS	0.00	0.17	0.00	1.00					214
Rural	Ag	0.92	0.00	0.11	0.00	1.00				311
	CC	0.00	0.63	0.27	0.10	0.01	1.00			312
	DS	0.06	0.50	0.16	0.90	0.06	0.43	1.00		313
	DpS	0.12	0.32	0.78	0.01	0.13	0.47	0.08	1.00	314
		211	212	213	214	311	312	313	314	

UNEMP

		Intermediate				Rural				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Intermediate	Ag	1.00								211
	CC	0.19	1.00							212
	DS	0.50	0.04	1.00						213
	DpS	0.29	0.00	0.83	1.00					214
Rural	Ag	0.52	0.87	0.10	0.02	1.00				311
	CC	0.31	0.62	0.07	0.01	0.03	1.00			312
	DS	0.50	0.14	0.80	0.87	0.17	0.17	1.00		313
	DpS	0.18	0.65	0.05	0.01	0.16	0.43	0.12	1.00	314
		211	212	213	214	311	312	313	314	

2. Results of t-tests to assess the difference between all possible combinations of D-P and Structural types: Individual Performance Indicators.



3. Results of t-tests to assess the difference between the Simplified D-P types and Structural types: Individual Performance Indicators.

NETMIG

		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.00	1.00											212
	DS	0.00	0.52	1.00										213
	DpS	0.00	0.00	0.01	1.00									214
Access. Rural	Ag	0.07	0.00	0.00	0.00	1.00								311
	CC	0.00	0.00	0.10	0.09	0.00	1.00							312
	DS	0.00	0.71	0.93	0.07	0.00	0.29	1.00						313
	DpS	0.00	0.00	0.00	0.18	0.00	0.01	0.01	1.00					314
Remote	Ag	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	1.00				401
	CC	0.00	0.00	0.01	0.00	0.00	0.00	0.09	0.00	0.00	1.00			402
	DS	0.49	0.02	0.04	0.00	0.93	0.00	0.09	0.00	0.61	0.11	1.00		403
	DpS	0.00	0.31	0.53	0.75	0.00	0.85	0.00	0.28	0.00	0.76	0.13	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

GDPCAP

		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.84	1.00											212
	DS	0.00	0.00	1.00										213
	DpS	0.00	0.00	0.00	1.00									214
Access. Rural	Ag	0.56	0.65	0.00	0.00	1.00								311
	CC	0.22	0.12	0.00	0.00	0.41	1.00							312
	DS	0.00	0.00	0.86	0.00	0.00	0.00	1.00						313
	DpS	0.00	0.00	0.00	0.76	0.00	0.00	0.00	1.00					314
Remote	Ag	0.55	0.23	0.00	0.00	0.22	0.04	0.00	0.07	1.00				401
	CC	0.13	0.02	0.00	0.00	0.01	0.00	0.00	0.06	0.50	1.00			402
	DS	0.04	0.03	0.96	0.00	0.01	0.06	0.96	0.00	0.09	0.01	1.00		403
	DpS	0.29	0.25	0.00	0.24	0.07	0.11	0.05	0.22	0.62	0.24	0.00	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

GDPCH

		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.93	1.00											212
	DS	0.00	0.00	1.00										213
	DpS	0.00	0.00	0.00	1.00									214
Access. Rural	Ag	0.90	0.79	0.00	0.00	1.00								311
	CC	0.57	0.30	0.00	0.00	0.57	1.00							312
	DS	0.00	0.00	0.97	0.00	0.00	0.00	1.00						313
	DpS	0.00	0.00	0.00	0.11	0.00	0.00	0.00	1.00					314
Remote	Ag	0.20	0.04	0.00	0.02	0.09	0.01	0.00	0.08	1.00				401
	CC	0.02	0.00	0.00	0.03	0.00	0.00	0.00	0.05	0.48	1.00			402
	DS	0.11	0.06	0.79	0.00	0.02	0.10	0.77	0.00	0.10	0.00	1.00		403
	DpS	0.17	0.13	0.00	0.94	0.04	0.07	0.02	0.34	0.58	0.24	0.00	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

EMPCH

		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.56	1.00											212
	DS	0.00	0.00	1.00										213
	DpS	0.00	0.00	0.00	1.00									214
Access. Rural	Ag	0.89	0.36	0.00	0.00	1.00								311
	CC	0.75	0.16	0.00	0.00	0.82	1.00							312
	DS	0.00	0.00	0.64	0.00	0.00	0.00	1.00						313
	DpS	0.00	0.00	0.00	0.37	0.00	0.00	0.00	1.00					314
Remote	Ag	0.33	0.33	0.00	0.00	0.18	0.08	0.00	0.03	1.00				401
	CC	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.42	1.00			402
	DS	0.08	0.03	0.96	0.00	0.02	0.06	0.85	0.00	0.09	0.00	1.00		403
	DpS	0.12	0.13	0.00	0.81	0.02	0.07	0.00	0.46	0.42	0.32	0.01	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

UNEMP

		Accessible Intermediate				Accessible Rural				Remote				
		Ag	CC	DS	DpS	Ag	CC	DS	DpS	Ag	CC	DS	DpS	
Access. Intermed.	Ag	1.00												211
	CC	0.00	1.00											212
	DS	0.82	0.00	1.00										213
	DpS	0.00	0.00	0.00	1.00									214
Access. Rural	Ag	0.25	0.00	0.09	0.00	1.00								311
	CC	0.00	0.08	0.00	0.00	0.00	1.00							312
	DS	0.89	0.01	0.99	0.00	0.31	0.05	1.00						313
	DpS	0.00	0.05	0.00	0.31	0.00	0.00	0.00	1.00					314
Remote	Ag	0.01	0.91	0.00	0.00	0.00	0.19	0.06	0.16	1.00				401
	CC	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.86	0.04	1.00			402
	DS	0.39	0.01	0.12	0.00	0.61	0.01	0.18	0.00	0.06	0.00	1.00		403
	DpS	0.13	0.58	0.02	0.24	0.03	0.28	0.46	0.54	0.71	0.03	0.00	1.00	404
		211	212	213	214	311	312	313	314	401	402	403	404	

APPENDIX 2: OLE GADE ON THE ISEZ

Extract from personal communication August 2009:

"I suppose I began wondering about the problems of government policy vis a vis peripheral/marginal region development (in otherwise developed economies) when I was working in the field in Norway on my dissertation project in 1968-69. My focus was on the causes, character and impacts of selective out-migration from North Norway. As you know this region, since World War II, had seen extensive central government aid for the purpose of stabilizing its economy and bringing its infrastructure more in line with Norwegian norms (and thus, presumably, stemming the outflow of people who were overwhelming Oslo, in particular). Gradually I sensed that there seemed to be a direct relationship between government encroachment and degree of out-migration for individual kommuner. A stage-wise migration process was clearly evident, with intermediate sized places becoming the initial stopover of folks seeking to broaden their opportunity structure. I began to think that had the central government correctly diagnosed the increasing differentiation in quality of life and opportunity that was regionally emerging with improvement in the national economy following the war, it might have concluded that investments could be better focused on intermediate growth poles/regions/zones, stabilizing them, and improving their future prospects to where they, and not Bergen, Trondheim, and Oslo would be an ultimate objective of the migrant. Ideally this might result in a decentralization of the regional development effort, i.e. let investment probes into the periphery issue from selected ISER nodes, should they have acquired the sufficient diversified economic base. Simultaneously, of course, this line of thinking is a complete rejection of the then traditional bi-polar model of regional economic development. The decentralizing approach in the US, begun in the 1970s, of having federal resources sent through the state governments to regional councils failed largely because the latter, where in developing regions, had their decisionmaking dominated by municipalities, many of whom were themselves failing.

Erik Bylund had earlier conceived of a stage-wise migration model explaining the settlement process of frontier regions in Northern Sweden. With industrialization, modernization and other changes in life, livelihood and popular perspectives, the frontier regions were in decline, and it was Bylund who harped against excessive government expenditures purported to stabilize/energize marginal regions. I began to model a migration process acting in the reverse, noting that people of very similar characteristics to the earlier frontier migrants – young, dynamic, perhaps better educated, and opportunistic – were moving from their lesser desirable peripheral environments, in a stage-wise manner. What they were leaving behind was an increasingly aging, tradition bound population; one more reluctant to respond to the expectations of the government that came with the aid packages. As an aside, I remember clearly the anguish expressed by young teachers, from Oslo, etc. on a two-year plan following their teaching certification, in rural schools in Nordland Province, literally pushing the migration envelope by constantly informing their students how truly nice it was in the cities of the south.

Persistent concerns about the apparent insufficient impacts of the governmental sums being proffered their peripheral regions caused a welter of ideas, theories of impacts and change, etc. to emerge in Sweden in the 1970s and thereafter. The Marginal Region Study Group coming out of Karlstad University (initially DIMA, then PIMA) was one result (as certainly was the founding of Nordregio). Here at the initial meeting of PIMA, in 1989, I met up with Lars Olof Persson and Ulf Wiberg, who had collaborated with Bengt Johansson, on Urbaniserad Glesbygd: Verklighet och Vision, published that same year. Lars Oluf and Ulf saw my work on the Intermediate Socio-Economic Development Region to provide the potential for a theoretical superstructure with clear policy implications, and we began collaborating on its essential characteristics focusing especially on research that compared national economies with distinctively different approaches to the regional development problem, specifically, Sweden, and the USA state of North Carolina. Supported by minor research grants from the United States and a substantial grant from the Swedish Research Council (in several

portions over the following two or three years) we proceeded with Lars Olof, Ulf, and myself as principal investigators, and with the additional support of graduate students from Umeå University and Appalachian State University. The initial offerings were presented in three papers at the annual meeting of the Association of American Geographers in Toronto, April, 1990, and were presented in their original form in a CERUM Working Paper, CWP-1990:8, edited by Ulf Wiberg, and entitled: Characteristics of the Intermediate Socioeconomic Zones in Sweden and USA.

Over the ensuing two years, additional reports were published in the annual PIMA meeting papers, and two Master Theses were produced at the Department of Geography and Planning at Appalachian State University (Jane Chang and Jeff Jones). I was subsequently invited to give the plenary presentation, you have referred to, in Galway. This was not an audience receptive to the idea that an empirically supported theory existed that might realign central governments' foci on peripheral region subsidization and infrastructure investment. …

…In my own research I have had opportunity to periodically utilize the ISER Model, as exemplified in a chapter where I sought to expand the explanatory regional development model to all of Europe, in the context of the prevalent research environment in the late 1990s (Gade, 1998). I have also used the conceptual framework in my textbooks on North Carolina, most recently in the 2002 volume. In both instances the model did not advance, since it was used only illustratively. Still I remain sold on this as being a continuously valid approach to looking at the spatial dimensions of economic development and change, in a context of regional differentiation and governmental investment policy.

The ESPON 2013 Programme

Applied Research Project 2013/1/2

EDORA

(European Development Opportunities for Rural Areas)

Final Report Annex 1 Part 25

Scientific Working Paper No. 25

Comparative Country Profiles Report

Joan Noguera and Laura Morcillo
Universitat de València

2010

EUROPEAN UNION
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Mar Garcia, researcher of the Institute of Local Development (University of Valencia) has helped greatly to the complexion of this report by compiling information from the EDORA database and other sources, and building most tables, figures and maps of Section 2 of the report.

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CONTENTS

SECTION 1
PURPOSE AND METHODOLOGICAL APPROACH

CHAPTER 1.
THE PURPOSE OF THE COUNTRY PROFILES IN THE FRAME OF THE EDORA PROJECT AND THE STRUCTURE OF THE MEMBER STATE COMPARATIVE COUNTRY PROFILES REPORT

According to the reference document of the EDORA Project (see Inception Report, page. 14), Activity 2.23 "Country Profiles" consist of tabular summaries of average indicator values for each type of rural area (as defined by activity 2.22 "Typology Elaboration") within each Member State, accompanied by a brief explanatory text.

According to this description, the goal of the Country Profiles is to have national and supra-national (groups of counties) "pen-pictures" of different rural standard categories, based on available indicators and enriched with "local knowledge" of partners. The rural categories that should guide the definition of regional groups (at NUT 3 level) are those defined by the Typology of the project (Activity 2.22). However, due to time constraints and task schedule incompatibilities, the rural categories used for the Country Profiles report are those defined by the Dijkstra and Poelman typology of Rural-Urban regions (available at http://ec.europa.eu/regional_policy/index_en.htm): urban, intermediate rural accessible, intermediate rural remote, predominantly rural accessible and predominantly rural remote. Having largely exceeded the time allocation for this task, most effort will be done to incorporate a section analysing rural types of the EDORA typology.

The cross-country report is structured in four sections:

Section 1 "Purpose and methodological approach" includes two chapters. Chapter 1 presents the goal and main objectives of Country Profiles in the frame of the EDORA project. Chapter 2 "Methodological approach" describes the processes carried out, outputs achieved and difficulties encountered.

Section 2 "An analysis of the Diversity of European Regions based on the EDORA Database" presents a series of tables, figures and maps built from the contents of the extensive EDORA Database (Activity 2.21). This section is divided into thematic chapters according to the EDORA conceptual headings: chapter 3 "Demography", Chapter 4 "Employment", Chapter 5 "Services of General Interest", Chapter 6 "Farm Structural Change", and Chapter 7 "Institutional Capacity". Depending on data availability, each section is structured as following:

- Comparative analysis of relevant data and indicators by country in the ESPON area with reference to the EU27 average (EU27 average has been used instead of ESPON area average due to data availability problems).
- Comparative analysis of relevant data and indicators by non-exclusive groups of countries (ie. Mediterranean, Scandinavian, EU 15, NMS, etc.).
- Comparative analysis of relevant data and indicators by categories in the Dijkstra-Poelman rural-urban typology (Predominantly Urban, Intermediate Rural Accessible,

Intermediate Rural Remote, Predominantly Rural Accessible and Predominantly Rural Remote)[1].

- Comparative analysis of relevant data and indicators at region level (NUT 3) for the countries covered, expressed in maps.

For some EDORA conceptual headings there was not sufficient relevant data available for analysis in the Database (ie. Rural business development, rural-urban relationships, cultural heritage and climate change). Therefore, these headings were removed from Section 2 and analysed only on the basis of qualitative analysis.

Section 3 "An analysis of the Diversity of European Regions Based on the EDORA Typologies" is structured in three chapters presenting three different analyses based on the EDORA typologies. In all cases analysis is carried out considering D-P, Structural and Performance typologies (the components of the EDORA Cube) and four main variables: number of regions, total area, population and GDP.

- Chapter 8 is a comparative analysis of the three EDORA typologies for the EU27 countries as a whole. D-P, Structural and Performance typologies are considered as well as the four variables mentioned. In each case, "residuals" are calculated between types and variables.
- Chapter 9 is an analysis of the three EDORA typologies in each of the EU27 countries individually. Therefore, the four variables (number of regions, total area, population and GDP) are analysed according to their distribution in the categories of each typology considered (D-P, Structural and Performance).
- Chapter 10 is an analysis of the three EDORA typologies by non exclusive groups of countries (ie. Mediterranean, Scandinavian, EU 15, NMS, etc.). The aim of this analysis is to test the behaviour of differentiated groups of countries in the selection of key variables for the three EDORA typologies Defined groups of countries are: (i) EU 15 (Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom); (ii) New Member States (Bulgaria, Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia, Slovakia); (iii) Mediterranean countries (Greece, Spain, Malta, Italy, Portugal, Chipre); (iv) Central-West European Countries (Belgium, Germany, France, Ireland, Luxembourg, Netherlands, Austria, United Kingdom); (v) Scandinavian Countries (Denmark, Finland, Sweden, Norway). Criteria for the selection of the groups of countries have been the definition of relatively homogeneous supranational areas or, at least, areas sharing common rural and regional dynamics. Furthermore, it is not mutually exclusive groups.

[1] For a complete methodological description of this typology please visit http://ec.europa.eu/regional_policy/sources/docgener/focus/2008_01_rural.pdf

CHAPTER 2.
METHODOLOGICAL APPROACH

The methodological procedure for Activity 2.23 “Country Profiles” is simple and straight forward. following steps have been undertaken:

1.1 Step 1. Decision on the structure of the National Country Profiles Report

This decision had to do with the overall goal for Activity 2.23 consisting of tabular summaries of average indicator values for each type of rural area (as defined by activity 2.22 “Typology Elaboration”) within each Member State, accompanied by a brief explanatory text. Due to the temporary mismatch in the execution of tasks 2.22 “Typology” (still in progress) and 2.23 “Country Profiles”, reference rural types for analysis could not be taken from the EDORA Typology. Instead, until the EDORA Typology is completed, rural types are those matching categories of Dijkstra-Poelman rural-urban typology.

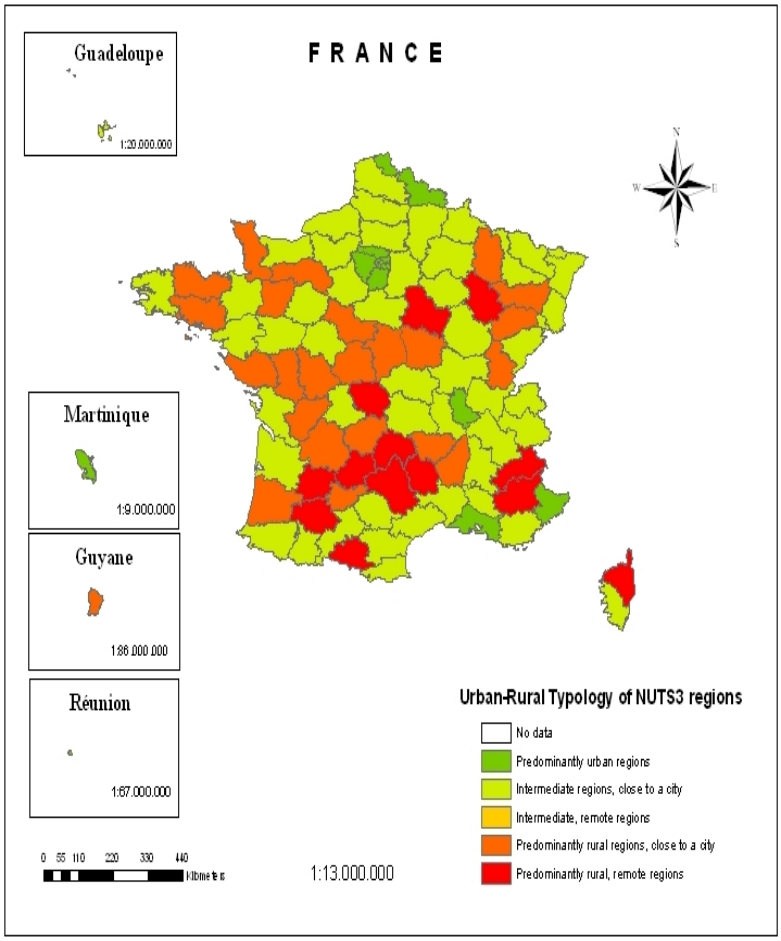
To meet the goal of the task an initial decision was made to structure the document under the EDORA thematic headings (Activity 2.11). Therefore, the report is divided into 10 main sections, each one dealing with one of the EDORA themes (demography, employment, rural-urban relationships, institutional capacity, and so on).

For each section, two types of information have been gathered: on the one hand, quantitative information consisting on a selection of indicators from the EDORA database that are available for a minimum number of territorial units (see Chapter 2.3 of the full Report for a more detailed description). On the other hand, a qualitative assessment of country experts through answers to a series of standard questions organized along the 10 EDORA thematic headings (see Chapter 1 and Chapter 2.4 of the full report for a more detailed description).

1.2 Step 2. Creating 27 country maps showing the results of the Dijkstra-Poelman typology at NUT 3 level

The starting point for the national reports was the analysis of the suitability of the Dijkstra-Poelman rural-urban typology to the real situation in each country covered. This assessment was based upon the expert knowledge of responsible partners and not in any quantitative data. Country maps were added to the initial part of each national report template, and an standard question was proposed asking whether the D-P typology produces a reasonable classification in the country, whether there are there significant processes hindered and which is the degree of internal variation. The aim of this exercise is to validate the results of a “top-down” typology carried out at regional level against the specific knowledge of experts about the processes and facts happening in and within each country and NUT 3 unit.

Figure 2.1 An example of country map based on the Dijkstra-Poelman typology



Source: own elaboration from http://ec.europa.eu/regional_policy/sources/docgener/focus/2008_01_rural.pdf

1.3 Step 3. Deciding on key thematic indicators and elaborating standard tables for each of the 25 counties covered.

The creation of tables of data guide comments of national teams for each Country Report. It was important to build a collection of tables with standardised indicators classified by subject area (corresponding to the themes of Activity 2.11 "Literature Review"). The “raw” data for tables came from the development of a comprehensive database containing all thematic indicators for the 32 countries considered, based on the information contained in the database project (Activity 2.21). The EDORA database had to be complemented with data and indicators that were not available by using other reliable sources. The databases used to supplement the information contained in the Project database are Eurostat, the European Union Rural Development (RDEU): Report 2007, ESPON public database, and SERA Project. The standard tables were prepared by the lead partner. Responsibility for the commentaries for the 32 countries was shared between partners as shown in Table 2.2. The lead partner, after receiving national inputs, was responsible for integrating each national comment into a chapter of the Cross-country Profiles Report.

Table 2.2 Partner Responsibilities for Country Profiles (2.23) (see project documents for key to partner numbers)

Partner No.	Countries
1	UK MT
2	SE FI DK NO EE LV LT IC FR
3	RO BG
4	ES
5	GR CY
6	IE
8	SL
9	DE NL LU BE
10	AT LS CH IT
12	PL CZ SK
13	HU
14	PT

Source: EDORA Application Form, Part B

The process for the development of tables started by looking at the opinion of thematic experts in relation to the most relevant indicators for characterising rural differentiation and change. Therefore, the initial reference was a set of lists of indicators (one for each theme) that would be optimal for analysis. From this starting point a search job was carried out to check the availability of these indicators for a sufficient number of NUTs III or NUTs II. Once the database was completed to a satisfactory level, the generation of tables was carried out. Each table includes, for each selected indicator, the value for each type of regions in the D-P typology (Predominantly Urban, Intermediate Rural Accessible, Intermediate Rural Remote, Predominantly Rural Accessible and Predominantly Rural Remote), the average value for the country, the average value for the ESPON area (EU27-CH+HR+IS+LI+MK+NO+TR), and the average of the EU 27 (see Table 2.3).

Table 2.3 An example of standard table: demographic indicators in Germany

DEMOGRAPHY		PU	IRA	IRR	PRA	PRR	Average country	Average EU 27 +CH+HR+IS+LI+ MK+NO+TR	Average EU 27
Variables		1	21	22	31	32			
Census pop. 2001	% pop. 0 to 14 years	14.92	16.29		16.44	17.00	15.71	16.75	16.70
	% pop. 15 to 64 years	67.80	67.09		67.09	66.69	67.40	66.62	66.65
	% pop. 64 years and over	17.29	16.63		16.47	16.31	16.89	16.53	16.55
	Age dependency rate	25.58	24.83		24.63	24.46	25.12	25.09	25.09
Population*	Population change 01-07	86.69	86.33		86.01	88.66	86.43	96.58	96.31
	% pop. 0_14_2007	16.06	15.77		15.36	17.42	15.83	16.68	15.97
	% pop.15_64_2007	76.31	76.34		76.79	75.70	76.42	69.75	70.18
	% pop. >64_2007	7.62	7.88		7.85	6.89	7.76	13.56	13.84
	Age dependency rate	31.08	31.06		30.31	32.10	30.92	44.08	43.17
	Natural increase 2001-06	-59.28	-45.4		-40.87	NA	-46.75	-5.99	-6.09
	Net migration 2001-06	-107.55	42.83		192.72	NA	64.14	7.09	8.97
Education	% ISCED 0_2**	31.41	29.28		29.47	35.68	30.28	33.63	36.66
	% ISCED 3_4**	63.97	65.25		65.46	63.34	64.72	43.29	47.14
	% ISCED 5_6**	21.94	22.76		21.98	18.10	22.22	17.03	18.55
	% farmers with basic or full education	66.99	66.57		66.50	66.20	66.74	35.34	39.55
	Life-Long Learning in Rural Areas	7.43	7.15		6.68	5.93	7.17	7.69	8.61

*Values NUT3 are replaced by values NUTS2

**% ISCED by groups are calculated for population more 15 years.

1.4 Step 4. Generating thematic standard questions

According to the goal of the task and the overall interest of EDORA in drivers, opportunities and Challenges for different types of rural areas, a number of standard questions focusing in these issues was developed for each thematic heading. These questions have already been presented and described in the previous section.

1.5 Step 5. *Elaboration of 25 draft Country Profiles Reports*

Once the leader partner produced all standard tables and questions, the "skeleton" of the Country Profiles Report for each country was ready for responsible experts to include comments as necessary. It was necessary to set up an iterative process with each of the national experts to resolve doubts. At the end of the process, the responsible partner for the Country Profiles task received draft reports from the following countries: Austria, Belgium, Bulgaria,Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

1.6 Step 6. Review of the draft Country Profiles Reports

The responsible partner has reviewed all draft Country Profile reports received to check that there were not misunderstandings on the standard questions and the comments of the tables.

1.7 Step 7. *Deciding on the structure of the Cross Country Profiles Report*

The lead partner had to deal with the information contained in the standard tables, the analysis developed at EU level by the responsible partner and the answers of the national experts to the standard questions. All this bulk of information has been used to build the structure of the Cross-country Report that was presented in full detail in Chapter 1:

Section 1 "Purpose and methodological approach"

Section 2 "An analysis of the Diversity of European Regions based on the EDORA Database"

Section 3 "An analysis of the Diversity of European Regions Based on the EDORA Typologies"

1.8 Step 8. Creation of tables, figures and maps for the available thematic indicators

The quantitative analysis at EU level carried out by the lead partner was not included in the original design of the task. However, after realising the potential of the EDORA Database and the divergences in orientation and level of detail of comments in the different national Country Profiles Reports, the lead partner decided to undertake an extensive analysis of a selection of the indicators used in the standard tables that were relevant and available in a sufficient number of countries. The analysis was fourfold:

Firstly, a comparative analysis of relevant data and indicators, by country, with reference to the EU27 average. These tables rank all 34 countries of the ESPON area according to the value in the indicator of reference. The average value shown is for the EU 27 and not for the ESPON area due to data availability problems. The goal of this analysis is to assess the position of each country in relation to the EU27 average for the selection of key indicators used to analyse each EDORA thematic heading (Table 2.4). The interpretation of this analysis is very easy with ranked countries according to their performance in the corresponding indicator. In the case of Table 2.4, the indicator belongs to the EDORA heading "Demography" and represents the percentage variation of the total population between 2001 and 2006. Countries on the top of the list are those showing a higher population growth in relation to the total population of the country. The average value for EU27 is not necessarily placed at the middle of the table. It depends on the weight of each country represented. For example, in this case the EU27 average takes position 28. The sharply negative value in Germany drags down the average for the EU27.

Secondly, a comparative analysis of relevant data and indicators, by non-exclusive groups of countries (ie. Mediterranean, Scandinavian, EU 15, NMS, etc.). The aim of this analysis is to test the behaviour of differentiated groups of countries in the selection of key indicators used to analyse each EDORA thematic heading (Figure 2.1). Defined groups of countries are: (i) EU 15 (Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom); (ii) New Member States (Bulgaria, Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia, Slovakia); (iii) Mediterranean countries (Greece, Spain, Malta, Italy, Portugal, Chipre); (iv) Central-West European Countries (Belgium, Germany, France, Ireland, Luxembourg, Netherlands, Austria, United Kingdom); (v) Scandinavian Countries (Denmark, Finland, Sweden, Norway). Criterion for the selection of the groups of countries has been the definition of relatively homogeneous supranational areas or, at least, areas sharing common rural and regional dynamics. Furthermore, it is not mutually exclusive groups. In the case of the exemplar figure (Figure 2.1) the indicator belongs to the EDORA heading "Demography" and represents the percentage variation of the total population between 2001 and 2006. The figure shows the average behaviour of all regions belonging to the defined group of countries. For instance, the population growth pace for the considered period is quicker in the Mediterranean countries (most probably linked to the immigration boom from 1999). Only the group "New Member States" shows a negative evolution (ie. a loss of total population) linked to outmigration.

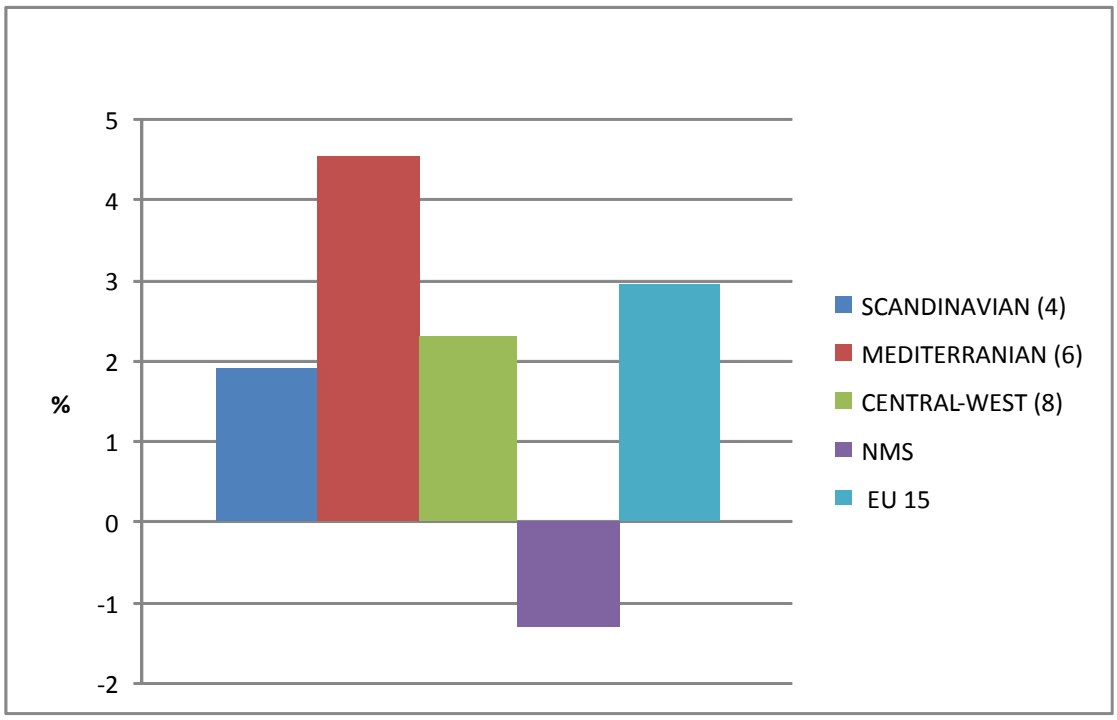
Table 2.4 Example of table for the comparison of countries in key indicators

	Population change 2001-2007
CYPRUS	11.63
ICELAND	8.58
LUXEMBOURG	8.47
SPAIN	8.33
LIECHTENSTEIN	7.01
NEDERLAND	6.12
MALTA	4.19
IRELAND	4.10
FRANCE	3.76
SWITZERLAND	3.70
ITALY	3.48
NORWAY	3.23
PORTUGAL	2.58
AUSTRIA	2.42
BELGIUM	2.13
UNITED KINGDOM	2.09
GREECE	1.45
FINLAND	1.41
SWEDEN	1.30
SLOVENIA	0.79
SLOVAKIA	0.23
CZECH REPUBLIC	0.10
POLAND	-1.52
ROMANIA	-1.63
ESTONIA	-1.81
HUNGARY	-1.92
LITHUANIA	-2.93
EU 27	**-3.16**
LATVIA	-3.51
BULGARIA	-6.51
GERMANY	-13.57
DENMARK	NA
Y.R. MACEDONIA	NA
CROATIA	NA
TURKEY	NA

Source: Own elaboration with data from the EDORA database

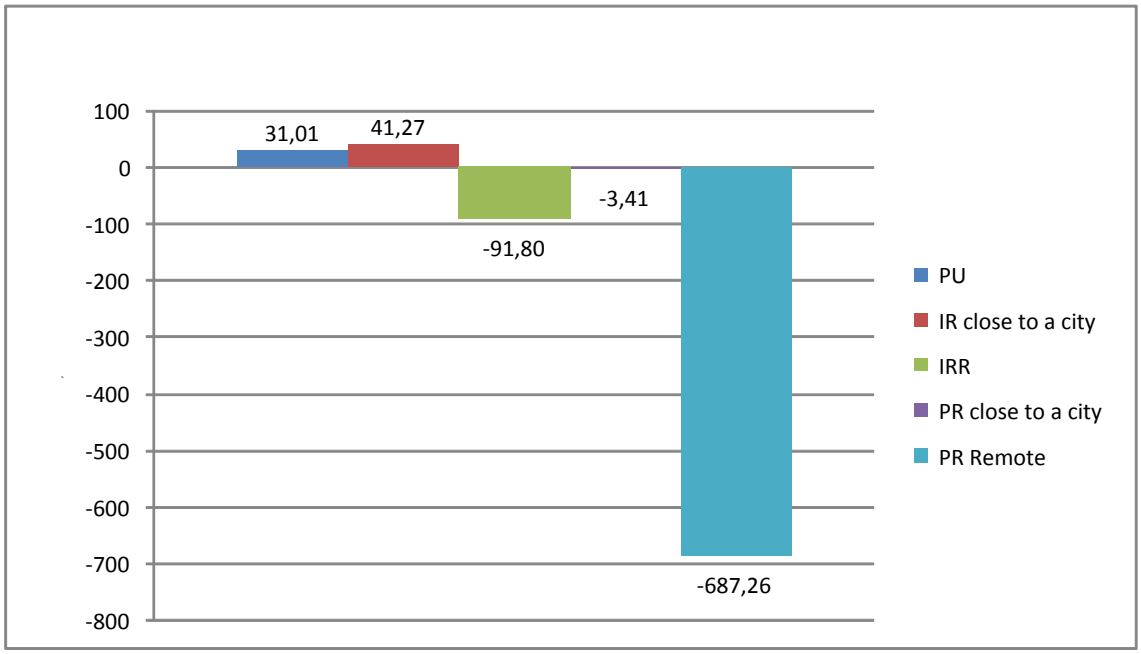
Thirdly, a comparative analysis of relevant data and indicators by categories in the Dijkstra-Poelman rural-urban typology (Predominantly Urban, Intermediate Rural Accessible, Intermediate Rural Remote, Predominantly Rural Accessible and Predominantly Rural Remote). This analysis is aimed at detecting potential differences in the behaviour of the D-P categories in the selection of key indicators used to analyse each EDORA thematic heading. In the case of the exemplar figure (Figure 2.2) the indicator belongs to the EDORA heading "Demography" and represents the total net migration balance between 2000 and 2006. Only two D-P types have a positive migration balance in the considered period, predominantly urban and intermediate rural accessible. Rurality act as inverse function for immigration. Accessibility acts as direct function of immigration even to a larger extent than rurality. As rurality increases and accessibility decreases net migration balance is worse.

Figure 2.1 Example of variable by non exclusive groups of countries. Population evolution, 2001-2006



Source: Own elaboration with data from the EDORA database

Figure 2.2 Example of variable by categories in the Dijkstra-Poelman rural-urban typology: Net migration 2001-2006

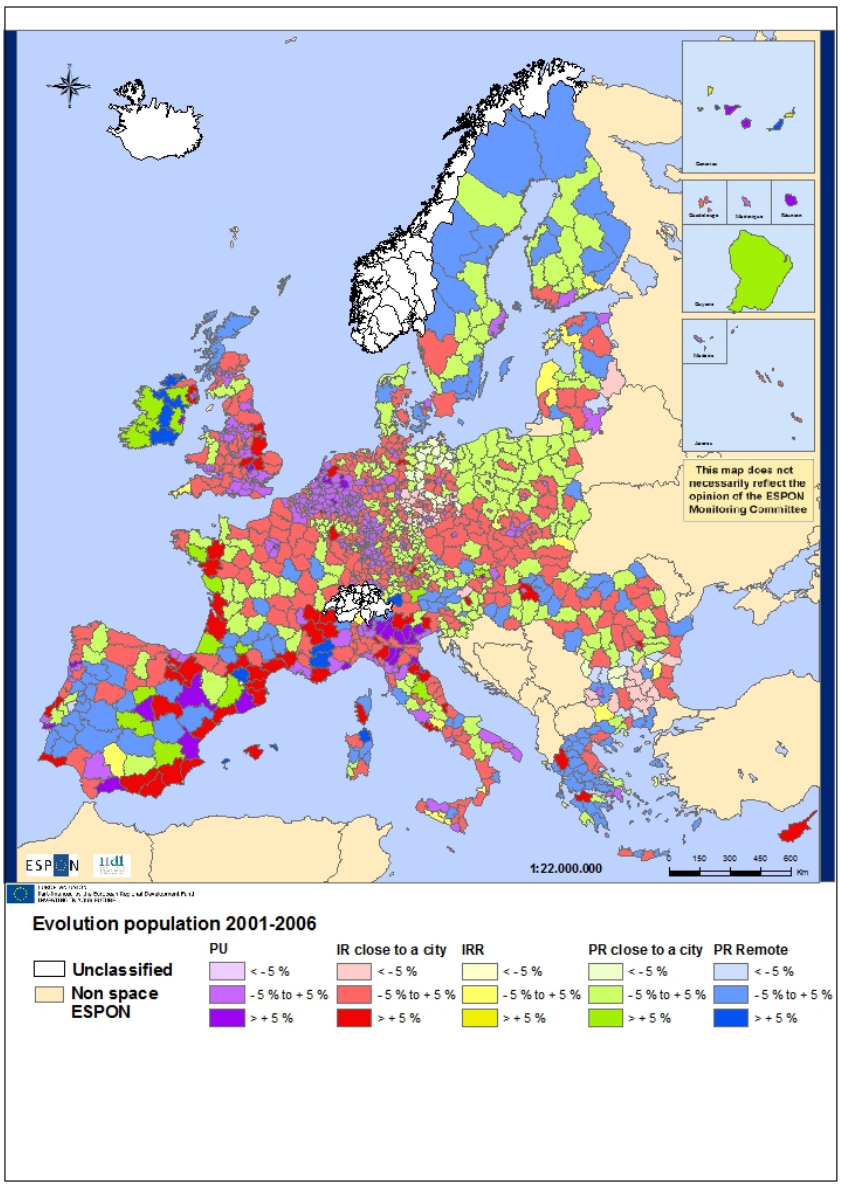


Source: Own elaboration with data from the EDORA database

Finally, a comparative analysis of relevant data and indicators at region level (NUT 3) for the countries covered, expressed in maps. This is the more complex analysis for two reasons: on

the one hand, it is done at individual NUT III; on the other hand, it requires representation in maps. However, it is considered a relevant piece since it allows for a very good identification of trends and processes at regional level. Maps represent the behaviour of each region in relation to the mean of the Dijkstra-Poelman category to which the region belongs . In the case of the exemplar figure (Figure 2.2) the indicator belongs to the EDORA heading “Demography” and represents the total net migration balance between 2000 and 2006.

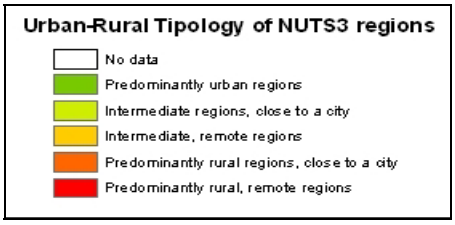
Map 2.1 Evolution of the total population 2000-2006



Source: own elaboration with data from the EDORA database

For the creation of maps, the information of the variables collected from different sources has been organised by folders. Within each folder there are different spreadsheets that stored information. From this data the following steps have been undertaken:

- Incorporation of a “GEO” variable in all databases. Is formed by the nomenclature in text characters that correspond to the different NUT levels (eg AT, AT1, AT11, AT111).
- Use of the “GEO” variable to join all data tables into a single spreadsheet. This process has been carried out, first, to integrate information from all databases in a single database and, secondly, to allow for graphic representation on maps in a geographic information system, managed through the ARCGIS 9.2 program and base mapping GISCO.
- The base-variable for organising data tables have been thematic level, Nuts, Nuts 0 variable name and Urban-Rural Category (CATG_URBRU).
- Implementation of dynamic tables for greater results in less time and for obtaining a greater combination of variables.
- Creation of tables with averages of each variable, the information has been organised in dynamic tables.
- Conducting national maps with the representation of the variable (CATG_URBRU) urban-rural category of each NUTS3 from the union of the cartographic base GISCO (geographical division NUTS3 level) with the database program ArcGis 9.2. The easiest way is giving a colour to each category of the variable displayed, as shown in the following example:



1.9 Step 9. Writing of the Cross-country Profiles Report

The elaboration of the Cross-country Profiles Report has been organised around the four sections previously described. The sources of information have been: on the one hand, the 25 draft national Country Profiles Reports including commented standard tables and answers to the standard questions; on the other hand, figures, tables and maps produced by the lead partner as described in chapter 2.8.

1.10 “Stones” found on the way

1.10.1 General difficulties

Soon, two main problems became evident: first, a relative timing mismatch which prevented the harmonious development of the task. This was due to the need to have indicators and statistical data contained in the Project Database (Activity 2. 21). The development of this

database, in turn, required a considerable time that made difficult progress in preparing thematic tables with indicators for each of the 33 countries considered.

The second problem refers to the absence or scarcity of relevant indicators available for several of the themes of the project. This reality forced to use a set of research questions that enable national leaders to develop the input of local knowledge in a guided and standardized for all (see Section 1 for a full description).

1.10.2 Building the tables of indicators

The EDORA database had to be complemented with data and indicators that were not available by using other reliable sources. This has been a very time consuming process. The databases used to supplement the information contained in the Project database are Eurostat, the European Union Rural Development (RDEU): Report 2007, ESPON public database, and SERA Project.

1.10.3 Getting feedback on the standard questions

The number of standard questions answered and level of detail varies much among the national Country Profiles Reports received. Accordingly, the synthesis of the Cross-country report has been built only from the information available for each indicator. Therefore, in most cases, comments refer to a subset of the countries for which the Country Profiles Reports have been received and not for the whole set.

SECTION 2
AN ANALYSIS OF THE DIVERSITY OF EUROPEAN REGIONS BASED ON THE EDORA DATABASE

At this stage the lead partner has received and analysed all national reports. These reports include findings and information that each author has deemed relevant to interpret the information contained in the tables and the standard questions. This set of national reports is the basis for the Member State report.

Apart from the national reports, comparisons have been made between groups of countries to analyse the behaviour of the variables and indicators considered. In a first stage, the comparative analysis was carried out between 5 subsets of countries defined[2]. In a second stage is planned the extension of the analysis to the categories of rural areas (IRA, IRR, and FOR PRR) on the basis of groups of countries. At a later stage, once the information on the territorial distribution of EDORA typology is available, the analysis will be replicated for these categories.

This Section "An analysis of the diversity of European Regions based in the EDORA Database" presents a systematic review and interpretation of the statistical data contained in the EDORA Database. The analysis has been carried out by thematic chapters according to the EDORA conceptual headings:

- Section 3.1 Demography
- Section 3.2 Employment
- Section 3.3 Rural business development
- Section 3.4 Rural-urban relationships
- Section 3.5 Cultural heritage
- Section 3.6 Services of general interest
- Section 3.7 Farm structural change
- Section 3.8 Institutional capacity
- Section 3.9 Climate change

Depending on data availability, each section is structured as following:

- Comparative analysis of relevant data and indicators by country with reference to the EU27 average
- Comparative analysis of relevant data and indicators by non-exclusive groups of countries (ie. Mediterranean, Scandinavian, EU 15, NMS, etc.)

[2] The groups of countries considered are:
- UE 15
- New Member States (12)
- Mediterranean countries (Portugal, Spain, Italy, Greece and Malta)
- Western and central Europe (Belgium, Netherlands, Luxembourg, France, United Kingdom, Ireland, Germany and Austria)
- Scandinavian countries (Norway, Sweden, Finland and Denmark)

- Comparative analysis of relevant data and indicators by categories in the Dijkstra-Poelman rural-urban typology (Predominantly Urban, Intermediate Rural Accessible, Intermediate Rural Remote, Predominantly Rural Accessible and Predominantly Rural Remote)[3].
- Comparative analysis of relevant data and indicators at region level (NUT 3) for the countries covered, expressed in maps.
- Qualitative analysis based on the individual country profile reports

[3] For a complete methodological description of this typology please visit http://ec.europa.eu/regional_policy/sources/docgener/focus/2008_01_rural.pdf

CHAPTER 3.
DEMOGRAPHY

3.1 Comparative analysis of relevant data and indicators by country with reference to the EU27 average

3.1.1 Evolution of the European population

The analysis of the **population change** of the European countries has been examined for the period 2001 to 2007. The result for the EU 27 members (2.58%) expresses a growth on the European community as a whole. It is, to a great extent, thanks to the increased immigration flows from non-EU countries and, lot a lesser extent, to the relative success of birth support policies (overall in Northern European countries). This result is sustained as well by the ranking of Europe as the third demographic power after China and India, mainly because of immigration dynamics.

Negative population change outcomes correspond to Bulgaria, Romania, Latvia, Lithuania, Estonia, Hungary and Poland. All of them obey to the consequences of the economic transition. These countries have suffered a structural economical transition towards a capitalism system, in parallel with the adhesion to Europe. Demographically, it affected to the population, producing higher mortality rates and lower birth rates –poorer sanitation conditions and quality services- (Pedroni, G. & Peinado, J. (2002) *Crecimiento natural. La población Europea* (26-28) Spain, Ed. Sintesis). Nowadays, natural increase of those countries is being smoothed with the rest of European countries, but net migration is the key factor of the present negative outcome. There is a high percentage of Eastern Europeans who migrate to other countries in search for job opportunities and a better quality of life.

Following the descending cascade of results, low outcomes correspond to Germany, Croatia, Czech Republic, Slovakia, Y.R. Macedonia and Slovenia. Germany suffers a decelerated demographic process: low birth rates and a trend to increased mortality rates (because of the ageing of the population pyramid) but a high- moderate net migration. The rest, not so far ago, were emergent economies and they had to adjust their socio-economical system to join the European Union, which caused them a period of instability. The consequences in demography were the same as in the above commented cases. A stronger economy and the improvement of basic services is leading to change the demographic situation (increase of birth rates, decrease of mortality rates)

Western and Central Europe are the richest regions of the Continent. It is reflected in the moderate population change rates (see Denmark, Finland, Sweden, Nederland, United Kingdom, Belgium, etc.) Stable and rich economies are translated into better social services, birth compensations and more immigration.

Southern Europe (except Greece and Turkey, due to its traditional social system) is characterised by low birth rates and mortality rates, but immigration is very high (especially due to Asian, Latin American and African migrations), that is the cause of the high-moderate population change rates. Spain is the second country with highest population change between

2001 and 2007, after Cyprus. Immigration is again the key factor over this result, as pointed out the increase of birth rate rates in Spain (influenced by middle age foreign population)

Particular cases, as Liechtenstein, Luxemburg, Iceland and Cyprus, with high population change rates (the highest is in Cyprus). Due to their small dimension and inherent characteristics (neuralgic business centres in the two first cases, and geographical proximity with Turkey and Greece in the last case) immigration flows are very high and variable.

Table 3.1 Population change 2001-2007 by country

	Population change 2001-2007 (pop. 2001 = 0)
CYPRUS	11.63
SPAIN	9.88
ICELAND	8.58
LUXEMBOURG	8.47
LIECHTENSTEIN	7.01
FRANCE	4.34
SWITZERLAND	4.23
MALTA	4.19
IRELAND	4.10
NORWAY	3.95
ITALY	3.81
PORTUGAL	3.34
AUSTRIA	3.27
BELGIUM	3.13
UNITED KINGDOM	3.02
TURKEY	2.64
SWEDEN	2.59
EU 27	**2.38**
NETHERLAND	2.32
GREECE	2.20
FINLAND	1.85
DENMARK	1.83
SLOVENIA	1.02
Y.R. MACEDONIA	0.53
SLOVAKIA	0.28
CZECH REPUBLIC	0.20
CROATIA	0.05
GERMANY	0.07
POLAND	-0.33
HUNGARY	-1.38
ESTONIA	-1.80
LITHUANIA	-2.93
LATVIA	-3.51
ROMANIA	-3.86
BULGARIA	-5.77

Source: Own elaboration with data from the EDORA database

3.1.2 Territorial concentration or dispersion: Evolution of the Population Density 2000-2006

The data results cover from the period 2000 to 2006. In line with the population increase there is a density increase in the EU27 of 0.92 on average. The decelerated demographic process is important but migration flow is the key factor in this result; it supposes the concentration of people in some places (usually, urban areas) and gaps in others (usually rural areas and barren places). Compared to World density data from 2000 to 2006, Europe is the second geographical area in the world (after Asia) with the highest population density. It is expressing the overcrowded of the European area, mainly because of its small dimension, regarding to the rest Continents. (United Nations (2008), *World summary 2000-2006*, table 1, http://unstats.un.org/unsd/demographic/products/dyb/dyb2006/Table01.pdf)

Some ex-socialist countries (Poland, Romania, Hungary, Bulgaria, Estonia, Latvia, and Lithuania) together with Y.R. Macedonia, Czech Yugoslavia, Croatia (ex-Yugoslavian countries) and Germany present negative population density results. Except Germany, the rest suffered the 'rural exodus' towards urban areas; frequently, it happens among the youngsters as a response to the lack of work and lack of social facilities in rural areas (Copus et.al., 2006). As a consequence, the geographical distribution of the population is unbalanced –crowded cities; empty villages.

Lower population densities correspond to Slovakia, Slovenia, Greece, Finland, Sweden, Denmark, Turkey, Austria, Portugal and Nederland. Except those Northern European countries and Austria, the rest are predominantly rural and have suffered out-migration processes in different historical stages, as well as 'rural exodus' among youngsters towards urban areas. At the present, some of them have recovered due to immigration flows and the improvement of their socio-economic situation (See Country Profiles Draft Reports reviewed from the EDORA Program). Because of their barren climate conditions, population of Scandianavian countries is concentrated in the South part of those countries.

Richer economies as Norway, United Kingdom, Belgium, Switzerland, Italy and France present moderate increase of population density rates. All of them are characterised by big and consolidate urban areas, high-moderate migration flows and better rural development policies. In relation to the last point, *counterurbanization* (ie. The *reinassance* of rural areas and recovering of rural activities or ways of life) has been happening over the last 30 years. This process leads to the dispersion of the population in the territory and, therefore, a more equilibrated density.

Finally, higher increases in population density rates correspond to Malta, Iceland, Spain, Liechtenstein, Luxembourg, Cyprus and Ireland. Geographically and climatically, Spain and Malta are demanded countries for living having immigration flows and tourism. Liechtenstein, and Luxembourg are quasi-urban states with a dynamic demography.

Table 3.2 Evolution of the population density 2000-2006, by country

	Density 2000-06 (Index 2000 = 0)
IRELAND	11.29
CYPRUS	9.87
LUXEMBOURG	6.85
LIECHTENSTEIN	6.21
SPAIN	5.79
ICELAND	5.52
MALTA	4.55
FRANCE	3.27
ITALY	2.84
SWITZERLAND	2.81
BELGIUM	2.28
UNITED KINGDOM	2.17
NORWAY	2.09
NEDERLAND	1.98
PORTUGAL	1.63
AUSTRIA	1.63
DENMARK	1.28
EU 27	**0.92**
SWEDEN	0.81
TURKEY	0.60
GREECE	0.56
FINLAND	0.26
SLOVENIA	0.24
SLOVAKIA	0.17
Y.R. MACEDONIA	-0.13
CZECH REPUBLIC	-0.20
GERMANY	-0.37
CROATIA	-0.61
POLAND	-1.11
ROMANIA	-1.22
HUNGARY	-1.59
ESTONIA	-1.99
LATVIA	-2.81
LITHUANIA	-2.91
BULGARIA	-7.34

Source: Own elaboration with data from the EDORA database

3.1.3 Demographic strength: Natural Growth Change, 2001-2006

The analysis for natural growth change (NGC) of the European countries has been examined for the period 2001 to 2006. Natural increase change is the difference between the number of births and the number of deaths. In the absence of migration flows, a positive result means an increase of the population, and vice versa. The negative result for the EU 27 members means a weak demographic behaviour of the European population on average. Europe is in a decelerated demographic process as a consequence of high living standards, rise of the life expectancy, better technology, etc. Calculation and analysis for this indicator exclude Malta, Croatia Turkey, Luxemburg and Liechtenstein for which there is no data available.

The descending cascade of results shows that the countries with negative NGC rates (decline of population) are: Sweden, Ireland, Belgium, Estonia, Germany, Romania, Poland, Switzerland, Slovakia, Nederland, Czech Republic, Cyprus, Latvia, Portugal, Bulgaria, Slovenia, Y.R. Macedonia, Italy and France. The case of the population decline in eastern European countries and ex-Yugoslavian countries was a consequence of the transition from their emergent economies towards the capitalistic ones which, in parallel, influenced on the improvement of social and sanitary services (increase of life expectancy and decreasing mortality rate) and new ways of living. In the rest of countries, 'single gap' and loss of traditions in the relations' understanding, as well as the ageing pyramid dynamics can affect the decline of NGC.

Moderate NGC outcomes respond to Greece, Hungary, United Kingdom and Iceland. Counter urbanization is an important factor associated with the increase of births in rural regions by the entrance of young people into these areas (see Hungary Country Profile Draft Report), as well as young immigrants who have children in the destination countries (United Kingdom). Traditional societies tend to increase or maintain birth numbers, such as Greece, maintaining a balance of the NGC.

The highest NGC outcomes emanate from Spain, Denmark, Norway, Austria, Lithuania and Finland. Spain, because of immigration processes contributing to increase birth numbers in recent years. Finland is the first country in the ranking of the NGC. Finland, Denmark, Norway, Austria and Lithuania are composed predominantly by rural areas and there is an old population structure (except Austria). The cause of the high NGC is the continuous and strong compensatory trend provided by immigration, and the positive contribution of birth policies which motivates population to have and sustain more children.

Table 3.3 Natural Growth Change 2001-2006, by country

	Natural increase change 2001-2006
FINLAND	146.28
LITHUANIA	74.01
AUSTRIA	63.93
NORWAY	26.10
DENMARK	17.70
SPAIN	11.92
ICELAND	6.81
UNITED KINGDOM	6.52
HUNGARY	3.43
GREECE	2.33
EU 27	**-6.09**
FRANCE	-7.63
ITALY	-8.78
Y.R. MACEDONIA	-9.74
SLOVENIA	-10.76
BULGARIA	-11.80
PORTUGAL	-12.36
LATVIA	-14.06
CYPRUS	-17.65
CZECH REPUBLIC	-17.65
NEDERLAND	-19.97
SLOVAKIA	-21.34
SWITZERLAND	-28.13
POLAND	-41.40
ROMANIA	-42.55
GERMANY	-46.75
ESTONIA	-48.62
BELGIUM	-50.69
IRELAND	-100.00
SWEDEN	-130.44
MALTA	NA
CROATIA	NA
TURKEY	NA
LUXEMBOURG	NA
LIECHTENSTEIN	NA

Source: Own elaboration with data from the EDORA database

3.1.4 Socio-demographic sustainability: the dependency rate

The age dependency rates (ADR) for the EU members are analysed for the year 2007. These ratios are a measure of the age structure of the population. They relate the number of individuals that are likely to be "dependent" on the support of others for their daily living – youths and the elderly – to the number of those individuals who are capable of providing such support. Two other indicators are presented: the youth-dependency ratio (for individuals aged less than 20) and the old-age-dependency ratio (for persons aged 65 and more), both calculated relative to the number of individuals aged 20 to 64. Age-dependency ratios affect the global environment where social policy operates and the types of needs that it will be called to meet. Their evolution is a function of mortality, fertility rates and of net migration (OECD, 2007, *Society at a glance: OECD Social Indicators*, 2006 Edition, http://www.oecd.org/dataoecd/4/24/38148786.pdf)

The percentage of dependents for the EU 27 is 43.19%. Europe is characterised by an ageing population structure, and therefore, old-age-dependency ratio is higher than youth one. A high ADR, which means relative increase of dependents, leads to social, economical and political implications.

Lowest ADR (less dependent) pertain to Germany (30.92%), Y.R. Macedonia, Ireland, Slovakia, Czech Republic, Liechtenstein, Poland and Slovenia. There is a bigger share of population between 20-64 years old (active) than dependents. This results in a good driving force for a country's economy. The dynamics of migration play an important role in the age dependency ratio: in some countries, youth migrate to other countries (NMS, Balcans) and/or active population migrate to more advanced and richer economies (Germany, Liechtenstein) to improve their life and labour conditions.

Around the value of the ADR of the EU27 are eight countries: Cyprus, Romania, Malta, Latvia, Bulgaria, Hungary, Lithuania and Spain.

Moderate ADR outcomes correspond to Estonia, Switzerland, Luxembourg, Nederland, Austria, Iceland, Croatia and Portugal. In the case of Switzerland, Luxembourg, Nederland and Austria this result is the consequence of ageing demographic processes and social policies to promote fertility. The remaining countries (Estonia, Croatia and Portugal) are affected by outmigration of active population.

The highest ADR (more dependent) are Finland, Italy, United Kingdom, Norway, Greece, Belgium, Sweden, France and Turkey. Ageing processes, social policies to promote fertility and improve maternity conditions or processes as emigration of youth (in the case of Turkey) are conditional factors into highest AD ratios.

Table 3.4 Age dependency rate 2007, by country

	Age dependency rate (2007)
TURKEY	55.83
FRANCE	54.75
SWEDEN	54.00
BELGIUM	52.94
GREECE	52.83
NORWAY	52.37
UNITED KINGDOM	52.21
ITALY	52.03
FINLAND	51.37
PORTUGAL	50.50
CROATIA	48.96
ICELAND	48.94
AUSTRIA	48.64
NEDERLAND	48.47
LUXEMBOURG	47.85
SWITZERLAND	47.21
ESTONIA	46.96
SPAIN	46.31
LITHUANIA	45.93
HUNGARY	45.37
BULGARIA	45.18
LATVIA	45.04
MALTA	43.88
ROMANIA	43.72
CYPRUS	43.34
EU 27	**43.19**
SLOVENIA	42.38
POLAND	41.23
LIECHTENSTEIN	40.78
CZECH REPUBLIC	40.58
SLOVAKIA	38.69
IRELAND	34.83
Y.R. MACEDONIA	32.67
GERMANY	30.92
DENMARK	NA

Source: Own elaboration with data from the EDORA database

3.1.5 Mobility of the population: Net Migration

Migration rates are complex to measure because of several controversial factors, for instance the unregistered immigration and the particular migration policy of each country. In this analysis the **Net migration change** (NMC) is measured for the period 2001-2006. Migration in Europe is characterised by internal and international migration: In 2006, there were relatively more non-EU than EU citizens among immigrants (Herm A., 98/2008, Population and social conditions, *Recent migration trends: citizens of EU-27 Member States become ever more mobile while EU remains attractive to non-EU citizens*, Eurostat). Net Migration has increased in 8.97% in the EU 27 during the period 2001-2006. Analysis of NMC is not possible for Malta, Croatia and Turkey due to the lack of data.

As it is shown on Table 3.5, negative NMC outcomes are for Iceland (-263.34), Spain, Netherlands, Slovakia, Greece, Bulgaria, Y.R. Macedonia, Liechtenstein and Austria (-76.48). It expresses a decline of Net Migration from 2001 to 2006. It does not mean, therefore, there are fewer immigrants or more emigrants. Actually, Spain, as well as Ireland (with negative result too), are the EU countries with the highest increase of immigrants during this period (Herm A., 98/2008, Population and social conditions, *Recent migration trends: citizens of EU-27 Member States become ever more mobile while EU remains attractive to non-EU citizens*, Eurostat, http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-08-098/EN/KS-SF-08-098-EN.PDF)

Moderate negative outcomes for NMC are represented by Portugal (-54.07), Romania, France, United Kingdom, Finland, Ireland and Switzerland (-7.15). This decline could be explained by several factors. For traditionally destination countries of immigration, as France, United Kingdom, Ireland, etc., this decline is interrelated with tough migration policies to restrict the entrance of immigrants.

A positive NMC is shown in Denmark (5.35) and Poland (8.25). It means a rise of Net Migration from 2001 to 2006. Partly, it is due to national immigrants returning home. (http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Migration_statistics)

Moderate positive outcomes correspond to Hungary (11.04), Latvia, Norway, Italy, Slovenia, Germany and Luxembourg (86.34). Increase in NMC responds to two variables before commented: national immigrants returning home and/or entrance of more immigrants because of the attractive destinations (related to economical stability or prosperity, better labour and social conditions, etc.)

High NMC outcomes are shown for Czech Republic (214.58), Cyprus, Belgium, Estonia, Sweden and Lithuania, which has the highest rate (1123.92). An improvement and stabilization of those countries, as well as suitable migration policies, stimulate the entrance of people.

Table 3.5 Net migration change 2001-2006, by country

	Net migration change 2001-2006
LITHUANIA	1123.92
SWEDEN	620.60
ESTONIA	418.96
BELGIUM	300.46
CYPRUS	214.58
CZECH REPUBLIC	214.58
LUXEMBOURG	86.34
GERMANY	64.14
SLOVENIA	61.25
ITALY	55.59
NORWAY	20.01
LATVIA	12.62
HUNGARY	11.04
EU 27	**8.97**
POLAND	8.25
DENMARK	5.35
SWITZERLAND	-7.15
IRELAND	-12.98
FINLAND	-36.06
UNITED KINGDOM	-38.90
FRANCE	-50.68
ROMANIA	-52.45
PORTUGAL	-54.07
AUSTRIA	-76.48
LIECHTENSTEIN	-77.27
Y.R. MACEDONIA	-92.93
BULGARIA	-97.30
GREECE	-112.03
SLOVAKIA	-135.76
NEDERLAND	-143.58
SPAIN	-221.52
ICELAND	-263.34
TURKEY	NA
CROATIA	NA
MALTA	NA

Source: Own elaboration with data from the EDORA database

3.1.6 Formal education and skills of the population

The indicator *% of population above 15 years with ISCED 5-6 level* expresses the percentage of population with tertiary education, according to ISCED classification system (International Standard Classification of Education) (Marcela M., Lubor T., Milan S. (2007), *How does tertiary education level insure people against unemployment?,* Labour Market Changes and Education Perspectives in the Czech Republic project (222), Czech Science Foundation, http://homel.vsb.cz/~tvr12/PUBLIKACE/2007/2007_pojisteni_VS.pdf)

In the EU 27 there is 18.55% of population 15 years and older in the third level of education. The accession of NMS has influenced this result even though a considered amount of population could not access to third level of education in the past because of economical, social and political factors. Furthermore, educative system in almost all the EU countries has become more accessible for EU citizens. Countries without data are as followed: Iceland, Y.R. Macedonia, Liechtenstein, Switzerland, Turkey, Slovenia and Denmark.

Low rates for people older than 15 years in the third level of education correspond to Romania, Portugal, Italy, Czech Republic, Malta, Slovakia and Hungary. Those countries suffered processes as the ones before commented.

Moderate rates, below EU27 average, are for Croatia, Greece, Austria, Poland, Bulgaria, Latvia and France. The remarkable cases here are Austria and France, advanced economies with good and qualified education system. This is caused by the flow of foreign workers with low level of qualification (Marcela M., Lubor T., Milan S. (2007), *How does tertiary education level insure people against unemployment?,* Labour Market Changes and Education Perspectives in the Czech Republic project (225), Czech Science Foundation, http://homel.vsb.cz/~tvr12/PUBLIKACE/2007/2007_pojisteni_VS.pdf) or immigrants whose third level studies are not recognized by the destination's educative system.

Moderate rates, above EU 27 result, are for Luxembourg, Sweden, United Kingdom, Spain, Lithuania and Germany. Those countries strongly promote education policies. The notable case here is Lithuania, a country in constant economical reactivation, with a young population. The urban region has the lowest share of farmers with basic or full educational attainment (see Lithuania Profile Draft Report)

Highest values of education have been reached for Belgium, Norway, Estonia, Cyprus, Finland, Ireland and Nederland. Northern education is one of the best of Europe because of the importance and investment in education. Cyprus has a lot of active population.

Table 3.6 % of population above 15 years with ISCED 5-6 level

	% of population above 15 years with ISCED 5-6 level
NEDERLAND	33.88
IRELAND	27.46
FINLAND	25.95
CYPRUS	25.32
ESTONIA	24.77
NORWAY	23.86
BELGIUM	23.40
GERMANY	22.22
LITHUANIA	21.78
SPAIN	20.97
UNITED KINGDOM	20.53
SWEDEN	20.34
LUXEMBOURG	20.16
EU 27	**18.55**
FRANCE	18.42
LATVIA	16.76
BULGARIA	15.97
POLAND	13.80
AUSTRIA	12.65
GREECE	12.48
CROATIA	11.59
HUNGARY	11.41
SLOVAKIA	11.24
MALTA	10.30
CZECH REPUBLIC	10.28
ITALY	10.01
PORTUGAL	8.84
ROMANIA	8.15
DENMARK	NA
SLOVENIA	NA
TURKEY	NA
SWITZERLAND	NA
LIECHTENSTEIN	NA
Y.R. MACEDONIA	NA
ICELAND	NA

Source: Own elaboration with data from the EDORA database

The indicator *% of population above 15 years with ISCED 0-2 level* expresses the percentage of population with pre-primary, primary and lower secondary level of education, according to ISCED (International Standard Classification of Education) classification system. (Marcela M., Lubor T., Milan S. (2007) *How does tertiary education level insure people against unemployment?* Labour Market Changes and Education Perspectives in the Czech Republic project (222), Czech Science Foundation, http://homel.vsb.cz/~tvr12/PUBLIKACE/2007/2007_pojisteni_VS.pdf).

In the EU 27 there is 36.66% of population older than 15 years old in the lower secondary level of education. The annex of NMS to the EU 27 affected in the results of this indicator too, as well as complex and particular socio-economic problems of each country. Comparing with the low EU 5_6 level result, the EU 0_2 level result points out the need to improve funds towards education and consolidate active policies to ensure alphabetization and lower secondary levels of education. Countries without data are as followed: Iceland, Y.R. Macedonia, Liechtenstein, Switzerland, Turkey, Slovenia and Denmark.

Table 3.6 % of population above 15 years with ISCED 0-2 level

	% of population above 15 years with ISCED 0-2 level
PORTUGAL	78.53
MALTA	72.01
SPAIN	59.38
ITALY	57.28
GREECE	56.18
NEDERLAND	50.78
IRELAND	44.38
BELGIUM	43.64
LUXEMBOURG	40.21
FRANCE	39.62
ROMANIA	39.60
BULGARIA	37.46
CROATIA	37.24
EU 27	**36.66**
CYPRUS	36.23
FINLAND	33.97
AUSTRIA	30.50
GERMANY	30.28
HUNGARY	29.93
NORWAY	28.19
LITHUANIA	27.89
POLAND	25.87
LATVIA	23.91
SLOVAKIA	23.40
UNITED KINGDOM	20.58
SWEDEN	20.48
ESTONIA	19.80
CZECH REPUBLIC	19.65
DENMARK	NA
SLOVENIA	NA
TURKEY	NA
SWITZERLAND	NA
LIECHTENSTEIN	NA
Y.R. MACEDCONIA	NA
ICELAND	NA

Source: Own elaboration with data from the EDORA database

Low rates for people older than 15 years old in the lower secondary level of education correspond to Czech Republic, Estonia, Sweden, United Kingdom, Slovakia, Latvia and Poland. Citizens older than 15 –active population- of some countries (like Czech Republic, Estonia, Slovakia, Latvia and Poland) out-migrate, and historically, the socialist education system was equal for everyone and good. Sweden and United Kingdom have moderate third level of education among citizens older than 15, which is the cause of the low rate for lower secondary level of education.

Moderate rates, below EU 27 result, are for Lithuania, Norway, Hungary, Germany, Austria, Finland and Cyprus. The same reasoning as before can be applied here: citizens older 15 pursue third level of education.

Moderate-high rates, above EU 27 result, are for Croatia, Bulgaria, Romania, France, Luxembourg and Belgium. The three last countries can be explained because of the historically foreign workers with low level qualification. The first three countries, as emergent economies, suffered from a lack of educative formation because of the lack of funds and bad social services.

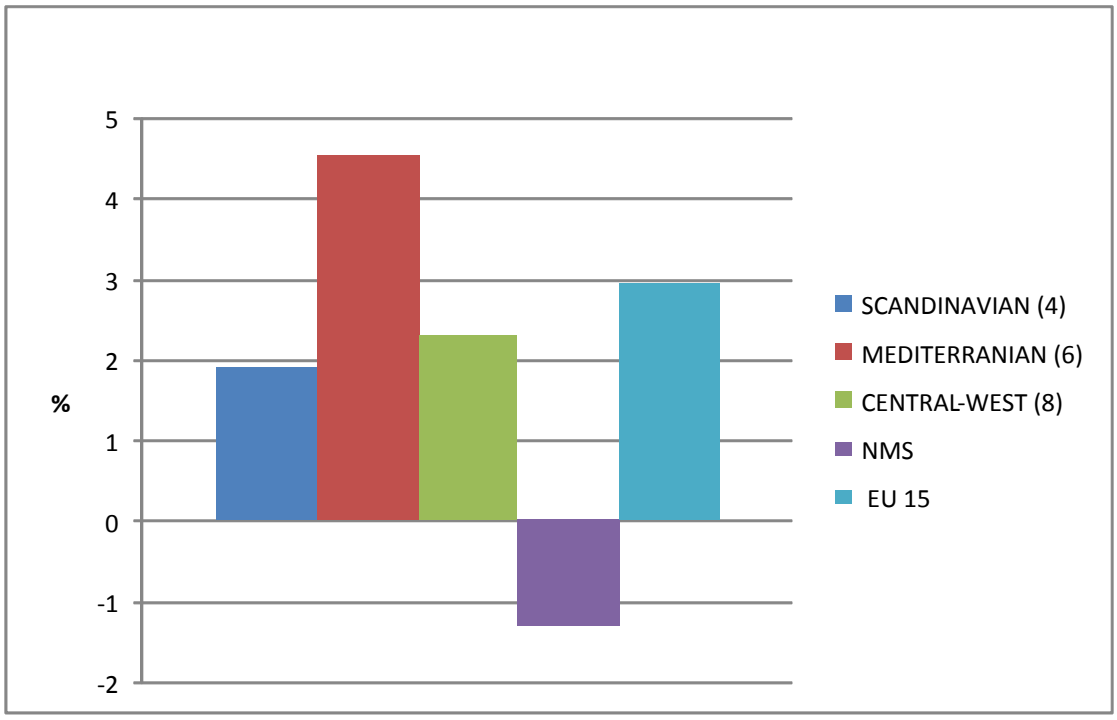
Highest values of population older than 15 with lower secondary level of education have been reached for Ireland, Nederland, Greece, Italy, Spain, Malta and Portugal (with a rate of 78.53%, the highest one) Nederland has a strong education investment, so all the education levels are covered and citizens can choose according to their personal preferences. It happens as well in the rest of countries with the highest values, adding the accessibility component as a problem in rural areas (case of Portugal)

3.2 Comparative analysis of relevant data and indicators by non-exclusive groups of countries

3.2.1 Evolution of the European population

The evolution of the population for the period 2001-2006 is positive for all groups of countries except for the NMS European members (rate of -1.3% aprox.). In 2006, EU 15 presents 3% more population than in 2001. Central-West population has evolved around 2.3% while Scandinavian population does not reach 2% increase. Mediterranean countries have achieved an increase of almost 4.5% of their population. There are two main trends behind this data: on the one hand, the logics of migration flows that have brought population mainly from NMS to Western Europe and; on the other hand, an increase of the birth rate (consequence of migrants in active age who have children in the destination countries). These two processes have been pushed by a prosperity economic period.

Figure 3.1 Population evolution by non exclusive groups of countries, 2001-2006

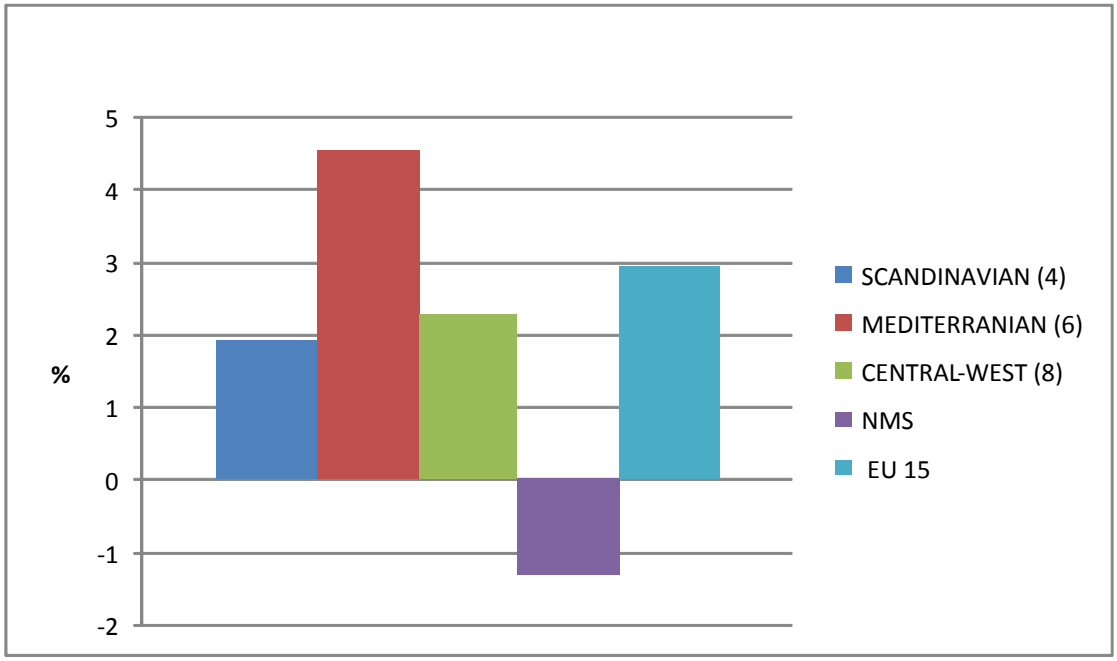


Source: Own elaboration with data from the EDORA database
Note: for some regions the raw calculation value is the corresponding NUT2 unit

3.2.2 Territorial concentration or dispersion: the evolution of the population density 2001-2006

Evolution density is linked to the historical occupation of the territory, to recent demographic trends like migration and natural growth, and to other social trends like urbanisation, counterurbanisation or periurbanisation. The evolution of population density for the period 2001-2006 is positive for the EU 15 (3%) but negative for the NWS 12 (approximately, -1.3%) A relevant percentage of NMS population emigrate to EU 15 countries to improve their living condition, mainly to Mediterranean countries where agriculture and building sectors made possible a relatively easy inclusion (4.5% increase of population density between 2001-2006) Central-West countries have a moderate rate of 2.2% increase also hosting significant immigration flows from other parts of the continent and abroad. Scandinavian countries show minor evolution density (between 1.9-2%) than Central-West countries..

Figure 3.2 Population density change by non exclusive groups of countries, 2001-2006

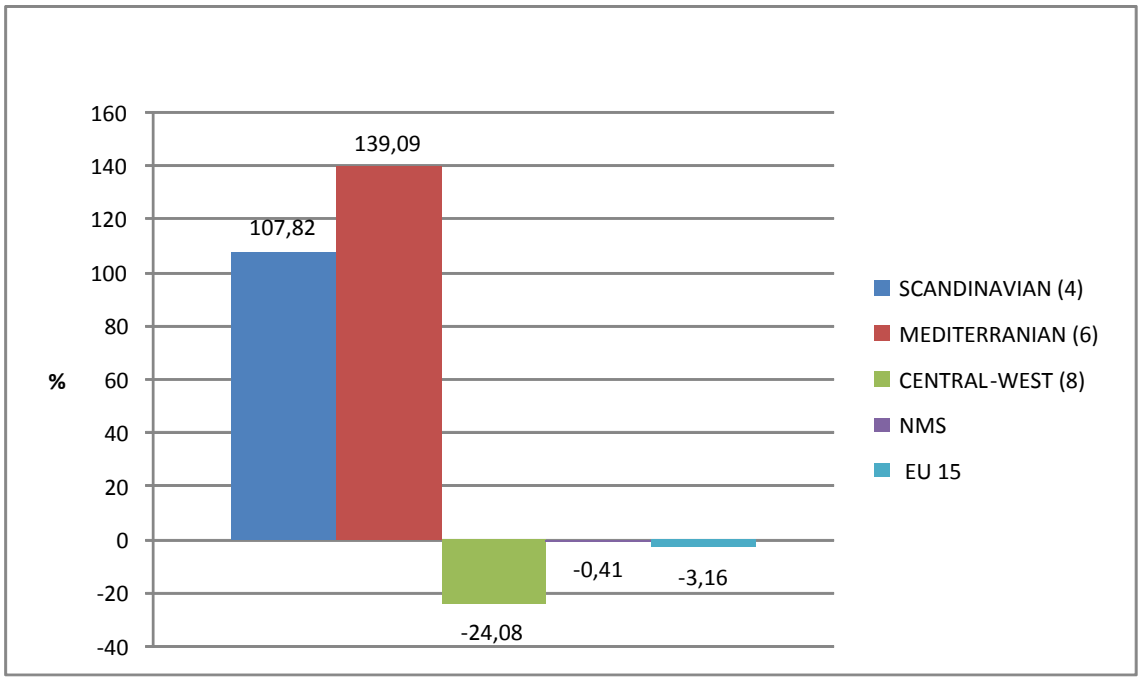


Source: Own elaboration with data from the EDORA database

3.2.3 Demographic strength: natural growth change 2000-2006

Figure 3.3 expresses the results of NGC for non exclusive groups of countries: decelerated demographic processes in EU 15 (population decrease of 3.16), NMS (population decrease of 0.41) and Central- West countries. Population ageing processes and low birth rates in those countries are evident. On the other hand, Mediterranean and Scandinavian countries have a positive natural increase evolution, mostly due to immigration showing birth rates and pattersn much more dynamic than those of the local population.

Figure 3.3 Natural change evolution by non exclusive groups of countries, 2001-2006

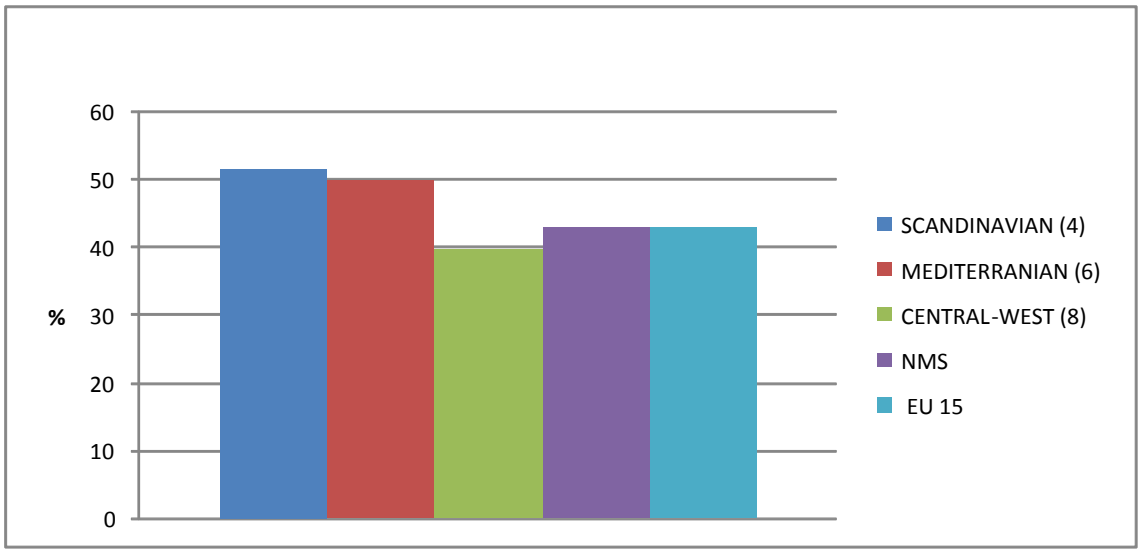


Source: Own elaboration with data from the EDORA database

3.2.4 Socio-demographic sustainability: the age dependency rate

Figure 3.4 shows the Age Dependency rate graphic for 2007. The analysis corroborates the quantitative increase of dependents over the EU Members. This is due to a rise of the old-age-dependency ratio (for persons aged 65 and more) because of the ageing processes of the modern society. Repercussions for a high age dependency ratio lead to social, economical and political changes. EU 15 and NMS have approximately 42% of dependents. Qualitatively, NMS have a major youth-age-dependency ratio and a minor old one in relation to EU 15 (which has the opposite). Age dependency rates for Central-West European countries are, on average, 40%. There are 50% of dependents in Mediterranean countries and 51% in Scandinavian countries.

Figure 3.4 Age Dependency Rate by non exclusive groups of countries, 2007

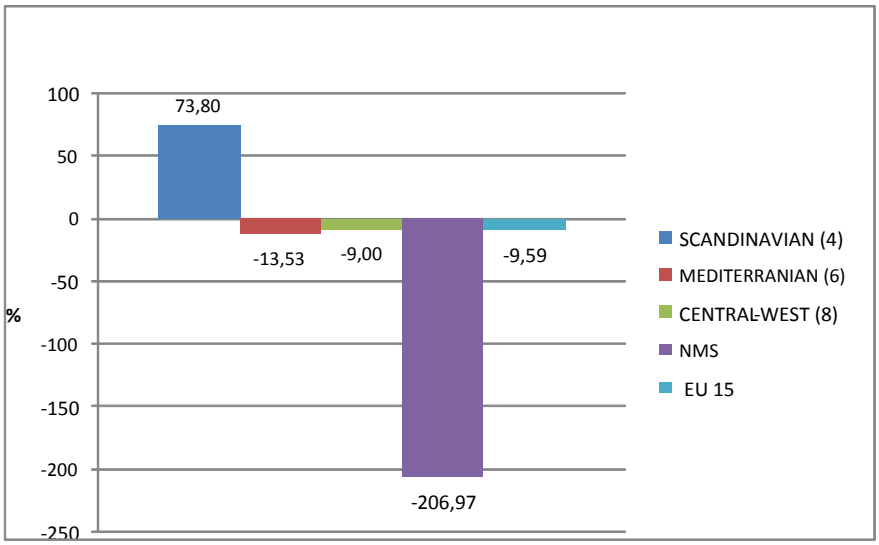


Source: Own elaboration with data from the EDORA database

3.2.5 Mobility of the population: net migration rate

There has been a negative evolution net migration between 2001 and 2006 in all the European countries, except the Scandinavians (with a remarkable high rate of 73.80%). The lowest rate pertains to the NMS, with an evolution of the net migration of -206,97%, a massive emigration from their countries. EU 15 suffers a decrease of 9.59% in the net migration rate between 2001 and 2006. Central-West countries suffer a decrease of 9% while Mediterranean countries suffer a decrease of 13.53% of the net migration evolution.

Figure 3.5 Population net migration evolution by non exclusive groups of countries, 2001-2006



Source: Own elaboration with data from the EDORA database

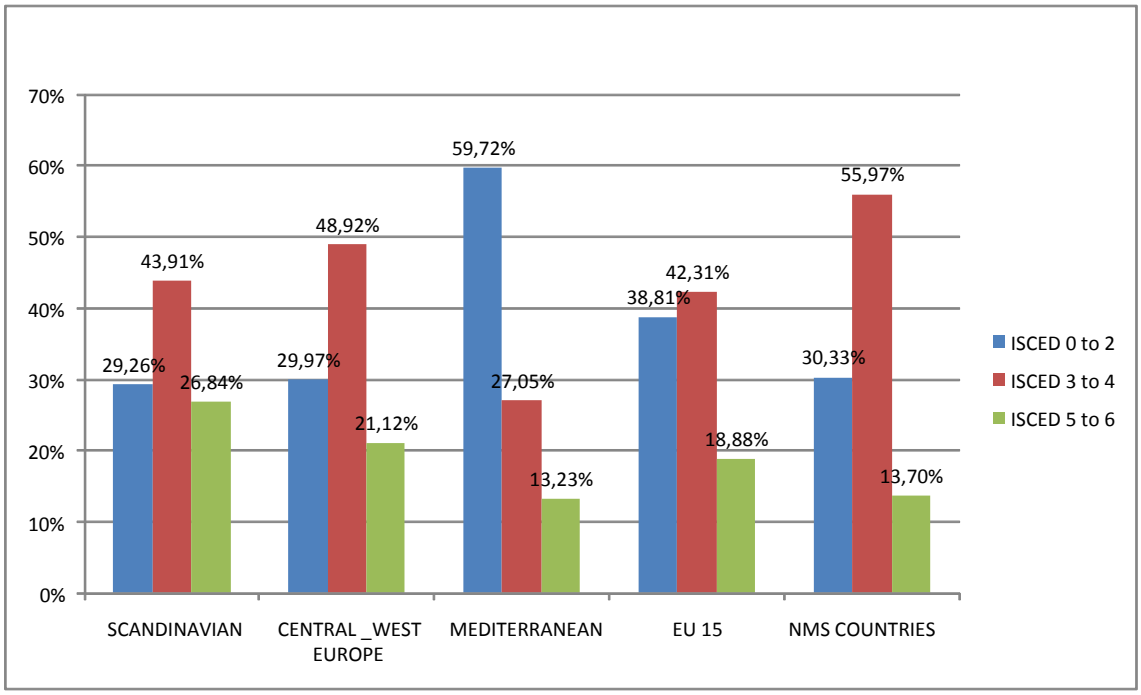
3.2.6 Education and skills of the population

The representation of all the ISCED levels in this graphic, i.e. academic qualification of population, shows that ISCED 3-4 (upper secondary education and post-secondary non tertiary education) is the most representative educational level in EU15 (42%) and the rest of countries' categories (except Mediterranean countries, responsible to diminish the EU 15 ISCED 3-4 result, and swell the ISCED 0-2 result of EU-15 due to Mediterranean high primary and lower secondary education –around 60%). Third educational level only represents 19% in the EU-15, i.e. high professional profiles are scarce among the EU-15 (stronger represented in Scandinavian and Central-West countries, richest and stable economies of the EU territory)

It is remarkable that NMS countries surpass Mediterranean countries in educational level, being ISCED 3-4 the one with highest percentage (56%) from the others levels, while in Mediterranean the highest percentage of academic qualifications of population correspond to ISCED 0-2 (60%). In both cases, third level of education is the lowest (around 13-14%) comparing to the other group of countries.

Scandinavian and Central-West countries have similar rates: predominance of ISCED 3-4 (higher in the second group of countries, reaching 49%), followed by around 29-30% of population with primary and secondary educational level, and finally ISCED 5-6 levels pass the 20% of population (higher in Scandinavian countries, reaching 27% and being the maximum rate in the whole Europe)

Figure 3.6 Academic qualification of population (ISCED levels), by non exclusive groups of countries, 2007



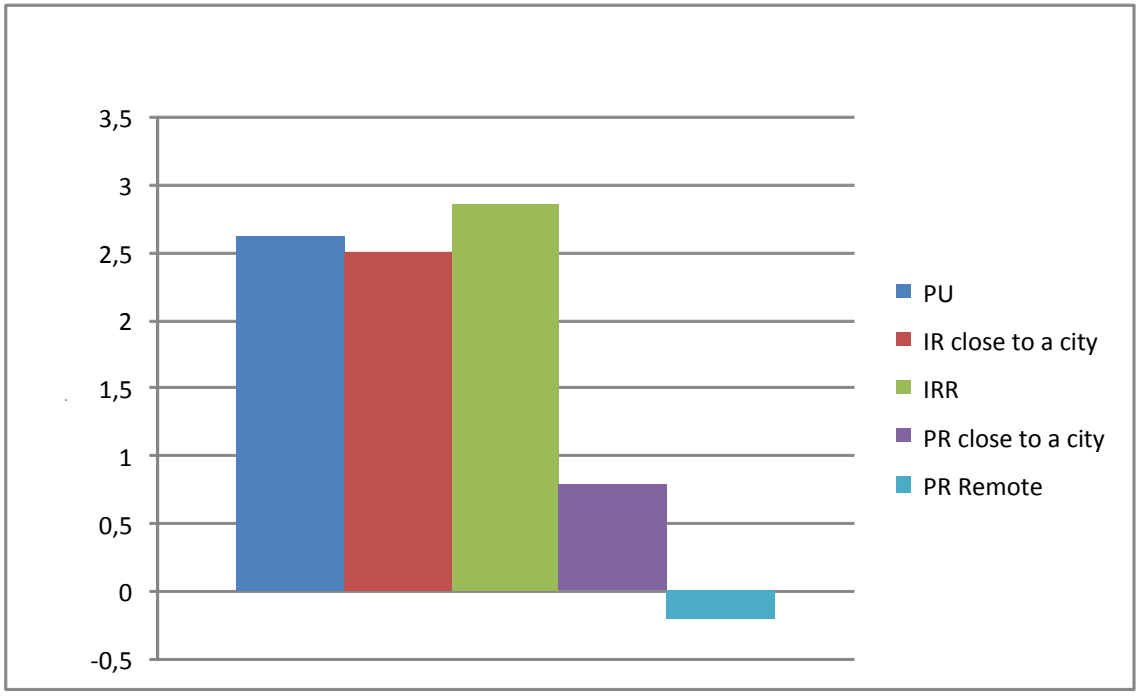
Source: Own elaboration with data from the EDORA database

3.3 Comparative analysis of relevant data and indicators by categories in the Dijkstra-Poelman rural-urban typology

3.3.1 Evolution of the European population

The evolution of the population for the period 2001-2006 is positive for all the areas except for the PRR, which result expresses a decrease of 0.2% of the population in 2006 respect to 2001. PRC has a soft change around 0.7% in the evolution of the population. As the PU as IRC areas have similar evolution percentages: 2.6% for PU and 2.5% for IRC. The most notable evolution pattern happens in the IRR area, with an increase of 2.9% of population in 2006. Explanation for this evolution is related to those addressed to the above indicators (e.g. evolution of natural increase and net migration)

Figure 3.7 Total population change 2001-2006, by categories in the Dijkstra-Poelman rural-urban typology



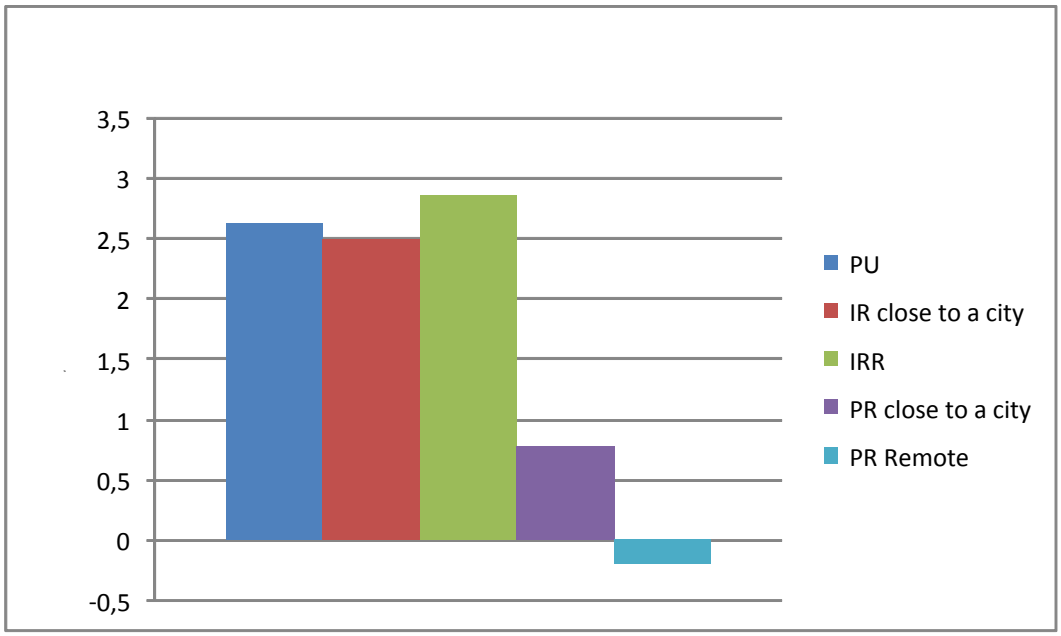
Source: Own elaboration with data from the EDORA database

3.3.2 Territorial concentration or dispersion: the evolution of the population density 2000-2006

Predominantly remote rural areas (PRR) have suffered a depopulation process between 2001 and 2006 of approximately 0.3%. Low results are followed by predominantly rural areas closed to a city (PRC), with an evolution density aprox. 0.7%. Urban areas and Intermediate rural areas possess a qualitative major percentage referring to evolution density. The highest one

(aprox. 2,9%) pertains to Intermediate Remote areas. A relevant fact is the predominance of IRR in the European territory and the big amount of foreigners who work in farming. IRC has a result of 2,5% while PU has an increase of 0.1% respect IRC.

Figure 3.8 Population density change 2001-2006, by categories in the Dijkstra-Poelman rural-urban typology



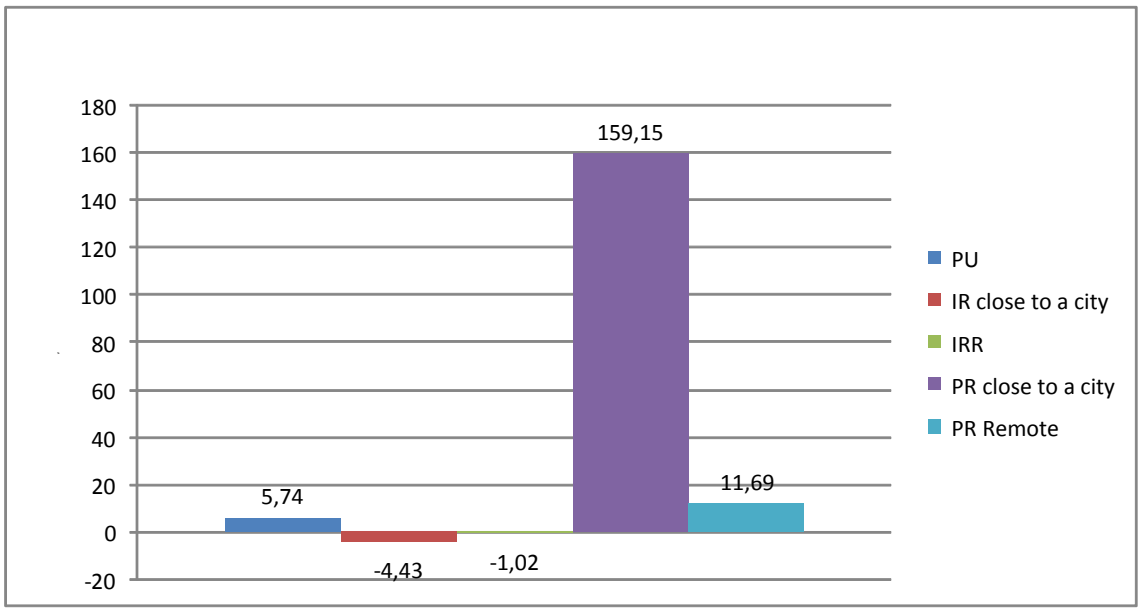
Source: Own elaboration with data from the EDORA database

3.3.3 Demographic strength: natural growth change 2000-2006

The evolution of natural increase between 2001 and 2006 is slightly positive in urban areas (5.74%) These areas concentrate mostly young population since they have a wide amount of education centres. PRR areas have a higher rate than PU, which respond to 11.69. But the highest rate from all the rural typologies is in the PRC, with a 159.15% increase of the natural growth change. Migration and geographical position closed to the city are the key factors for this result. They are cheapest place to live as well as comfortable at the communication level.

In contrast to positive rates, IRC and IRR have negative results: for the first one the result is -4.43% and for the second one is -1.02%. They are a consequence of the ageing processes and the intrinsic characteristics of Intermediate areas as peripheral 'sleep centres' (cheaper accommodation places than cities and closed to them to their job centres)

Figure 3.9 Natural growth change 2001-2006, by categories in the Dijkstra-Poelman rural-urban typology



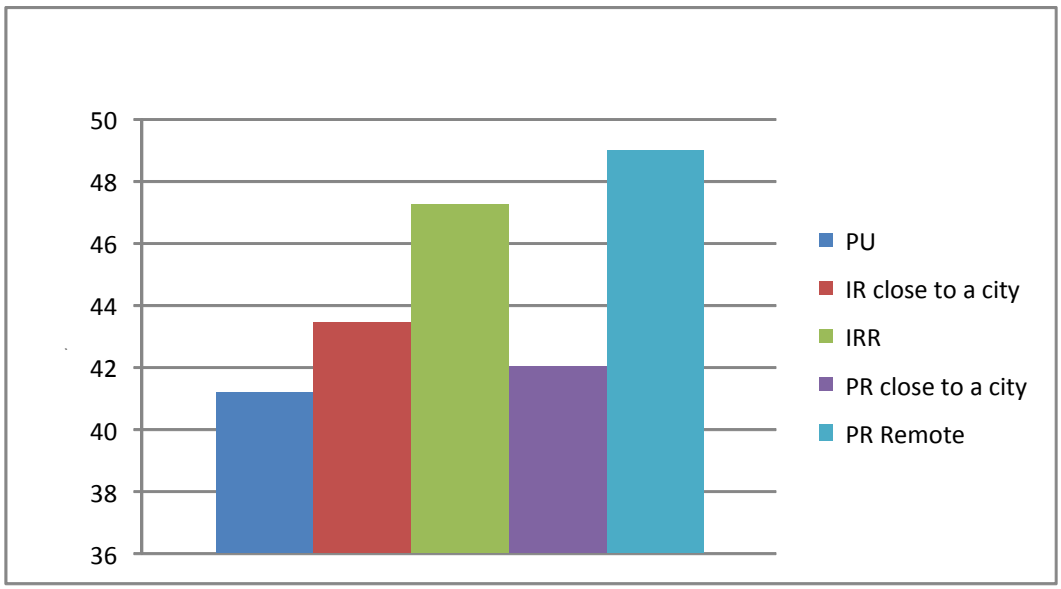
Source: Own elaboration with data from the EDORA database

3.3.4 Socio-demographic sustainability: the dependency rate

Age dependency rates are very high in remote areas which mean a high percentage of dependents, particularly population older than 65 years old. Quantitatively, in IRR there is a dependent population around 47.5% and in PRR it is aprox. 49% (almost the half of the population). The cause of these results is due to 'rural exodus' processes among youngest towards urban areas, depopulating rural areas where, as a final consequence, only old inhabitants live there.

Urban areas, as a result of the reverse process and because they usually are work epicentres, have the lowest rate of dependency, 41%. As followed, PRC areas present a 42% of dependent population and IRC areas present around 43.5%. These areas, as being closed to the city, receive flows of active population to work and/or live in the periphery.

Figure 3.10 % Age Dependency Rate, by categories in the Dijkstra-Poelman rural-urban typology, 2007



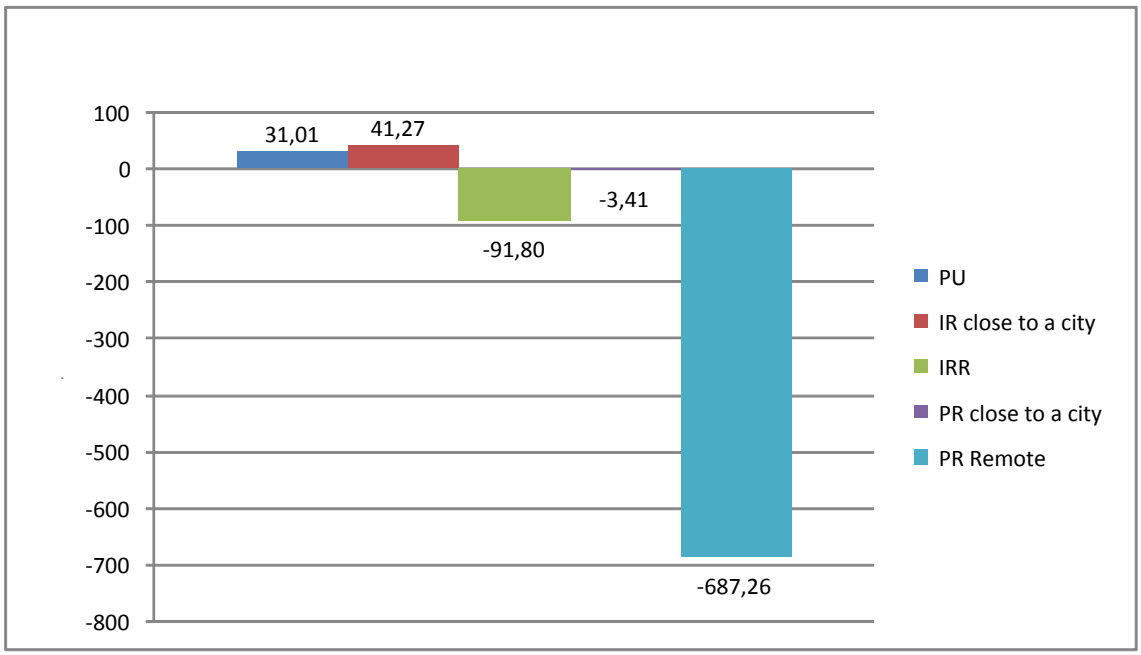
Source: Own elaboration with data from the EDORA database

3.3.5 Mobility of the population: net migration rate

The lowest and negative evolution net migration result occurs in PRR, with a rate of -687.26%, so net migration in 2006 was extremely lowest than in 2001. In IRR there is a fall of 91.80% of the net migration while in PRC is just 3.41 less than in 2001. Urban areas as well as IRC have positive results, an increase of the net migration of 31% in PU and 41.27 % in IRC in 2006 comparing to 2001. Urban areas as well as Intermediate areas are job centres and accommodation centres, respectively, so a high percentage of active population is concentrated in those areas.

Basically negative results express a decrease in the net migration rate between 2001-2006 as an increase of emigrants in 2006 to areas with better communications and services.

Figure 3.11 Net migration 2001-2006, by categories in the Dijkstra-Poelman rural-urban typology



Source: Own elaboration with data from the EDORA database

3.3.6 Education and skills of the population

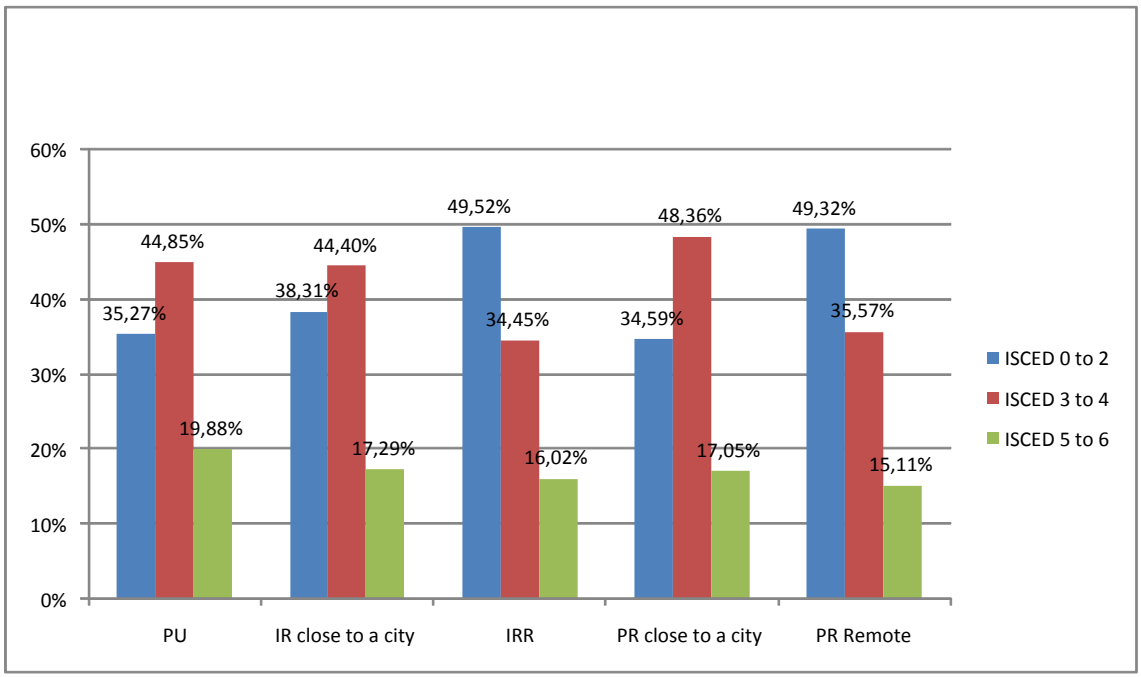
This graphic represents the academic qualification of population in all the ISCED levels associated with the rural typologies. The general picture assesses that urban areas represents the areas with more % population older than 15 years old with third educational level (ISCED 5-6) raising 20%, followed by areas closed to a city (IRC, PRC) and after that importance of intermediate rural areas front to predominantly rural. On the other hand, remote rural areas present more percentage of % population older than 15 years old with elementary educational level (ISCED 0-2), where the highest rate correspond to IRR areas (49,52%) and PRR (49,32%).

In areas closed to a city predominates population with ISCED 3-4 level (upper secondary education and post-secondary non tertiary education). In PRC the rate (48%) is higher than in IRC (44%), compensated in the last one by 4 times more of population with elementary education and a small more percentage of population with a third educational level than in PRC.

As before commented, remote rural areas have the highest rates of % population older than 15 years old ISCED 0-2 level and the lowest rates for third educational level, as well as for ISCED 3-4 (with a rate around 20 times more representative than for the elementary educational level). Normally, those areas do not have universities or high-education centres and rural population have necessarily to migrate to areas where they exist (usually urban areas)

As a conclusion, the clue is the accessibility, the size of the area and the concentration of services in urban areas instead of decentralised basic services (as education, sanity, etc.) in heterogenic and disperse areas.

Figure 3.12 Academic qualification of population (ISCED levels), by categories in the Dijkstra-Poelman rural-urban typology, 2007



Source: Own elaboration with data from the EDORA database

3.4 Comparative analysis of relevant data and indicators at region level (NUT 3) for the countries covered, expressed in maps

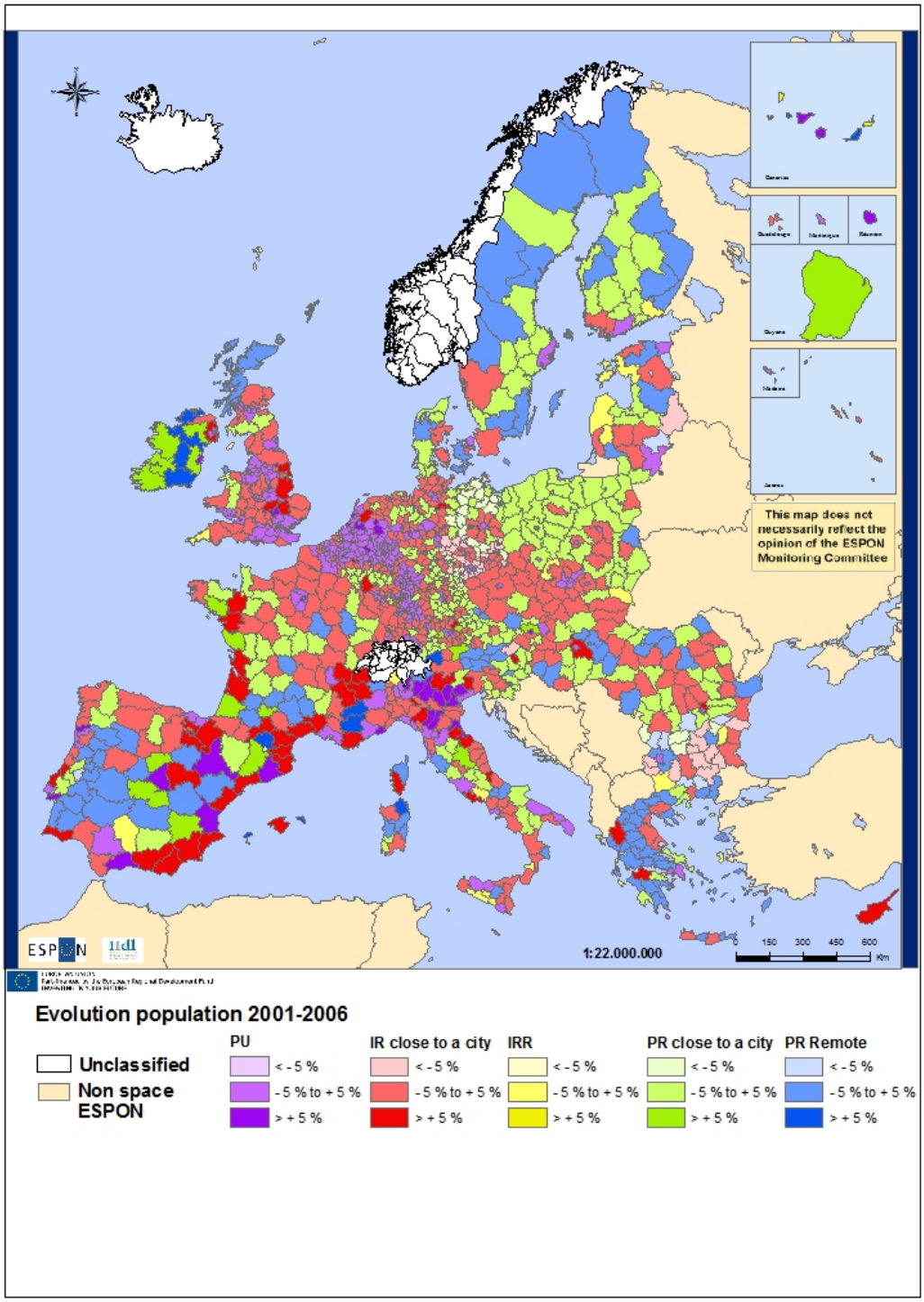
3.4.1 Evolution of the European population

The evolution of the population for the period 2001-2006 is represented in this map over all the European territory. In general, there is a moderate evolution population rate in Europe. Concentration of population matches up with South Europe (coastal environments) - concretely, in PU and IRC areas with more than 5% for this rate- since they are tourist attraction centres and migratory centres for other Europeans, as well as foreign workers (job opportunities in tertiary sector)

Moderate rates (between -5% to +5%) are extended in IRC and PRC areas all over Europe. The same happen in PRR areas (they occupy a big surface in Sweden and Finland, and are important for Greece and Scotland, due to their particular climate –in some cases- and disperse territorial structure)

IRR areas are negligible, as in the evolution density map, because they are not representative for the evolution population indicator in this map.

Map 3.1 Evolution of the total population 2000-2006



Source: own elaboration with data from the EDORA database

3.4.2 Territorial concentration or dispersion: the evolution of the population density 2000-2006

Evolution density is showed in this map for the period 2001-2006 for the European territory.

At first glance, the most extended results correspond to IRC and PRC areas between -5% to +5% all over Europe. It means a moderate evolution density from 2000-2006, excepting South Europe (specially the coastal environment) has more population density (>5% in IRC) because of its touristic attractive (e.g. Spain)

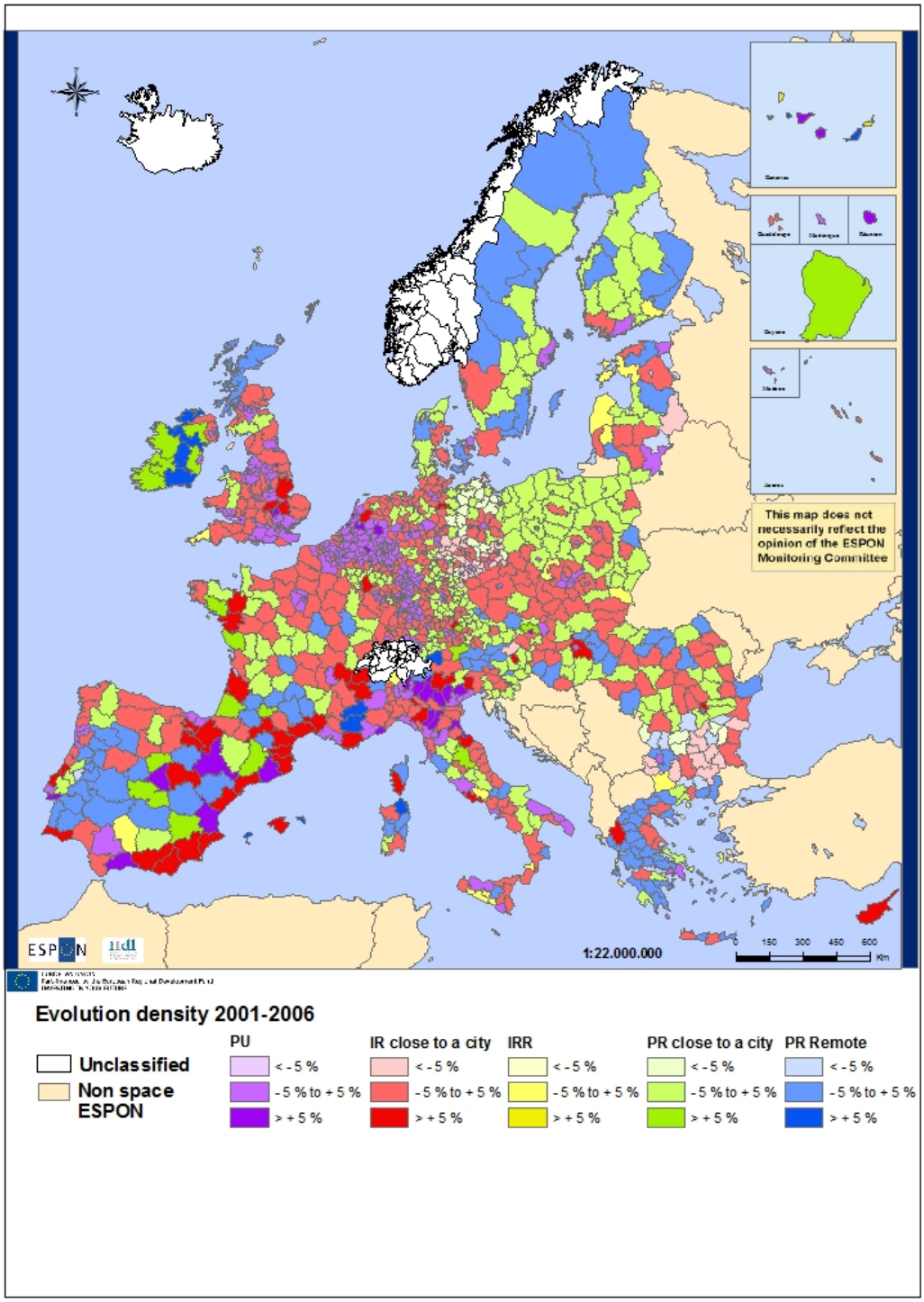
PRR areas between -5% to +5% rate (moderate evolution density) are extensively distributed among Europe (they occupy a big surface in Sweden and Finland)

Urban areas are distributed between South and Central Europe, as well as in United Kingdom. In the majority of cases, rates in PU are between -5% to +5%, except in Spain where rates are higher than 5% because of the tourism.

IRR areas with an evolution density indicator do not represent even a 1% of the area of the European territory, so they are negligible.

In sum, Europe posses a moderate evolution density rate for the analysed period. The most represented areas for this rate are IRC and PRC. Hence, population are concentrated the most in urban areas and areas closed to cities. A wider service offer and job opportunities can be found in those areas.

Map 3.2 Evolution of the population density, 2001-2006



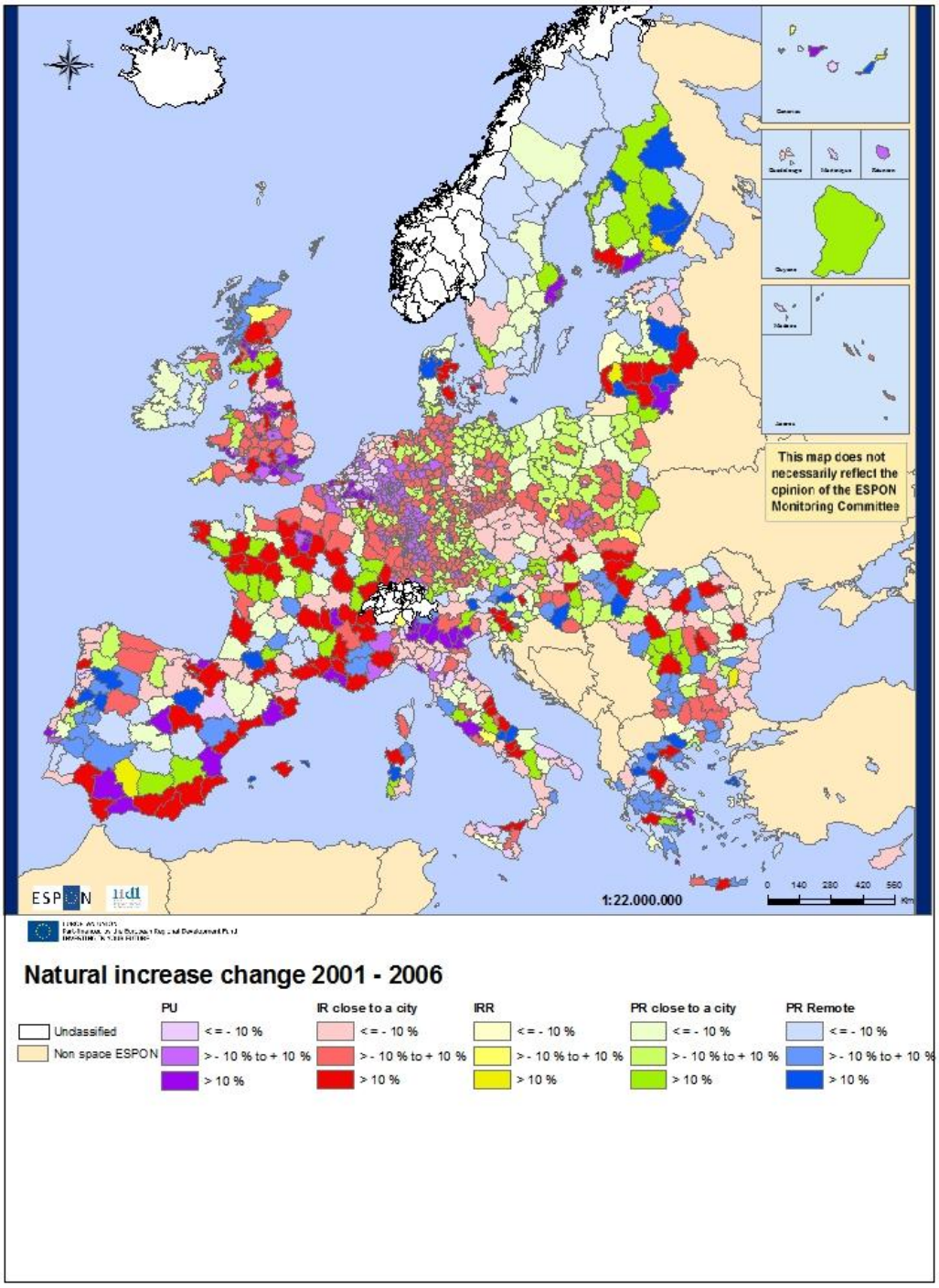
Source: own elaboration with data from the EDORA database

3.4.3 Demographic strength: natural growth change 2001-2006

This map reflects the natural increase change (NIC) for the period 2001-2006 in the EU Continent. The map is very heterogenic. An important displacement of population can be seen (affecting almost all the demographic indicators, as the analysed current one) like an invisible trajectory from North to South. Rates below 10% (soft colours) are predominant in Central Europe (except France) and East Europe. Those results have been explained in the sections related to NIC. In sum, key factors are emigration (East Europe) and ageing demographic processes (Central Europe) In general terms, cross-section areas for this rate in these territories are PU, IRC and PRC.

Moderate changes (rates from -10% to 10%) and high rates (above 10%) happen in South Europe, France, some ex-socialist countries (in North and East Europe), United Kingdom and South of Finland. Predominant areas with those rates are the PRC, followed by IRC, PU and PRR. IRR areas are negligible again.

Map 3.3 Natural growth change 2001-2006



Source: own elaboration with data from the EDORA database

3.4.4 Socio-demographic sustainability: the age dependency rate

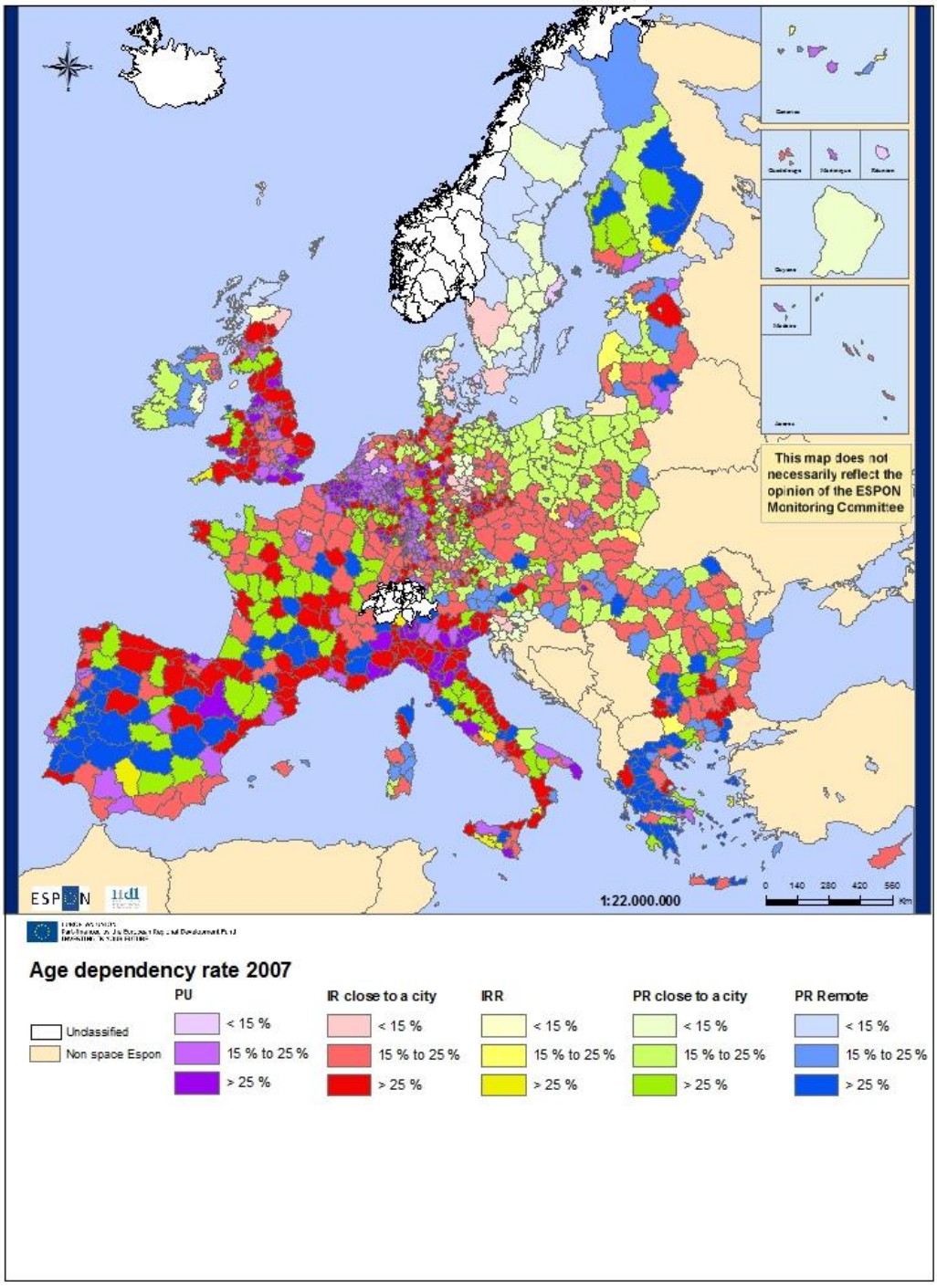
This map reflects the age dependency rate of 2007 for the five rural typologies among all the EU countries. There are three different colour ranges for each typology based of an age dependency rate percentage criteria. The predominance of IRC areas with 15-25% of age dependency rate in West Europe and PRC with 15-25% (mostly in East Europe) and more than 25% (all over the EU, but mostly in East Europe) are significant.

In general, PU and IRR areas, besides age dependency rate, are not remarkable in the territory, and respond better to rates between 15-25% of dependents.

PRR areas with more than 25% of age dependency rate are concentrated in South Europe, along the coast (caused mainly due to retired European foreigners who establish their residence in warm climates from the South), as well as in the East part of Finland. PRR areas with less than 15% of ADR are concentrated in North Europe (predominantly in Sweden)

As conclusion for those data results, there is a high-moderate age dependency rate trend in the whole Europe, but higher in West and South Europe than in East Europe. Referring to rural typologies, IRC and PRC areas with high-moderate ADR are the striking ones.

Map 3.4 Age Depencency Rate 2007



Source: own elaboration with data from the EDORA database

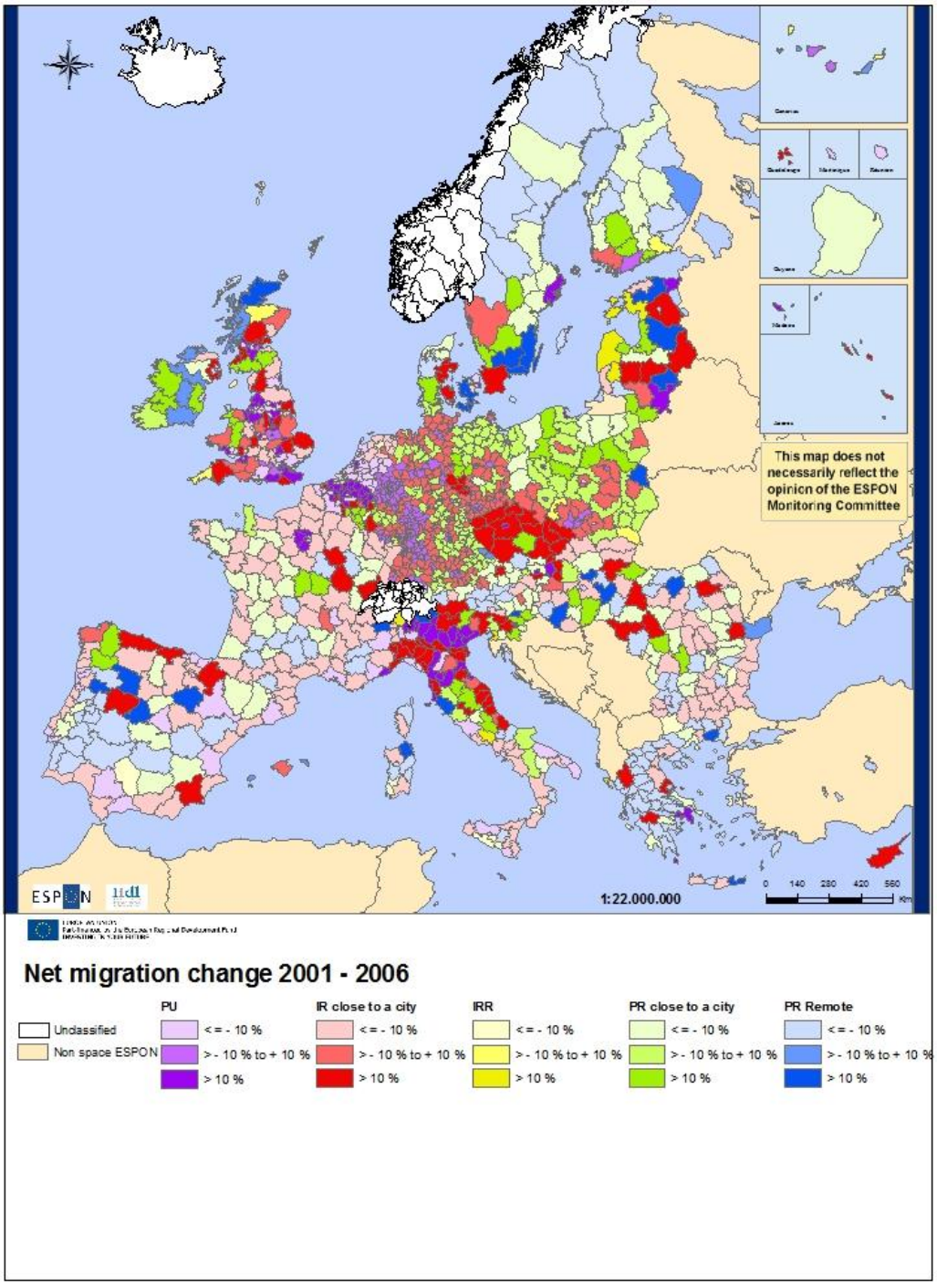
3.4.5 Mobility of the population: net migration change 2001-2006

This map expresses the spatial distribution of the Net Migration Change results for the period 2001-2006 at the NUT3 level. The map can be divided in two parts: Western Europe (low NMC rates, less changeable) and Eastern Europe–except in some spots of the South- (moderate-high NMC rates, more changeable). The difference between both processes is the return of national migrants to their origin countries.

The Occidental part, as well as South Oriental part, are characterised by NMC<10%, predominantly in IRC, IRR and PRR, except in some NUT3 with change rates of more than 10%.

The Oriental part (Central Europe, North Europe -excluding North part of Scandinavian countries-, United Kingdom and Ireland) are characterised by NMC from -10% to +10% and NMC>10% among all the rural typologies. The North part of the Scandinavian countries is remarkable because of its low rates below 10% in vast regions of PRR and IRR; this is due to severe climate conditions, immigration to these places is very rare, the contrary is more common.

Map 3.5 Met migration change, 2001-2006



Source: own elaboration with data from the EDORA database

3.4.6 Formal education and skills of the population

This map reflects the distribution of the *% pop.> 15 years with ISCED 0_2 level* (lower secondary level of education) all over Europe for the year 2007. The EU 27 average is 36.6% which is a low rate since less than the half of population have basic education formation.

The distribution of IRC with more than 40% of this indicator is remarkable in the map, mainly in West and South Europe. The same happen with IRC areas with less than 30% of population older than 15 with lower secondary education level. In this case, the rate's distribution varies from East Europe, some Northern countries and United Kingdom.

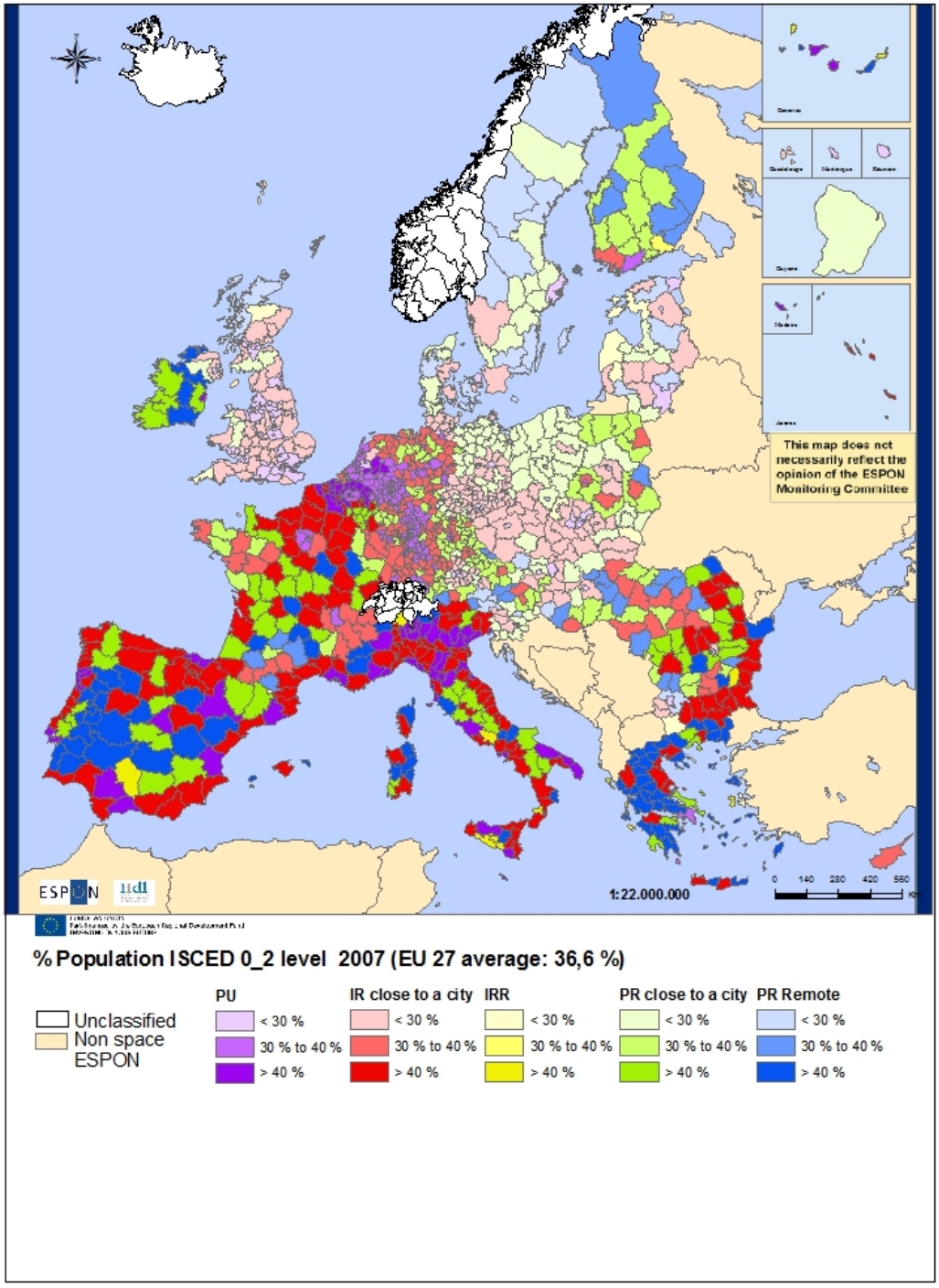
In parallel with the vast IRC distribution, PRC areas with more than 40% of the indicator have a noticeable distribution among West and South Europe and Ireland. PRC areas with results between 30-40% correspond to East Europe.

IRR areas with less than 30% of population with lower secondary level of education (the important ones in this map) are distributed in North Europe. This is due to the high education standards of those countries, where population structure have a third education level profile.

Following the distribution path of the indicator, PRR with more than 40% of the rate are situated in South Europe and Ireland, rates between 30-40% correspond to East Europe and Finland while rates less than 30% belong to North Europe.

In Urban areas the significant results are for rates of more than 40% of population with lower secondary level of education, distributed in South Europe, and rates between 30-40% distributed in the North coast of Central Europe.

Map 3.6 % of population 15 or more years with ISCED 0-2 level, 2007



Source: own elaboration with data from the EDORA database

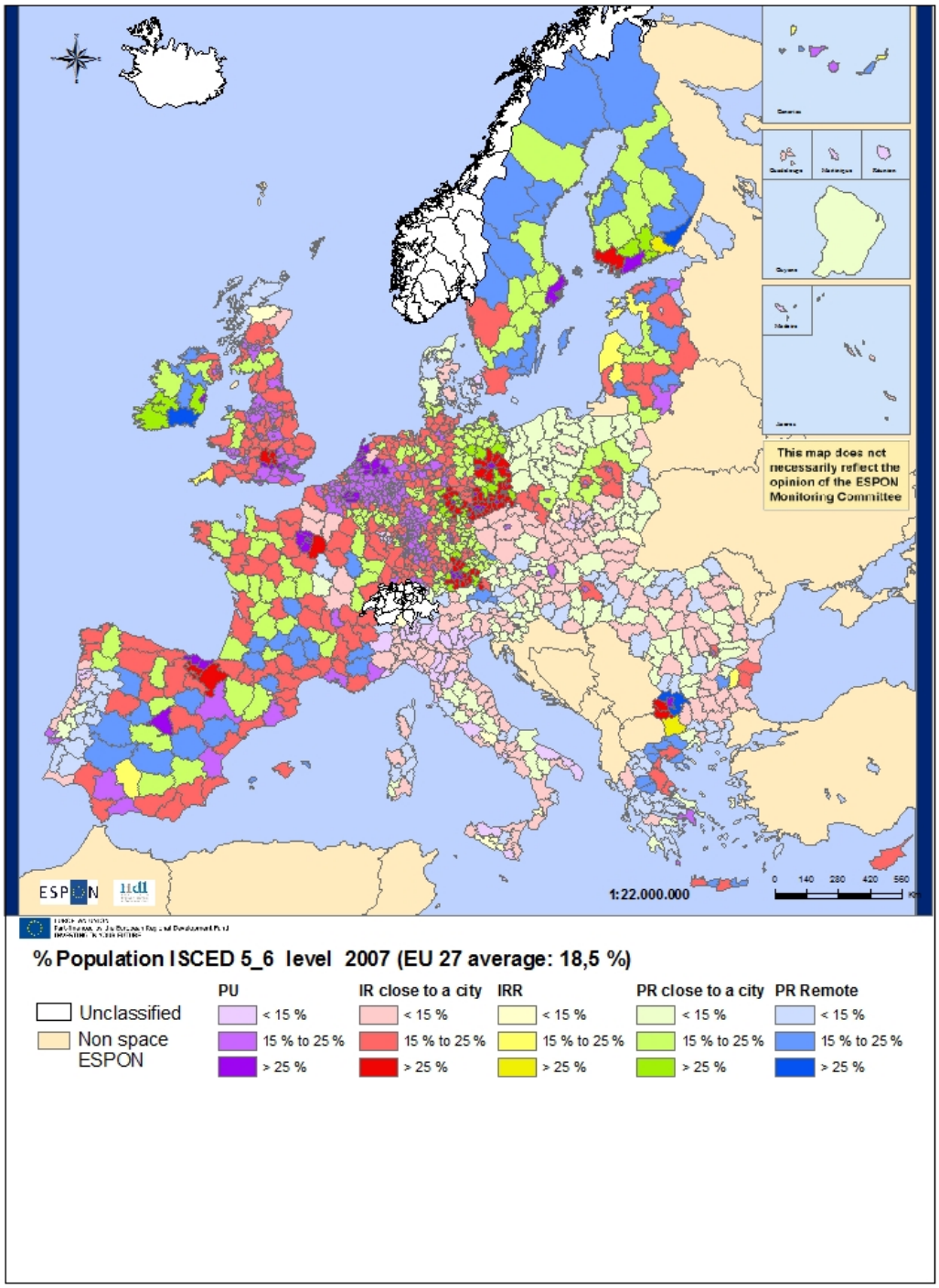
Map 3.7 reflects the distribution of the *% pop.> 15 years with ISCED 5_6 level* (third level of education) all over Europe for the year 2007. The EU 27 average is 18.5%, lower than for the indicator of the ISCED 0_2 level. It does not means that European citizens have low educative qualification since there are a lot of play role factors, as the recent adhesion to the UE of other countries with less education opportunities and/or investments.

Central Europe, South Europe –except Italy-, Ireland, United Kingdom and Scandinavian countries present the highest rates of this indicator due to their developed education policies and the funds distribution towards the education sector. It is a sign of first economies countries with basic services achieved.

Referring to rural typologies, PU and IRC (except in the case of North Europe due to their territorial particularities: PRC and PRR areas are predominant) concentrate the highest rates of % pop.> 15 years with ISCED 5_6 level.

East Europe presents rates less than 15% for this indicator, classified in four different typologies: IRC, IRR, PRC and PRR. Countries from this part of Europe are gradually evolving in the entire social and economical sectors and they are achieving better and stronger policies, as for instance education.

Map 3.7 % of population 15 or more years with ISCED 5-6 level, 2007



Source: own elaboration with data from the EDORA database

CHAPTER 4.
EMPLOYMENT

Unemployment rates represent unemployed persons as a percentage of the active population of the same age. Unemployed people, according to the International Labour Organisation (ILO) criteria, are those persons aged 15 and over who are: (i) without work, (ii) available to start work within the next two weeks and, (iii) have actively sought employment at some time during the previous four weeks or have found a job to start later (Daguerre A., 2002, *Labour market and unemployment in the European Union*, note 2, p.3, University of Kent)[4]. In general, unemployment rates are higher in disadvantages groups as women, youth and disabled people. Those groups suffer stronger the lack of employment or the bad labour conditions.

In this Report, unemployment rate data are shown referring to the year 2007. Economics' rates might not be understood making an isolated analysis for one year period because they are related to change flows over time. Hence, economics' evolution is a key factor to figure out economics' indicators. Unemployment rate was a bit stuck from 2002 to 2005 and from then on, it decreases drastically till 2008, when it starts to rise again in relation to the global economic crisis starting in mid 2008 (Euro indicators, 2009, *Euro area unemployment rate stable at 9.8%*, see graphs, Eurostat)[5]. Hence, 2007 was a year of low unemployment rates comparing to the indicator's evolution, so as it meant a year with an increased employment rate (Massarelli N., 2009, *Persisting weakness in the EU labour market*, Chart 1. Employment and unemployment. EU-27. Seasonally adjusted, Eurostat)[6]. High unemployment rates in regions in the new Member States are on the decrease. (Martins P., 2007, *New Member States contribute to reducing unemployment in Europe*, p.2, Statistics in Focus, Eurostat)[7].

4 http://www.kent.ac.uk/wramsoc/workingpapers/firstyearreports/backgroundreports/labourmarketbackgroundreport.pdf)

5 http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/3-01122009-AP/EN/3-01122009-AP-EN.PDF

6 http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-09-087/EN/KS-SF-09-087-EN.PDF

7 http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-07-124/EN/KS-SF-07-124-EN.PDF

4.1 Comparative analysis of relevant data and indicators by country with reference to the EU27 average

4.1.1 The impact of unemployment in national economies

The unemployment rate in 2007 for EU-27 shown on this table is 7.63. As commented above, comparing to other periods, this is a low outcome for the unemployment. There are no data for Turkey, Y.R. Macedonia, Switzerland, Liechtenstein, Slovenia, Iceland and Denmark.

Low rates of unemployment correspond to industrialised countries with a growing and healthy economy as Northern European countries (Norway and Lithuania) and Central European countries (Nederland, Austria, Luxembourg), as well as the striking cases of Cyprus and Ireland; both countries are manufacturing and service economies, where lower unemployment rates are frequently significant ((see Ireland Country Profile Draft Report, EDORA) & (Department of Enterprise, Trade and Investment, 2007, *Northern Ireland's unemployment rate remains low*, Northern Ireland Executive))[8].

There are several heterogenic countries with moderate unemployment rate: Estonia (with 5.06% of unemployment), United Kingdom, Czech Republic, Latvia, Sweden, Malta, Italy, Portugal, Romania and Belgium (with 7.23 of unemployment, closed to the EU 27 average). There is not a specific socio-political pattern that explains those results due to the different realities of each of these countries. Traditionally, Northern and Central European countries have had higher labour productivity levels than ex-socialist countries and Southern countries, as well as a technological labour market instead of agricultural (Daguerre A., 2002, *Labour market and unemployment in the European Union*, note 2, p.5, University of Kent)[9].

The highest rates in unemployed correspond to Finland, Hungary, France, Spain, Germany, Bulgaria, Greece, Poland, Croatia, and Slovakia. There is a trend in the labour market philosophy towards part-time jobs, jobs per hour and self-employment, which is associated with low incomes and under-employment (see Copus et al, 2009, EDORA, *Rural employment*, p.7, The ESPON 2013 Programme) This trend leads to precarious labour situations and finally it has a direct effect on the rise of long-term unemployment rates.

Some Southern countries as well as some ex-socialist countries have in common traditional cultures. It affects the women society role, pushed her into the background in the labour market (black economy, worse paid jobs than men, problems with maternity leave, etc.). It should be mentioned that this phenomenon increases in rural areas.

Nowadays, women role is improving thanks to women right campaigns. For instance, in Northern countries the trend is that they remain for a long time on the formation period (reaching university level) and delaying the insertion to the labour market. All those factors (as

[8] http://www.northernireland.gov.uk/news/news-deti/news-deti-april-2007/news-deti-180407-northern-irelands-unemployment.htm)

[9] http://www.kent.ac.uk/wramsoc/workingpapers/firstyearreports/backgroundreports/labourmarketbackgroundreport.pdf

positive as negative) contribute to increase unemployment rate among women and, as a consequence, it should be considered on the total unemployment rate.

Table 4.1 Unemployment rate (pop. > 15 years) 2007, by country

	Unemployment rate (pop.> 15 years) in 2007
SLOVAKIA	10.96
CROATIA	10.46
POLAND	9.65
GREECE	9.36
BULGARIA	9.11
GERMANY	8.86
SPAIN	8.55
FRANCE	8.36
HUNGARY	8.04
FINLAND	7.96
EU 27	**7.63**
BELGIUM	7.23
ROMANIA	7.16
PORTUGAL	7.11
ITALY	6.51
MALTA	6.40
SWEDEN	6.24
LATVIA	6.12
CZECH REPUBLIC	5.44
UNITED KINGDOM	5.23
ESTONIA	5.06
IRELAND	4.61
LITHUANIA	4.52
LUXEMBOURG	4.10
CYPRUS	3.90
AUSTRIA	3.61
NEDERLAND	3.22
NORWAY	2.56
DENMARK	NA
ICELAND	NA
SLOVENIA	NA
LIECHTENSTEIN	NA
SWITZERLAND	NA
Y.R. MACEDONIA	NA
TURKEY	NA

Source: own elaboration with data from the EDORA Database

4.1.2 Economic structure: employment by sector of activity

The employment growth rate is determined by the sectoral structure. Nowadays in the EU 27, the **primary sector** accounts for less than 10 per cent of total employment (exactly 7.98%), in a third of rural regions its share is less than 5 per cent. However, in more remote rural areas of the Central and Eastern European Countries this sector still covers 25 per cent of the whole working force (see Copus et al, 2009, EDORA, *Rural employment*, p.18, The ESPON 2013 Programme) There are no data for Turkey, Y.R. Macedonia, Switzerland and Liechtenstein.

Employment in services is now the largest of the three sectors in all three region types. As shown on the table, the majority of countries have primary sector employment rates below the EU 27 average, which means that their economies tend more to secondary or tertiary sector structure than primary sector. Such is the case of some countries, with primary sector rates less than 5 per cent of the total employment, as Luxembourg, United Kingdom, Germany, Sweden, Denmark, Belgium, Malta, Nederland, Czech Republic, Slovakia, Norway and Cyprus. The majority of those countries have passed a long industrialised and technological history era. The rest (as Malta, Czech Republic, Slovakia and Cyprus) have accelerated their reconversion into the capitalism system since their annex to the EU; today, most of them are tourist attractive places and most of the country's GDP comes from tourism.

Above 5% but below EU 27 average the followed countries are targeted: France, Italy, Hungary, Estonia, Finland and Ireland (this last one has a rate of primary sector employment of 7.56% of the total employment, closed to the EU 27 rate). The characteristic rurality of those countries predicts an economy based partially on the resources use productivity. At any rate, as far they are industrialised countries tertiary and secondary sectors occupy a big proportion of the total employment.

Moderate percentage of primary sector employment over the total employment, and above EU 27 rate, correspond to Spain (8.01%), Iceland, Croatia, Slovenia and Latvia (15.42%). Rurality, as well as pristine and diverse landscapes (in some cases), turn them into (eco)-tourism attractions and it enhances primary sector activities.

Rates of more than 18% of primary sector employment are for Poland (18.12%), Austria (18.31%), Lithuania, Portugal, Greece, Bulgaria and Romania (35.65%). To a great extent, rural areas are predominant among the territory of those countries, so primary sector activities are involved in the labour market economy of each of these countries. Some of them have not done yet the transition towards a high-technologic society, so tertiary sector is restricted (based primarily on the tourism)

Table 4.2 % of employed in the primary sector 2007, by country

	% Employment in primary sector
ROMANIA	35.65
BULGARIA	25.14
GREECE	22.00
PORTUGAL	20.17
LITHUANIA	18.94
AUSTRIA	18.31
POLAND	18.12
LATVIA	15.42
SLOVENIA	12.46
CROATIA	9.25
ICELAND	8.53
SPAIN	8.01
EU 27	**7.98**
IRELAND	7.56
FINLAND	7.42
ESTONIA	7.27
HUNGARY	6.18
ITALY	5.92
FRANCE	5.29
CYPRUS	4.90
NORWAY	4.80
SLOVAKIA	4.68
CZECH REPUBLIC	4.33
NEDERLAND	4.26
MALTA	4.17
BELGIUM	3.60
DENMARK	3.44
SWEDEN	3.38
GERMANY	3.12
UNITED KINGDOM	2.17
LUXEMBOURG	1.30
LIECHTENSTEIN	NA
SWITZERLAND	NA
Y.R. MACEDONIA	NA
TURKEY	NA

Source: own elaboration with data from the EDORA Database

The **secondary sector** is the economic sector which activities produce manufactured goods from primary sector outputs. Activities such construction and manufacturing are included in this kind of economic sector. Old industrialised countries, with long trajectory of goods exportation, such ex-socialist countries are characterised by high secondary sector employment rates. The EU 27 average rate for this indicator represents the 26.71% over the total employment, so it does not represent even the half of the total employment of the EU economy. There are no data for Turkey, Y.R. Macedonia, Switzerland and Liechtenstein.

Low rates for secondary sector employment (less than 23%) belong to Greece, Cyprus, Norway, Denmark, United Kingdom, Luxembourg and Belgium. Both first cases are catching because of

their particular rurality and moderate GDP, but they lean toward tertiary sector (major in the case of Cyprus). The rest countries base their economies on tertiary sectors, helped by high-tech infrastructure, and nourished by basic good imports, being potentially dependant on primary and secondary activities of other countries.

Table 4.3 % of employed in the secondary sector 2007, by country

	% Employment in secondary sector
CZECH REPUBLIC	41.24
SLOVENIA	38.57
ESTONIA	36.14
HUNGARY	35.72
SLOVAKIA	35.16
CROATIA	32.98
IRELAND	30.32
ROMANIA	29.96
ITALY	28.86
LITHUANIA	28.77
SPAIN	28.71
PORTUGAL	28.67
BULGARIA	28.51
GERMANY	28.15
FINLAND	27.29
POLAND	27.26
EU 27	**26.71**
ICELAND	26.36
LATVIA	25.87
MALTA	25.07
SWEDEN	24.74
AUSTRIA	24.38
FRANCE	23.46
NEDERLAND	23.16
BELGIUM	22.52
LUXEMBOURG	21.43
UNITED KINGDOM	21.20
DENMARK	20.79
NORWAY	20.40
CYPRUS	20.16
GREECE	19.49
LIECHTENSTEIN	NA
SWITZERLAND	NA
Y.R. MACEDONIA	NA
TURKEY	NA

Source: own elaboration with data from the EDORA Database

Moderate rates below EU 27 average imply countries as: Nederland (23.16%), France, Austria, Sweden, Malta (25%), Latvia and Iceland (there is a 26.36% of employment in secondary sector) Similar explanation than the above commented can be applied for these results. Malta and Iceland are remarkable, as they are islands so because of their condition, they are more isolated from the European territory. Malta's economy is dependent on foreign trade, manufacturing - especially electronics and pharmaceuticals - and tourism (2009, The World

Factbook, *Economy of Malta*, Central Intelligence Agency –CIA-, https://www.cia.gov/library/publications/the-world-factbook/geos/mt.html) Similar facts happen in Iceland.

Moderate-high rates, above EU average, pertain to Poland (27.26%), Finland, Germany, Bulgaria, Portugal, Spain, Lithuania and Italy (28.86%) This economic sector does not represent a high percentage from the total employment, but manufacturing and construction are relevant and contribute to the country's GDP. Some of them (e.g. Bulgaria and Lithuania) are in a transition process towards services and high-tech industries.

The majority of the ex-Yugoslavian countries (Romania, Croatia, Slovenia and Czech Republic) and some ex-socialist countries (Slovakia, Hungary and Estonia) possess the highest rates of secondary sector employment, as it can be seen in the table results. Ireland is the conspicuous case of this group, with a 30.32% of secondary sector employment over the total employment. It has suffered a transition from agriculture to services and high-tech industries, based on a knowledge economy, and it is dependent on trade, industry and investment (Hill K. & all, 2005, Lessons from the 'Irish Miracle', W.P. Carey School of Business, http://wpcarey.asu.edu/seidman/reports/ireland.pdf).

Among the EU economic sectors, **tertiary sector** enjoy the highest employment proportions. It advocates for services (tourism, high-tech enterprises, catering trade, etc.) The EU 27 rate for tertiary sector employment is 65.31% over the total employment, so more than a half of employment in Europe is set for tertiary sector. Countries like the Scandinavians and Central European countries (as Germany, France, Nederland, etc.) influence on those results. There are no data for Turkey, Y.R. Macedonia, Switzerland and Liechtenstein.

Most of the ex-socialist countries, as well as some Southern countries have low rates of employment in tertiary sector (below 60%): Romania, Bulgaria, Slovenia, Portugal, Lithuania, Czech Republic, Poland, Estonia, Austria, Croatia, Hungary, Greece and Latvia. Those results match with the ones from the primary and secondary sector tables; primary and secondary activities are more competitive and occupy more prominence in the economy of ex-socialist countries and Southern ones.

Moderate rates, below EU 27 result, are distributed in a heterogenic way in countries as Slovakia (60.16%), Ireland, Spain, Iceland, Italy and Finland (65.29%). Partially this is due to their rural typologies configuration and the still importance of primary and secondary sector. Finland has a rate closed to EU 27 average because Finland's economy is basically based on high-tech services and wood manufacturing, management and monitoring; it does not raise high rates because of the inhospitable climate conditions of the North part where only seasonally there are economic incomes (winter tourism)

Central countries and Scandinavian ones (except Finland) reach high rates of employment in the tertiary sector (the highest one is 77.27% in Luxembourg) due to the long economy growth trajectory, focusing on knowledge economy, high-tech services and importation of basic goods.

Climate conditions are a handicap for those countries that limit them over the primary activities.

Table 4.4 % of employed in the tertiary sector 2007, by country

	% Employment in tertiary sector
LUXEMBOURG	77.27
UNITED KINGDOM	76.63
DENMARK	75.77
CYPRUS	74.93
NORWAY	74.80
BELGIUM	73.88
NEDERLAND	72.57
SWEDEN	71.88
FRANCE	71.26
MALTA	70.76
GERMANY	68.72
EU 27	**65.31**
FINLAND	65.29
ITALY	65.21
ICELAND	65.12
SPAIN	63.29
IRELAND	62.12
SLOVAKIA	60.16
LATVIA	58.71
GREECE	58.51
HUNGARY	58.10
CROATIA	57.78
AUSTRIA	57.31
ESTONIA	56.59
POLAND	54.63
CZECH REPUBLIC	54.43
LITHUANIA	52.29
PORTUGAL	51.16
SLOVENIA	48.97
BULGARIA	46.35
ROMANIA	34.39
LIECHTENSTEIN	NA
SWITZERLAND	NA
Y.R.MACEDONIA	NA
TURKEY	NA

Source: own elaboration with data from the EDORA Database

4.1.3 High technology in the labour market

High and medium technologies manufacturing (HMHT) are further focused on product innovation instead of process innovation (more typical of Low-medium technologies manufacturing -LMT-). Product innovation produces different innovation effects as: increased range of goods and services, new markets or increased market share and improved quality in goods or services. Nowadays, there is a prevalence of LMT over HMHT, which means that flexibility of production or reduced labour costs are more important than an increased range of goods and services and access to new markets.

LMT are concentrated in low-wage industrialised countries, with below-average growth rates, as less prosperous Central and Eastern European countries, as well as Portugal and Italy. HMHT are correlated with high-wage regions that have concentrated on advanced knowledge-based services (situated in metropolitan regions because of their higher economic potential).

Knowledge-intensive services and highly qualified employees have a strong positive influence on regional economic performance, correlated with the level of employment. One to point out is that the different innovation pattern between HMHT and LMT may have an ambiguous effect on income and employment due to its cost-cutting nature, since LMT are an important employment sector and an important prerequisite for the development of high- and medium-high-technology industries. (Heidenreich M., 2008, *Innovation patterns and location of European low- and medium-technology industries*, European Studies in Social Sciences, University of Oldenburg, Elsevier B.V.)[10].

In 2004, the result of this indicator in EU 27 is outright positive: there was a 107.13% of employment in high and medium technologies manufacturing. The employment rate in this kind of industry sector was completely covered. Eastern and Central European countries reinforced this result thanks to their wager towards innovation and the replacement from LMT to HMHT in Eastern Europe, taking advantage of the collateral opportunity investments. There are no data for Turkey, Switzerland, Liechtenstein, Iceland, Norway, Romania, Bulgaria and Croatia.

Employment in HMHT below 90% rates correspond to Greece (very low rate of 18.05%), Cyprus, Luxembourg, Y.R. Macedonia, Latvia, Portugal, Lithuania (45.77%), and countries where there is half or more than a half of employment in HMHT like Estonia, Spain, Nederland and Poland (72.06%) The majority of these countries have above-average growth rates but they do not fund R&D (Research & Development) investments as much as they could.

The next group of countries has rates above 90% of employment in HMHT but not reaching EU 27 average. This group is made up of Denmark (92.45%), Malta, Ireland, Austria, Belgium, Finland, United Kingdom, France and Italy (101.97%). Most of them are Central European countries. Almost all of the countries of this group pertain to high-wage economies and they are characteristic by having advanced, knowledge-based metropolitan areas, investing in R&D,

[10] http://www.sozialstruktur.uni-oldenburg.de/en/download/heidenreich_2008_Innovation_patterns_and_location_of_European_low-_and_medium-technology_industries.pdf

new markets and improving goods and materials. This high-tech framework permit to install HMHT manufactories and it requires a considerable amount of labour force.

Table 4.5 Employment in high and medium technologies manufacturing (2004)

	Employment in high and medium technologies manufacturing (2004)
GERMANY	164.68
SWEDEN	140.03
CZECH REPUBLIC	137.35
SLOVENIA	135.05
HUNGARY	131.10
SLOVAKIA	122.34
EU 27	**107.13**
ITALY	101.97
FRANCE	97.78
UNITED KINGDOM	97.36
FINLAND	95.70
BELGIUM	94.63
AUSTRIA	94.12
IRELAND	93.94
MALTA	92.75
DENMARK	92.45
POLAND	72.06
NEDERLAND	62.28
SPAIN	60.96
ESTONIA	50.60
LITHUANIA	45.77
PORTUGAL	40.47
LATVIA	27.95
Y.R. MACEDONIA	27.95
LUXEMBOURG	20.54
CYPRUS	18.73
GREECE	18.05
CROATIA	NA
BULGARIA	NA
ROMANIA	NA
NORWAY	NA
ICELAND	NA
LIECHTENSTEIN	NA
SWITZERLAND	NA
TURKEY	NA

Source: own elaboration with data from the EDORA Database

Above EU average and reaching very high rates of employment in HMHT, the leader countries in HMHT and LMT are: Slovakia (122.34%), Hungary, Slovenia, Czech Republic, Sweden and Germany (164.68%) Those manufactories have been contracting, especially in Western Europe, and relocating to Eastern Europe, taking advantage of the lower labour cost in Eastern Europe.

(Heidenreich M., 2008, *Innovation patterns and location of European low- and medium-technology industries*, p.9-11, European Studies in Social Sciences, University of Oldenburg, Elsevier B.V.)[11].

[11] http://www.sozialstruktur.uni-oldenburg.de/en/download/heidenreich_2008_Innovation_patterns_and_location_of_European_low-_and_medium-technology_industries.pdf

4.2 Comparative analysis of relevant data and indicators by non-exclusive groups of countries

4.2.1 The impact of unemployment in national economies

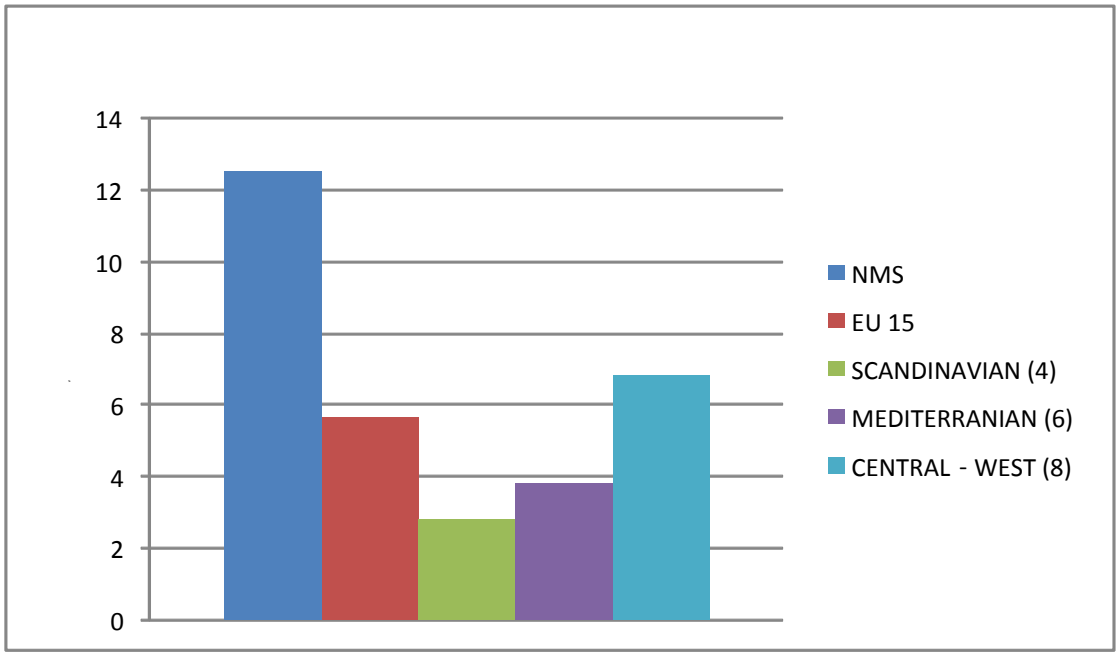
The highest unemployment rate in 2007 belongs to the NMS Members and it raises a percentage around 12.5%, more than 6% than EU 15 unemployment rate. Nowadays, NMS and EU 15 unemployment rates narrow the gap between them because productivity system of NMS is increasing, and so is the employment (slightly in the case of women and youth cases)

Central-West countries possess higher unemployment rates (around 6.5%) than Mediterranean (approximately a 2% less) and Scandinavian (approximately a 3% less). The figure of Germany (in the case of Central-West countries) and Spain (in the case of Mediterranean countries) swell the results for this rate of each country's group.

Long-term unemployment, part-time job, unequal gender access and conditions to work supplies, low pensions…in sum, unstable situations, are common labour conditions in the present labour market of modern societies and influence negatively in the employment supply.

Obviously, unemployment analysis has to be updated to the new circumstances as a consequence of the current global financial crisis causing higher unemployment rates that are expected to remain over the next few years. The current financial crunch and the loss of employment, linked to high debts, high prices, etc., is causing triggered effects on social and economical problems.

Figure 4.1 Unemployment rate, 2007



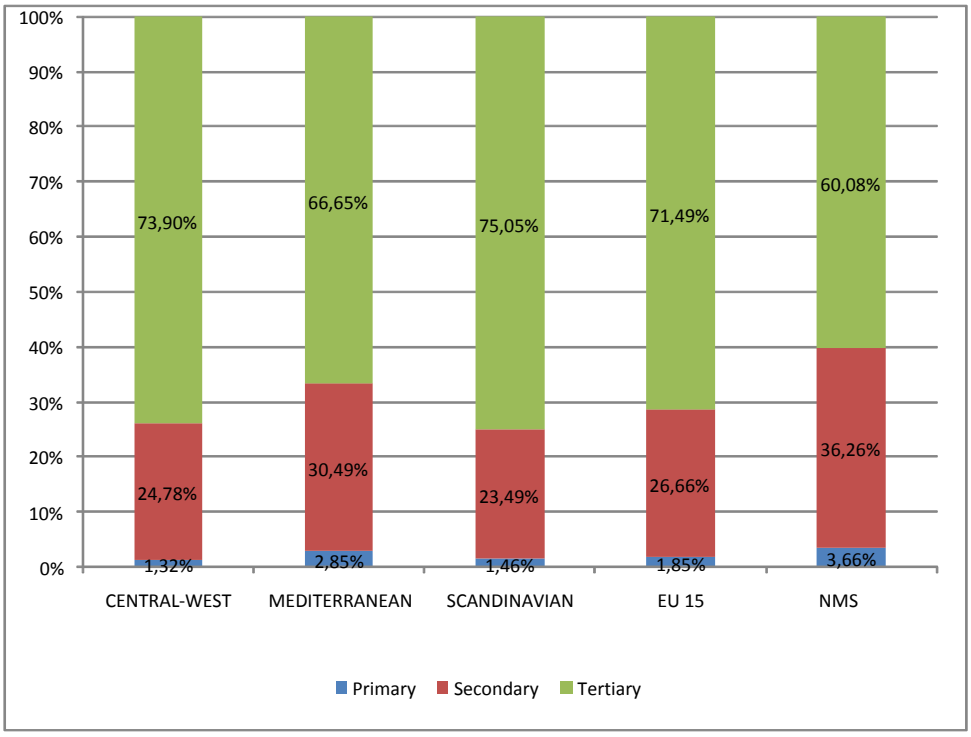
Source: own elaboration with data from the EDORA Database

4.2.2 Economic structure: employment by sector of activity

The European Union is predominantly a tertiary economy, so secondary and primary sectors represent less proportion among the economic sectors and the productivity growth. Concretely, in the EU-15 there is a 71% of employment in tertiary sector, more than the half than in the secondary sector, being the primary sector the one with less representation, which does not arrive to 2%.

The results for the employment proportion in primary sector drive to a similar behaviour over the percentage rates among the Central-West and Scandinavian countries with a decrease of around 22-23% respect to the employment proportion in secondary sector. However, in NMS Members and Mediterranean countries there is, respectively, around a 32% and 27% less of the employment rate in primary sector over the secondary sector; primary and overall secondary sector are stronger in these group of countries than in the rest. Exportation of primary goods in an International scale contributes to the GDP of those areas. Nevertheless, as time goes by, employment in primary sector is decreasing, and cheap labour force (immigrants) is replacing national labour force because of the hard and discredited labour conditions in the primary sector.

Figure 4.2 % of employed by economic sector, 2005



Source: own elaboration with data from the EDORA Database

In NMS manufacturing and construction prevail over services because they suffered an economic transition period since their annex to the EU, putting a lot of effort on increase their

productivity and opening internationally their market trade. Process is still running for those countries and results are increasingly positive.

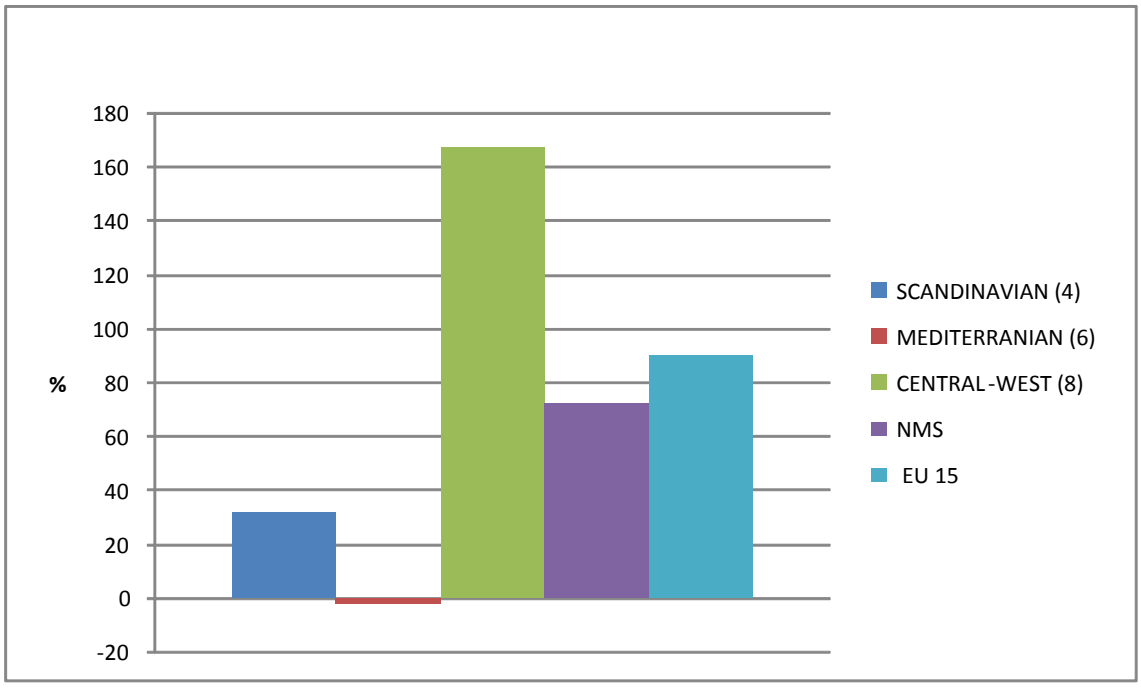
Those processes have their consequences on the employment rate in the tertiary sector, as in Mediterranean and NMS countries (representing 10% less employment rate than in Central-West and Scandinavian countries –which rates are 74% and 75% respectively-). It manifests the tertiary sector structure of Old Member States, more focused over knowledge economy and high-tech industries, which activities and employment rates are less seasonally dependant than tourism.

4.2.3 Evolution of unemployment 2002-2005

New Member States, or NMS, evolves diminishing the unemployment rates between 2002 and 2005 (their rate is approximately 75%) They are reaching EU rates, although they have still high unemployment rates.

On the other hand, EU 15 unemployment increases from 2002 to 2005 until 85%; this is partly due to Central West influence (high increase in the evolution of unemployment in that period around 165%), specifically the influence of Germany on the results because it has a notable weight in the representation of the Central West countries. Scandinavian countries have 30 times more unemployment in 2005 than in 2002, affected by Swedish positive evolution of the unemployment rates. Several factors play role in those processes: since precarious jobs and education level till migration deregulation policies.

Figure 4.5 Evolution of unemployment, 2002-2005



Source: own elaboration with data from the EDORA Database

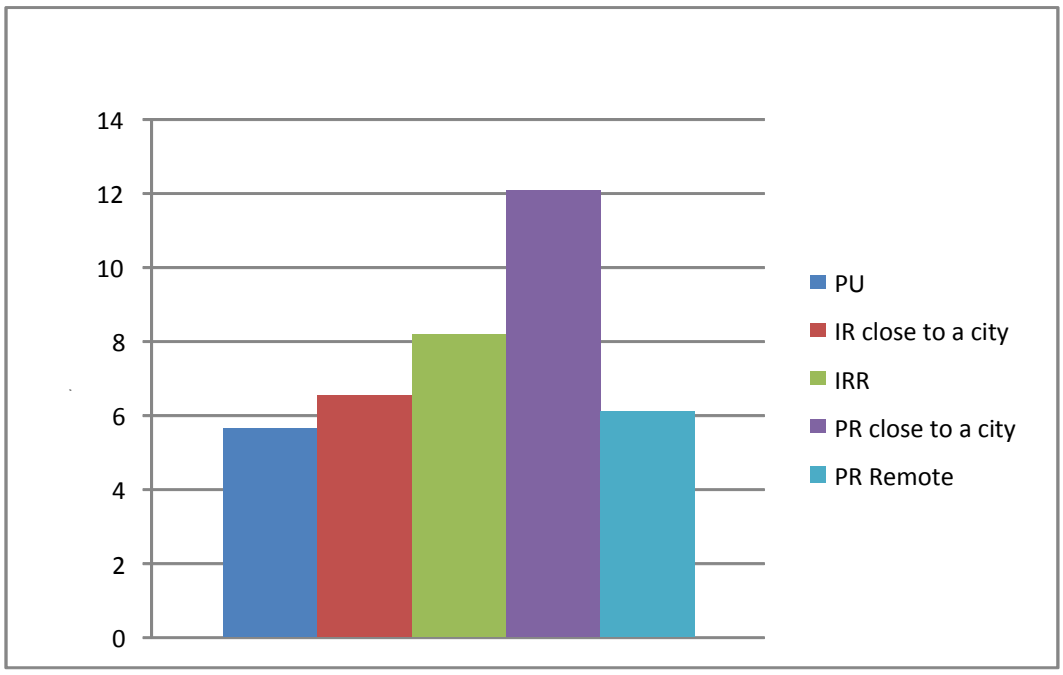
In opposition to those results, Mediterranean countries possess negative results below 0 (around -2%), which mean a decrease of unemployment evolution rate between 2002 and 2005. For this European area, results are positive since in 2005 unemployment decrease and as a consequence, employment increase. This could be explained by a higher tourism demand over those countries and a major activity role of the construction sector. Furthermore, it must be pointed out that countries such Spain, posses one of the highest rates of unemployment and one of their targets is to balance this rate (i.e. to decrease it) till European levels, so efforts put into it are visible through this result (but it has to be taken into account, anyway, that unemployment is still high in these Mediterranean countries)

4.3 Comparative analysis of relevant data and indicators by categories in the Dijkstra-Poelman rural-urban typology

4.3.1 The impact of rurality and accessibility in unemployment

In 2007, unemployment was low comparing to other years so high rates were not reached. Respect to rural typologies, the highest unemployment rate (12%) was in PRC areas, followed by 8% of unemployment in IRR. In a descendent order of results, IRC had around 6.5%, PRR had 6% of unemployment and PU had the lowest rate from all the rural typologies, a rate closed to 6%. As commented on the table for unemployment rate, in general, youth and women unemployment rates rise in rural areas. This phenomenon and the lower economic activity in rural areas (basically related to primary and secondary sector) influence in the unemployment rate of rural areas. Furthermore, in rural areas the social assistance referring to labour opportunities and employment search is not as wide as in metropolitan areas, or in the case it will, has not the same effectiveness. Telecommuting could be one of the alternatives to improve employment conditions in rural areas (overall for third educational level professionals), especially in the remote ones.

Figure 4.6 Unemployment rate 2007



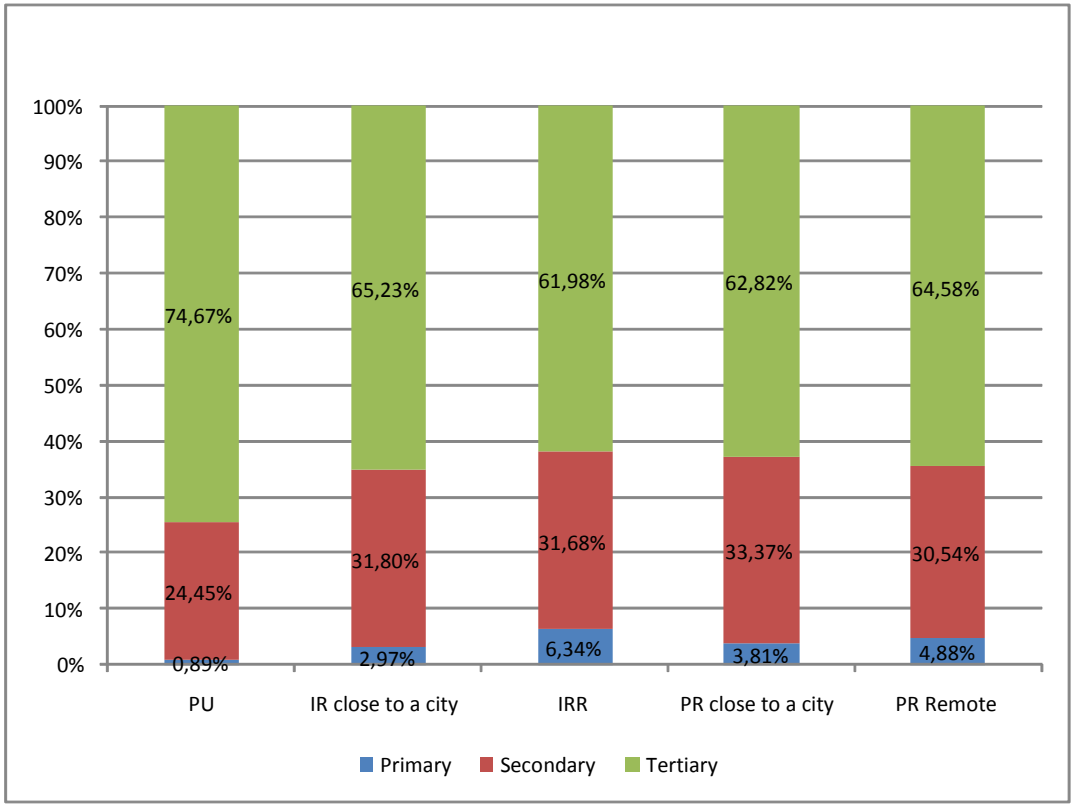
Source: own elaboration with data from the EDORA Database

4.3.2 Economic structure: employment by sector of activity

Extrapolating results and observing this graphic, one could lead to assert than productivity and economic activities are concentrated in PU and IRC areas. On the other hand, IRR and PRR are the most static population places, suffering low economy growth and productivity and hence, low employment percentage.

In 2005, the highest percentage of employment in primary sector occurred in remote rural areas (IRR had 6,34% of this indicator over the total employment, and PRR had around 5%). This sector is characterised by activities as agriculture, livestock, fishing, mining industry, apiculture, etc. The rest areas had results below 4%. Firstly, predominantly rural areas possessed higher representation on primary sector (PRC with 4%) while IRC possessed the half of % employment, and PU did not arrive to represent even 1%. It is known that urban areas are tertiary economies.

Figure 4.7 % of employment by economic sector, 2005



Source: own elaboration with data from the EDORA Database

Referring to employment in secondary sector, the highest rates are given for PRC (around 34%) and IRC (around 32%) Following the cascade of results, IRR areas have 32% (a bit less than IRC), PRR have 31% and PU areas do not reach 25%. In general, intermediate remote areas, overall the ones closed to cities, are characterised by being industrial centres due to the proximity to the city, good communication infrastructures and space capacity to build industries.

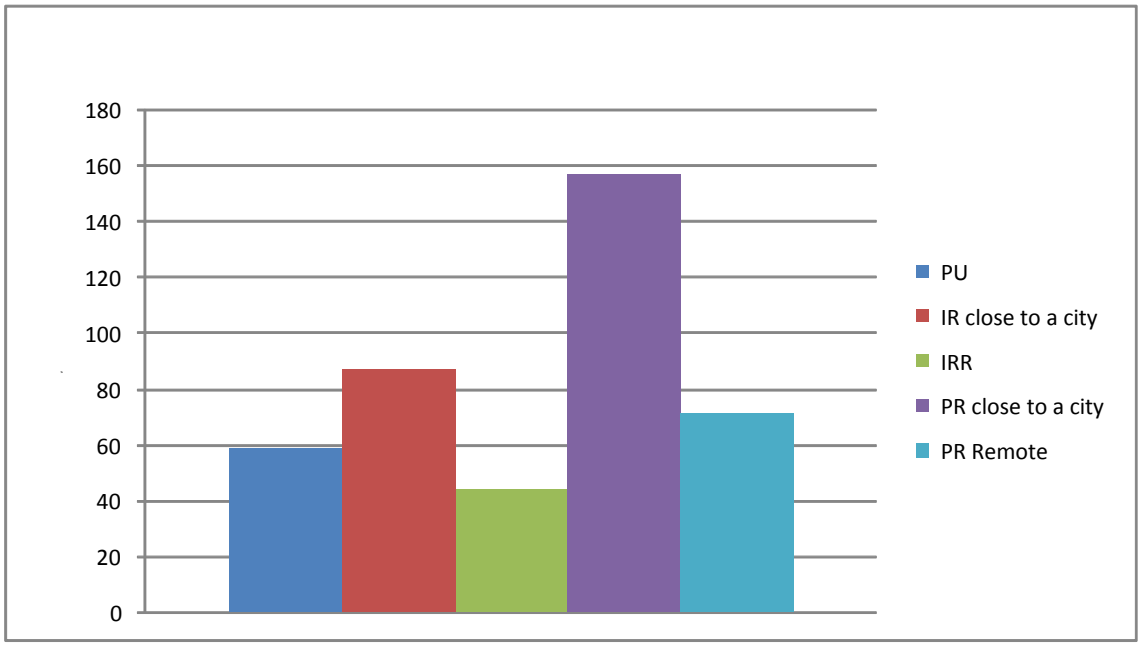
Tertiary sector is characteristic of modern and high-tech societies. Normally, urban regions are the best spheres for tertiary activities, as the graphic results demonstrate, with a rate above 75%. IRC areas have a moderate rate of 65% of employment in this sector, mainly due its connexion with metropolitan areas. The rest areas have results below 65%. Concretely, in PRR the rate is 64,6%, followed by PRC (63%) and IRR with a rate closed to 62%

4.3.3 High technology in the labour market

At the NUT3 level, from 2002 to 2005 the evolution of unemployment rate increased more in peripheral areas closed to the city than in other of the rural typologies, especially in PRC (with a rise of 158%) while in IRC is the half of this percentage, around 85%. Those results are followed by a 75% outcome for PRR areas, around 60% of unemployment rise in urban areas and approximately a 43% for IRR.

Peripheral areas configure a communication net with metropolitan areas but usually job spots are on urban areas. Peripheral areas are constituted by industrial zones; when labour force decline in the industry sector, population search for job in the cities. Furthermore, most of those areas are 'sleeping accommodation places' because of the economic accommodation advantages comparing to rent prices of metropolitan areas, but population do not usually work there. This phenomenon is noticeable nowadays.

Figure 4.9 Evolution of unemployment, 2002-2005



Source: own elaboration with data from the EDORA Database

4.4 Comparative analysis of relevant data and indicators at region level (NUT 3) for the countries covered, expressed in maps.

4.4.1 Employment by economic sector

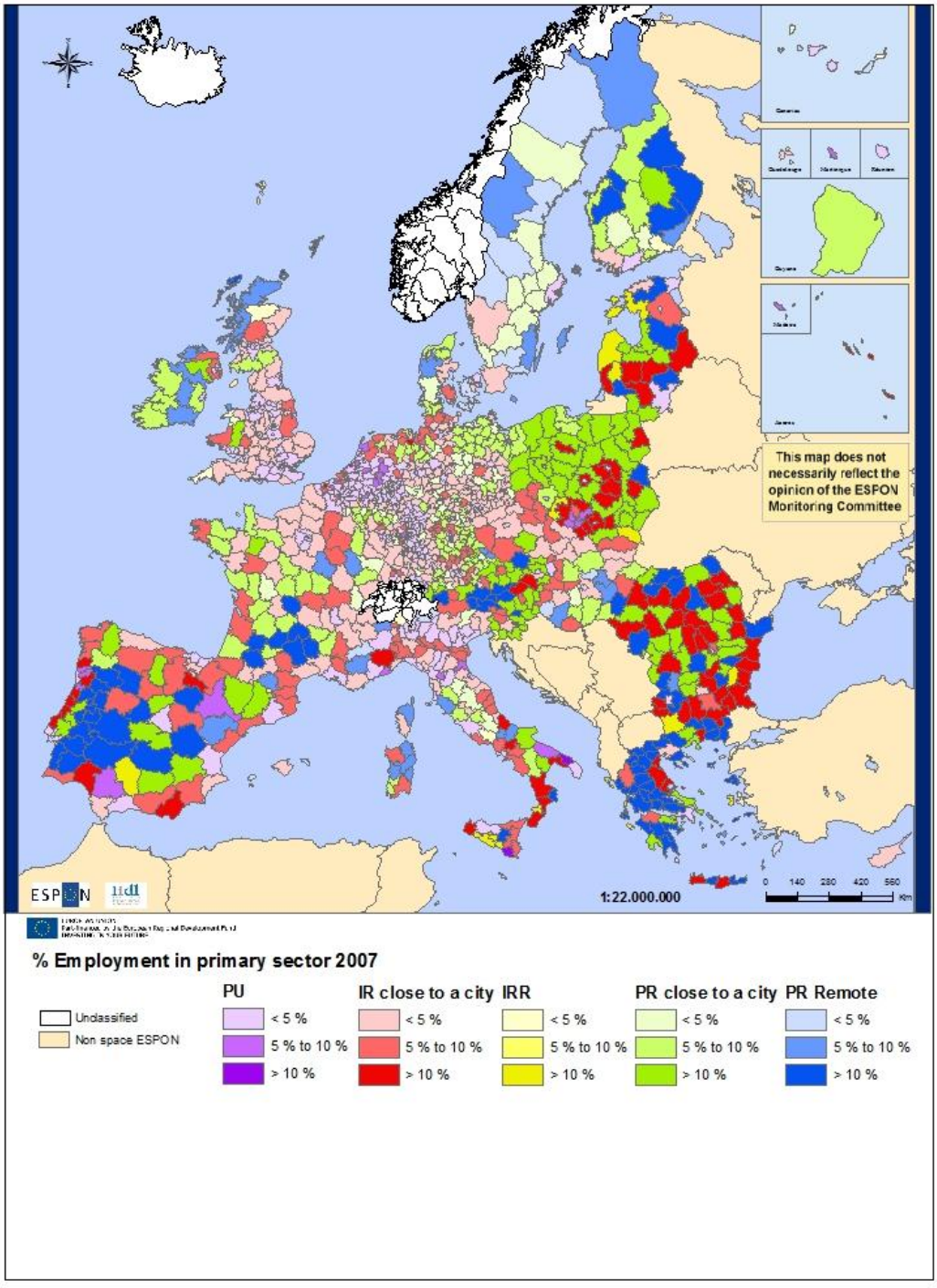
Employment in primary sector is preponderantly distributed in East Europe and some Southern European regions. In Eastern Europe high rates (>10%) of employment in primary sector correspond in order to IRC, PRC and PRR areas, as in the case of Portuguese regions.

Urban areas (PU) as well as IRR are not mainly represented in this map; so at the NUT3 level, those areas do not offer eligible percentage of employment in primary sector.

The majority of Central Europe and Anglo-Saxon zones, as well as Italy, possess extensive IRC areas with low rates (<5%) of employment in primary sector (opposite results than in map 4.3 about tertiary sector). To a lesser extent, there are PRC areas with moderate rate (5-10%)

In contrast, Scandinavian regions are dominated by PRR areas with low rates of employment in primary sector, although there are some regions (in the same group of PRR areas) with moderate rates and others with high rates (case of some South Finnish regions). PRC areas with low rates for this indicator covered part of the territory as well, and moderate rates, according to these typology areas, can be found in South Finnish regions. These results are influenced by the limitation of climate conditions and resources in the North part of those regions.

Map 4.1 Employment in the primary sector, 2007



Source: own elaboration with data from the EDORA Database

Typically industrialised areas embody this economic sector. Among the EU 27 countries, **secondary sector** manufactories are peculiarly found in Eastern regions, some Southern ones (like some regions of Italy, North and East of Spain) and Ireland. The last one has high rates of

employment in secondary sector in PRC and PRR areas over the South territory and part of the North one.

Eastern regions, mainly in South-East, are characterised by high rates (>30%) of employment in secondary sector in IRC areas. High rates for this indicator are found, as well, in PRC and PRR in lesser proportion than in IRC. North-East regions possess overall moderate rates in PRC areas and in few IRC areas.

Southern regions (excepting ex-socialist countries from the East), basically the North and East of Spain and Italy, denote high rates for this indicator in IRC areas and PU areas. Punctually, in the centre of Spain, there are some high rates in PRR and PRC. The rest zones have moderate rates in each rural typology.

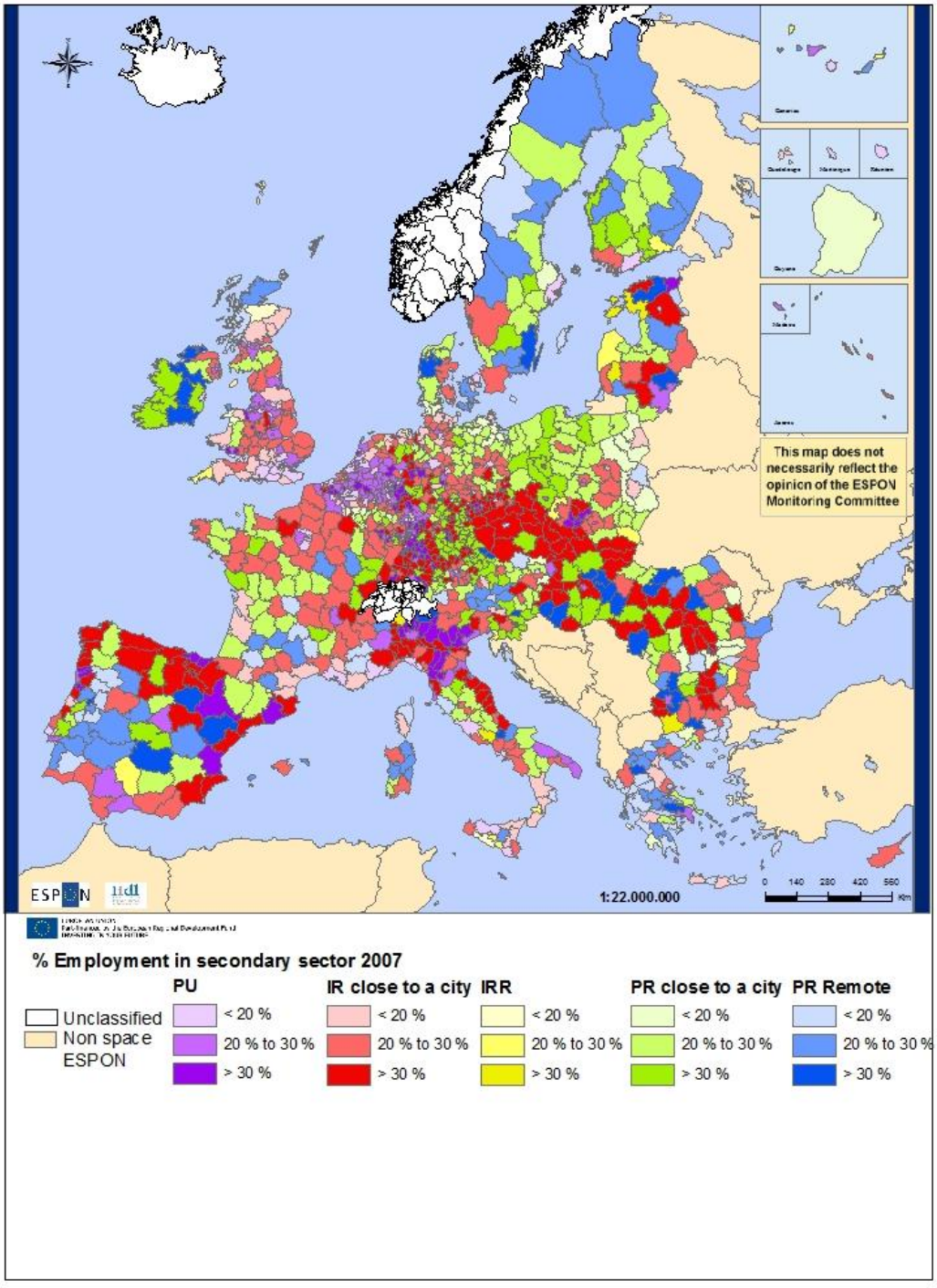
Employment rates in secondary sector in Central Europe and United Kingdom are diversely distributed over IRC, PRC and PU areas with moderate (20-30%) results. There are some IRC and PU areas with high rates, but those region areas are relatively small.

In general, moderate rates for this indicator cover the Scandinavian territory, distinguished by PRC and PRR big extensive areas, except in some PRR small areas from the South part of Finland and Sweden where there is a high rate of employment in secondary sector.

The particular case of the group of the Northern ex-socialist countries of Latvia, Lithuania and Estonia is characterised by high rates for this indicator in IRC, PRR and IRR areas and in a lesser extent to a PU small area. The rest regions of this group possess moderate rates.

There is one fact to point out referring to the distribution of results, and it is that IRR areas are not very represented in this map, so employment in secondary sector in this kind of rural areas is negligible, except in the case of Northern ex-socialist countries.

Map 4.2 Employment in the secondary sector, 2007



Source: own elaboration with data from the EDORA Database

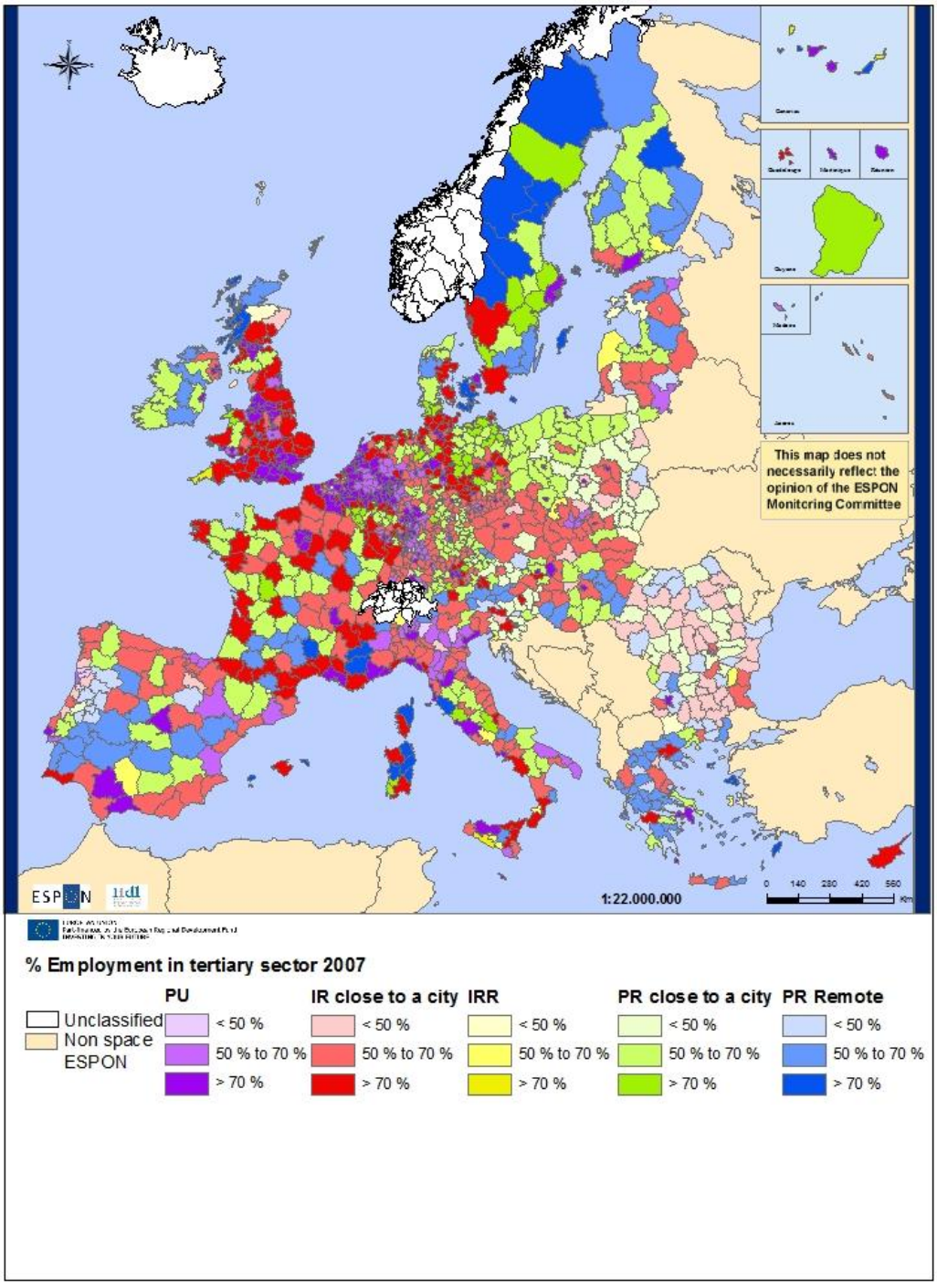
As it has been said, **tertiary sector** prevails in metropolitan areas, but analysing the map one can observe that there are few PU areas in the EU territory (they are mainly found in Central Europe) but the ones that exist possess high (>70%) and moderate (50-70%) rates of employment in tertiary sector.

IRC and PRC areas with moderate rate of this indicator are largely scattered among the EU territory, except in the South-East region since this region present low rates for the indicator. IRC areas with high rates of employment are mainly distributed in Central Europe and United Kingdom. There are not so many PRC areas with high rates, excepting in some regions of Sweden and the island of the French Guyana.

PRR areas are dispersed in the EU territory as well, but in minor proportion, although they predominate in Sweden and Finland, occupying large extensions and high rates of employment in tertiary sector. These areas, which have moderate rates for the indicator, are distributed in South Europe. IRR areas are negligible respect to this indicator because they are not representative in the map.

In sum, in the European territory the principal NUTs with moderate rates of employment in tertiary sector are IRC and PRC areas, and in less proportion PRR (mainly in South Europe). Urban areas are fewer represented in the map but they concentrate high and moderate rates of employment in tertiary sector.

Map 4.3 Employment in the tertiary sector, 2007



Source: own elaboration with data from the EDORA Database

4.4.2 Evolution of unemployment 2002-2005

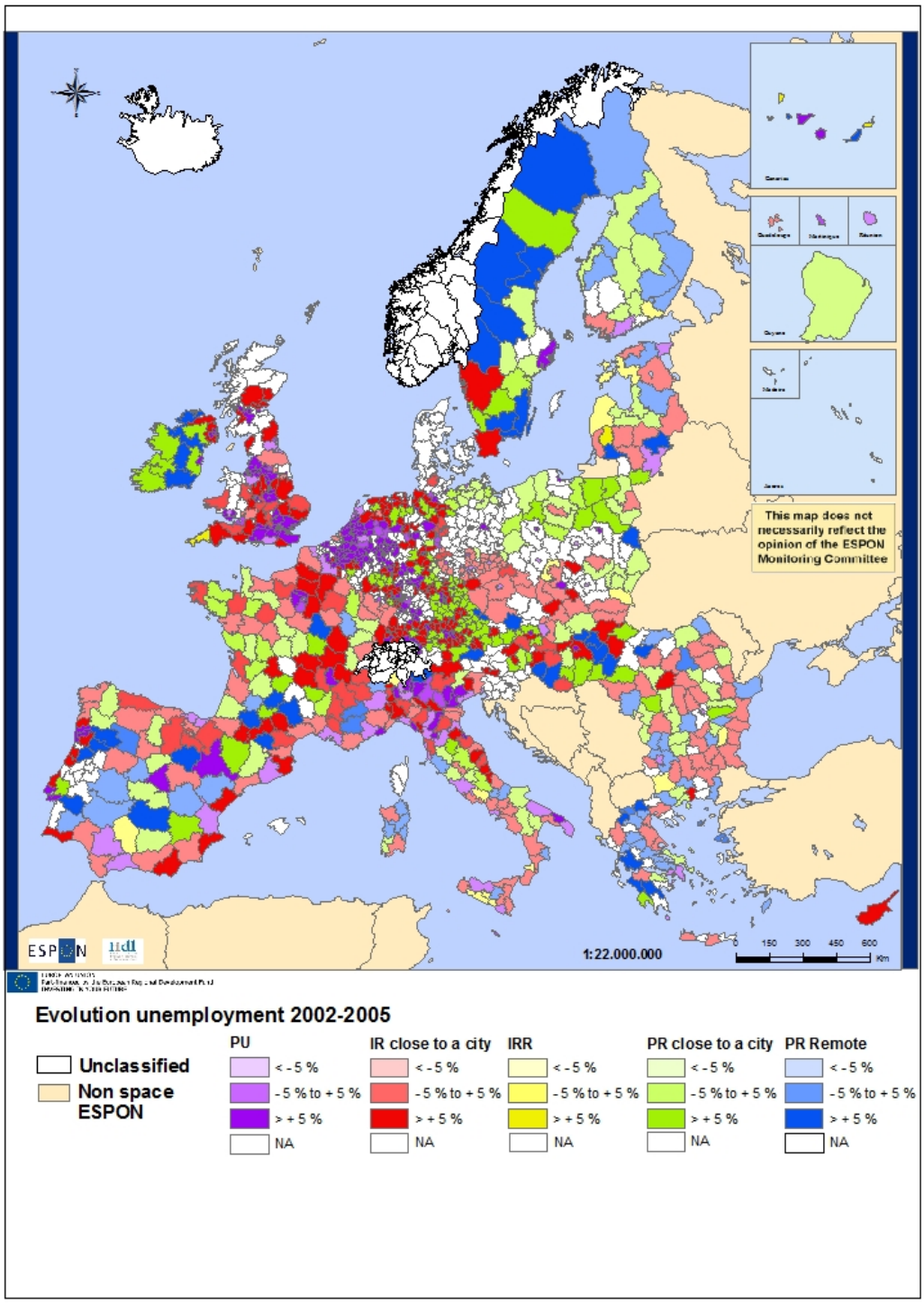
As shown on the map, Central Europe and Anglo-Saxon regions were the regions with more increase on the unemployment rate from 2002 to 2005, mainly in IRC and PU areas (except in Ireland where those high rates can be found in PRC and PRR areas due to its spatial planning and geographical characteristics). Changes in macroeconomics, labour system as well as political and social factors influence in the employment and/or unemployment rates and their evolution.

Among Scandinavian regions, Sweden has changed more than 5% according to the evolution of the unemployment rate, largely in PRR and PRC areas. Finland, in opposition, has evolved moderately in the same areas.

Referring to Eastern Europe, it must be considered in the analysis that there is not data about most of the regions. Meanwhile, the available data show moderate rates (from -5 to 5%) for the evolution unemployment in PRC and IRC. In some regions there are IRC and PRR areas with high rates for this indicator but are very located.

Southern Europe has moderate and low rates which mean a decrease of the unemployment in 2005 respect to 2002, normally in IRC and PRR areas. These kinds of areas, together with PU areas, possess high rates for the indicator in some regions, indicating an increase of unemployment. There are several factors to take into account to lead to this result, as for instance partial and precarious job, seasonal job (mainly because of tourism activities), non registered work, etc.

Map 4.4 Evolution of unemployment, 2002-2005



Source: own elaboration with data from the EDORA Database

CHAPTER 5.
SERVICES OF GENERAL INTEREST

Services of general interest (SIG) can be defined as manifestations of public goods as available resources to use and consume by everyone. Broadly, SIG can be classified in different sector services as: technical infrastructure, telecommunication, transport, justice, health and social.

According to the rights approach, 'Every citizen should have the right to have access to services of general interest, to transparent and affordable prices, continuous service etc.' (Noguera J. et al, 2009, *Review of Current Situation and Trends: Access to services of general interest*, p.11-20, EDORA Applied Research Project 2013/1/2).

Services of general interest make an important contribution to the overall competitiveness of European industry and to economic, social and territorial cohesion. (Official Journal of the European Communities, 2001, *Communication from the Commission-Services of general interest in Europe*, p.3)[12].

In addition, SIG play a crucial role for local development in general and for the development of rural areas in particular, fighting the rural decline among other problems. (Noguera J. et al, 2009, *Review of Current Situation and Trends: Access to services of general interest*, p.33, EDORA Applied Research Project 2013/1/2).

[12] http://eur-lex.europa.eu/LexUriServ/site/en/oj/2001/c_017/c_01720010119en00040023.pdf

5.1 Comparative analysis of relevant data and indicators by country with reference to the EU27 average

5.1.1 The provision of services of general interest

Referring to technical infrastructures, social and health system, the indicators analysed in this report represent and give information about the quality and accessibility of those services. The analysis has been done for a countries' spatial scope (NUTS 0-1).

In this analysis there is one relevant fact to take into account and it has relation with the EU average calculation. There is no data for the Northern European countries (except Finland) the Anglo-Saxon countries (Ireland, United Kingdom), some countries from Central Europe (Germany, Switzerland and Liechtenstein) and some Southern European countries (Slovenia, Turkey, Malta, Croatia and Y.R. Macedonia). Therefore, EU 27 average is mainly calculated on just 17 countries data plus non data of the rest countries and divided among all the 27 countries, so this average do not represent an accurate result for the whole Europe. Nevertheless, the EU average result is 171.35 **doctors per inhabitant**. This moderate result is a consequence of the non countries data added to the average calculations (overall it is influenced by overcrowded countries as Germany and United Kingdom) as well as the low rate of Finland.

Below EU 27 average there is only Finland with a 67.02 outcome of doctors per inhabitants. In spite of its vast territory area, spatial planning in Finland is much dispersed and so it is service planning, correlated as well with the population demand. Hence, it does not mean that there is not good quality of health services but a difficult accessibility due to the particular situation of this country.

The rest 16 countries have results above EU average. Moderate rates from, approximately, 183 doctors/inhabitant (Romania) to 308 doctors/inhabitant (Spain) correspond to a heterogenic group of seven countries (Southern countries -as Romania, Portugal, Cyprus and Spain-, and Central ones –as Poland, Luxembourg and Austria -)

High rates (from 311 to 602 doctors per inhabitant) are presented for nine countries in total, some from Central Europe (Nederland, France, Belgium), some ex-socialist countries (Hungary, Bulgaria, Slovakia and Czech Republic) and two countries from the South of Europe, Greece and Italy. This last country has the highest rate, by far, among all the European countries, with a rate three times higher than the group of countries with high rates (which average is around 334 doctors per inhabitant)

Table 5.1 Doctors per inhabitant, 2007, by country

	Doctors per inhabitant, 2007
ITALY	602.49
CZECH REPUBLIC	372.91
GREECE	345.07
BELGIUM	338.84
SLOVAKIA	336.08
BULGARIA	326.28
FRANCE	320.41
HUNGARY	318.68
NEDERLAND	310.79
SPAIN	308.32
AUSTRIA	296.41
CYPRUS	264.20
LUXEMBOURG	238.90
PORTUGAL	236.63
POLAND	220.03
ROMANIA	182.71
EU 27	**171.35**
FINLAND	67.02
Y.R. MACEDONIA	NA
CROATIA	NA
NORWAY	NA
ICELAND	NA
LIECHTENSTEIN	NA
SWITZERLAND	NA
TURKEY	NA
GERMANY	NA
SWEDEN	NA
SLOVENIA	NA
UNITED KINGDOM	NA
IRELAND	NA
MALTA	NA
DENMARK	NA
ESTONIA	NA
LITHUANIA	NA
LATVIA	NA

Source: own elaboration with data from EDORA Database

This followed indicator is classified into health care resources. It indicates the quality and availability of health services, concretely beds per 1,000 persons, in a hospital. Total hospital beds are all hospital beds which are regularly maintained and staffed and immediately available for the care of admitted patients. (OECD Health Data 2009, Health care resources. Total hospital beds[13] , OECD- Organisation for Economic, Co-operation and Development-). This definition is similar vis-à-vis **hospital beds per head** definition; with the difference than the last one does not refer to the total hospital beds but the available beds per person.

[13] http://www.ecosante.fr/index2.php?base=OCDE&langs=ENG&langh=ENG&valeur=&source=1

The submitted results point out the heterogeneity of countries with similar scores referring to health services in Europe. There is a low quality trend of social service and health service systems among EU 15 countries, overall and interestingly in urban areas over rural areas. Conversely, NMS possess better quality on social and health services. (Noguera J. et al, 2009, *Review of Current Situation and Trends: Access to services of general interest*, p. 20-26, EDORA Applied Research Project 2013/1/2)

In this case, the EU 27 average presents the same problem as in the previous analysis because of the lack of information. This lacking of information is due to the non data availability of the next ten countries: Cyprus, United Kingdom, Turkey, two rich Central countries (Switzerland, Liechtenstein), some Northern countries (Latvia, Lithuania, Estonia, Iceland, Norway) and some ex-socialist countries (Croatia, Y.R. Macedonia, Czech Republic) Nonetheless, the final result for EU 27 average indicates that there are around 5 beds per head as an average for the European Union.

Below EU 27 average and with low rates there are six countries: Ireland (1.35 hospital beds/head, the lowest outcome), Sweden, Portugal, Luxembourg, Nederland and Spain (3.34 hospital beds/head). The cases of Sweden, Luxembourg and Nederland are remarkable as they are rich and developed economies with a concerned image about social rights and disparities.

Continuing with countries placed below the EU 27 average, moderate and moderate-high rates correspond to Bulgaria (with a rate of 3.67 hospital beds/head), Malta, Slovenia, Poland, Denmark, Finland, Belgium Greece, Italy, Romania and Austria (closed to EU average with a rate of 4.94 hospital beds/head) Most of them are ex-socialist countries where social and health services have better quality than in the EU 15. Malta is characterised by having high scores on social and health services (Noguera et al, 2009, p.23)

There are just few countries, concretely four, with rates above the EU average: France, Slovakia, Hungary and Germany, with the highest rate of 6.23. These countries have from 5 to 6 hospital beds per head. So as conclusion, in this analysis these countries are the best in one indicator (hospital beds/head) of the health care resources and in general, ex-socialist countries have better rates than EU 15 countries.

Table 5.2 Hospital beds per 1,000 inhabitants, 2007, by country

	Hospital beds per 1,000 inhab.
GERMANY	6.23
HUNGARY	6.15
SLOVAKIA	5.62
FRANCE	5.06
EU 27	**4.98**
AUSTRIA	4.94
ROMANIA	4.82
ITALY	4.72
GREECE	4.26
BELGIUM	4.23
FINLAND	4.20
DENMARK	4.08
POLAND	4.05
SLOVENIA	3.94
MALTA	3.87
BULGARIA	3.67
SPAIN	3.34
NEDERLAND	3.13
LUXEMBOURG	2.68
PORTUGAL	2.58
SWEDEN	2.55
IRELAND	1.35
CZECH REPUBLIC	NA
Y.R. MACEDONIA	NA
CROATIA	NA
NORWAY	NA
ICELAND	NA
LIECHTENSTEIN	NA
SWITZERLAND	NA
TURKEY	NA
UNITED KINGDOM	NA
ESTONIA	NA
LITHUANIA	NA
LATVIA	NA
CYPRUS	NA

Source: own elaboration with data from EDORA Database

The **density of hospitals** is the number of hospitals per unit of area usually per square kilometre or mile. It depends on the territory extension and the density of population of a region. So, it is a measure that indicates the quality and access of health services of an area.

The European Union is a small continent but it is overcrowded of people. Therefore, SGI require to be compactly distributed from a local perspective, aiming to provide the best quality and access of SGI to citizens. Considering this fact and focusing on the current indicator, the

result for the EU 27average (5.44 hospitals/ Km^2 or mile) indicates an excellent sanitary infrastructure distribution among the EU territory.

The analysis does not provide data of the followed countries: Turkey, some Central countries (Switzerland, Liechtenstein, and United Kingdom), some Northern countries (Iceland, Norway, Estonia, Latvia and Lithuania) and some ex-Yugoslavian countries (Croatia, Y.R. Macedonia and Czech Republic)

The classification of the indicator's rates of each country is divided into three groups (low, moderate, high rates) according to quantitative parameters, but the classification per se does not reflect the real quality of the sanitary infrastructure of a country. For this reason, a briefly understandable interpretation will be further developed.

Low rates (less than 2 hospitals per square kilometre or mile) are the score for: Sweden (0.16), Finland, Slovenia, Ireland, Bulgaria, Cyprus, Greece, Denmark, Luxembourg, Slovakia and Spain (1.70). The rurality of almost all these countries and partly their remote placement, difficult the construction and/or access of sanitary infrastructures due to several factors as: lack of enough demand, local/regional budget, other synergic infrastructures, etc. Except Sweden and Finland, the rest countries have a small or middle area size and some of them are densely populated. Furthermore most of them are touristic sites and thus, suffer important territorial disparities (as concentration of people on the coastal regions, at the same time as concentration of SGI) In contrast, Finland and Sweden have big area size and are dispersedly populated, concentrating the population and services on the South part of their countries.

Moderate rates (from 2-4 hospitals per square kilometre or mile) encounter place in Portugal (2.30), Austria, Romania and Hungary (3.31). The small size of these countries is the cause of this result. It does not mean there are more hospitals, or they are better distributed, but the space is limited and services are concentrated (usually in metropolitan areas)

High rates (more than 4 hospitals per square kilometre or mile) are the result of Nederland (4.15), Italy, France, Belgium, Malta, Germany and Poland (14.41). These three last countries have rates above the EU average. The majority of all this group of countries is situated in the Centre of Europe. The common factor of all of them is that they are overcrowded countries according to their space limitation. Thus, the demand of services is not only high but concentrated in a reduced space, mainly attracted by the huge characterised urban areas of those advanced knowledge-based countries (with better infrastructure, local budget, high-education level labour force, etc.)

Table 5.3 Density of hospitals, 2007, by country

	Density of hospitals
POLAND	14.41
GERMANY	8.44
MALTA	8.13
EU 27	**5.44**
BELGIUM	4.98
FRANCE	4.48
ITALY	4.39
NEDERLAND	4.15
HUNGARY	3.31
ROMANIA	3.19
AUSTRIA	2.56
PORTUGAL	2.30
SPAIN	1.70
SLOVAKIA	1.64
LUXEMBOURG	1.16
DENMARK	1.15
GREECE	1.01
CYPRUS	0.87
BULGARIA	0.86
IRELAND	0.86
SLOVENIA	0.81
FINLAND	0.18
SWEDEN	0.16
LITHUANIA	NA
LATVIA	NA
ESTONIA	NA
UNITED KINGDOM	NA
CZECH REPUBLIC	NA
Y.R. MACEDONIA	NA
CROATIA	NA
NORWAY	NA
ICELAND	NA
LIECHTENSTEIN	NA
SWITZERLAND	NA
TURKEY	NA

Source: own elaboration with data from EDORA Database

The **density of motorways** indicates the road infrastructure availability. It is important to understand the SGI situation framework, the strengths and weaknesses of SGI, and overall it has a closed relation with accessibility to other services, as it has been commented repeatedly.

This indicator is well documented since there is data of almost all the EU countries, except eight (Turkey, Switzerland, Liechtenstein, Iceland, Norway, Croatia, Y.R. Macedonia and Malta). The indicator is expressed by a range from 0.00 to 0.08. So, the quantitative classification of ranges is as followed: low rates (0.00-0.01), moderate (0.02-0.03) and high (more than 0.04).

The EU 27 average for this indicator is 0.04 motorways per square kilometre or mile. It is a good average for Europe, as it means European Union is well connected thanks to an adequate road network (on average). The influence of Central-West countries scores on the EU average is remarkable. But road network disparities between this EU area and the South and East EU areas must not disguise the result and has to be addressed towards a better and real good European road network.

Table 5.4 Density of motorways, 2007, by country

	Density of motorways
NEDERLAND	0.08
BELGIUM	0.07
GERMANY	0.06
LATVIA	0.04
EU 27	**0.04**
UNITED KINGDOM	0.04
FRANCE	0.03
AUSTRIA	0.03
ITALY	0.03
LUXEMBOURG	0.03
CZECH REPUBLIC	0.02
SLOVENIA	0.02
DENMARK	0.02
PORTUGAL	0.02
BULGARIA	0.01
CYPRUS	0.01
FINLAND	0.01
LITHUANIA	0.01
SWEDEN	0.01
POLAND	0.01
SLOVAKIA	0.01
IRELAND	0.01
SPAIN	0.01
ROMANIA	0.01
GREECE	0.01
HUNGARY	0.01
ESTONIA	0.00
MALTA	NA
Y.R. MACEDONIA	NA
CROATIA	NA
NORWAY	NA
ICELAND	NA
LIECHTENSTEIN	NA
SWITZERLAND	NA
TURKEY	NA

Source: own elaboration with data from EDORA Database

The most numerous group is the related to low rates, formed by: Estonia, Hungary, Greece, Romania, Spain, Ireland, Slovakia, Poland, Sweden, Lithuania, Finland, Cyprus and Bulgaria. The majority of them spend long or moderate time to access to services. Most of these countries

have a small size, with a concentrated spatial planning but without enough or good connexions with rural areas. The broad dimension (big distances) of Sweden and Finland, as well as the inhospitable zones and non-urbanized regions, influence on the motorways density and infrastructure.

Moderate rates pertain to Portugal, Denmark, Slovenia, Czech Republic, Luxembourg, Italy, Austria and France. Except Portugal, Italy and France the rest of countries are small in size so motorways tend to be concentrated over the territory. Portugal, Italy and France should implement a broadly road network and better infrastructure policies due to their size and population density (which induces to highest demand of services).

The countries with high rates of density of motorways (above the EU 27 average, except the United Kingdom) are: United Kingdom, Latvia, Germany, Belgium and Nederland. They are principally Central European ones, except the striking case of Latvia (maybe this score is due to its strategic placement between the borders of Russia, Belarus and Lithuania). The others are very developed countries, as well as not so big in size but highly concentrated on people. This result could be the explanation for the shorter access time indicators to services.

The indicator called **'% households with broadband access'** is related to telecommunication services. This kind of services is typical for knowledge-based economies, used as basic tools (in opposition to industrialised economies, where traditional services are more commonly used). Therefore, these services are more accessible in EU 15 countries than in NWS 12, as far as in urban areas in contrast with rural areas. (See Noguera et al, 2009, *Review of Current Situation and Trends: Access to services of general interest*, p.21-22, EDORA Applied Research Project 2013/1/2) Thus, telecommunication services are indicators of developed societies, in parallel with first economies systems.

Due to the difficult measurement of this indicator, over the total 27 European countries there are no data of the followed 24 countries: Turkey, most of the ex-Yugoslavian countries (Y.R. Macedonia, Romania, Croatia and Slovenia), most of the Northern countries (Iceland, Lithuania, Latvia, Estonia, Sweden and Denmark), some Central countries (Switzerland, Liechtenstein, Ireland, Luxembourg, Germany, France and Belgium), few Southern countries (Greece, Malta and Cyprus) and some ex-socialist countries (Poland, Bulgaria and Hungary)

Hence, EU 27 average provides a biased result that does not reflect the reality households' access to broadband among the EU. Nonetheless, the table data indicates that there is a 48% of households with broadband access, i.e. that almost the half of households enjoy this service.

There are only data for 10 heterogenic countries: Italy, Portugal, Czech Republic, Slovakia, Spain, Austria, United Kingdom, Finland, Norway and Nederland.

The majority of them are Central-West countries (with higher GDP and included on the knowledge-based economies group). Their scores are above the EU 27 average, being Nederland the country with the higher rate (more than 73% of households have broadband

access). Some of them, as Scandinavian countries (with rates higher than 60% of households with broadband access) are exporters of high-tech tools and infrastructures over the world.

Southern European countries have rates below the EU 27 average, reaching less than 42% of households with broadband access. The lowest one pertains to Italy, with around 30% of households with broadband access, leaving 70% of households without access to broadband.

Table 5.5 % of households with broadband access, 2007, by country

	%households with broadband access
NEDERLAND	73.60
NORWAY	72.58
FINLAND	65.42
UNITED KINGDOM	62.18
MALTA	59.00
AUSTRIA	52.91
EU 27	**48.01**
SPAIN	41.47
SLOVAKIA	35.50
CZECH REPUBLIC	35.14
PORTUGAL	35.13
ITALY	29.53
BELGIUM	NA
DENMARK	NA
FRANCE	NA
GERMANY	NA
LUXEMBOURG	NA
SWEDEN	NA
IRELAND	NA
ESTONIA	NA
CYPRUS	NA
HUNGARY	NA
BULGARIA	NA
LATVIA	NA
POLAND	NA
LITHUANIA	NA
SLOVENIA	NA
GREECE	NA
CROATIA	NA
LIECHTENSTEIN	NA
ICELAND	NA
SWITZERLAND	NA
TURKEY	NA
Y.R. MACEDONIA	NA
ROMANIA	NA

Source: own elaboration with data from EDORA Database

5.1.2 The accessibility to services of general interest

The indicator '**time to nearest hospital**' is linked with the accessibility of health services. It depends on different SGI (as road infrastructures, transport facilities, etc.) as well as spatial planning in different scales: national, regional and local.

In this indicator analysis, twelve from the twenty seven countries of the European Union can not be studied because there are no data of them. The referred countries are: Turkey, three Central European countries (Switzerland, Liechtenstein and United Kingdom) most of the Northern countries (Iceland, Norway, Estonia, Latvia and Lithuania) and most of the ex-Yugoslavian countries (Croatia, Y.R. Macedonia and Czech Republic)

In the EU 27, users spend approximately 23 minutes to arrive to the nearest hospital. This result suggests than hospital placements are accessible to users, maybe because of their well spatial distribution, affordable transport facilities and other important and related SGI, number of hospitals, etc.

According to the table data, countries with low rates (less than 20 minutes) are: Malta, Slovakia, Nederland, Germany, Luxembourg, Belgium, Cyprus, Italy, Hungary and France. The socio-economic and political situation of these countries is different from country to country but in the majority of them, users spend short time to arrive to the nearest university, i.e. these countries match up in the accessibility temporal scale of two services of general interest (health and education). Perhaps it is due to the moderate or small size of some of them (in some cases), or maybe the quality of other related services is adequate (as transport, road infrastructures, etc.)

The results show that there are other countries with moderate rates (from 20 to 40 minutes) as: Poland, Romania, Bulgaria, Slovenia, Denmark, Austria and Spain. The longest the time to access to the nearest hospital the hardest the repercussion on the users' health, deteriorating it and leading to convert a mild illness into a seriously one. These countries also had adverse time rates to access to the nearest university. Hence, the problem of these countries could be addressed as bad accessibility to SGI and/or bad quality of services (mainly transport and road infrastructures)

The worse results pertain to Portugal, Finland, Ireland, Greece and Sweden, where there are high rates for this indicator, i.e. users spend more than 40 minutes to access to the nearest hospital. The case of Finland and Sweden has been broadly commented in several indicator analyses: dispersed population vs. dispersed SGI (paradoxically 'concentrated' in the South part of their territory) due to their dimensions and climate conditions. The rest listed countries are characterised by a stronger rurality composition and the remote location of their regions, which surely influence on the accessibility to SGI.

Table 5.6 Time to nearest hospital, 2007, by country

	Time to nearest hospital (minutes)
SWEDEN	89.42
GREECE	64.95
IRELAND	49.15
FINLAND	48.91
PORTUGAL	41.38
SPAIN	39.74
AUSTRIA	33.82
DENMARK	31.84
SLOVENIA	27.56
BULGARIA	25.94
ROMANIA	25.25
EU 27	**22.83**
POLAND	22.72
FRANCE	18.76
HUNGARY	17.63
ITALY	17.17
CYPRUS	17.15
BELGIUM	16.91
LUXEMBOURG	14.21
GERMANY	12.58
NEDERLAND	9.89
SLOVAKIA	7.58
MALTA	3.36
LITHUANIA	NA
LATVIA	NA
ESTONIA	NA
UNITED KINGDOM	NA
CZECH REPUBLIC	NA
Y.R. MACEDONIA	NA
CROATIA	NA
NORWAY	NA
ICELAND	NA
LIECHTENSTEIN	NA
SWITZERLAND	NA
TURKEY	NA

Source: own elaboration with data from EDORA Database

The indicator '**time to nearest university**' is linked with the accessibility of education services. Time is the accessibility measurement unit since it measures the users' effort needed to benefit from the use of particular service. (Noguera et al, 2009, p.15) There are other factors that influence the accessibility of SGI, as spatial planning, territorial geography, transport facilities, etc.

This analysis provides more data for the current indicator, excepting for the followed countries: Turkey, Switzerland, Liechtenstein, Iceland, Norway, Croatia and Y.R. Macedonia. Thus, EU 27 average calculation is more accurate. As a result, in the EU 27 a user spends 45.10

minutes to arrive to the nearest university on average, i.e. a poor access to the university education centres.

Some EU countries accomplish short time outcomes to the nearest university below EU average. This is translated into very good and good accessibility to education services. The countries which possess these characteristics are: Cyprus(17.15 min), Luxembourg, Belgium, Czech Republic, Slovakia, Nederland, Germany and United Kingdom (33.98 min). Most of them pertain to Central part of Europe, traditionally well-developed and with high scores on education services. The both first countries, Malta and Cyprus, are island with small dimensions and, normally, have high scores in education services, among others SGI.

Furthermore, there are other countries with rates below EU average but where users spend longer time to access to the nearest university. Those countries are Denmark (around 35 min), Estonia and Slovenia (around 44 min). Probably transport facilities are not very suitable in the last both countries and it makes difficult the access to universities.

Following with the cascade of results, countries with rates above the EU average and high-moderate scores are: France (49.42 min), Italy, Portugal, Poland, Austria, Spain and Hungary (57.16 min). The scores for this group of countries tend to be undesirable because they state that user expends long time travelling to access to the nearest university, in detriment of her/his welfare.

If the time to the nearest university exceed one hour, the indicator outcome expresses a negative result for the accessibility to education services. Countries with the longest time are: Romania (62.10 min), Ireland, Latvia, Lithuania, Bulgaria, Finland, Greece and Sweden (114.42 min). Finland and Sweden are striking since they are sorted by high education level and good education services. The interpretation for these countries is their long distances in km. because of their dispersed spatial planning structure and their predominantly rural typology, i.e. no concentration of knowledge centres in one single area.

As conclusion, there is a lot of heterogeneity on the results for each country of the EU, but the result of the EU as a whole should be enhanced to accomplish a better accessible education services.

Table 5.7 Time to nearest university, 2007, by country

	Time to nearest university (minutes)
SWEDEN	114.42
GREECE	83.45
FINLAND	79.03
BULGARIA	65.99
LITHUANIA	65.35
LATVIA	63.69
IRELAND	63.67
ROMANIA	62.10
HUNGARY	57.16
SPAIN	56.45
AUSTRIA	54.95
POLAND	50.77
PORTUGAL	50.59
ITALY	49.60
FRANCE	49.42
EU 27	**45.10**
SLOVENIA	44.12
ESTONIA	41.40
DENMARK	34.67
UNITED KINGDOM	33.98
GERMANY	33.30
NEDERLAND	31.54
SLOVAKIA	29.89
CZECH REPUBLIC	28.71
BELGIUM	26.31
LUXEMBOURG	17.43
CYPRUS	17.15
MALTA	NA
Y.R. MACEDONIA	NA
CROATIA	NA
NORWAY	NA
ICELAND	NA
LIECHTENSTEIN	NA
SWITZERLAND	NA
TURKEY	NA

Source: own elaboration with data from EDORA Database

The indicator '**time to nearest airport**' is linked with the accessibility to transport infrastructures, concretely, to an airport. It gives information about airports distribution, estimation of number of airports, other transport infrastructures (private vs. public transport), road infrastructure, etc.

The analysis does not provide data of seven countries: Turkey, Switzerland, Liechtenstein, Iceland, Norway, Croatia and Y.R. Macedonia. The quantitative classification of ranges for the

indicator (in minutes) is divided into: low rates (0-70), moderate (70-120) and high (more than 120).

On average, the EU 27 users spend 83.44 minutes to arrive to the nearest airport, i.e. more than one hour travelling to arrive to the airport. This result suggests that nearest airports infrastructures are placed in no centred regions, e.g. in peripheral areas with bad access to users (traditionally only private transport is able to access to airports)

The majority of countries that have low rates are from Central Europe, and the others, which are not from there, are small size countries with short distances between sites. This list of countries is constituted by eleven EU countries: Malta, Luxembourg, Belgium, Denmark, Cyprus, United Kingdom, Germany, Nederland, Ireland, Italy and Estonia. The scores assessment can have different variables; on one hand, those countries have better road infrastructure (see above table data) so they provide good connexions between sites and favour the private transport; on the other hand, those countries have a strong deployment of public transport (train, tram, tube, buses, etc.). Also, short-time travel could suggest more airport availability, i.e. more number of airports (which is related to the users demand)

According to the table data, there are eight countries where users spend, on average, from 70 to 120 minutes to arrive to the nearest hospital. Those countries are: Slovenia, France, Portugal, Latvia, Lithuania, Austria, Spain and Czech Republic. This result matches up with the result of the above table about density of motorways. Hence, road infrastructure could determine the access to the airport (considering, overall, the private transport as the main used transport type). There is no specific information about public transport facilities, but maybe they are in less importance than the private transport. The number of airports and their distribution in the space is also determining.

The long-time travels occur in eight EU countries: Greece, Slovakia, Hungary, Finland, Sweden, Poland, Bulgaria and Romania. Lack of good services, and/or their concentration in metropolitan areas, has been observed for these countries (except in Finland and Sweden) in other indicators' tables. Probably, the number of airports will be limited, or airports will have inadequate space distribution. Also, and referring to ex-socialist countries, due to the absence of public infrastructure investment, private transport prevails over public transport.

Table 5.8 Time to nearest airport, 2007, by country

	Time to nearest airport (minutes)
ROMANIA	256.06
BULGARIA	193.73
POLAND	158.40
SWEDEN	146.22
FINLAND	132.33
HUNGARY	127.82
SLOVAKIA	124.17
GREECE	122.14
CZECH REPUBLIC	115.28
SPAIN	104.28
AUSTRIA	100.26
LITHUANIA	97.69
LATVIA	92.10
PORTUGAL	87.75
FRANCE	87.41
SLOVENIA	85.17
EU 27	**83.44**
ESTONIA	66.10
ITALY	65.26
IRELAND	63.14
NEDERLAND	60.89
GERMANY	56.58
UNITED KINGDOM	51.69
CYPRUS	45.64
DENMARK	35.46
BELGIUM	33.90
LUXEMBOURG	21.14
MALTA	3.36
Y.R. MACEDONIA	NA
CROATIA	NA
NORWAY	NA
ICELAND	NA
LIECHTENSTEIN	NA
SWITZERLAND	NA
TURKEY	NA

Source: own elaboration with data from EDORA Database

5.2 Comparative analysis of relevant data and indicators by non-exclusive groups of countries

5.2.1 The provision of Services of General Interest

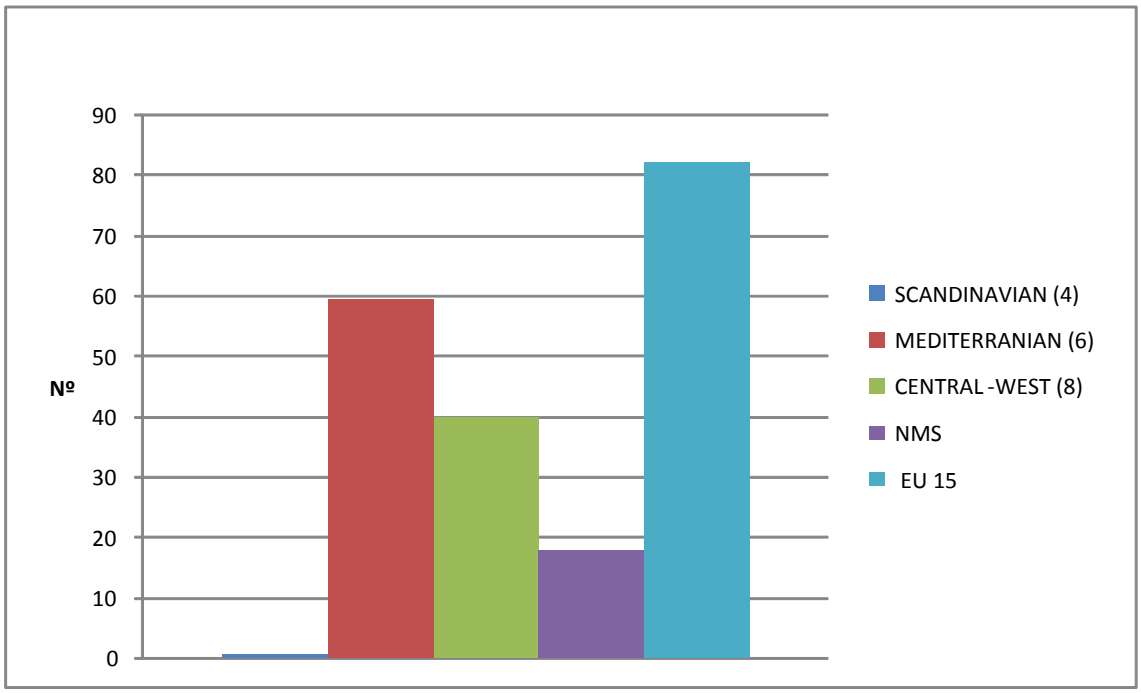
The graphic representation of the distribution of doctors per inhabitant per EU countries' groups is clearly expressed in this figure.

The supremacy of EU 15 (81% of doctors per inhabitant) facing NMS (around 18% of doctors per inhabitant) suggests better quality and accessibility on health services in the Old European Members States. Nonetheless, lacking of data of the NMS could explain the disparity on the results. Further research should be examined to throw light upon the real situation to complete the analysis.

The above commented is valid for the extremely low percentage of doctors per inhabitant in the Scandinavian countries, i.e. among all of them there is only data for Finland (which rate is below the EU average, see table 5.1) so the result does not express the real situation of Scandinavian countries.

Mediterranean countries possess a high rate of 60% doctors per inhabitant while Central-West countries have a 20% less of doctors per inhabitant. There are more data of the first group of countries than the second one. Furthermore, the default data of such a broad country as Germany influences on the results for Central-West countries.

Figure 5.1 Doctors per 1,000 inhabitant 2007, by non exclusive groups of countries



Source: own elaboration with data from EDORA Database

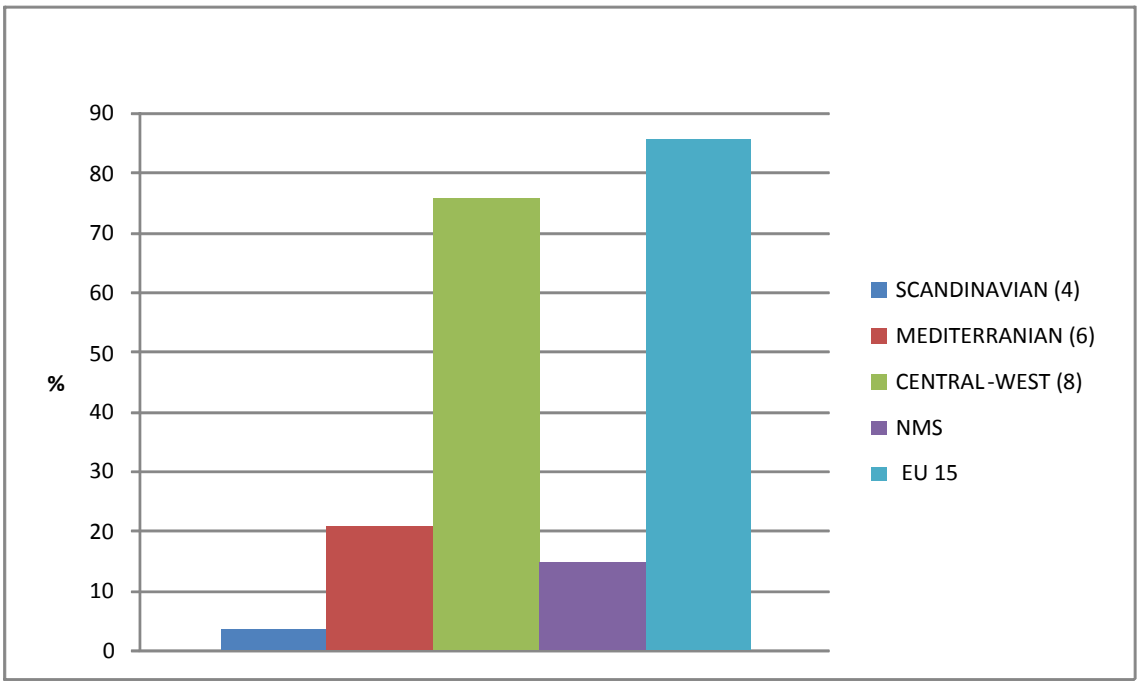
Once again, the prevalence of EU 15 as opposed to NMS is evident, 85% of hospital beds per head in EU 15 front 15% of hospital beds per head in the NMS. The high percentage for the EU 15 is primarily influenced by Central-West countries' scores. Conversely, in the table data related to this indicator it was shown the absence of data of more ex-socialist and NMS countries than the group of countries from the EU 15, so the possible interpretation observing just the graphic result could be slanted.

The lowest percentage of hospital beds per head (around 4%) is observed for Scandinavian countries. This is due basically to two main factors: lack of data of one of these countries and low rates in the rest of countries, below the EU average. It is related to geographical dimensions and a dispersed territorial model.

Similar circumstances suffer the Mediterranean countries with low rates below the EU average, having a 20% of hospital beds per head over the total. Comparing last graphic and this one, it can be suggested that quality of services (human capital) is good but quantity of services (e.g. number of medical infrastructures) is insufficient.

In contrast, Central-West countries possess around 75% of hospital beds per head. High rates for the indicator of France and Germany arise the total percentage of this group of countries. Generally, Central-West countries have high quality and better infrastructures of SGI.

Figura 5.2 hospital beds per 1,000 inhab., 2007, by non exclusive groups of countries



Source: own elaboration with data from EDORA Database

5.2.2 The accessibility to Services of General Interest

The indicator related to *'accessibility time to the nearest hospital'* is important to value the health services of a nation. Indirectly, this indicator gives information about other SGI, which can be contrasted with plus data to create a realistic framework of a territory's situation.

The scale of percentage for the indicator 'time to nearest hospital' must be read the other way around, i.e. when marked a 90% of time, this time is 'saved' while the rest (10% of time) is spent, which means a fast way to the nearest hospital.

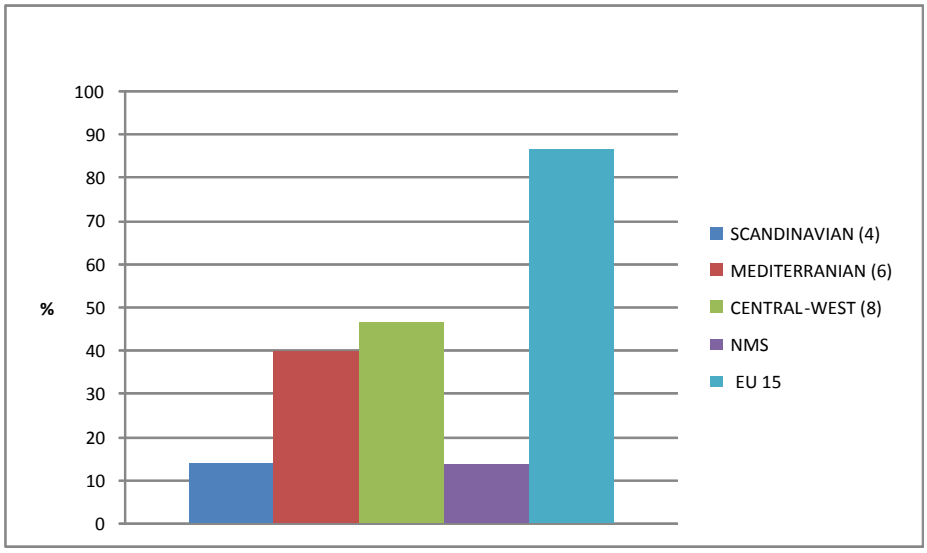
As seen on the graphic, EU 15 countries save more than 85% of time on arriving to the nearest hospital, while NMS countries only save less than 15%. The possible interpretation is that EU 15 countries have developed better or more efficient tools to access to health services (as better road infrastructures, transport facilities, etc.)

The influence of Central-West countries on the EU 15 results is evident, as in the graphic as in the table data of this indicator. They save more than 45% of time to arrive to the nearest hospital, which mean they operate efficiently and fast on access to the service.

Below this score, Mediterranean countries save a 40% of time, a slightly result difference with Central-West countries as a cause of the lowest results of Spain, Portugal and Greece.

Among the Scandinavian countries, there were only data about Finland and Sweden. That is one of the reasons for the low percentage of time (the same as in the NMS), besides the long time access results of Finland and Sweden and their idiosyncrasy characteristics.

Figura 5.3 Time to nearest hospital, 2007, by non exclusive groups of countries



Source: own elaboration with data from EDORA Database

In general, universities use to be placed in big extensions of urban or peripheral areas, so transport facilities and road infrastructures are key elements to achieve good access to universities. The promotion of public transport services incentives mobility (at a reasonable

cost) among customers. Countries with strong public transport policies should save time to users to arrive to universities and other SGI.

The scale of percentage for the indicator *'time to nearest university'* must be read following the instructions of figure 5.3.

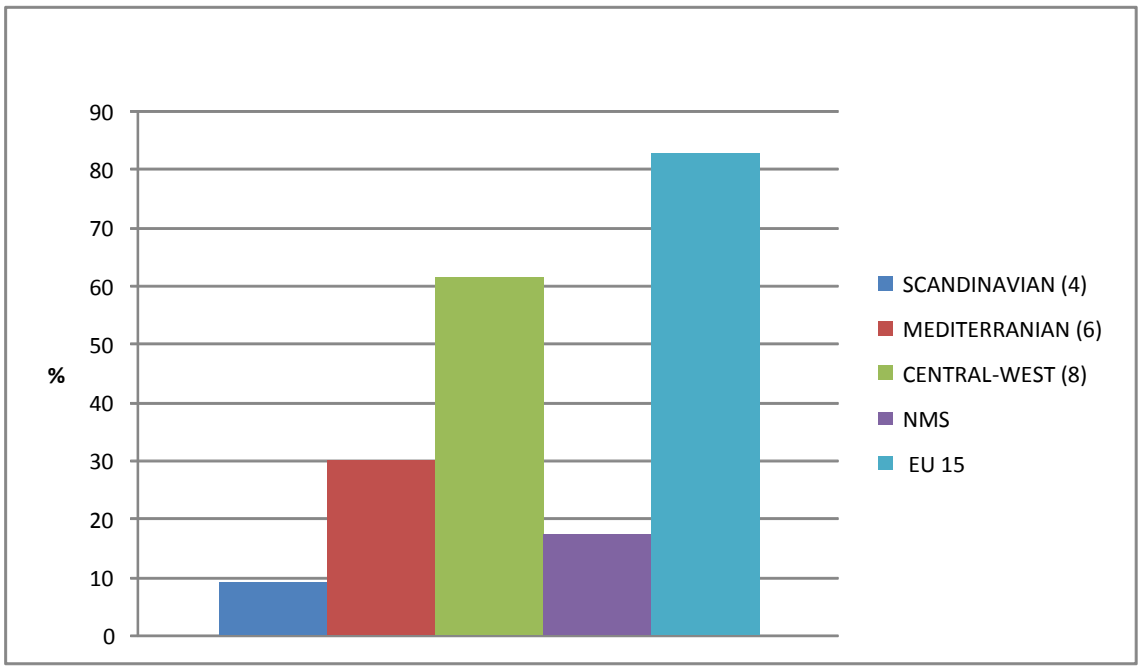
Hence, EU 15 countries have better scores than NMS in the access to the nearest university because users from the EU 15 save around 83% of time over their total time to arrive to the nearest university. Meanwhile, NMS only save around 18% of time over the total, so they spend around 80% of time to travel to the nearest university.

Central-West countries influence on the results of the EU 15 since they are the thriftiest group among the EU 15 group of countries. Users save the 60% of their time and use the rest to go to the nearest university. So access to university is affordable and time-pleased.

It is not the case of Mediterranean countries, generally spendthrift of time, wasting 70% of time to access to university, which is translated into long-time travels and uncomfortable for students. The rurality of some of these regions, bad infrastructures, liberalisation of public transport sector, etc. leads to this unpleasant situation.

Taking into consideration that the Scandinavian region is constituted by four countries and there are two of them without data, it is comprehensive that the rate has dropped. Furthermore, the other two countries with data have very low rates, i.e. the time to nearest university is long (users spend 90% of time over the total). Evidently, this is due to the vast extension of these territories (which imply long distances), the hard weather conditions and the predominant remote rural areas that exist there.

Figura 5.4 Time to nearest university, 2007, by non exclusive groups of countries



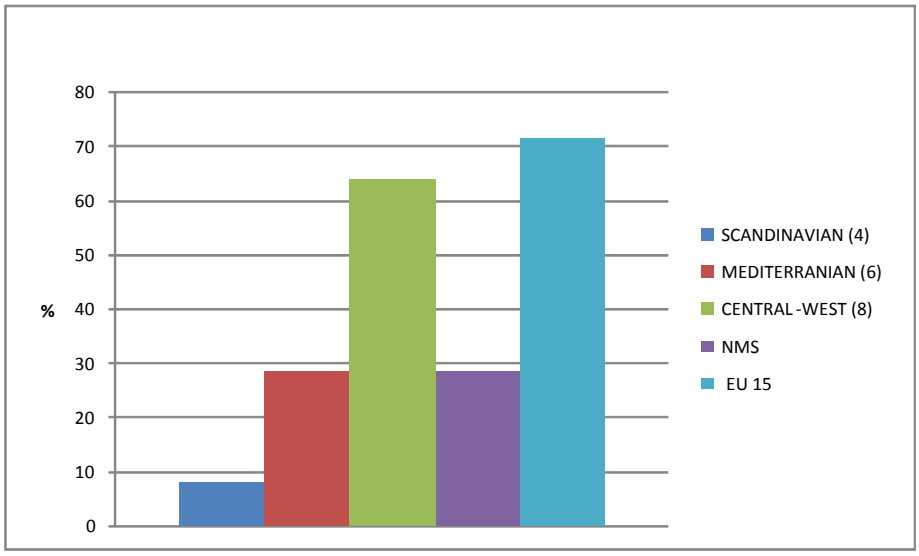
Source: own elaboration with data from EDORA Database

The indicator *'time to nearest airport'* gives information about the transport infrastructure (access and quality). As airports need big extensions to be constructed, normally they are placed in peripheral areas (with more free space) closed to urban areas. The number of airports depends on the demand of users, according to site attractions.

The scale of percentage for the indicator *'time to nearest airport'* must be read following the instructions of figure 5.3.

The gap on time travel between EU 15 and NWS 12 is considerable; there is a difference of 40% of spent time to access to the nearest airport. In EU 15 there is a saving of 70% of time (i.e. users spend 30% of time to arrive to the nearest airport). Meanwhile, the situation in NWS 12 is the opposite, the saving is less than 30% (i.e. users spend 70% of time to arrive to the nearest airport).

Figura 5.5 Time to nearest airport, 2007, by non exclusive groups of countries



Source: own elaboration with data from EDORA Database

Central-West countries influence positively on the EU 15 result as they enjoy good access infrastructures, represented by a more than 60% time saving in accessing to the nearest airport. A drop of 30% on the time saving percentage is scored for Mediterranean countries, being placed on the same level of spent time to access to the nearest airport as NWS 12 countries. Both areas must develop better transport infrastructures.

Among the Scandinavian countries, there were only data about Finland and Sweden. This is the reason of the low total percentage (expend of around 90% of time travelling), plus the long time access results of Finland and Sweden. The particular territorial idiosyncrasy of these countries must be taken into account in the interpretation of results. They have good transport infrastructures, but distances and climate conditions influence negatively on the indicator results.

5.3 Comparative analysis of relevant data and indicators by categories in the Dijkstra-Poelman rural-urban typology

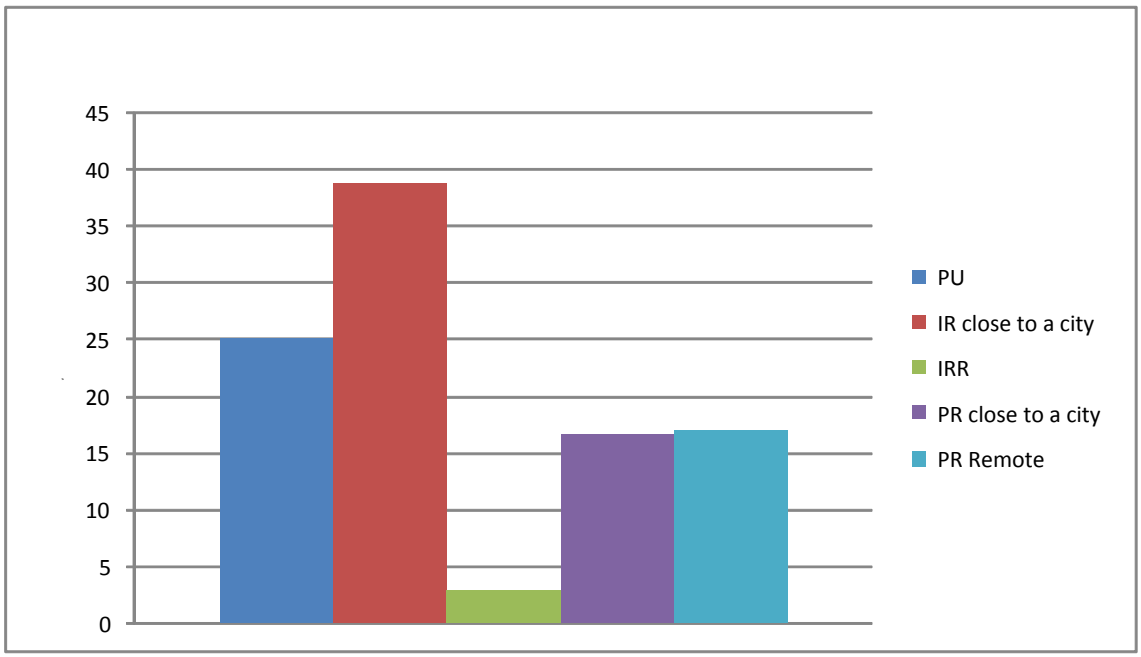
5.3.1 The provision of Services of General Interest

This graphic shows the distribution of doctors per inhabitant in each rural typology. Normally, health and social services have better access and quality in urban areas than rural ones, but this graphic evidences the opposite, concretely there are more doctors per inhabitant in rural areas closed to the city (see Noguera et al., 2009, EDORA project)

The graphic expresses the highest score (closed to 40% of doctors per inhabitant) in IRC, followed by the existence of 25% of doctors per inhabitant in PU. Lower scores are presented for PRC and PRR, with similar rates around 17% (slightly higher in PRR) and the lowest one is done in IRR with a 2.5% of doctors per inhabitant. Perhaps in IRR there is a rotation of doctors among the region - without a fixed doctor consultancy on the area- and hence, dependent of the accessibility of other SGI (transport facilities, road infrastructures, etc.)

The indicator percentage is approximately the double for rural areas respect to urban areas. Two processes take place in this discussion. On one hand, urban areas have more concentration of population and larger areas, so demands over SGI increase and the distribution of doctors per 1000 inhabitants is more disperse, i.e. there are less doctors per patient due to more population density. In rural areas occurs the opposite, and so, the healthcare services might be more personalized.

Figure 5.6 Doctors per 1,000 inhabitants, 2007, by categories in Dijkstra-Poelman rural-urban typology



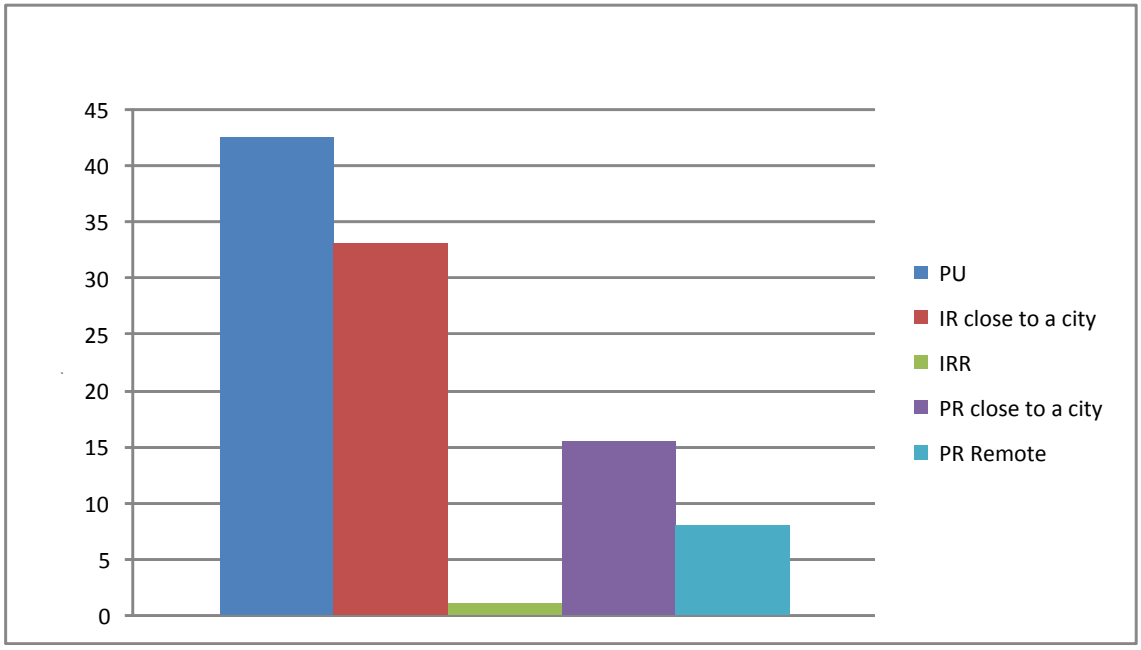
Source: own elaboration with data from EDORA Database

In this graphic the situation is opposed to the above commented. Urban areas prevail upon rural areas, with around 42% of *hospital beds per head* respect to 33% in IRC. So, in urban areas there are more utilities but in IRC there are more quality of human resources.

Predominantly rural areas have low rates. PRC present a 15% of hospital beds per head and PRR present around 7%. Usually, this kind of rural areas has difficulties on enclosing good and/or enough SGI. There are several spiral factors that influence this situation as: depopulation processes, lack of qualified labour force, high unemployment, bad infrastructures, lack of specific sanitary/hospital materials, etc.

Finally, IRR areas have around 1% of hospital beds per head, i.e. extremely minimum quality of health service. The difficult access to remote areas, as well of the high expenses in transport and the above commented factors, could influence on the low score for this utility.

Figure 5.7 Hospital beds per 1,000 inhabitants, 2007, by categories in Dijkstra-Poelman rural-urban typology



Source: own elaboration with data from EDORA Database

5.3.2 The accessibility of Services of General Interest

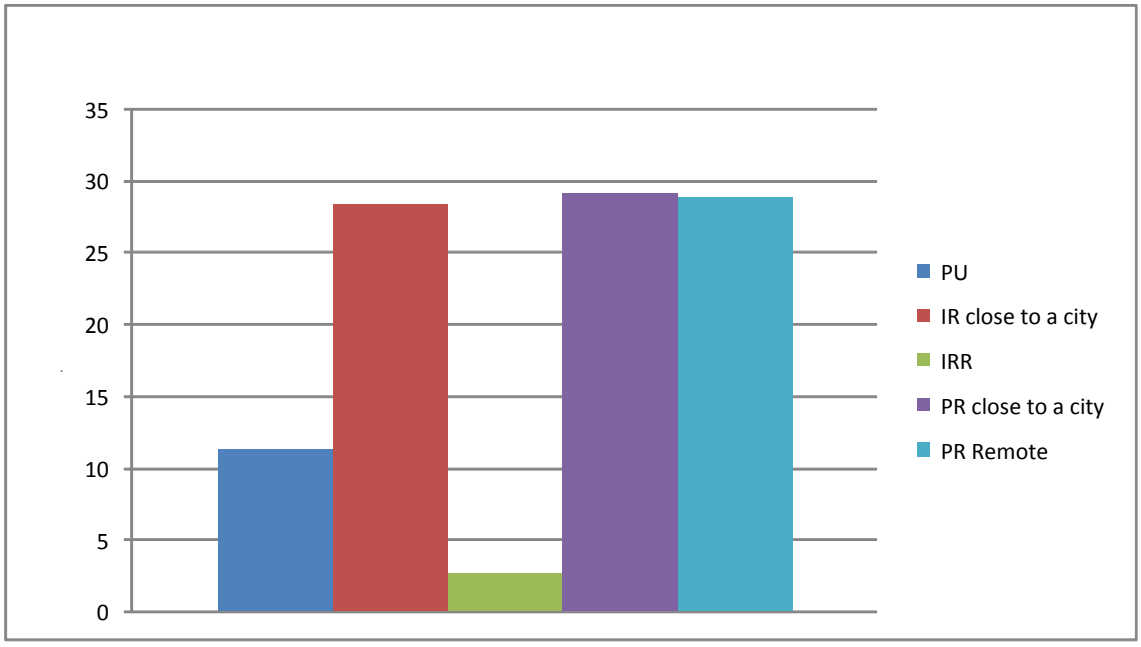
This figure offers an unclear picture of the rural typologies that spend long or short time to access to the nearest hospital.

The short time that users spend in IRR areas, which does not reach a 5% of time over the total time, is a partial result. Contrasting with the other health indicator graphics, one can guess the absence of health services in this kind of areas, or the absence of the areas in themselves. Thus, this result does not indicate the real time spent to access to the nearest hospital, but it can be explained by the above commented phenomenon.

The result in PU areas is reasonable. Users spend on average around 11% of their time to go to the nearest hospital. The metropolitan areas normally provides better access to services due to the concentration of population and services, better infrastructures and transport facilities.

In the rest of areas users spend similar time to arrive to the nearest hospital, with rates higher than 25%, distinguishing IRC areas front to PRR and PRC areas. As repeatedly commented, several factors influence on accessibility: distance, transport facilities, regional policies and road infrastructure conditions.

Figure 5.8 Time to nearest hospital, 2007, by categories in Dijkstra-Poelman rural-urban typology



Source: own elaboration with data from EDORA Database

This figure has a simpler interpretation than figure 5.7 since the represented percentage expresses the time in percentage spent to arrive to the nearest university.

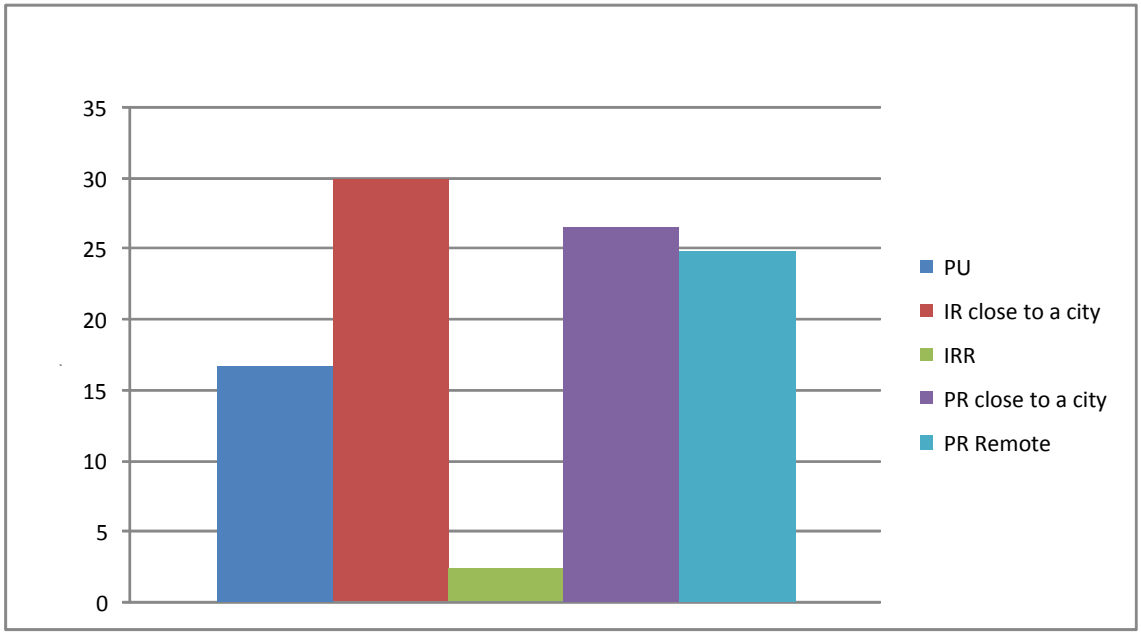
As illustrated, the shorter time percentage to arrive to the nearest university (around a 2.5% of time spent over the total) is indicated for IRR areas. This is a tricky result as it does not respond

to the timing but the absence of universities since there are not university students (see figure 3.12) Similar circumstances happen in PRC and PRR areas, which time spent is around 26-27% and 25% respectively.

Pursuing with the scores, urban areas users spend around 16-17% of time to arrive to the nearest university, very short time, mainly due to the big amount of transport facilities of an urban areas and the concentration of university campus.

The longest time spent to go to the nearest university (30%) occurs in IRC areas. universities are usually place in urban areas, so users from IRC areas have to displace there. The links within those areas and the city depend on transport facilities and road infrastructures, among other factors, and in some regions they do not work properly. If the universities are placed in the IRC areas, students from PU areas have the same problem turned around.

Figure 5.9 Time to nearest university, 2007, by categories in Dijkstra-Poelman rural-urban typology



Source: own elaboration with data from EDORA Database

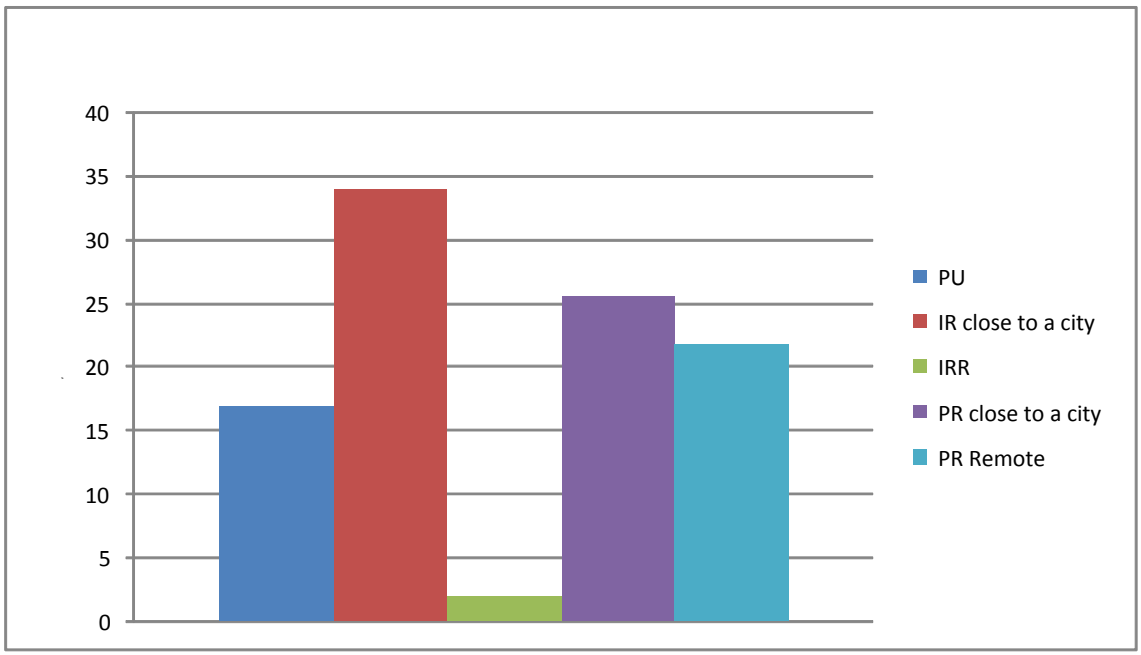
The distribution of the indicator '*time to nearest airport'* among the different rural typologies depends on the territorial capacity (space, service and infrastructures disposal, etc.) and the users demand.

As observed, the longest-time travel (spent of 35% of time) to arrive to the nearest airport occurs in IRC areas. These areas are the usual sites where airports are placed, so the result responds to a higher flow of travels to theses sites, in contrast with the other rural typologies. The same happen, but in less percentage, in PRC areas (with a rate of 25% of spent time travel), either because airports are placed in these areas or because users from these areas travel to IRC (and viceversa) to access to the nearest airport.

The result for IRR areas has the opposite interpretation; there are no so many IRR with airports so the travel flows to these areas are reduced. In the quantitative data it is indicated as short-time travel but this result is far from the real situation.

Following with the graphic scores, in PRR there is a spent time travel closed to 22%, while in PU areas the score is closed to 17%. PU areas with this score could be associated with Central European countries (with high density of PU regions) and short, moderate access times (due to their adequate transport and road infrastructures, among other factors). In the case of PRR score, these areas could be associated primarily with Scandinavian countries (due to their major representation) but this score disguises long-time travels from PRR, due to their remoteness characteristics.

Figure 5.10 Time to nearest airport, 2007, by categories in Dijkstra-Poelman rural-urban typology



Source: own elaboration with data from EDORA Database

5.4 Comparative analysis of relevant data and indicators at region level (NUT 3) for the countries covered, expressed in maps

5.4.1 Provision of Services of General Interest

The present indicator, *doctors per 1,000 inhabitants*, respond to the quality of health services. As observed in the map, there are a lot of regions with no availability of data.

Making a snapshot of the map, it can be stated that Southern Europe enjoys more doctors per inhabitant than all the rest of European regions, especially Northern regions (less than 150 doctors per inhabitant)

Among Northern regions with fewer doctors, Scandinavian countries and Ireland have them distributed overall in PRR and PRC areas. Northern ex-socialist countries have them in predominantly IRC and PRR areas.

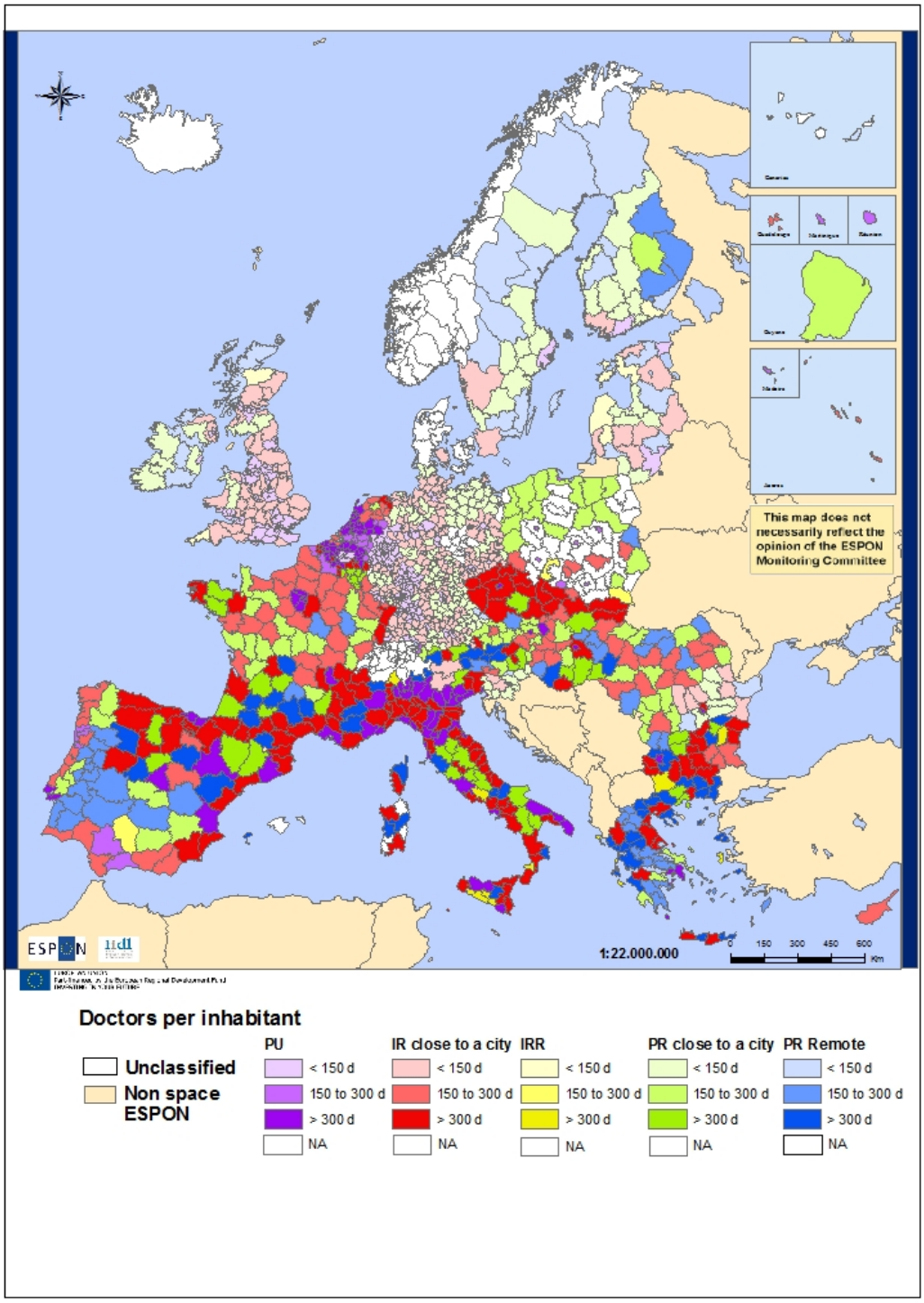
The regions of United Kingdom, Germany and Austria embody principally IRC and PRC areas with fewer doctors. The rest of Central European countries have moderate rates in IRC and PRC zones, except in Belgium and Nederland which predominant typology is the PU and there are some regions with more than 300 doctors per inhabitant.

Eastern regions have moderate rates (150-300 doctors per inhabitant) predominantly in PRC and IRC, as well in some little PRR spots. The exceptions are some IRC regions, with more than 300 d/i, which correspond to Czech Republic and Slovakia.

Southern regions, as above commented, are the regions with more doctors per inhabitant (overall in the IRR and PU areas of coastal regions) PRR areas with a high rate are common as well in inland regions and Greece. Portugal is an exception in this group because, except in the Algarve region (touristic site with a concentration of SGI and people), it has principally IRC areas with moderate rates.

Hence, the most remarkable areas with more doctors per inhabitant are the IRC and PU areas, overall in Southern coastal regions, since they concentrate more SGI because of the tourism activity and the concentration of population.

Map 5.1 Doctors per 1,000 inhabitants, 2007, by categories in Dijkstra-Poelman rural-urban typology



Source: own elaboration with data from the EDORA Database

At first glance, there is a big amount of unable data for the indicator *Hospital beds per 1,000 inhabitants* to a large extent in the European Union. Southern regions data are more completed as well as some from Central Europe and from two Scandinavian countries (Sweden and Finland). Eastern Europe is almost empty of content. So the analysis is going to be a bit geographically concrete to make it understandable.

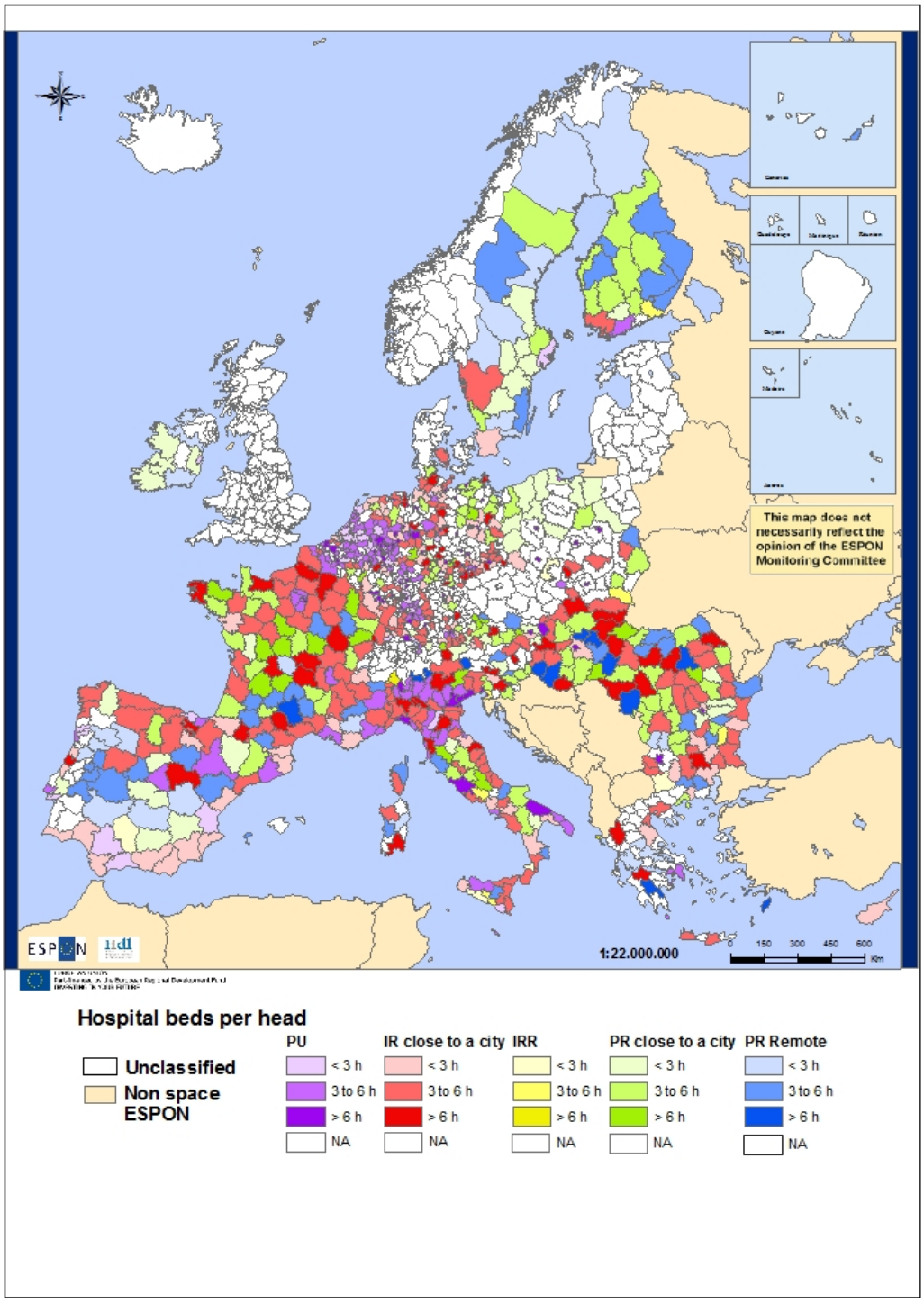
Referring to countries up North, there is only information about Finland and Sweden. The first one has higher rates (3-6 hospital beds per head) in more part of its territory than the second one (most of its territory is represented by low rates (less than 3 hospital beds per head). But both of them have high rate in the same kind of rural typologies, mainly in PRC and PRR areas.

Central Europe as a whole can not be analysed. Some regions of Germany and surrounding areas possess rates of more than 6 h.b/head in IRC and PRC areas. The regions of Belgium, Nederland, Luxembourg and Switzerland are predominantly urban, with moderate and high rates. France has been well documented and has predominantly IRC areas with moderate rates, and some scattered PRC and IRC areas with more than 6 hospital beds per head.

Southern Europe (except Greece, Portugal and the South of Spain with low rates) presents moderate rates, mainly in PRC, IRC and some PRR areas. Besides, South-East regions have the highest rates among Southern Europe, overall in IRC areas and some PRR ones. These results benefit the Southern ex-Yugoslavian countries in favour of a better quality of health services, maybe due to their last political system.

In sum, there are more hospital beds per head in IRC areas. Due to the lack of data, a final assessment of the health indicator distribution among the EU can not be done, but the inferred hypothesis from this map is that the regions with the best quality health resources are the South-East regions of Europe.

Map 5.2 Hospital beds per 1,000 inhabitants, 2007, by categories in Dijkstra-Poelman rural-urban typology



Source: own elaboration with data from the EDORA Database

5.4.2 Accessibility to Services of General Interest

This map represents the *accessibility to hospitals* among the EU regions, although there is an important lack of data for numerous regions.

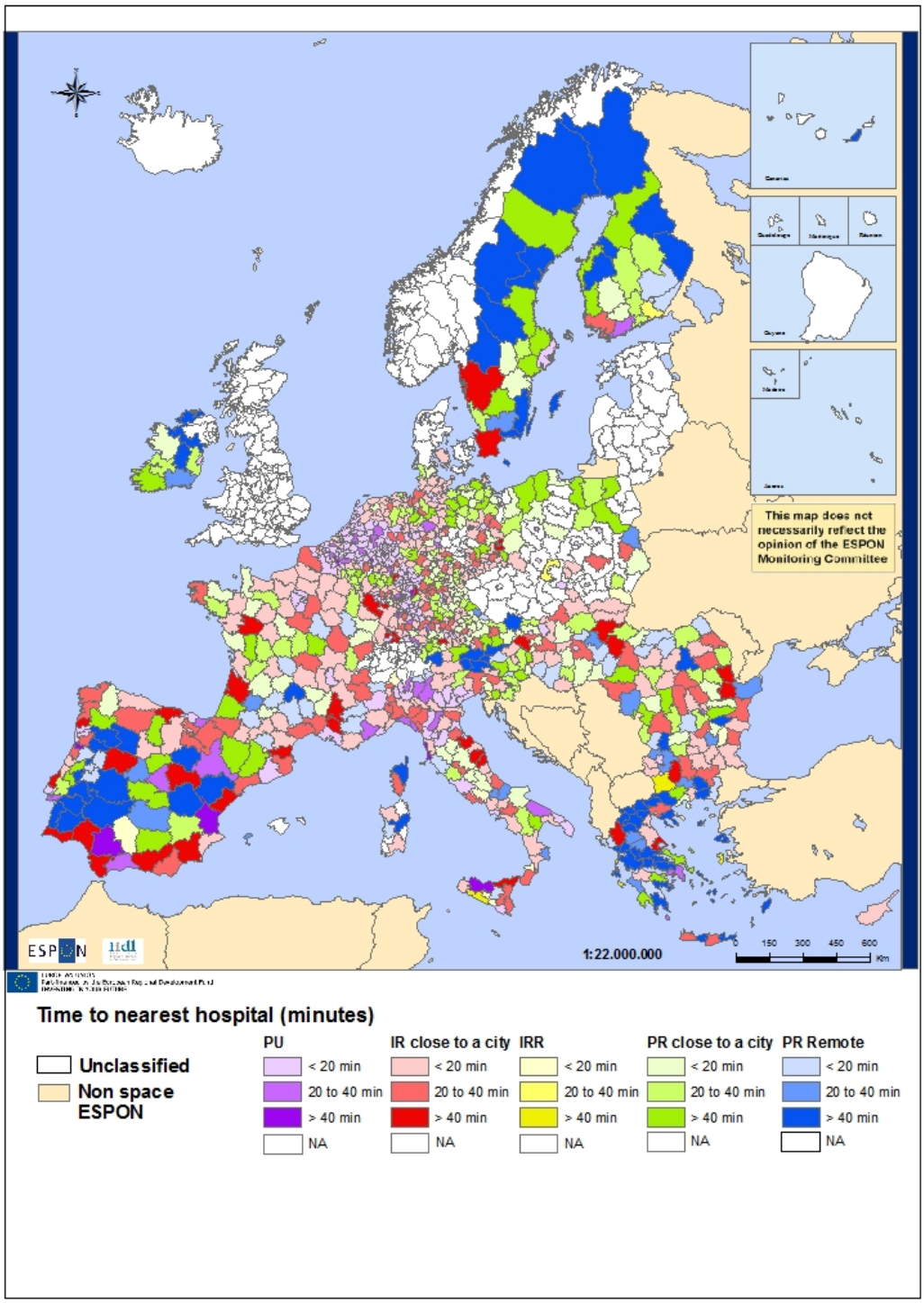
The picture represented on this map offers a snapshot of the European situation. Except ex-socialist regions, Spain, Greece, Ireland, Sweden and Finland regions, the rest European countries have low and moderate rates, mainly distributed in IRC, PRC and PU areas. There are some dispersed spots (scattered in IRC and PRC) where users spend more than 40 minutes to arrive to the nearest hospital.

The other countries, marked as exceptions, are classified as countries with high rates, i.e. users who live in most of the regions of those countries spend more than 40 min. to access to the nearest hospital. So, in some cases, the accessibility to hospitals in those regions is inadequate.

As continuously said, in Sweden and Finland there is a problem of population and service dispersion, so distances are the handicap to access to services. Their predominantly rural typology per se does not affect on the accessibility since those countries have very good quality of public services in all their region types.

Among the other group of countries with high rates (characterised principally by IRC, PRC and PRR areas), only Spain has a PU representation with moderate and high rates. In this group of countries, distances per se are not the key factor because they have smaller size. But services and infrastructure availability and maintenance are the key elements, as well as their demand per user (which increase seasonally due to tourism). In addition, regions' remoteness is important here and plays an important role since historically, those places have been characterised by neglected actions and inefficient rural development policies (e.g. see Greece case)

Map 5.3 Time to nearest hospital, 2007, by categories in Dijkstra-Poelman rural-urban typology



Source: own elaboration with data from the EDORA Database

In this map is shown in detail the distribution of the indicator *Time to nearest University* over the different rural typologies in the EU. The measurement scale is different from the table data of the same indicator, so results could be different as well and it has to be taken into account in a deeper analysis.

Excepting Scandinavian countries, Greece, United Kingdom, France, some regions of Spain and some other spots, the rest of the European territory spend long time (>65 min) to access to the nearest university.

Scandinavian countries, up North, spend moderate time (from 55 to 65 min) to arrive to the nearest university, mainly due to the PRR terrain (characteristic of those areas because of the long distances and dispersed population centres) Denmark and Finland are exceptions. In the first one, principally constituted by IRR areas, users spend short time (<55min) to arrive to the nearest university (because of its small and concentrated territory). In the second one, principally constituted by PRC and PRR areas, users spend long time (<65min) to arrive to the nearest university since, as well as Sweden, Finland occupies a large and dispersed territory.

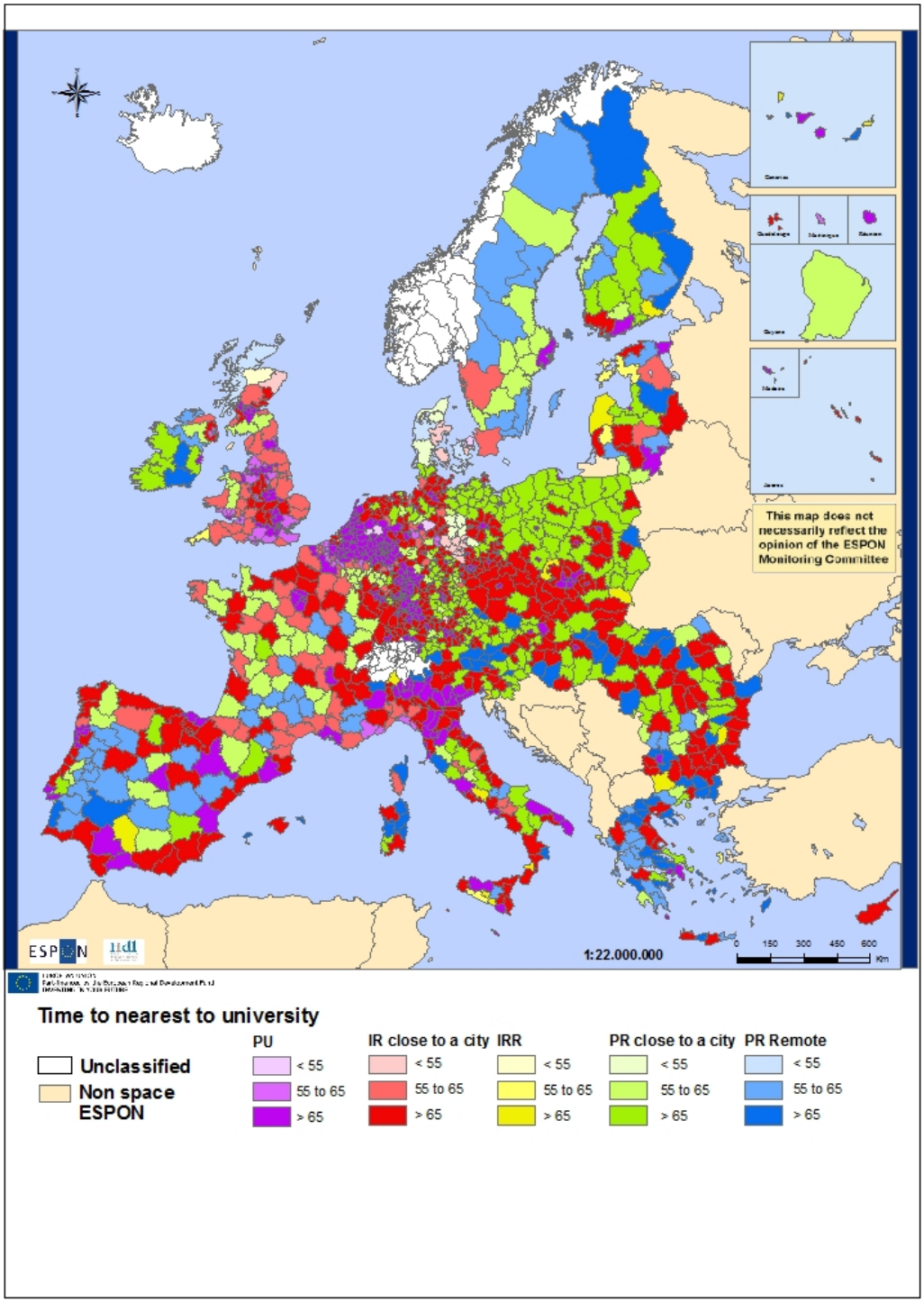
Eastern Europe (excepting North-East region) is characterised by PRC and IRC areas where, in general, users spend the maximum time (>65 min) to arrive to the nearest university. There are some dispersed and small PRR and PU areas with these characteristics. All the different rural typologies are distributed over the North-East region, with the predominance of IRC areas, and different rates of time but normally long timing.

Central Europe, except France and United Kingdom with moderate time spent, is disaggregated into IRC, PRC and PU with long time spent to access to the nearest university. Perhaps, a continuous flow of students travelled from urban areas to peripheral areas (and viceversa) is the cause of this result. France is disaggregated into IRC, PRC and PRR areas, where only in some IRC spots there is an expense of long time travel. In UK the predominant area is IRC and the timing rate is moderate, while in Ireland PRC and PRR are predominant and there is a high timing rate.

Southern Europe is heterogenic. In the coastal regions, mainly represented by IRC and PU areas, users spend long time to access to the nearest university. The rest of the inland territory is constituted mainly by PRR and PRC with moderate timing rates.

To summarise, the map results argue on the table and graphic results of the same indicator, pointed out that IRC and PU areas are characterised by long timing rates (the opposite than the other representations). As commented about, maybe this is due to the different measurement scale of the time.

Map 5.4 Time to nearest University, 2007, by categories in Dijkstra-Poelman rural-urban typology



Source: own elaboration with data from the EDORA Database

At first glance, this map could be divided in two different branches according to long and short *time travel to access to the nearest airport*. Eastern, Northern and some Southern countries

pertain to the group of long-time travel, and Anglo-Saxon, Central and other Southern countries (Italy, Corsica, Sardinia, Malta and Cyprus) pertain to the short-time travel group.

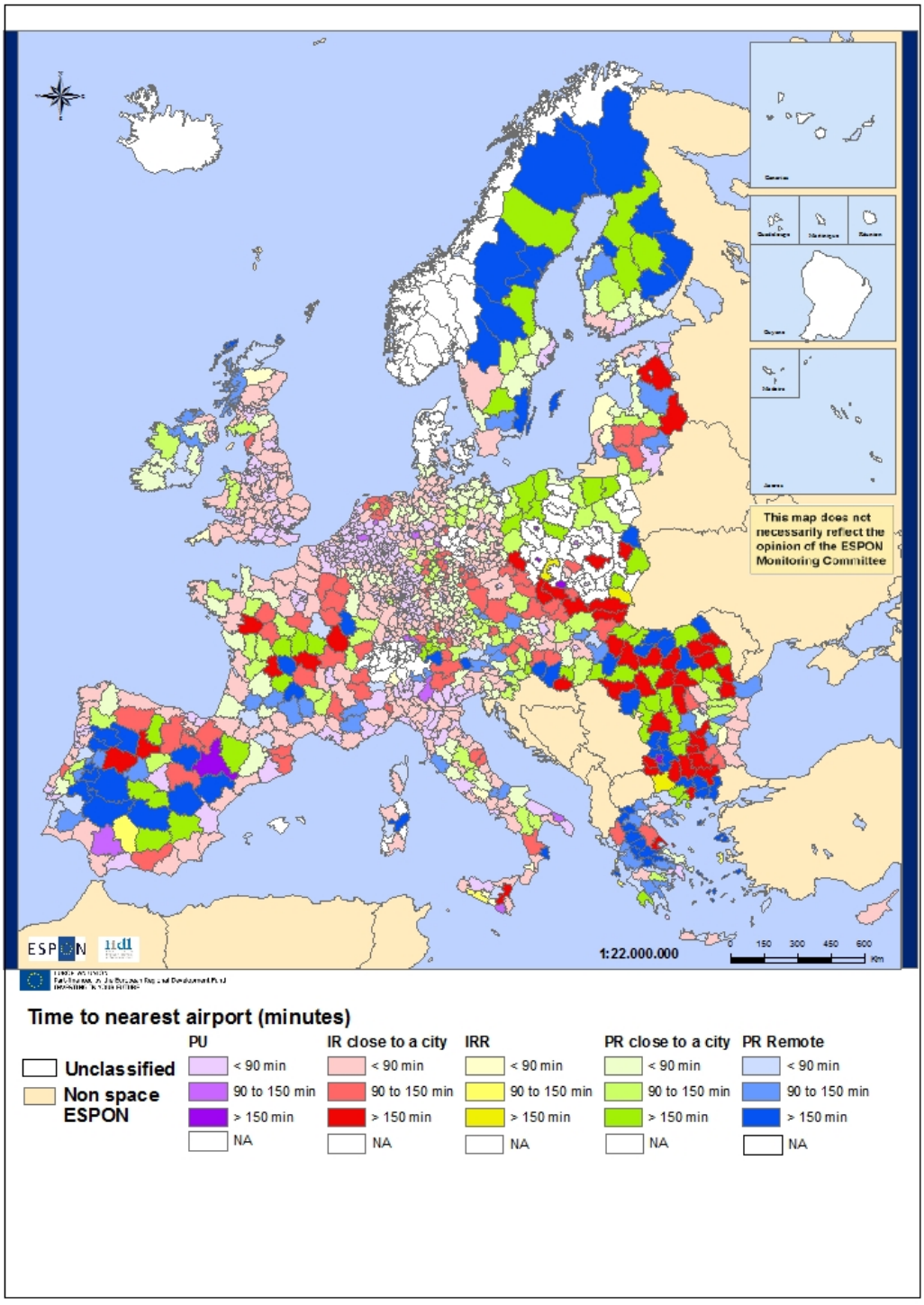
Referring to the long-time travel group of regions, it is mainly distributed over PRR areas (at big scale in the case of Finland, Sweden, inland of Spain and Greece), IRC areas (overall in Eastern European regions, and some in ex-socialist regions from the North of Europe, as well in some small spots of France) and PRC areas (greatly in Finland, Sweden, Eastern European regions) These regions need a strengthen of transport facilities and better road networks (in the case of Finland and Sweden there are other particularities and this interpretation can not be applied for them)

On the other hand, short-time travel group of regions is mainly distributed mostly over IRC and PU, afterwards in PRC areas and some little PRR spots (mainly in Ireland and France). A deductive hypothesis, extracted from the results, is that transport facilities, road networks and accessibility appear as satisfactory in this group of regions.

Intermediate remote areas are not extensively represented in the map, its representation is negligible. It suggests the distribution of airports near these areas is poor.

In conclusion, IRC areas (with different rates for the indicator) are the principal distributed areas among the European Union, partly due to the placement of airports in the periphery regions, closed to urban focus.

Map 5.5 Time to nearest airport, 2007, by categories in Dijkstra-Poelman rural-urban typology



Source: own elaboration with data from the EDORA Database

CHAPTER 6
FARM STRUCTURAL CHANGE

6.1 Comparative analysis of relevant data and indicators by country with reference to the EU27 average

6.1.1 The profile of farmers

The indicator defined as '**% holders working full time'** gives information about the intensification or reduction of the farming activity related to the economic framework of a country. Normally, in small sized farms and subsistence agriculture holders do not work full time, while in larger size farms holders usually do work full time to reach certain good sales and obtain more benefits. Farming activity is linked with rural development support, which somewhat is depending on rural projects and funds.

As the table shows, in the EU 27 there is, on average, a 36% of holders who work full time. The influence of intensive farming practices and large rural development support in Central-West countries help to enclose this EU 27 score. There are no data for six countries: Y.R. Macedonia, Turkey, Switzerland, Iceland, Liechtenstein and Croatia.

Rates below EU average and where there are less than 20% holders working full time are located in: Romania (1.38%), Lithuania, Hungary, Slovakia, Malta, Cyprus, Greece, Estonia, Poland, Latvia and Slovenia (18%). The majority of those countries have small size farms structure and subsistence agriculture. National rural development policies and funds are not strong enough because these countries have suffered a hard socio-economic transition towards EU reconversion patterns.

In the next group of countries, there is a percentage of holders between 20-40% who work full time. This group is constituted by: Sweden (24%), Portugal, Italy, Bulgaria, Norway, Spain, United Kingdom, Austria, Denmark and Czech Republic (39.39%). These last both countries have rates above EU average. Referring to last indicator results, there is a heterogenic disparity of farm size structures among this group of countries.

As well as in the last indicator result, rates with more than 40% of holders who work full-time in agriculture correspond to Central-West countries (Finland, Germany, France, Ireland, Luxembourg, Nederland and Belgium). Pluriactivity of farmers and agriculture diversification are promoted in Central Europe, overall in Northern countries; it incentives holders to work full time and to maintain their jobs since agricultural goods, via primary sector, are used for other production purposes. (See Copus et al, 2009, *Farm Structural Change and the Role of Agriculture in the Rural Economy*, p.19, EDORA project)

Table 6.1 % of holders working full time (2005), by country

	% Holders working full time 2005
BELGIUM	67.84
NEDERLAND	67.56
LUXEMBOURG	57.26
IRELAND	52.65
FRANCE	52.64
GERMANY	43.27
FINLAND	41.00
CZECH REPUBLIC	39.39
DENMARK	36.89
EU 27	**35.50**
AUSTRIA	34.44
UNITED KINGDOM	30.94
SPAIN	30.72
NORWAY	30.22
BULGARIA	30.14
ITALY	25.50
PORTUGAL	24.94
SWEDEN	23.74
SLOVENIA	18.03
LATVIA	17.92
POLAND	17.51
ESTONIA	15.98
GREECE	11.69
CYPRUS	8.29
MALTA	7.89
SLOVAKIA	6.05
HUNGARY	5.66
LITHUANIA	3.02
ROMANIA	1.38
CROATIA	NA
LIECHTENSTEIN	NA
ICELAND	NA
SWITZERLAND	NA
TURKEY	NA
Y.R MACEDONIA	NA

Source: own elaboration with data from the EDORA Database

The current indicator is defined as the **percentage of holders older than 55 years old**, and it is based on the data of 2007. Normally, the proportion of holders working full-time tends to decrease as age increases. A concatenation of factors is related with the holders' age. In intensive/big farms elderly holders do not usually work, in contrast to subsistence/small farms.

On average, among the total holders from the EU 27 Member States, there are more than half of holders older than 55 years old. In rich economies there is a trend to hire young immigrants or young national holders (hired in less proportion) to work full-time on farming. Furthermore, social labour conditions of elderly workers (retirement age and economic compensation) are

largely developed in historically democratic countries. The followed eleven countries do not register data: Y.R. Macedonia, Turkey, Switzerland, Iceland, Liechtenstein, Croatia, Greece, Bulgaria, Spain, United Kingdom and Germany.

Table 6.2 % of holders more than 55 years old (2007), by country

	% holders > 55 years (2007)
PORTUGAL	74.10
ROMANIA	67.42
ITALY	67.34
SLOVAKIA	60.34
SLOVENIA	58.59
LITHUANIA	58.58
CYPRUS	58.19
MALTA	57.56
ESTONIA	57.29
HUNGARY	55.59
SWEDEN	51.08
EU 27	**50.62**
LATVIA	49.93
IRELAND	49.75
CZECH REPUBLIC	45.90
DENMARK	45.84
NEDERLAND	45.45
BELGIUM	42.64
FRANCE	41.30
LUXEMBOURG	39.38
NORWAY	36.79
FINLAND	36.44
POLAND	35.68
AUSTRIA	29.84
GERMANY	NA
UNITED KINGDOM	NA
SPAIN	NA
BULGARIA	NA
GREECE	NA
CROATIA	NA
LIECHTENSTEIN	NA
ICELAND	NA
SWITZERLAND	NA
TURKEY	NA
Y.R. MACEDONIA	NA

Source: own elaboration with data from the EDORA Database

Rates below 45% of holders older than 55 years old, and indeed below EU average, pertain to the followed Central-West countries: Austria (30%), Poland, Finland, Norway, Luxembourg, France and Belgium (43%). Basically these results respond to none primarily agriculture economic activity (on the other way around, these countries are characterised by being

Knowledge based economies focused on tertiary sector). The existing agriculture activity is intensive and based on pluriactivity and diversification. Holders who work on this system spend full-time in farms, and so age requirements decrease.

There are just a few countries with rates between 45 to 55%. They are Nederland (45.45%), Denmark, Czech Republic, Ireland, Latvia and Sweden (51%). In the majority of them (except Latvia and Sweden), holders work full-time, mainly in big farm structures. In Latvia, farms use to be small and there are holders who do not work full-time. In those conditions, old holders can manage their holdings and can still work on them. Sweden is mainly a tertiary sector economy and social system is over-developed, so old workers enjoy good retirement conditions.

Older holders' representation is more than 55% in countries such a: Hungary (55.59%), Estonia, Malta, Cyprus, Lithuania, Slovenia, Slovakia, Italy, Romania and Portugal (reaching 74%). As it can be observed, the majority of them are ex-socialist, ex-Yugoslavian and countries from the South of Europe. In most of them, characterised by small farm structures and subsistence agricultural system, holders do not work full-time. It is supposed that they harvest crops to benefit themselves, and in less proportion, market users (due to the limitation of goods production)

6.1.2 Farm structures

The first indicator analysed in this section is **% Holdings >100 ESU** referred to data of 2005. It indicates the percentage of farm size structures bigger than 100 ESU (1300 ha). ESU (European Size Unit) is a measure of the economic size of a farm business based on the gross margin imputed from standard coefficients for each commodity on the farm. 1 ESU is roughly corresponds to: 1.3 hectares of cereals, 1 dairy cow or 25 ewes (English Department for Environment, Food and Rural Affairs, 2004, *Economics and Statistics. Farm Business Survey. Measure of farm size*, https://statistics.defra.gov.uk/esg/asd/fbs/sub/europe_size.htm)

In 2005, the EU 27 average was represented by 8.38% holdings bigger than 100 ESU, which means a prevalence of medium size farms among EU territory, on average. In this calculation there is no representation of some countries (Y.R. Macedonia, Turkey, Switzerland, Iceland, Liechtenstein and Croatia) due to non data availability.

The majority of ex-socialist, ex-Yugoslavian, Southern countries and Scandinavian countries possess rates below 5%, i.e. in these countries there is a prevalence of small farms (and possibly a subsistence agriculture system). Concretely, the list of countries by size is the followed one: Romania (0.5%), Greece, Slovenia, Lithuania, Poland, Latvia, Malta, Bulgaria, Hungary, Cyprus, Estonia, Portugal, Austria, Slovakia (1.71%), Ireland, Italy, Finland, Spain, Sweden and Norway (4.86%). Except Scandinavian countries and Austria (pertaining to this group of countries because of its small territory size), the other countries comprise more employment proportion in primary sector than in tertiary sector and all the indicators point out their rurality character, focused on traditional customs.

Medium size farms (from 5% to 15% holdings bigger than 100 ESU) are located in Czech Republic (below EU average with a result of 6.17%), UK, Luxembourg, Germany and France (15%). Except Czech Republic, the rest countries are Central European and their economic system is based primarily on the tertiary sector. Their agriculture system is more modernised and involved in the industrialised market, and normally responds to intensive farming practices.

Large size farms (with more than 15% holdings bigger than 100 ESU) are sited in Denmark, Belgium and Nederland (reaching the highest percentage of holdings with a result of 33.42%). These countries possess the same similarities as the right above commented, but due to their small territory size the indicator places them on the top rank of the table data.

Table 6.3 % of holdings of more than 100 ESU (2005), by country

	% Holdings >100 ESU (2005)
NEDERLAND	33.42
BELGIUM	22.25
DENMARK	17.98
FRANCE	14.88
GERMANY	13.06
LUXEMBOURG	11.02
UNITED KINGDOM	9.60
EU 27	**8.38**
CZECH REPUBLIC	6.17
NORWAY	4.86
SWEDEN	3.48
SPAIN	3.11
FINLAND	2.75
ITALY	2.74
IRELAND	2.18
SLOVAKIA	1.71
AUSTRIA	1.36
PORTUGAL	1.05
ESTONIA	0.94
CYPRUS	0.78
HUNGARY	0.29
BULGARIA	0.28
MALTA	0.27
LATVIA	0.23
POLAND	0.23
LITHUANIA	0.17
SLOVENIA	0.13
GREECE	0.12
ROMANIA	0.05
CROATIA	NA
LIECHTENSTEIN	NA
ICELAND	NA
SWITZERLAND	NA
TURKEY	NA
Y.R. MACEDONIA	NA

Source: own elaboration with data from the EDORA Database

Firstly, the farm size structure has been studied in the farm structural change section according to large size of holdings. Now, it is going to be studied according to small size of holdings, meant by the indicator **% Holdings < 2 ESU** (i.e. less than 2.6 ha). As before commented, small size farms usually indicate an agriculture type based on subsistence or small production scale (local market). This kind of agriculture does not largely contribute to the economic budget at national scale.

Making a snapshot of the table data and comparing these results with the % holdings>100 ESU, it can be asserted that small size farms prevail over large ones among the EU territory. Pointed out, in EU 27 there was an 8.38% of holdings>100 ESU on average while, as described in this table, there is a 34% of holdings<2 ESU on average over the total of holdings. The percentage interval in the current table (from 2% till 92% of holdings smaller than 2 ESU) is major than in the other table (from 0.05% till 33% of holdings bigger than 100 ESU)

It has to be taken into account that there are no data for: Nederland, Y.R. Macedonia, Turkey, Switzerland, Iceland, Liechtenstein and Croatia.

On one hand, countries with rates less than 25% and below EU 27 average correspond majorly to Central-West countries (excepting Spain): Norway (2%), Denmark, Finland, Belgium, Luxembourg, Ireland, France, Germany and Spain (22.15%). These countries are not characterised by having small size farms, actually it is the other way around (as observed in the first table data of the present section). The agriculture type in those countries is linked to good production at big scale, contributing to a country's GDP through primary goods sales.

There is heterogeneity of countries (mainly ex-Yugoslavian and Southern ones) with rates from 25% to 60% of holdings smaller than 2 ESU, such as: Sweden (28%) and Austria (with rates below EU 27 average) and Italy (35%), Greece, UK, Slovenia, Malta, Czech Republic, Cyprus and Portugal (56%), all with rates above the EU 27 average. The case of Austria and Sweden is different respect the others since they are mainly tertiary sector and high-developed societies. Thus, they do not reach high proportions of either smaller farms or bigger ones.

Rates over 60% of holdings smaller than 2 ESU correspond exclusively to ex-socialist countries: Poland (68%), Estonia, Lithuania, Latvia, Hungary, Slovakia, Romania and Bulgaria (92%) It has been argued that subsistence agriculture type in these countries -mainly rural and industrialised at the same time- prevails over intensive and diversified agriculture. It is linked with primary and secondary sector and those countries are becoming the major European exporters of primary goods, but the production process is still being developed and it needs more funds and better rural development strategies.

Table 6.4 % of holdings of less than 2 ESU (2005), by country

	% Holdings < 2 ESU (2005)
BULGARIA	91.90
ROMANIA	90.35
SLOVAKIA	90.23
HUNGARY	87.57
LATVIA	83.61
LITHUANIA	78.76
ESTONIA	75.20
POLAND	68.29
PORTUGAL	56.13
CYPRUS	54.30
CZECH REPUBLIC	51.28
MALTA	49.46
SLOVENIA	47.86
UNITED KINGDOM	45.93
GREECE	35.95
ITALY	35.06
EU 27	**33.89**
AUSTRIA	29.20
SWEDEN	27.98
SPAIN	22.15
GERMANY	14.05
FRANCE	13.09
IRELAND	11.20
LUXEMBOURG	8.57
BELGIUM	7.29
FINLAND	6.73
DENMARK	2.17
NORWAY	1.99
CROATIA	NA
LIECHTENSTEIN	NA
ICELAND	NA
SWITZERLAND	NA
TURKEY	NA
Y.R. MACEDONIA	NA
NEDERLAND	NA

Source: own elaboration with data from the EDORA Database

6.2 Comparative analysis of relevant data and indicators by non-exclusive groups of countries

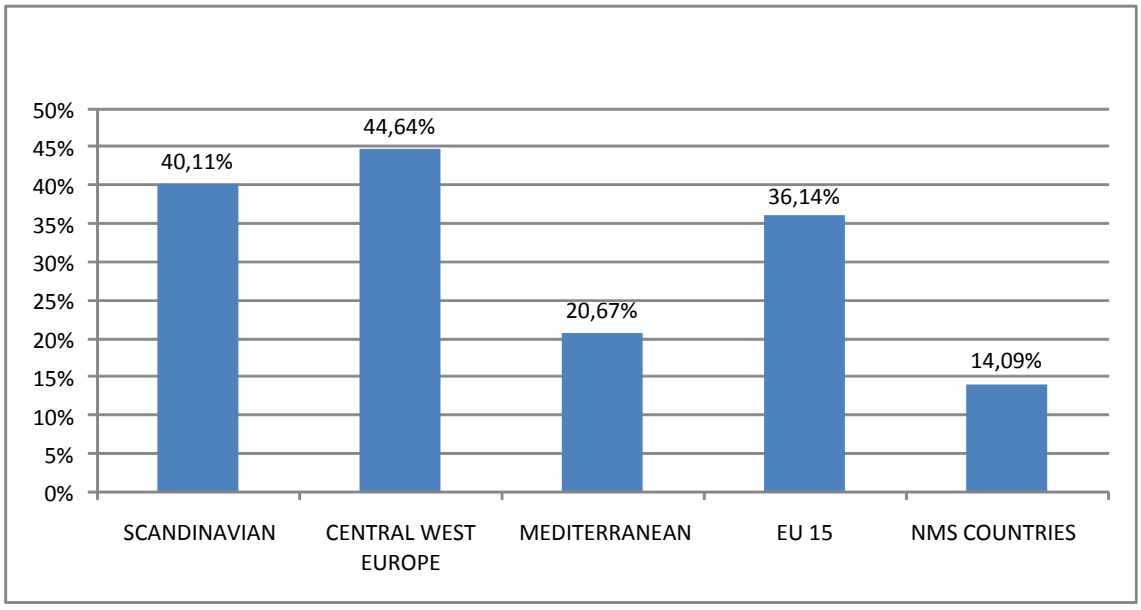
6.2.1 The profile of farmers

In 2005, there were more than 36% of holders working full time in EU 15 while in NMS they reach the 14% of full-time job. The EU 15 rates is influenced and helped by the rural development policies of Central-West countries, among the rest EU 15 members. Furthermore, agriculture system from EU 15 and NMS differs. In EU 15 there is a modernised and supported agriculture (where usually migrants work seasonally), and in NMS regions subsistence agriculture, characterised by firmly deeply rooted practices, is the main agriculture system which generates fewer good sales in the market economy.

Harvesting types and periods must be taken into account in the analysis because they are different depending of the land productivity, resources availability and climate conditions. Thus, some crops need more attention and work effort and others do not need such a continuous control.

In Central-West countries, due to larger size farms and solid holders' labour conditions (thanks to European and national funds and modernisation of the agriculture sector), there were a 45% of holders working full time.

Figure 6.1 % of holders working full time (2005)



Source: own elaboration with data from the EDORA Database

Conversely, Mediterranean countries do not enjoy the same opportunities and it is reflected on their score, which does not reach 21% of holders working full-time, the half than Central-West and Scandinavian countries.

In Scandinavian countries the situation is no as political and economical but climatically limited. The productivity of primary goods in these countries is low and tertiary sector activity produces great incomes, positioning as the major economic sector.

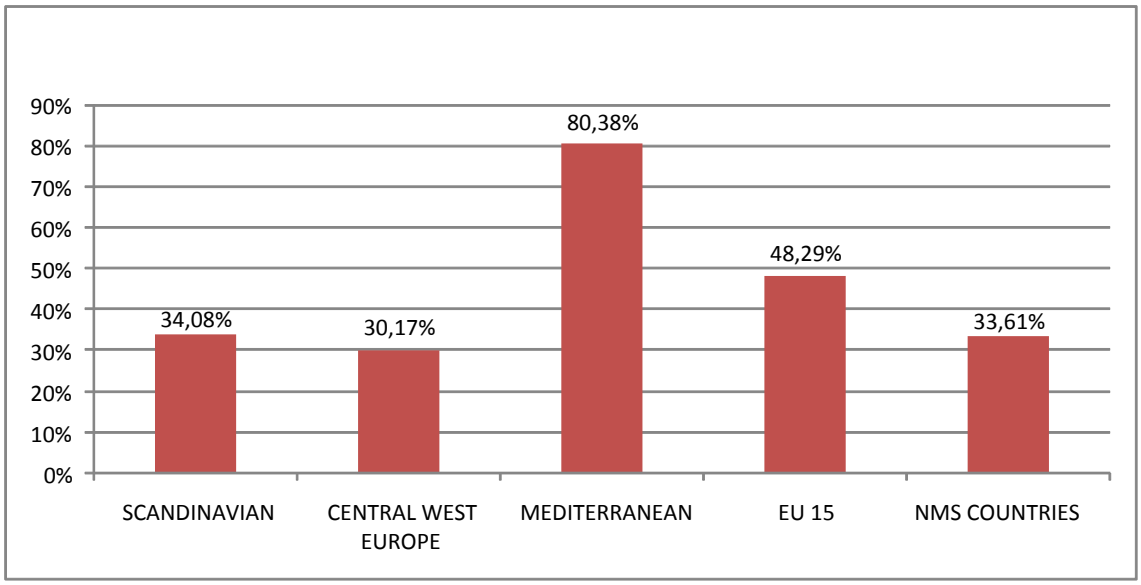
The percentage of *holders older than 55 years old* is higher in the EU 15 (there are 49% holders older than 55 years old) than in NMS (closed to 34% of holders older than 55 years old), with a difference of 15%. Not only there are more holders working full-time in EU 15 but elderly population too (at the same time, less young workers want to work in agriculture, except immigrants).

The highest percentage of holders older than 55 years old reaches 80% in Mediterranean countries. Small-medium farms, more holders working part-time (surely in non pluriactive agriculture), elderly population and migration patterns produce than in Mediterranean countries the percentage is higher than in NMS.

In contrast, Scandinavian countries possess less than the half percentage of holders older than 55 years old (there are around 34% holders over 55 years old) due to their principal tertiary sector activity, their good retirement conditions and the hard conditions of the climate.

Meanwhile, in Central-West countries, knowledge-based economies, there are closed to 30% of holders over 55 years old even though it is the area with more holders working full-time. It induces to suggest that agriculture represents little proportion on the economic activity but it follows a concentration model of production (large farms, full-time work, successful good sales, immigration labour force, etc.)

Figure 6.2 % of holders over 55 years old (2005)



Source: own elaboration with data from the EDORA Database

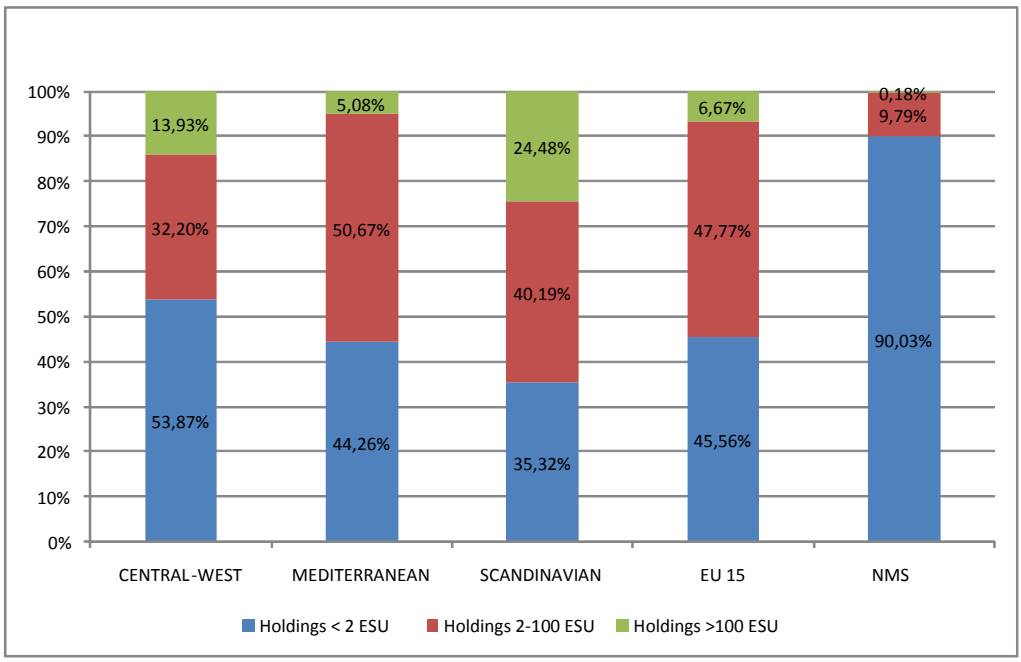
6.2.2 The profile of farmers

At first glance, the predominance of NMS member states over EU 15 is clear referring to small farm size structure. In numbers, there are 90% of holdings smaller than 2 ESU in NMS while in EU 15 there are 46%. The influence of Central-West countries' high percentage (with an existence of 54% holdings smaller than 2 ESU) and Mediterranean countries (44%) help the EU 15 percentage to rise, in spite of the poor score for Scandinavian countries (around 35%) produce the opposite effect on the EU 15 score.

Medium farm sizes dominate on the EU 15 panorama, with a rate closed to 48% (2 points above the small size farms result in EU 15). In this case, the most influential group is the Mediterranean countries (where medium farm size represents closed to 51% over all the different farm sizes). As well, Scandinavian countries posses higher representation of medium farm size than small ones, with a rate of 40%, and Central-West countries reduce it to a 32% (predominating small size farms structure on these countries). Meanwhile, the score for NMS countries is practically negligible, not reaching 10% of medium farm size.

According to big farm size, the percentage of holdings bigger than 100 ESU is very low in all the different group of countries. In EU 15, it does not reach the 10% but in NMS, it represents less than 0,20%, so big farms are rare in the territory. The assertion of the different agriculture systems between both areas is patent: more industrialised and intensive/extensive farming from to traditional and subsistence farming. The first one needs medium size farms and the second does not require big farm infrastructure.

Figure 6.3 Structure of holdings according to economic size ESU (2005)



Source: own elaboration with data from the EDORA Database

Scandinavian countries possess the same rates as in the table data, i.e. agriculture is not the main economic activity (indeed it is rare) and current farms enjoy medium size (perhaps due to the non productivity of the land in those latitudes) but large size occupies the highest representation over all the different group of countries, reaching almost the 25%.

The result for Mediterranean countries (5% holdings bigger than 100 ESU) shows that farm structure is primarily based on extensive and/or subsistence agriculture. In Central-West countries there are around 14% holdings bigger than 100 ESU, the second highest score after Scandinavian countries.

In sum, in the European territory there is a prevalence on small/ medium farm size (especially in NMS where subsistence and traditional agriculture is the main economic activity on the primary sector)

6.3 Comparative analysis of relevant data and indicators by categories in the Dijkstra-Poelman rural-urban typology

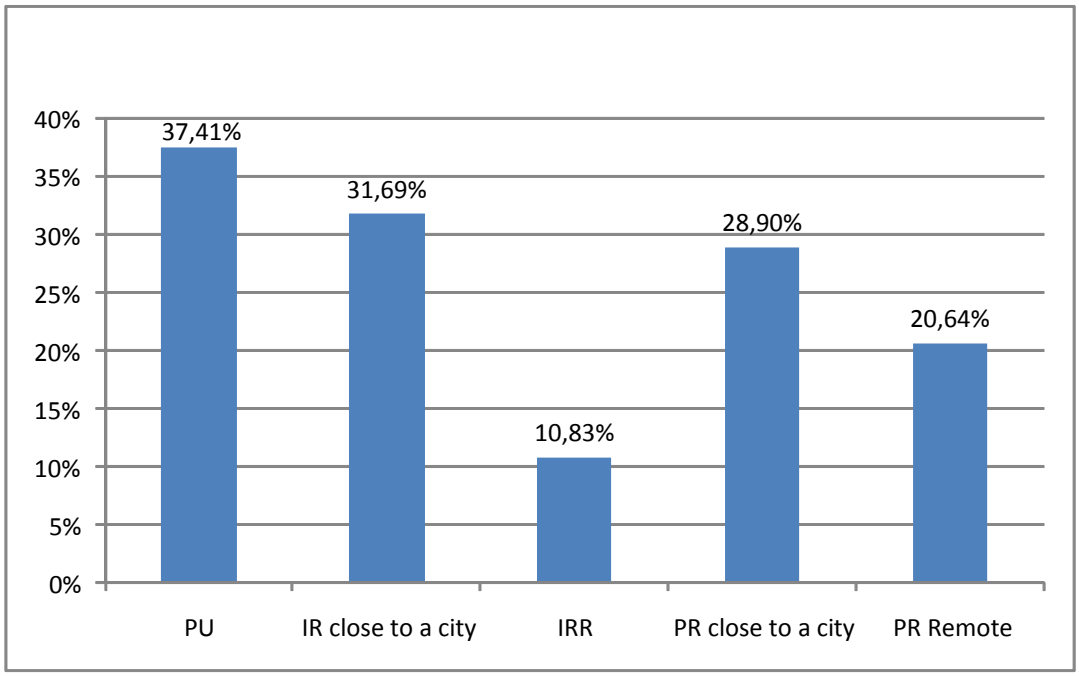
6.3.1 The profile of farmers

In this graphic, the percentage of holders who work full-time has relation with the percentage of holdings bigger than 100 ESU. It can be suggested than bigger size farms provides more work and stable labour conditions to holders, due to their production on the market economy. The bigger a farm is, the more diversified can be and the more different market outputs can generate.

Therefore, full-time holders are concentrated mostly on PU areas (there are a bit more of 37% of holders who work full time), and afterwards in IRC (32%) and PRC areas (29%). Urban areas and areas closed to cities imply productivity business circuits, flow of goods merchandising, transport facilities, etc.; hence, agriculture, representing a small piece of the economic sector in urban areas, is characterised by being intensive and economically productive, which implies bigger farms and more amount of farmers working full-time.

PRR areas reach 21% of holders working full time and IRR areas reach 11%. Due to their remoteness, transaction transport costs and farm size structures, holders can not survive economically by their agriculture production, just subsist, which do not incentive them to work full time.

Figure 6.5 % of holders working full time (2005)



Source: own elaboration with data from the EDORA Database

As in the above figures, the distribution of the indicator *% of holders more than 55 years old* among the main rural typologies follows the same pattern. IRR areas, as the main agriculture sustain typology, possesses the highest rate of older holders (around 69%), followed by almost 68% of holders over 55 years old in PRR areas, 46% in IRC, 38% in PRC areas and finally the lowest rate of 36% in PU areas.

This distribution of the indicator responds to holdings availability and importance of agricultural sector in the economic framework. The more predominant they are the more holders are. The bigger farms and more full-time work the young they are (always dependent on demographic structure and features)

Figure 6.6 % of holders more than 55 years old (2005)

Source: own elaboration with data from the EDORA Database

6.3.2 The profile of farmers

In general, as observed the graphic, small size farms dominate in all the rural typologies, except in PU areas where more than the half of farms have medium size.

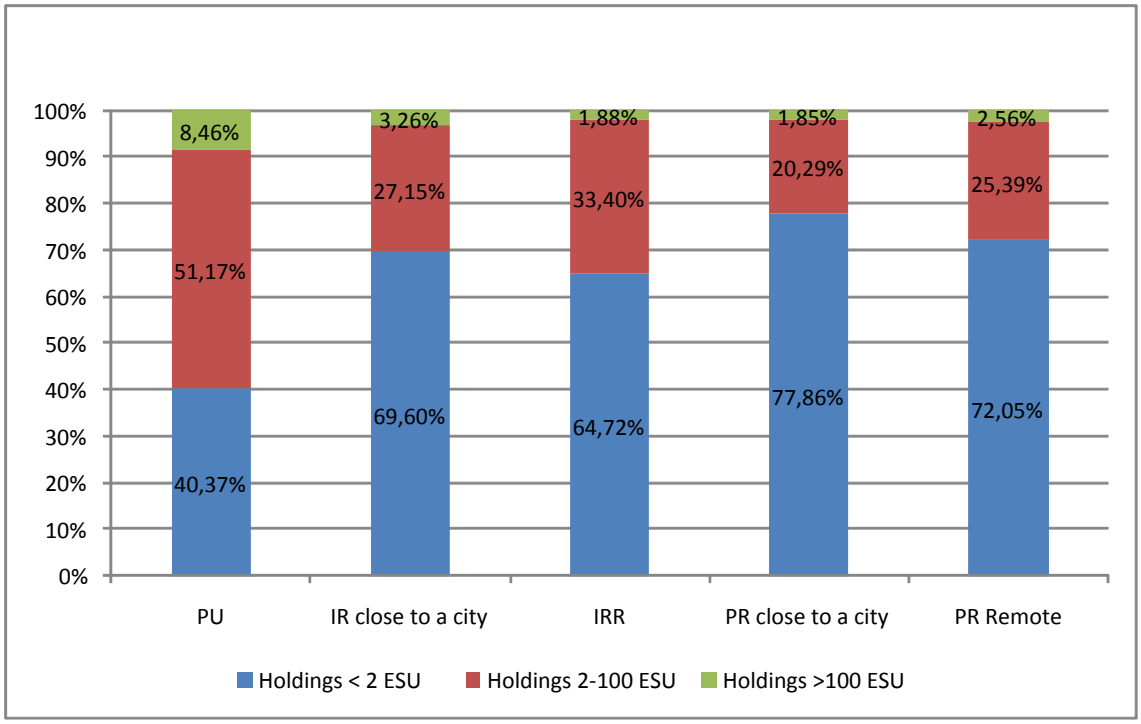
The percentage of holdings bigger than 100 ESU is not largely represented in any of the different rural typologies, comparing to the other farm size structures. Anyway, the highest rate of big farms is for urban areas, where around 9% of holdings are bigger than 100 ESU. Although, these areas have the largest representation of medium size farms over the other rural typologies, with a percentage of 51%, a 11% above the percentage of holdings<2 ESU.

The next rural typology with more big farm size representation is the IRC areas (with a rate of 3.3%), basically because of its proximity to the city (saving transport costs) and primary sector manufactories, which need a big amount of goods to increase their productivity, i.e. farms must have large sizes to achieve the required demand. Therefore, small farms prevail over the others, reaching 70% of holdings<2 ESU.

Surprisingly, in PRR areas there are almost a 3% of holdings bigger than 100 ESU. Long distances (traduced on high transport cost) and low agricultural goods prices, do not benefit farmers who live in remote areas. But if the agri-business is strong enough in those areas, it can lead to support intensive/extensive and industrial agriculture. Anyway, as seen on the graphic, the predominance on this kind of areas is still the subsistence agriculture (with a 72% of holdings<2 ESU) since these areas tend to be more traditional in customs and less modernised.

The lowest percentage (around 2%) pertains to IRR and PRC areas. Basically IRR area types are characterised by old population and a worried 'rural exodus' due to lack of job opportunities. Thus, agriculture is based on the subsistence and small farms are enough to cover the needs of families, as shown on the graphic through the percentage of 65% holdings<2ESU and 33% of holdings 2-100 ESU. PRC areas maybe do not dispose of good agri-business nets to maintain big size farms. Indeed, they have the highest percentage of holdings<2 ESU (78%), marking PRC as more traditional and subsistence farming practices areas, based on familiar business. Medium size holdings represent around 20%, the lowest percentage over the other rural typologies scores.

Figure 6.7 Structure of holdings according to economic size (ESU) (2005)



Source: own elaboration with data from the EDORA Database

CHAPTER 7.
INSTITUTIONAL CAPACITY

7.1 Comparative analysis of relevant data and indicators by country with reference to the EU27 average

The concept of institutional capacity is widely extended. It supports development in its different forms, and foster and monitor collective strategies, through the principles of governance with a multi-level approach, sustained on the base of the importance of organised social structures.

Institutional capacity is the result of a longer history of democracy and stronger traditions of welfare state. Thus, somehow, this mechanism is linked with the socio-economic history and current situation of a country. Hence, the selected indicator to express quantitatively the institutional capacity of a country is the **GDP in euro per inhabitant in percentage of the EU average**, with data of 2005.

GDP (Gross Domestic Product) has become a universal metric variable for economic growth and 'living standards'. It counts all transactions with a market prize without including non-market ones, as family work. GDP does not adequately take into account underground economy, externalities and human and social welfare (Goossens Y. et al, 2007, *Alternative progress indicators to Gross Domestic Product (GDP) as a means towards sustainable development*, p.7, Policy Department Economic and Scientific Policy, European Parliament)[14] GDP in Euro per inhabitant is the same as GDP per capita (in Euros), i.e. the value of all final goods and services produced within a nation in a given year divided by the average (or mid-year) population for the same year.

In this analysis, the EU 27 GDP per capita average is calculated in spite of the data for the followed six countries: Y.R. Macedonia, Turkey, Norway, Switzerland, Iceland and Liechtenstein. The result EU 27 average is 95€ per capita.

Rates below 60€/capita correspond to: Bulgaria, Romania, Latvia, Lithuania, Croatia, Poland, Estonia, Hungary, Slovakia, Czech Republic, Malta, Portugal and Slovenia. The majority of these countries are NWS members, from ex-socialist and ex-Yugoslavian countries. The common factor among them is that they have a recent democratic insertion (in contrast to Old States) and social participation is still weak and/or disorganised. Due to the annex to the EU and the economic efforts to reach EU parameters, the development capacity (knowledge, skills, institutions, etc.) of these countries is less than in other major Welfare States, and so it could be the institutional capacity. Malta and Portugal are exceptions, and institutional capacity is well achieved (despite the GDP result)

The medium rates (60-120€/capita) correspond mainly to Central-West European member states (Belgium, France, Germany Austria, Finland) and four Southern countries. On the last group, there are three countries (Greece, Cyprus and Spain) with scores below the EU 27

[14] http://www.europarl.europa.eu/comparl/envi/pdf/externalexpertise/gdp.pdf

average. Italy has a slightly different rate above the EU 27 average with 101.78€/capita. From there on, only Central-West countries are positioned in the top ranking.

Finally, the top rank (more than 120€/capita) is constituted by United Kingdom, Nederland, Sweden, Ireland, Denmark and Luxembourg (which reaches 288.80 €/capita). They have traditionally democratic systems, well developed institutions, and all kind of social organisations that are able to act following a multi-level approach.

Table 7.1 GDP in euro per inhabitant in percentage of the EU average (2005), by country

	GDP in euro per inhabitant in percentage of the EU average 2005
LUXEMBOURG	288.20
DENMARK	173.94
IRELAND	156.08
SWEDEN	131.09
NEDERLAND	127.81
UNITED KINGDOM	123.35
FINLAND	118.70
AUSTRIA	115.23
GERMANY	113.26
FRANCE	107.95
BELGIUM	104.25
ITALY	101.78
EU 27	**95.48**
SPAIN	88.07
CYPRUS	80.50
GREECE	62.14
SLOVENIA	55.83
PORTUGAL	54.02
MALTA	46.40
CZECH REPUBLIC	41.07
SLOVAKIA	32.91
HUNGARY	32.83
ESTONIA	30.98
POLAND	28.34
CROATIA	26.93
LITHUANIA	23.19
LATVIA	20.75
ROMANIA	14.68
BULGARIA	10.45
LIECHTENSTEIN	NA
ICELAND	NA
SWITZERLAND	NA
NORWAY	NA
TURKEY	NA
Y.R. MACEDONIA	NA

Source: own elaboration with data from the EDORA Database

7.2 Comparative analysis of relevant data and indicators at region level (NUT 3) for the countries covered, expressed in maps.

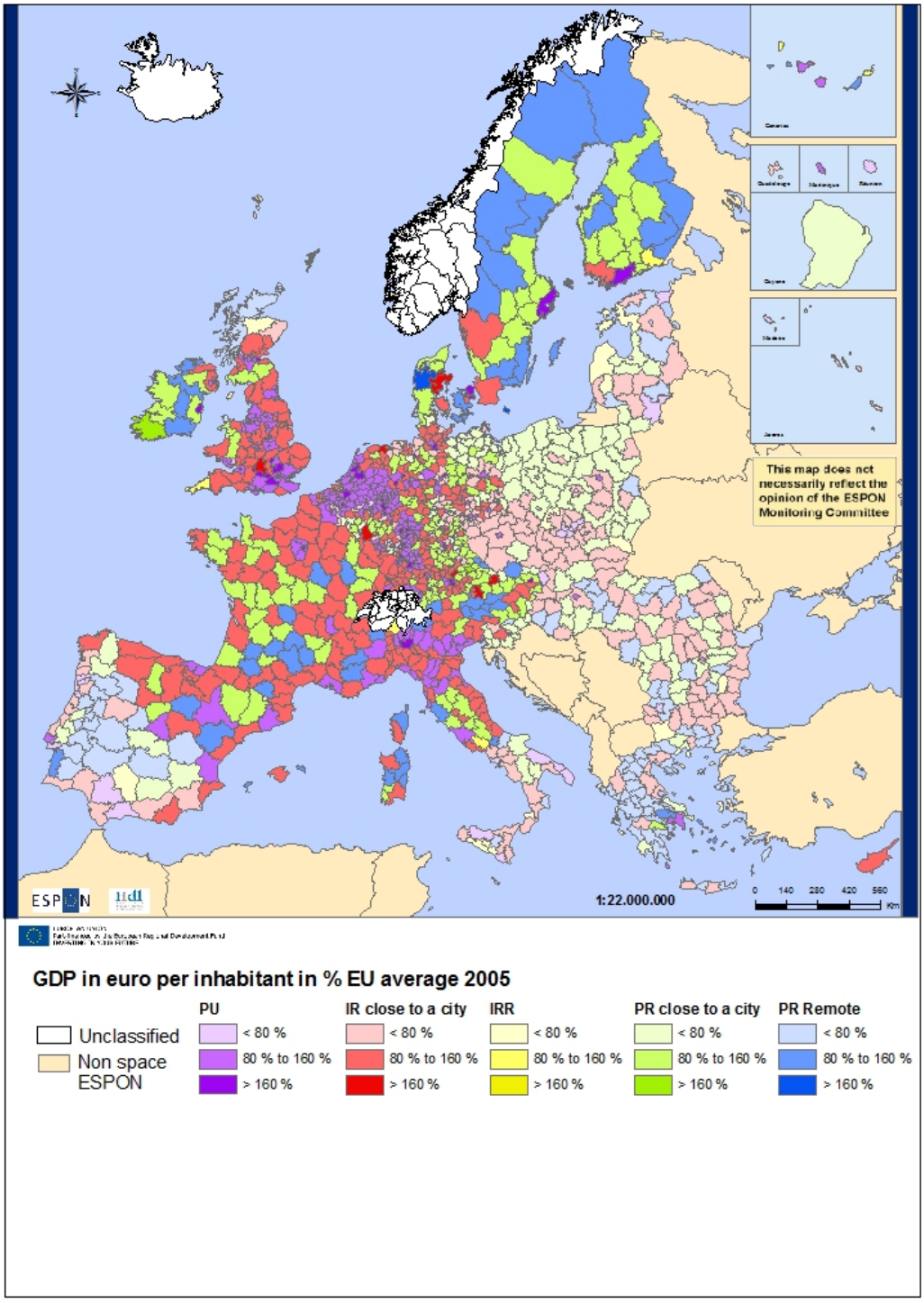
There is a clear difference on GDP ratio between Old Member States and New Member States, i.e. the first ones produce more goods and services per capita than the second ones. Nonetheless, it does not reflect than institutional capacities are better in the first ones (and viceversa) Heterogenic situations among the EU regions make difficult a general description of the institutional capacity of each region type.

East Europe, Portugal, Greece, South-West of Spain and South of Italy have rates below 80€/capita, mainly distributed in IRC, PRC and PRR areas. The rurality issue, unfortunately, is linked with difficult socio-economic cohesion, lack of funds for social development and difficult multi-level governance approach commissioning. (See Kahila P. et al, 2009, *Institutional capacity*, EDORA project, Applied Research Project 2013/1/2)

Central West countries, Scandinavian, North of Spain and Italy, and Anglo-Saxon countries have rates from 80€/capita to 160€/capita; In some little IRC and PU spots of Central West countries, Scandinavian and United Kingdom, GDP rates reach more than 160 €/capita. Except Finland and Sweden (with major distribution in PRR and PRC areas with medium rates), the rest Old Member States' GDP rates are distributed among IRC, PU and PRC areas. The wager for high-tech manufactories in a knowledge based economy context provokes a rise on the GDP ratio per capita as final incomes are high.

As far as rural typologies, economic growth is mainly concentrated in PU and IRC areas since they are neuralgic business centres and concentrate more population (i.e. more labour force) with higher education level. It could be inferred, consequently, that living standards and institutional capacity are better developed as well in these areas, but it is just a supposition that needs more contrast data referred to non-market indicators.

Map 7.1 GDP in euro per inhabitant in % EU average (2005)



Source: own elaboration with data from the EDORA Database

SECTION 3

AN ANALYSIS OF THE DIVERSITY OF EUROPEAN REGIONS BASED ON THE EDORA TYPOLOGIES

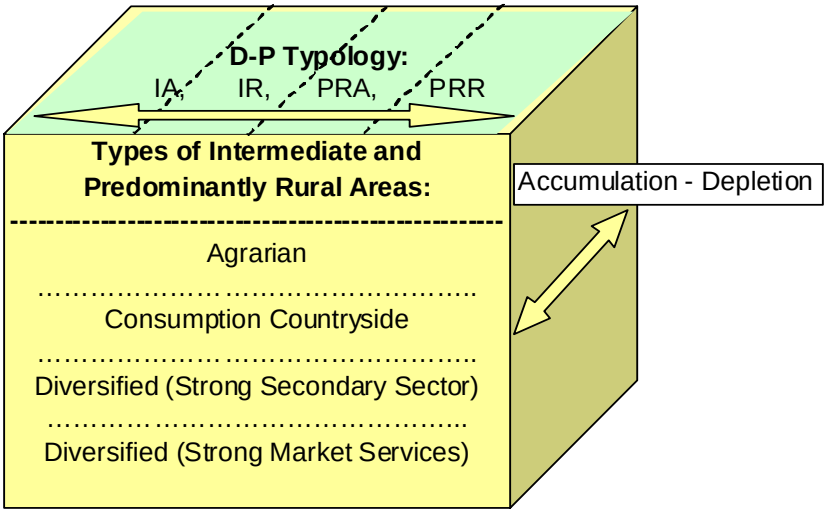
Section 3 of the MS comparative Country Profiles Report focus on the analysis of the three typological components of the EDORA Cube: the rural-urban typology of Dijkstra-Poelman, the Structural typology and the Performance Typology.

The EDORA Cube is composed by three typologies:

- First, the Dijkstra-Poelman typology of rural-urban regions that distinguishes five categories in relation to accessibility and rurality: Predominantly Urban, Intermediate Accessible, Intemediate Remote, Predominantly Rural Accessible and Predominantly Rural Remote.

- Second, the EDORA Structural typology. The second dimension seeks to capture the most important differences in economic structure between the Intermediate and Predominantly Rural regions of the ESPON space. This typology considers four categories in relation to the socioeconomic structure: agrarian economies, consumption countryside, diversified (with important Secondary Sector), diversified (with important Market Services Sector)..

- Third, the EDORA Performance typology. The last "cube" face, the EDORA Performance Typology, is calculated from a regional composite performance indicator from 5 indicators (net migration, per capita GDP, average annual change in GDP, average annual change in total employment, and unemployment rate). The composite indicator is calculated as the average of the normalised (Z) scores for the five indicators. The four categories have been defined by the average standardised score as follows:
  - *Accumulation regions*: <-0.5 (i.e. more than half a standard deviation below the "non-urban" mean).
  - *Above average regions*: -0.5 to 0 (i.e. less than half a standard deviation below the "non-urban" mean).
  - *Below average regions*: 0 to +0.5 (i.e. less than half a standard deviation above the "non-urban" mean)
  - *Depleting regions*: <-0.5 (i.e. more than half a standard deviation above the "non-urban" mean)



The EDORA Cube – a 3 dimensional framework for analysis

Note: IA = Intermediate Accessible, IR = Intermediate Remote
PRA= Predominantly Rural Accessible PRR = Predominantly Rural Remote

Source: Copus and Noguera, 2010

For each of these, categories, a threefold analysis is carried out:

- **Chapter 8** deals with a comparative analysis of number of NUTs3, total area, population, GDP and GDP per capita for the EU27 countries

- **Chapter 9** develops an analysis of number of NUTs3, total area, population, GDP and GDP per capita in each country of the EU 27

- **Chapter 10** carries out an analysis of the number of NUTs3, total area, population, GDP and GDP per capita by non exclusive groups of countries

CHAPTER 8
COMPARATIVE ANALYSIS OF THE THREE EDORA TYPOLOGIES FOR THE EU27 COUNTRIES

Chapter 8 presents the first of the three analyses of the "EDORA cube" typologies. The EDORA cube is a triangular typology exercise aimed at identifying ruralities in the EU context. Full details on methodology and presentation of results can be found in the EDORA Typology working paper and corresponding sections of the EDORA Final Report.

8.1 Distribution of NUTs 3 regions according to the "EDORA cube" typologies

Table 8.1 analyses the distribution of NUTS3 regions of the EU27 according to categories of the Dijkstra-Poelman typology (hereafter D-P). DP Typology classifies regions according to their accessibility and rurality. Accesibility is measured in % of population which access to a market town under a particular time threshold. Rurality is linked to more extensive (as opposite to intensive) land use and, therefore, the variable is % of population living in rural LAU; that is, those below 150 inhab./km^2. Special attention is given to the categories "Intermediate" and "Predominantly" rural, while reducing attention to category "Predominantly Urban (PU) due to the research focus of EDORA on rural areas.

Only few countries have significant percentages of their NUT3 regions in PU categories. These are smaller countries in which the urban component is dominant either due to its administrative function (Netherlands or Belgium) or touristic (Malta). Relatively large countries also have a significant percentage of urban regions. It is the case of the UK (61.6%) due to the existence of a dense and balanced urban fabric, and Germany (44%) which combines a dense urban fabric with a NUT3 size that allows a more effective identification of urban regions. Most remaining countries are located in values ranging from 31% in Italy to 0% in countries like Cyprus and Slovenia.

Higher percentages of accessible regions (70-80%), according to the definition of D-P, match smaller countries, mainly located in central Europe (Czech Republic, Slovakia, Hungary, Slovenia). Also larger countries have high percentages of accessible regions, either because possess a dense urban fabric (France) or due to their favourable geomorphologic conditions (Poland).

Countries with higher percentages of remote regions (about 40) are clearly within the geographical periphery of the EU and, in some cases, have large territories (Sweden, Finland, Greece, Portugal).

On the other hand, rurality is concentrated in countries that combine a larger area and a peripheral geographical position. Thus, we observe rates of over 70% of predominantly rural regions in Finland, Sweden, Ireland and Greece. Furthermore, Austria is over 70% due to the dominance of mountainous areas.

Table 8.1 Dijkstra-Poelman Typology. Number of regions (in % of MS total)

Regions		D-P Typology				% of MS Total
		PU	IA	IR	PRA	PRR
Austria	AT	5,71	22,86	0,00	48,57	22,86
Belgium	BE	61,36	22,73	0,00	15,91	0,00
Bulgaria	BG	3,57	50,00	7,14	14,29	25,00
Cyprus	CY	0,00	100,00	0,00	0,00	0,00
Czech Republic	CZ	7,14	85,71	0,00	7,14	0,00
Germany	DE	44,06	35,43	0,00	20,05	0,47
Denmark	DK	27,27	27,27	0,00	18,18	27,27
Estonia	EE	20,00	40,00	20,00	0,00	20,00
Spain	ES	20,34	37,29	5,08	15,25	22,03
Finland	FI	5,00	5,00	5,00	45,00	40,00
France	FR	13,00	50,00	0,00	24,00	13,00
Greece	GR	1,96	17,65	7,84	9,80	62,75
Hungary	HU	5,00	40,00	0,00	25,00	30,00
Ireland	IE	12,50	0,00	0,00	50,00	37,50
Italy	IT	31,78	42,06	4,67	11,21	10,28
Lithuania	LT	10,00	40,00	10,00	20,00	20,00
Luxembourg	LU	0,00	100,00	0,00	0,00	0,00
Latvia	LV	16,67	16,67	16,67	33,33	16,67
Malta	MT	100,00	0,00	0,00	0,00	0,00
Netherlands	NL	67,50	30,00	0,00	2,50	0,00
Poland	PL	18,18	27,27	3,03	50,00	1,52
Portugal	PT	23,33	26,67	0,00	10,00	40,00
Romania	RO	2,38	42,86	0,00	35,71	19,05
Sweden	SE	4,76	9,52	0,00	42,86	42,86
Slovenia	SI	0,00	25,00	8,33	58,33	8,33
Slovakia	SK	12,50	62,50	0,00	25,00	0,00
United Kingdom	UK	61,65	28,57	1,50	3,76	4,51

Source: EDORA Typology

Key: **Green**: 20-40% -
Yellow: 40-60%
Red: > 60%

Figure 8.2 shows the percentage of NUT3 regions of the EU27 which is located in each of the categories of the EDORA Structural Typology. The structural typology classifies regions according to their economic settings. According to this typology, regions can have an economic base focused on primary activities, or be focused on the "consumption countryside", or have diversified economies dominated by secondary activities or by private services. The analyses carried out on the EDORA typology and those made elsewhere in this report show that regions with an agricultural economy and to a lesser extent, those focused on "consumtion countryside" concentrate the main problems associated with rural decline. By contrast, rural regions with diversified economies have better economic and demographic indicators.

Rural regions whose economies are primarily agriculture-based match peripheral areas that have kept less modernised agricultural structures and means of production Moreover, social modernization has only been carried out partially and, therefore, there are still few

opportunities for economic diversification in rural areas. Therefore, most countries with the highest percentages of rural areas under the category "Agriculture" (more than 50%) are located in the NMS. We need to keep in mind, in any case that these agriculture-based rural regions includes a variety of types ranging from some areas of subsistence farming in Romania or Bulgaria to industrialised agricultural production complexes in Poland or other countries.

The regions defined as "consumption countryside" are characterised by areas dominated by one or more services together, typically geared to the urban population (access to environmental assets, tourism capacity, and farm diversification). Consequently, there is not only one type of rural areas but many rural profiles that have in common the orientation to urban consumption, usually in forms of tourism. Most countries show significant percentages of their regions in this category. Due to the diversity of sub-categories implicit in the Consumption Countryside we can not speak of uniformity; each region under this category may have a different economic settings with the common denominator of their orientation to urban consumption. Only two conditions seem to be implicit in this type of regions: on the one hand, a relative low importance of agriculture as economic activity and employment provider; on the other hand, a mature urban demand that makes possible consumption of rural goods beyond a critical threshold.

Within these diversified rural economies the EDORA Structural typology differentiates two situations: on the one hand, areas where secondary activity (industry and construction) is the most relevant; on the other hand, areas where private services constitute the main economic activity.

Diversified rural economies with strong secondary sectors may refer to the implementation of diffuse processes of industrialisation in intermediate rural areas (ie. Marshallian districts in Spain or Portugal). It may, on the other hand, be the remnants of industrial specialization associated with the communist era (Hungary, Czech Republic, Slovakia, Poland) to be reinforced in recent years because of relocation of large industrial plants from other less competitive locations in terms of costs. For these areas, industrial know-how accumulated during the twentieth century and the lower costs of land and labour, along with the EU “umbrella” are the main potentials. However, the maintenance of an industrial activity of this sort does not guarantee an easy path to long term, sustainable development unless work is undertaken in a proper embedding of the industrial fabric, usually exogenous, in the local development strategy. It can also mean the case of rural regions where agriculture is not a relevant activity due to land or climate constraints and they have managed to develop or attract industrial activity.

Rural areas with diversified economies that have a powerful private services sector are present in few regional environments. It is the case for non-urban tourist regions in which much of the economy hinges on the services sector without a very specific thematic orientation as with the “consumption countryside”. It should also be included here a set of regions of France, Denmark and the Netherlands. Territorial diversity of these countries, the presence of consolidated urban markets, or counter-urbanisation processes that have brought urban population to rural areas may be explanatory factors

Table 8.2 Structural Typology. Number of regions (in % of MS total)

		Structural Typology			% of MS Total
		Ag	CC	D(Sec)	D(PServe)
Austria	AT	8,57	60,00	17,14	8,57
Belgium	BE	2,27	18,18	4,55	13,64
Bulgaria	BG	78,57	17,86	0,00	0,00
Cyprus	CY	0,00	100,00	0,00	0,00
Czech Republic	CZ	0,00	28,57	57,14	7,14
Germany	DE	0,00	41,96	6,06	7,93
Denmark	DK	0,00	45,45	9,09	18,18
Estonia	EE	20,00	60,00	0,00	0,00
Spain	ES	22,03	40,68	11,86	5,08
Finland	FI	0,00	95,00	0,00	0,00
France	FR	8,00	23,00	1,00	55,00
Greece	GR	80,39	17,65	0,00	0,00
Hungary	HU	50,00	20,00	20,00	5,00
Ireland	IE	0,00	75,00	12,50	0,00
Italy	IT	12,15	40,19	1,87	14,02
Lithuania	LT	50,00	20,00	10,00	10,00
Luxembourg	LU	0,00	100,00	0,00	0,00
Latvia	LV	66,67	16,67	0,00	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	2,50	10,00	20,00
Poland	PL	53,03	7,58	13,64	7,58
Portugal	PT	33,33	40,00	0,00	3,33
Romania	RO	88,10	2,38	4,76	2,38
Sweden	SE	0,00	90,48	0,00	4,76
Slovenia	SI	16,67	83,33	0,00	0,00
Slovakia	SK	0,00	62,50	25,00	0,00
United Kingdom	UK	0,00	26,32	3,01	9,02

Source: EDORA Typology

Key: **Green**: 20-40%
Yellow: 40-60%
Red: > 60%

Table 8.3 shows the percentage of rural regions of the EU27 countries for each category of the EDORA Performance Typology. The EDORA Performance Typology is calculated from a regional composite performance indicator from 5 indicators (net migration, per capita GDP, average annual change in GDP, average annual change in total employment, and unemployment rate). The composite indicator is calculated as the average of the normalised (Z) scores for the five indicators. The four categories have been defined by the average standardised score as follows:

- *Accumulation regions*: <-0.5 (i.e. more than half a standard deviation below the "non-urban" mean).
- *Above average regions*: -0.5 to 0 (i.e. less than half a standard deviation below the "non-urban" mean).
- *Below average regions*: 0 to +0.5 (i.e. less than half a standard deviation above the "non-urban" mean)

- *Depleting regions*: <-0.5 (i.e. more than half a standard deviation above the "non-urban" mean)

More or less pronounced, NMS concentrate higher percentages of depleting regions. Thus, Romania and Bulgaria are the countries with the highest percentages (over 70%) but closely followed by Latvia (66%), Poland (59%) and Lithuania (50%). These low regional yields are associated with a set of elements that, in this case, refer to population dynamics, wealth and its evolution, and the strength and dynamism of the labor market. The percentage of depleting regions in the EU15 is very low. It is worthy highlighting 14% in Germany, related to the adjustment problems of Eastern Landers, and 12% of Greece for the problems of isolation and rurality of some areas.

Table 8.3 Performance Typology. Number of regions (in % of MS total)

		Performance Typology			% of MS Total
		Deplet.	Below	Above	Accum.
Austria	AT	0,00	25,71	34,29	34,29
Belgium	BE	2,27	22,73	11,36	2,27
Bulgaria	BG	75,00	14,29	7,14	0,00
Cyprus	CY	0,00	0,00	0,00	100,00
Czech Republic	CZ	0,00	71,43	21,43	0,00
Germany	DE	15,15	14,45	21,45	4,90
Denmark	DK	0,00	9,09	45,45	18,18
Estonia	EE	0,00	60,00	0,00	20,00
Spain	ES	0,00	10,17	25,42	44,07
Finland	FI	5,00	25,00	50,00	15,00
France	FR	1,00	25,00	42,00	19,00
Greece	GR	13,73	39,22	35,29	9,80
Hungary	HU	15,00	55,00	20,00	5,00
Ireland	IE	0,00	0,00	0,00	87,50
Italy	IT	3,74	23,36	21,50	19,63
Lithuania	LT	50,00	40,00	0,00	0,00
Luxembourg	LU	0,00	0,00	0,00	100,00
Latvia	LV	50,00	16,67	16,67	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	5,00	20,00	7,50
Poland	PL	56,06	21,21	4,55	0,00
Portugal	PT	0,00	40,00	30,00	6,67
Romania	RO	69,05	26,19	0,00	2,38
Sweden	SE	0,00	33,33	61,90	0,00
Slovenia	SI	0,00	41,67	50,00	8,33
Slovakia	SK	37,50	37,50	12,50	0,00
United Kingdom	UK	0,00	6,77	12,78	18,80

Source: EDORA Typology

Key: **Green**: 20-40%
Yellow: 40-60%
Red: > 60%

The set of rural regions "below average" includes areas facing some weakness in the indicators used (emigration, wealth and employment) that gives them a lower performance than the European average. These are regions that are in a position of weakness, however, is not as pronounced as in the case of depleting regions. At this level are placed high percentages of some of the NMS rural regions (Czech Republic, Slovakia, Estonia, Hungary, Lithuania) and somewhat lower percentages of other NMS whose highest percentages are located in the "Depleting" areas. Besides these cases, unlike the previous category, a number of EU15 countries also have percentages of rural regions in this category that are around 20-30% (Austria, Belgium, Finland, France) and raises above 40% in Portugal and Sweden.

When we accumulate the percentages of the regions below the mean ("depleting" and "below average") we get a truer picture of the situation that reinforces the above arguments. Ten of twelve NMS get percentages above 60% of their rural regions in these categories. The percentages go to more than 80% in Romania, Bulgaria and Lithuania.

As for areas that are placed above the average, most do in the "above average" category and only a relatively small percentage in the category "Accumulating". In any case, it is noteworthy that most of these regions are concentrated in countries with higher GDP per capita (ie. the EU 15). Furthermore, the highest percentages of rural regions in the category "Accumulating" are located in small countries (Cyprus and Luxembourg) and in countries that, at that point in time, were under the influence of an explosive development of the building and associated sectors (Ireland and Spain).

8.2 Total area distribution of NUTs 3 regions according to the "EDORA cube" typologies

This section presents the distribution of the total area of NUT3 in the three EDORA typologies: D-P, Structural and Performance. This is done in two ways: first, as the total percentage of each category in each typology; second, as the differential between the percentage of regions in each category and the percentage of total area representing these regions. The differential results in a percentage that goes to 0% to the extent that the number of regions and the total area match. A high differential (over 10%) indicates a significant heterogeneity in the size of the regions of a member state.

Tables 8.4, 8.6 and 8.8 present the percentage of total area of NUT3 regions for the EU27 for each EDORA typology. Tables 8.51, 8.7 and 8.9 show differentials between the percentage of NUT3 regions in each category and the percentage of total area representing these regions.

Table 8.4 analyses the total area of NUTS3 regions of the EU27 according to categories of the Dijkstra-Poelman typology (hereafter D-P). D-P Typology classifies regions according to their accessibility and rurality. Accesibility is measured in % of population which access to a market town under a particular time threshold. Rurality is linked to more extensive (as opposite to intensive) land use and, therefore, the variable is % of population living in rural LAU; that is, those below 150 inhab./km^2. Special attention is given to the categories "Intermediate" and "Predominantly" rural, while reducing attention to category "Predominantly Urban (PU) due to the research focus of EDORA on rural areas.

Most of the territory is located in urban or intermediate areas (IA-IR) in small countries (Cyprus), where the geomorphological conditions do not impose significant restrictions on accessibility (Bulgaria, Czech Republic, Slovakia) or where infrastructure networks are dense and well development (Italy, Germany, France, Spain). Some of these countries combine several of these factors (Belgium, Netherlands, Luxembourg).

Rurality in terms of territory is most pronounced in the entire area of Ireland (99%), Finland (93%), Poland (91%) and Sweden (90%). It also shows percentages above 70% in Austria, Denmark, Greece, Portugal and Slovenia.

Table 8.4 Dijkstra-Poelman Typology. Total area (in % of MS total)

		% of MS Total				
		PU	IA	IR	PRA	PRR
Austria	AT	1,36	20,20	0,00	47,65	30,79
Belgium	BE	54,86	20,64	0,00	24,50	0,00
Bulgaria	BG	1,22	53,36	8,86	13,02	23,54
Cyprus	CY	0,00	100,00	0,00	0,00	0,00
Czech Republic	CZ	0,63	90,75	0,00	8,62	0,00
Germany	DE	19,48	44,55	0,00	35,42	0,55
Denmark	DK	4,58	23,67	0,00	38,64	33,11
Estonia	EE	7,70	46,07	25,48	0,00	20,75
Spain	ES	14,06	37,35	2,79	21,01	24,78
Finland	FI	2,00	3,22	1,65	36,36	56,76
France	FR	4,44	47,23	0,00	36,05	12,28
Greece	GR	2,89	21,44	1,75	11,39	62,54
Hungary	HU	0,56	41,47	0,00	28,71	29,25
Ireland	IE	1,32	0,00	0,00	58,05	40,63
Italy	IT	25,40	43,94	3,92	16,15	10,59
Lithuania	LT	14,90	45,51	6,66	15,14	17,78
Luxembourg	LU	0,00	100,00	0,00	0,00	0,00
Latvia	LV	0,47	22,54	21,06	32,32	23,62
Malta	MT	100,00	0,00	0,00	0,00	0,00
Netherlands	NL	56,12	41,07	0,00	2,81	0,00
Poland	PL	3,10	4,83	0,00	86,71	5,35
Portugal	PT	8,58	21,70	0,00	9,99	59,73
Romania	RO	0,10	44,62	0,00	34,32	20,96
Sweden	SE	1,54	8,33	0,00	31,14	59,00
Slovenia	SI	0,00	24,45	5,15	65,27	5,13
Slovakia	SK	4,19	63,59	0,00	32,22	0,00
United Kingdom	UK	22,96	49,76	1,56	11,12	14,61

Source: EDORA Typology

Key: **Green**: 20-40% -
Yellow: 40-60%
Red: > 60%

Differentials between number of regions and total area are shown in Figure 8.5. The differential results in a percentage that goes to 0% to the extent that the number of regions and the total area match. A high differential (over 10%) indicates a significant heterogeneity in the size of the regions of a member state.

Figure 8.5 shows that the largest positive differential (ie, a percentage of regions greater than the percentage of geographic area) relate mainly to urban and, to a lesser extent, intermediate regions. Thus, urban regions of the United Kingdom, Germany and Denmark show differentials over 20% while urban regions of Latvia, Poland, Portugal, Estonia and Ireland, are above the threshold of 10%. By contrast, rural areas are those that accumulate wider negative differentials, mainly due to their larger size. It is the case in Poland, Denmark, Portugal, Finland and Sweden. The countries where differentials are lower and thus where there is a greater

balance in the size of the regions are Bulgaria, Spain, Greece, Hungary, Italy, Romania and Slovenia.

Table 8.5 Dijkstra-Poelman Typology. % Number of Regions - %Total area (in % of MS total)

		D-P Typology				% of MS Total
		PU	IA	IR	PRA	PRR
Austria	AT	4,35	2,66	0,00	0,92	-7,93
Belgium	BE	6,50	2,09	0,00	-8,59	0,00
Bulgaria	BG	2,36	-3,36	-1,72	1,26	1,46
Cyprus	CY	0,00	0,00	0,00	0,00	0,00
Czech Republic	CZ	6,51	-5,04	0,00	-1,47	0,00
Germany	DE	24,57	-9,12	0,00	-15,37	-0,08
Denmark	DK	22,70	3,60	0,00	-20,46	-5,84
Estonia	EE	12,30	-6,07	-5,48	0,00	-0,75
Spain	ES	6,28	-0,06	2,29	-5,76	-2,75
Finland	FI	3,00	1,78	3,35	8,64	-16,76
France	FR	8,56	2,77	0,00	-12,05	0,72
Greece	GR	-0,93	-3,79	6,09	-1,58	0,20
Hungary	HU	4,44	-1,47	0,00	-3,71	0,75
Ireland	IE	11,18	0,00	0,00	-8,05	-3,13
Italy	IT	6,38	-1,88	0,75	-4,93	-0,31
Lithuania	LT	-4,90	-5,51	3,34	4,86	2,22
Luxembourg	LU	0,00	0,00	0,00	0,00	0,00
Latvia	LV	16,20	-5,87	-4,39	1,01	-6,95
Malta	MT	0,00	0,00	0,00	0,00	0,00
Netherlands	NL	11,38	-11,07	0,00	-0,31	0,00
Poland	PL	15,08	22,44	3,03	-36,71	-3,84
Portugal	PT	14,75	4,96	0,00	0,01	-19,73
Romania	RO	2,28	-1,77	0,00	1,39	-1,91
Sweden	SE	3,22	1,20	0,00	11,72	-16,14
Slovenia	SI	0,00	0,55	3,18	-6,94	3,20
Slovakia	SK	8,31	-1,09	0,00	-7,22	0,00
United Kingdom	UK	38,70	-21,19	-0,05	-7,36	-10,10

Source: EDORA Typology

Key: **Dark blue**: >20%
Light blue: 10 to 20%
Yellow: -10 to -20%
Orange: < -20€

Figure 8.6 shows the total area of NUT3 regions of the EU27 which is located in each of the categories of the EDORA Structural Typology. The structural typology classifies regions according to their economic settings. According to this typology, regions can have an economic base focused on primary activities, or be focused on the "consumption countryside", or have diversified economies dominated by secondary activities or by private services. The analyses carried out on the EDORA typology and those made elsewhere in this report show that regions with an agricultural economy and to a lesser extent, those focused on "consumption countryside" concentrate the main problems associated with rural decline. By contrast, rural regions with diversified economies have better economic and demographic indicators.

Rural areas whose economy is centred on agriculture account for most of the countries in which rurality is high or those holding weaker economies. This is the case of Romania (89%), Latvia (84%), Greece (82%), Bulgaria (79%), Poland (79%). Also relevant percentages are present in Hungary (58%), Portugal (56%) and Lithuania (47%)

The areas of 'consumption countryside' are dominant in most countries. The regions defined as "consumption countryside" are characterised by areas dominated by one or more services together, typically geared to the urban population (access to environmental assets, tourism capacity, and farm diversification). Consequently, there is not only one type of rural areas but many rural profiles that have in common the orientation to urban consumption, usually in forms of tourism. Most countries show significant percentages of their regions in this category. Due to the diversity of sub-categories implicit in the Consumption Countryside we can not speak of uniformity; each region under this category may have a different economic settings with the common denominator of their orientation to urban consumption. Only two conditions seem to be implicit in this type of regions: on the one hand, a relative low importance of agriculture as economic activity and employment provider; on the other hand, a mature urban demand that makes possible consumption of rural goods beyond a critical threshold

Within diversified rural economies the EDORA Structural typology differentiates two situations: on the one hand, areas where secondary activity (industry and construction) is the most relevant; on the other hand, areas where private services constitute the main economic activity.

Diversified rural economies with strong secondary sectors may refer to the implementation of diffuse processes of industrialisation in intermediate rural areas (ie. Marshallian districts in Spain or Portugal). It may, on the other hand, be the remnants of industrial specialization associated with the communist era (Hungary, Czech Republic, Slovakia, Poland) to be reinforced in recent years because of relocation of large industrial plants from other less competitive locations in terms of costs. For these areas, industrial know-how accumulated during the twentieth century and the lower costs of land and labour, along with the EU “umbrella” are the main potentials. However, the maintenance of an industrial activity of this sort does not guarantee an easy path to long term, sustainable development unless work is undertaken in a proper embedding of the industrial fabric, usually exogenous, in the local development strategy. It can also mean the case of rural regions where agriculture is not a relevant activity due to land or climate constraints and they have managed to develop or attract industrial activity. Total area under this category is only relevant in Czech Republic (70%), and Slovakia (21%).

Rural areas with diversified economies that have a powerful private services sector are present in few regional environments. It is the case for non-urban tourist regions in which much of the economy hinges on the services sector without a very specific thematic orientation as with the “consumption countryside”. It should also be included here a set of regions of France (68%) and the Netherlands (35%). Territorial diversity of these countries, the presence of

consolidated urban markets, or counter-urbanisation processes that have brought urban population to rural areas may be explanatory factors.

Table 8.6 Structural Typology. Total area (in % of MS total)

		Structural Typology			% of MS Total
		Ag	CC	D(Sec)	D(PServe)
Austria	AT	11,55	62,41	19,38	5,30
Belgium	BE	1,19	23,46	3,96	16,53
Bulgaria	BG	79,74	19,04	0,00	0,00
Cyprus	CY	0,00	100,00	0,00	0,00
Czech Republic	CZ	0,00	20,00	70,24	9,12
Germany	DE	0,00	56,89	10,45	13,18
Denmark	DK	0,00	61,80	16,75	16,88
Estonia	EE	20,75	71,55	0,00	0,00
Spain	ES	34,65	30,72	13,86	6,71
Finland	FI	0,00	98,00	0,00	0,00
France	FR	7,20	19,56	0,83	67,97
Greece	GR	82,57	14,54	0,00	0,00
Hungary	HU	58,07	17,79	16,70	6,87
Ireland	IE	0,00	81,19	17,49	0,00
Italy	IT	12,01	47,24	1,36	13,98
Lithuania	LT	47,04	19,00	6,66	12,39
Luxembourg	LU	0,00	100,00	0,00	0,00
Latvia	LV	83,84	15,69	0,00	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	4,95	9,27	29,65
Poland	PL	79,54	14,63	2,73	0,00
Portugal	PT	56,03	32,98	0,00	2,41
Romania	RO	92,04	2,97	4,23	0,66
Sweden	SE	0,00	95,89	0,00	2,58
Slovenia	SI	13,78	86,22	0,00	0,00
Slovakia	SK	0,00	74,42	21,39	0,00
United Kingdom	UK	0,00	57,39	2,73	16,93

Source: EDORA Typology

Key: **Green**: 20-40%
Yellow: 40-60%
Red: > 60%

Differentials between number of regions and total area for the Structural Typology are shown in Figure 8.6. The differential results in a percentage that goes to 0% to the extent that the number of regions and the total area match. A high differential (over 10%) indicates a significant heterogeneity in the size of the regions of a member state in relation to each type.

The vast majority of relevant differentials (>10%) occur in the negative side (ie. usually rural regions accumulate more land per unit of measure and this is the reason why most negative differentials are in the agriculture and consumption countryside regions). The biggest differentials are:

In the case of rural regions with dominant agricultural economy greatest differentials are in Poland (-27%), Portugal (-23%), Latvia (-17%) and Spain (-13%).

In rural regions dominated by "consumption countryside" greatest differential occur in United Kingdom (-31%), Denmark (-16%), Germany (-15%), Slovakia (-12%) and Estonia (-12%).

Rural regions with diversified economies and dominant secondary sector show differentials in the positive and negative sides. The former refers to Poland (11%) while the latter refers to Czech Republic (-13%).

Rural regions with diversified economies and dominant "private services" sector show significant negative differentials in France (-13%)

Table 8.7 Structural Typology. % Number of Regions - %Total area (in % of MS total)

		% of MS Total			
		Ag	CC	D(Sec)	D(PServe)
Austria	**AT**	-2,98	-2,41	-2,24	3,27
Belgium	**BE**	1,09	-5,28	0,58	-2,90
Bulgaria	**BG**	-1,17	-1,18	0,00	0,00
Cyprus	**CY**	0,00	0,00	0,00	0,00
Czech Republic	**CZ**	0,00	8,57	-13,10	-1,98
Germany	**DE**	0,00	-14,93	-4,39	-5,26
Denmark	**DK**	0,00	-16,35	-7,66	1,31
Estonia	**EE**	-0,75	-11,55	0,00	0,00
Spain	**ES**	-12,62	9,96	-1,99	-1,62
Finland	**FI**	0,00	-3,00	0,00	0,00
France	**FR**	0,80	3,44	0,17	-12,97
Greece	**GR**	-2,18	3,11	0,00	0,00
Hungary	**HU**	-8,07	2,21	3,30	-1,87
Ireland	**IE**	0,00	-6,19	-4,99	0,00
Italy	**IT**	0,14	-7,06	0,51	0,04
Lithuania	**LT**	2,96	1,00	3,34	-2,39
Luxembourg	**LU**	0,00	0,00	0,00	0,00
Latvia	**LV**	-17,17	0,97	0,00	0,00
Malta	**MT**	0,00	0,00	0,00	0,00
Netherlands	**NL**	0,00	-2,45	0,73	-9,65
Poland	**PL**	-26,51	-7,06	10,91	7,58
Portugal	**PT**	-22,69	7,02	0,00	0,92
Romania	**RO**	-3,95	-0,59	0,53	1,72
Sweden	**SE**	0,00	-5,41	0,00	2,19
Slovenia	**SI**	2,89	-2,89	0,00	0,00
Slovakia	**SK**	0,00	-11,92	3,61	0,00
United Kingdom	**UK**	0,00	-31,07	0,28	-7,90

Source: EDORA Typology

Key: **Dark blue**: >20%
Light blue: 10 to 20%
Yellow: -10 to -20%
Orange: < -20€

Table 8.8 shows the percentage of total area of the EU27 countries for each category of the EDORA Performance Typology. The EDORA Performance Typology is calculated from a regional composite performance indicator from 5 indicators (net migration, per capita GDP, average annual change in GDP, average annual change in total employment, and unemployment rate). The composite indicator is calculated as the average of the normalised (Z) scores for the five indicators. The four categories have been defined by the average standardised score as follows:

- *Accumulation regions*: <-0.5 (i.e. more than half a standard deviation below the "non-urban" mean).
- *Above average regions*: -0.5 to 0 (i.e. less than half a standard deviation below the "non-urban" mean).
- *Below average regions*: 0 to +0.5 (i.e. less than half a standard deviation above the "non-urban" mean)
- *Depleting regions*: <-0.5 (i.e. more than half a standard deviation above the "non-urban"

The total area under the "depleting" category involves more than 50% of the total in 5 of the new member states: Poland (63%), Latvia (63%), Bulgaria (66%), Romania (70%), Slovakia (51%). Close to these values is Lithuania (45%). It is relevant to point out that 1/4th of German territory is classified under this category, matching the eastern *Lander*. These are the areas suffering more problems of emigration, unemployment and lower income level.

The regions "below average" are relevant in a number of countries, especially the new member states. As in the analysis of the distribution of NUT3, "below the average" and "depleting" areas are located in the less modernised economies of Europe. By contrast, the "above average" and "accumulation" areas are mainly located in countries with stronger economies and higher income levels.

Table 8.8 Performance Typology. Total area (in % of MS total)

		Performance Typology			% of MS Total
		Deplet.	Below	Above	Accum.
Austria	AT	0,00	27,04	39,50	32,09
Belgium	BE	3,06	26,96	14,22	0,90
Bulgaria	BG	66,62	22,36	9,80	0,00
Cyprus	CY	0,00	0,00	0,00	100,00
Czech Republic	CZ	0,00	63,07	36,31	0,00
Germany	DE	24,01	20,18	29,62	6,71
Denmark	DK	0,00	1,37	78,48	15,58
Estonia	EE	0,00	82,39	0,00	9,92
Spain	ES	0,00	18,00	30,41	37,53
Finland	FI	7,23	49,33	35,87	5,58
France	FR	0,27	35,61	40,55	19,12
Greece	GR	11,04	42,30	33,25	10,52
Hungary	HU	16,58	60,27	15,71	6,87
Ireland	IE	0,00	0,00	0,00	98,68
Italy	IT	2,74	28,94	17,78	25,14
Lithuania	LT	44,99	40,10	0,00	0,00
Luxembourg	LU	0,00	0,00	0,00	100,00
Latvia	LV	62,78	21,06	15,69	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	3,06	28,14	12,68
Poland	PL	63,26	33,64	0,00	0,00
Portugal	PT	0,00	50,31	33,79	7,32
Romania	RO	70,00	29,23	0,00	0,66
Sweden	SE	0,00	53,74	44,72	0,00
Slovenia	SI	0,00	29,16	58,24	12,60
Slovakia	SK	51,35	35,28	9,18	0,00
United Kingdom	UK	0,00	10,17	33,47	33,41

Source: EDORA Typology

Key: **Green**: 20-40%
Yellow: 40-60%
Red: > 60%

Differentials between number of regions and total area for the Performance Typology are shown in Figure 8.9. The differential results in a percentage that goes to 0% to the extent that the number of regions and the total area match. A high differential (over 10%) indicates a significant heterogeneity in the size of the regions of a member state.

Differentials resulting from the comparison between number of regions and total area, in the case of the Performance Typology are, as in the case of the Structural Typology, mostly negative. Again, the cause is the exclusion from the analysis of Urban regions and the empirical evidence that Rural regions are more extensive.

Important differentials are not recorded in the case of "depleting" regions. Just highlight the cases of Latvia (-17%) and Slovakia (-14%).

Differentials in "below average" regions are more significant. Here stand Finland (-24%), Estonia (-22%) Sweden (-20%) and France (-10%). On the positive side, Slovenia shows a differential of 12%.

In the case of regions "above average" differentials are shown both in positive and negative. In the first case includes Sweden (17%) and Finland (14%). In the case of negative differentials includes Denmark (-25%), United Kingdom (-20%) and the Czech Republic (-15%).

As in case of "depleting regions", the areas of differential accumulation are not elevated. Just highlights the UK (-15%) and Ireland (-11%) for negative differentials, whilst Estonia (10%) stands for its positive differential.

Table 8.9 Performance Typology. % Number of Regions - %Total area (in % of MS total)

		Performance Typology			% of MS Total
		Deplet.	Below	Above	Accum.
Austria	AT	0,00	-1,33	-5,22	2,19
Belgium	BE	-0,79	-4,23	-2,86	1,37
Bulgaria	BG	8,38	-8,08	-2,66	0,00
Cyprus	CY	0,00	0,00	0,00	0,00
Czech Republic	CZ	0,00	8,36	-14,88	0,00
Germany	DE	-8,86	-5,72	-8,17	-1,82
Denmark	DK	0,00	7,73	-33,02	2,60
Estonia	EE	0,00	-22,39	0,00	10,08
Spain	ES	0,00	-7,83	-4,99	6,54
Finland	FI	-2,23	-24,33	14,13	9,42
France	FR	0,73	-10,61	1,45	-0,12
Greece	GR	2,68	-3,09	2,05	-0,72
Hungary	HU	-1,58	-5,27	4,29	-1,87
Ireland	IE	0,00	0,00	0,00	-11,18
Italy	IT	1,00	-5,57	3,71	-5,51
Lithuania	LT	5,01	-0,10	0,00	0,00
Luxembourg	LU	0,00	0,00	0,00	0,00
Latvia	LV	-12,78	-4,39	0,97	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	1,94	-8,14	-5,18
Poland	PL	-7,20	-12,43	4,55	0,00
Portugal	PT	0,00	-10,31	-3,79	-0,65
Romania	RO	-0,95	-3,04	0,00	1,72
Sweden	SE	0,00	-20,41	17,19	0,00
Slovenia	SI	0,00	12,51	-8,24	-4,27
Slovakia	SK	-13,85	2,22	3,32	0,00
United Kingdom	UK	0,00	-3,40	-20,68	-14,62

Source: EDORA Typology

Key: **Dark blue**: >20%
Light blue: 10 to 20%
Yellow: -10 to -20%
Orange: < -20€

8.3 Population distribution of NUTs 3 regions according to the "EDORA cube" typologies

This section presents the distribution of the population of NUT3 in the three EDORA typologies: D-P, Structural and Performance. This is done in two ways: first, as the total percentage of each category in each typology; second, as the differential between the percentage of total area in each category and the percentage of the population representing these regions. The differential results in a percentage that goes to 0% to the extent that the total area and the population match. A high differential (over 10%) indicates a significant concentration of the population in one or more typology categories.

Tables 8.10, 8.12 and 8.14 present the percentage of population of NUT3 regions for the EU27 for each EDORA typology. Tables 8.11, 8.13 and 8.15 show differentials between the percentage of total area in each category and the percentage of the population representing these regions.

Table 8.10 analyses the population of NUTS3 regions of the EU27 according to categories of the Dijkstra-Poelman typology (hereafter D-P). D-P Typology classifies regions according to their accessibility and rurality. Accesibility is measured in % of population which access to a market town under a particular time threshold. Rurality is linked to more extensive (as opposite to intensive) land use and, therefore, the variable is % of population living in rural LAU; that is, those below 150 inhab./km^2. Special attention is given to the categories "Intermediate" and "Predominantly" rural, while reducing attention to category "Predominantly Urban (PU) due to the research focus of EDORA on rural areas.

The analysis of population distribution among the categories of the D-P typology allows isolating the percentage of each country's population that resides in PU regions. Predominantly urban regions account for a significant portion of the population of small countries without complicated terrain like Malta (100%), Belgium (85%) and the Netherlands (83%). Stands also the case of the United Kingdom (70%) associated with the existence of a dense urban system which connects the country, aided by a "friendly" physical environment without major accidents. At a second level there are some of the largest countries (territorial and demographically), in which PU regions also accounts for a significant percentage of the population thanks to the existence of dense and well organised urban systems. This is the case for Germany (58%), Italy (54%) and Spain (48%). Surprisingly, however, the low percentage of population in urban areas of France (30%) as a result of the network of intermediate cities only headed by Paris and a handful of metropolitan area (Lyon, Marseille, Lille, Toulouse and Bordeaux).

Accessibility is one of the main parameters to measure population settlement. If we add up the population living in accessible areas (IA-PRA), without the PU population, results indicate that there is a clear concentration of population in accessible areas to the detriment of remote areas. If we, then, add to this figure the population of PU regions, almost all countries show over 80% of the population in the resulting sum. Consequently, few countries maintain significant portions of the population in remote areas: Greece (32%), Ireland (28%), Denmark

(26%), Latvia (24%) and Finland (22%). The reasons are diverse but are related to their geography: the complicated terrain of Greece, the strong peripherality of northern Scandinavia (Finland) or Ireland's urban macrocephaly.

The above analysis does not imply that predominantly rural regions have been emptied demographically. The relationship between rurality and population operates under different parameters than those explaining accessibility. In the case of D-P categories, the population in predominantly rural regions (PRA-PRR) is still significant in a number of countries. More than half of the population live in predominantly rural regions in 6 countries of the EU27: Ireland (72%), Estonia (65%), Finland (62%), Slovenia (57%), Sweden (51%) and Denmark (50%). It is evident that those are not economically weaker countries but territories with geographic peculiarities that have a significant percentage of its land in categories of rurality which implies a high percentage of rural population.

Table 8.10 Dijkstra-Poelman Typology. Population (in % of MS total)

		D-P Typology				% of MS Total
		PU	IA	IR	PRA	PRR
Austria	AT	23,42	30,87	0,00	35,19	10,52
Belgium	BE	84,71	11,06	0,00	4,22	0,00
Bulgaria	BG	16,18	52,37	6,88	9,23	15,35
Cyprus	CY	0,00	100,00	0,00	0,00	0,00
Czech Republic	CZ	11,61	83,43	0,00	4,96	0,00
Germany	DE	57,77	29,27	0,00	12,77	0,20
Denmark	DK	29,26	20,83	0,00	23,60	26,31
Estonia	EE	12,76	64,75	12,02	0,00	10,47
Spain	ES	48,50	35,81	2,23	7,37	6,08
Finland	FI	26,12	8,67	3,48	42,43	19,31
France	FR	29,56	53,66	0,00	12,97	3,81
Greece	GR	36,16	25,31	2,16	6,77	29,61
Hungary	HU	16,90	42,02	0,00	21,89	19,19
Ireland	IE	27,96	0,00	0,00	44,09	27,95
Italy	IT	54,14	34,02	2,61	6,31	2,92
Lithuania	LT	25,12	50,13	5,15	10,66	8,94
Luxembourg	LU	0,00	100,00	0,00	0,00	0,00
Latvia	LV	31,63	15,44	13,39	29,04	10,50
Malta	MT	100,00	0,00	0,00	0,00	0,00
Netherlands	NL	82,85	15,88	0,00	1,26	0,00
Poland	PL	21,56	29,78	2,34	45,49	0,81
Portugal	PT	52,31	26,76	0,00	5,83	15,10
Romania	RO	9,01	50,29	0,00	27,49	13,20
Sweden	SE	21,14	29,89	0,00	29,35	19,61
Slovenia	SI	0,00	37,27	5,30	53,78	3,65
Slovakia	SK	11,28	63,48	0,00	25,24	0,00
United Kingdom	UK	69,56	27,24	1,17	1,48	0,54

Source: EDORA Typology
Key: **Green**: 20-40%
Yellow: 40-60%
Red: > 60%

Finally, it is worth noting the behaviour of the variable "population" when combined low accessibility and high rurality. This applies to the category "predominantly rural remote" (PRR). In this case it is clear that both variables (accessibility and rurality) and operating effectively to reduce the intensity of human occupation. In 15 of the 27 EU countries PRR regions do not reach 10% of the population in their respective states. Comparatively, only 10 countries of the 27 member states have less than 10% of its territory in this category. Interestingly, remote rural residence is not located primarily in the NMS but in countries with specific geographical constraints that limit the accessibility to parts of their territories, mainly by island or by geography.

Differentials between % of total area of regions and % of population are shown in Figure 8.11. The differential results in a percentage that goes to 0% to the extent that the number of regions and the total area match. A high differential (over 10%) indicates a significant heterogeneity in the size of the regions of a member state.

Differentials between total area and population show, first, that urban areas concentrate a lot more population than the geographical area they represent. This general trend is more pronounced in the UK (-47%), Portugal (-44%), Germany -(38%), Spain (-34%), Greece (-33%) and Latvia (-31%). This means that the population is more concentrated in PU areas in relation to the surface they occupy. Interestingly, both countries recorded negative differentials in PU regions. This is Slovakia (-7%) and Estonia (-5%). These differentials mean that the territorial dimension of the predominantly urban regions is greater than its population size. This contradicts the own definition of urban as an area of higher density and human occupation.

Apart from the PU areas, only the Intermediate regions close to cities (IA) show a tendency to negative differentials, although much less pronounced than in the previous case. These are regions whose accessibility and relatively low rurality allow for dense urban networks and major population settlements. There are several countries that show negative differential in IA regions confirming this hypothesis, Poland (-25%), Sweden (-22%), Estonia (-19%) and Slovenia (13%), among other. However, there are three countries where the trend is the opposite: less demographic than geographic weight in IA regions. This is Netherlands (25%), United Kingdom (23%) and Germany (15%).

The other three categories of the D-P typology (IR, ARP and RRP) show positive differential; ie. the geographic "weight" is greater than the demographic "weight". While differentials are scarce in IR regions, they are much more important in predominantly rural regions (both accessible and remote). Only Finland shows a negative differential (greater geographic than demographic weight) for the case of predominantly rural accessible regions.

Table 8.11 Dijkstra-Poelman Typology. % Total Area - %Population (in % of MS total)

		D-P Typology				% of MS Total
		PU	IA	IR	PRA	PRR
Austria	AT	-22,06	-10,67	0,00	12,46	20,27
Belgium	BE	-29,85	9,58	0,00	20,27	0,00
Bulgaria	BG	-14,96	1,00	1,99	3,79	8,19
Cyprus	CY	0,00	0,00	0,00	0,00	0,00
Czech Republic	CZ	-10,98	7,33	0,00	3,66	0,00
Germany	DE	-38,29	15,28	0,00	22,65	0,35
Denmark	DK	-24,69	2,84	0,00	15,05	6,80
Estonia	EE	-5,06	-18,68	13,46	0,00	10,28
Spain	ES	-34,44	1,54	0,56	13,64	18,70
Finland	FI	-24,12	-5,45	-1,82	-6,06	37,45
France	FR	-25,11	-6,43	0,00	23,08	8,46
Greece	GR	-33,27	-3,87	-0,41	4,62	32,93
Hungary	HU	-16,33	-0,55	0,00	6,82	10,06
Ireland	IE	-26,64	0,00	0,00	13,96	12,68
Italy	IT	-28,74	9,92	1,31	9,84	7,68
Lithuania	LT	-10,22	-4,62	1,51	4,48	8,85
Luxembourg	LU	0,00	0,00	0,00	0,00	0,00
Latvia	LV	-31,16	7,10	7,67	3,28	13,11
Malta	MT	0,00	0,00	0,00	0,00	0,00
Netherlands	NL	-26,73	25,19	0,00	1,54	0,00
Poland	PL	-18,46	-24,95	-2,34	41,22	4,54
Portugal	PT	-43,73	-5,06	0,00	4,16	44,63
Romania	RO	-8,91	-5,67	0,00	6,84	7,75
Sweden	SE	-19,60	-21,57	0,00	1,78	39,38
Slovenia	SI	0,00	-12,82	-0,15	11,49	1,48
Slovakia	SK	-7,09	0,11	0,00	6,98	0,00
United Kingdom	UK	-46,61	22,52	0,39	9,63	14,06

Source: EDORA Typology

Key: **Dark blue**: >20%
Light blue: 10 to 20%
Yellow: -10 to -20%
Orange: < -20€

Figure 8.12 shows the total population of NUT3 regions of the EU27 which is located in each of the categories of the EDORA Structural Typology. The structural typology classifies regions according to their economic settings. According to this typology, regions can have an economic base focused on primary activities, or be focused on the "consumption countryside", or have diversified economies dominated by secondary activities or by private services. The analyses carried out on the EDORA typology and those made elsewhere in this report show that regions with an agricultural economy and to a lesser extent, those focused on "consumption countryside" concentrate the main problems associated with rural decline. By contrast, rural regions with diversified economies have better economic and demographic indicators.

Regions dominated by an agrarian economy (category "Agriculture") host more than 50% of the population only in the case of 3 countries: Romania (78%), Bulgaria (64%) and Latvia (52%).

Not far from these percentages are four other countries: Poland (49%), Greece (44%), Hungary (40%) and Lithuania (33%). Three other countries exceed 10%: Portugal (13%), Estonia (10.5%) and Spain (10.3%). Based on these data, we can argue that the population stays in rural areas dominated by an agrarian economy in the case of societies where agriculture is not yet completely modernised, either because of the general state of the economy, or because the geographical constraints that limit accessibility and difficult or make it impossible to implement this process of modernisation.

Table 8.12 Structural Typology. Population (in % of MS total)

		Structural Typology			% of MS Total
		Ag	CC	D(Sec)	D(PServe)
Austria	AT	6,61	39,10	21,20	9,67
Belgium	BE	0,46	4,71	1,98	8,14
Bulgaria	BG	64,14	19,68	0,00	0,00
Cyprus	CY	0,00	100,00	0,00	0,00
Czech Republic	CZ	0,00	20,86	56,53	11,00
Germany	DE	0,00	29,43	6,37	6,43
Denmark	DK	0,00	40,96	14,81	14,97
Estonia	EE	10,47	76,77	0,00	0,00
Spain	ES	11,24	30,58	5,78	3,90
Finland	FI	0,00	73,88	0,00	0,00
France	FR	2,37	15,41	0,45	52,22
Greece	GR	44,71	19,13	0,00	0,00
Hungary	HU	40,92	15,95	14,45	11,79
Ireland	IE	0,00	57,39	14,65	0,00
Italy	IT	7,35	25,70	1,27	11,53
Lithuania	LT	33,34	16,38	5,15	20,01
Luxembourg	LU	0,00	100,00	0,00	0,00
Latvia	LV	51,82	16,55	0,00	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	1,67	4,27	11,21
Poland	PL	48,68	7,61	13,53	8,62
Portugal	PT	13,33	30,96	0,00	3,40
Romania	RO	79,72	3,33	6,57	1,37
Sweden	SE	0,00	65,83	0,00	13,03
Slovenia	SI	8,61	91,39	0,00	0,00
Slovakia	SK	0,00	65,32	23,40	0,00
United Kingdom	UK	0,00	21,04	2,45	6,94

Source: EDORA Typology

Key: **Green**: 20-40%
Yellow: 40-60%
Red: > 60%

Population in 'consumption countryside' regions is relevant in virtually all countries to account for rural territories that benefit from demands of urban markets. The regions defined as "consumption countryside" are characterised by areas dominated by one or more services together, typically geared to the urban population (access to environmental assets, tourism capacity, and farm diversification). Consequently, there is not only one type of rural areas but

many rural profiles that have in common the orientation to urban consumption, usually in forms of tourism. Most countries show significant percentages of their rural population in this category. Due to the diversity of sub-categories implicit in the Consumption Countryside we can not speak of uniformity; each region under this category may have a different economic settings with the common denominator of their orientation to urban consumption. Only two conditions seem to be implicit in this type of regions: on the one hand, a relative low importance of agriculture as economic activity and employment provider; on the other hand, a mature urban demand that makes possible consumption of rural goods beyond a critical threshold

Within diversified rural economies the EDORA Structural typology differentiates two situations: on the one hand, areas where secondary activity (industry and construction) is the most relevant; on the other hand, areas where private services constitute the main economic activity.

Diversified rural economies with strong secondary sectors may refer to the implementation of diffuse processes of industrialisation in intermediate rural areas (ie. Marshallian districts in Spain or Portugal). It may, on the other hand, be the remnants of industrial specialization associated with the communist era (Hungary, Czech Republic, Slovakia, Poland) to be reinforced in recent years because of relocation of large industrial plants from other less competitive locations in terms of costs. For these areas, industrial know-how accumulated during the twentieth century and the lower costs of land and labour, along with the EU "umbrella" are the main potentials. However, the maintenance of an industrial activity of this sort does not guarantee an easy path to long term, sustainable development unless work is undertaken in a proper embedding of the industrial fabric, usually exogenous, in the local development strategy. It can also mean the case of rural regions where agriculture is not a relevant activity due to land or climate constraints and they have managed to develop or attract industrial activity. Diversified rural regions with a strong secondary sector contain significant contingents of people in some countries. Higher percentages of population for this type of region are in: Czech Republic (57%), Slovakia (23%), and Austria (21%). Percentages in the remaining countries are much lower, mostly below 10%.

Rural population in regions with diversified economies that have a powerful private services sector, is relevant only in few regional environments of France (52%) and Lithuania (20%).

Differentials between % of total area of regions and % of population for the case of the Structural Typology are shown in Figure 8.13. The differential results in a percentage that goes to 0% to the extent that the number of regions and the total area match. A high differential (over 10%) indicates a significant heterogeneity in the size of the regions of a member state.

The vast majority of differentials shown between the percentage of total area and the percentage of population in each category of the Structural Typology are positive. This means that, in most cases, rural areas have less demographic than territorial weight. This results in many implications for territorial planning and management of public resources in systems where allocation of funding is done according to population size.

Depending on the distribution of rural areas in different categories, and the characteristics of rural settlement in each country, the differences are more or less relevant for each country and rural type. For example, in the case of agricultural areas, differentials are always positive (more territory than population) are more important in countries such as Portugal (43%), Greece (37%). Latvia (32%), Poland (31%), Hungary (17%) among others. In the case of Portugal and Greece it could be the case for remote rural areas (mountain environments) in which there has not been a sufficient degree of diversification of the agricultural economy. These are regions that have been losing population for decades. In the case of NMS regions these are the less modernised agricultural areas that, while not suffering so much the problems of inaccessibility, are the source of an important part of immigration to Western Europe.

Table 8.13 Structural Typology. % Total Area - %Population (in % of MS total)

	Structural Typology				% of MS Total
		Ag	CC	D(Sec)	D(PServe)
Austria	AT	4,94	23,31	-1,81	-4,37
Belgium	BE	0,73	18,75	1,98	8,39
Bulgaria	BG	15,60	-0,64	0,00	0,00
Cyprus	CY	0,00	0,00	0,00	0,00
Czech Republic	CZ	0,00	-0,86	13,72	-1,87
Germany	DE	0,00	27,46	4,08	6,75
Denmark	DK	0,00	20,84	1,94	1,90
Estonia	EE	10,28	-5,22	0,00	0,00
Spain	ES	23,41	0,14	8,08	2,81
Finland	FI	0,00	24,12	0,00	0,00
France	FR	4,83	4,15	0,38	15,76
Greece	GR	37,86	-4,59	0,00	0,00
Hungary	HU	17,15	1,85	2,26	-4,92
Ireland	IE	0,00	23,80	2,84	0,00
Italy	IT	4,66	21,54	0,09	2,45
Lithuania	LT	13,71	2,63	1,51	-7,62
Luxembourg	LU	0,00	0,00	0,00	0,00
Latvia	LV	32,02	-0,86	0,00	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	3,29	5,01	18,44
Poland	PL	30,86	7,03	-10,81	-8,62
Portugal	PT	42,70	2,02	0,00	-0,99
Romania	RO	12,33	-0,37	-2,34	-0,70
Sweden	SE	0,00	30,05	0,00	-10,45
Slovenia	SI	5,17	-5,17	0,00	0,00
Slovakia	SK	0,00	9,10	-2,01	0,00
United Kingdom	UK	0,00	36,35	0,28	9,98

Source: EDORA Typology

Key: **Dark blue**: >20%
Light blue: 10 to 20%
Yellow: -10 to -20%
Orange: < -20€

Differentials are wider in the case of the Consumption Countryside areas. Most of them are over 20% and do not correspond, in any case, to the same countries where differentials were important in the Agrarian type. Here are included countries like the United Kingdom (36%), Sweden (30%), Germany (27%), Finland (24%), Ireland (24%), Austria (23%), Italy (21%) and Denmark (21%). All countries with high per capita incomes where the urban demand for rural goods and services is more consolidated. The larger urban development and characteristics of the regional division are the factors explaining these differentials.

In the case of rural areas with diversified economic structures the balance between area and population is more equilibrated. The vast majority of countries show differential close to zero and, when higher differentials are present, there is some balance between positive and negative values corresponding to characteristics of the spatial structure of each country.

Table 8.14 shows the percentage of total population of the EU27 countries for each category of the EDORA Performance Typology. The EDORA Performance Typology is calculated from a regional composite performance indicator from 5 indicators (net migration, per capita GDP, average annual change in GDP, average annual change in total employment, and unemployment rate). The composite indicator is calculated as the average of the normalised (Z) scores for the five indicators. The four categories have been defined by the average standardised score as follows:

- *Accumulation regions*: <-0.5 (i.e. more than half a standard deviation below the “non-urban” mean).
- *Above average regions*: -0.5 to 0 (i.e. less than half a standard deviation below the “non-urban” mean).
- *Below average regions*: 0 to +0.5 (i.e. less than half a standard deviation above the “non-urban” mean)
- *Depleting regions*: <-0.5 (i.e. more than half a standard deviation above the “non-urban” mean)

The total population under the "depleting" category involves more than 50% of the total in 5 of the new member states: Poland (63%), Latvia (63%), Bulgaria (66%), Romania (70%), Slovakia (51%). Close to these values is Lithuania (45%). It is relevant to point out that 1/4th of German rural population is classified under this category, matching the eastern *Lander*. These are the areas suffering more problems of emigration, unemployment and lower income level.

Population concentrated in regions "below average" are relevant in a number of countries, especially the New Member States. As in the analysis of the distribution of NUT3, “below the average” and "depleting" areas are located in the less modernised economies of Europe. By contrast, the “above average” and "accumulation" areas are mainly located in countries with stronger economies and higher income levels.

The rural population distribution according to categories of the Performance Typology reinforces the arguments presented so far. The rural population is concentrated in categories below the European average ("depleting" and "below average") mainly in the NMS and the

countries that formerly constituted the European periphery. Thus, the rural population in "depleting regions" is more than half of total in Romania (61%), Poland (53%), Bulgaria (52%), and also show relevant percentages in Slovakia (41%), Latvia (38%) and Lithuania (28%). The category "below average" is relevant in most of these same countries and in other NMS and Greece.

By contrast, the rural population is concentrated in regions above the European average ("above average" and "Accumulation") in countries with higher levels of economic development.

Table 8.14 Performance Typology. Population (in % of MS total)

		Performance Typology			% of MS Total
		Deplet.	Below	Above	Accum.
Austria	AT	0,00	11,52	26,33	38,73
Belgium	BE	1,39	7,99	5,35	0,56
Bulgaria	BG	51,58	22,90	9,34	0,00
Cyprus	CY	0,00	0,00	0,00	100,00
Czech Republic	CZ	0,00	65,38	23,01	0,00
Germany	DE	9,31	10,08	18,48	4,35
Denmark	DK	0,00	0,79	57,94	12,01
Estonia	EE	0,00	48,27	0,00	38,96
Spain	ES	0,00	8,31	16,89	26,29
Finland	FI	1,59	16,92	44,11	11,26
France	FR	0,69	19,38	32,35	18,03
Greece	GR	5,04	22,45	31,91	4,44
Hungary	HU	12,98	43,62	14,71	11,79
Ireland	IE	0,00	0,00	0,00	72,04
Italy	IT	1,52	18,18	11,17	14,99
Lithuania	LT	28,06	46,82	0,00	0,00
Luxembourg	LU	0,00	0,00	0,00	100,00
Latvia	LV	38,43	13,39	16,55	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	1,24	10,09	5,82
Poland	PL	52,67	21,26	4,51	0,00
Portugal	PT	0,00	19,56	21,62	6,51
Romania	RO	60,57	29,04	0,00	1,37
Sweden	SE	0,00	18,01	60,85	0,00
Slovenia	SI	0,00	28,29	46,62	25,09
Slovakia	SK	41,32	36,29	11,11	0,00
United Kingdom	UK	0,00	2,01	8,19	20,23

Source: EDORA Typology
Key: **Green**: 20-40%
Yellow: 40-60%
Red: > 60%

Differentials between % of total area of regions and % of population for the case of the Performance Typology are shown in Figure 8.15. The differential results in a percentage that goes to 0% to the extent that the number of regions and the total area match. A high

differential (over 10%) indicates a significant heterogeneity in the size of the regions of a Member State.

The vast majority of differentials shown between the percentage of total area and the percentage of population in each category of the performance Typology are positive. This means that, in most cases, rural areas have less demographic than territorial weight. This results in many implications for territorial planning and management of public resources in systems where allocation of funding is done according to population size.

Table 8.15 Performance Typology. % Total Area - %Population (in % of MS total)

		Performance Typology			% of MS Total
		Deplet.	Below	Above	Accum.
Austria	AT	0,00	15,52	13,18	-6,64
Belgium	BE	1,67	18,97	8,87	0,34
Bulgaria	BG	15,04	-0,54	0,46	0,00
Cyprus	CY	0,00	0,00	0,00	0,00
Czech Republic	CZ	0,00	-2,31	13,29	0,00
Germany	DE	14,70	10,09	11,14	2,36
Denmark	DK	0,00	0,58	20,54	3,57
Estonia	EE	0,00	34,11	0,00	-29,05
Spain	ES	0,00	9,69	13,52	11,23
Finland	FI	5,64	32,41	-8,24	-5,69
France	FR	-0,42	16,23	8,21	1,09
Greece	GR	6,00	19,85	1,34	6,08
Hungary	HU	3,60	16,66	1,00	-4,92
Ireland	IE	0,00	0,00	0,00	26,64
Italy	IT	1,23	10,76	6,61	10,15
Lithuania	LT	16,93	-6,72	0,00	0,00
Luxembourg	LU	0,00	0,00	0,00	0,00
Latvia	LV	24,35	7,67	-0,86	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	1,82	18,05	6,86
Poland	PL	10,59	12,39	-4,51	0,00
Portugal	PT	0,00	30,75	12,17	0,81
Romania	RO	9,43	0,19	0,00	-0,70
Sweden	SE	0,00	35,73	-16,13	0,00
Slovenia	SI	0,00	0,87	11,62	-12,48
Slovakia	SK	10,04	-1,01	-1,93	0,00
United Kingdom	UK	0,00	8,16	25,27	13,18

Source: EDORA Typology

Key: **Dark blue**: >20%
Light blue: 10 to 20%
Yellow: -10 to -20%
Orange: < -20€

Depending on the distribution of rural areas in different categories, and the characteristics of rural settlement in each country, the differences are more or less relevant for each country and rural type. For example, in the case of depleting and "below average" areas, differentials

are always positive (more territory than population) and more important in countries such as Latvia (24%) for Depleting regions, and Sweden (36%). Estonia (34%), Finland (32%) or Portugal (31%) for “below average” regions.

In the case of regions "above average" differentials are mainly positive (UK 25%, Denmark 21%, Netherlands 18%, etc.) but there is a high negative differential in Sweden (-16%) that reflects an overconcentration of population in “above average” rural areas in relation to their geographical size. Accumulation regions are quite equilibrated when comparing population and territory. Most countries show values close to zero. Main positive differentials are in Ireland (27%) and UK (13%), and negative differentials are in Estonia (-29%) and Slovenia (12%).

8.4 GDP distribution of NUTs 3 regions according to the "EDORA cube" typologies

This section presents the distribution of the GDP of NUT3 in the three EDORA typologies: D-P, Structural and Performance. This is done in two ways: first, as the total percentage of each category in each typology; second, as the differential between the percentage of total area in each category and the percentage of the population representing these regions. The differential results in a percentage that goes to 0% to the extent that the total area and the population match. A high differential (over 10%) indicates a significant concentration of the population in one or more typology categories.

Tables 8.16, 8.18 and 8.20 present the percentage of population of NUT3 regions for the EU27 for each EDORA typology. Tables 8.17, 8.10 and 8.21 show differentials between the percentage of total area in each category and the percentage of the population representing these regions.

Table 8.16 analyses the GDP of NUTS3 regions of the EU27 according to categories of the Dijkstra-Poelman typology (hereafter D-P). D-P Typology classifies regions according to their accessibility and rurality. Accesibility is measured in % of population which access to a market town under a particular time threshold. Rurality is linked to more extensive (as opposite to intensive) land use and, therefore, the variable is % of population living in rural LAU; that is, those below 150 inhab./km^2. Special attention is given to the categories "Intermediate" and "Predominantly" rural, while reducing attention to category "Predominantly Urban (PU) due to the research focus of EDORA on rural areas.

The analysis of GDP distribution among the categories of the D-P typology allows isolating the percentage of each country's GDP located in PU regions. The most important finding is the concentration of GDP of the countries in PU and AI regions. In fact, the sum of the values of these two categories gives very high percentages of the GDP of most countries. These are, of course, the areas of greatest concentration of population and economic activity although it seems that the concentration is even greater in the case of GDP than it was in the case of population.

Table 8.16 Dijkstra-Poelman Typology. GDP (in % of MS total)

GDP		D-P Typology				% of MS Total
		PU	IA	IR	PRA	PRR
Austria	AT	30,10	34,64	0,00	26,97	8,29
Belgium	BE	90,01	7,37	0,00	2,62	0,00
Bulgaria	BG	33,31	43,44	4,74	6,24	12,27
Cyprus	CY	0,00	100,00	0,00	0,00	0,00
Czech Republic	CZ	24,19	71,60	0,00	4,21	0,00
Germany	DE	67,00	23,16	0,00	9,70	0,15
Denmark	DK	37,34	24,12	0,00	22,21	16,32
Estonia	EE	7,23	78,16	8,21	0,00	6,40
Spain	ES	53,65	33,66	1,64	6,16	4,89
Finland	FI	35,43	8,38	3,55	37,08	15,56
France	FR	39,40	47,47	0,00	10,18	2,95
Greece	GR	49,42	21,07	1,66	5,35	22,51
Hungary	HU	37,29	34,86	0,00	15,44	12,41
Ireland	IE	40,80	0,00	0,00	39,91	19,29
Italy	IT	59,68	30,90	1,84	5,19	2,38
Lithuania	LT	38,38	44,64	4,24	6,84	5,90
Luxembourg	LU	0,00	100,00	0,00	0,00	0,00
Latvia	LV	55,12	7,51	10,32	20,44	6,61
Malta	MT	100,00	0,00	0,00	0,00	0,00
Netherlands	NL	84,00	15,03	0,00	0,97	0,00
Poland	PL	37,95	25,48	1,48	34,62	0,47
Portugal	PT	60,40	22,88	0,00	4,67	12,04
Romania	RO	19,99	50,13	0,00	20,46	9,42
Sweden	SE	28,63	28,39	0,00	25,35	17,63
Slovenia	SI	0,00	45,95	5,39	45,84	2,82
Slovakia	SK	26,27	53,51	0,00	20,22	0,00
United Kingdom	UK	74,70	23,10	0,80	1,03	0,37

Source: EDORA Typology

Key: **Green**: 20-40%
Yellow: 40-60%
Red: > 60%

Differentials between % of total population of regions and % of GDP for the case of the D-P Typology are shown in Figure 8.17. The differential results in a percentage that goes to 0% to the extent that the number of regions and the total area match. A high differential (over 10%) indicates a significant heterogeneity in the size of the regions of a member state.

Differentials between % of total population of regions and % of GDP show, first, that urban areas concentrate a lot more share of GDP than the % of population area they represent. This general trend is more pronounced in Latvia (-23 %), Hungary (-20%), Bulgaria (-17%), Poland (-16%).

The other four categories of the D-P typology (IA, IR, ARP and RRP) show very little differentials and most values close to zero; ie. the demographic "weight" very similar to the “economic” "weight".

Table 8.17 Dijkstra-Poelman Typology. % Population - %GDP (in % of MS total)

		D-P Typology				% of MS Total
		PU	IA	IR	PRA	PRR
Austria	AT	-6,68	-3,77	0,00	8,22	2,23
Belgium	BE	-5,29	3,69	0,00	1,61	0,00
Bulgaria	BG	-17,14	8,93	2,14	2,99	3,08
Cyprus	CY	0,00	0,00	0,00	0,00	0,00
Czech Republic	CZ	-12,58	11,83	0,00	0,75	0,00
Germany	DE	-9,23	6,11	0,00	3,07	0,05
Denmark	DK	-8,08	-3,30	0,00	1,39	9,99
Estonia	EE	5,53	-13,41	3,81	0,00	4,07
Spain	ES	-5,14	2,16	0,59	1,21	1,19
Finland	FI	-9,31	0,29	-0,07	5,35	3,75
France	FR	-9,84	6,19	0,00	2,78	0,86
Greece	GR	-13,26	4,23	0,50	1,42	7,11
Hungary	HU	-20,40	7,17	0,00	6,45	6,78
Ireland	IE	-12,84	0,00	0,00	4,18	8,66
Italy	IT	-5,54	3,11	0,77	1,12	0,54
Lithuania	LT	-13,26	5,49	0,92	3,82	3,04
Luxembourg	LU	0,00	0,00	0,00	0,00	0,00
Latvia	LV	-23,50	7,93	3,07	8,60	3,90
Malta	MT	0,00	0,00	0,00	0,00	0,00
Netherlands	NL	-1,14	0,85	0,00	0,29	0,00
Poland	PL	-16,36	4,31	0,86	10,87	0,34
Portugal	PT	-8,09	3,88	0,00	1,15	3,05
Romania	RO	-10,97	0,17	0,00	7,02	3,78
Sweden	SE	-7,49	1,50	0,00	4,00	1,98
Slovenia	SI	0,00	-8,69	-0,09	7,94	0,84
Slovakia	SK	-14,99	9,97	0,00	5,02	0,00
United Kingdom	UK	-5,14	4,14	0,36	0,46	0,18

Source: EDORA Typology

Key: **Dark blue**: >20%
Light blue: 10 to 20%
Yellow: -10 to -20%
Orange: < -20€

Figure 8.18 shows the GDP of NUT3 regions of the EU27 which is located in each of the categories of the EDORA Structural Typology. The structural typology classifies regions according to their economic settings. According to this typology, regions can have an economic base focused on primary activities, or be focused on the "consumption countryside", or have diversified economies dominated by secondary activities or by private services. The analyses carried out on the EDORA typology and those made elsewhere in this report show that regions with an agricultural economy and to a lesser extent, those focused on "consumption countryside" concentrate the main problems associated with rural decline. By contrast, rural regions with diversified economies have better economic and demographic indicators.

Regions dominated by an agrarian economy (category "Agriculture") host more than 50% of the national GDP only in the case of Romania (66%). Not far from these percentages is Bulgaria

(47%). Five other countries exceed 20%: Poland (35%), Greece (33%), Latvia (32%) Hungary (27%) and Lithuania (22%). Based on these data, we can argue that GDP stays in rural areas dominated by an agrarian economy in the case of societies where agriculture is not yet completely modernised, either because of the general state of the economy, or because the geographical constraints that limit accessibility and difficult or make it impossible to implement this process of modernisation.

GDP in 'consumption countryside' regions is relevant in virtually all countries to account for rural territories that benefit from demands of urban markets. The regions defined as "consumption countryside" are characterised by areas dominated by one or more services together, typically geared to the urban population (access to environmental assets, tourism capacity, and farm diversification). Consequently, there is not only one type of rural areas but many rural profiles that have in common the orientation to urban consumption, usually in forms of tourism. Most countries show significant percentages of their rural population in this category. Due to the diversity of sub-categories implicit in the Consumption Countryside we can not speak of uniformity; each region under this category may have a different economic settings with the common denominator of their orientation to urban consumption. Only two conditions seem to be implicit in this type of regions: on the one hand, a relative low importance of agriculture as economic activity and employment provider; on the other hand, a mature urban demand that makes possible consumption of rural goods beyond a critical threshold

Diversified rural economies with strong secondary sectors may refer to the implementation of diffuse processes of industrialisation in intermediate rural areas (ie. Marshallian districts in Spain or Portugal). It may, on the other hand, be the remnants of industrial specialization associated with the communist era (Hungary, Czech Republic, Slovakia, Poland) to be reinforced in recent years because of relocation of large industrial plants from other less competitive locations in terms of costs. For these areas, industrial know-how accumulated during the twentieth century and the lower costs of land and labour, along with the EU “umbrella” are the main potentials. However, the maintenance of an industrial activity of this sort does not guarantee an easy path to long term, sustainable development unless work is undertaken in a proper embedding of the industrial fabric, usually exogenous, in the local development strategy. It can also mean the case of rural regions where agriculture is not a relevant activity due to land or climate constraints and they have managed to develop or attract industrial activity. Diversified rural regions with a strong secondary sector contain significant percentages of GDP in few countries. Higher percentages for this type of region are in: Czech Republic (49%), Slovakia (24%), and Austria (20%). Percentages in the remaining countries are much lower, mostly below 10%.

Rural population in regions with diversified economies that have a powerful private services sector, is relevant only in few regional environments of France (46%) and Lithuania (19%).

Table 8.18 Structural Typology. GDP (in % of MS total)

		Structural Typology			% of MS Total
		Ag	CC	D(Sec)	D(PServe)
Austria	AT	3,90	35,02	19,57	11,40
Belgium	BE	0,31	3,23	1,40	5,04
Bulgaria	BG	47,27	19,42	0,00	0,00
Cyprus	CY	0,00	100,00	0,00	0,00
Czech Republic	CZ	0,00	16,77	48,93	10,10
Germany	DE	0,00	23,26	5,34	4,40
Denmark	DK	0,00	43,58	7,72	11,36
Estonia	EE	6,40	86,37	0,00	0,00
Spain	ES	8,67	28,19	6,18	3,31
Finland	FI	0,00	64,57	0,00	0,00
France	FR	1,84	12,79	0,33	45,64
Greece	GR	33,22	17,37	0,00	0,00
Hungary	HU	27,23	11,63	13,95	9,90
Ireland	IE	0,00	41,97	17,23	0,00
Italy	IT	4,60	23,25	1,47	11,00
Lithuania	LT	22,46	15,73	4,24	19,18
Luxembourg	LU	0,00	100,00	0,00	0,00
Latvia	LV	31,72	13,15	0,00	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	1,30	5,66	9,03
Poland	PL	35,17	7,14	12,13	7,62
Portugal	PT	11,31	25,28	0,00	3,01
Romania	RO	65,99	4,24	7,26	2,52
Sweden	SE	0,00	59,74	0,00	11,63
Slovenia	SI	5,93	94,07	0,00	0,00
Slovakia	SK	0,00	49,99	23,74	0,00
United Kingdom	UK	0,00	17,05	1,90	6,35

Source: EDORA Typology

Key: **Green**: 20-40%
Yellow: 40-60%
Red: > 60%

Differentials between % of total population of regions and % of GDP for the case of the Structural Typology are shown in Figure 8.19. The differential results in a percentage that goes to 0% to the extent that the number of regions and the total area match. A high differential (over 10%) indicates a significant heterogeneity in the size of the regions of a member state.

All differentials shown between the percentage of total population and the percentage of GDP in each category of the Structural Typology are positive. This means that, in most cases, rural areas have less economic than demographic weight (ie. the share of GDP is lower than the share of population for most rural areas). This trend is exacerbated in the less favoured rural areas (ie. agrarian). One would expect that diversified rural economies would do better in retaining GDP according to their demographic size. Although this is, to some extent truth, the positive sign in most countries reflects an extension of the same trend (ie. there are gaps also

in diversified rural areas between their bigger demographic size and a relatively smaller economic size)

Table 8.19 Structural Typology. % Population - %GDP (in % of MS total)

		Structural Typology		% of MS Total	
		Ag	CC	D(Sec)	D(PServe)
Austria	AT	2,70	4,09	1,62	-1,74
Belgium	BE	0,15	1,48	0,58	3,10
Bulgaria	BG	16,88	0,26	0,00	0,00
Cyprus	CY	0,00	0,00	0,00	0,00
Czech Republic	CZ	0,00	4,09	7,59	0,89
Germany	DE	0,00	6,16	1,03	2,04
Denmark	DK	0,00	-2,62	7,09	3,61
Estonia	EE	4,07	-9,60	0,00	0,00
Spain	ES	2,57	2,39	-0,40	0,59
Finland	FI	0,00	9,31	0,00	0,00
France	FR	0,53	2,62	0,12	6,58
Greece	GR	11,50	1,76	0,00	0,00
Hungary	HU	13,69	4,32	0,50	1,89
Ireland	IE	0,00	15,42	-2,58	0,00
Italy	IT	2,75	2,46	-0,20	0,53
Lithuania	LT	10,88	0,64	0,92	0,83
Luxembourg	LU	0,00	0,00	0,00	0,00
Latvia	LV	20,09	3,40	0,00	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	0,36	-1,40	2,18
Poland	PL	13,51	0,46	1,41	1,01
Portugal	PT	2,02	5,68	0,00	0,39
Romania	RO	13,73	-0,91	-0,69	-1,15
Sweden	SE	0,00	6,09	0,00	1,40
Slovenia	SI	2,67	-2,67	0,00	0,00
Slovakia	SK	0,00	15,32	-0,34	0,00
United Kingdom	UK	0,00	3,99	0,55	0,60

Source: EDORA Typology

Key: **Dark blue**: >20%
Light blue: 10 to 20%
Yellow: -10 to -20%
Orange: < -20€

Table 8.20 shows the percentage of GDP of the EU27 countries for each category of the EDORA Performance Typology. The EDORA Performance Typology is calculated from a regional composite performance indicator from 5 indicators (net migration, per capita GDP, average annual change in GDP, average annual change in total employment, and unemployment rate). The composite indicator is calculated as the average of the normalised (Z) scores for the five indicators. The four categories have been defined by the average standardised score as follows:

- *Accumulation regions*: <-0.5 (i.e. more than half a standard deviation below the "non-urban" mean).
- *Above average regions*: -0.5 to 0 (i.e. less than half a standard deviation below the "non-urban" mean).
- *Below average regions*: 0 to +0.5 (i.e. less than half a standard deviation above the "non-urban" mean)
- *Depleting regions*: <-0.5 (i.e. more than half a standard deviation above the "non-urban" mean)

The % of total GDP under the "depleting" category involves more than 50% of the total only in the case of Romania (52%) (it was 5 countries in the cased of the variable "population"). Close to these values are Poland (39%) and Bulgaria (38%). The 25% of the German population living in "depleting" regions only gather 6% of the national GDP.

Table 8.20 Performance Typology. GDP (in % of MS total)

		Performance Typology			% of MS Total
		Deplet.	Below	Above	Accum.
Austria	AT	0,00	7,95	21,04	40,90
Belgium	BE	0,58	4,73	4,18	0,50
Bulgaria	BG	37,76	18,51	10,42	0,00
Cyprus	CY	0,00	0,00	0,00	100,00
Czech Republic	CZ	0,00	54,53	21,28	0,00
Germany	DE	5,88	7,36	15,27	4,48
Denmark	DK	0,00	0,58	45,30	16,78
Estonia	EE	0,00	31,70	0,00	61,07
Spain	ES	0,00	5,78	14,30	26,28
Finland	FI	1,11	13,61	38,71	11,14
France	FR	0,43	15,44	27,92	16,81
Greece	GR	3,97	15,94	27,33	3,35
Hungary	HU	7,99	30,11	14,71	9,90
Ireland	IE	0,00	0,00	0,00	59,20
Italy	IT	0,85	12,48	10,22	16,77
Lithuania	LT	19,02	42,60	0,00	0,00
Luxembourg	LU	0,00	0,00	0,00	100,00
Latvia	LV	21,41	10,32	13,15	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	0,87	8,64	6,49
Poland	PL	39,06	17,19	5,80	0,00
Portugal	PT	0,00	14,39	18,48	6,73
Romania	RO	51,67	25,82	0,00	2,52
Sweden	SE	0,00	15,85	55,53	0,00
Slovenia	SI	0,00	22,66	41,27	36,07
Slovakia	SK	29,16	34,17	10,40	0,00
United Kingdom	UK	0,00	1,47	6,00	17,83

Source: EDORA Typology

Key: **Green**: 20-40%
Yellow: 40-60%
Red: > 60%

Share of GDP concentrated in regions "below average" is relevant in a number of countries, especially the New Member States. As in the analysis of the distribution of NUT3, “below the average” and "depleting" areas are located in the less modernised economies of Europe. By contrast, rural GDP is concentrated in the “above average” and "accumulation" areas in countries with stronger economies and higher income levels.

Differentials between % of total population of regions and % of GDP for the case of the Performance Typology are shown in Figure 8.21. The differential results in a percentage that goes to 0% to the extent that the number of regions and the total area match. A high differential (over 10%) indicates a significant heterogeneity in the size of the regions of a member state.

Table 8.21 Performance Typology. % Population - %GDP (in % of MS total)

		Performance Typology			% of MS Total
		Deplet.	Below	Above	Accum.
Austria	AT	0,00	3,57	5,28	-2,17
Belgium	BE	0,81	3,26	1,17	0,05
Bulgaria	BG	13,82	4,39	-1,08	0,00
Cyprus	CY	0,00	0,00	0,00	0,00
Czech Republic	CZ	0,00	10,85	1,73	0,00
Germany	DE	3,43	2,72	3,21	-0,13
Denmark	DK	0,00	0,21	12,64	-4,77
Estonia	EE	0,00	16,57	0,00	-22,10
Spain	ES	0,00	2,53	2,60	0,02
Finland	FI	0,48	3,31	5,40	0,12
France	FR	0,26	3,93	4,43	1,22
Greece	GR	1,07	6,51	4,58	1,10
Hungary	HU	4,99	13,50	0,00	1,89
Ireland	IE	0,00	0,00	0,00	12,84
Italy	IT	0,67	5,70	0,95	-1,78
Lithuania	LT	9,04	4,22	0,00	0,00
Luxembourg	LU	0,00	0,00	0,00	0,00
Latvia	LV	17,02	3,07	3,40	0,00
Malta	MT	0,00	0,00	0,00	0,00
Netherlands	NL	0,00	0,37	1,45	-0,68
Poland	PL	13,61	4,07	-1,29	0,00
Portugal	PT	0,00	5,17	3,14	-0,22
Romania	RO	8,90	3,22	0,00	-1,15
Sweden	SE	0,00	2,17	5,32	0,00
Slovenia	SI	0,00	5,63	5,36	-10,98
Slovakia	SK	12,15	2,12	0,71	0,00
United Kingdom	UK	0,00	0,54	2,19	2,41

Source: EDORA Typology

Key: **Dark blue**: >20%
Light blue: 10 to 20%
Yellow: -10 to -20%
Orange: < -20€

The vast majority of differentials shown between the percentage of population and the percentage of GDP in each category of the performance Typology are positive. This means that, in most cases, rural areas have less economic than demographic weight. This exacerbates the implications for territorial planning and management of public resources in systems where allocation of funding is done according to population size, because in most countries, there is a further gap between population and economic capacity.

Depending on the distribution of rural areas in different categories, and the characteristics of rural settlement in each country, the differences are more or less relevant for each country and rural type. For example, in the case of depleting, “below average” and “above average” areas, differentials are always positive (more population than economic relevance) and more important in NMS.

In the case of “accumulation” regions differentials are more equilibrated with positive and negative values. Negative results (Estonia -22%; Slovenia -11%) indicate rural areas where the share of GDP is larger than it should according to their population.

CHAPTER 9
ANALYSIS OF THE THREE EDORA TYPOLOGIES IN EACH OF THE EU27 COUNTRIES

Chapter 9 presents the second of the three analyses of the "EDORA cube" typologies. The EDORA cube is a triangular typology exercise aimed at identifying ruralities in the EU context. Full details on methodology and presentation of results can be found in the EDORA Typology working paper and corresponding sections of the EDORA Final Report[15].

[15] Keys to the interpretation of categories in each typology

Dijkstra-Poelman Typology:

- *PU*: Urban Regions
- *IA*: Intermediate Accessible Regions
- *IR*: Intermediate Remote Regions
- *PRA*: Predominantly Rural Accessible Regions
- *PRR*: Predominantly Rural Remote Regions

Structural Typology

- AG: Regions with primary sector activities predominance (agriculture, forest logging, etc.)
- CC: Consuming countryside, characterised by areas dominated by one or more services together, typically geared to the urban population (access to environmental assets, tourism capacity, and farm diversification). Consequently, there is not only one type of rural areas but many rural profiles that have in common the orientation to urban consumption, usually in forms of tourism.
- D/Sec: Diversified rural economies with strong secondary sectors may refer to the implementation of diffuse processes of industrialisation in intermediate rural areas (i.e. Marshallian districts in Italy, Spain or Portugal). It may, on the other hand, be the remnants of industrial specialization associated with the communist era (Hungary, Czech Republic, Slovakia) to be reinforced in recent years because of relocation of large industrial plants from other less competitive locations in terms of costs.
- D(PServe): Rural areas with diversified economies that have powerful private service sectors are present in many regional environments. It is the case for non-urban tourist regions in which much of the economy hinges on the services sector (Cyprus) without a very specific thematic orientation as with the 'consumption countryside'. It should also be included here a set of regions of France, Denmark, Germany, Spain, Italy or the UK. Territorial diversity of these countries, the presence of consolidated urban markets, or counter-urbanization processes that have brought urban population to rural areas may be explanatory factors.

Performace Typology:

The EDORA Performance Typology is calculated from a regional composite performance indicator from 5 indicators (net migration, GDP per capita, average annual change in GDP, average annual change in total employment, and unemployment rate). The composite indicator is calculated as the average of the normalized (Z) scores for the five indicators. It measures the regions performance in socioeconomic parameters (capacity to attract/ detain population, evolution of GDP and employment). The four categories have been defined by the average standardized score as follows:

- Accumulation regions: <-0.5 (i.e. more than half a standard deviation below the "non-urban" mean).
- Above average regions: -0.5 to 0 (i.e. less than half a standard deviation below the "non-urban" mean).
- Below average regions: 0 to +0.5 (i.e. less than half a standard deviation above the "non-urban" mean)
- Depleting regions: <+0.5 (i.e. more than half a standard deviation above the "non-urban" mean)

9.1 Austria

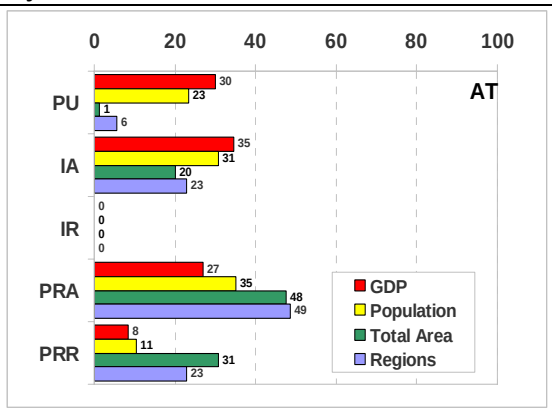
According to the *Dijkstra-Poelman typology* in Austria, the most extended area is represented by the PRA regions, indeed they gather the major concentration of regions and population. Nevertheless, the GDP score is higher in IA and PU regions (concentrated areas referring to population but smaller in size and with less diversified regions, i.e. densely populated regions with concentration of services and business clusters). PRR regions are the second biggest areas and compile more diversified regions (after PRA). However, they have the lowest GDP and population scores from the total of rural typologies -excepting IR regions, which are not representative in the graphic- which means that productivity is low due to lack of/urban concentrated job opportunities and population settlements. The rurality of Austria owes to the vast mountainous topography of the Alpine Range, as well as the remote regions from the North of Austria with difficult access to SGI.

The *Structural typology* in Austria can give more information about the socioeconomic picture of this country. Based on this typology, the CC (Consuming Countryside) is the most extended category due to their predominance over all the four indicators' scores. The implication of this is linked to activities focused on urban consuming (e.g. winter and mountain tourism). As it can be observed, the D/Sec category (i.e. diversified rural economies with strong secondary sector) is in second place of importance for all the different indicators, having the $^{1}/3$ size and number of regions of the CC regions, and GDP and population scores less than 10% respect the respectively CC scores. The poorest represented category is the Ag (predominantly rural), representing the double area than D(PServe) but having lowest scores in the rest indicators (overall GDP and population), implies a non dependency or economic benefit from the primary sector activities, as well as a depleted rural region.

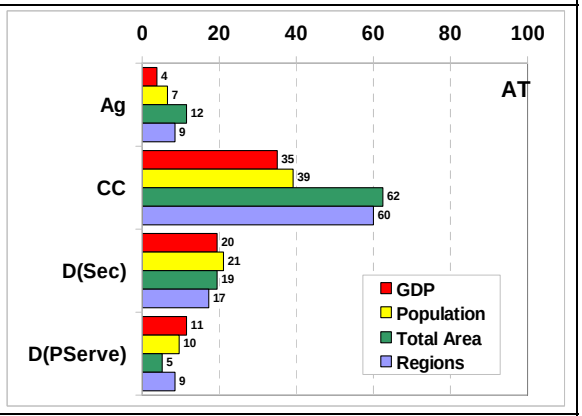
Referring to the *Performance typology,* regions above the average (values from -0.5 to 0, i.e. less than half a standard deviation below the "non-urban" mean) are the most representative in size (8 points above accumulation regions) but they have the same number of regions than in accumulation regions, being GDP (the double) and population (13 % more) scores highest for in this last region. Areas below the average (from 0 to +0.5, i.e. less than half a standard deviation above the "non-urban" mean) are slightly smaller and with a less number of regions than accumulation regions, but with GDP and population scores very low: GDP reach 8% and population the 12%. Taking into account there are no depletion areas, regions below the average will concentrate the primary economic activities, enjoy less SGI and detain population to remain on them.

Figure 9.1 Distribution of NUT3 regions in Austria. Dijkstra-Poelman, Structural and Performance Typologies

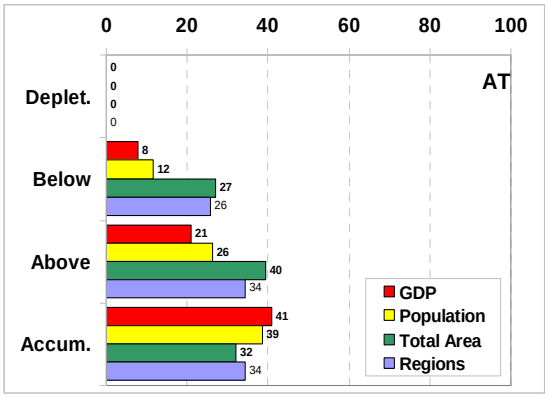
Dijkstra-Poelman



Structural EDORA



Performance EDORA



Source: EDORA Typology

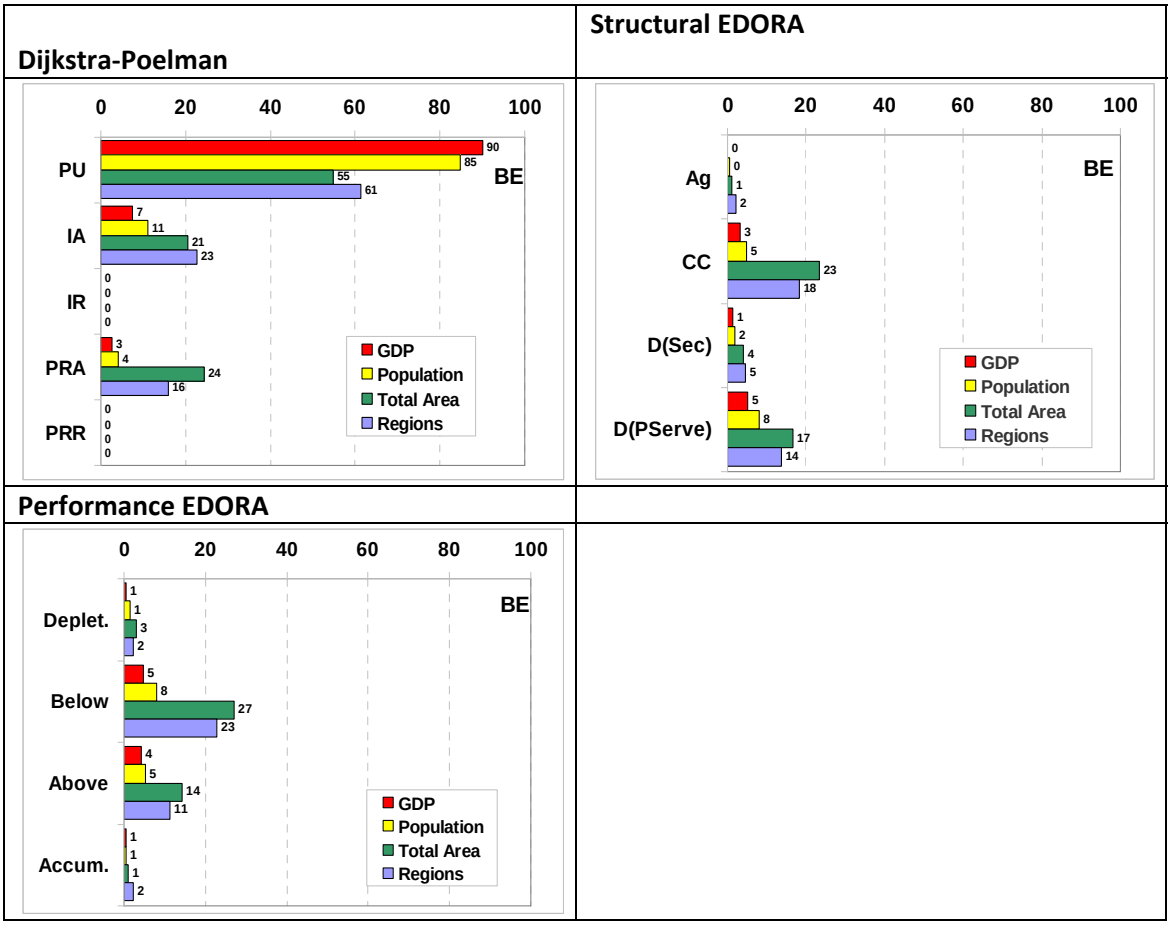
9.2 Belgium

The urbanity of Belgium due to the concentration of population in a small territory is well known, and the results of the *Dijkstra-Poelman typology* show it clearly. Urban regions are the biggest in size and number of regions; furthermore the economic and human capitals are mainly concentrated there, being an unbalanced output for the rest typologies. Thus the city/town models are the lively epicenter of the country. PRA regions are the second bigger in size, less than $^{1}/3$ than urban regions, but IA (smaller than PRA in area but with more number of regions) provides better scores of GDP and population since they are relatively closed to main urban centers, enjoying a dual relation between them and urban centers (PU)

Referring to the *Structural typology*, Belgium is catalogued mostly as a CC region (Consuming Countryside) in parallel with D(PServe) regions (rural areas with diversified economies) where in spite of their lesser area, the scores of GDP and population are higher than in CC regions. Counter-urbanization processes as well as consolidated urban markets and communication nets could be an explanation for this categorization. D(Sec) regions represent less than the half of size than D(PServe) regions, and GDP and population scores represent a little percentage over the total. Ag regions cover a small part of the territory but they are not productive socioeconomically.

The next typology, the so called *Performance typology,* point out the preponderance of regions below the average (from 0 to +0.5, i.e. less than half a standard deviation above the "non-urban" mean). Regions above the average are the half of size and number of regions than the first commented but they have slightly lowest scores for GDP and population than them, which mean more concentration of capitals and population density in semi or urban centers. Depletion regions are bigger and have better results for the rest of indicators than accumulation regions. It can be suggested that aggressive urbanization models do not take place in Belgium. Hence, counter-urbanization processes, a widespread of SGI and good communication nets and links between cities and villages occur in Belgium, principally due to its reduced space and strong ecological awareness.

Figure 9.2 Distribution of NUT3 regions in Belgium. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

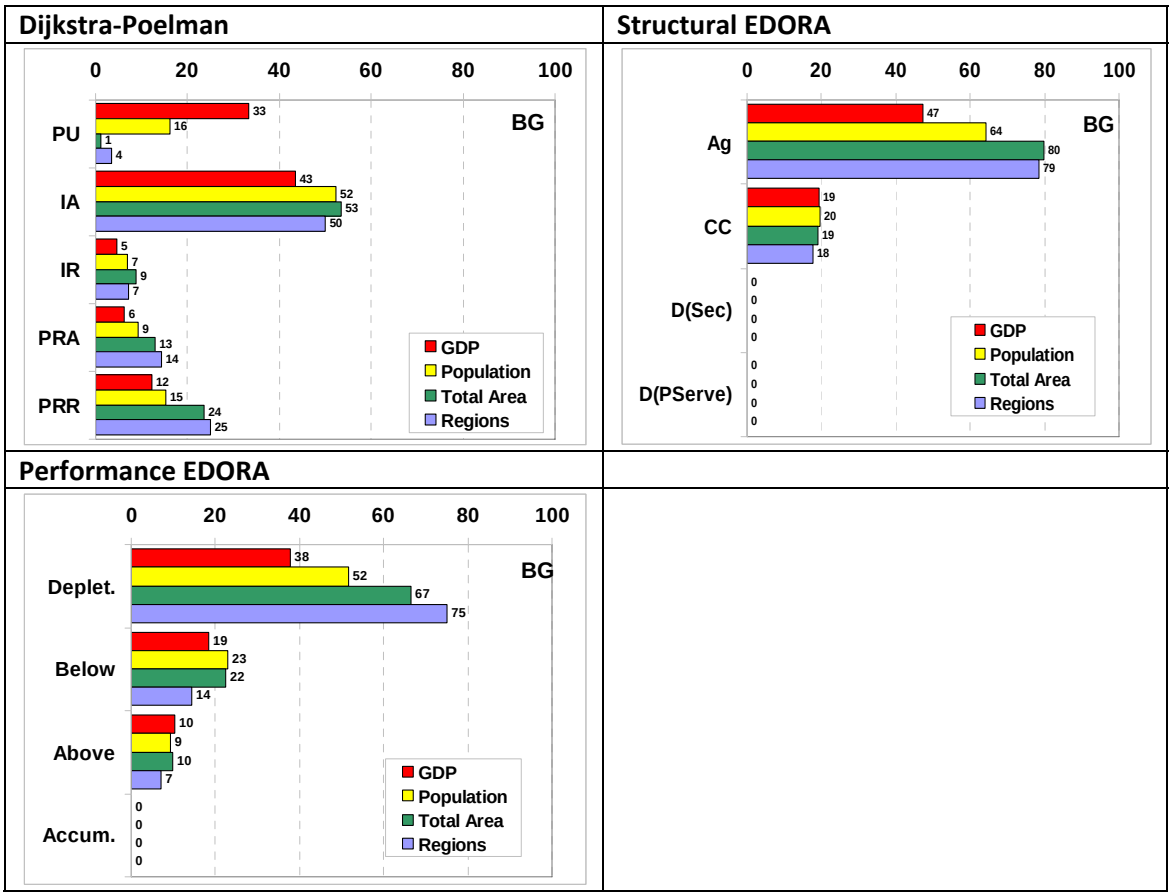
9.3 Bulgaria

Bulgaria has a surface of 110.912 km² (similar to Cuba). Hence, different regions are closed to each other, and SGI and population should be more concentrated on the territorial space. Beginning with these premises and according to the *Dijkstra-Poelman typology,* the half of the Bulgarian territory is classified as IA regions, concentrating the half of the population and the best GDP scores (coming mainly from agriculture and the iron and steel sector). By size and number of regions, PRR regions are the second in importance (representing 24% and 25% respectively) but having the third place in highest scores for GDP and population. The second place for these scores is for the PU regions even they are the smallest respect the other rest categorizations. It must be remarked the high GDP outcomes in PU, only 10 points below the IA regions, but with less of $^{1}/3$ of the population, i.e. creation of capital without strictly labour force but financing and capital inversions. PU regions, overall Sofia (the capital of Bulgaria) are basically business centers as well as touristic attractions. PRA and IR regions represent around 10% in size but they are the less overcrowded and productive places.

The rurality and the agro-society model of Bulgaria are illustrated in the *Structural typology* through the predominance of Ag regions (regions with primary sector activities predominance) as in size, social and economically. $^{2}/3$ of the land in the country is dedicated to agriculture, so it is the main economic activity of the country. Although the secondary sector got obsolete after some technological European reforms, the iron and steel sector, mining exploitation and thermal power stations are other of the main economic activities in Bulgaria. CC regions are the second category with data (not as D(Sec) and D(Pserve)), their outcome is one third less than the ones of Ag regions. Secondary sector activities could be placed in this type of regions.

One more time, the graphic about the categories from the *Performance typology* shows the predominance of rural areas, being the depletion regions (the most rural ones) the dominant over the territory on more than 60% in size and more than 80% in number of regions. Furthermore, these regions comprise more than the half of the Bulgarian population and contribute to almost a 40% of GDP. On the contrary there are no data for accumulation regions. Followed the cascade of results, regions below the average are the second in importance, representing 22% of size over the total territory area and where 23% of population live there. The contribution to GDP is the half than for depletion areas and almost the double than for regions above the area (smaller 2 times in size and with few regions and population than the regions below the average)

Figure 9.3 Distribution of NUT3 regions in Bulgaria. Dijkstra-Poelman, Structural and Performance Typologies

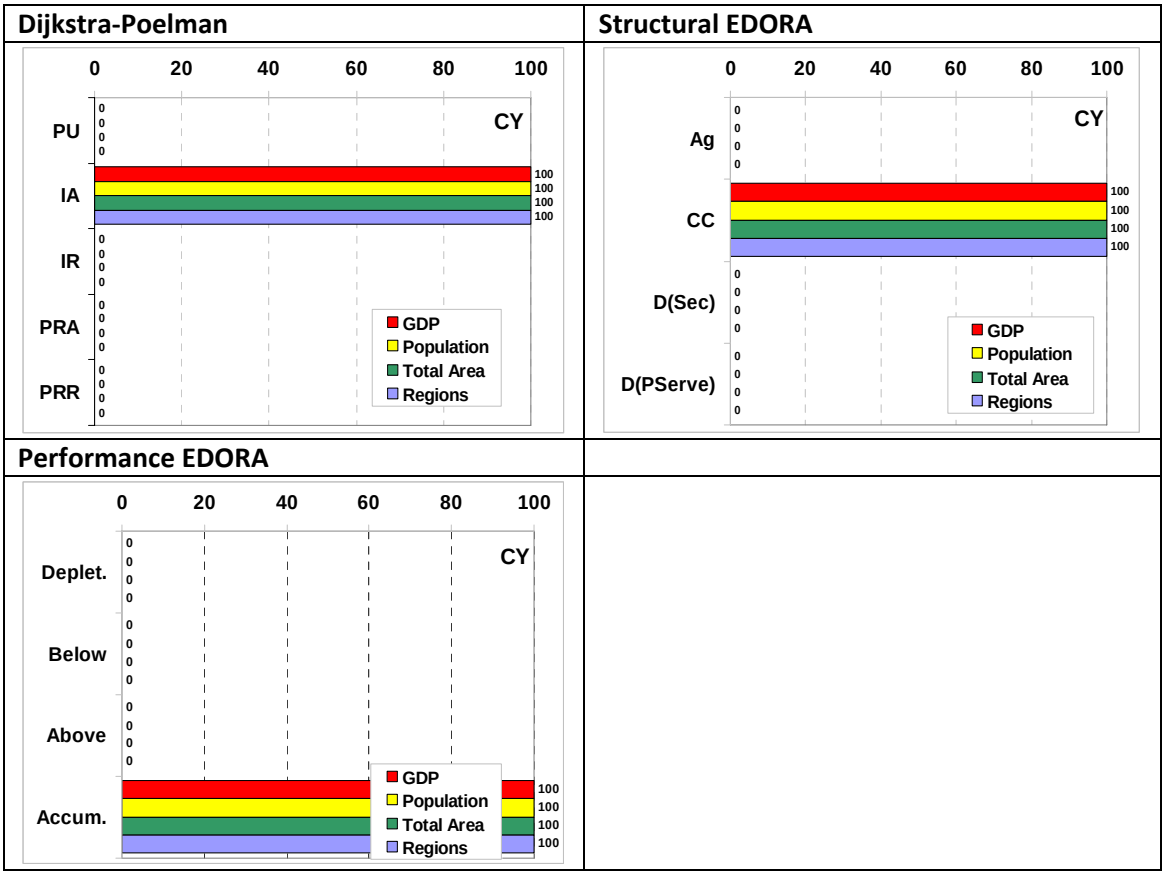


Source: EDORA Typology

9.4 Cyprus

Cyprus is a small island but it is divided in two parts: the Greek part and the Turkish part. Its mountainous topography makes some zones remote from each other, but the short distances between places convert the regions in IA (Intermediate accessible). The country is a CC region since it survives mainly thanks to agriculture and industrial exportations, but the main income is provide by the tourism. Due to the small size of the island and concentration of SGI, population and because of other non analyzed factors in these typologies, Cyprus regions can be classified as accumulation ones; it does not mean urbanization is spread over the island, but a process of social and economical life concentration exist in the island territory.

Figure 9.4 Distribution of NUT3 regions in Cyprus. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

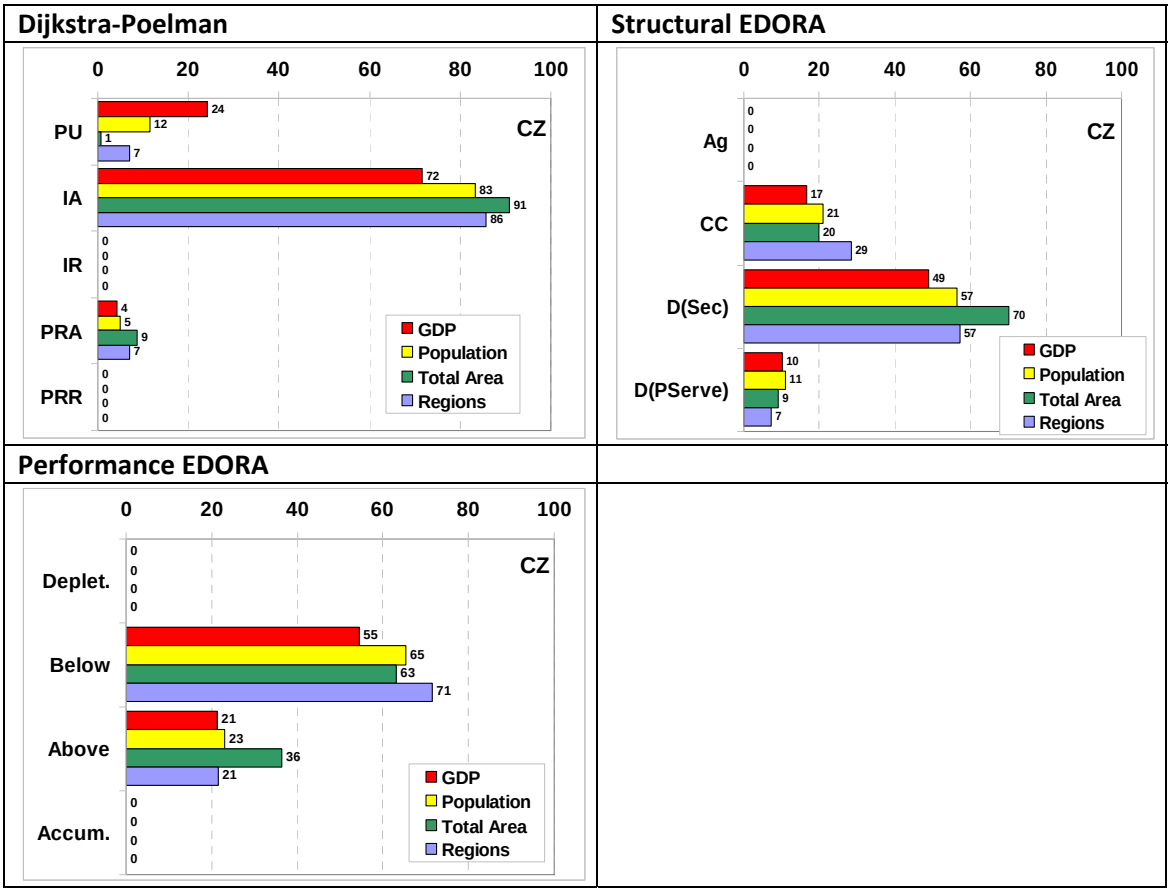
9.5 Czech Republic

As explained in the Country Profile Draft Report of the Czech Republic and as it is shown in the *Dijkstra-Poelman typology,* the Czech territory is classified in more than 90% by IA regions (composed with a 86% of different regions). Thus, it is logical than the majority of population live there (83%) and the GDP is highest here too (72% from the total). PRA areas are the second biggest (with same diversity of regions as PU regions) but they have a poor population and GDP scores, contrary to PU regions, very small in size but with more population and a contribution of more than 20% to the total of the Czech GDP. PR and PRR regions are not represented in the graphic.

The predominant category for the country according to the *Structural typology* is the *D/Sec** (Diversified rural economies with strong secondary sectors). The communist industrial specialization system of the country was transformed and adapted after the inclusion of the Czech Republic into the European Union, but still its reminiscence is strong and there is a high employment demand on industries. Thus, settlements around industrial areas are common and not only population life there but other business grow in the surroundings and contribute as well to the increase of the GDP of D(Sec) regions. CC regions, the second in importance for all the indicators' types, can have a synergic relation with D(Sec) and D(PServe) regions (business clusters) creating communication links between them (e.g. goods transport, national park sites, leisure activities, etc.)

The Performance typology classifies the Czech Republic as a compilation of regions below the average, i.e. far from urban patterns. They cover more than 60% of the territorial size and there are more than 70% regions included in this category, being inhabited by more than 60% of the Czech population, where the economy finds its growth cluster (more than 50% GDP is located) Regions above the average have the half size of the before commented but less regions can be considered in this category. Population and GDP scores represent the half or less than the half than the last scores for regions below the average. As depletion as accumulation areas are not illustrated in the graphic.

Figure 9.5 Distribution of NUT3 regions in Czech Republic. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

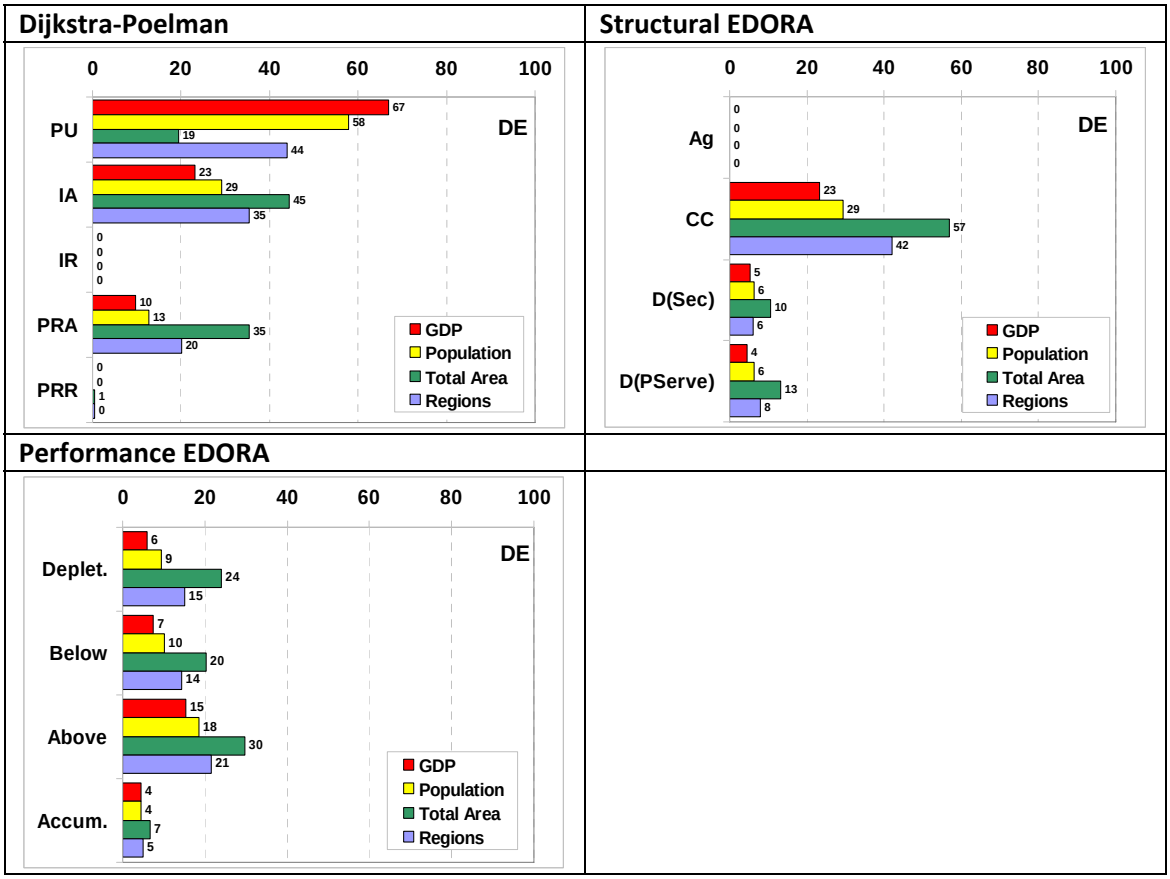
9.6 Germany

Germany is an overpopulated country, with clearly socio-economic and territorial divergences between the West and East. The West fits in the PU classification, while the East fits with IA classification. The compendium, as shown on the *Dijkstra-Poelman typology*, suggest that IA regions are bigger than the rest but there are more number of regions with PU characteristics. Population is concentrated in PU regions (almost 60% of inhabitants live there) as well as GDP (67% from the total). IA regions do not reach even the half of these outcomes. PRA regions are bigger than PU, but they have even less number of regions, population and GDP. IRR and PRR do not offer data for the indicators.

The country is categorized spatially, socially and economically in CC regions, occupying almost the 60% of the territory. The economic sectors diversity of Germany is vast (e.g. tourism, vineyards, agriculture, industries, increase of high-tech business, etc.) Consuming countryside model is traduced in the category of D(PServe), with s slightly bigger area than D(Sec) but similar scores for the rest of indicators as in D(Sec)

Regions above the average are bigger in size and highest for the rest indicators than the rest categories from the *Performance Typology*. They are followed by depletion areas, mainly rural (overall in East Germany) where agriculture and primary and rural landscape is present. Smaller but almost the same indicators' scores as in the depletion regions are the regions below the average. Accumulation regions present the lowest results, as Germany is a widespread resources country, with good infrastructures and a welfare society and strong economy.

Figure 9.6 Distribution of NUT3 regions in Germany. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

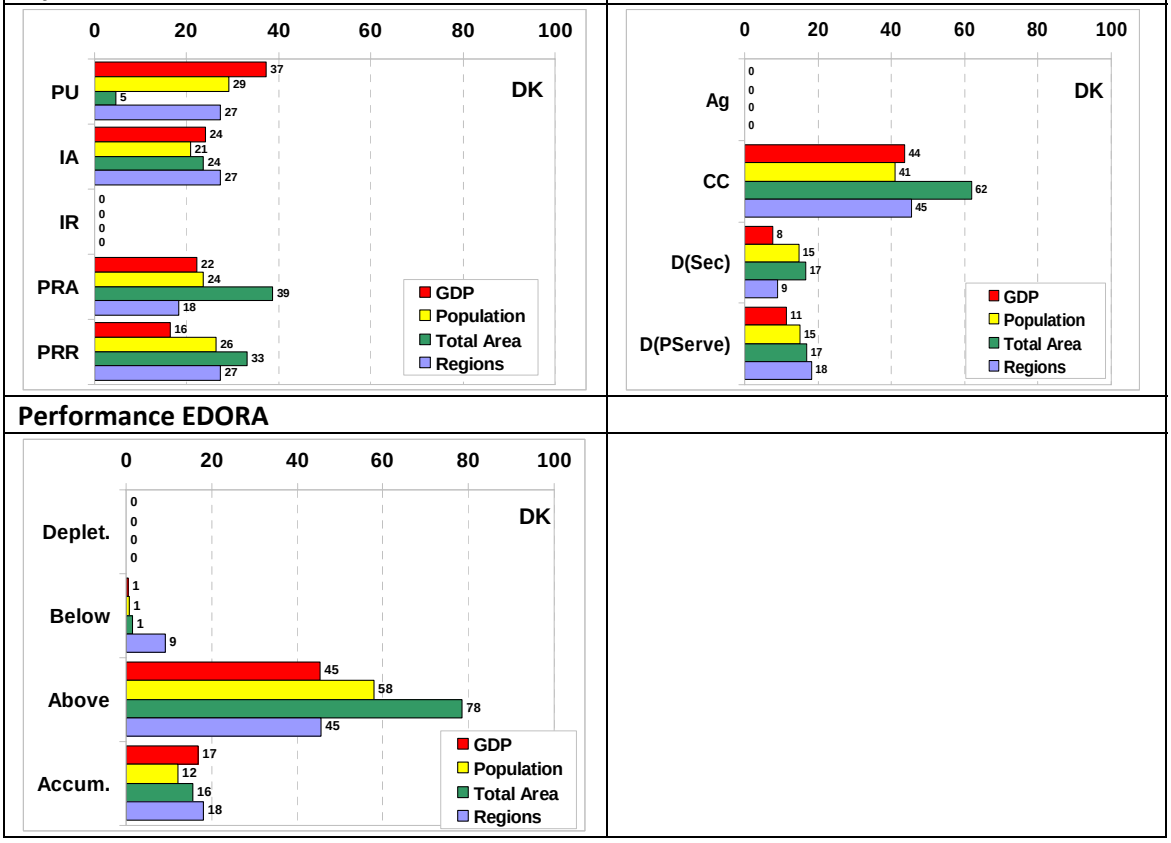
9.7 Denmark

Denmark is a very small country, surrounded by the North and the Baltic Sea. As illustrated on the graphic about the *Dijkstra-Poelman typology*, the biggest regions are PRA (almost 40%) and PRR regions, followed by IA regions (26%). Nevertheless, PRA is the less diversified in number of regions and population, contrary to PU regions (the smallest in area but with equal number of regions as IA and PRR, and with the highest population percentage -29%-). Population is well distributed over the territory due to limitation of space and good widespread of SGI and infrastructures; all the different categories (except IR regions which do not offer data) have population rates above 20%. GDP is higher in PU regions, reaching 37%, but it is indeed considerable in IA (27%) and PRA (22%). In PRR regions GDP reaches the lowest rate of 16%, which is a good value for this kind of regions. Quality of life and welfare can be considered well achieved and balanced, possibly as a consequence of a sustainable management between rural and urban spatial planning.

Denmark is considered one of the best countries to live based on the high living standards and the prosperity of economy. According to the *Structural typology*, it is classified in CC regions in more than 60% of its territory where 41% of population lives there and where more than 40% GDP from the total amount is generated. Urban consumption orientation is focused mostly on a highly diversified technological agriculture, ecotourism, etc. Other important activities in the country are exports of food and energy, as well as industrialization. The first activity occurs in D(PServe) regions, in strictly and closed relation with Consuming Countryside regions, and with indicators' rates $^{1}/3$ less than in CC regions. The second activity is located in D(Sec) regions (same area (17%) and population (15%) as D(PServe) but less GDP and number of regions), which is in closed relation with CC regions too, orientated to urban consuming but characterized by secondary sector features.

As pointed out in the first paragraph and thanks to the *Performance typology*, one can guess the widespread of SGI, goods, and the general welfare vs. high living standards of Danish population since regions above the average cover almost 80% of the territory in more than 40% of different regions, living there almost a 60% over the total population, and reaching the highest scores of GDP (45%, almost the half from the total country's GDP). Accumulation regions are the second in importance, with scores $^{1}/4$ less than the previous category. On the other hand, there are no depletion regions and regions below the average represent a little part from the total categories that can be considered insignificant.

Figure 9.7 Distribution of NUT3 regions in Denmark. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

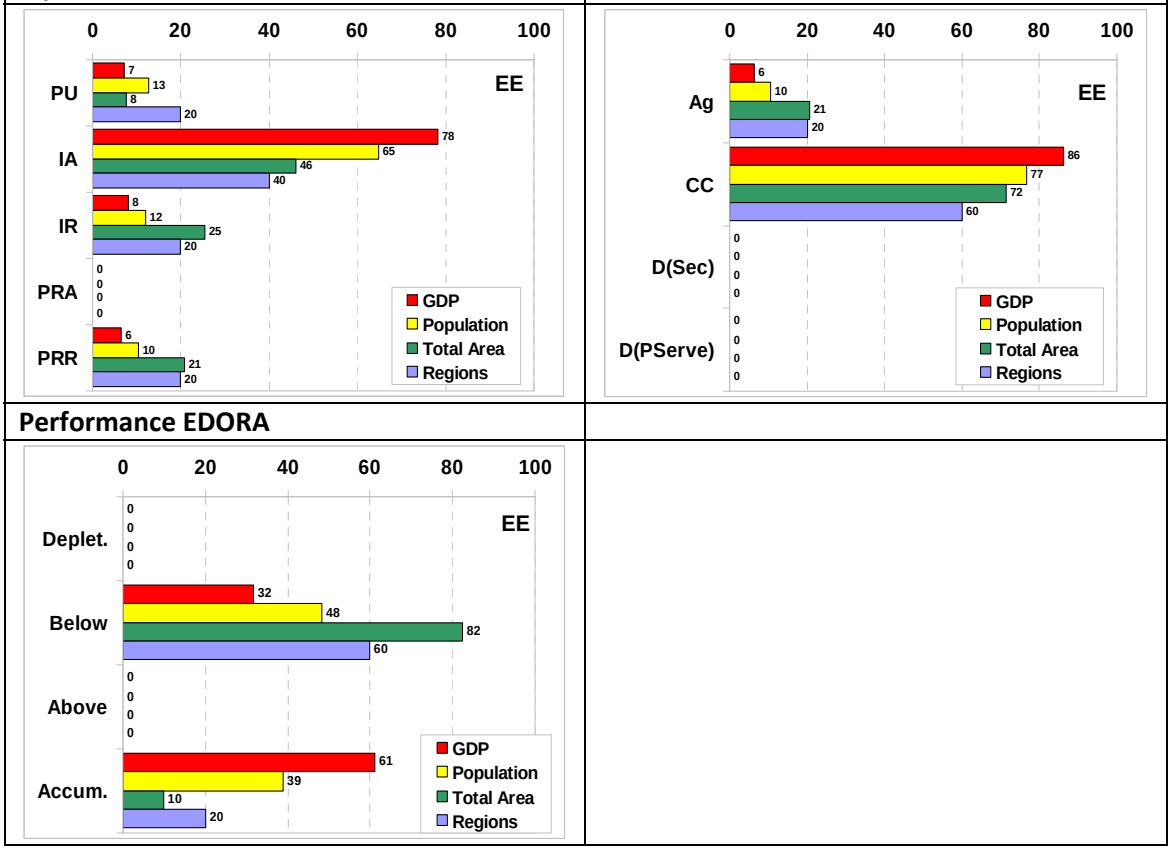
9.8 Estonia

Based on the *Dijkstra-Poelman typology*, Estonia is largely composed by IA regions in almost a 50% of its territory and in 40% of different regions of the country. The majority of population (65%) is concentrated in this type of regions and so it is the GDP, comprising a 78% over the total country's GDP. IR and PRR regions possess $^{1}/3$ smaller area. Results for IR regions are slightly higher than in PRR. Although being smaller, PU regions (principally concentrated in the North-East, where the capital Tallinn is located) have the same number of regions and more population and GDP scores than IR regions.

Estonia is orientated towards urban consumption since it is largely composed by CC regions (consuming countryside) in more than 70%, reaching a GDP higher than 80% due to productive and human capitals are concentrated there. It is a touristic placement for Scandinavian tourism (overall Finnish) and ex-socialist neighbor countries. Logging is an important activity and Estonian wood is exported over the world. Agriculture is becoming less important in the country's economy but still it is, and Ag regions comprise 21% of the total Estonian surface, generating low GDP (6%) due to the mentioned loss of importance, rural exodus, farmers' ageing, non technological agriculture practices, etc.

In the *Performance typology,* it is shown that more than 80% of the Estonian regions are considered regions below the average (there are 60% of different regions classified inside this category). Almost the half of population is concentrated in these regions, where the GDP is the half than in accumulation regions (which only represent 10% of the total country's surface but have a high population density –basically in Tallinn and surroundings-)

Figure 9.8 Distribution of NUT3 regions in Estonia. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

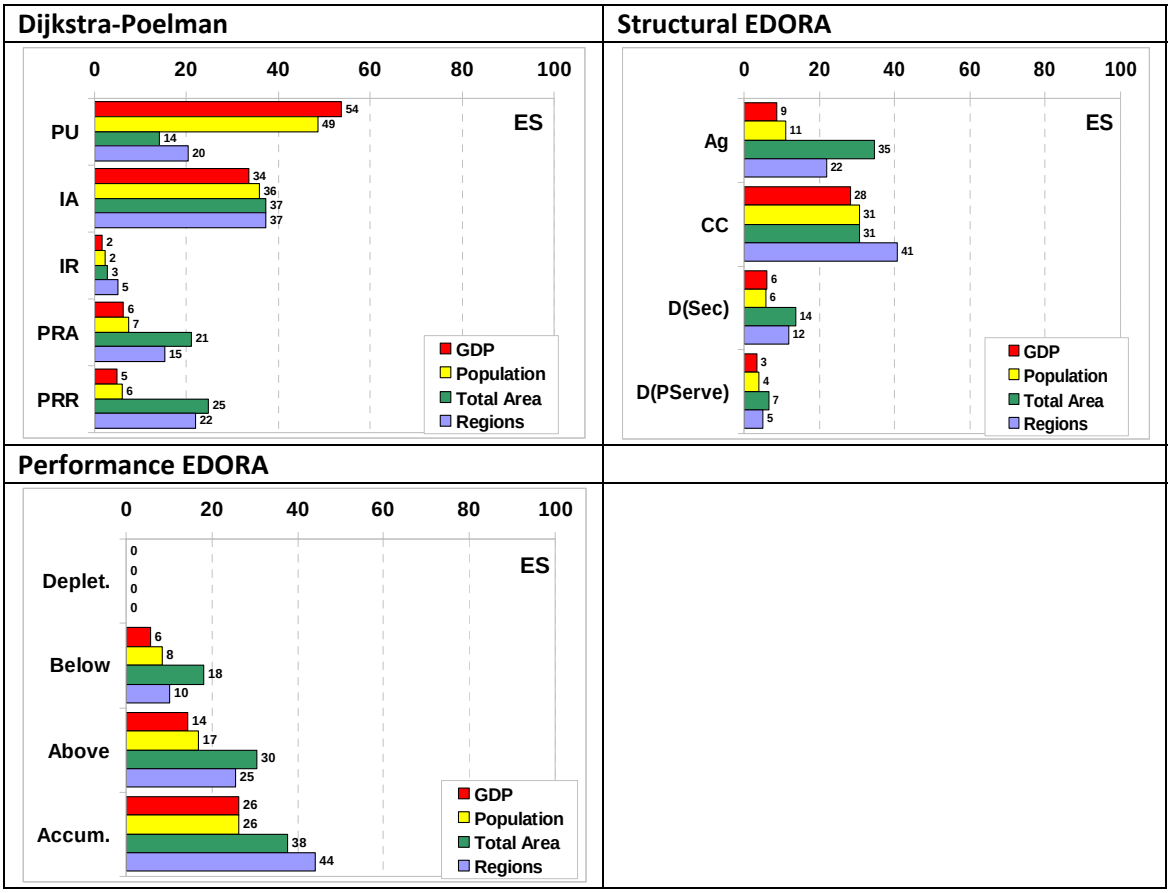
9.9 Spain

There is a fair distribution referring to the area size for each category from the *Dijkstra-Poelman typology*, except for PU and IR regions. The biggest area which compiles more number of regions is represented by IA regions. Peripheral sites surrounding cities are an increasing phenomenon in spatial planning, concentrating more and more population because of lowest prices of housing, etc. In this case 36% of population lives in these regions and the generation of GDP arises 34%. PU regions are the only category that surpasses the scores of population and GDP: the half of population lives in PU (taking into account that these regions only cover 14% of the territory, it can be asset that there is a high population density on PU regions) and more than half of Spanish GDP is generated there, becoming the most economically developed region. PRR are the second biggest areas but the social and economic indicators are lower than in PRA, the third biggest category. IRR regions are represented but the scores are very low for all the indicators (below 5%)

According to the *Structural typology*, Spain is composed by CC regions (not in size but in number of regions, overall in the East coast due to its touristic attractive). This type of regions is the most overcrowded (31% of population lives there) and the richest over the rest categories (28% GDP). The largest areas (35%) are the Ag regions, with less regions, population and GDP than the CC because of the rural exodus, lack of employment, farming discredit, etc. D(Sec) regions are placed in third place of importance relating to the indicators' scores but they have less population and GDP than Ag regions. The same happen with D(PServe) regions. Counter-urbanization processes, urban markets widespread, etc. are some of the processes that occur in this type of regions.

Accumulation regions are the biggest ones, covering a 38% of the Spanish territory, mostly in the Coast regions where the tourism and economic benefits are higher and SGI are concentrated, in opposition to rural areas. Thus, these are the reasons for the highest population and GDP scores, both having a percentage of 26%. Regions above the average are slightly smaller than accumulation regions but population and GDP scores are 10 points lower. Regions below the average do not reach even 20% of space and population and GDP scores are approximately the half than the regions above the average. Normally these regions are dedicated to farming and primary sector activities and do not offer attractive to youth population to settle down and start business enterprises.

Figure 9.9 Distribution of NUT3 regions in Spain. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

9.10 Finland

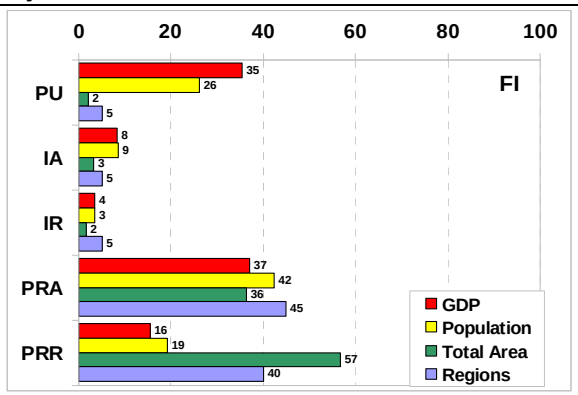
Finland occupies a big territory but the North part (Lapland) is almost depopulated due to the tough living conditions because of the cold weather of the Arctic Pole. The spatial planning follows a disperse population and SGI model. Rural areas predominate over urban ones, as it can be inferred from the Dijkstra-Poelman graphic. PRR regions occupy a 57% of the total area of Finland, 40% regions are included as PRR; nevertheless, they have low population and GDP scores. The majority of PRR regions include Northern regions of the country and, as commented before, depopulation processes occur and low productivity and economic activities are characteristics there (except winter tourism and ecotourism). A 36% of the Finish territory is classified as PRA regions, category with more number of regions than the before commented, and with the highest population (42%) and GDP (37%) rates over the rest categories. PU regions represent only the 2% of the total area of Finland (as IA and IR regions) because only the capital of Helsinki, its closed surroundings and some more cities (Tampere, Turku, etc.) fit in this categorization. PU regions are educational, cultural and economical sites, what it is the reason because, although their small size, GDP rate is similar to the one in PRA regions (bigger in size and number of regions) and there is more density of population comparing to PRA regions (with the double of population but almost four times bigger)

As a consequence of the special climate and spatial conditions of Finland, its territory can be classified as a total CC region. Rural areas, in all their diversity, produce goods and generate incomes of different types (tourism, high-tech industries, logging, educational demand from abroad due to their education system quality, etc.) towards an urban and rural consumption.

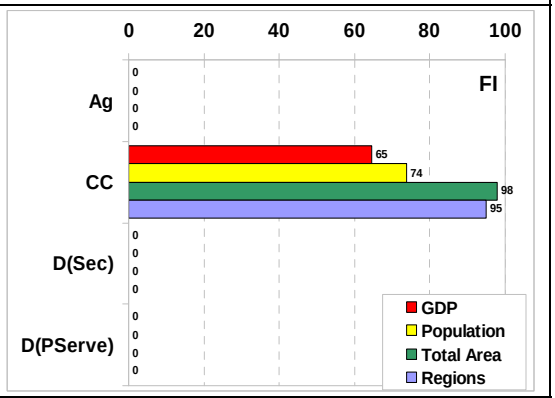
There are not so many depletion regions due to the disperse spatial planning model of Finland, but neither there are so many accumulation regions since urban centers or concentration of population, capitals and SGI are not supported by the geography and climatology of the country. The biggest regions are the regions below the average, which do not have such an influx of population and flow of capitals as the regions above the average (smaller in size but covering more regions).

Figure 9.10 Distribution of NUT3 regions in Finland. Dijkstra-Poelman, Structural and Performance Typologies

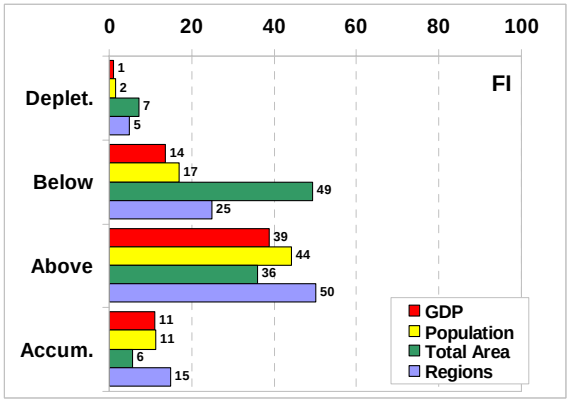
Dijkstra-Poelman



Structural EDORA



Performance EDORA



Source: EDORA Typology

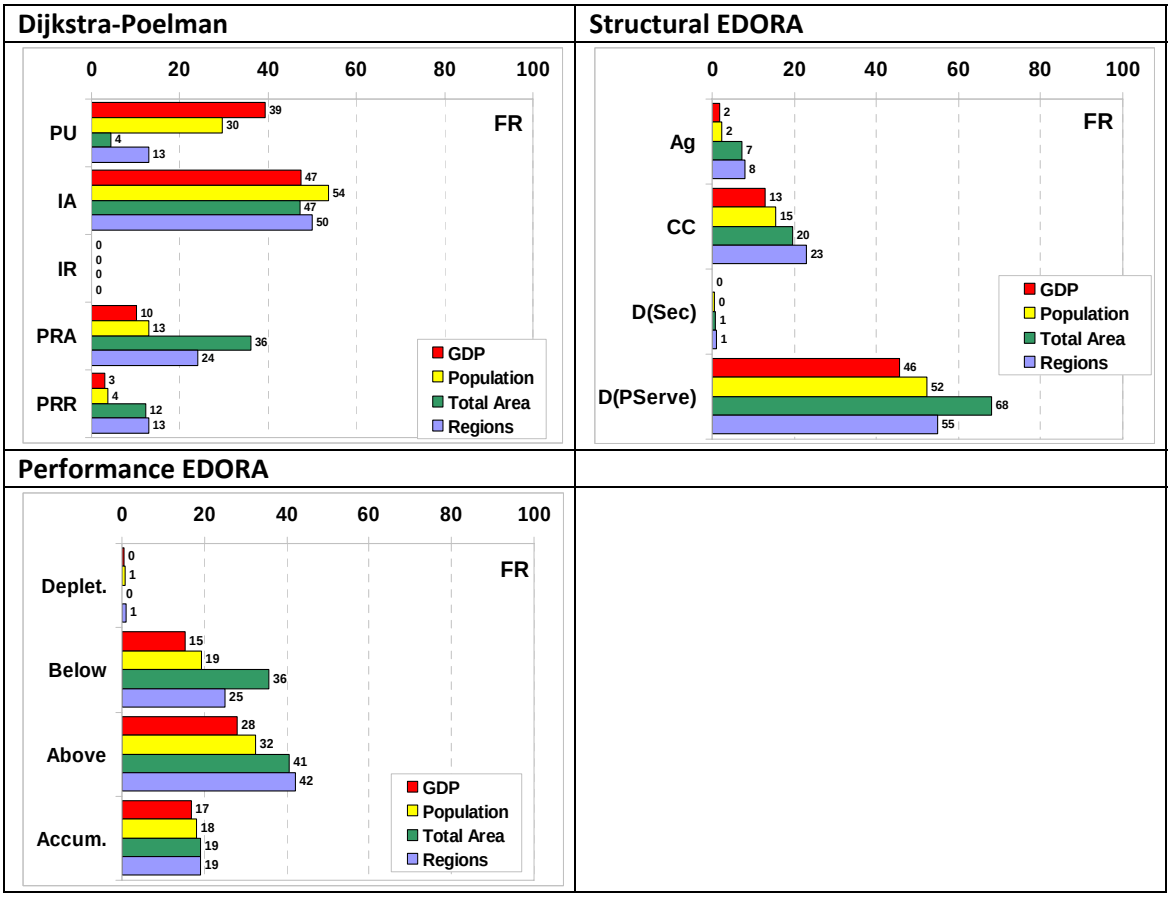
9.11 France

Following the NUTS3 distribution, France is majorly composed by IA regions, concretely they represent the 47% of the total area of the country where the half of regions are classified in this category. This type of region is inhabited by 54% of the total population in France and contributes to the 47% of the total GDP of the country. PRA regions are 10% smaller in size than IA and have the half of number of regions. Furthermore, population and GDP scores are $^{1}/3$ lower than in IA, only exceeding PRR respectively scores (PRR regions are in fact smaller than PRA in size and number of regions). PU regions represent the smallest size and same number of regions than PRR regions, but the GDP rate is closed to IA (just a bit less than 10% from it) and the population percentage is the second highest after IA regions, representing 30% of the total population in France.

The Structural typology classifies France as a D(PServe) region due to its tertiary economy with a solid urban market. Paris, the capital, is a huge metropolis that operates as the business center of France; service sector, cheap labour force (immigrants), precarious job contracts, social disparities, population and capitals concentration, etc. are characteristics a first economy, as France is. CC regions represent less than 20% of the total area and have 1/3 lower population and GDP scores than D(PServe) regions; the economic activities of this categorization are focused on urban consumption (tourism, leisure, industries, etc.) Ag regions are more important in Southern regions of France where vineyards and agriculture are one of the main activities. Anyway, these regions are quite depopulated and do not contribute largely to the French economy.

In relation to the *Performance typology*, regions above the average are the largest represented (41%) and they group as well the biggest amount of regions. A 32% of population lives there and generates 28% of the total GDP. The second bigger area correspond to regions below the average, with more regions number and population than accumulation regions (half the size than regions below the average) but with lower GDP percentage. In depletion regions only 1% lives but non area size is represented, so it can be considered a negligible category.

Figure 9.11 Distribution of NUT3 regions in France. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

9.12 Greece

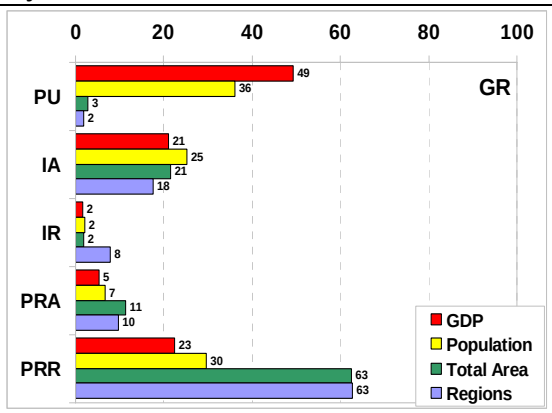
Greece is typically a rural country which bases its economy in agriculture and tourism. It is manifested in the graphics. According to the first typology, PRR areas are the biggest one, representing 63% of the total area of the country, even though population and GDP percentages are smaller than those in PU regions. PU regions are the smallest after IR regions (very depopulated and with low GDP) but they posses the highest rates of population (36%) and GDP (49%, almost the half from the total GDP of the country –mainly due to tourism-) IA regions have a balance between space (21%) and inhabitants (25%), as well as GDP generated (21%) PRA regions are bigger than PU regions but smaller than IA, representing only 11% of the total Greek area. Their remoteness make these areas non attractive to live and invest on local businesses, so population and GDP are low due to these and more complex reasons.

The rurality of Greece is clear enough when observed the graphic of the *Structural typology*: Ag regions represent more than 80% of the total Greek area and there are 80% of regions with Ag features. Almost the half of population (45%) settles down in this type of regions, which create a total GDP contribution of 33%. CC regions represent the rest 15% of the total area, and have lower scores than Ag regions. Tourism is the main activity in these areas.

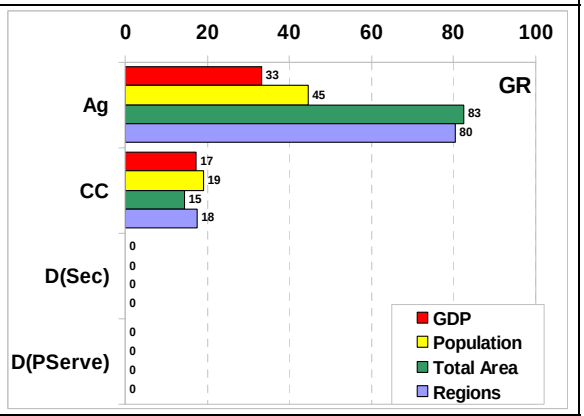
Referring to the *Performance typology*, regions below the average are the largest represented (42% of the total are of Greece distributed in 39% of regions) but with around 10% less population and GDP than regions above the average (10% smaller but equally distributed among regions) Depletion regions, (typically rural) represent 11% of the total area, as accumulation regions, but they are distributed in more number of regions and they have 1% more population and GDP than accumulation regions. Traditional Greek society model, linked to the land, is still strong and profitable for the economy of the country.

Figure 9.12 Distribution of NUT3 regions in Greece. Dijkstra-Poelman, Structural and Performance Typologies

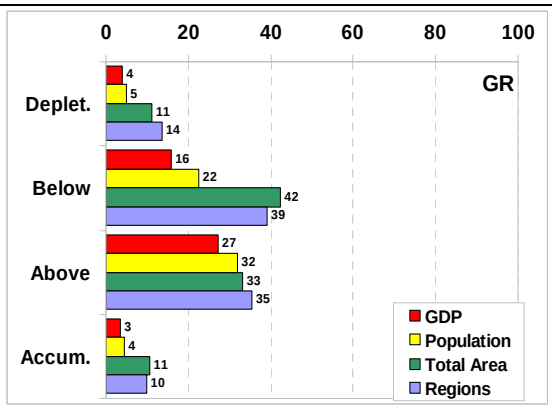
Dijkstra-Poelman



Structural EDORA



Performance EDORA



Source: EDORA Typology

9.13 Hungary

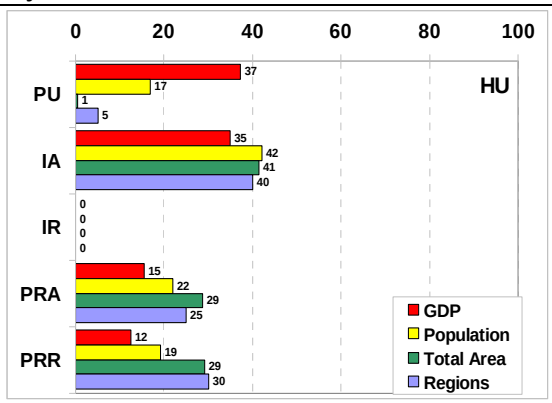
In the following illustrations, it is observed that Hungary is, to a big extent, represented by IA regions (occupying 41% of the territory and being the classification of 40% of the total regions of the country). These regions are the most populated ones (42%) and GDP presents the second better result, only 2% less than in PU regions. So IA regions are lively and economically healthy regions. Both PRR and PRA regions occupy the same area (29%) but PRR category responds to more regions' features than PRA, with a difference of 5%. Nonetheless, PRA regions posses a little higher population and GDP scores than PRR. Exceptionally, PU regions only cover 1% of the total are of Hungary (i.e. Budapest) but the GDP rate is the highest (37%) among the rest although population rate is not as high as in the other categories.

Hungary, after a lot of transition periods from primary economy and industrialization to tertiary economy, has still remnants of the past. Hence, Ag regions almost reach 60% of the territory and the half of Hungarian regions are considered farming regions based on primary sector activities. GDP and population indicators have the highest percentage in this category (27% and 41% respectively) CC regions are three times smaller, two times less populated and 10% less rich than Ag regions, but similar to D(Sec) rates. Both of them are focused on tourism and secondary sector activities (overall from the industrial past era) D(PServe) regions only cover 7% of the total area of the country but have similar population rates as D(Sec) and similar GDP rates as CC. in these regions tertiary activities take place, overall in urban sites, as Budapest.

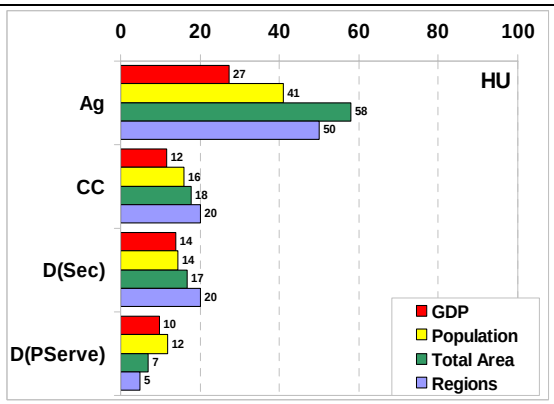
Remarkably, regions below the average (e.g. intermediate accessible rural areas) are distributed over the 60% of the total area of Hungary in 55% different regions where 44% of population lives and a 33% of GDP is generated. Regions above the average are 30% smaller than the previous ones and have only 15% of population and GDP, more than depletion areas (1% bigger than regions above the average, but less than 5% distributed among regions). The smallest are is for accumulation regions, with almost the same population as depletion areas but 2% richer referring to the GDP indicator.

Figure 9.13 Distribution of NUT3 regions in Hungary. Dijkstra-Poelman, Structural and Performance Typologies

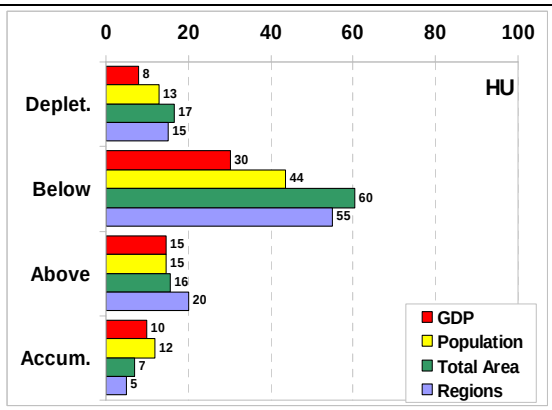
Dijkstra-Poelman



Structural EDORA



Performance EDORA



Source: EDORA Typology

9.14 Ireland

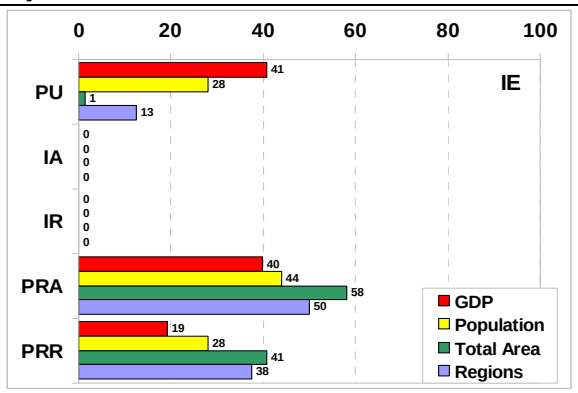
The territory of Ireland is covered, according to the *Dijkstra-Poelman typology*, in almost a 60% by PRA regions, distributed in 50% of the country's regions. These regions group the biggest number of population (44%) and the second highest GDP score (40%). GDP from PRA is only 1% less than in PU regions, the smallest in area (only 1% of the total area) and number of regions (13%) –without taking into account IA and IR which are not represented in the graphic-, and with approximately half of the population than in PRA regions and the same population percentage (28%) as PRR regions. As for PRR regions, the area is bigger (41%) as well as their distribution among regions (38%) but they generate the lowest GDP (19%). Normally these regions are rural ones, and their primary activity, agriculture, has been placed into the background of the Irish economy.

Specialization on high-tech, software, industrialization and other tertiary activities are the targets of the Irish market, focused on urban consumption and exportations. Thus, CC and D(Sec) regions are the most relevant in the Irish socio-economic system. It can be suggested that CC regions, with an extension of 80% of the total Irish area and grouping 75% of regions into their category, are the financing and social centers of Ireland, living there almost the 60% of the population and generating the 42% of the total GDP. D(Sec) regions have ¼ values regard to the CC scores for all the indicators, except for GDP scores which difference is around $^{1}/3$.

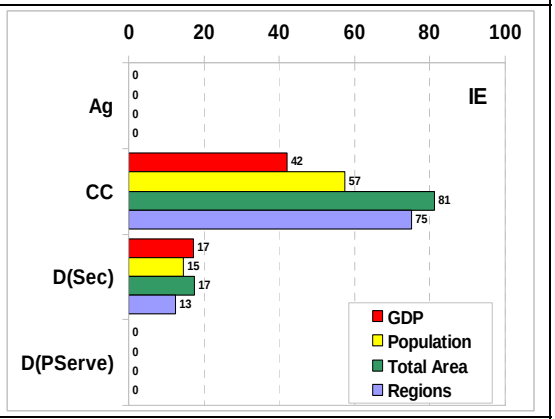
The *Performance typology* shows that the whole Ireland is considered an accumulation region.

Figure 9.14 Distribution of NUT3 regions in Ireland. Dijkstra-Poelman, Structural and Performance Typologies

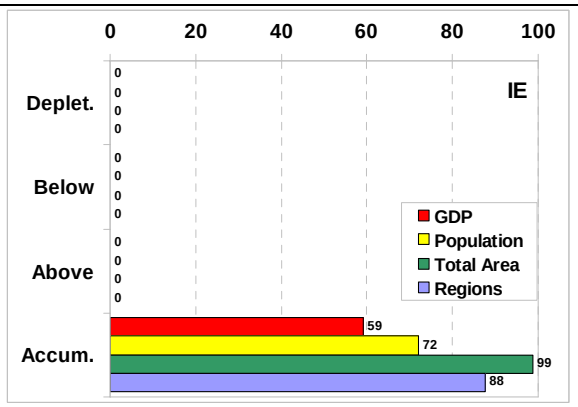
Dijkstra-Poelman



Structural EDORA



Performance EDORA



Source: EDORA Typology

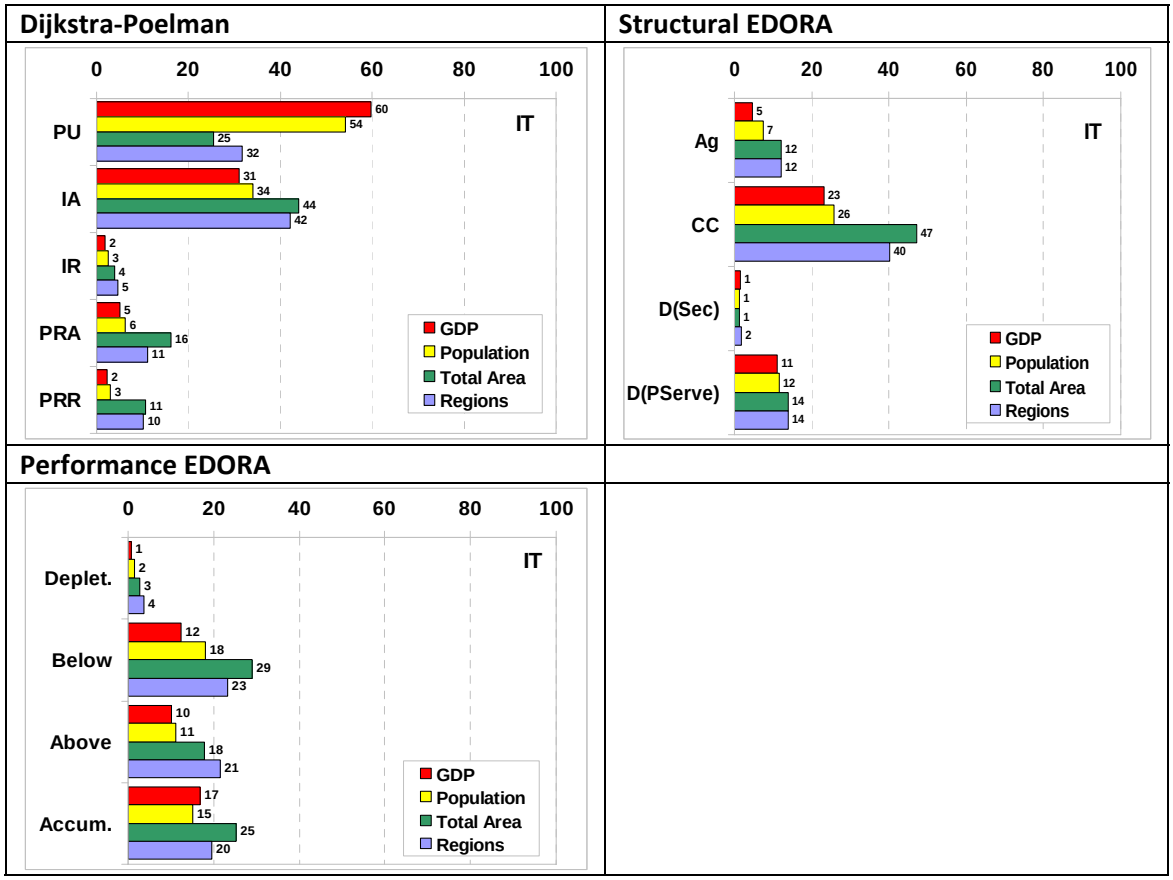
9.15 Italy

The simplified spatial perspective of Italy leads to divide the country in two parts: the North (richer and more urbanized) and the South (poorer and more rural). The first typology illustrates the predominance in size (44%) and number of regions (42%) of IA regions over the rest categories, preceded by PU regions –although their $^{1}/2$ size and number of regions- regard to population and GDP scores, which are the double than in IA regions (54% and 60% respectively vs. 34% and 31%) and the highest respect to the other categories. The rest categories have low population and GDP scores, as well as they do not represent large extensions of territory in Italy.

The half of the Italian territory is classified into the CC category, from where 40% of the total regions are grouped in. D(PServe) regions are the second bigger and with better scores for the rest of indicators. Tertiary sector and tourism are the main economic activities in Italy. Agriculture has a lukewarm role on the economy (just contribute to the 6% of the total GDP) but it must be considered as well.

The rurality of Italy is evident when analyzing the *Performance typology* data. Regions below the average represent the largest area in the country (29%) as well as the most numerous in regions (23%) and population (18%). Depletion regions are the less represented and have the lowest indicators' rates. The second bigger areas are the accumulation regions (25%); they group the second most populated category (15%) and they are the richest category among the rest (contributing to the 17% of the total GDP). Regions above the average have moderate rates for all the indicators comparing to the other categories.

Figure 9.15 Distribution of NUT3 regions in Italy. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

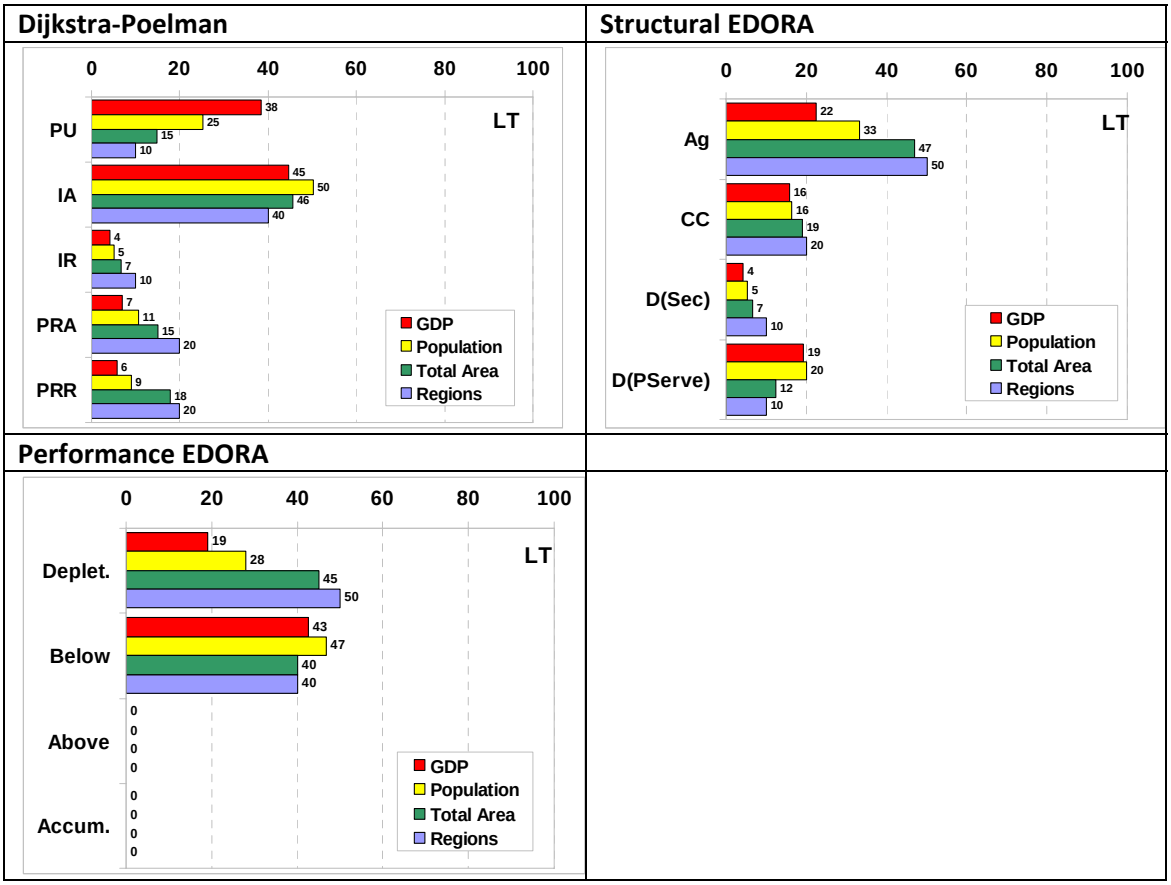
9.16 Lithuania

As an ex-socialist country, the transformation of Lithuania into a tertiary economy is being a long process. One of its particularities is the still rurality that exists over the country, with a predominance of the primary sector in the market and the economic sphere. As a consequence, urbanization is still growing but predominant IA regions dictate the spatial configuration of the territory, with repercussion on the socio-economic scores: the half of the population is concentrated in these areas, as well as the GDP (45%). PRR, PRA and IR have in common that they represent less than the half size than IA regions, and have the lowest population and GDP scores. In spite of its small-medium size (15%), PU regions (mainly the capital and closed surroundings) are place in second place for population (25%) and GDP scores (38%)

According to the *Structural typology*, a 47% of the total area of Lithuania and 50% of regions are grouped in the category Ag. Population and GDP best scores are presented in this type of regions too, 33% and 22% respectively. As commented before, primary sectors, overall agriculture, are the main economic forces that impulse the Lithuanian economy. CC regions follow Ag as the second biggest and more diverse regions, even though their population and GDP scores are below the ones in D(PServe) regions. These last regions enjoy these scores mainly because of the growing phenomenon of migration from rural to urban areas. The lowest results for all the indicators are observed in D(Sec) regions, the smallest, since secondary sector is not as important as primary sector in Lithuania.

The characteristic of being a primary economy where agriculture has an important role on society and economy configures the terrain in favor to rural areas. Thus, depletion areas are the biggest (45%) and the most diverse in number of regions, but regions below the average have more potential to attract population and business opportunities since they enjoy of more SGI and better infrastructures in general. The rest categories' data are not illustrated in the graphic of the *Performance typology*.

Figure 9.16 Distribution of NUT3 regions in Lithuania. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

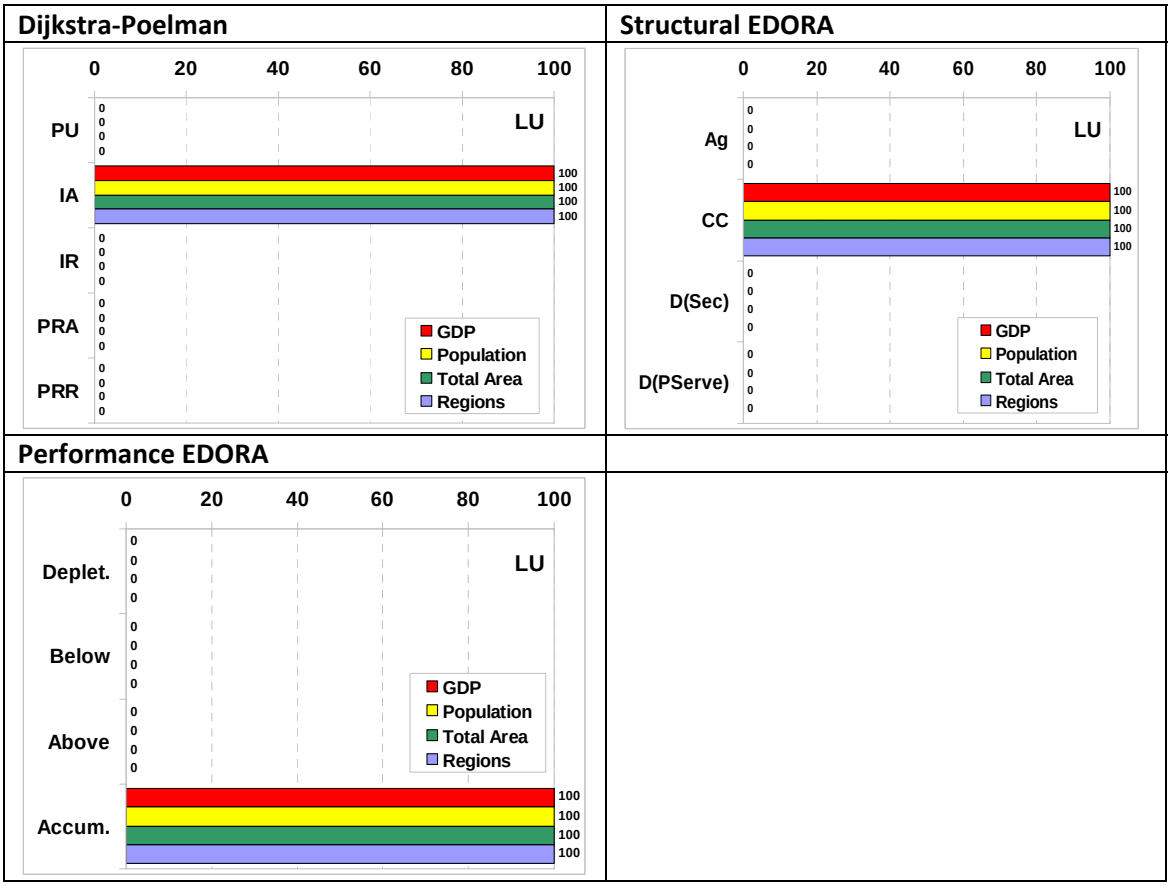
9.17 Luxembourg

Due to the small size of the country, the second smallest in the EU, the NUTS3 distribution classifies the regions as IA regions, but at a detail scale, urbanization and urban areas compose the reality of the spatial planning of the country.

Similar patterns occur when analyzing the *Structural typology*. According to it, Luxembourg is composed by CC regions. The real picture is that this country is a strong third economy, where labour market is very solid by the exportation of financial services.

According to the *Performance typology*, same explanation can be applied. Taking the whole country as a single region/NUT, the results show concentration of capitals, SGI and social services, without differentiate one region from another.

Figure 9.17 Distribution of NUT3 regions in Luxembourg. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

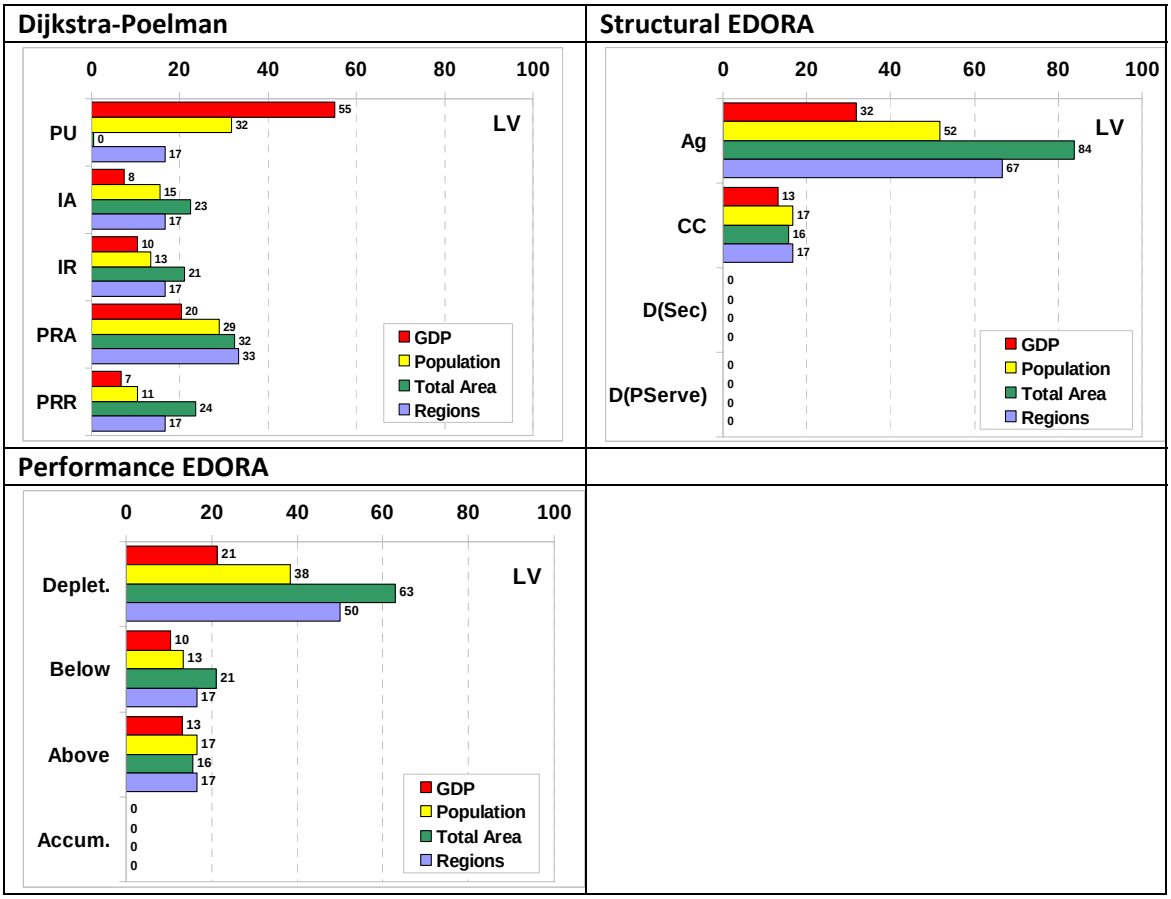
9.18 Latvia

The case of Latvia is similar to Lithuania, as in the history, geography and socio-economic patterns, but the case of Latvia is more noticeable. Analyzing the *Dijkstra-Poelman typology*, it can be observed than GDP (56%) and population (32%) are concentrated in PU regions (mainly in Riga, the capital) but PRA,PRR and IA regions are more important as in size as in number of regions. From there, only PRA regions possess sustainable and balance scores of population (29%) and GDP (20%). The rest categories posses GDP rates of 10% (IR regions) or less (IA and PRR), and population rates of 15% (IA regions) or less (IR and PRR)

The power of primary sector in the Latvian economy (overall agriculture and logging) is manifested in the predominance of Ag regions, representing more than 80% of the area of Latvia and covering the 67% of regions. These regions are populated by the 52% of inhabitants, and the contribution of GDP is about 32% of the total. CC regions have a small representation of 16% in size and similar values for the rest of indicators. Ecotourism, farm diversification and general tourism are some of the recent economic activities to attract people and capitals. The tertiary sector is still being developed.

More than 60% of the total area of Latvia is composed by depletion regions, concretely the 50% of regions are classified into this category. Population (38%) and GDP (21%) rates in this category are the highest from the other categories of the *Performance typology*. Regions below the average are bigger and agglutinate the same number of regions than regions above the average, but these last ones have slightly better population and GDP scores.

Figure 9.18 Distribution of NUT3 regions in Latvia. Dijkstra-Poelman, Structural and Performance Typologies

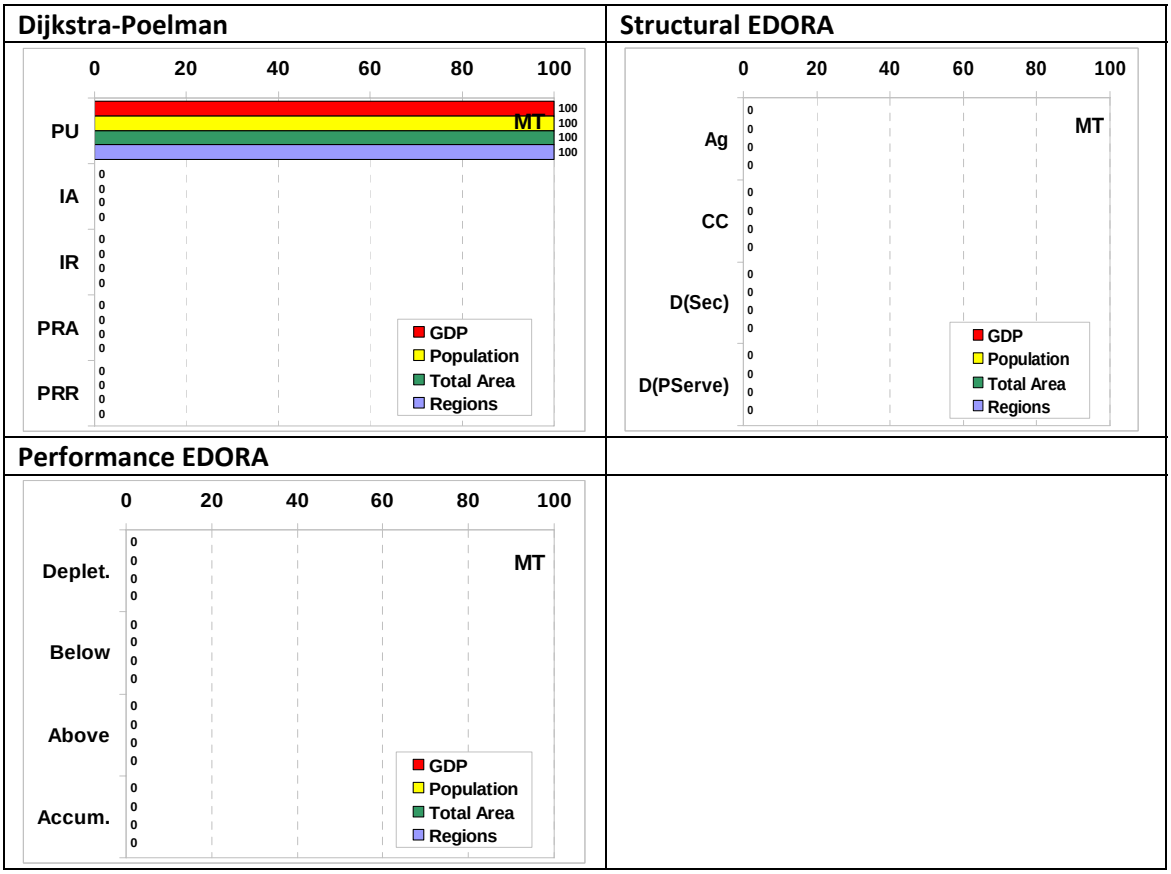


Source: EDORA Typology

9.19 Malta

Malta does not offer too much information about some indicators or parameters; furthermore, it is s very small Island and the NUTS3 division is not a good system of regions' differentiation. These are the reasons why the Structural and the Performance typologies do not offer any data, and why the Dijkstra-Poelman typology considers Malta as a single region, concretely a PU region as a whole due to the high urbanization and tourism. The data is far from the reality since Malta is divided in small rural regions, overall in the inland of the island.

Figure 9.19 Distribution of NUT3 regions in Malta. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

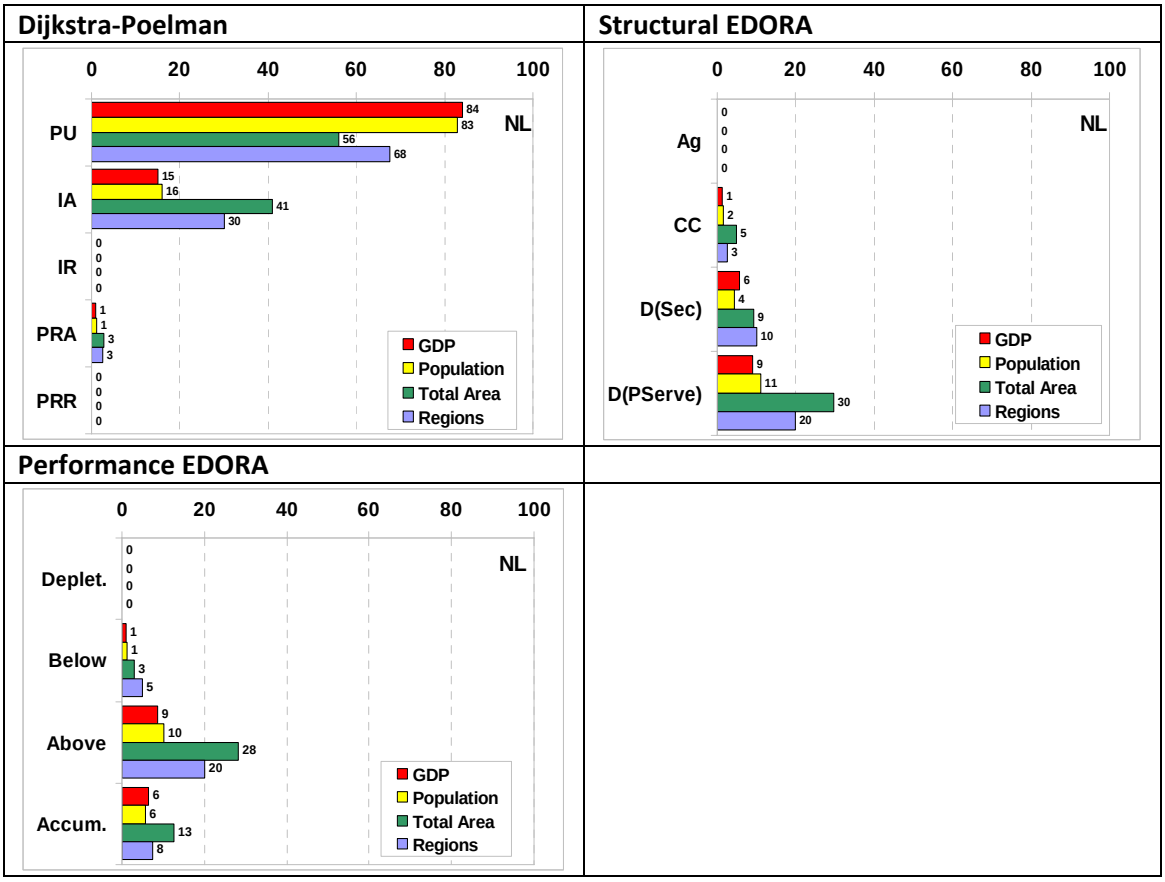
9.20 Netherlands

The Netherlands are, as well, small territories densely populated, and characterized by being a third economy country very developed in technological and farm diversification processes. These features are the cause of the classification of the country as a composition of PU regions in the 56% of its area for a total of 68% of regions, with a concentration of population of 83%, in parallel to a concentration of 84% of the total GDP of the country. IA regions represent the 40% of the region but population and GDP scores are very little comparing to the ones in PU regions. PRA regions have a small representation over the total indicators' scores.

As a dominant third economy and absolutely urban, the highest scores for all the indicators take place in D(PServe) regions, urban clusters per excellence. D(Sec) regions take the second place in the ranking, followed by CC regions (with slightly representation on the graphic)

The concentration of services, population and capitals in the reduced space of the Netherlands convert the country in a quite compact territory. This is the reason for the predominance of regions above the average respect to the rest categories, followed by accumulation regions and regions below the average (this last category is surely linked with the PRA regions)

Figure 9.20 Distribution of NUT3 regions in Netherlands. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

9.21 Poland

Historically, Poland has suffered a lot transition periods that have impacted the society, the environment and the economy of the country: from the II World War, the exodus or death of Jew population, to the communist system, etc.

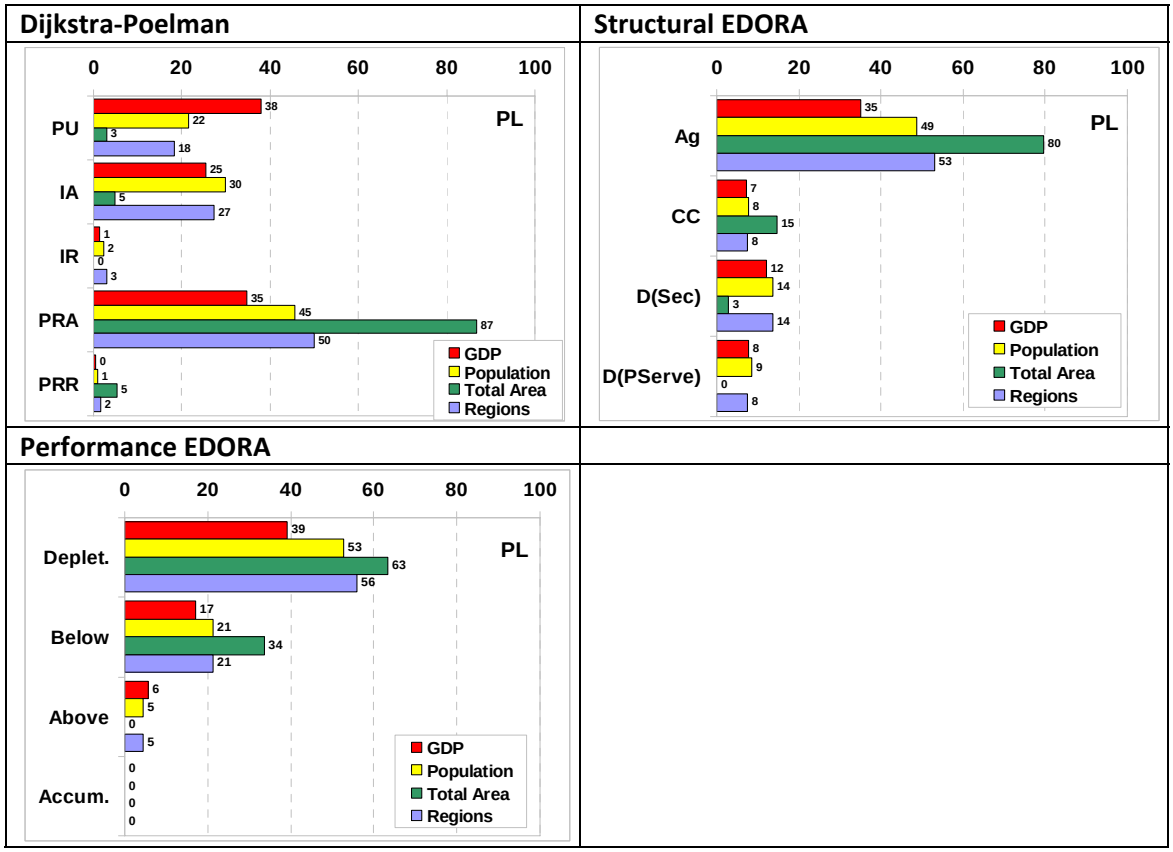
The graphics show data from the common EDORA database but in the Country Profile Draft Report of Poland some of these data are rejected, e.g. considering such a big extension for PRA regions and Ag regions.

Taking into account strictly the data from these graphics and having in mind the considerations before commented, the analysis is as followed: there is an 87% of the Polish territory considered as PRA, widespread in the 50% of the Polish regions and having a 45% of population, with rates of GDP quite high (35%, just 3% below the PU regions ones). Urban areas (PU) are scarcely represented in the territory but they group into their category a percentage of 18% of regions; the population score of PU regions is the third most populated, with a rate of 22%, below PRA and IA scores. On the other hand, IA regions as well as PRR regions only cover 5% of the total area of Poland, but IA rates for population, GDP and number of regions are higher than in PRR regions.

The Structural typology suggests that an 80% of the total area of Poland is covered by Ag regions; concretely there are 53% of regions that respond to this category. Almost the half of the population live there and the generated GDP has the highest score (35%) over all the others in the rest categories. CC regions are the second biggest regions but D(Sec) have highest scores for population and GDP. As described on the Country Profile Draft Report of Poland, agriculture is on decline and other non-agricultural businesses, such small scale manufacturing, rural tourism, etc., are more common in rural areas.

According to the *Performance typology*, there are not accumulation regions, and regions above the average are not very representative. The most representative ones are depletion areas, covering more than 60% of Poland in more than half of the Polish regions, where living standards and economy are the best over all the other categories since more than the half of population lives there and almost a 40% of the total GDP is reached. Regions below the average are important as well, covering 34% of the country's territory and having population and GDP scores above 15%.

Figure 9.21 Distribution of NUT3 regions in Poland. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

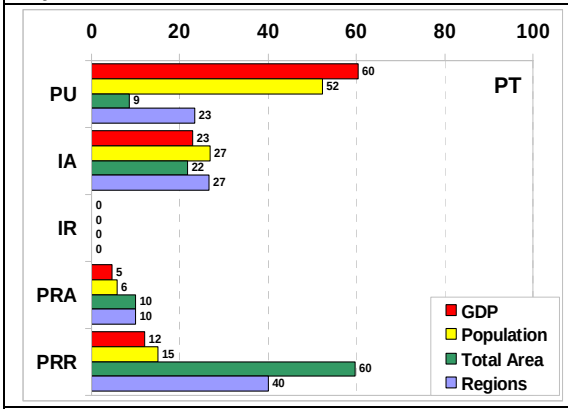
9.22 Portugal

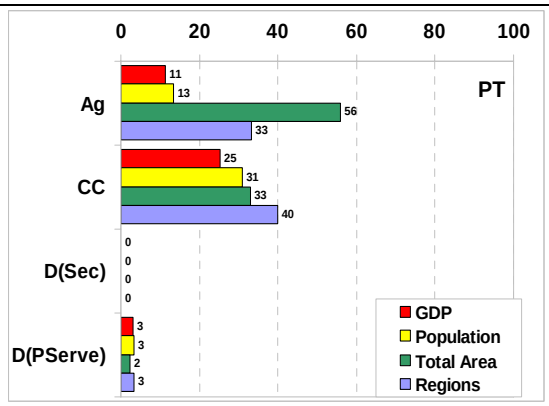
Portugal is a third economy country but primary sector plays an important role nowadays, overall in the East part of the country (characterized by PRR regions). The West part of Portugal is limited by the Atlantic coast; this part is better developed and more urbanized (characterized by PU and IA regions) due to the impact of tourism. As it can be observed in the first graphic, PRR are the biggest regions in size (occupying 60% of the total area of Portugal) and number of regions (40%), but the most populated (more than half inhabitants live there) and richest (60% of the total GDP) are the PU regions. IA regions are the second biggest (3 times smaller than PRR and 1 time bigger than PU) and thanks to their accessibility they have the second best scores in population (27%) and GDP (23%). PRA represent an area bigger than in PU but the have the lowest score of number of regions, population and GDP. Meanwhile, IR regions are not represented at all in the graphic.

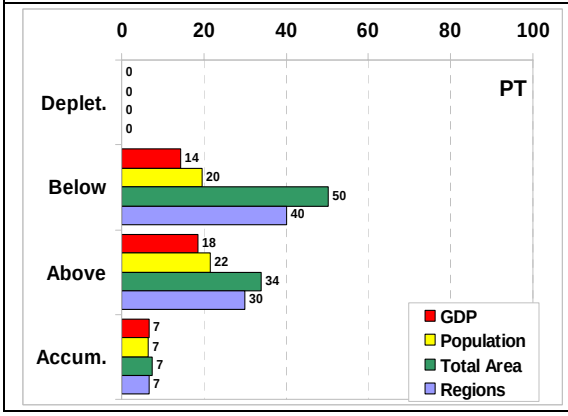
According to the *Structural typology*, Ag regions are the biggest in size (occupying 56% of the total Portuguese area and covering 33% of regions) but CC region, although their half size and 10% less regions, have approximately the double or more than the double values for population (31%) and GDP (25%) scores. Agriculture and tourism are the main economic activities for the country to a big extent. Tertiary sector is represented by D(PServe) regions, but as observed, it needs strength and a major impulse.

On the one hand, there are no depletion regions and on the other hand, accumulation regions are the worse represented comparing to the other two left categories. The biggest and diverse regions are the ones below the average cover the 40% of region in a surface extension of 50% of the total area. However, regions above the average (smaller in size and with 10% less of regions) have the best scores of population and GDP (2% and 4% higher than in the previous commented regions, respectively)

Figure 9.22 Distribution of NUT3 regions in Portugal. Dijkstra-Poelman, Structural and Performance Typologies







Source: EDORA Typology

9.23 Romania

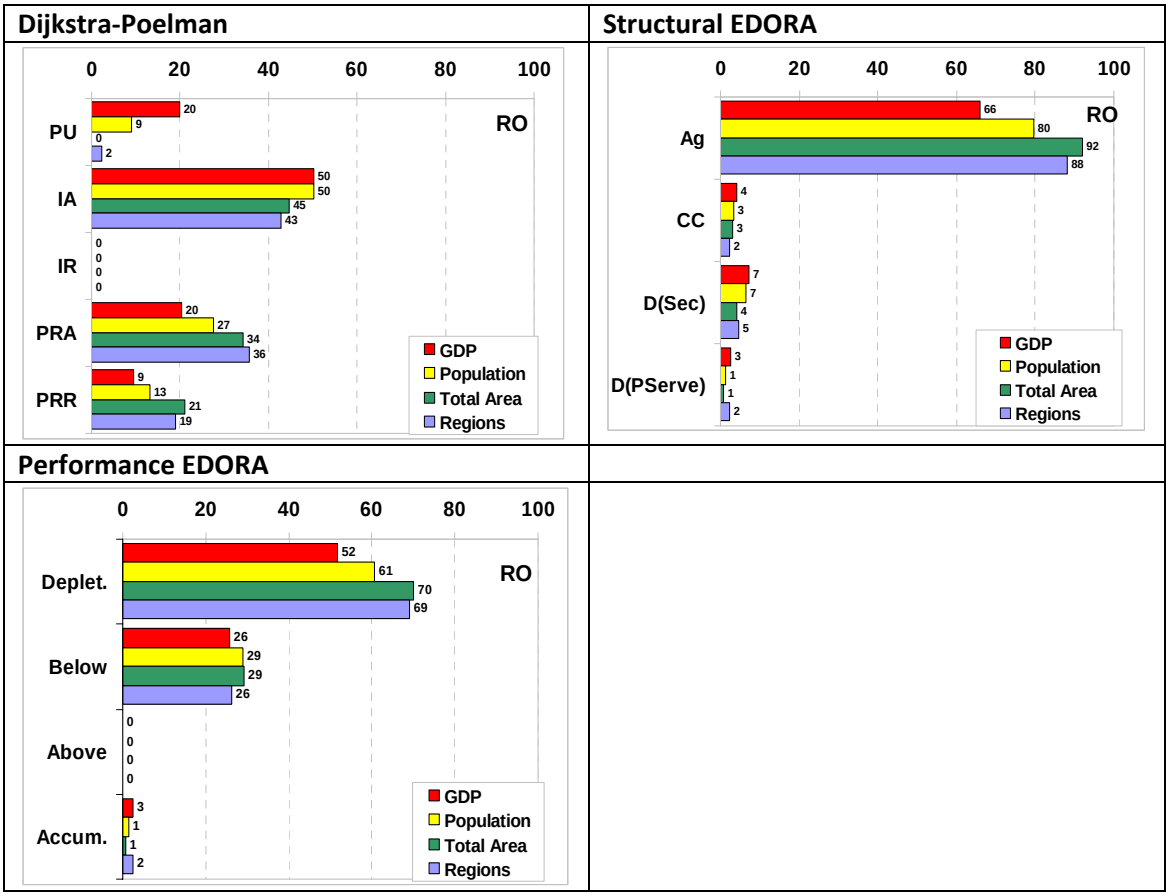
Romania has suffered the transformation from the communist system to the capitalism. It has lead to a deep structural change on economy and society. As a legacy, primary sector activities generate the largest income for the country's economy. Secondary sector is important as well, but due to the technological change, industries have been remained obsolete.

The territory is mainly rural. The only PU region is the capital, Bucharest. Migration towards the city is a trendy phenomenon but the repercussions are still weak and slowly. But still the half of population and GDP are concentrated in IA regions, which occupy the largest space of Romania (45%) in a 43% of different regions. PRA regions are the second niche of population (grouping a total of 27%) and GDP (20%, the same as PU regions); they are the second biggest areas in Romania with a 34% of surface and with 36% of regions responding to these characteristics. Rates of PRR regions have values around 10% less than in PRA regions.

The majority of Romania is composited by Ag regions for an 88% of the total Romanian regions in an extension of 92%. The 80% of population live in these areas, and as the GDP is the highest (66%), it is supposed that the people who live there are farmers or are related to farming activities somehow. D(Sec) regions are the second in importance due to the importance of the secondary sector in times of communist and the present remnant of these times. The rest categories are represented but with very low scores.

Typically rural characteristics surround Romania. Proof of it is the vast extension (70%) and percentage of regions (69%) of depletion areas, where population (61%) and GDP (52%) are concentrated. Regions below the average are the second best represented, with rates approximately 3 times less than in depletion regions.

Figure 9.23 Distribution of NUT3 regions in Romania. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

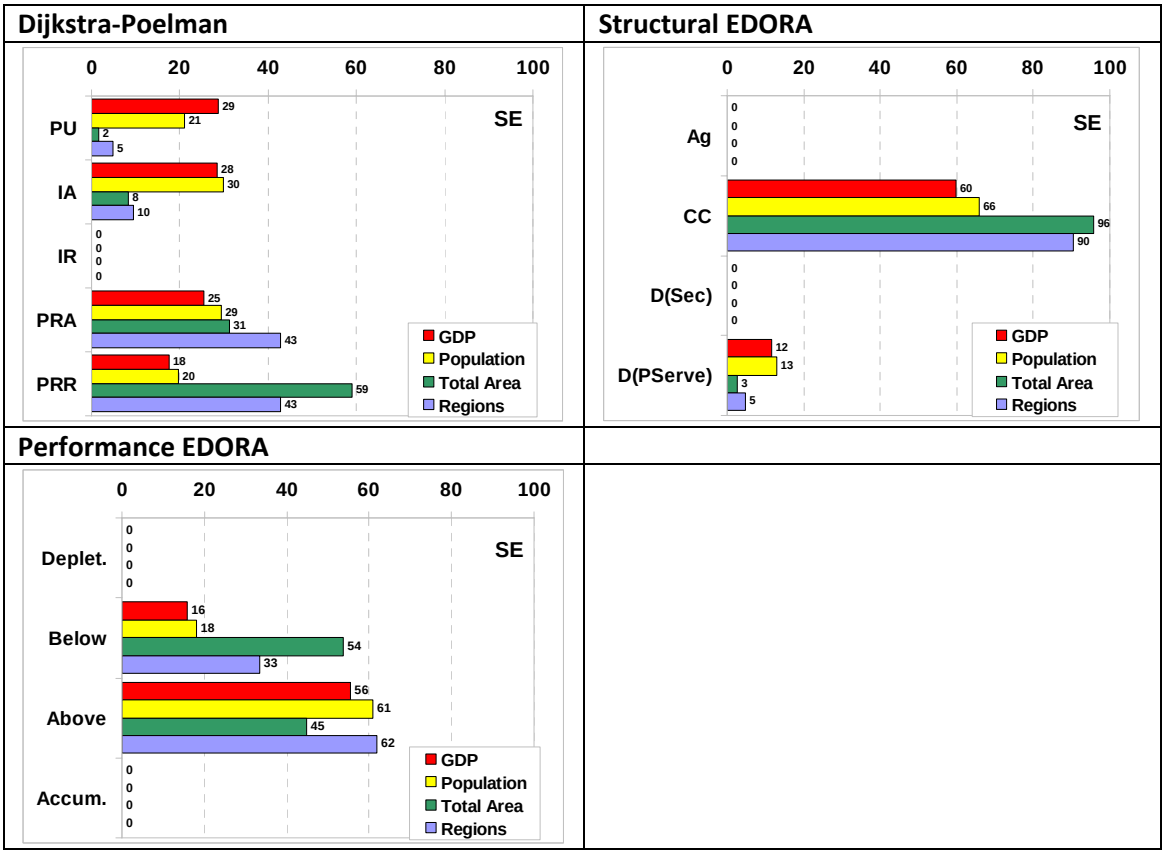
9.24 Sweden

The case of Sweden is similar to the one in Finland: huge territory surface limited by climate conditions up North and characterized by disperse spatial planning model. These are the reasons why PRR regions appear as the biggest, occupying a 60% of Sweden in 43% of regions. The same explanation can be applied for PRA regions, smaller in size but with higher rates of population (29%) and GDP (25%) than in PRR (which have the lowest rates for this indicators, 20% and 18% respectively) due to its accessibility. IR regions are not represented but IA regions are; IA regions only cover 8% of the total Swedish surface but are the most populated regions (30%) and the second richest, with a GDP of 28%, just 1% below the GDP rate in PU regions. PU regions only represent 2% of the total surface but, as a tertiary economy Sweden is, business centers and best educational centers (e.g. universities, polytechnics), some reasons why population (21%) and GDP (29%) are swarmed in PU.

CC regions enjoy the highest rates from the *Structural typology* categories: they cover a 96% of the total area of Sweden in 90% different regions. Because of good infrastructures and the disperse spatial model, population and GDP are engaged to Consuming Countryside regions with rates very high (66% and 60% respectively) being able to focused on urban consumption markets without living strictly in PU regions. Anyway, part of the population inhabitation and generation of GDP occur in D(PServe) regions, small in size and with poor dispersion among regions, but business and educational clusters per excellence.

According to the Performance typology, there are 54% of surface and 33% of regions considered regions below the average, where population and GDP scores represent less than 1/3 the scores they have in regions above the average. Concretely, these areas, smaller than the other in around 10% but with more diversity of regions (62%), enjoy a settlement of 61% of the Swedish population and a contribution to a 56% of the total GDP. Good SGI, communication infrastructures and high living standards are some of the reasons why population lives in such a regions, with less population density and better environmental conditions.

Figure 9.24 Distribution of NUT3 regions in Sweden. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

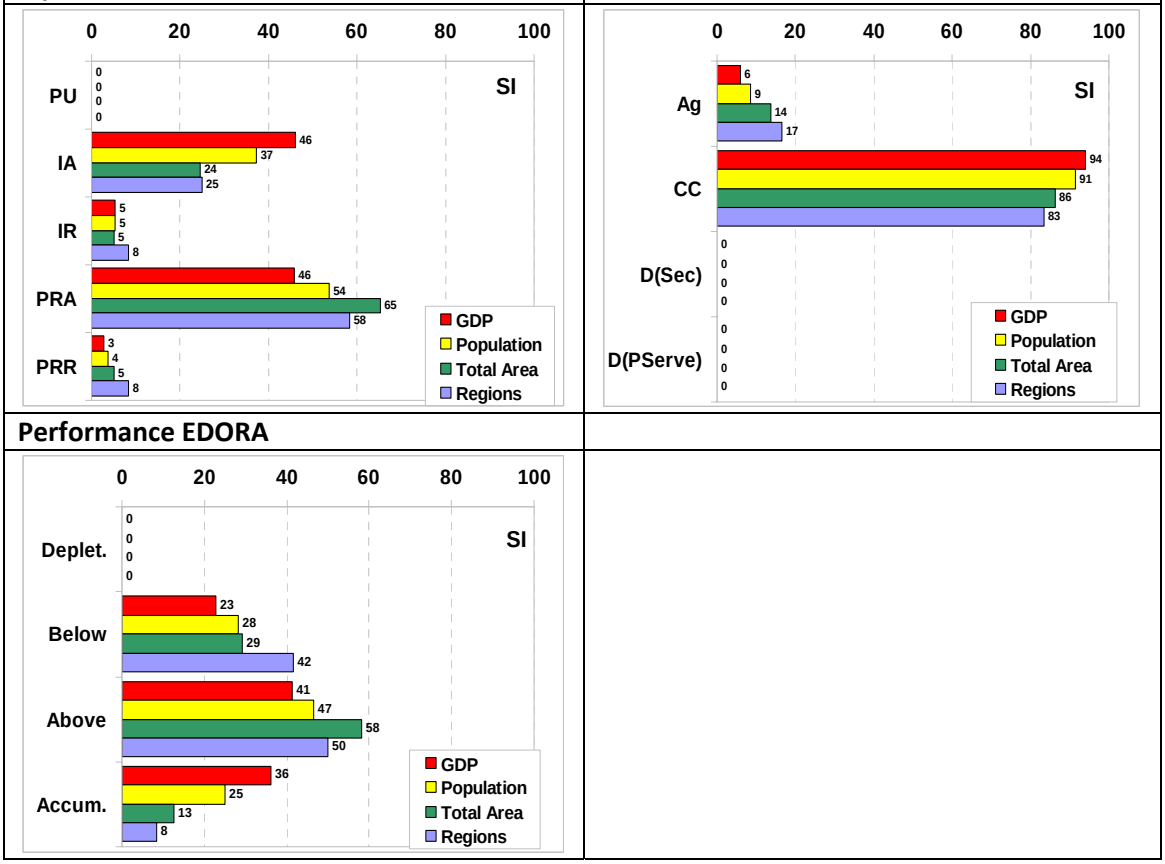
9.25 Slovenia

The socioeconomic situation of Slovenia is marked by its communist past. After the annex to the EU, it has been transformed into a third economy system, quite weak by the way. According to the different typologies, there are no PU regions, D(Sec), D(PServe) and even depletion regions, i.e. rurality characterizes the Slovenian landscape but secondary sector is the economic engine of the country, composed to a large extent by small-medium enterprises. IR and PRR regions do not offer high scores for the indicators. In opposition, PRA and IA regions have noticeable scores. PRA represent 65% of the total area of the Slovenian territory and there are 58% of regions classified according to this category. They are lively centers (more than the half of the Slovenian population lives there) and rich (concretely, there is a contribution of 46% of the total GDP, as well as in IA regions). IA regions occupy the third part of area and number of regions than PRA regions, and have around 20% less population, even as commented before, they contribute to the same GDP as PRA.

Slovenia is mainly composed by CC regions and to a little extent by Ag regions. The indicators' percentages are above 80% in CC regions, i.e. concentration of population and GDP in a big area, divided in 83% of regions. Primary sector is declining while secondary sector prevails on economy.

Based on the *Performance typology*, regions above the average are the biggest in size (58%), grouping a 50% of regions where a 47% of population lives and where the contribution of the total GDP is the highest one (41%) respect the other categories. There are around 42% of regions in a 29% of the total area of Slovenia which are considered regions below the average. On them, the half of population and GDP rates than in regions above the average can be found. Accumulation regions only represent 13% of the total area of the country but have population and GDP scores closed to ones in the other main categories. These 3 categories, overall regions above the average, have the capacity to attract population and capitals.

Figure 9.25 Distribution of NUT3 regions in Slovenia. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

9.26 Slovakia

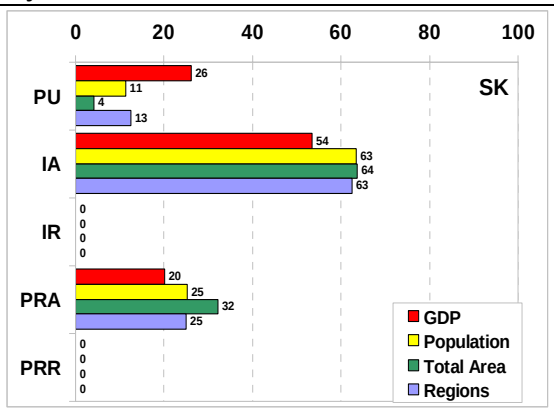
The socioeconomic background of Slovakia is similar to the one in Hungary or Slovenia. That is the reason about the predominance of CC regions, with an area of 74% respect the total, settlements of 65% of the total population and GDP generation of 50% (Slovakia is becoming attractive to tourists). D(Sec) regions are important as well, small-medium enterprises, foreign investments and a technological revolution comprise the business market structure and national businesses are increasing, overall rural business (as ecotourism)

The 63% of regions in Slovakia are classified as IA since this category occupies large extensions of the territory (concretely the 64%) and the 63% of population lives there. One of the causes, as well as consequences, to be attractive regions to live is the employment and generation of production and income and so IA regions reach (since they generate the 54% of the total GDP of Slovakia) PRA regions are 2 times smaller than IA and so show the rest of indicators. Even their higher population rates (25%) they generate less GDP (20%) than PU regions (which generate 26% in a space of 4%, less populated (11%)

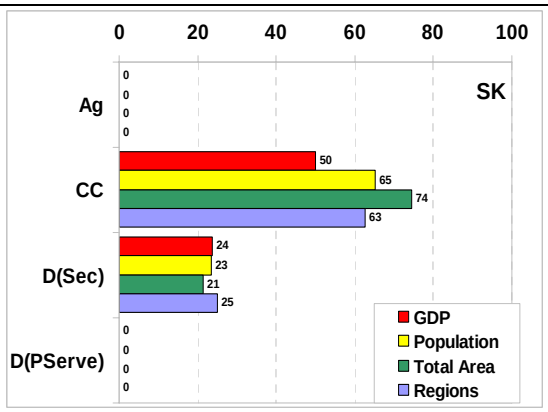
In general, socioeconomic parameters need strength since depletion regions and regions below the average are the majorly distributed categories for Slovakia. Depletion regions cover the half of the country's territory but there the same number of regions as in the category 'regions below the average'. Population is a bit less than 10% more than in 'regions below the average' but the GDP contribution is 5% less than in 'regions below the average'. Regions above the average have low scores comparing to the both last commented categories.

Figure 9.26 Distribution of NUT3 regions in Slovakia. Dijkstra-Poelman, Structural and Performance Typologies

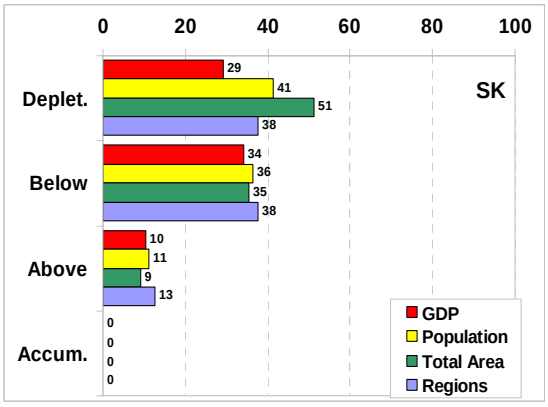
Dijkstra-Poelman



Structural EDORA



Performance EDORA



Source: EDORA Typology

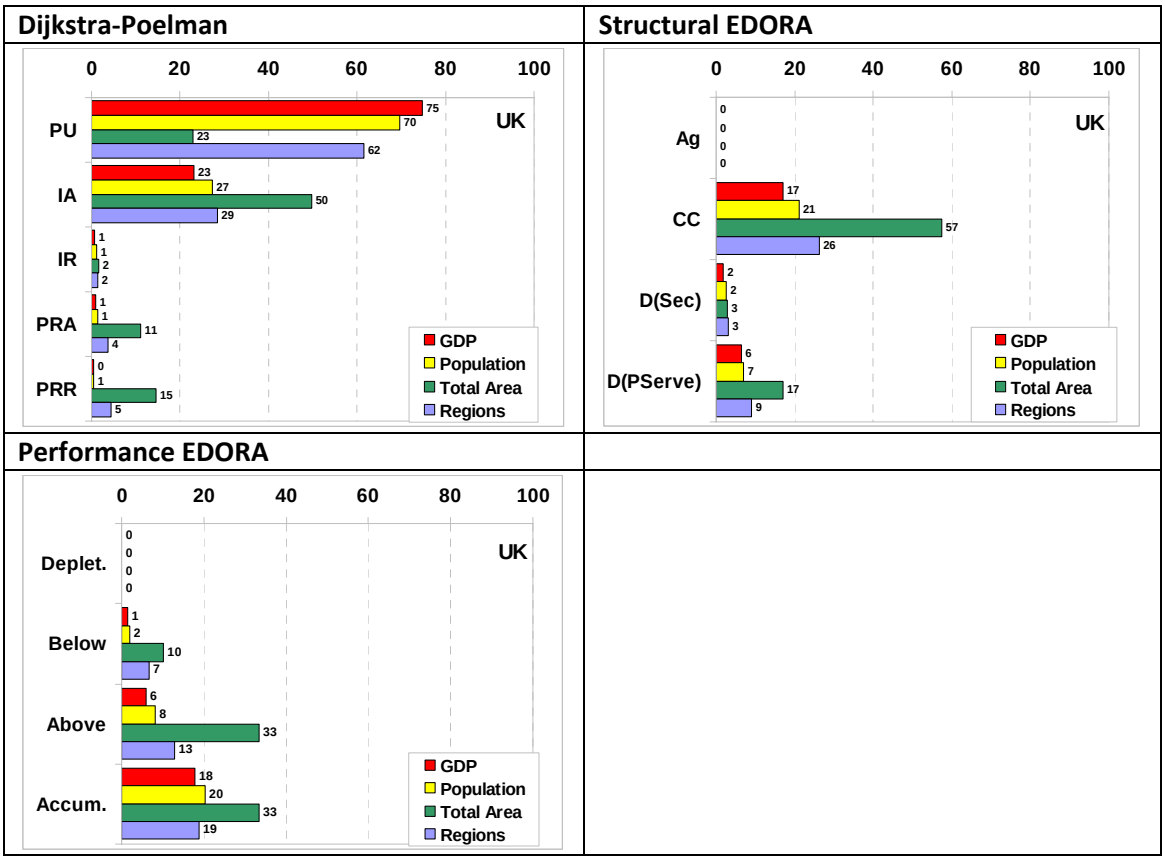
9.27 United Kingdom

United Kingdom can de divided in North (more rural) and South (more urbanized and densely populated, overall London and surroundings). It is mainly a tertiary economy based on the service sector. IA regions occupy the half of the total area of the island, but PU regions comprise the double number of regions (62% front to 29%) and three times higher scores for population (70% vs. 27%) and GDP (75% vs. 23%), basically located in main cities. Migration is very important in this country, overall in London (business center in Europe).

According to the *Structural typology*, United Kingdom is considered to be inside the CC category (more populated and richer since it occupies 57% of the total area of the country) and in second place, in the D(PServe) one (17% of area). Financing, farm diversification, tourism, educational centers' prestige attraction, etc. configure the economy of the country.

In the *Performance typology* is pointed out the urbanity of the United Kingdom. Accumulation regions and regions above the average are the best distributed ones. They occupy the same area (33%) but the first ones have better scores for the other indicators, overall population (20%, 12% higher than in 'regions above the average') and GDP (18%, 11% higher than in 'regions above the average'). Regions below the average present low scores for the indicators and they are only distributed in a 10% of the total surface of the country.

Figure 9.27 Distribution of NUT3 regions in United Kingdom. Dijkstra-Poelman, Structural and Performance Typologies



Source: EDORA Typology

CHAPTER 10
ANALYSIS OF THE THREE EDORA TYPOLOGIES BY NON EXCLUSIVE GROUPS OF COUNTRIES

Chapter 10 of the MS Comparative report presents a systematic analysis of the three typologies that make up the "EDORA Cube" considering non-exclusive group of countries[16]. The analysis refers to the following variables: number of regions, area, population, GDP and GDP per capita.

10.1 Distribution of NUT3 regions

The Dijkstra-Poelman rural-urban typology classifies regions according to their accessibility and rurality. Accesibility is measured in % of population which access to a market town under a particular time threshold. Rurality is linked to more extensive (as opposite to intensive) land use and, therefore, the variable is % of population living in rural LAU; that is, those below 150 inhab./km^2. This typology differentiates 5 types of regions: Predominantly Urban, Intermediate Rural Accessible, Intermediate Rural Remote, Predominantly Rural Accessible and Predominantly Rural Remote[17]. Figure 10.1 analyses the number of NUTS3 regions of the EU27 according to categories of the Dijkstra-Poelman typology (hereafter D-P). The analysis shows a percentage breakdown with the following characteristics:

- Central and Western European countries contain, overall, the highest percentages of regions in Predominantly Urban regions (PU). In this case, 43%. Adding the Intermediate Accessible Regions the percentage of "urban" or "peri-urban" regions amounts to three quarters of the total (77%). Conversely, the Scandinavian countries show the lowest percentages of regions concentrated in these categories. Thus, only 9.6% are Predominantly Urban regions (PU) and the percentage is only 21% if we add the Intermediate Accessible regions. In between are the Mediterranean countries and the NMS. In the first case, about one in four regions are Predominantly Urban. This percentage rises to 56% when we include the Intermediate Accessible regions. The NMS also record a rate of 50% in the sum of PU and IA regions, although in this case the internal distribution of both categories is different because the IA regions account for 40% and PU regions only 10%. Finally, the behaviour of the EU15 is closer to the

[16] Defined groups of countries are: (i) EU 15 (Belgium, Denmark, Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom); (ii) New Member States (Bulgaria, Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Romania, Slovenia, Slovakia); (iii) Mediterranean countries (Greece, Spain, Malta, Italy, Portugal, Chipre); (iv) Central-West European Countries (Belgium, Germany, France, Ireland, Luxembourg, Netherlands, Austria, United Kingdom); (v) Scandinavian Countries (Denmark, Finland, Sweden, Norway). Criterion for the selection of the groups of countries has been the definition of relatively homogeneous supranational areas or, at least, areas sharing common rural and regional dynamics. Furthermore, it is not mutually exclusive groups

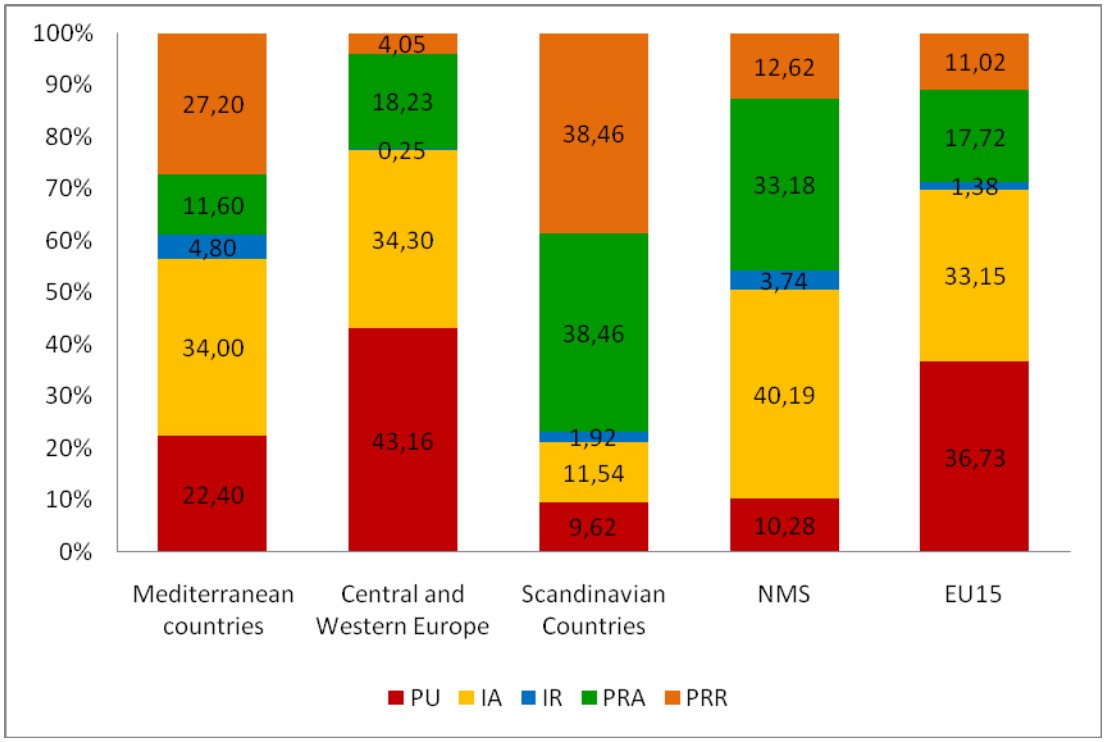
[17] For a complete methodological description of this typology please visit http://ec.europa.eu/regional_policy/sources/docgener/focus/2008_01_rural.pdf

countries of Central and Western Europe, with 70% of urban or “peri-urban” divided in 37% in regions PU and 33% in IA regions.

- On the other hand, the "rural" regions, represented by Predominantly Rural (accessible or remote), show the largest percentages in the Scandinavian countries, in the NMS and in the Mediterranean countries. In Scandinavian countries, the two PR categories' percentages are identical and very high. Thus, 76% of the Scandinavian regions are Predominantly Rural either remote or accessible. In the case of NMS the highest percentage of rural regions is accessible (PRA), while remote regions are considerably less. Finally, in the Mediterranean countries the most significant percentage corresponds to remote rural areas (PRR) (27%). These differences are mainly due to geographical features. Thus, both Scandinavian (due to their size) and Mediterranean countries (due to their orography) show areas where accessibility is low and, therefore, are located in the category of "remote." The opposite happens in the NMS where rurality is high but accessibility is better.

This distribution indicates that there are patterns of territorial occupation clearly differentiated in the EU27. Countries of the EU15 have percentages of urban and "peri-urban" regions significantly greater than those recorded in all the NMS.

Figure 10.1 Dijkstra-Poelman Typology. Percentage of regions in each category, by non-exclusive groups of countries



The structural typology classifies regions according to their economic settings. According to this typology, regions can have an economic base focused on primary activities, or be focused on the "consumption countryside", or have diversified economies dominated by secondary activities or by private services. The analyses carried out on the EDORA typology and those made elsewhere in this report show that regions with an agricultural economy and to a lesser extent, those focused on "consumption countryside" concentrate the main problems associated with rural decline. By contrast, rural regions with diversified economies have better economic and demographic indicators.

Figure 10.2 shows the number of NUT3 regions of the EU27 which is located in each of the categories of the EDORA Structural Typology.

Regions dominated by an agrarian economy (category "Agriculture") are located mainly in the NMS (30%) and in Mediterranean countries (13%), while in the remaining categories are hardly present. It is, as we have said, regions dominated by an agrarian economy in the case of societies where agriculture is not yet completely modernised, either because of the general state of the economy, or because the geographical constraints that limit accessibility and difficult or make it impossible to implement this process of modernisation. This could be the case of agro-productive complexes with high levels of competitiveness (eg, some fruits and vegetables in Mediterranean countries or modernized continental agriculture spaces), but more often involve areas where agriculture dominates by the absence of economic alternatives (Mediterranean remote areas or regions of semi-subsistence farming in some of the NMS).

By contrast, Consumption Countryside regions are present in a relevant way in all country groups except for the case of NMS, to account for rural territories that benefit from demands of urban markets. The precondition for the existence of such regions is the presence of an urban market sufficiently developed and mature, which explains the virtual absence of this category in the NMS and its importance in all other groups of countries. The regions defined as "consumption countryside" are characterised by areas dominated by one or more services together, typically geared to the urban population (access to environmental assets, tourism capacity, and farm diversification). Consequently, there is not only one type of rural areas but many rural profiles that have in common the orientation to urban consumption, usually in forms of tourism. Due to the diversity of sub-categories implicit in the Consumption Countryside we can not speak of uniformity; each region under this category may have a different economic settings with the common denominator of their orientation to urban consumption. Only two conditions seem to be implicit in this type of regions: on the one hand, a relative low importance of agriculture as economic activity and employment provider; on the other hand, a mature urban demand that makes possible consumption of rural goods beyond a critical threshold

Diversified regional economies with a strong secondary sector are located mainly in the NMS (48%) and Scandinavia (42.5%) but significantly present in all other categories of countries. Diversified rural economies with strong secondary sectors may refer to the implementation of diffuse processes of industrialisation in intermediate rural areas (ie. Marshallian districts in

Spain or Portugal). It may, on the other hand, be the remnants of industrial specialization associated with the communist era (Hungary, Czech Republic, Slovakia, Poland) to be reinforced in recent years because of relocation of large industrial plants from other less competitive locations in terms of costs. For these areas, industrial know-how accumulated during the twentieth century and the lower costs of land and labour, along with the EU "umbrella" are the main potentials. However, the maintenance of an industrial activity of this sort does not guarantee an easy path to long term, sustainable development unless work is undertaken in a proper embedding of the industrial fabric, usually exogenous, in the local development strategy. It can also mean the case of rural regions where agriculture is not a relevant activity due to land or climate constraints and they have managed to develop or attract industrial activity.

Diversified regional economies with a strong private service sector are mainly in the countries of Central and Western Europe and the EU 15, while its presence is much smaller in the case of Scandinavia and the NMS.

Figure 10.2 EDORA Structural Typology. Percentage of regions in each category, by non-exclusive groups of countries

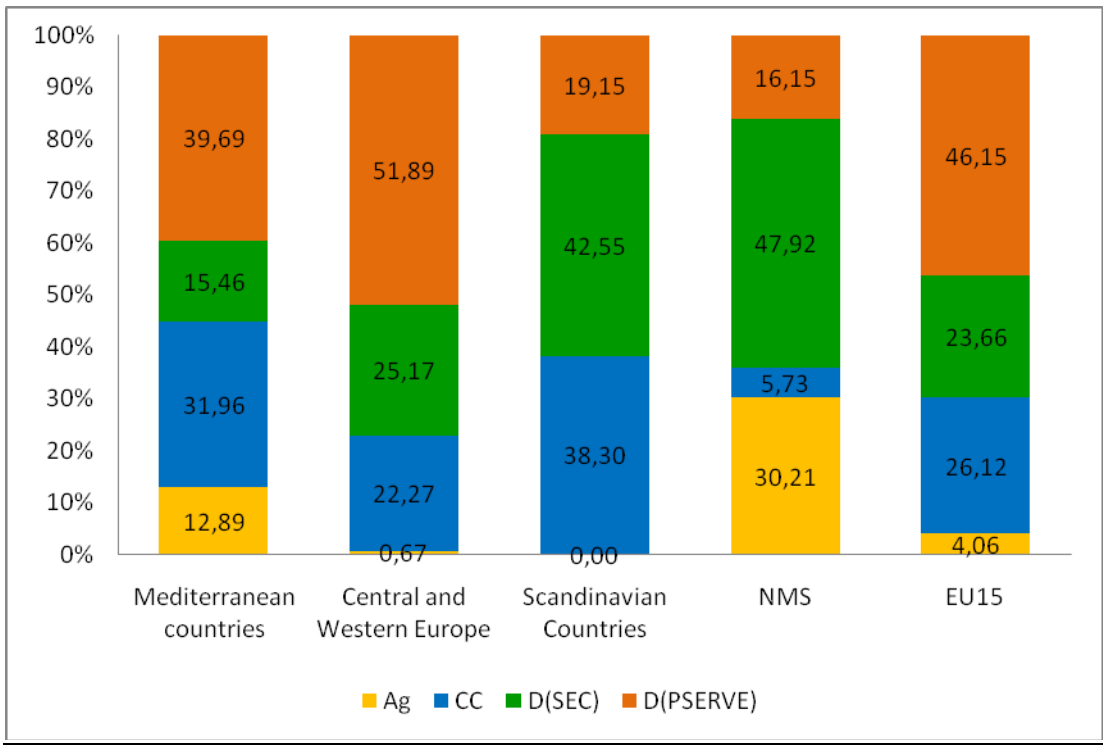


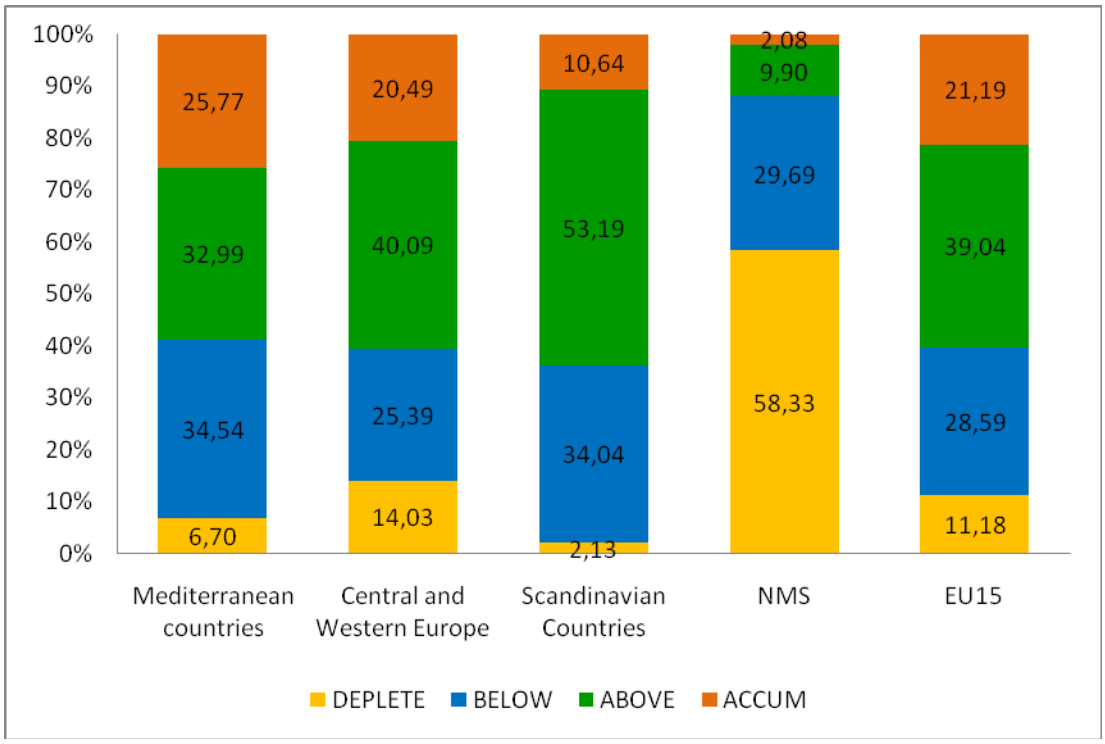
Table 10.3 shows the number of regions (in percentage of total) of the EU27 countries for each category of the EDORA Performance Typology. The EDORA Performance Typology is calculated from a regional composite performance indicator from 5 indicators (net migration, per capita GDP, average annual change in GDP, average annual change in total employment, and unemployment rate). The composite indicator is calculated as the average of the normalised

(Z) scores for the five indicators. The four categories have been defined by the average standardised score as follows:

- *Accumulation regions*: <-0.5 (i.e. more than half a standard deviation below the "non-urban" mean).
- *Above average regions*: -0.5 to 0 (i.e. less than half a standard deviation below the "non-urban" mean).
- *Below average regions*: 0 to +0.5 (i.e. less than half a standard deviation above the "non-urban" mean)
- *Depleting regions*: <-0.5 (i.e. more than half a standard deviation above the "non-urban" mean)

The depleting regions are located mainly within the NMS, where they represent 58% of the total. This is largely the territories from which there has been a continuous process of migration and loss of economic activity. This type of regions is also present in the other groups of countries considered, although to a much lesser extent. Thus, the rate falls below 15% in all other groups of countries and, contrary to what might be expected, areas of Central and Western Europe contain a greater proportion of depleting regions (14%) than the Mediterranean regions (7%). On the other hand, the percentage of regions "below average" is an almost constant share of between 25% and 35% in all groups of countries.

Figure 10.3 EDORA Performance Typology. Percentage of regions in each category, by non-exclusive groups of countries



The sum of the percentages of regions "depleting" and "below average", ", gives an idea of the prevalence of regions with greatest difficulties. This percentage is much higher in the case of

the NMS groups where the sum of these two categories accounts for 88% of all regions. All other groups of countries have percentages of the sum of these two categories are about 40%.

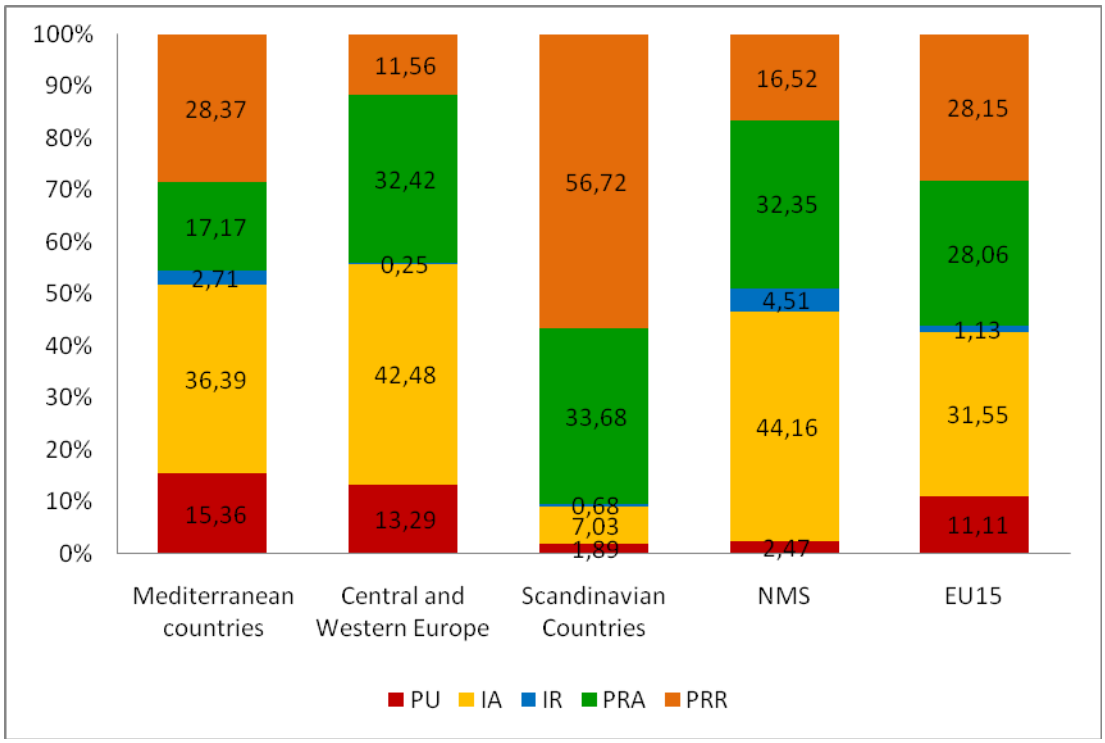
Therefore, the number of "below average" regions is mostly relevant in the New Member States. “Below the average” and "depleting" areas are located in the less modernised economies of Europe. Consequently, the regions "above average" (including "Accumulation") are more than 50% in all categories of countries with the exception of the NMS.

10.2 Total area

The Dijkstra-Poelman rural-urban typology classifies regions according to their accessibility and rurality. Accesibility is measured in % of population which access to a market town under a particular time threshold. Rurality is linked to more extensive (as opposite to intensive) land use and, therefore, the variable is % of population living in rural LAU; that is, those below 150 inhab./km^2. This typology differentiates 5 types of regions: Predominantly Urban, Intermediate Rural Accessible, Intermediate Rural Remote, Predominantly Rural Accessible and Predominantly Rural Remote[18]. Figure 10.4 analyses the total area of NUTS3 regions of the EU27 according to categories of the Dijkstra-Poelman typology (hereafter D-P). The analysis shows a percentage breakdown with the following characteristics:

The highest percentages of total area in Predominantly Urban regions (PU) are in Mediterranean countries (15%), although Central and Western European countries (13%) and EU15 (11%) have similar percentages of total land under PU regions. On the other extreme, Scandinavian countries and NMS show percentages around 2%. Adding the Intermediate Accessible Regions the percentage of "urban" or "peri-urban" regions amounts to 45% to 55% in all groups of countries but Scandinavian.

Figure 10.4 Dijkstra-Poelman Typology. Percentage of total area in each category, by non-exclusive groups of countries



[18] For a complete methodological description of this typology please visit http://ec.europa.eu/regional_policy/sources/docgener/focus/2008_01_rural.pdf

On the other hand, the total land in "rural" regions, represented by Predominantly Rural (accessible or remote), show the largest percentages in the Scandinavian countries (90%), in the EU15 (56%), in the NMS (49%) and in the Mediterranean countries (54%). In Scandinavian countries, the two PR categories' percentages very high. Thus, 90% of the Scandinavian regions are Predominantly Rural either remote or accessible. In the case of the EU15 countries, the two PR categories' percentages are identical 828% each). In the case of NMS the highest percentage of rural regions is accessible (PRA), while remote regions are considerably less. Finally, in the Mediterranean countries the most significant percentage corresponds to remote rural areas (PRR) (28%). These differences are mainly due to geographical features. Thus, both Scandinavian (due to their size) and Mediterranean countries (due to their orography) show areas where accessibility is low and, therefore, are located in the category of "remote." The opposite happens in the NMS where rurality is high but accessibility is better.

The structural typology classifies regions according to their economic settings. According to this typology, regions can have an economic base focused on primary activities, or be focused on the "consumption countryside", or have diversified economies dominated by secondary activities or by private services. The analyses carried out on the EDORA typology and those made elsewhere in this report show that regions with an agricultural economy and to a lesser extent, those focused on "consumption countryside" concentrate the main problems associated with rural decline. By contrast, rural regions with diversified economies have better economic and demographic indicators.

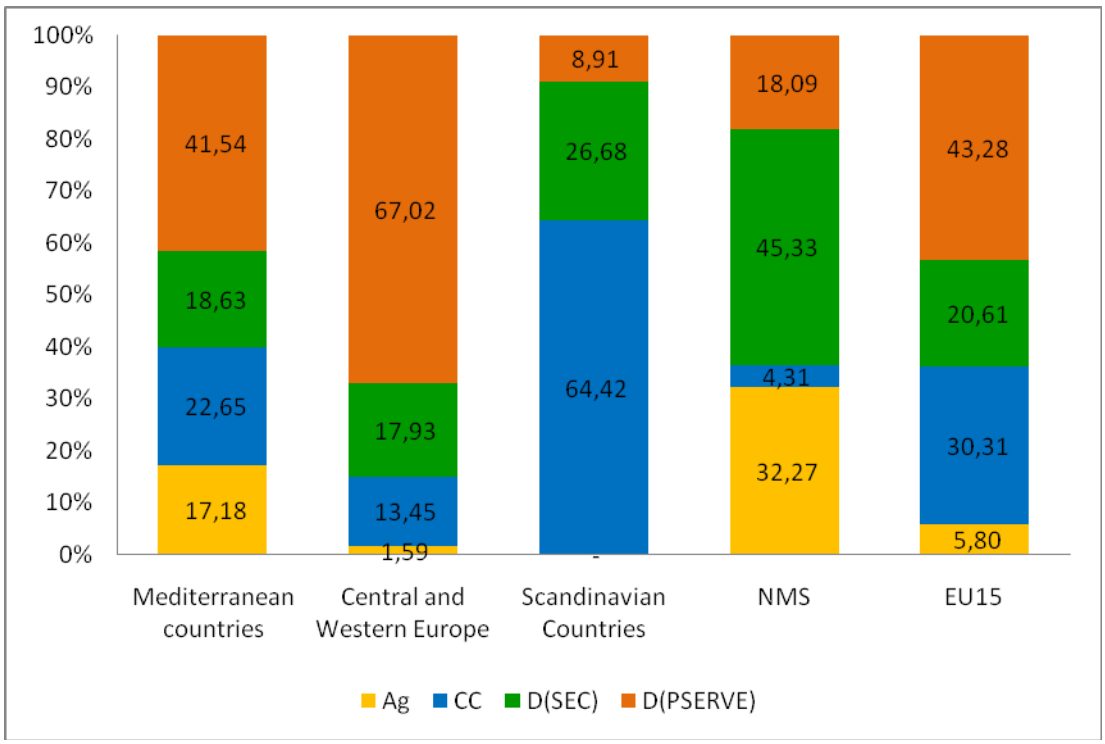
Figure 10.5 shows the percentage of total land of the EU27 which is located in each of the categories of the EDORA Structural Typology.

Percentage of total land of regions dominated by an agrarian economy (category "Agriculture") is higher in the NMS (32%) and in Mediterranean countries (17%), while in the remaining categories are hardly present. It is, as we have said, regions dominated by an agrarian economy in the case of societies where agriculture is not yet completely modernised, either because of the general state of the economy, or because the geographical constraints that limit accessibility and difficult or make it impossible to implement this process of modernisation. This could be the case of agro-productive complexes with high levels of competitiveness (eg, some fruits and vegetables in Mediterranean countries or modernized continental agriculture spaces), but more often involve areas where agriculture dominates by the absence of economic alternatives (Mediterranean remote areas or regions of semi-subsistence farming in some of the NMS).

By contrast, the total land under Consumption Countryside regions is important in all country groups except for the case of NMS, to account for rural territories that benefit from demands of urban markets. The precondition for the existence of such regions is the presence of an urban market sufficiently developed and mature, which explains the virtual absence of this category in the NMS and its importance in all other groups of countries. The regions defined as "consumption countryside" are characterised by areas dominated by one or more services together, typically geared to the urban population (access to environmental assets, tourism

capacity, and farm diversification). Consequently, there is not only one type of rural areas but many rural profiles that have in common the orientation to urban consumption, usually in forms of tourism. Due to the diversity of sub-categories implicit in the Consumption Countryside we can not speak of uniformity; each region under this category may have a different economic settings with the common denominator of their orientation to urban consumption. Only two conditions seem to be implicit in this type of regions: on the one hand, a relative low importance of agriculture as economic activity and employment provider; on the other hand, a mature urban demand that makes possible consumption of rural goods beyond a critical threshold

Figure 10.5 EDORA Structural Typology. Percentage of total area in each category, by non-exclusive groups of countries



Percentage of total land under “diversified regional economies with a strong secondary sector” is located mainly in the NMS (45%) and Scandinavia (27%) but significantly present in all other categories of countries (about 20% in each case). Diversified rural economies with strong secondary sectors may refer to the implementation of diffuse processes of industrialisation in intermediate rural areas (ie. Marshallian districts in Spain or Portugal). It may, on the other hand, be the remnants of industrial specialization associated with the communist era (Hungary, Czech Republic, Slovakia, Poland) to be reinforced in recent years because of relocation of large industrial plants from other less competitive locations in terms of costs. For these areas, industrial know-how accumulated during the twentieth century and the lower costs of land and labour, along with the EU “umbrella” are the main potentials. However, the maintenance of an industrial activity of this sort does not guarantee an easy path to long term, sustainable development unless work is undertaken in a proper embedding of the industrial

fabric, usually exogenous, in the local development strategy. It can also mean the case of rural regions where agriculture is not a relevant activity due to land or climate constraints and they have managed to develop or attract industrial activity.

Diversified regional economies with a strong private service sector are mainly in the countries of Central and Western Europe and the EU 15 (67%), while its presence is much smaller in the case of Scandinavia and the NMS.

Table 10.6 shows the total land (in percentage of total) of the EU27 countries for each category of the EDORA Performance Typology. The EDORA Performance Typology is calculated from a regional composite performance indicator from 5 indicators (net migration, per capita GDP, average annual change in GDP, average annual change in total employment, and unemployment rate). The composite indicator is calculated as the average of the normalised (Z) scores for the five indicators. The four categories have been defined by the average standardised score as follows:

- *Accumulation regions*: <-0.5 (i.e. more than half a standard deviation below the "non-urban" mean).
- *Above average regions*: -0.5 to 0 (i.e. less than half a standard deviation below the "non-urban" mean).
- *Below average regions*: 0 to +0.5 (i.e. less than half a standard deviation above the "non-urban" mean)
- *Depleting regions*: <-0.5 (i.e. more than half a standard deviation above the "non-urban" mean)

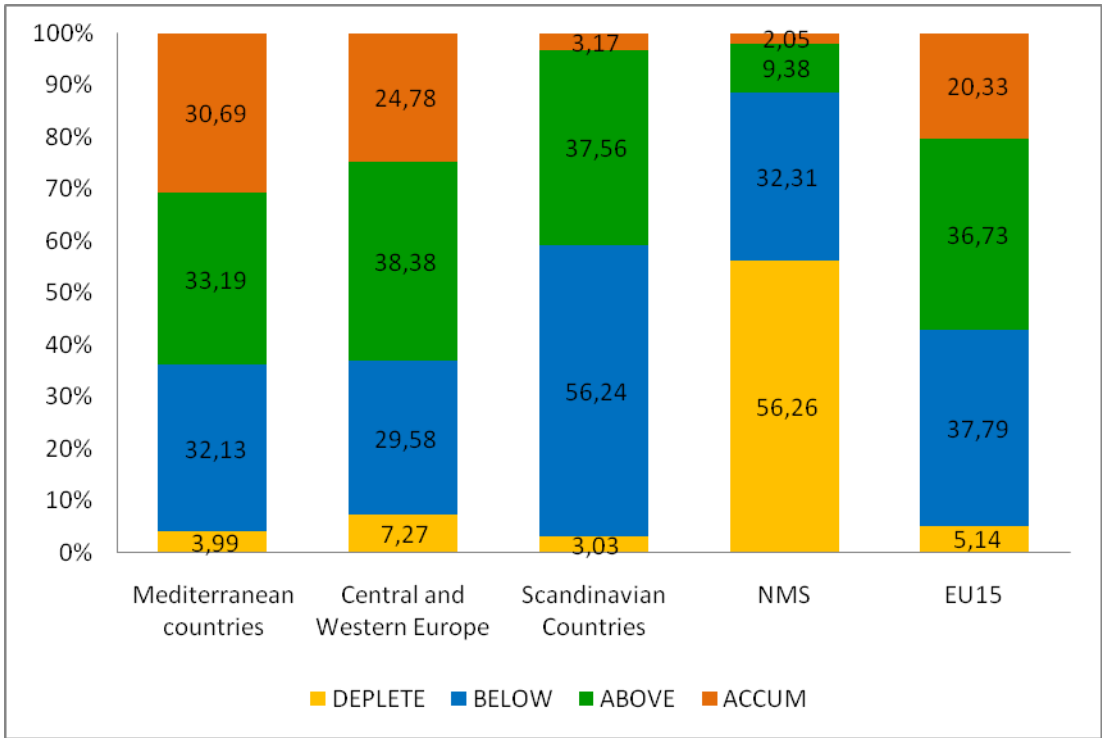
The total area of depleting regions is concentrated mainly within the NMS, where it represents 56% of the total. This is largely the territories from which there has been a continuous process of migration and loss of economic activity. This type of regions is also present in the other groups of countries considered, although to a much lesser extent. Thus, the rate falls below 10% in all other groups of countries and, contrary to what might be expected, areas of Central and Western Europe contain a greater percentage of total area in depleting regions (7%) than the Mediterranean regions (4%). On the other hand, the percentage of total land in regions "below average" is an almost constant share of between 25% and 35% in all groups of countries with the exception of Scandinavian countries where this category amounts 56% of total land.

The sum of the percentages of regions "depleting" and "below average", gives an idea of the prevalence of regions with greatest difficulties. This percentage is much higher in the case of the NMS groups where the sum of these two categories accounts for 88% of all regions. The percentage is also important in the case of Scandinavian countries (59%). All other groups of countries have percentages of the sum of these two categories are about 35%.

Therefore, the percentage of total land in "below average" regions is mostly relevant in the New Member States. "Below the average" and "depleting" areas are located in the less modernised economies of Europe. Consequently, total area in regions "above average"

(including "Accumulation") is more than 50% in all categories of countries with the exception of the NMS and Scandinavian countries.

Figure 10.6 EDORA Performance Typology. Percentage of total area in each category, by non-exclusive groups of countries

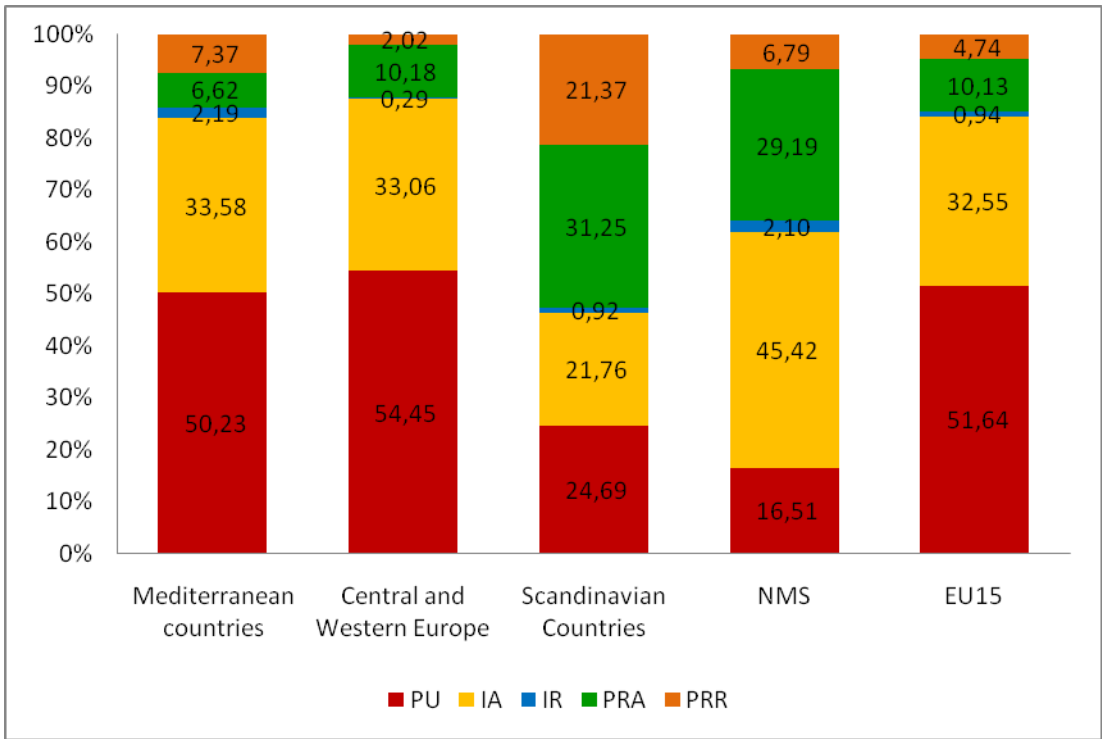


10.3 Population

The Dijkstra-Poelman rural-urban typology classifies regions according to their accessibility and rurality. Accesibility is measured in % of population which access to a market town under a particular time threshold. Rurality is linked to more extensive (as opposite to intensive) land use and, therefore, the variable is % of population living in rural LAU; that is, those below 150 inhab./km^2. This typology differentiates 5 types of regions: Predominantly Urban, Intermediate Rural Accessible, Intermediate Rural Remote, Predominantly Rural Accessible and Predominantly Rural Remote[19]. Figure 10.7 analyses the total population of NUTS3 regions of the EU27 according to categories of the Dijkstra-Poelman typology (hereafter D-P). The analysis shows a percentage breakdown with the following characteristics:

Population concentrates in urban and peri-urban regions to a more extent than total area and number of regions. The highest percentages of population in Predominantly Urban regions (PU) are in Central and Western European countries (54%), the EU15 (52%) and the Mediterranean countries (50%). On the other extreme, Scandinavian countries and NMS show lower percentages (25% and 17% respectively). Adding the Intermediate Accessible Regions, the percentage of "urban" or "peri-urban" regions amounts 85% of total in all groups of countries but Scandinavian and NMS.

Figure 10.7 Dijkstra-Poelman Typology. Percentage of total population in each category, by non-exclusive groups of countries



[19] For a complete methodological description of this typology please visit http://ec.europa.eu/regional_policy/sources/docgener/focus/2008_01_rural.pdf

On the % of population in "rural" regions, represented by Predominantly Rural (accessible or remote), show the largest percentages in the Scandinavian countries (53%) and in the NMS (36%). In all cases, the percentage of population is much lower than the territorial significance of rural regions. These differences are mainly due to geographical features. Thus, both Scandinavian (due to their size) and Mediterranean countries (due to their orography) show areas where accessibility is low and, therefore, are located in the category of "remote." The opposite happens in the NMS where rurality is high but accessibility is better.

The structural typology classifies regions according to their economic settings. According to this typology, regions can have an economic base focused on primary activities, or be focused on the "consumption countryside", or have diversified economies dominated by secondary activities or by private services. The analyses carried out on the EDORA typology and those made elsewhere in this report show that regions with an agricultural economy and to a lesser extent, those focused on "consumption countryside" concentrate the main problems associated with rural decline. By contrast, rural regions with diversified economies have better economic and demographic indicators. Figure 10.8 shows the % of population of the EU27 which is located in each of the categories of the EDORA Structural Typology.

The percentage of population in regions dominated by an agrarian economy (category "Agriculture") is higher in the NMS (22%) and in Mediterranean countries (7%), while in the remaining categories hardly exists. It is, as we have said, regions dominated by an agrarian economy in the case of societies where agriculture is not yet completely modernised, either because of the general state of the economy, or because the geographical constraints that limit accessibility and difficult or make it impossible to implement this process of modernisation. This could be the case of agro-productive complexes with high levels of competitiveness (eg, some fruits and vegetables in Mediterranean countries or modernized continental agriculture spaces), but more often involve areas where agriculture dominates by the absence of economic alternatives (Mediterranean remote areas or regions of semi-subsistence farming in some of the NMS).

By contrast, percentage of population in Consumption Countryside regions is relevant in all country groups except for the case of NMS, to account for rural territories that benefit from demands of urban markets. The precondition for the existence of such regions is the presence of an urban market sufficiently developed and mature, which explains the virtual absence of this category in the NMS and its importance in all other groups of countries. The regions defined as "consumption countryside" are characterised by areas dominated by one or more services together, typically geared to the urban population (access to environmental assets, tourism capacity, and farm diversification). Consequently, there is not only one type of rural areas but many rural profiles that have in common the orientation to urban consumption, usually in forms of tourism. Due to the diversity of sub-categories implicit in the Consumption Countryside we can not speak of uniformity; each region under this category may have a different economic settings with the common denominator of their orientation to urban consumption. Only two conditions seem to be implicit in this type of regions: on the one hand, a relative low importance of agriculture as economic activity and employment provider; on the

other hand, a mature urban demand that makes possible consumption of rural goods beyond a critical threshold

Population in diversified regional economies with a strong secondary sector gets a higher share of total in the NMS (54%) and Scandinavia (35%) but significantly present in all other categories of countries. Diversified rural economies with strong secondary sectors may refer to the implementation of diffuse processes of industrialisation in intermediate rural areas (ie. Marshallian districts in Spain or Portugal). It may, on the other hand, be the remnants of industrial specialization associated with the communist era (Hungary, Czech Republic, Slovakia, Poland) to be reinforced in recent years because of relocation of large industrial plants from other less competitive locations in terms of costs. For these areas, industrial know-how accumulated during the twentieth century and the lower costs of land and labour, along with the EU "umbrella" are the main potentials. However, the maintenance of an industrial activity of this sort does not guarantee an easy path to long term, sustainable development unless work is undertaken in a proper embedding of the industrial fabric, usually exogenous, in the local development strategy. It can also mean the case of rural regions where agriculture is not a relevant activity due to land or climate constraints and they have managed to develop or attract industrial activity.

Population in diversified regional economies with a strong private service sector gets higher shares of total mainly in the countries of Central and Western Europe and the EU 15, while its presence is much smaller in the case of the NMS.

Figure 10.8 EDORA Structural Typology. Percentage of total area in each category, by non-exclusive groups of countries

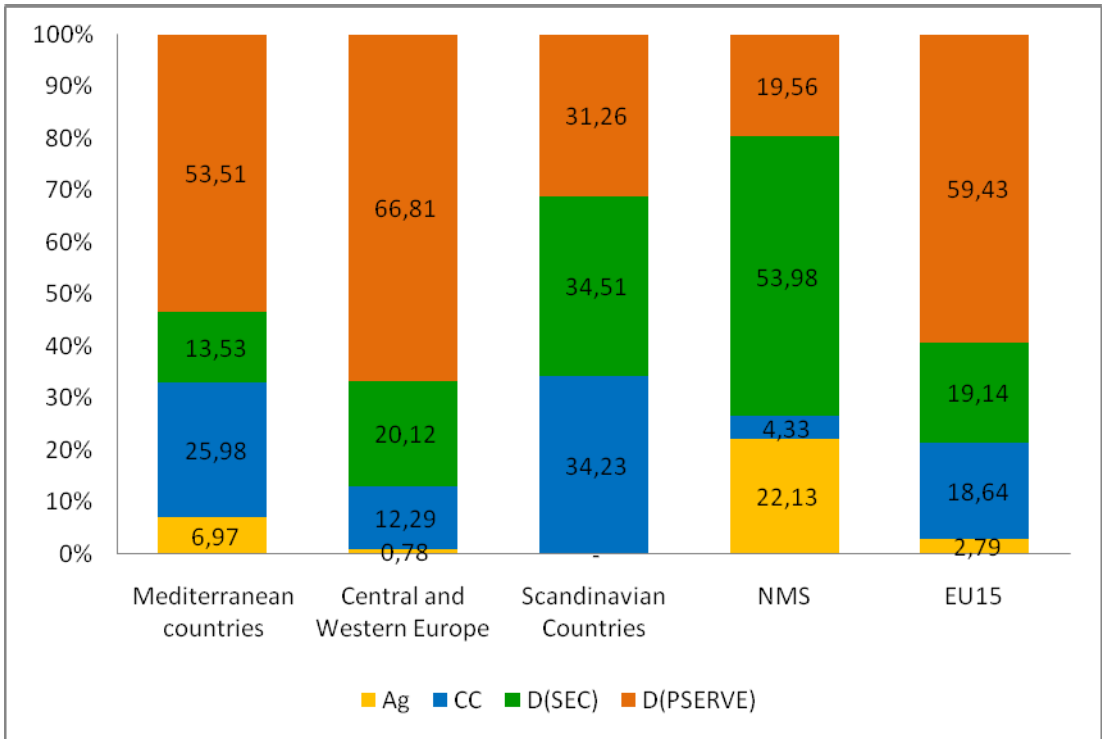
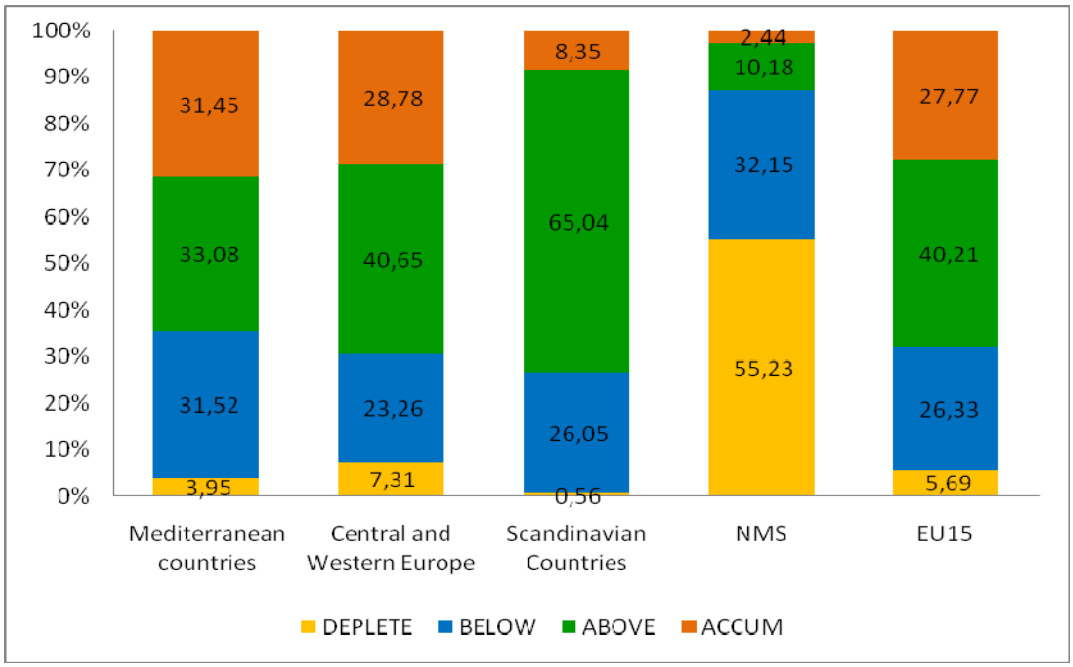


Table 10.9 shows the percentage of total population of the EU27 countries for each category of the EDORA Performance Typology, by non exclusive groups of countries. The EDORA Performance Typology is calculated from a regional composite performance indicator from 5 indicators (net migration, per capita GDP, average annual change in GDP, average annual change in total employment, and unemployment rate). The composite indicator is calculated as the average of the normalised (Z) scores for the five indicators. The four categories have been defined by the average standardised score as follows:

- *Accumulation regions*: <-0.5 (i.e. more than half a standard deviation below the "non-urban" mean).
- *Above average regions*: -0.5 to 0 (i.e. less than half a standard deviation below the "non-urban" mean).
- *Below average regions*: 0 to +0.5 (i.e. less than half a standard deviation above the "non-urban" mean)
- *Depleting regions*: <-0.5 (i.e. more than half a standard deviation above the "non-urban" mean)

Percentage of total population in depleting regions is larger for the NMS, where it represents 55% of the total. This is largely the territories from which there has been a continuous process of migration and loss of economic activity. Population in depleting regions is also present in the other groups of countries considered, although to a much lesser extent. Thus, the rate falls below 10% in all other groups of countries and, contrary to what might be expected, areas of Central and Western Europe contain a greater proportion of population in depleting regions (7%) than the Mediterranean regions (4%). On the other hand, the percentage of population in regions "below average" is an almost constant share of between 25% and 30% in all groups of countries.

Figure 10.9 EDORA Performance Typology. Percentage of total population in each category, by non-exclusive groups of countries



The sum of the percentages of regions "depleting" and "below average", gives an idea of the prevalence of regions with greatest difficulties. This percentage is much higher in the case of the NMS groups where the sum of these two categories accounts for 87% of the population living in these types of regions. All other groups of countries have percentages of the sum of these two categories about 30%.

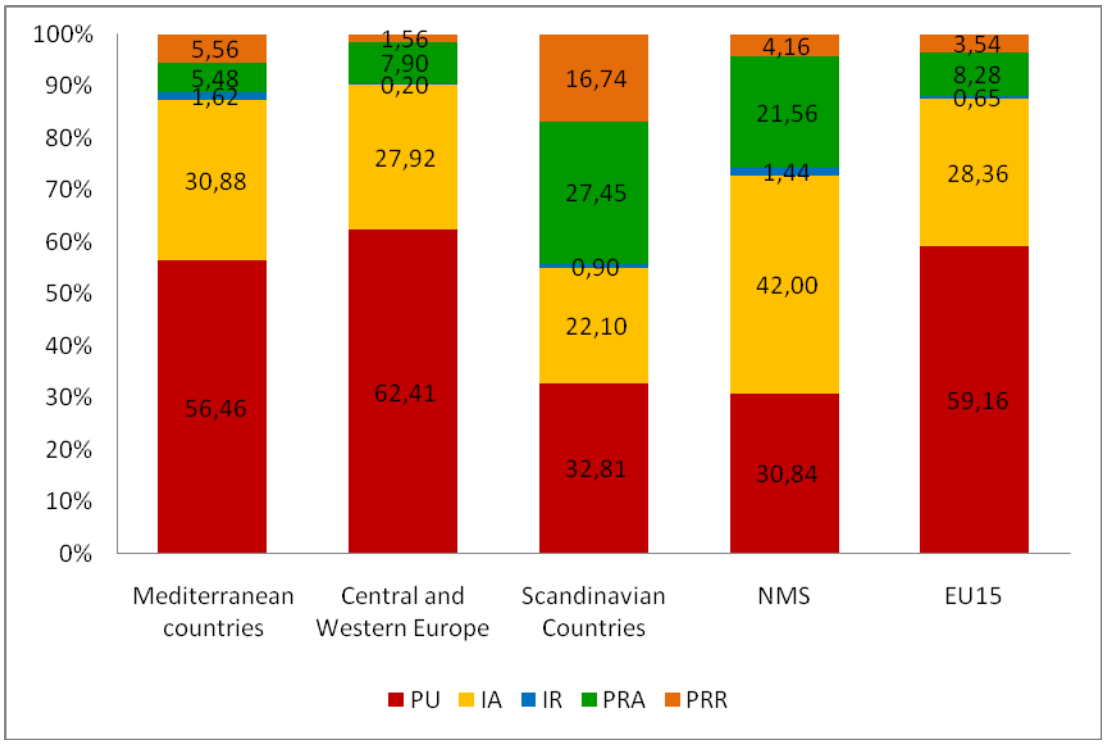
Therefore, the number of "below average" regions is mostly relevant in the New Member States. “Below the average” and "depleting" areas are located in the less modernised economies of Europe. Consequently, the regions "above average" (including "Accumulation") contain between 60% and 70% of the total population in all categories of countries with the exception of the NMS.

10.4 Gross Domestic Product

The Dijkstra-Poelman rural-urban typology classifies regions according to their accessibility and rurality. Accesibility is measured in % of population which access to a market town under a particular time threshold. Rurality is linked to more extensive (as opposite to intensive) land use and, therefore, the variable is % of population living in rural LAU; that is, those below 150 inhab./km^2. This typology differentiates 5 types of regions: Predominantly Urban, Intermediate Rural Accessible, Intermediate Rural Remote, Predominantly Rural Accessible and Predominantly Rural Remote[20]. Figure 10.10 analyses the percentage of GDP of the EU27 according to categories of the Dijkstra-Poelman typology (hereafter D-P). The analysis shows a percentage breakdown with the following characteristics:

GDP concentrates in urban and peri-urban regions even to a more extent than total area, number of regions or population (an almost constant addition of 6-7% to the % of population). The highest percentages of GDP in Predominantly Urban regions (PU) are in Central and Western European countries (62%), the EU15 (59%) and the Mediterranean countries (56%). On the other extreme, Scandinavian countries and NMS show lower percentages (33% and 31% respectively). Adding the Intermediate Accessible Regions, the percentage of "urban" or "peri-urban" regions amounts 85-90% of total in all groups of countries but Scandinavian and NMS.

Figure 10.10 Dijkstra-Poelman Typology. Percentage of GDP in each category, by non-exclusive groups of countries



[20] For a complete methodological description of this typology please visit http://ec.europa.eu/regional_policy/sources/docgener/focus/2008_01_rural.pdf

The % of GDP in "rural" regions, represented by Predominantly Rural (accessible or remote), shows the largest percentages in the Scandinavian countries (45%) and in the NMS (26%). In all cases, the percentage of GDP is much lower than the territorial significance of rural regions, and lower than the percentage of population (about 6-7% less). These differences are mainly due to geographical features. Thus, both Scandinavian (due to their size) and Mediterranean countries (due to their orography) show areas where accessibility is low and, therefore, are located in the category of "remote." The opposite happens in the NMS where rurality is high but accessibility is better.

The structural typology classifies regions according to their economic settings. According to this typology, regions can have an economic base focused on primary activities, or be focused on the "consumption countryside", or have diversified economies dominated by secondary activities or by private services. The analyses carried out on the EDORA typology and those made elsewhere in this report show that regions with an agricultural economy and to a lesser extent, those focused on "consumption countryside" concentrate the main problems associated with rural decline. By contrast, rural regions with diversified economies have better economic and demographic indicators.

Figure 10.11 shows the percentage of GDP of NUT3 regions of the EU27 which is located in each of the categories of the EDORA Structural Typology, by non exclusive groups of countries.

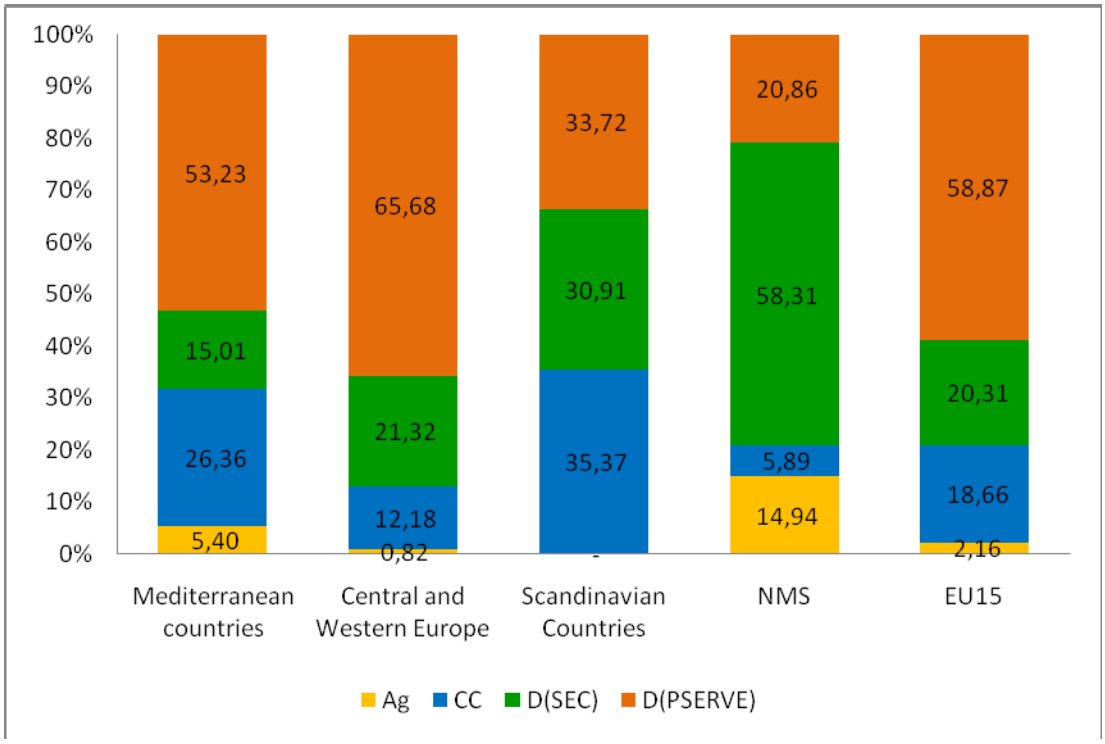
Percentage of GDP in regions dominated by an agrarian economy (category "Agriculture") is located mainly in the NMS (15%) and in Mediterranean countries (5%), while in the remaining categories is hardly present. It is, as we have said, regions dominated by an agrarian economy in the case of societies where agriculture is not yet completely modernised, either because of the general state of the economy, or because the geographical constraints that limit accessibility and difficult or make it impossible to implement this process of modernisation. This could be the case of agro-productive complexes with high levels of competitiveness (eg, some fruits and vegetables in Mediterranean countries or modernized continental agriculture spaces), but more often involve areas where agriculture dominates by the absence of economic alternatives (Mediterranean remote areas or regions of semi-subsistence farming in some of the NMS).

By contrast, GDP in Consumption Countryside regions is relevant in all country groups except for the case of NMS, to account for rural territories that benefit from demands of urban markets. Scandinavian countries account for the biggest share of its total rural GDP (35%) while Mediterranean countries get 26% and EU 15 19%. The precondition for the existence of such regions is the presence of an urban market sufficiently developed and mature, which explains the virtual absence of this category in the NMS and its importance in all other groups of countries. The regions defined as "consumption countryside" are characterised by areas dominated by one or more services together, typically geared to the urban population (access to environmental assets, tourism capacity, and farm diversification). Consequently, there is not only one type of rural areas but many rural profiles that have in common the orientation to urban consumption, usually in forms of tourism. Due to the diversity of sub-categories implicit

in the Consumption Countryside we can not speak of uniformity; each region under this category may have different economic settings with the common denominator of their orientation to urban consumption. Only two conditions seem to be implicit in this type of regions: on the one hand, a relative low importance of agriculture as economic activity and employment provider; on the other hand, a mature urban demand that makes possible consumption of rural goods beyond a critical threshold

Diversified regional economies with a strong secondary sector are located mainly in the NMS (58%) and Scandinavia (31%) but are also significantly present in all other categories of countries. Diversified rural economies with strong secondary sectors may refer to the implementation of diffuse processes of industrialisation in intermediate rural areas (ie. Marshallian districts in Spain or Portugal). It may, on the other hand, be the remnants of industrial specialization associated with the communist era (Hungary, Czech Republic, Slovakia, Poland) to be reinforced in recent years because of relocation of large industrial plants from other less competitive locations in terms of costs. For these areas, industrial know-how accumulated during the twentieth century and the lower costs of land and labour, along with the EU "umbrella" are the main potentials. However, the maintenance of an industrial activity of this sort does not guarantee an easy path to long term, sustainable development unless work is undertaken in a proper embedding of the industrial fabric, usually exogenous, in the local development strategy. It can also mean the case of rural regions where agriculture is not a relevant activity due to land or climate constraints and they have managed to develop or attract industrial activity.

Figure 10.11 EDORA Structural Typology. Percentage of GDP in each category, by non-exclusive groups of countries



GDP in diversified regional economies with a strong private service sector is relevant in the countries of Central and Western Europe (66%) and the EU 15 (59%), but it is also important in all other groups of countries.

Table 10.12 shows the percentage of GDP of the EU27 countries for each category of the EDORA Performance Typology, by non-exclusive groups of countries. The EDORA Performance Typology is calculated from a regional composite performance indicator from 5 indicators (net migration, per capita GDP, average annual change in GDP, average annual change in total employment, and unemployment rate). The composite indicator is calculated as the average of the normalised (Z) scores for the five indicators. The four categories have been defined by the average standardised score as follows:

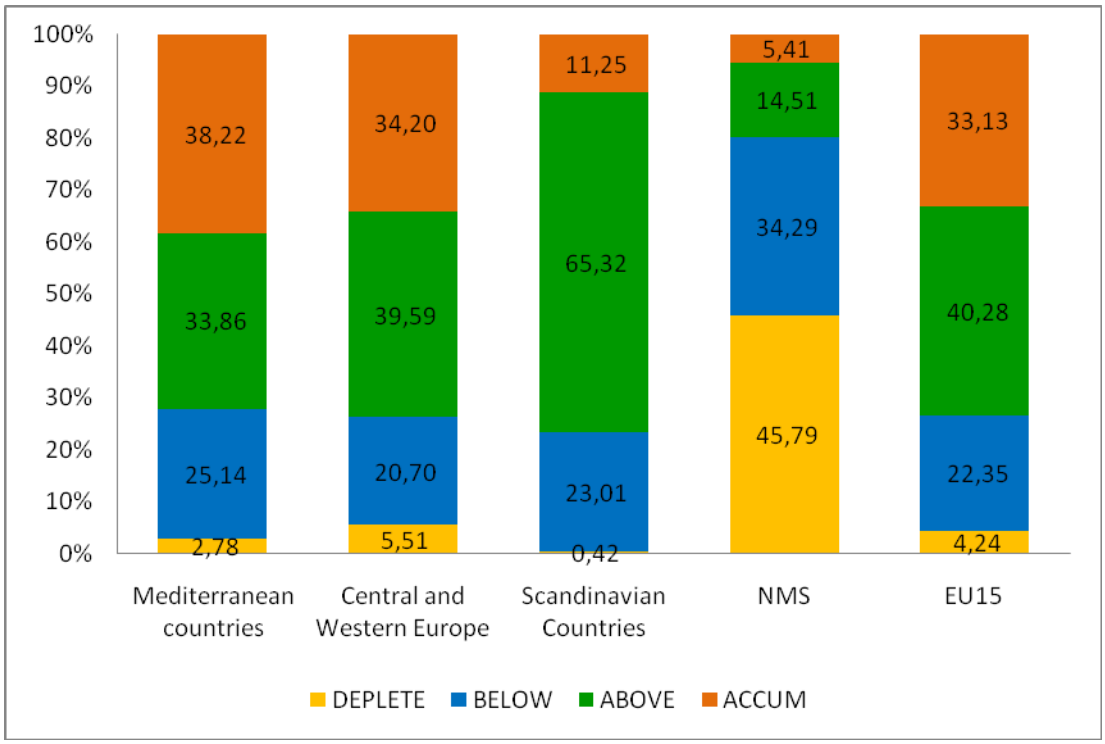
- *Accumulation regions*: <-0.5 (i.e. more than half a standard deviation below the "non-urban" mean).
- *Above average regions*: -0.5 to 0 (i.e. less than half a standard deviation below the "non-urban" mean).
- *Below average regions*: 0 to +0.5 (i.e. less than half a standard deviation above the "non-urban" mean)
- *Depleting regions*: <-0.5 (i.e. more than half a standard deviation above the "non-urban" mean)

The depleting regions are located mainly within the NMS, where they represent 46% of the total, some 10% less than the equivalent territory. This is largely the regions from which there has been a continuous process of migration and loss of economic activity. This type of regions is also present in the other groups of countries considered, although to a much lesser extent. Thus, the rate falls below 5% in all other groups of countries. On the other hand, the percentage of regions "below average" is an almost constant share of between 25% and 35% in all groups of countries.

The sum of the percentages of regions "depleting" and "below average", gives an idea of the prevalence of regions with greatest difficulties. This percentage is much higher in the case of the NMS groups where the sum of these two categories accounts for 80% of all regions. All other groups of countries have percentages of the sum of these two categories about 25-30%.

Therefore, the number of "below average" regions is mostly relevant in the New Member States. "Below the average" and "depleting" areas are located in the less modernised economies of Europe. Consequently, the regions "above average" (including "Accumulation") are more than 70% in all categories of countries with the exception of the NMS.

Figure 10.12 EDORA Performance Typology. Percentage of GDP in each category, by non-exclusive groups of countries



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Future Perspectives

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Note: Page numbering is consecutive within the aggregated Final Report document (Parts A, B and C)

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SUMMARY

This working paper develops a framework, using foresight techniques, for considering the future opportunities and constraints that are likely to confront rural areas of different kinds during the next two decades. This framework builds upon the work of the earlier phases of the project; viewing the meta-narratives of recent and contemporary change as predominantly incremental processes driven by endogenous factors, into which, during the next decades new, "exogenous shocks" will impose themselves, causing more rapid and radical change. Of the range of potential "shocks" which may reasonably be anticipated, it has been assumed that the most likely and the most influential in a rural context is Climate Change. The most important aspect of climate change, about which there is not yet consensus, is the rapidity with which its impacts will be manifest. A second "exogenous" factor, which is in a sense more passive or responsive, is the nature of the economic governance approach underlying the policy measures, which are developed to meet the challenges of climate change. This takes the familiar form of a dichotomy between "laissez faire" approaches on the one hand, and stronger regulation in response to the recent credit crunch on the other.

The EDORA Future Perspectives analysis adopts a simplified, qualitative, "foresight" approach, which is appropriate given the limited resources available, the breadth of the issues to be considered, and the fact that in this arena quantified data is rather scarce. This leads to a systematic procedure for scenario development, followed by an expert assessment of the likely implications for the four Structural types on non-urban regions.

The two "exogenous" variables introduced above structure the analysis in the form of two axes defining the range of possible outcomes. The first axis stretches between gradual climate change at one extreme, to rapid at the other. The second (economic governance) axis ranges from "neo-liberal" to "strongly regulated". Clearly the two axes are not entirely independent of each other, laissez faire approaches are more likely if change is gradual, whilst severe and rapid climate change is likely to spur MS and international agencies into more "top-down" responses. The two axes define four quadrants that can then form the basis of four narrative scenarios of change over the coming two decades. However, before these scenarios can be "fleshed out" it is necessary to assemble some basic information on contextual issues, including demographic trends, energy security, food security, and the likely continuation of ongoing economic and social trends.

The next step is the elaboration of four qualitative and narrative scenarios, reflecting the four possible combinations of the two exogenous factors, climate change and style of economic governance:

Scenario 1: Gradual climate change + deregulated market economy
In many ways this is close to a "business as usual" scenario. With the exception of a shift of agriculture towards the para-productivist model, and a substantial growth in new forms of energy production, the current processes of change, described in Section of the report would continue. This would probably be associated with a continued increase in regional differentiation.

Scenario 2: Gradual climate change + highly regulated economy
In the second scenario the impact of the credit crunch leads to a more cautious and regulated form of economic governance in which a shortage of capital inhibits both the private and public sector responses to the gradually emerging climate change

effects. Limited mitigation means that even gradual climate change has significant impacts upon economic activity and quality of life in rural Europe, resulting in intensified out-migration from agrarian and sparsely populated regions. Energy costs rise but the development of renewables is modest, leading to an increasing dependence on nuclear power. Increasing freight costs provide a degree of import protection, and slow the decline of manufacturing in Europe. Reduced consumer spending and shortage of capital inhibits the expansion of the tertiary sector.

Scenario 3: Rapid Climate Change + deregulated market economy
Rapid and disruptive climate change attaches a premium to land as a basic resource underpinning both adaption and mitigation measures. Food prices rise, renewable energy production and bio-technology industries expand rapidly. Agricultural production intensifies and increasingly adopts bio-technology. There is a concentration of control of the (rural) means of production in corporate hands. The tertiary sector is buoyed up by an expansion of financial services, and private investments in research and development, although the benefits are largely restricted to accessible rural areas.

Scenario 4: Rapid Climate Change + highly regulated economy
The rapid onset of climate change results in a coordinated consensus-based public policy response. There is rapid public investment in new forms of nuclear power and careful regulation of the use of rural land, to ensure food supplies. There are strong and selective migration flows from South, East and Central Europe into the North and West, and towards major cities. Public transport systems, using low/zero emissions technologies lead to compact urban growth. Fossil fuel use is reserved for food production, whilst cropping is also regulated to reduce the production of GHGs. The primary and secondary sectors are reinvigorated by the public policy response focussed upon sustainability. The shift in favour of the tertiary sector slows or is reversed.

The expert assessment of the implications of the above scenarios for the four Structural types of rural region utilised both the project's Expert Group, and the members of the TPG. Responses to the assessment clearly established that S1 (*Gradual climate change + deregulated market economy*) is thought the most likely scenario to emerge in the coming years. Identification of a preferred scenario proved less conclusive. Whilst there was a consensus that S2 (*Gradual climate change + highly regulated economy)* would result in the greatest benefits to rural regions, this was not the majority view. More detailed analysis of the evaluations established that S2 was preferred as it could give rise to greater levels of territorial cohesion within the EU.

1 INTRODUCTION

1.1 Aims and objectives of EDORA

The point-of-departure of the project is the recognition that, rather than becoming more uniform in character, the European countryside is becoming more diverse than ever. The increasing differentiation produces both new policy challenges and new development opportunities. There is therefore a need for a better understanding of the development opportunities and challenges facing diverse types of rural areas in Europe. The underlying demand for such knowledge is to support targeted policy development and to bring forward new principles for policy formulation at all levels.

Two key research questions have been set by the technical specification of this project:

- What are the development opportunities of diverse types of European rural areas and how can these resources contribute to improved competitiveness, both within the respective countries and on a European scale?
- What are the opportunities for increasing regional strengths through territorial cooperation, establishing both urban-rural and/or rural-rural partnerships, supporting a better territorial balance and cohesion?

There is a very clear policy rationale for the focus upon rural differentiation, drivers of change, opportunities and constraints. It has three main elements:

o The 2000 Lisbon agenda, which sets overarching objectives for growth through building a competitive knowledge economy, increasing employment, through innovation and entrepreneurship, whilst respecting and enhancing social cohesion.

o The Gothenburg Agenda, which seeks to ensure that growth is compatible with environmental objectives.

o The Fourth Cohesion Report, and, more recently the Green Paper on Territorial Cohesion which have drawn attention to regional specificities as a potential resource, which may provide an alternative to agglomeration, as a foundation for economic development.

2 CURRENT TRENDS AND FUTURE PERSPECTIVES

The focus of the EDORA project on territorial development opportunities necessitates consideration of the nature and spatial distributed of such opportunities and, through spatial planning, how they might be harnessed to support the future development of different types of rural region. The drivers, opportunities and constraints approach (DOC) central to this research recognises the role of path dependency in shaping regional development trajectories. It also takes into consideration the potential for these trajectories to change as a consequence of the contingent nature of opportunities and constraints. Contingency, in this instance, arises from the territorial capital associated with a region and how it is reconfigured by ongoing processes, the outcome of which are uncertain, and unforeseen events.

This chapter develops a framework for considering the nature of future opportunities and constraints that will reshape regional development trajectories. The aim of this research is to develop future perspectives of rural regions through the use of foresight techniques. These perspectives are used to assess the implications of likely

future developments for the rural regions defined in the EDORA typology. The chapter is divided into four sections. The first provides an introduction to foresight practice, a systematic approach that is increasingly used in future orientated strategic planning. Section two develops four scenarios representing future perspectives of rural regions. Section three considers, through the use of expert input, the potential implications of each of the scenarios for the rural regions defined in the EDORA typology. Finally, section four concludes with a brief summary of the research and highlights issues that will be considered in later chapters.

2.2.1 Foresight and Future Perspectives

Section 1 of this report explored the dynamics of rural change through a review of key social, economic and cultural drivers of change and the development of three narratives. The review highlights the dominance of a discourse in which 'rural' is predominantly viewed as agricultural, inaccessible and, more often than not, problematic. The conclusions of Section 1, combined with the results of the structural typology, find that rural regions are highly diverse in terms of their socio-economic structures and their development trajectories. These findings challenge the dominant discourse and point to a new means of viewing rurality. This conceptualisation emphasises the interrelatedness of social and economic processes whilst, simultaneously, recognising the connections between processes, people and spaces. Regional and rural development is, under this framework, not simply a case of ameliorating the friction of distance and challenges associated with low population density, but rather a means of fostering greater levels of regional resilience. Resilience is, in this instance, defined as the capacity of regions to adapt to change such that their long-term prospects are not limited.

The influence of these drivers of change on regional development trajectories is synopsised in a number of meta-narratives. These provide a stylised representation of how the drivers interact with each other and how they can influence the uneven development of rural regions. The purpose of this chapter, taking a 20 year perspective, is to look ahead and consider how current trends and emerging issues might alter the significance of the drivers and their interaction. Further to this, we seek to assess, using Expert evaluations, the consequences for balanced regional and rural development of such developments. In looking to the future we can imagine that some exogenous drivers will become increasingly evident, and the way in which regions adapt to these will depend upon their resilience.

This type of research falls firmly into the area of future studies and, more specifically, foresight activities. With growing appreciation of the risks associated with uncertainty policy stakeholders are increasingly looking to future orientated studies to provide a framework to guide strategic development initiatives. The area of foresight research has developed in response to this demand. Foresight initiatives are generally used as part of strategic business planning and, increasingly, policy development as a means of considering the longer-term implications of contemporary trends and issues (Eaves, 2007). Whilst foresight first became popular within the private sector increasingly public sector bodies including state agencies and third sector groups use foresight initiatives to consider future needs and their policy implications (Teagasc, 2008; Williams and Shaw, 2009). This trend is largely explained with reference to the growing recognition of the interplay between a large number of factors shaping current and future options. It also reflects the spatially extended and uneven geography of disruptive impacts and the associated human, social, financial and environmental costs, of unanticipated events i.e. the global financial crisis and associated sovereign debt crisis.

Foresight is defined as systematic activities embracing: critical thinking concerning long-term developments; debate and effort to create wider participation in decisions; and shaping the future, especially by influencing public policy and strategic decisions (Grol, 2005; Faroult, 2006). Conventionally, foresight exercises are used to develop perspectives of the future, attain consensus on which perspectives are likely to come to pass and to highlight critical issues that need to be considered if preferred perspectives are to be realised. Whereas, in the past, foresight initiatives placed considerable emphasis on identifying a single perspective of the future and, from this, developing an assessment of threats and opportunities, contemporary foresight exercises are broader in terms of the range of issues considered and highlight a number of possible or alternative futures. Increasingly, the objective of foresight initiatives focuses on the identification of thematic issues that will play an important role in shaping change, - such as, for example, greater connectivity, - rather than trying to predict/forecast specific future outcomes in detail.

The EU FOREN Project, amongst other objectives, sought to develop 'a set of pragmatic guidelines on how foresight activities at the European level should be conducted so that they can make a substantial contribution to policy development' (Grol, 2005). Within this project, a review of different approaches to foresight was undertaken and four broad types identified. These include informative, instrumental, technological driven and society driven. The European Commission report on *'Using foresight to improve the science-policy relationship'* provides a succinct definition of each approach:

- Informative foresight studies are those that focus on producing information for decision-makers and stakeholders.
- Instrumental foresight initiatives emphasise the production of specific recommendations pertaining to particular issues or policies.
- Technology driven foresights are those that emphasise the development, dissemination and uptake of new technologies.
- Finally, social foresight takes as the departure point future issues in a particular area and explore how technological and social developments may and should interact (Faroult, 2006, p.10).

The FOREN project found that combinations of social and instrumental foresights are commonly used in projects considering issues of sustainability. As the EDORA project is fundamentally concerned with balanced regional development (sustainability) and policy issues, the latter combination of approaches is considered most appropriate to this research.

2.2.1 Methods

Having identified an appropriate foresight approach, attention now turns to the choice of an appropriate method of developing future perspectives. A review of different approaches by Conway (2006) and, more recently, Slaughter (2008) found that four broad methods of implementing foresight are identifiable. These include, linear, systematic, critical and integral methods.

Linear methods tend to be strongly quantitative in form and require extensive data covering a sufficiently long time period to produce robust analysis. These methods, drawing heavily on econometrics, have been applied extensively in a variety of settings. Whilst originally used by the military to formulate strategy they are most commonly associated with technological approaches (Faroult, 2006, p.7). More recently they have also been successfully implemented in policy settings, (see, for example, the ESPON TipTap project).

Systematic, critical and integral methods are more qualitative. They accept that technological and societal developments do not follow pre-defined pathways but are non-linear or chaotic. Socio-economic development is not considered predictable beyond a generic level. The use of narrative scenarios to sketch out the potential implications of current trends and, possible future events is common to these methods. A systematic foresight involves a number of sequential tasks including exploration of current trends and the development of understanding of the possible implications of contemporary trends (Bhimji, 2009, p.3). When undertaken in policy development environments a third stage, applying or implementing the findings of the first two stages, is the ultimate goal. Critical and integral methods are more recent developments that view foresight initiatives as culturally embedded processes. They are generally applied within foresight exercises involving diverse groups of stakeholders and foreground the experiences and perspectives of those leading the initiative and the stakeholders. Critical and integral methods are also useful when the foresight involves a large, interdisciplinary team as they create a space for reflexive thinking on different epistemological approaches.

In the context of developing future perspectives as part of the EDORA project a number of issues arise from the review of approaches and methods presented above. At a practical level there is the issue of time and resources. The development of future perspectives is, in this instance, a single element in a much larger project. This aspect of the EDORA project has, consequently, limited resources to engage in the complete range of activities commonly associated with a conventional foresight, particularly participatory activates. The absence of these activities, fundamental in distinguishing foresight from other futures-oriented studies, places this work outside the frame of a conventional foresight project (Keenan *et al.,* 2006. p.14). Notwithstanding this issue it is possible to undertake elements of a foresight to develop future perspectives. These include the definition of the problem, design of the framework for considering future perspectives through the use of scenarios and the engagement with an, albeit limited, group of stakeholders. This latter constraint is perhaps the most significant issue as contemporary foresights are defined by their inclusion of not just subject experts and policy makers but also other stakeholders, representing a variety of views and opinions. In order to overcome these issues it was decided to apply a foresight approach based on systematic methods. This incorporates a progressive perspective by which we refer to identifying ways of overcoming the challenges presented by contemporary issues such that the future prospects for rural regions are not constrained. Systematic methods are perhaps the most widely applied of all foresight techniques and involve, amongst other activities, systems analysis and scenario building (Slaughter, 2008 p.11). Within the EDORA project, emphasis is placed on scenario building as this forms the basis from which to develop future perspectives.

The scenarios outlined below are alternative descriptions of possible futures for rural regions in the EU. As snapshot scenarios, rather than chain scenarios, they do not consider the individual, and highly complex, processes that bring about these futures. They are not forecasts nor predictions of the future based on analysis and extrapolation from past trends, - these types of activities are more in keeping with linear foresight activities. The future perspectives are tools that assist reflection on the implications of contemporary and known issues within a medium – longer-term perspective. It is also important to note that, though policy assessment activities are incorporated into the EDORA project, they are not part of the future perspectives.

2.2.2 Future Perspectives of Rural Regions

The objective of this research is to consider how future development may reconfigure the territorial capital associated with the different types of rural regions identified in the EDORA typology and, hence, their socio-economic development. This aim is pursued through the identification of key thematic issues based on discussions with the EDORA Expert Group. Key drivers of future change, as opposed to drivers of contemporary trends, identified from previous EU foresight studies were used as the basis of these discussions. Following this, as with most foresight studies, the next stage focuses on establishing a framework within which to consider future socio-economic development. This involves a brief review of the concept of rural change before provide a brief contextual assessment of a select number of drivers these trends. The third stage combines the drivers of future change with contemporary trends as a framework to develop the future perspectives.

2.2.3 Stage 1: Rural Change and Drivers of Change

Rural socio-economic change can be conceived of as an ongoing, iterative process involving the interplay between developments within the agri-food industry on the one hand and the non-farm economy, on the other (Commins and Keane, 1994). These two forces can be considered the dominant structural drivers of rural change. Although clearly distinct from one another, they are inter-linked, particularly when one considers their effects at EU scales (McHugh, 2001). However, rather than conceive of rural areas as passive players responding to external forces and events, contemporary rural change, commonly referred to as neo-endogenous rural development, is considered to be mediated by a region's territorial capital and the regulatory frameworks and existing social and economic structures at the local / regional scale which shape it. The way in which, and pace that, regional resources reconfigure in response to the dominant structural drivers of change reflects the dynamic capacity of rural regions.

Increasingly, it is recognised that a group of overarching or drivers of future change overlay and shape the dynamic capacity of rural regions. Woods (2005) combines these drivers under the heading of globalisation, which is conceptualised as the advanced interconnection, and interdependencies of localities across the world.' (p.32). Interconnections are not simply conceived of as movements of goods, people or capital. They speak of relationships of all types whether they are natural (climatic or physical resources), human (as reflected in social organisation) or economic. Interdependencies reflect the symbiotic or synergistic nature of developments or actions in one region that have the capability of impacting, either positively or negatively, on other regions. Globalisation is therefore multifaceted in that it, simultaneously, reshapes social, economic, cultural and environmental conditions. Given this conceptualisation it is not simply a case of developing future perspectives through a consideration of the implications of globalisation for rural regions. It is necessary to identify those aspects of globalisation that are likely to play a significant role in conditioning the future of rural regions.

A recent foresight report, Spatial Scenarios and Orientations in relation to the ESDP and Cohesion Policy (2006), sought to assess the implications of the development pathways resulting from interconnections and interdependencies between a large number of social, economic and environmental factors. Twenty thematic scenarios were drafted and from these four key forces were identified: the impacts of climate change, the ageing of Europe's population, a passage to a new energy paradigm and the rising importance of globalisation. (p.15). Whilst these forces are interrelated, at a global if not an EU scale, they operate relatively independently of each other i.e. the

EU has yet to reach a stage where, for example, the transition to a low carbon society affects dominant demographic trends.

What unites these is their potential to shape EU and national initiatives. One of the most important early contributions from the Expert Group was the emphasis that, within the 20 year time span covered by these future perspectives, it is not so much the actual impact of particular drivers, i.e. climate change, but rather the anticipation of these changes in advance of any actual effect that would shape future development trajectories. This point was made on several occasions in relation to a range of drivers including climate change, peak oil and (economic) globalisation. In relation to other issues, most notably demographic change, a view was expressed that because these were considered by society as a whole, to be 'natural', gradual and on-going, there would be very little pressure, for radical responses. This gives rise to specific challenges for those regions where such issues, i.e. population decline through both out migration and natural decrease, are problematic.

Discussions with the Expert Group concerning those forces likely to shape the future development trajectories of rural regions were wide ranging in their scope. Topics that received most attention included the implications of climate change, peak oil and the opportunities for the renewable energy sector, the growing significance of food security issues and consumer concerns regarding traceability, the medium term impacts of the global financial crisis and subsequent sovereign debt crisis and the continued undermining of social-democratic principles. Broadly, these issues can be grouped into an environmental theme, dominated by climate change but also containing food and energy issues. The second group broadly concerns social and economic issues including the on going restructuring of rural economies and societies, the implications of the global economic recession for rural regions, the potential implications of the sovereign debt crisis on public spending in rural regions and the uneven economic performance within the EU.

Climate change, as a driver, was discussed at length. Climate change is of fundamental importance to rural regions not simply because of the direct affects but also because of the implications of societal responses in the form of mitigation strategies, i.e. CO^2 reductions, and adaption measures, i.e. shift to renewable energies and bio-fuels. The 4th International Panel on Climate Change (IPCC) report details 11 key future impacts and vulnerabilities for Europe and outlines adaption measures that might be considered (Parry et al., 2007). Of these 11 issues most have direct implications for rural regions. Several relate to geographic areas that are typically classified as rural i.e. coastal, mountains and sub-Arctic regions. The report also highlights land-uses that predominate in rural regions i.e. forests, shrublands, grasslands and wetlands. Agriculture and fisheries, key elements of some rural economies are also specifically mentioned.

The significance of climate change as a driver of change is also reflected in a range of other ESPON sponsored research, including Regions at Risk of Energy Poverty (ReRISK), which focuses on the diverse regional consequences of increased average temperatures and greater frequency of severe weather events (ReRISK, Discussion Paper). ReRISK relates, through consideration of the impacts of climate change on energy demands and energy poverty, to the ongoing ESPON Climate Change and Territorial Effects on Regions and Local Economies (CLIMATE) project. Although considering the broad aspects of climate change this project highlights several issues pertinent to rural regions. These largely focus on the implications of increased mean temperatures for natural resource based industries. The work of both these projects, ReRISK and CLIMATE focus to a large extent on longer term, 60+ years from now, implications of climate change. In this regard they are of limited

use in the development of the EDORA Future Perspectives, which explore potential scenarios to 2030. The significance of both of these projects to EDORA rests in their central premise and emphasis on the need for action to mitigate against and or adapt to climate change. The pace at which society engages with this necessity is, however, in question. The uncertainty surrounding the answer to this question therefore forms one dimension to be considered by the Future Perspectives. It can be envisaged that a gradual response to the implications of climate change would be more conducive to a continuation of a social and economic system not unlike the present. If, however, the response of society was to pre-empt the most significant affects of climate change then it is possible that national legislators and, in some instances international bodies, would be called on to design and implement strategies preparing for such eventualities.

The second group of drivers are highly interrelated having their roots in contemporary trends and developments that are reshaping governance approaches to economic development in general and rural development in particular. Despite the global economic crisis and the questions it raises regarding the theoretical and empirical basis of neo-liberal approaches to development, many Member States continue to withdraw from the provision of public supports and public services. For rural regions, particularly those with very low population densities, this has a range of implications foremost of which is the concentration of services in key towns or their discontinuation altogether (Higgs and White, 1997, p.441). This shift away from direct State involvement in the provision of services is compounded by three crises that are simultaneously, undermining the capacity for State and EU intervention; the continued decline in primary sector related employment in response to increasing economies of scale driven by growing global competition at both production and processing levels, and rapid evolution of food supply chains; the impact of the global economic recession on rural regions; and, the implications of sovereign debt concerns for individual Member States and the EU more broadly.

The Expert Group, in discussions concerning the EDORA typology and the Future Perspectives, highlighted a feature of economic restructuring common to all types of rural region is the continued decline of employment in the primary sector and consolidation of remaining enterprises. Whilst this driver may be considered endogenous, it is in large part, driven by exogenous forces. These include changes in EU policy deregulating food markets and the growing scale of food producers both within the EU and globally. For those regions that are highly dependent on agriculture, forestry and fishing related employment, classified as 'Agrarian Economies' within the EDORA typology, this process has undermined their overall economic performance. Compounding this are changes in manufacturing activities that have seen consolidation of food processing enterprises and withdrawal of low value-added activities to urban regions in Eastern Europe or, relocation to other countries i.e. China or India. These processes give rise to a number of related issues including rural emigration, particularly of younger people, and limited capital for investment in new enterprises. For many governments, such developments raise serious questions regarding the sustainability of rural regions given the costs associated with the continued provision of public services and supports and the reluctance of enterprises to locate in these regions.

The current economic downturn is also reshaping the economies of some rural regions in different ways. Research in Ireland, the UK and Spain highlights the impact of the 'Credit Crisis' on their construction sectors (Meredith, 2009; CRC, 2009; OECD, 2009). Construction was an important source of employment, particular for males with low skill levels (Meredith, 2009). Whilst the collapse of this industry has affected all regions it has particularly impacted those classified as Diversified (with

important Secondary Sector)' regions. Increased unemployment has resulted in greater demands on State welfare services which, at a time of declining exchequer returns, necessitates either raising funds through the sale of public assets, greater sovereign borrowing or cuts in other areas of public spending.

A third outcome to the global economic downturn is the emergence of sovereign debt crises and, perhaps more significantly, the perception that particular countries are at risk of sovereign debt default i.e. Ireland, Spain, Portugal. The latter issue has also impacted on countries with limited risk of default but with high borrowing needs e.g. the UK. The net result is many EU countries face significant constraints in accessing debt markets, particularly longer-term debt. As a consequence, member states are faced with the need to implement significant cuts to their national spending programmes and are also inclined to reduce the overall budget of the EU. These developments have resulted in significant cuts in public spending across the EU. The consequences of these developments have reduced economic activity and the provision of services.

For rural regions each of the three crises have direct impacts. The restructuring of the primary sector and related processing activities is most evident in Agrarian Economies. The general absence of significant alternative employment opportunities in these regions results in two dominant trends, outmigration and limited succession on farms. The consequences of these developments include a rapidly ageing population and underperformance of the primary sector. Taken together, these outcomes have a negative impact on social and economic development. Whilst other types of rural regions are also experiencing similar trends, the outcomes are somewhat different. The availability of alternative sources of employment in manufacturing and service related employment assists in maintaining rural populations. In these regions, as with those classified as 'Consumption Countryside', the opportunities for and capacity to diversify the rural economy are greater.

The impacts of the current economic downturn are as pervasive as the decline of the primary sector in that all types of regions are affected. The sector specific nature of the recession has, however, resulted in spatially differentiated outcomes. Regions with workforces concentrated in construction, manufacturing and consumer services i.e. tourism, have been particularly adversely affected by the economic downturn. Whilst 'Agrarian Economy' regions have experienced outflows of manufacturing enterprises the consequences of such developments are most readily evident in Diversified regions in terms of increased unemployment. Consumption Countryside regions are also likely to have been negatively impacted by declining demand for construction resulting from the international credit crisis. There are other, indirect, impacts of the economic recession in these regions. The economies of Consumption Countryside regions are reliant on the sale or provision of high value added products and services. The impact of the recession on spending patterns has seen a decline in demand for many of these goods and services with consequent implications in terms of increased business failure rates and unemployment.

The consequences of the sovereign debt crisis are, from a spatial perspective, somewhat harder to assess. The introduction of strong deficit reduction fiscal policies by national governments in response to external financial pressures from banks and investors has led to significant cuts in exchequer spending. In the worst affected countries, i.e. Portugal, Ireland, Italy, Spain and Greece, cuts in spending have resulted in reduced capital spending programmes, transfer spending programmes and gross capital formation. Recent changes in the UK budgetary policy suggest that a similar approach will be taken to deficit reduction. Evidence from Ireland indicates that rural regions, in addition to disadvantaged groups, experience significant cuts in

public sector expenditure. This arises from dependence on public sector related employment, capital spending to support construction related employment and social transfers, particularly in those regions with high elderly dependency ratios.

Taken together the three crises combine to constrain the ability of member states to respond to contemporary and future challenges. These constraints have the capacity to reshape regional development trajectories which, in turn, hold important implications for territorial cohesion. Conditioning which trajectories become dominant is the extent to which States and will be in a position to support strategic development and thereby further core EU objectives. If, however, one accepts that public finances will be constrained in the short to medium term governments are left with a limited set of choices including greater regulation to achieve key objectives i.e. increased taxes on consumption, or delegation of resource allocation to the market place through privatisation of national assets and greater deregulation of markets.

Based on the forgoing assessment, a review of recent foresight studies, discussions with the Expert Group and input from other EDORA partners, response of society to the threats posed by climate change and capacity of Member States to direct strategic development are selected as key drivers of future change conditioning rural development in the coming years. This later driver is referred to as 'Public Investment'. These themes are represented as two structuring assumptions on the horizontal and vertical axes of Figure 1. This diagram attempts to capture the variety of approaches open to society in developing strategies and initiatives to overcome the challenges associated with climate change or, the perception that the climate is changing and hence action is called for. The response to climate change is represented on the horizontal axis whilst State / EU (dis)investment are represented on the vertical axis.

In several respects these forces are similar to the drivers of change associated with both the ESPON funded Demography and Migratory Flows affecting European Regions and Cities (DEMIFER) and Future Orientation of Cities (FOCI) research programmes. In these studies, issues associated with climate change are considered as is the governance framework surrounding the allocation of both public and private resources. It is important to note however that the DEMIFER project uses a dichotomous approach where in scenarios are presented in terms of choices between the economy and the environment and between distribution and fairness (DEMIFER, 2010, P.19). As FOCI had yet to develop scenarios within the project's interim report, no comparative assessment can be made between it and the approach applied by the EDORA study.

Within the EDORA project, scenarios were not presented as dichotomous choices but rather as points along a spectrum of possible outcomes. The approach is predicated on the concept of uncertainty that is inherently unquantifiable and gives rise to the prospect of several plausible alternative futures that cannot be ranked by probability and through numbers, but all have to be prepared for or anticipated in some way (Keith et al., 2009). Use of largely quantitative approaches would have the affect of limiting the number of issues that could be considered, given the need for sufficiently robust data, and thereby limit the scope of the potential scenarios. This issue is of particular significance within the context of the ESPON, which has previously funded a number of foresight studies that utilised quantitative approaches. The present study represents an approach that is, quite literally, qualitatively different.

Another issue associated with this approach is the risk of identifying extreme scenarios which, whilst possible are not probable. The four scenarios outlined below

represent probable future socio-economic environments. These are based on potential outcomes from interaction between contemporary trends, outlined below, and the drivers of future change.

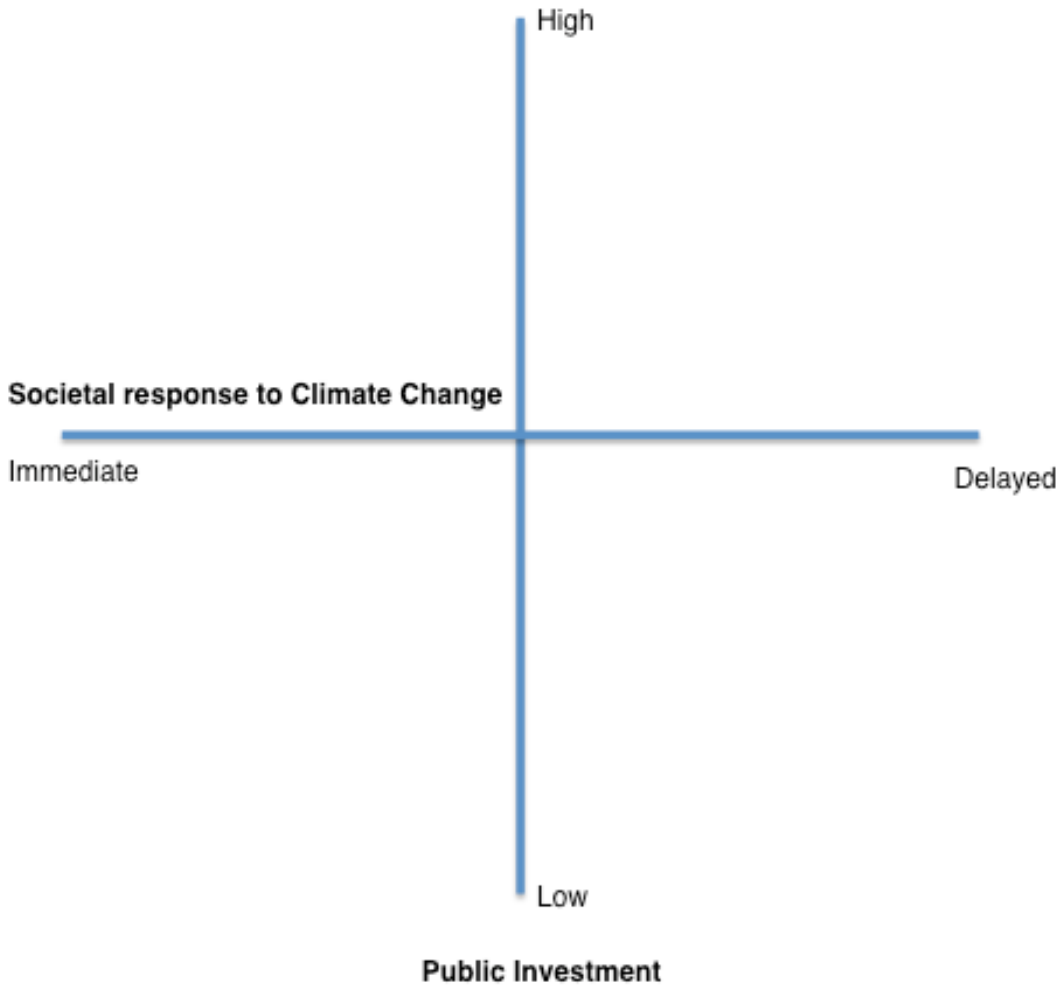

Figure 1: Conceptualising the interrelationship between responses to climate change and Capacity of Public Investment

2.2.4 Stage 2: Context

As a means of developing future perspectives for rural regions, the general context of socio-economic development in Europe is considered. This involves establishing the present status of a select number of contemporary trends associated with climate, population and settlement change, and developments affecting demography, energy and food security and societal issues. Where available, information on expected conditions in 2030 is also provided.

Climate

The 20th Century saw European temperatures increase by 0.8^{o} with average summer temperatures increasing slightly and winter temperatures increasing significantly (Alcamo et al., 2007). These developments have accompanied changing patterns of participation that result in dryer summers, particularly in South, East and Central Europe and wetter winters in North and West Europe. By 2030 it is not expected that the full impacts of climate change will be manifest but some effects will be obvious. The climate will be, on average, be warmer than today. There will be more extreme

events (Alcamo et al., 2007). These may be highly variable in nature and spatial distribution such that flooding and droughts could impact on different parts of the EU at the same time (CLIMATE, 2010). Sea level changes will be noticeable.

Population, Demography and Settlement

The population of Europe is predicated to decline by 8%, on 2000 levels, by 2030 (COM(2005)94). This development will have highly uneven spatial and demographic impacts. There will be significant national and regional variation in population change. It is predicted that States in western parts of Europe should see marginal increases in their populations driven by immigration. Migration patterns will be dominated by east to west movements. Continuation of recent (1990+) settlement trends would see population increase in urban regions (though not necessarily in their cores) and accessible rural regions.

Low natural growth combined with increased life expectance will see growth in the 65+ population from 16% - 23% by 2030, resulting in overall ageing of the population (COM(2005)94). Differences in urban and rural demographic structures and migration patterns will result in rapid ageing of the population in rural regions at an earlier stage. This, combined with migration to cities and accessible rural regions, will contribute to the decline of the population of other rural regions.

Energy Security

Currently the EU consumes 30% of global energy production COM(2008)30. Fossil fuels account for 80% of total energy consumption whilst 55% of all electricity production depends on fossil fuels. It is generally accepted that peak oil, the point at which increasing extraction ceases and production declines over the long-term, will occur, if it has not already, in the near future (DZTB, 2010). Whilst the EU will be able to afford increasing energy prices, this development will result in changes to the structure, distribution and functioning of social and economic activates. For rural regions this may have a particular impact on settlement distribution and the structure of economic activities. It is likely that energy intensive crops will become less competitive in the face of higher production costs. Greater specialisation of agri-food production will take place as regions seek to develop their natural, competitive advantages. Higher transportation costs may undermine these advantages in less accessible and remote rural regions.

Presently renewable energy sources account for only 6% of total energy produced and 13% of electricity production (DG-ENERGY, 2009). It is expected that, by 2030, per capita energy consumption will increase by 9% (from 11 tonnes of CO^2 to 12 tonnes). Recognition of the limits to fossil fuel production, combined with greater awareness of energy security issues, have given impetus to policies supporting the development of renewable energies in Europe COM(2007) 1. This in turn has resulted in significant investment in a range of potential, renewable energy systems. Parallel to this process is a general reassessment of the potential of both conventional nuclear and, experimental, thermonuclear fusion reactors. It is to be expected that the development of both renewable and nuclear power will gather momentum in the coming years. The pace of climate change will play a key role in determining which emerges as the dominant form of energy production. This will have significant implications for rural regions.

Food Security: self-sufficiency or self-reliance

Global population increase is placing further demands on the world's food supply. Notwithstanding this, the slow down in population growth in recent decades has enabled global food production to meet this demand (FAO, 2002). A number of developments have however resulted in challenges to global food security.

Schmidhuber (2009) defines food security as *'when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life'.* Under this definition it is unlikely that the EU will be faced with an acute food security risk in the period to 2030. Developments affecting actual (self-sufficiency), rather than relative (self-reliance), food security include changes in land-use, i.e. the transfer of land from food to bio-fuel production, and the EU's changing bio-geography in the face of climate change. Relative food security is associated with changing food consumption patterns, i.e. greater demand for protein outside of the EU.

Changes to EU agricultural policies, flowing from global trade agreements, have resulted in the reduction of food surpluses. This has contributed to greater volatility in both food production and food prices (DG-Agri, 2010). There is a threat from increasing energy prices, as a consequence of peak oil sometime after 2020, that EU self-reliance, the sourcing of food internationally, may become an issue. Combined with the decline in the area of land available for food production this could lead to sustained increases in food prices. Whilst such a development will be to the advantage of rural regions in general, climate changes may necessitate significant changes in where and how food is produced. Not all rural regions will benefit from a transition to self-sufficiency. Some may find their productive capacity limited or reduced as a consequence of changing weather patterns i.e. reduced precipitation in South, Central and Eastern Europe. Higher input costs, particularly fertilisers, may result in reduced yields and, hence, more extensive agricultural practices.

Economy

Current economic trends are resulting in a reduction in the economic significance of the agri-food sector (Crowley et al., 2009). This is resulting in substantial changes to the structure and functioning of the rural economy (McHugh, 2001). These developments are impacting on the landscape and environment. There is an ongoing restructuring of manufacturing activities as some types of industry, textiles and heavy engineering in particular, relocate to other global regions i.e. India and Asia (Jan-Evert and Schamp, 1996). This is particularly true in North and West Europe. Central and Eastern Europe are witnessing limited increases in some manufacturing sectors. The services sector continues to expand throughout the EU in terms of employment and relative share of GNP and GDP. Higher value service activities continue to concentrate in urban regions. The financial services sector is highly concentrated in the European Pentagon.

By 2030 it is to be expected that demographic developments and higher energy costs will result in significant realignment of Europe's economy (Reflection Group, 2010). Higher production and transportation costs in other global regions could see the re-emergence of some manufacturing activities throughout the EU, particularly those producing consumer goods. Demographically, there may be significant demand for younger workers (COM(2005)94). Whilst there will be a need for high skilled graduates there will also be demand for labour with basic skills to support the service economy. Energy and food security issues may lead to a reinvigorated agri-food industry. Demand for cheaper energy might result in re-orientation of the agriculture sector to produce bio-fuels.

Society

Currently significant societal change is resulting from the rapid social, economic and cultural developments in a number of countries / global regions i.e. Brazil, Russia, India and China. This has altered global production and consumption of a range of products and commodities. These developments are giving rise to greater

competition for natural, human and capital resources. In turn, this competition has resulted in substantial change in global trading patterns and financial markets.

A number of factors have contributed to enhanced migration flows both into the EU and between member states. These developments have given rise to societal concerns regarding culture and identity. In some instances immigration has resulted in moves to restrict further migration.

The financial crisis of 2007 – 2010 has led to significantly increased distrust of the free market as an efficient means of distributing resources. The measures taken by member states and the EU to support the global financial system has resulted in a debate concerning the role of markets and, more importantly, how these should be regulated such that they do not impinge on societal well-being.

There is increasing uncertainty regarding 'facts'; science in particular is seen as highly contested and open to manipulation. Public distrust of political systems is increasing and in some quarters there is also a questioning of the role of organised religion.

These developments, combined with the ageing of Europe's population, will play key roles in shaping the future policy, political and social environment. There is, however, significant uncertainty as to how these factors will be influenced by changes to climate, the economy or food security. It is possible to envisage a future that, as a consequence of the progressive ageing of Europe's population, becomes increasingly conservative with the result that innovation is limited and pre-existing, sub-optimal solutions are preferred. This, however, ignores the potential associated with the significant human capital accumulation that accompanies ageing to overcome the future challenges.

2.2.5 Stage 3: Future Perspectives

The brief review of contemporary trends and how they might impact on the development of rural regions provides a general context for the future perspectives. In line with the framework depicted in Figure 1, these represent four different climatic and governance environments:

- Scenario 1: gradual response to climate change combined with low levels of State – EU supports (divestment).
- Scenario 2: gradual response to climate change combined with high levels of State – EU supports (investment).
- Scenario 3: rapid response to climate change combined with low levels of State – EU supports (divestment).
- Scenario 4: rapid response to climate change combined with high levels of State – EU supports (investment).

When developing scenarios a matrix outlining how important factors vary under different conditions assists in summarising some of the relationships between drivers of change (Table 1). This tool is also useful in helping to maintain rigor when developing each scenario as it provides a framework from which to build the scenario narrative. At this stage it is worth noting that the scenarios are simply referred to as S1, S2, S3 or S4. In a qualitative assessment, such as this, naming the scenarios could lead to the incorporation of bias, either positive or negative.

Scenario 1 (S1: Gradual response to climate change + limited State – EU support)

The opening decade of the new millennium saw the emergence of financial markets as the primary means of allocating resources in EU member states and heightened awareness of the implications of climate change. Despite the global crisis of 2007 – 2010, financial markets continued to function without significant regulation. Innovations in estimating risk allowed markets to account for, and communicate this risk. Though financial markets continue to be cyclical they have not, as of 2030, experienced a repeat of the 2007 – 2010 crisis. Climate change is gradual with some regions, particularly those in South, East and Central Europe, witnessing increases in mean temperatures and decreased in precipitation. Regions in the North and West of Europe also experienced increased temperatures, particularly during winter months. The incremental nature of these developments allowed the market, with limited State / EU supports, to lead the adjustment to the new conditions. More obvious signs, more intense heat waves and flood events led to a renewed emphasis on securing a legally binding successor to the agreement reached at the Copenhagen Conference on Climate Change. This new agreement paved the way for the introduction of a global cap and trade market based system of regulating greenhouse gas emissions.

Rural regions, which at the end of the first decade of the new millennium were increasingly socially and economically differentiated, continued to diverge, at both national and EU levels. Long-term demographic developments saw those regions in peripheral areas, distant from or inaccessible to urban regions, loose population through age specific migration of younger cohorts and natural decline. Conversely, accessible and urban regions experienced population increases particularly amongst older age cohorts. These developments underpinned the continued evolution of the rural economy. On one level, the market based response to climate change and the threat of peak oil resulted in energy production vying with agriculture, fisheries and other primary sector activities for resources, particularly land (sea). The rapid growth of the energy economy had a wide variety of impacts on rural regions. In those regions with a strong primary sector, growth of the energy sector occurred through endogenous development. In regions with limited territorial capital, particularly human and financial capital, national and multinational corporations developed renewable energy opportunities. Few of the benefits, other than limited direct employment in the initial construction and subsequent maintenance of energy installations, accrued to these regions.

Agriculture underwent profound changes during this period. The rapid growth of the energy sector, driven by increasing prices for fossil fuels, competed with farming for land and capital. In those regions characterised by para-productivist agricultural structures the reduced availability of land, combined with the need to minimise the environmental impacts of food production, particularly greenhouse gas emissions, resulted in further industrialisation of food production. Climate change, which resulted in more variable growing conditions, led to demands from the agri-food industry for greater adoption of biotechnologies, particularly genetically modified crops. These were designed to be robust, capable of surviving prolonged droughts and highly efficient at converting nitrogen to yield. In regions where peri-productivist agricultural structures predominated there was considerable consolidation of land ownership. This, in turn, facilitated the development of the renewable energy sector including solar, wind, wave and tidal systems.

Aligning with the 'Global Economy' scenario from the *Future of Manufacturing in Europe 2015 – 2020* foresight study[1], manufacturing within the EU is subject to significant restructuring as "consumers have pursued personal utility without paying

[1] http://foresight.jrc.ec.europa.eu/documents/eur20705en.pdf

too much attention to environmental and social impacts of production and consumption. The free market has been considered the most effective way to allocate resources and to achieve sustainable development. The World Trade Organisation and the interests of large multinational companies shape international trade policies. The European Union's and Member States' influence on global level is rather weak. Policy-making principally aims to strengthen market mechanisms and competition. Policy objectives have been set on specific levels with little emphasis on the integration across institutions or policy fields." (Geyer et al., 2003 p.7). These forces contribute to the decline of manufacturing employment as labour intensive activities are relocated to lower cost regions outside of the EU or, labour requirements are reduced through technological advances including process and production automation. Rural regions with high levels of dependence on low value-added manufacturing are particularly affected by this restructuring. Some regions, however, are able to capitalize on existing physical and human resources and become important centres for product design and research and innovation. This is particularly true in the area of consumer goods where the trend towards individualization is supported by advances in software design; two areas where 'local' knowledge is fundamentally important. Links between manufacturing activities and service industries are strengthened and the boundaries between them blurred.

The primary growth areas within the services sector include financial, information intensive and personal services. These contribute to significant expansion of the tertiary sector. Much of this development, dependent on access to highly skilled and educated labour, is dispersed across more accessible regions. Though still important, the significance of location is diminished as a consequence of advances in telecommunications. The balance between quality of life, access to virtual networks and local support networks proves to be a key factor in deciding which regions develop. Those rural regions lacking sufficiently high capacity broadband connections in 2015 fail to develop the necessary basic support milieu and, consequently, lag behind in terms of development of the services sector.

Table 1: Scenario Descriptions

	S1 (Gradual response to climate Change with limited State / EU supports)	S2 (Gradual response to Climate Change with high levels of State / EU support)	S3 (Rapid response to Climate Change with low levels of State / EU supports)	S4 (Rapid response to Climate Change with high levels of State / EU supports)
Governance	Economic systems are largely self-regulated. There is further deregulation of key commodity markets, particularly energy and food. Integration of global manufacturing and services continues. The 'market' decides the allocation of resources.	Economic systems are increasingly regulated by State and international bodies. Key commodities, including energy and water, are largely regulated through binding international agreements. The State controls the allocation of key resources and determines how they are utilised.	Economic systems are largely self-regulated. There is further deregulation of key commodity markets, particularly energy and food. Integration of global manufacturing and services continues. The 'market' decides the allocation of resources.	Economic systems are increasingly regulated by State and international bodies. Key commodities, including energy and water, are largely regulated through binding international agreements. The State controls the allocation of key resources and determines how they are utilised.
Climate	Gradual climate change. Weather patterns are unstable but not to the extent of massively disrupting economic activities or society in general. South, East and Central Europe experience progressive warming and reduced rainfall. North and West Europe experience warming and also increased precipitation.		Climate change is more evident. Weather patterns become highly unstable. All areas of Europe experience extreme weather events on a frequent basis. Radical shifts in seasonal weather patterns occur which change productive capacity, economic activities and social organisation.	
Energy	Slow transition to a low-carbon economy. Gradual shift in energy composition. Increased private sector investment in wind, wave, solar energy and bio-fuels. Greater public and private research into technological solutions to energy security issues. i.e. hydrogen fuel cells.	Slow transition to a low-carbon economy. Greater emphasis on 'proven' non-fossil fuel derived energy. Nuclear power is the preferred option. Limited development of alternative / renewable energy sector.	Transition to low carbon economy occurs quickly. Significant private market investment in alternative energy technologies. Bio-fuel production competes with food production for resources (land and capital). Significant state expenditure to support development waste to fuel and waste to food systems.	Transition to low carbon economy occurs quickly. Fossil fuel use is prioritised to support food production, particularly tillage crops. Nuclear power is the preferred option. Significant state expenditure to support development of commercial Thermonuclear Fusion Reactors.
Transport-ation	Rural transport continues to be dominated by private car ownership. Most cars are powered by electricity. Freight transportation continues to depend on fossil fuels.	Rural transport continues to be dominated by private car ownership. Taxes on fossil fuels make private transportation increasingly expensive. Freight transportation continues to depend on fossil fuels.	Rural transport transitions to a hub and spoke model with private transportation used to access, public, transportation hubs. Freight transportation shifts to rail and ferry systems.	Rural transport is increasingly the prevue of community-based schemes. Freight transportation shifts to rail and ferry systems.
International Migration	Targeted migration programmes seek to attract highly educated and skilled labour to the EU.	Increasing restrictions on international migration to the EU.	Significant intake of migrants from countries severely impacted by climate change.	Limited intake of immigrants from outside of the EU.

	S1 (Gradual response to climate Change with limited State / EU supports)	S2 (Gradual response to Climate Change with high levels of State / EU support)	S3 (Rapid response to Climate Change with low levels of State / EU supports)	S4 (Rapid response to Climate Change with high levels of State / EU supports)
Internal Migration	Cohort specific migration results in areas with limited territorial capital ageing rapidly. Migration is dominated by East - West and South - North flows.	Migration is limited to the highly educated and skilled. Migration is dominated by East - West and South - North flows. Migration to rural areas is increasingly limited to those who can afford the high costs associated with rural living. i.e. water and transportation	Large-scale migration from East - West and South – North Europe. Internal migration is characterised by younger age cohorts and rural - urban moves.	Large-scale rural – urban flows of younger cohorts. Selective urban – rural, welfare driven, flows of older cohorts particularly in West and North Europe. Rural – rural flows of older cohorts are also evident as those in South and East Europe seek a more benign living environment.
Food security	Self-Reliance. The EU competes in global food markets on the basis of comparative advantage.	Gradual recouping of CAP payments to production to increase self- sufficiency.	Self-Reliance Protein production is increasingly industrialised to maximise input - output efficiency and free up land for bio-fuel production. Animal and rice production is significantly constrained in an effort to reduce green house gas emissions.	Self-sufficiency Radical recouping of CAP payments to production to increase self-sufficiency. Animal and rice production is significantly constrained in an effort to reduce green house gas emissions. Greater emphasis on the development of regional food systems.
Economy	Increased primary sector productivity through application of bio-technologies. Stabilisation of primary sector employment through expansion of alternative enterprises including energy and public goods provision, particularly water management. Decrease in manufacturing employment. Further growth in the services sector, particularly in urban areas. The financial sector is a key economic growth sector.	The primary sector remains productive through increasing economies of scale. Limited growth in the secondary and services sectors. High-risk sectors, finance in particular, are heavily regulated.	Tertiary dominated economy. Primary production characterised by economies of scale. The development of the bio-fuels sector results in further penetration of external capital into rural areas through the accumulation of land by corporations. This development sees greater integration of rural economies with global systems.	Rapid restructuring. Growth of both primary and secondary sector employment relative to the tertiary sector. State controls the management of key resources, particularly energy and capital.

Scenario 2 (S2: Gradual response to climate change + high levels of State – EU support)

Following the collapse of financial markets in 2007 – 2008 and the subsequent, long-term, cost of supporting national financial systems there was increased demand for much greater regulation of capital and commodity markets. Throughout the EU, but particularly amongst Southern and Eastern member states there was a strong move towards greater regulation of capital markets. At the EU level, changes to the operation of the Euro resulted in greater restrictions on the functioning of financial markets. These developments set the framework governing social and economic development up to 2030.

The relative lack of capital, due to greater restrictions on private equity markets and higher taxes, to repay monies borrowed to recapitalise national and international banking systems, suppresses private sector growth. These developments result in greater need for State and EU resources to support strategic objectives. The limited access to capital results in an inability of many Member States, particularly those affected by the sovereign debt crisis in 2011, to cope with a number of issues including the consequences of climate change, greater global competition in the manufacturing of good and the provision of services, demographic developments and increasing energy costs.

Climate change, though gradual, results in significant disruption of social and economic activities as a consequence of society's slow response to this issue. Floods and droughts impact on, particularly, food production and settlement patterns. Volatility in food production saw greater demands on the EU to manage commodity price risks. Related to this issue, concerns over periodic food shortages led to, the introduction of strategic EU food reserves. In the years following 2020 energy costs increased in response to greater demand for dwindling stocks of fossil fuels. These costs further suppressed private sector led economic growth. In response to the resultant energy crisis Member States invested heavily in nuclear power generation.

Rural regions experienced very challenging social, economic and environmental conditions throughout this period. The growing dominance of nuclear power undermined the potential of a green dividend supporting economic growth and diversification in rural regions. Some regions did benefit from increased construction related employment associated with the building of new nuclear power plants. Due to public unease concerning environmental and safety issues Member States chose to locate these investments in areas with existing nuclear installations. Rather than change regional development trajectories, this strategy re-enforced trends present circa 2010.

Concentration of public spending on overcoming strategic resource crises including water, food and energy and the constricted nature of private capital markets hinders rural economic diversification. As a result, this scenario foresees a continuation of dominant trends evident during the early years of the new millennium. The consolidation of agriculture, driven by the need to reduce financial risk associated with significant fluctuations in commodity yields arising from extreme weather events has a range of impacts. At one level it drives the 'corporatisation' of farming which, in turn, reduced the local economic impacts of farming as input suppliers and processors respond to consolidation with further rationalisation. Overall, these changes limited employment opportunities for younger cohorts of the rural population thereby contributing to rural out-migration.

Whilst some manufacturing activities experienced a limited revival as a consequence of changing comparative advantages in the face of increasing domestic and international transportation costs, these gains were undermined by relocation of pharmaceutical and high-tech production in lower cost regions. Blurring of the boundaries between these two sectors occurs with the increasing use of nano-technology in healthcare. Agglomerative advantages accrue to global regions with pre-existing knowledge capacity which prevents the emergence of additional global integration zones.

The tertiary sector remains important but has relatively little capacity for expansion in the face of limited capital availability and reduced consumer spending. Key growth areas include financial, information intensive and personal services. Whilst these contribute to the expansion of the tertiary sector, they do not offset declines in those activities that are amenable to 'off-shoring' including education, healthcare, accounting and basis legal services.

Scenario 3 (S3: Rapid response to climate change + low levels of State – EU supports).

The period from 2010 to 2030 sees an accelerated response to the challenges associated with climate change that severely disrupts established patterns of social and economic activity. The pace and scale of change is such that it causes a fundamental rethinking of the role and value of particular resources and economic activities. Land is increasingly viewed not simply as a means of production but also as a key resource in mitigating the impacts of extreme weather events. This, combined with rapid increases in the costs of food and energy, give rise to unprecedented public and private investment in renewable energy and bio-technology enterprises.

The transition to low carbon economy occurs over a 10-year period as member states move to limit output of greenhouse gases and move to an economy and society that is not dependent on fossil fuels. The rapid transition, combined with an inability to bring sufficient nuclear or renewable energy on-line in a short period, gives rise to significant demand for bio-fuels production. Private equity funds and others with access to capital accumulate significant land holdings as a means of capturing a significant proportion of the economic return from food and energy production. Member states also engage in the accumulation of land in key areas to manage flooding and improve water conservation through introduced vegetation, i.e. forestry, and technological solutions. These developments gave rise to land shortages in key areas resulting in intensification in agricultural production through adoption of bio-technologies and further development of integrated production systems. Nutrient management and recycling, including those from human waste, become critical to maintaining soil productivity. Whilst there is significant economic activity in rural areas the wealth generated is increasingly concentrated in larger corporations who own the land and production technologies. Production, and the risks associated with it, is undertaken by those who lease the land and technologies.

These developments are largely driven by, and contribute to, further growth of the tertiary sector of the economy. Research and development, financial services and the 'experience economy' are the most important growth areas. These activities are largely concentrated within gateway urban centres and accessible rural regions. The development of the 'experience economy' is of some benefit to rural areas but much of the added value is returned to firms located outside of rural regions.

Scenario 4 (S4: Rapid response to climate change + high levels of State – EU supports)

The social, economic and environmental challenges resulting from climate change leads to an EU wide debate on how best to respond. It becomes clear that the general population, whilst not trusting of political leaders, do not wish the societal response to be conditioned or determined by private enterprise. This agreement results in the development of initiatives that support the transition to a low-carbon society through sustainable production and consumption.

Nuclear power is the preferred energy option as renewable sources are not considered capable of meeting demand in the short to medium term. Significant state expenditure is directed to support development of commercial Thermonuclear Fusion Reactors following successful operation of the ITER (International Thermonuclear Experimental Reactor). Construction of nuclear power plants ensures that most land is available for productive use. The state stringently regulates land-use with the result that new residential development in the open countryside only occurs in exceptional circumstances. Rural settlement is increasingly concentrated into existing towns and villages.

Certain regions, particularly those in South, Central and Eastern Europe witness substantial depopulation. Northern and Western Europe are the preferred destinations of these migrants. Whilst younger cohorts migrated to urban regions to avail of employment opportunities in the public and secondary sectors older cohorts from both rural and urban regions chose to 'retreat' to rural regions.

In an effort to reduce greenhouse gas emissions the use of fossil fuels in transportation is phased out over the course of ten years with urban regions ceasing use within seven years. This transition is supported through investment in public transportation to settlement centres and the provision of, private or community, transportation links to these nodes using electric vehicles. Fossil fuel use, in the short-term is prioritised to support food production, particularly tillage crops. Agricultural activities giving rise to significant GHG emissions, rice cultivation and protein production in particular, is restricted using market instruments. By 2030, the EU, through a refocused CAP, reaches its goal of 80% self-sufficiency in food, energy and water which was established as part of extensive review of all EU policies in 2020. This objective was achieved through the promotion of local and regional food systems.

The reorientation of public policy towards achieving sustainable production and consumption reinvigorates the primary and secondary sectors, particularly through the exploitation of import substitution opportunities. The tertiary sector, whilst continuing to be important, does not grow at the same pace as the primary and secondary sectors.

3 IMPLICATIONS OF THE FUTURE PERSPECTIVES FOR RURAL REGIONS

An assessment of the implications of the scenarios outlined above was undertaken using a participatory approach. Researchers involved in the early stages of the EDORA project, in addition to members of the Expert Group, were asked to complete the assessment. This group was selected because they are familiar with the

background to the project and, most importantly, the structure of the EDORA typology. None of the individuals who completed the evaluation were involved with the design or development of the scenarios. The evaluation form, see Appendix 1 of the Working Paper, comprised a summary of the EDORA typology and an outline of the scenarios along with Table 1, as presented above. Following each scenario the participants were asked to indicate the impacts, ranging from very positive (+2), positive (+1), neutral (0), negative (-1) or very negative (-2), of the scenario on the four types of rural region identified by the EDORA typology. Participants were also asked to provide comments explaining their assessment of the scenario. Two additional questions were included in the evaluation. The first asked which of the four scenarios the participants though most likely to unfold over the course of the next 20 years and which was, in their opinion, preferable.

The evaluation form was circulated to 15 researchers in addition to the members of the Expert Group. From this population there were nine responses. The assessments relating to each scenario were compiled and their potential impact on rural regions evaluated through an analysis of the frequency of the scores. The analysis is divided into two phases, the first assesses the general distribution of positive, neutral and negative scores between the scenarios whilst the second provides a more detailed examination of the implications of the scenarios for the rural regions identified in the EDORA typology. The evaluator's qualitative comments are used by way of providing insights to their thinking when scoring the scenarios.

3.2.1 General assessment of scenarios

The scores associated with each scenario were assessed to identify the number of positive (1 or 2), neutral (0) or negative (-1 or -2) values. This approach enables a general assessment of the collective responses to the scenarios. The summary data indicate that S3 received the highest number of positive responses, 16, from the evaluators (Table 2). This result suggests that the scenario is perceived as being beneficial to many of the rural regions identified in the EDORA typology. There are, however, 10 negative and a further six neutral scores associated with this scenario indicating potentially substantial regional variation in the impact of S3. S1 recorded the least number of negative, nine, and the highest number of neutral, eight, scores. S2 and S4 have similar numbers of positive and negative scores. These findings indicate that both scenarios would give rise to highly uneven spatial impacts with some areas benefiting considerably whilst others are disadvantaged.

Table 2: General Assessment of Future Perspective Scenario Assessment Scoring

	S1	S2	S3	S4	Total
Positive	15	14	16	13	58
Negative	9	14	10	12	45
Neutral	8	4	6	6	24
Total	32	32	32	31*	127

* An evaluator did not provide a score in one of the cells. This is treated as a missing value.

It is interesting to compare these results to those of the questions regarding which scenario is preferable and which is considered most likely to emerge as the dominant set of trends in the next 20 years (Table 3). Of the eight assessments completed, five (62.5%) thought that S1 the most likely to occur. There was less agreement regarding which scenario is preferable amongst the evaluators. Whilst S2 received

three (37.5%) endorsements, S1 and S3 both received two. S4 was considered the least preferable scenario.

Table 3: General Assessment of Likely and Preferred Scenarios

	Likely	Preferable
S1	5	2
S2	2	3
S3	0	2
S4	1	1

That S1 is considered the most likely to emerge as the dominant set of trends in the coming years is unsurprising as it most closely parallels present conditions. The market is largely unregulated and there is a general expectation that climate change will be gradual allowing for evolution of contemporary systems and structures. Several of the evaluators suggested that this scenario should be labelled 'Business as usual'.

3.2.2 Evaluating the potential regional impacts of the scenarios

In order to develop a better understanding of the differences between preferences expressed for likely and preferred scenarios, the second phase of the Future Perspectives assessment focused on exploring scoring within each scenario. Once more the frequency of scores were assessed and modal values identified. This approach facilitates a more detailed assessment of the potential regional or spatial impacts of the scenarios. By way of linking the future perspectives to those aspects of the EDORA project concerned with policies to promote competitiveness and cohesion in rural Europe, consideration is given to how each scenario might impact on territorial cohesion. Rather than identification of scenarios that result in more or less cohesion, the approach here is to suggest that territorial cohesion may be more evident at particular spatial scales under different scenario conditions i.e. at local and neighbourhood levels rather than the development of additional global integration zones. This approach avoids replicating work undertaken as part of the ESPON Spatial Scenarios research programme[2].

S1 is considered to have negative or very negative implications for the 'Agrarian Economies' regions identified in the EDORA typology. Five of the eight assessments scored this scenario as have an adverse influence on the future development of these regions. The scenario was thought to have neutral or positive implications for 'Consumption Countryside' and 'Diversified (with important Secondary Sector)' regions and highly positive impacts on 'Diversified (with important Market Services Sector)' regions. On the basis of this assessment it is likely that this scenario would give rise to territorial cohesion at the continental scale with increasing convergence between Member States but not between regions.

The qualitative assessment of this scenario by the evaluators emphasises the general loss of competitiveness for the EU and some of the implications for rural regions. Overall, the EU is considered to loose competitiveness relative to other global regions. This leads to several consequences, including the growth of small enterprises in rural areas producing goods to replace imports and migration of people from urban to rural regions to take "refuge". Whilst all regions can benefit from the

[2] See here for the final Spatial Scenarios Report: http://www.espon.eu/export/sites/default/Documents/Projects/ESPON2006Projects/CoordinatingCrossThematicProjects/Scenarios/fr-3.2_final-report_vol1.pdf

growth of micro and small scale manufacturing, regions benefiting most from migration include consumption countryside and diversified areas. The rationale underpinning this assessment relates to the strategies adopted by, in particular, the middle classes. These populations, seeking to escape from the deleterious impacts of repeated economic crises on their lifestyles, actively engage with *"green lifestyles… [which] mask the decline in social mobility"* (Evaluator 1). These comments suggest that the nature of consumption changes for many people with greater emphasis on self-created products and experiences.

The agriculture sector is seen to benefit from a "strong bushel-barrel correlation" as energy prices lead to higher commodity values (Evaluator 2). A number the comments nuance the spatial impacts associated with this scenario. There is a general view that agrarian economies, though benefiting from the development of the 'green economy' initially, will loose out in the longer-term as goods and hence profits produced from these investments are repatriated to corporations external to these regions (Evaluator, 2, 3, 5). It should be noted that 'profit repatriation' will not necessarily be to 'urban' regions but rather to those regions with the capacity to develop or capitalise on knowledge to create innovative products and services. These could well be diversified or Consumption rural regions.

A number of commentators also highlight the potential for future developments to result in the transition of regions from one type to another. In S1, several of the commentators indicated that the emergence of competing agri-food and agri-energy sectors could reverse trends within Consumption countryside regions (Evaluators 4 and 5).

S2 divided the evaluators into two distinct groups, those that thought the impacts will be largely positive and those that did not. There were equal numbers of positive and negative scores for 'Agrarian Economies' regions whilst 'Consumption Countryside' and 'Diversified (with important Market Services Sector)' regions were considered to experience negative impacts under this scenario. Only 'Diversified (with important Secondary Sector)' regions were thought to benefit from the developments associated with S2. In assessing these results we explored the possibility that evaluators from particular areas of the EU shared common perspectives of the scenarios. The respondents were grouped into three categories; New Member States, Southern Member States and Western European Member States. No clear pattern was discerned. Given these results, it is difficult to assess this scenario's implications for territorial cohesion. However, given that it foresees a general continuation of contemporary socio-economic trends, albeit within a challenging framework for non-urban regions, it is likely that territorial cohesion could occur along two trajectories; greater cohesion between rural and urban regions at the sub national scale and between gateway cities at the European level. With regard to integration of rural and urban regions, the nature of this integration is likely to be driven by extension of the urban into rural rather than through balanced development. The extent to which this could be classified as territorial cohesion is therefore questionable.

The qualitative assessment offered by the evaluators reflected their division between those that saw this scenario as being largely positive and those that did not. Whilst many of the comments pertaining to S1 focused on agriculture and spatial impacts, the role of the State and regulation of markets were the most commonly referenced themes. Of those evaluators that think this scenario will have negative implications should to come to pass, Evaluator 4, captured the essence of their concerns: *"Regulations and financial restrictions will result in fossilization of the agrarian economies as there will be little impetus, either public or private for change. The*

consumption countryside will not be consumed in an intensive way as a consequence of de-valorisation of key features or characteristics of these regions. There will be a conflict between sustaining the diversity of rural regions and which limits the possibilities for development (instead of sophisticated revalorisation of traditional rural characteristics with modern possibilities of development. Diversified (Market sector) regions will face significant in adjusting to a regulated market environment whilst diversified (Secondary) regions will not be capable of developing to their potential as a consequence of increased regulation regardless to the consequences of climatic change." Contrasting this perspective are those of Evaluators 3 and 2. These assessments suggest that, a foregrounding of the CAP as one of the primary means of mitigating the challenges of responding to climate change, could result in more balanced development. This outcome is not a consequence of more rapid growth of less developed regions but rather the differential impacts of Scenario 2. These are considered to have greater consequences for regions that are highly integrated into global economies e.g. Diversified and Consumption Countryside regions. The resulting 'negative growth' is thought to change their relative position compared to other regions and hence give rise to 'balanced' development.

S3 provided a relatively clear result with 'Agrarian Economies' and 'Consumption Countryside' regions considered to experience largely negative impacts whilst 'Diversified' regions benefited from the developments associated with the scenario. Evaluator 4 noted that rapid response to climatic chanllanges would necessitate a highly coordinated response, which is difficult to achieve through a deregulated market. Here the evaluator points to the tragedy of commons by way of exemplifying their point and suggests that this scenario would be "devastating" for Agrarian Economies and Consumption Countryside regions. All evaluators scored positive (6) or very positive (2) impacts for 'Diversified (with important Market Services Sector)' regions. The comments of evaluators suggest that the capacity of these regions to participate in technology and knowledge creation necessary to deal with rapid climatic change combined with advantages in exploiting the 'experience economy' should deliver significant benefits. The impacts on 'Diversified (with important Secondary Sector)' regions are less clear-cut with three 'Neutral' and three 'positive' assessments. The extent to which global transportation is affected by rapid responses to climate change challenges and the shift from fossil to alternative energy based transportation is considered to offer both opportunities and challenges to these regions. One comment may explain the distribution of neutral and positive assessments. Evaluator 5 stated that the capacity for diversified (market) regions to respond to the emerging opportunities and challenges will be conditioned by their geographic location in general and proximity, rather than accessibility, to key markets. Overall then, this assessment suggests that territorial cohesion might be delivered by supporting the development of Gateways and Hubs with these places enhancing their links with surrounding regions. The development of local services, particularly in the areas of food, water, extreme weather event management and leisure activities, might form the focus of policy interventions linking rural regions with those containing Gateways and Hubs.

S4 is similar to the assessment of S1 in that there is general agreement between the evaluators regarding the spatial impacts of this scenario. In this instance, however, five of the eight respondents rated the impacts on 'Agrarian Economies' and 'Consumption Countryside' regions as being positive. The implications of S4 for 'Diversified (with important Market Services Sector)' and 'Diversified (with important Secondary Sector)' regions were generally less positive. A distinction is drawn between the assessments of the impacts on these two groups of regions. 'Diversified (with important Market Services Sector)' areas are considered by the assessors to

experience either negative or neutral trends arising from this scenario. No positive outcomes were considered to emerge from S4 for these regions. The assessment of 'Diversified (with important Secondary Sector)' regions divided the evaluators. Four of the respondents rated the impacts as being negative whilst three thought them positive; one assessor scored the impact as neutral.

The re-grounding of food supply systems is the central benefit arising from this scenario according to comments from several of the evaluators. The development of regional food systems, in response to the need for increased food self-sufficiency, has positive benefits for all regions (Evaluator 1, 2, 4 and 6) but particularly for agrarian economies and Consumption countryside regions (Evaluator 2 and 6). The generally negative implications for diversified regions relates to their higher exposure to non-agricultural industrial sectors which would need to restructure to serve local – international (largely within the EU) rather than global markets. This scenario suggests that territorial cohesion might be most evident at local scales with networks of rural and urban regions developing complementary products and services. These would be targeted, in the first instance, at local levels and, in the second instance, at the EU level.

3.2.3 Spatial Impact Assessment

The final stage of this analysis summarises the spatial impact assessment through an analysis of the modal values associated with each scenario and regional type. For each of the scenarios, the associated scoring was collated and the most frequent value ascribed to a region under the various scenarios identified. The results of this assessment are presented in Table 3. Looking across the scenarios we can see that there is some variance in the nature and level of impact on each of the regions. Taking the assessments for 'Agrarian Economies' regions as an example, we see that the modal values range from -2 to +2. Using this matrix it is therefore possible to evaluate the impacts of these future perspectives at the regional scale.

Regions classified as 'Agrarian Economies' are, in general, are negatively affected by the dominant trends associated with S1, S2 and S3. Only S4, Rapid Climate Change with Strongly Regulated Economy, produces, according to the combined assessment of the evaluators, a very positive outcome. Those regions associated with the 'Consumption Countryside' and 'Diversified' types also experience positive and negative impacts depending on which scenario one is assessing.

Table 4: Summary assessment of regional impacts of the scenarios

	S1	**S2**	**S3**	**S4**
Agrarian Economies	-1	-1	-2	2
Consumption Countryside	0	-1	-1	1
Diversified (with important Secondary Sector)	0	1	0	-1
Diversified (with important Market Services Sector)	1	-1	1	-1

4 CONCLUSIONS

This chapter presented the research and results associated with the development of future perspectives for rural regions in Europe that take into consideration the next 20 years. It provided an overview of the approach taken in the development of the perspectives and presented four scenarios of future rural change conditioned by the pace of climate change and the dominant form of economic governance. Eight researchers and experts with a detailed knowledge of contemporary rural development trends, policy developments, issues and research assessed these scenarios. It is worth reiterating at this stage that there is no 'right' or 'correct' scenario. The scenarios developed in this work offer four alternative perspectives of the future for the four regional types identified in the EDORA typology. The assessments of the spatial implications of these scenarios vary. This variance reflects differences in the individual perspectives of the evaluators, informed by their personal milieu and lifetime experiences, and their professional consideration of the potential outcomes to highly complex interactions between a range of environmental, political, social, economic and cultural factors.

The assessment of future perspectives highlights differences in the spatial impacts and implications of each of the scenarios. S1 sees three of the four region types benefiting from the developments associated with this perspective, 'Agrarian Economies' being the exception. If this scenario accurately reflects the dominant development trajectories of the coming years then there will be a clear need for territorial cohesion policy measures targeted at 'Agrarian Economies' regions.

S2 has, with the exception of Diversified (with important Secondary Sector), negative implications for all other region types. In this respect it may be, perversely, be considered the most equitable. There are two critical issues with this conclusion. Firstly, as the impacts in each of the regions are considered to be 'negative' rather than 'very negative' it is possible that there is no redistributive affect associated with this scenario. This is unlikely given that the consequences of negative impacts on development would not be experienced similarly in different types of region; a point central to the EDORA approach. This gives rise to a second issue. Given the move to a highly regulated market envisaged in this scenario it is possible that there would be greater demands on national and supranational regulators to respond to the negative impacts developments. How these institutions responded, in general, and the types of initiatives implemented, in particular, would have a significant impact on the process of adjustment foreseen in this perspective.

S3 presents an alternative view with the 'Diversified' regions advancing whilst Agrarian and 'Consumption Countryside' regions experience negative impacts associated with the developments foreseen in this scenario. Once again, this would have a redistributive affect but in this instance it implies further weakening of already weak regions, this is particularly true of Agrarian regions, which are considered to be 'very negatively' affected by these developments. Whilst the issues arising from these developments in 'Consumption Countryside' regions might be tackled through strengthening of Urban – Rural linkages, different initiatives would be required in the case of 'Agrarian Economies' regions.

S4 is interesting in that it suggests that 'Agrarian Economies', and to a lesser extent 'Consumption Countryside', regions would benefit whilst the 'Diversified' regions would loose out. This scenario has the effect of redistributing development and could give rise to convergence between different types of rural region in the EU.

In summary there is no single future perspective that foresees positive outcomes for all regions under the framework developed in this research. There are however scenarios that may have a balancing affect on regional development and thereby give rise to greater territorial cohesion within the EU. Equally there are scenarios that would give rise to further imbalanced development. These may be considered preferable and policy initiatives put in place to ensure the negative impacts in particular regions are mitigated. One of the central points emerging from the research is that territorial cohesion could occur at a number of spatial scales. The key challenge then is to develop initiatives at local nation and EU scales that contribute to balanced regional development at all levels.

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APPENDIX 1: SCENARIO ASSESSMENT GUIDELINES

Introduction

This document presents a summary of four scenarios developed as part of the Future Perspectives research undertaken within the EDORA project. Each scenario is followed by two questions. The first seeks your assessment of the possible impacts of this scenario on the four types of regions identified in the EDORA typology.

You are asked to indicate whether the impacts of change outlined in the scenarios will be very positive (+2), positive (+1), neutral (0), negative (-1) or very negative (-2). It would be very useful if you could provide additional comments explaining your decisions. The second question is optional and asks you to suggest a name for the scenario.

At the end of the fourth scenario there are two additional questions seeking your opinion as to which of the four scenarios you think is most likely and which is preferable. Place an X beside your choice.

I would be delighted if you could return this assessment sheet to me by Wednesday, April 21st. If you cannot return it before then I would appreciate it if you can let me know when you will be able to return it.

If you have any questions in relation to this assessment please contact me at: david.meredith@teagasc.ie

The EDORA typology identifies four regional types. These include,

a. Agrarian Economies

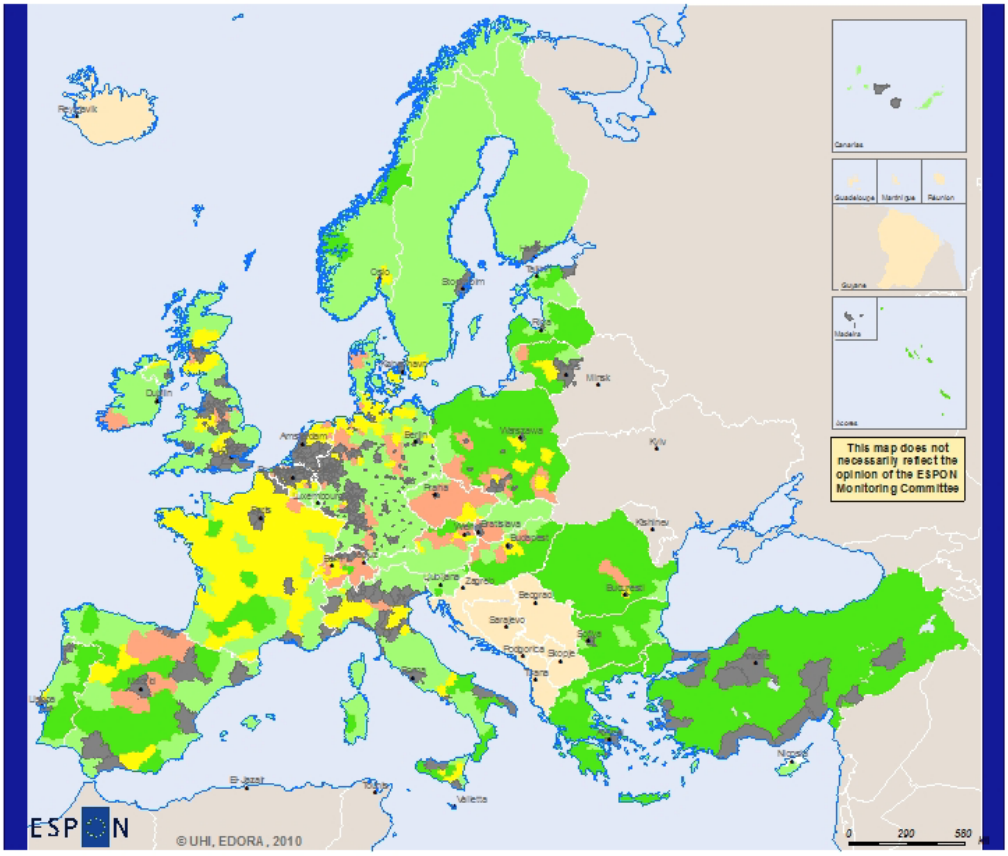
It should be noted that Agrarian regions are not necessarily those regions that have very strong agricultural structures. In many instances these regions are dependent on agriculture because of the absence of alternative industries.

b. Consumption Countryside

c. Diversified (with important Secondary Sector)

d. Diversified (with important Market Services Sector).

The map, below, provides an assessment of the distribution of the different regional types.



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Regional level: NUTS 3
Source: EDORA Database, 2010
Origin of data: Eurostat REGIO Database, and other sources, various years (centred on 2006).
© EuroGeographics Association for administrative boundaries

Structural Types (Intermediate and Predominantly Rural NUTS 3 Regions)

- No Data
- PU Regions
- Agrarian
- Consumption Countryside
- Diversified (Strong Secondary Sector)
- Diversified (Strong Private Services Sector)

Note: A simplified classification procedure was necessary in CH and TR, due to missing data. However it is anticipated that acquisition of a wider range of indicators would not materially change the outcome.

Scenario 1 (S1: Gradual climate change + highly deregulated market economy)
The opening decade of the new millennium saw the emergence of financial markets as the primary means of allocating resources in EU member states and heightened awareness of the implications of climate change. Despite the global crisis of 2007 – 2008, financial markets continued to function without significant regulation. Innovations in estimating risk allowed markets to account for, and communicate this risk. Though financial markets continue to be cyclical they have not, as of 2030, experienced a repeat of the 2007 – 2008 crisis. Climate change continues to take place much as predicted by the Intergovernmental Panel on Climate Change with some regions, particularly those in South, East and Central Europe, witnessing increases in mean temperatures and decreased in precipitation. Regions in the North and West of Europe also experienced increased temperatures, particularly during winter months. The incremental nature of this development allowed the market based system of governance to adjust to the new conditions. More obvious signs of the impacts of climate change led to a renewed emphasis on securing a legally binding successor to the agreement reached at the Copenhagen Conference on Climate Change. This new agreement paved the way for the introduction of a global cap and trade market based system of regulating greenhouse gas emissions.

Rural regions, which at the end of the first decade of the new millennium were increasingly socially and economically differentiated, continued to diverge, at the EU level. Long-term demographic developments saw those regions in peripheral areas, distant from or inaccessible to urban regions, loose population through age specific migration of younger cohorts and natural decline. Conversely, accessible and urban regions experienced population increases. These developments underpinned the continued evolution of the rural economy with energy production vying with agriculture, fisheries and other primary sector activities for resources, particularly land (sea). The rapid growth of the energy economy had a wide variety of impacts on rural regions. In those regions with a strong primary sector growth of the sector occurred through endogenous development. In regions with limited territorial capital, particularly human and financial capital, national and multinational corporations developed renewable energy opportunities. Few of the benefits, other than limited direct employment in the initial construction and subsequent maintenance of energy installations, accrued to these regions.

Agriculture underwent profound changes during this period. The rapid growth of the energy sector, driven by increasing prices for fossil fuels, competed with farming for

land and capital. Reduced availability of land, combined with the need to minimise the environmental impacts of food production, particularly greenhouse gas emissions, resulted in further industrialisation of food production. Climate change, which resulted in more variable growing conditions, led to demands from the agri-food industry for greater adoption of biotechnologies, particularly genetically modified crops. These were designed to be robust, capable of surviving prolonged droughts and highly efficient at converting nitrogen to yield.

Manufacturing activities continued to decline throughout much of Europe up to 2030 as corporations relocated their labour intensive activities to lower cost labour markets. The high growth of other sectors including research and design and financial services contributes to expansion of the tertiary sector. Much of this development, dependent on concentrations of highly skilled and educated labour, takes place in larger urban centres and urban regions.

Scenario 1: Assessment

On a scale of +2 to -2 what is your assessment of the possible impacts of this scenario on the four types of rural area identified in the EDORA typology.

Regional Types	Scenario 1
Agrarian Economies	
Consumption Countryside	
Diversified (with important Secondary Sector)	
Diversified (with important Market Services Sector)	

Comments:

Can you suggest a name for this scenario?

Scenario 2 (S2: Gradual climate change + highly regulated market economy)
Following the collapse of financial markets in 2007 – 2008 and the subsequent, long-term, cost of supporting national financial systems there was increased demand for much greater regulation of capital and commodity markets. Throughout the EU, but particularly amongst Southern and Eastern member states there was a strong move towards greater regulation of capital markets. At the EU level, changes to the operation of the Euro resulted in greater restrictions on the functioning of financial markets. These developments set the framework governing social and economic development up to 2030.

The relative lack of capital, due to greater restrictions on private equity markets and higher taxes, to repay monies borrowed to recapitalise national and international banking systems, suppressed private sector growth. Such was the need to repay borrowings that many member states also reduced public sector spending. These developments resulted in a relative inability to cope with a number of issues including the consequences of climate change and increasing energy costs.

Climate change, though gradual, resulted in significant disruption of economic activities. Floods and droughts impacted on, particularly, food production and settlement patterns. In the years following 2020 energy costs began to increase in response to greater demand for dwindling stocks of fossil fuels. These costs further suppressed economic growth. In response to these developments member states invested heavily in nuclear power generation.

In the absence of significant public or private investment rural regions experienced very challenging social, economic and environmental conditions throughout this period. The lack of capital suppressed economic diversification. This contributed to greater migration of younger cohorts from rural to urban regions. The consolidation of agriculture, driven by the need to reduce financial risk associated with significant variations in commodity yields arising from extreme weather events, also limited opportunities for younger cohorts and thereby contributed to rural out-migration. Climatic variability and its impact on productivity also led to greater vertical integration of food supply chains, which contributed to consolidation.

Manufacturing activities experienced a limited revival as a consequence of changing comparative advantages in the face of increasing domestic and international transportation costs. The tertiary sector remains important but has relatively limited

capacity for expansion in the face of capital shortages and reduced consumer spending.

Scenario 2: Assessment
On a scale of +2 to -2 what is your assessment of the possible impacts of this scenario on the four types of rural region identified in the EDORA typology.

Regional Types	Scenario 2
Agrarian Economies	
Consumption Countryside	
Diversified (with important Secondary Sector)	
Diversified (with important Market Services Sector)	

Comments:

Can you suggest a name for this scenario?

Scenario 3 (S3: Rapid climate change + highly deregulated market economy)
The period from 2010 to 2030 sees rapid climate change that severely disrupts established patterns of social and economic activity. The pace and scale of change is such that it causes a fundamental rethinking of the role and value of particular resources and economic activities. Land is increasingly viewed not simply as a means of production but also as a key resource in mitigating the impacts of extreme weather events. This, combined with rapid increases in the costs of food and energy, give rise to unprecedented public and private investment in renewable energy and bio-technology enterprises.

The transition to low carbon economy occurs over a 10-year period as member states move to limit output of greenhouse gases and move to an economy and society that is not dependent on fossil fuels. The rapid transition, combined with an inability to bring sufficient nuclear or renewable energy on-line in a short period, gives rise to significant demand for bio-fuels production. Private equity funds and others with access to capital accumulate significant land holdings as a means of capturing a significant proportion of the economic return from food and energy production. Member states also engage in the accumulation of land in key areas to manage flooding and improve water conservation through introduced vegetation, i.e. forestry, and technological solutions. These developments gave rise to land shortages in key areas resulting in intensification in agricultural production through adoption of bio-technologies and further development of integrated production systems. Nutrient management and recycling, including those from human waste, become critical to maintaining soil productivity. Whilst there is significant economic activity in rural areas the wealth generated is increasingly concentrated in firms rather than family operated businesses who own the land and production technologies. Production, and the risks associated with it, is undertaken by those who lease the land and technologies.

These developments are largely driven by and contribute to further growth of the tertiary sector of the economy. Research and development, financial services and the ‘experience economy’ are the most important growth areas. These activities are largely concentrated within gateway urban centres. The development of the ‘experience economy’ is of some benefit to rural areas but much of the added value is returned to firms located outside of rural regions.

Scenario 3: Assessment

On a scale of +2 to -2 what is your assessment of the possible impacts of this scenario on the four types of rural region identified in the EDORA typology.

Regional Types	Scenario 3
Agrarian Economies	
Consumption Countryside	
Diversified (with important Secondary Sector)	
Diversified (with important Market Services Sector)	

Comments:

Can you suggest a name for this scenario?

Scenario 4 (S4: Rapid climate change + highly regulated market economy)
The social, economic and environmental crisis resulting from rapid climate change leads to an EU wide debate on how best to respond. It becomes clear that the general population, whilst not trusting of political leaders, do not wish the societal response to be conditioned or determined by private enterprise. This agreement results in the development of initiatives that support the transition to a low-carbon society through sustainable production and consumption.

Nuclear power is the preferred energy option as renewable sources are not considered capable of meeting demand in the short to medium term. Significant state expenditure is directed to support development of commercial Thermonuclear Fusion Reactors following successful operation of the ITER (International Thermonuclear Experimental Reactor). Construction of nuclear power plants, rather than bio-fuel based systems, ensures that most land is available for productive use. The state stringently regulates land-use with the result that new residential development in the open countryside only occurs in exceptional circumstances. Rural settlement is increasingly concentrated into existing towns and villages.

Certain regions, particularly those in South, Central and Eastern Europe witness substantial depopulation. Northern and Western Europe are the preferred destinations of these migrants. Whilst younger cohorts migrated to urban regions to avail of employment opportunities in the public and secondary sectors older cohorts from both rural and urban regions chose to move to rural regions.

In an effort to reduce greenhouse gas emissions the use of fossil fuels in transportation is phased out over the course of ten years with urban regions ceasing use within seven years. This transition is supported through investment in public transportation to settlement centres and the provision of, private or community, transportation links to these nodes using electric vehicles. Fossil fuel use, in the short-term is prioritised to support food production, particularly tillage crops. Agricultural activities giving rise to significant GHG emissions, rice cultivation and protein production in particular, is limited. By 2030, the EU, through a refocused CAP, reaches its goal of 80% self- sufficiency in food, energy and water which was established as part of extensive review of all EU policies in 2020. This objective was achieved through the promotion of local and regional food systems.

The reorientation of public policy towards achieving sustainable production and consumption reinvigorates the primary and secondary sectors, particularly through the exploitation of import substitution opportunities. The tertiary sector, whilst continuing to be important, does not grow at the same pace as the primary and secondary sectors.

Scenario 4: Assessment

On a scale of +2 to -2 what is your assessment of the possible impacts of this scenario on the four types of rural region identified in the EDORA typology.

Regional Types	Scenario 4
Agrarian Economies	
Consumption Countryside	
Diversified (with important Secondary Sector)	
Diversified (with important Market Services Sector)	

Comments:

Can you suggest a name for this scenario?

Final Questions

Which of these scenarios is most likely to occur? (place an X beside your choice)

S1

S2

S3

S4

Which of these scenarios is preferable? (place an X beside your choice)

S1

S2

S3

S4

Summary of possible impacts of scenario changes on key issues

	S1	S2	S3	S4
Governance	Economic systems are largely self-regulated. There is further deregulation of key commodity markets, particularly energy and food. Integration of global manufacturing and services continues. The 'market' decides the allocation of resources.	Economic systems are increasingly regulated by State and international bodies. Key commodities, including energy and water, are largely regulated through binding international agreements. The State controls the allocation of key resources and determines how they are utilised.	Economic systems are largely self-regulated. There is further deregulation of key commodity markets, particularly energy and food. Integration of global manufacturing and services continues. The 'market' decides the allocation of resources.	Economic systems are increasingly regulated by State and international bodies. Key commodities, including energy and water, are largely regulated through binding international agreements. The State controls the allocation of key resources and determines how they are utilised.
Climate	Gradual climate change. Weather patterns are unstable but not to the extent of massively disrupting economic activities or society in general. South, East and Central Europe experience progressive warming and reduced rainfall. North and West Europe experience warming and also increased precipitation.		Rapid climate change. Weather patterns become highly unstable. All areas of Europe experience extreme weather events on a frequent basis. Radical shifts in seasonal weather patterns occur which permanently change productive capacity.	

Energy	Slow transition to a low-carbon economy. Gradual shift in energy composition. Increased private sector investment in wind, wave, solar energy and bio-fuels. Greater public and private research into technological solutions to energy security issues. i.e. hydrogen fuel cells.	Slow transition to a low-carbon economy. Greater emphasis on 'proven' non-fossil fuel derived energy. Nuclear power is the preferred option. Limited development of alternative / renewable energy sector.	Transition to low carbon economy occurs quickly. Significant private market investment in alternative energy technologies. Bio-fuel production competes with food production for resources (land and capital). Significant state expenditure to support development waste to fuel and waste to food systems.	Transition to low carbon economy occurs quickly. Fossil fuel use is prioritised to support food production, particularly tillage crops. Nuclear power is the preferred option. Significant state expenditure to support development of commercial Thermonuclear Fusion Reactors.
Transportation	Rural transport continues to be dominated by private car ownership. Most cars are powered by electricity. Freight transportation continues to depend on fossil fuels.	Rural transport continues to be dominated by private car ownership. Taxes on fossil fuels make private transportation increasingly expensive. Freight transportation continues to depend on fossil fuels.	Rural transport transitions to a hub and spoke model with private transportation used to access, public, transportation hubs. Freight transportation shifts to rail and ferry systems.	Rural transport is increasingly the prevue of community-based schemes. Freight transportation shifts to rail and ferry systems.

International Migration	Targeted migration programmes seek to attract highly educated and skilled labour to the EU.	Increasing restrictions on international migration to the EU.	Significant intake of migrants from countries severely impacted by climate change.	Limited intake of immigrants from outside of the EU.
Internal Migration	Cohort specific migration results in areas with limited territorial capital ageing rapidly. Migration is dominated by East - West and South - North flows.	Migration is limited to the highly educated and skilled. Migration is dominated by East - West and South - North flows. Migration to rural areas is increasingly limited to those who can afford the high costs associated with rural living. i.e. water and transportation	Large-scale migration from East - West and South – North Europe. Internal migration is characterised by younger age cohorts and rural - urban moves.	Large-scale rural – urban flows of younger cohorts. Selective urban – rural, welfare driven, flows of older cohorts particularly in West and North Europe. Rural – rural flows of older cohorts are also evident as those in South and East Europe seek a more benign living environment.

Food security	Self-Reliance. The EU competes in global food markets on the basis of comparative advantage.	Gradual recouping of CAP payments to production to increase self- sufficiency.	Self-Reliance Protein production is increasingly industrialised to maximise input - output efficiency and free up land for bio-fuel production. Animal and rice production is significantly constrained in an effort to reduce green house gas emissions.	Self-sufficiency Radical recouping of CAP payments to production to increase self- sufficiency. Animal and rice production is significantly constrained in an effort to reduce green house gas emissions. Greater emphasis on the development of regional food systems.
Economy	Increased primary sector productivity through application of bio-technologies. Stabilisation of primary sector employment through expansion of alternative enterprises including energy and public goods provision, particularly water management. Decrease in manufacturing employment. Further growth in the services sector, particularly in	The primary sector remains productive through increasing economies of scale. Limited growth in the secondary and services sectors. High-risk sectors, finance in particular, are heavily regulated.	Tertiary dominated economy. Primary production characterised by economies of scale. The development of the bio-fuels sector results in further penetration of external capital into rural areas through the accumulation of land by corporations. This development sees greater integration of rural economies with global systems.	Rapid restructuring. Growth of both primary and secondary sector employment relative to the tertiary sector. State controls the management of key resources, particularly energy and capital.

urban areas. The financial sector is a key economic growth sector.

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EDORA

(European Development Opportunities
for Rural Areas)

Final Report Annex 1 Part 27

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Establishing the Potential for Territorial Cooperation

Paul Courtney (University of Gloucester)
Hilary Talbot (University of Newcastle)
and **Dimitris Skuras** (University of Patras)

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1. INTRODUCTION

This working paper relates to the concept of territorial cooperation, and the potential for establishing it with respect to various policy goals across a diverse rural Europe. More specifically in the context of EDORA, the concept is considered as a potential way of enhancing regional cohesion and competitiveness by strengthening the links between urban and rural regions and between rural regions. The paper combines a review of the academic and policy literature, together with an empirical assessment of selective material assembled during the earlier phases of the project. As part of this it builds on the Rural-Urban Interactions thematic paper (WP3), elements of which are referred to in constructing a conceptual framework for territorial cooperation. The discussion of territorial cooperation in this paper necessarily moves beyond a focus around rural-urban interactions *per se* due to complexities surrounding territorial boundaries and governance structures. The shift also represents the non-proximate nature of much territorial cooperation, and consideration of territorial cooperation as a policy tool.

The working paper has three main objectives, around which the material presented in the paper is structured:

- Building on Working Paper 3, to review the concept of territorial cooperation in order to classify it into meaningful categories for policy analyses;
- To undertake an analysis of the material contained in the Exemplar Regions reports, together with a review of the literature on business and food networks, in order to provide the basis for deriving policy implications;
- To consider the implications of this for establishing the potential for territorial cooperation across rural Europe.

Throughout the paper, attention will be paid to the various processes operating across rural and urban Europe, underlying development opportunities and the scope which might exist for working with these processes for the benefit of rural regions. Suggestions for strengthening the links within and between regions via territorial cooperation will be considered, which in turn will feed into the wider implications discussed in Working Paper 28 for promoting the EU 2020 objectives through various elements of cohesion policy.

Before moving on to conceptualise territorial cooperation, the paper begins with a brief overview of how the term is currently used in EU policy.

1.1. Existing forms of territorial cooperation

One of the key ingredients in territorial cohesion policy, frequently referred to in recent policy documents such as the 2008 Green Paper (CEC, 2008), is “territorial cooperation”. Through its territorial cooperation objective, cohesion policy encourages regions and cities to work together to learn from each other through joint programmes, projects and networks. As Engl (2009) describes, territorial cooperation is a diverse phenomenon characterised by a multitude of different forms and structures with regard to its implementation. These are dependent on both the needs of local and regional entities, and the capacities and competencies of their actors. Perhaps because of this reliance on geographical and human contexts, territorial cooperation is a somewhat vague and ill-defined term which appears to include both existing “informal” interactions between different areas (urban-rural, or rural-rural) and “formal” interactions “artificially” stimulated by policy.

Three main forms of territorial cooperation are commonly referred to by the European Commission: crossborder cooperation, interregional cooperation and transnational cooperation. In the period 2007-13 the European territorial cooperation objective (formerly

the INTERREG Community Initiative) covers three types of programmes across 52 crossborder and 13 transnational programmes. In addition, INTERREG, URBACT and ESPON provide a framework for exchanging experience between regional and local bodies in different countries under the interregional cooperation programme. Engl (2009) provides a useful overview of all three forms of cooperation.

Crossborder cooperation describes the collaboration between two or more adjacent local or regional entities in different but neighbouring states. As such it can adopt short-term projects (like single projects for a specific purpose) or permanent long-term structures covering various thematic issues. Crossborder programmes cover areas of the economy, infrastructure and culture. Working methods include elaboration of crossborder development strategies, exchange of information and coordination of initiatives in certain policy areas and participation of local and regional institutions in various programmes and projects.

Interregional cooperation refers to collaboration between non-adjacent local and regional authorities, its main purpose being to foster exchange of information and experience to represent common interests. Possible forms are community or town twinning, bilateral regional partnerships or multilateral regional networks and fields of collaboration including regional development, research and innovation, environmental protection and cultural activities.

Transnational cooperation is linked to a specific geographic area and involves local, regional and national authorities. Transnational forms of collaboration are multilateral and deal with spatial planning, aimed at an integrated and jointly planned spatial development of an area, such as the Baltic Sea Region programme.

Beyond the overarching aims of promoting the sharing of good practice and lessons learned between policy professionals and other stakeholders through, for example, the creation of formal networking arrangements, conferences, working groups and various forms of development tools, the precise definition and scope of territorial cooperation remains ambiguous. In practice one has to cope with hybrid and overlapping structures which are often hard to classify or assign to one of the three subcategories. This increasing heterogeneity produces two necessities: First, the various forms of territorial cooperation need to be classified along analytical categories, and second, an assessment has to be made as to whether or not recent developments – especially at a local community level – might provide for more homogeneity (Engl, 2009).

2. CONCEPTUAL AND THEORETICAL APPROACHES

To address the ambiguity surrounding territorial cooperation across Europe, it is necessary to first conceptualise the term in an attempt to develop it into meaningful categories. This also contributes to the formulation of some meaningful policy recommendations which hinge around the differentiation of rural areas.

This conceptualisation is set out in three stages. The critique begins with a discussion around rural-urban cooperation and its origins in spatial planning. The inevitable shortcomings of maintaining a rural-urban focus are described, particularly when considering the scope for fostering cooperation across a range of territorial scales, both proximate and relational. In response to this observation the second section considers the scope for conceptualising territorial cooperation through the lens of Camagni's 'territorial capital'. It concludes that whilst the framework is useful, it is too rigid to reflect the holistic nature of territorial cooperation and fails to sufficiently reflect the impact of power relations which can mean that not all forms of territorial cooperation are positive. In turn, the third section draws on the Carnegie Commission's Community Capitals Framework (CCF) to discuss power and politics and how they might impinge on territorial cooperation. With the CCF also falling short

of providing an all-encompassing framework the remainder of the section goes on to explain how an inductive approach was subsequently taken to identify three meaningful categorisations of territorial cooperation for use later in the paper.

2.1. From rural-urban to territorial cooperation

Rural-urban interactions are at the heart of the overarching concept of spatial planning, which is undertaken with the aim to "create a more rational territorial organisation of land uses and linkages between them" (ESPON, 2005:1). The European Spatial Development Perspective (ESDP) (CSD, 1999) has been instrumental in drawing attention to urban-rural relationships and urban-rural partnerships at the European, national, regional and local levels. This interest derives from the recognition that the vitality of Europe's rural areas is under threat; in many cases as a result of depopulation and agricultural decline. Urban areas, on the other hand, face different problems such as congestion, pollution and urban sprawl.

The European Spatial Development Perspective (ESDP) also sees a shift towards a polycentric system as central to achieving balanced competitiveness and the creation of several dynamic zones of global economic integration. The rationale for such a policy is to help avoid further concentration in core areas of the EU and more fully utilize the potential of all regions, thus enhancing the competitiveness of the EU in a global context (EC, 1999). The polycentricity concept challenges the core-periphery (or monocentric) model whereby a prosperous, economically dynamic core zone contrasts with an underdeveloped, geographically remote periphery (Shucksmith et al, 2005). The move towards polycentricity not only chimes well with aims of spatial planning, and European policy more broadly, but also because other functional changes in the activity patterns and spatial mobility of rural and urban producers and consumers have served to undermine the monocentric model.

The model is one of a balanced settlement structure whereby urban centres at several levels or scales are the driving forces for regions, implying a hierarchical interrelation of functional structures between the difference levels (Schindeggar and Tatzberger (2002). In turn, polycentric development is based on the principle of functional economic and political relations and networks (Antikainen et al 2003) between urban areas at different scales. If the opportunities and potential of the countryside are seen as an integral part of regional development, the structure of intra-regional flows and relations is then of increasing relevance (Shucksmith et al, 2005). However, whilst the physical and functional boundaries of urban and rural areas are becoming ever more blurred, the interdependencies are simultaneously becoming more complex and dynamic, containing structural and functional flows of people, capital goods, information, technology and lifestyles (CURS, 2004).

Rural-urban cooperation is also pertinent to the polycentric planning model. Parkinson (2004) acknowledges that there is recognition in several European city regions of the economic advantages of critical mass and efforts to increase rural-urban collaboration, including increased competitiveness and capacity to provide fiscal relief for revitalisation of central cities. In this respect, the extent to which such relief can benefit surrounding rural regions is highly dependent on the nature and extent of rural-urban collaboration. Similarly, rural-urban collaboration is required to overcome competition between neighbouring local authorities and fragmentation of sub-regional governance which can prevent city regions from functioning effectively. This is also relevant to the wider polycentric planning model, which requires the forging of new connections by overcoming historical barriers such as those caused by national boundaries and local rivalries and developing joint working and active cooperation. Indeed, underpinning polycentric development is the notion that settlements work together in a partnership to help sustain and grow businesses, services and facilities and that administrative boundaries no longer act as a barrier. In turn this requires new forms of governance that link communities of place and interest to form coherent networks with area-wide goals.

However, achieving rural-urban cooperation is far from straightforward. Constraints may be felt in the form of: political and cultural differences on both sides which hinder development; exclusion in decision making processes due to a lack of strategic appreciation at the local level; distrust and competition between rural and urban interests which prove divisive to rural projects; the dilution of rural interests due to urban influence; disagreements about the nature of the cooperative effort; inequalities in resources; reluctance of agencies to engage in multijurisdictional processes; hierarchical decision-making; uncooperative or uninterested government agencies; distrust among stakeholders; and ambiguous authority structures.

Thus, in terms of facilitating territorial policies a focus on rural-urban cooperation can be regarded as too restrictive, and too challenging, a picture which is further complicated when all forms of governance are considered. Partnerships can be seen as an outcome of the continuing changes in the governance of rural areas. The increasing complexity of both governance structures and boundaries requires collaboration between a wide range of actors; along with the new modes of policy the boundaries between public and private sectors become blurred and dissolved. Governance can be regarded as a manifold phenomenon, which comprises a complex set of power relations and differing aims from the promotion of regional competitiveness to the improvement of democracy. Territorial governance not only forms an alternative to sector based policymaking, but also advances endogenous development by building local capacity of people to adapt to external changes.

Within the EU, rural development is generally performed as a multilevel process between various actors in all regional and administrative levels. Depending on circumstances in different environments, the endogenous processes are on the one hand attached to localities, and on the other hand steered from higher administration levels. This recognition that development is rarely truly 'bottom-up' has led many to suggest a focus on "neo-endogenous rural development", emphasising not only horizontal relations between the local actors but also vertical relations through which the 'top-down' meets the 'bottom-up' – i.e. how multi-level governance might support and empower local mobilisation of rural communities. There are two dimensions to multilevel governance. First, vertical governance deals with the collaboration, coordination and decision-making processes between local, sub-regional, regional, national and international actors. This requires a mixture of top-down and bottom-up approaches in order to address local level needs and demands. Second, horizontal governance deals with intersecting sectoral approaches and also with different types of actors. Horizontal governance is linked to the openness and the direction of the dialogue among institutions, administrative cultures and routines and the variety of actors. Both dimensions imply that an appropriate conceptualisation of territorial cooperation is unlikely to be found through the lens of rural-urban relationships *per se*.

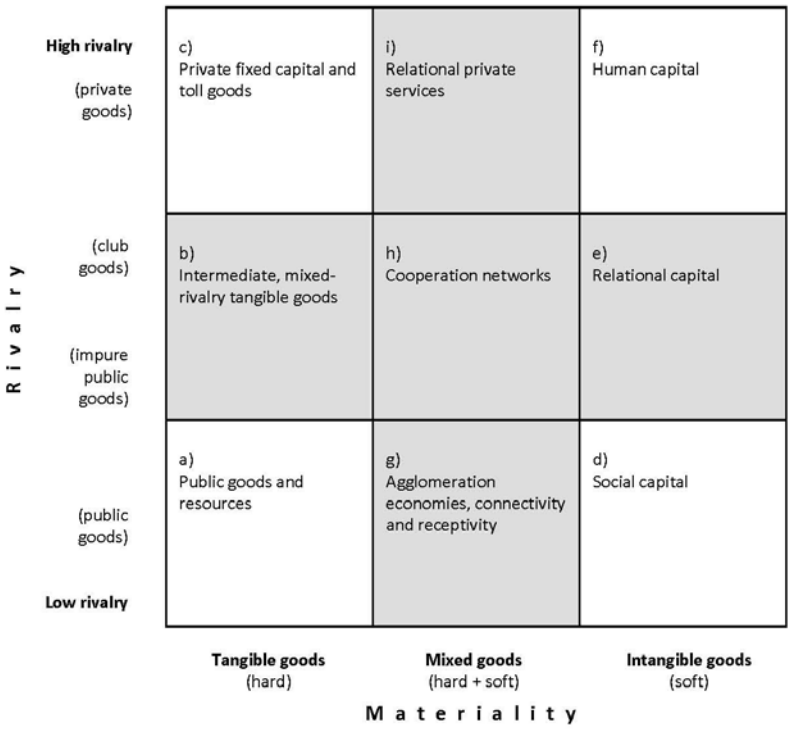
A crucial question in rural development is how its implementation may foster and maintain diversified interrelations. Healey (2004) points out that spatial planning seeks both to promote collaborative action and mobilisation of local actors and also to articulate this with legitimate external influences. To further explore this we turn to the paradigm of territorial capital and examine whether Camagni's work holds the key to unlocking a meaningful categorisation of territorial cooperation.

2.2. Lessons from territorial capital

Camagni's (2008) discussions on territorial capital, in particular his 'innovative cross', is potentially useful in this respect. This concept classifies all potential sources of territorial capital in a three-by-three matrix, building upon the two dimensions of rivalry and materiality (Figure 1). The most interesting aspect is that it seeks to intregrate hard and soft elements and puts the capacity "to convert potential relationality into effective relationality and linkages among economic agents" into the centre of the regional policy schemes, labelling the

intermediate classes of the matrix the 'innovative cross' (Camagni 2008, 37). This provides a detailed reference for addressing the inter-relatedness of places, as characterized by the EDORA project's overarching theme of "connexity". The elements amenable for territorial cooperation are core to this structure and are to be found in the bottom right hand quadrant of the matrix, encompassing in particular cooperation networks, relational capital and social capital. Camagni's description of these three elements is given below.

Figure 1:The innovative cross of territorial capital



Source: Camagni 2008

Cooperation networks: Encompassing strategic alliances in R&D and knowledge; public-private partnerships in services and schemes; and governance of land and cultural resources. This category of territorial capital lies at the centre of Camagni's 'innovative cross', integrating tangible and intangible assets and concerning public/private and private/private cooperation networks. This form of territorial capital is very much about the knowledge economy, where the diffusion of knowledge in the private sector is facilitated by public support. Camagni's focus with regard to cooperation networks is also largely urban, although it is recognised that this form of territorial capital also manifests itself in new forms of governance in spatial planning and landuse, a field characterised by both market and policy failures.

Social capital: Encompassing institutions; behavioural models, values; trust, reputation, and associationism. Social capital can be defined as the set of norms and values which governs interactions between people, the institutions into which they are incorporated, the relational networks established among various social actors, and the overall cohesion of society. While it should be possible for social capital to be accumulated through investment in time and effort by individuals and organisations, it is also created and accumulated through slow historical processes, and can therefore be seen as a bi-product of the existing fabric of social relationships.

Camagni distinguishes between two dimensions of social capital within which cooperation is identified: the dichotomy between elements involving single individuals (micro) from those of the system (macro), and that between observable elements such as networks, norms and social structures (formal) and abstract elements such as values, attitudes and codes of behaviour (informal). Within this structure, cooperation (encompassing covenants, strategic

alliances and contracts) is seen as the conduit of micro and informal dimensions of social capital, and to be facilitated by trust, reputation and participation.

Relational capital: Encompassing cooperation capability; collective actions capability; and collective competencies. While social capital arguably exists wherever a society exists, Camagni interprets relational capital as being the set of bilateral/multilateral linkages that local actors have developed, both inside and outside the local territory and facilitated in so doing by an atmosphere of easy interaction, trust, shared behavioural models and values. Thus, relational capital is equated to the concept of local milieu; a set of proximity relations which integrate systems of actors and which generates a localised dynamic process of collective learning (Camagni, 1991). Geographic proximity is associated with socio-cultural proximity – the presence of shared models of behaviour, mutual trust, common language & representations and common moral and cognitive codes.

The above begins to piece together a framework around which a rational categorisation of territorial cooperation can be formulated; it also moves beyond the three forms of capital by describing the processes by which they are implemented. There are nevertheless some important caveats, most notably that Camagni's innovative cross is centred around economic development. As such, cultural and political assets do not feature as strongly in the framework. The shortcomings of this with respect to territorial cooperation is that, due to the necessarily holistic nature of rural development, one needs to distinguish between networks *of* development and *for* development, and take into account the inevitable role of cultural factors in shaping such networks. In simple terms, some forms of cooperation will arise as a bi-products of development initiatives or even development situations where a critical mass of assets or capitals have begun to foster informal networks, collaboration or knowledge exchange, before any formal recognition of positive development has occurred. In turn, all forms of cooperation will inevitably be influenced by a locality's context; the place-making, identity and cultural heritage which shape the way that the economy and society functions. To a degree the strength of this cultural influence may be related to the proximity to urban centres, or the extent to which in and out-migration have impacted on a place, but essentially it is a contextual factor that all attempts at generic and transferable policies must recognise.

Thus, while Camagni's innovative cross enables us to consider carefully where the processes of territorial cooperation fit within the development framework, and how the attributes of territorial cooperation may be deconstructed to assist in this understanding, Camagni's categories prove too narrowly focussed on economic factors for use within a holistic development context Another reason why Camagni's model is limited in its applicability to rural development is its failure to take sufficient account of power and politics as an asset, and how the conceptualisation of territorial cooperation as territorial capital reinforces the widespread assumption that cooperation necessarily is beneficial.

2.3. Taking account of power and politics

Carnegie's asset based approach to community development deals with a more holistic approach to development and is therefore worth consideration in this context. Like Camagni's innovative cross, Carnegie's Community Capitals Framework (CCF) also distinguishes between 'human or intangible' and 'material or tangible' factors (Carnegie Commission, 2007). The seven capitals[1] include two that are of particular interest to this discussion: social capital which is defined as making up the interactions among groups and individuals such as networks, norms and trust that facilitate cooperation for mutual support; and political capital which as well as providing a community's ability to influence the use and distribution of resources, provides the scope to change power structures, the ability to inspire policy and the collective organisation that can hold political representatives to account.

[1] Social, political, cultural, human, natural, financial and built capital.

In practice viewing political capital as an asset itself requires a degree of caution as any social (and relational) capital or cooperation that is developed through political capital can itself be divisive and result in power struggles, inequality and social exclusions. This is particularly apposite in discussing territorial cooperation between rural and urban areas, with the latter more likely to dominate and be better represented in regional government. Further, the state can be considered an asset in its own right, which again is pertinent to discussions of territorial cooperation. Crucially, the state can play an important role in changing the emphasis from endogenous development, which is focused solely on territorial capital/assets, to neo-endogenous development by having strong extra-local linkages, and access to many necessary resources - again important to understanding territorial cooperation. Thus, while Carnegie's CCF provides an interesting perspective and gives expression to a more holistic view of community development, it too fails to provide an all encompassing framework for categorising territorial cooperation in a rural development context.

It is more practical in this case to consider forms of territorial cooperation that bear stronger relevance to rural development and which help bridge the social, economic, cultural and political factors that are bound up with it. In order to move towards a more developed conceptualisation of territorial capital that might have application in a European rural development context, the next section provides details of three empirical studies of territorial cooperation in a rural setting.

The first of these uses an inductive approach to analyse the material compiled in the EDORA Exemplar Regions reports. This involved reviewing the reports (See WPs 11-22) for discourses of territorial cooperation, even though in the majority of cases territorial cooperation as a topic was not explicitly discussed. These examples were then sorted according to the characteristics of the types of cooperation observed and subsequently refined through an iterative process as a more detailed qualitative analysis of the Exemplar Region reports was undertaken.

The resulting categorisations from this inductive process were labelled: Cooperative ventures, Functional cooperation and Socio-economic connections. In all three cases, the framework captures elements of rural-rural, rural-urban and rural-global cooperation, although as the following descriptive accounts reveal, this is not always a straightforward distinction to make.

Sections 3.2 and 3.3 report on business networks and food networks respectively. These take the form of a selective review of relevant academic and policy literature.

3. EMPIRICAL EVIDENCE / ANALYSES

3.1. Examples of territorial cooperation drawn from the Exemplar Regions

The inductive approach to, first, categorizing, and second, critiquing the various forms of territorial cooperation within these categories, revealed the Exemplar Region reports to be a valuable source of material in relation to the potential of NUTS 3 rural regions to harness and utilize territorial cooperation in a rural development context. Nevertheless, this is a complex and relatively unexplored field of research, in which terminology, means for systematic analysis, and interpretation, are still emerging.

The work described here is therefore exploratory in nature and is designed to serve as a contribution to the policy debate in the context of the EDORA project. It examines the range of ways in which cooperation was reportedly aiding, hindering, or just being part of the development trajectory of the Exemplar Regions in order to gain an understanding of the potential for territorial cooperation across rural Europe.

This section is organised according to the categories of cooperation that were revealed through the inductive exercise. Implicit within this categorisation is the range of scales at which cooperation takes place – from the household/family level to world-wide - how linkages can be formal or informal, one-way or two-way, and how a range of actors make the connections (people, organisations, goods, places). Also implicit are challenges to the assumption that territorial cooperation is always beneficial.

Cooperative ventures

This category covers situations where individuals, or people representing organisations, come together for a common purpose. This terminology is suggestive of inclusivity and voluntarism at the local, (NUTS3) level, and there were many examples that bore this out, but there were also a number where this was not the case.

Cooperative ventures with a rural focus (Rural-Rural)

Some of the examples of cooperative ventures had a rural focus. The territorial scale was small: some were very local, some covered a rural NUTS3 region, or reached over the NUTS3 borders to include neighbouring rural areas. Some appeared to have a more a distinct, identifiable, organisational form than others.

In Sweden, there are some 4,500 community-led local action groups engaged in rural development. They are federated across the country as the Village Action Movement; a similar network of local community organisations is apparent in Finland. In Chemsko-Zamojski (Poland), a number of farming unions and associations have sprung up, and eight agri-tourism associations have been formed which cover a significant part of the region. New producer groups have also formed. Two large cooperatives in Ostrolecko-Siedlecki (Poland) dominate the dairy market with farmers as the shareholders/members. On Skye (UK), there are examples of tenant farmers co-operating to buy out the private landowner and setting themselves up as community organisations that own, manage and work the land. It is also usual for the small-holding 'crofters' on Skye to jointly manage their common grazings. In Ostrolecko-Siedlecki the inhabitants of Kurpie have formed a number of local and regional associations, in order to promote their local culture and traditions; similar associations have developed in Osrednjeslovenska (Slovenia). Jonkoping region (Sweden) is known for the 'Spirit of Gnosjo': an ethos of cooperation between business owner-managers, and between employers and employees that leads to profitable private businesses. At a very local scale, the North Yorkshire (UK) report stresses how the farms are still generally owned by families or family partnerships who have passed it from generation to generation.

The examples so far have had a strong air of communitarianism – of local people voluntarily co-operating for their mutual betterment. It would be disingenuous to suppose that the state had no involvement in any of these cases, but there are a further set of cases where rural cooperative ventures clearly include state involvement, sometimes as partners of the 'local' cooperation and sometimes as more directional actors. In particular, it is now commonplace for hybrid organisations that involve local people, state organisations and perhaps businesses to work in partnership at the local/regional level to promote rural development. An example is how several municipalities in the Zasavska region (Slovenia) joined with others in an adjacent region to form the 'Paths of Heritage' project, involving local people, representatives of local institutions and professionals. Another is how the Neumarkt county (Germany) director brought together as the REGINA project "municipalities, civil society organisations and the local business community to jointly discuss visions of the future of Neumarkt county and then implement projects accordingly".

Many of the Exemplar Region reports referred to the LEADER programme and the activities of the local action groups at the scale of the NUTS3 region or lower. These are a specific

form of hybrid organisation at the local/regional level: they must adhere to EU organisational parameters in order to receive EU funding for locally agreed activities that fall within parameters set by Brussels. Some reports stressed the benefits of the LEADER approach. For example: "During the last two decades public programs have promoted entrepreneurship, social capital, networks, strategic planning and local development in new and effective ways (LEADER, PRODER, etc)" (Teruel region, Spain); and that in Neumarkt it has been successful in encouraging participation in local decision-making. Some also draw attention to short-comings. In Mansfeld-Sudharz (Germany) the partnership for LEADER II was said to be characterised by cooperation within the public sector, and had to be widened in later LEADER programmes. Research subjects in North Yorkshire reported that 'participative planning' and hybrid partnerships (including LEADER) were in evidence but questioned the extent to which the community voice is heard in such forums.

Some report authors commented on the wider benefits of local decision-making, such as in restoring and reaffirming self-esteem and cultural worth (Skye) and how it fostered technological innovation (Neumarkt). However, it should not be deduced from the discussion so far that people and organisations within rural localities and regions are always cooperative. The Neumarkt report stressed the many conflicts between groups over such activities as preserving or transforming its traditional culture. The Skye report referred to incomers as a source of both hope and suspicion.

Cooperating with more urban areas (Rural-urban)

This discussion of rural-urban cooperation draws attention to the different settlement patterns in the 12 rural regions. One (Osrednjeslovenska) includes the capital city within its territory; some refer to significant urban areas being included (e.g., Chemsko-Zamojski); others are characterised by a network of towns (e.g., the 28 market towns in North Yorkshire). Some have a very weak urban presence within the region: Teruel is said to lack a "true urban network able to structure and functionally organise the territory" and Ostrolecko-Siedlecki to display "very low internal cohesion. Delimitation of its boundaries appears to be highly incidental and performed solely for statistical purposes". In the Exemplar Region reports, 'cooperation' with urban areas emphasises the situations where the rural regional boundaries have been crossed rather than situations within a region where more passive rural/urban connections exist.

Much of the urban-rural cooperation discussed in the Exemplar Regions reports had a public sector emphasis, such as in Jonkoping, where "administrative connections and municipal amalgamations have reinforced direct formal connections between rural and urban areas", in Osrednjeslovenska's programme of Coexistence between Town and Countryside which "aims to create new opportunities for economic development and new employment prospects at the fringe of the town, to enrich the town and its supplies and to link the town with the neighbouring areas in the region", and in Neumarkt where "integrating the county more firmly into the Nuremberg metropolitan area has been another cornerstone of the current county director". In the last case the recognition of increasing rural-urban interdependencies led to a joint 'marketing' venture. In the Jonkoping, Osrednjeslovenska and Neumarkt reports such collaborations are seen in a positive light; the North Yorkshire report, however, stresses the powerlessness of the rural areas in such governance structures where rural resourcing is "determined by a distant, urban-dominated decision making forum".

Functional networks

The Exemplar Region reports are full of references to flows, in particular of goods and people, but also of less tangible entities such as ideas and investments. Particularly prominent are the flows in and out of the regions. Some regions are predominantly primary producers or involved in manufacturing and their reports tend to discuss the shipment of goods in and out of the region. Some of the narratives are of long term global trade (e.g., La

Rioja, Spain); in some, national or interregional flows dominate (e.g., South Savo, Finland); in contrast, in Chemsko-Zamojski agriculture is still the main employer, but the semi-subsistence nature of much of this activity limits the extent of flow of these goods.

People flow in and out of all the regions. A common narrative is of how young people are leaving the rural areas, either for work or for education (e.g., South Savo, Zasavska). Sometimes this involves a move up the settlement hierarchy to major cities in the home country, but for some regions, such as Chemsko-Zamojski, migrating to other countries for better incomes is now common. Sometimes the outflow of population is dramatic: Mansfeld-Sudharz, for example has had an annual outflow of between 8% and 11% for 2000 – 2009. Some rural regions now also experience enough counterurbanisation flows of population to mean that their overall population trends are on an upward trajectory. Osrednjeslovenska and North Yorkshire are both examples of rural regions in this situation. Frequently, however, the outflows are of young people, and the inflows are of older age groups. At present, this is not the case in Teruel which is experiencing an in-migration of relatively young people from Latin America, Africa and Eastern Europe. However, this report goes on to discuss the transient nature of such in-migrants and how once they have accumulated enough income they may well move out of the rural region. This raises an interesting question about young people more generally: when they leave rural regions for educational or employment betterment is this a permanent or temporary move? Conversely, one could also consider whether older migrants to rural areas give rise to greater territorial cooperation.

Some people flow in and out of the rural region on a daily basis for work. Commuting to cities and more urban areas is the most common direction of flow reported in a number of regional reports (e.g., Zasavska, La Rioja, Osrednjeslovenska). However, there are some reports of noteworthy counter-flows into rural towns (e.g. North Yorkshire) or to large service centres located out of town (e.g., Osrednjeslovenska). In most cases these patterns of daily activity are reported as if driven by the employment market, but the Jonkoping report implies a more explicitly planned approach: the county administration sees facilitating “living in one place and working or shopping in another … as crucial for the future development” and intends to build a vital regional centre, using the surround rural hinterlands as attractive residential areas.

The development of cultural and place-based tourism is regularly outlined in the regional reports. In some regions this is about attracting city dwellers from proximate regions for rural ‘getaways’. For city dwellers, Neumarkt’s rural attractions can be accessed within an hours’ travel, and much of the tourism development is based around very short trips – sometimes just an evening with dinner away from the city – and weekend breaks. Teruel has recently developed its outdoor tourism potential and attracts many Spanish city dwellers for its mountain activities.

The remote region of South Savo tends to cater for longer holidays: it has 40,000 summer cottages used as second homes by many owners. In this region there is often a doubling of population in the summer months. Some regions are developing a specific form of cultural tourism which might attract tourists from all over the world: for example, Mansfeld-Sudharz promotes its association with Luther. Some are able to draw in tourists from around the world on the basis of links to the ‘old country’. The ‘highland clearances’ in Skye’s history saw forced emigration for many of its workers, and it is able to draw on this bond, together with the natural beauty of the island to attract tourists.

Ideas and knowledge also flow between regions and flows from outside the rural area are presented in some reports as important to development. The Mansfeld-Sudharz report stressed the support they were given by external organisations such as national economic advisers and federal and state policy-makers to help them reverse their depletion. Universities also have a role to play: in Neumarkt two University outposts reinforce the institutional ties to Nuremberg and Erding where their main campuses are located. In

Osrednjeslovenska, the University of Ljubljana is within the rural region and linked into the regional plan: an incubator has been set up which offers assistance in the form of knowledge and skills to new enterprises, and links them with a broader domestic and international environment. Some regions also stress the importance of flows of knowledge and ideas from the rural region to urban regions or to other rural regions. In Osrednjeslovenska, traditional rural practices, products and services are demonstrated to urban dwellers in annual city events. The Neumarkt region is seen as a source of ideas and knowledge: it has won numerous awards for its development programmes and in 2009 was chosen as a national model region for promoting and testing climate change adaptation strategies.

All the Exemplar Regions reports discuss factors which enabled or constrained the flows of goods and people in, out and around their regions. These fell into two categories: geographic features and infrastructure development. Many discussed the position of their region in relation to major cities as distances, but relatively short distances did not always equate to ease of flows. For Chemsko-Zamojski the Ukraine was close, but the Schengen area border constrained the flow of goods and services; in Ostrolecko-Siedlecki internal rail connections were poor, making it far easier to travel to Warsaw (outside the region) than between the two cities (Ostrolecko and Siedlecki) within the region. In recognition of such constraining factors, some regional reports stressed travel times rather than just distances.

Some reports emphasised their rail networks. Some of the routes had long histories – for example, since the C19th La Rioja region had exported wine to France via a line that linked Logrono with the port of Bilbao, and Neumarkt region had used canals and railway lines to transport its goods to the Danube and the Main rivers. In the case of Neumarkt, a new Danube-Main canal was completed in 1992 which connects the city of Neumarkt to national and international freight centres, and allows tourist excursion boats into the region. In 2006 a new high speed rail line was opened between Nuremburg and Munich; although there are no stations within Neumarkt region, a dedicated connecting train conveys people to and from this main line, which has significantly reduced commuting times to major cities, and allows city-dwellers to visit the region for evenings as well as for overnight breaks.

Roads in some regions were reported to be in bad condition, leaving them poorly connected (e.g., Zasavska, Skye). In South Savo the roads could not be maintained because of the partial abandonment of some sparsely populated areas. There were many regions where the proximity of an existing, or new, major road or motorway enabled flows of goods or services (e.g., Teruel, Neumarkt, Mansfeld-Sudharz), and others where an improved road infrastructure was thought to be important for the development of the rural region (e.g., Jonkoping, Zasavska). In some cases, infrastructures specific to their geographies have made/will make a significant difference to the flows: a bridge to the mainland (Skye) and the construction of new and modernised border crossings (Chemsko-Zamojski). The constraints on the flow of less tangible goods via telecommunications are stressed in some reports: for example, in Skye mobile phone coverage is said to be ‘uneven at best’ and broadband access limited.

A joint planning approach to the development of significant new transport and telecommunications infrastructures which crosses regional boundaries is clearly needed. The account in the Neumarkt report of ensuring that the new high speed rail link connects with the region via a local link line stresses the importance of such cross-region planning. The La Rioja and Osrednjeslovenska reports emphasise the wider planning implications of the flows created by commuting and counter-urbanisation: that development in rural areas needs to be regulated if their attraction as residential areas is to be conserved.

Socio-economic connections

Some of the examples of connexity given in the regional reports are less dynamic than the descriptions above of cooperative ventures and flows. There are descriptions of regions as

historic ‘transit zones’ and ‘crossroads’ which influence current developments, such as La Rioja where people (and goods) not only passed through, but settled and brought a wide range of geographic/cultural influences, and Chemsko-Zamojski which had a long history as a place where “different cultures, religions and traditions” coincided. In some cases the links with the past leaves regions with degraded environments: Zasavska and Mansfeld-Sudharz are examples of this.

A number of Exemplar Region reports discuss the role of small towns and urban areas within the rural region as hubs of activity. These are hubs for employment, but also places where services are located (e.g., Chemsko-Zamojski, Jonkoping, Osrednjeslovenska). The Jonkoping and Osrednjeslovenska reports discuss this as a planned development: in Jonkoping where a regional centre is being built which will provide such a hub, but with the rural hinterland providing an attractive rural area; and in Osrednjeslovenska where polycentric regional development encouraged urban-rural relations. Some examples of general linkages and interdependencies are very local, such as the importance of civic organisations (e.g., Chemsko-Zamojski, Jonkoping) and a ‘strong sense of community’ (e.g., North Yorkshire, Skye). The Ostrolecko-Siedlecki report describes the broad network of socio-economic connections within the region: how there is a renewed interest in locality and in taking advantage of traditions and local culture; this in turn makes it an attractive area for ‘cultural’ tourists, which leads to more cultural and art activity and the development of small craft businesses, catering and agro-tourism.

Other forms of connection: Governmental restructuring and external impacts

Some of the reports discuss the recent restructuring of government and the effects of this on rural development in their region. For some, the formal drawing of boundaries has caused problems: in Chemsko-Zamojski the border with the Ukraine has become less porous since Poland entered the Schengen area, and the boundaries of Ostrolecko-Siedlecki are said to be ‘highly incidental’ with the region having very low internal cohesion. In South Savo the process of regionalisation has reduced the powers of the (smaller) municipalities; in more urban areas some of these are amalgamating, and the authors claim that “there is a clear necessity to proceed with amalgamations … in rural areas”.

Another restructuring process currently underway that is affecting rural development in some of the Exemplar Regions is the formalisation of ‘city-regions’ (North Yorkshire) and ‘functional regions’ (Jonkoping). These are restructurings that bring together proximate urban and rural regions in recognition of the interdependencies between urban and rural regions. In both North Yorkshire and Jonkoping this restructuring has been accompanied by ‘rural’ policies being subsumed into all the policies of the higher level regional tier through a process of ‘mainstreaming’. In the Jonkoping report the benefits of strengthening the linkages are stressed; by contrast the North Yorkshire report describes “a fear from some that city-regions will amalgamate with the more affluent accessible parts of North Yorkshire, leaving a residue of remote and impoverished rural parts without effective formal links into the wider region”.

The report on Skye is the most vocal about the complexity of government and governance structures, describing how “development projects on Skye and Lochalsh are difficult to fully catalogue as they are sponsored by a bewildering array of organisations” and how, although the public sector has been important to the development of Skye, “of concern is the fractured nature of these efforts”.

Some of the interconnectedness experienced in the regions was perceived as an external force that impacted upon the region. This could have a positive, negative or neutral effect. The UNESCO World Heritage Site designations for Martin Luther’s birthplace and burial site were highly beneficial to Mansfeld-Sudharz’s burgeoning tourism industry, as was the external advice and support on regeneration provided to the region by the federal Trust organisation. The North Yorkshire case study describes how little discretion the NUTS3

region has over its development, with much influence emanating from WTO, EU, national and regional (NUTS1) governance tiers.

Funding programmes from the EU, such as LEADER, were described in a positive light. There were a number of statements emphasising the positive impact of EU accession. In Ostrolecko-Siedlecki the dairy industry had increased dramatically since EU accession enhanced the selling price, and in Chemsko-Zamojski region foreign investment had intensified since Poland's accession to the EU. La Rioja region noted a significant increase in the production and sale of wine in foreign and new markets following accession and successive GATT rounds. The North Yorkshire region report expressed concern about the impact on the remoter areas if CAP support to farmers were to be reduced from 2013 as their spend was very important to the local economy. However, as outlined above, not all aspects of EU membership were so positive, with some regional restructuring and boundary issues concerned with EU accession causing difficulties.

Some reports discussed their vulnerability to globally derived external impacts, such as the financial crisis (Chemsko-Zamojski) and the oil crisis (North Yorkshire). Some expressed concerns about (negative) impacts from relationships with adjacent urban areas: in North Yorkshire this was about being marginalised in the decision-making processes; there were concerns about the effects of unchecked surburbanisation processes on the rural areas (Osrednjeslovenska, La Rioja); and problems were raised about counter-urbanisation in terms of the affordability of housing (North Yorkshire, Skye).

In summary, there are two observations about the nature of the relationships described in section 3.1, and the extent to which they fit with the conceptual constructs presented earlier. First, the difficulties of engaging in co-operative action given the unequal division of power between rural (positioned as powerless) and urban (powerful) areas is prominent in the analysis, although a degree of caution is required about accepting this characterisation. Contextual factors will always play their role. Second, the vast majority of cooperation evident in the Exemplar Regions appears to be local (i.e. within the region). While this is not surprising, it does raise questions regarding the conceptual validity of territorial cooperation to regions, particularly those that are not located along international boarders. Further reflections on the analysis are provided in section 3.4.

3.2. Business networks as territorial cooperation

This section considers some further networks with relevance to rural development that could usefully be viewed in the context of territorial cooperation. There are a number of thematic networks documented in the literature which commonly operate around the delivery or production of a wide variety of public and private goods, including for example those relating to water, environment, climate change, leisure, agricultural produce and forestry[2]. Here we consider one of the most prolific thematic networks that is often discussed in a rural development context: business (knowledge economy) networks.

Since the end of the 20th century we have witnessed the emergence of an increasingly uneven geography of innovation and production at firm level, both within and between nations. As this geography of firm innovative activity continues to evolve, there are strong tendencies for winners to keep winning, and losers to keep losing, exacerbating already established disparities in local economic opportunity (Gertler, 2005). Asheim and Isaksen (2003) point to the role of historical trajectories in the innovation process and underline that learning processes concerning all economic actors of a locality are now highly localized and, by no means, placeless. Weak learning capacities, and a 'lock-in' to local strong ties with low

[2] As an example, a climate change network might bring together expertise, experience and perspectives from researchers, policy makers and other stakeholders in the area of climate change. Such a network may, for example, provide a forum for research on climate change issues and act as a means for furthering dialogue between countries as they undertake efforts to address climate change.

innovation production systems may lead firms to innovation inertia. This threat has been recognized and pointed out by several researchers as arising from various theoretical backgrounds including an entrepreneurial lock-in (Staber, 2005), structural embedding (Nooteboom, 2006), institutional 'thinness' (Isaksen, 2003) and others. While it is still unclear why the region should be so central in improving innovativeness and productivity growth (Gertler, 2003, p. 132), mainstream economists view innovation as a major factor of local and regional economic development and growth (Howells, 2005). Economists argue that the incentive to innovate determines the rate of technological progress which in turn determines the economy's long-run growth rate (Romer, 1990; Grossman and Helpman, 1991; Howitt and Aghion, 2005).

Business networks touch upon all three elements of Camagni's core structure of territorial capital discussed in section 2.2 namely cooperation networks, relational capital and social capital. Business networks are the most important economic element of territorial cooperation because they connect local economic actors to each other and also link the local with the non-local. In a rural-rural and a rural-urban framework business networks are important factors bonding local actors and bridging rural localities to other rural or urban localities. Malecki and Poehling (1999) provide strong evidence that market links to customers, suppliers and other firms are the most versatile sources of information and find that entrepreneurs who have always lived in the locality consulted at least one of the other entrepreneurs on more than one occasion while being suspicious of outsiders. The implication is that territorial cooperation – in so far as it can be termed territorial rather than enterprise cooperation – will reflect the structure of business supply chains. This level of bonding embeddedness may be a barrier to information acquisition (Malecki and Poehling, 1999), it may create functional and cognitive lock-ins (Hassink, 2005) or it may have an inverted U-shape on innovative performance (Uzzi's 1997 model portrayed by Boschma, 2005).

Business growth and innovation is highly dependent on learning and knowledge exchange between regionally based agents and resources in contemporary knowledge-based economies. Learning is now considered a social process producing optimum results in a situation of spatial proximity with frequent interaction between agents (Rutten and Boekema, 2007, p.4). Knowledge and information is exchanged more efficiently in richer and thicker networks that produce, utilize and distribute tacit knowledge. Thus, there is a set of features that links business growth and innovation to a specific locality or geographic area and supports them through enhanced learning capacities. Differences in regional business growth may be sought in factors related to all three core territorial elements. One of these important factors is related to a firm's interaction with its local and non-local knowledge environments. While the interaction itself is the direct subject matter of cooperation networks which lies at the heart of Camagni's 'innovative cross', its quality is highly dependent upon relational and social capital. The smooth and efficient operation of business networks depends on factors that respectively bridge/bond entrepreneurs and their firms with the non-local/local environment.

These factors are closely related to social capital which includes behavioural models, values, trust, reputation, associationism and reciprocity, as well as relational capital in the form of collective action or collective competencies. An important bonding factor is the content of a firm's or region's historical baggage or what might be called production culture or embeddedness. Lagendijk and Oinas (2005) underline the need to understand the role of the non-local to the development of social capital. The non-local is a domain where local firms may tap into different technical and institutional resources for economic interaction and local economic growth and development. Innovation systems at the regional level require a degree of openness between the knowledge exploration and the knowledge exploitation sub-systems. Quite often, the whole or parts of the knowledge exploration and exploitation systems do not co-locate and the local-sticky resources need to stay linked in by tapping into the non-local. As a result, there is a second set of features linking business growth and

innovation to the non-local. Thus, contrary to the consensus that regional learning economies facilitate innovation and growth it is argued that the absence of bridging factors leads to lock-ins and holds back growth by combining innovation and the knowledge economy.

Business growth in a knowledge economy framework is affected by the entrepreneurs' ability to become a node of the area's social and institutional networks. Social capital is an important factor of regional development (Callois and Aubert, 2007; Iyer *et al*., 2005) and of innovation (Hauser *et al*., 2007; Tura and Harmaakorpi, 2005). Social capital is defined as the non-formalized networks that are created, maintained and used by the networks' nodes/actors in order to distribute norms, values, preferences and other social attributes and characteristics, but which also emerge as a result of actors sharing some of these attributes (Westlund, 2006, p. 8; Westlund and Bolton, 2003). Callois and Aubert (2007) summarize the ways in which social capital affects regional performance and, by extending the same arguments, innovative activity and business performance. Social capital facilitates transmission of information (about new technology, potential demand, matching partners, etc.), decreases transaction costs by the prevailing trust and loyalty and facilitates collective action. On the other hand, high levels of social capital may discourage economic agents from seeking new opportunities, drive individuals to have low incentives and presents a considerable range of exclusion effects. Burt's (2001) sociometric analysis has pointed out that strong local ties may be effective in a static world but may work in the opposite direction in a dynamic environment.

Putnam (2000) introduced the distinction between bonding social capital, involving strong ties, and bridging social capital involving loose ties spanning over different social worlds. Bridging capital is important as it includes, among others, the territorially external links of a firm. Bathelt et al. (2004) make a distinction between the learning processes taking place among actors embedded in a community by just being there and the knowledge attained by building channels of communication to selected providers located outside the local milieu. They go on to argue that the co-existence of high levels of locally embedded knowledge and many bridging pipelines provide firms with access to outward looking clusters with a string of particular advantages not available to others. Moreover, bonding or bridging factors may address different needs of the interactive non-linear knowledge processes (Kline and Rosenberg, 1986). Bonding factors may connect firms to tacit knowledge essential for the development design stages while bridging factors may provide the indispensable feedback, paths and loops that connect back directly from perceived market needs and users to potentials for improvement of product and service performance in the next round of design.

The major bridging factors may be found in activities or situations connecting the entrepreneurs and their firms with the non-local environment creating channels for the flow of information and knowledge. The entrepreneur's embeddedness with the local economic and social environment is an important feature influencing the creation of certain networks (Benneworth, 2004) which, in turn, may support innovative activity (Boschma, 2005) or lead to lock-ins (Hassink, 2005). In fact, accessing innovative customers or markets is ranked the highest most unmet need of European companies. Lund (2004) presents evidence from Danish firms showing that the overwhelming majority of firms developing new products have close contacts with customers and suppliers (80-90%) whereas only 25-33% have close links with consultants and institutions. One factor that has the potential to bridge/bond the firm with its nonlocal/local environment respectively is the trade networks developed with suppliers, customers/clients, financial and technical partners and employees.

Relatively recent research works have attempted to create a typology of firms based on their regional trade linkages with suppliers and customers or consumers (Romero and Santos, 2007; Skuras *et al*., 2005). Romero and Santos (2007) analyzed a sample of Spanish firms in the region of Andalusia. For firms in the manufacturing industries with strong forward linkages, they found that the 'extrovert' firms, i.e., those firms dependant on external sales markets and suppliers, were dominated by high tech SMEs, while the 'exporting' firms, i.e.,

those firms dependant on external sales markets and local suppliers, were dominated by micro high tech firms. Skuras *et al*. (2005) in a similar analysis of businesses located in four countries of Southern Europe found that the firms which maintained completely disembedded trade networks i.e., networks with external suppliers and markets, attained the highest business growth rates and had the highest accumulated human capital. Thus, it is expected that rural firms accessing trade networks that connect them with firms outside the local community in other rural locations or in urban locations will be more innovative due to higher information flows and more active due to a wider range of entrepreneurial opportunities.

Many rural regions with close proximity to urban areas have undergone an industrial restructuring involving either the closure of old manufacturing plants or a way out of primary industries. Industrial restructuring, or more generally, industry dynamics, is a major unobserved factor supporting or inhibiting business growth and innovative activity in a knowledge economy. Benneworth (2004) argues that firm dynamics, plant closure and entry, or "negative events and factors", have positive outcomes. In many rural areas, the closure of larger plants supported the creation of smaller, entrepreneurial and more innovative SMEs. However, it has also been argued that political lock-ins in old industrial areas may form a thick institutional tissue together with the firms and workers in a "self-sustaining coalition" (Grabher, 1993; Hassink and Shin, 2005) which opposes learning initiatives to restructure the regional economy (Hassink, 2005). In this case cooperation networks work in the opposite direction and growth is inhibited.

3.3. Food networks as territorial cooperation

The discourse of food networks, characterised by the growth in alternative food networks and their associated short food supply chains is usefully viewed in the context of territorial cooperation, whereby cooperative ventures by producers and processors contribute to endogenous development but also help shape wider socio-economic connections and functional networks within and between regions.

A focus on food networks is pertinent given the continuing crisis associated with the conventional agri-food system and the growing vibrancy of the new rural development/agri-food paradigm (See Van der Ploeg et al 2000). Food networks also grow more important in an energy-constrained world, the implications of which are discussed in WP 26 (Future Perspectives). While not explicitly discussed as a form of territorial cooperation in the literature, the nature and dynamics of food networks do have resonance with it in that they in effect take the form of cooperative ventures between food producers and other actors in the food chain. Further, the governance and management of food chains are closely akin to the types of socio-economic connection discussed above in section 3.1, and the physical distribution and purchase of food is itself a functional network around which stakeholders from rural and urban areas often come together.

The discourse around food networks hinges around the growth in local food networks which have been encouraged by the Rural Development Regulation (1257/99). Under this second pillar of the CAP, the aim has been to broaden rural policy away from a narrow focus on agriculture towards a more integrated and territorial approach (Lowe et al, 2002). Thus, food networks have for some time now been a central feature of attempts to move towards integrated policies with a territorial, as opposed to sectoral, view.

Sage (2003) notes that territorially based production systems may offer new opportunities for capturing and retaining economic value in rural areas and there is a growing appreciation of the socially embedded character of food networks. Social embeddedness, which coveys principles of connectivity, reciprocity and trust, also works to mediate self-interest -by developing a concern for the common good, and not just profit maximisation (Ilbery and Kneafsey, 1999). Indeed, in addition to economic objectives, social, cultural and environmental dimensions are also seen as important in moves to encourage economic

diversification, agri-environmental schemes and the local processing and marketing of agricultural products.

The emergence of alternative food networks and the short food supply chains with which they are commonly associated not only allow producers to short-circuit long, complex and industrial food supply chains (Marsden et al 2000) but also have potential for challenging conventional production, retail and consumption patterns, and embracing wider discourses of local environmental awareness and direct contact between producers and consumers (Holloway and Kneafsey, 2000). Thus, the discourse of food networks provides a broad foundation for considering wider issues of integrated rural development. In this context, Whatmore et al (2003) argue that alternative food networks redistribute value through the food chain, reconvene trust between producers and consumers and articulate new forms of political association and market governance.

A consequence of the modernisation and mechanisation of agro-food systems has been the lengthening and globalisation of food supply chains, which in turn has resulted in an increasing disconnection between farming and food and thus between farmers and consumers. In response there has in recent years been a turn towards more sustainable farming methods, the creation of local and shorter food supply chains and the formation of reflexive consumerism where the interest is in the quality and traceability of the food (Ilbery and Maye, 2005).

This agenda is of relevance to rural development in considerably broader terms. Local food supply chains assume a more sustainable option in themselves, as a means of: extending biodiversity from farm to plate; saving energy; reducing food miles; providing social care; improving civic responsibility; and retaining economic value in the local economy. (Ilbery and Maye, 2005).

In their assessment of whether locally and regionally-based food networks have the capacity to contribute to a more sustainable rural development, Marsden and Smith (2005) purport that value capture and the producer end of food supply chains has at least three potential dimensions. First, local producers and their networks attempt to capture more of the economic value of their products. Second, in order to activate this, innovations in the mechanisms for distributing value among producers and processors at the local level are required. This involves new types of entrepreneurial activity based upon distinct types of networks and activities. And third, these two types of value capture can lead to potentially new synergies forged between agricultural practices and various multi-functional activities including agri-tourism, engagement in off-farm income activities and environmental schemes and projects.

In turn, further multi-functional forms of value-capture can be generated, demanding new local network formation and new forms of ecological entrepreneurship, where actors are committed to preserving cultural, ecological and environmental integrity and yet find new pragmatic ways to create employment and other economic benefits in the local community. These ‘socio-technical niches’ can be seen as collective attempts to resist the dominance of globalisation and modernisation processes; thus Marsden and Smith advocate a set of inter-relationships between network building, the exploitation of production and marketing synergies based on local foods and the new spatial development of socio-technical niches.

Within this, local is seen as a form of social contingency where a sense of shared ownership and community resources and the responsibility for its viability and preservation can inspire trust and commitment, effectively lowering transactions costs and facilitating the process of economic interaction.

The food chain dimension has also become a key element enabling us to understand better new patterns of rural development (Marsden et al 2000) and potentially a significant building

block for future policies designed to influence these. As Renting et al (2003) explain, alternative food networks are newly emerging networks of producers, consumers and other actors that embody alternatives to the more standardised industrial mode of food supply. Short food supply chains have developed substantially throughout Europe and in some countries have become key elements of rural development.

Although shortening food supply chains can engender new market relationships which are built around new forms of association and institutional support, Ilbery et al (2004) outline some constraints to developing short food networks, particularly in lagging rural regions:

- The small number and size of alternative producers operating.
- Restrictive and constraining bureaucracy on forms of alternative production.
- Expanding activities on a small farm or cottage style business to continue adding value –as economies of scope – may prove too risky, financially or otherwise.
- Equally, the development of new technologies and tighter supermarket specifications could further increase production costs.
- Lagging regions often suffer from a shortfall of intermediaries (e.g. abattoirs, transporters, wholesalers) that are able and willing to conform to alternative forms of production. Producers still need to contact key external actors in order to create economies of synergy (particularly apt in the context of territorial cooperation).
- Physical infrastructure (roads, railways) may limit network developments in lagging locales.

New alliances need to be made between producers and outside experts from the state and other institutional departments (Marsden et al 2002), although this view needs to be qualified as there may not be one definitive answer or model in lagging regions. Indeed, it is useful to move from a discussion of local food networks to one of food networks in a regional, national and international context, and with it to the relevance of both spatially proximate and spatially extended networks.

Research by Ilbery and Maye (2006) on Dutch food labelling schemes indicates that partnerships with a range of actors in food supply and rural development systems are required to achieve success but that sets of rules embedded in institutions and structures need to be overcome. In turn, this requires schemes to focus more on network building, management and expansion than on technical and environmental aspects. Nevertheless they also argue that institutions remain an important part of network building and management, as demonstrated in the EU's PDO/PGI quality labelling scheme, that help direct farmers to produce public goods that the market wants. Thus, the emphasis needs to be more on the networks associated with production, distribution and consumption, rather than on the quality and characteristics of the food itself.

Importantly, food supply chains are not limited to a discussion of local food networks, but encompass the range identified by Marsden et al which includes three types of short food supply chains:

- *Face-to-face* (where consumers buy direct from the producer or processor)
- *Spatially proximate* (where food is retailed at local outlets within the region by people accorded an association with the product through expertise directly to consumers immediately aware of its local nature)
- *Spatially extended* (where products are sold to consumers outside the local area or region who may have little knowledge of that area. Here the key is to use product labelling and imagery to transfer information about the production process and the area to the consumer).

As such, forms of cooperation based around food networks naturally encompass rural-rural and rural-urban elements. This framework provides a useful basis not only for assessing the

potential success of food networks in driving development through the facilitation of social capital, but should also help facilitate application of the principles to wider rural development issues and non-food networks.

Sonnino and Marsden (2006) show that the key to operationalising alternative food networks to wider rural development lies in both recognising that such networks do not work in isolation from those of more conventional agriculture, and that they should be aligned with the broader processes and politics of regionalisation. This in turn raises the need to analyse the relationship between emerging regional governance frameworks and regional food innovations. According to Jarosz (2000), the process through which local food networks bring food producers, brokers, retailers and consumers together spatially and socially in specific regions through their relations and interactions with regional agri-food networks remains to be documented.

The 'battleground' between the conventional and alternative agri-food sectors is portrayed by Table 1.

Table 1: Rural space as competitive space and the 'battleground' between the conventional and alternative agri-food sectors.

Type of spatial relationships	DE-LOCALIZATION Conventional agri-food		RE-LOCALIZATION Alternative agri-food
Producer relations	Intensive production 'lock-in'; declining farm prices and bulk input suppliers to corporate processors/retailers	CHANGING COMPETITIVE SPATIAL BOUNDARIES	Emphasis on 'quality'; producers finding strategies to capture value-added; new producer associations; new socio-technical spatial niches developing.
Consumer relations	Absence of spatial reference of product; no encouragement to understand food origin; space-less products		Variable consumer knowledge of place, production, product, and the spatial conditions of production; from face-to-face to at-a-distance purchasing.
Processing and retailing	Traceable but privately regulated systems of processing and retailing; not transparent; standardized vs. other than spatialized products		Local/regional processing and retailing outlets; highly variable, traceable, and transparent; spatially referenced and designed qualities.
Institutional frameworks	Highly bureaucratized public and private regulation; hygienic model reinforcing standardization; national CAP support (Pillar I)		Regional development and local authority facilitation in new network and infrastructure building; local and regional CAP support (Pillar II).
Associational frameworks	Highly technocratic—at-a distance—relationships; commercial/aspatial relationships; lack of trust or local knowledge		Relational, trust-based, local, and regionally-grounded; network rather than linearbased; competitive but sometimes collaborative.

Source: Sonnino and Marsden (2006)

As Table 1 identifies, re-localisation can act variably to recapture local power and revalorise rural space, thereby becoming a potentially powerful process in new forms of rural development. According to Sonnino and Marsden, it follows that researchers now need to

move beyond focusing on specific cases of alternative food networks to study the regional, local, economic and spatial governance of particular places in which these evolve, mutate and compete. Considering food networks in the wider remit of territorial cooperation can be seen as a first step towards this.

Sonnino and Marsden identify three preconditions for the successful development of food networks across Europe:

i) to situate more effectively the alternative networks in the highly competitive, regulatory and spatial context associated with the conventional sector;
ii) to assess the variable ways in which, from both a public and private governance point of view, agri-food developments and innovations are becoming a significant part in the broader processes of the social, economic and political regionalisation affecting all European economies; and
iii) to give more weight to assessing the real rural development benefits (and potential dis-benefits) of agri-food developments, especially by paying more attention to the power relations among actors both within and among food networks and in the new types of spatialised governance and associationalism in which they operate.

Ilbery and Maye (2005) argue that it is imperative that the starting point of short food networks is the suppliers upstream of the food producers, thus as a form of territorial cooperation, food networks should naturally embrace a broader element of the rural economy, both locally and further afield. These authors also found that the key to success in food networks was the dynamism and personality of the entrepreneur, together with his/her own network of contacts, and highlight the competitive nature of the business environment and the need for supply chains to remain fluid and mobile. This implies enterprises continually dipping in and out of different supply chains, depending on environmental context, market forces and business development.

According to Ilbery and Maye (2005), the reconnection of food producers and consumers (the ultimate goal of food networks) will not happen through the development of speciality and niche market food products alone. Other aspects of the economy, notably the public procurement of local foods and cooperative/community food schemes offer much greater potential for the development of food supply systems that are more economically, socially and environmentally sustainable.

Indeed, research across six European countries (Van Der Ploeg et al 2000) estimates that up to 50% of farmers are, to varying degrees, following broader or deeper rural development strategies, with many combining these with continuing participation in conventional agricultural markets. According to Marsden and Smith (2005), new and highly uneven network developments in agri-food are diffusing and contributing to a more diverse rural landscape in Europe. Thus, there is a need to match understanding of new forms of network development and ecological entrepreneurship on the one hand with the wider social and political economy of rural and regional landscapes on the other.

Marsden and Smith suggest that more effort is now needed to understand the distinctive geographical and social components of trends in alternative food networks. Key actors in networks that develop well need to play a decisive role in enrolling and mobilising other actors into the network and in developing new interfaces between producers and consumers.

3.4. Reflections on territorial cooperation from the empirical analyses

Exemplar Regions analysis

Reflection on the discourse analysis of the material contained in the Exemplar Region reports throws up caveats to the exercise, and poses some further questions to inform the

debate beyond the EDORA project. Observations are again structured according to the three categories of territorial cooperation derived from the exercise.

Cooperative ventures

This would appear to provide the most apposite term for a narrow definition of territorial cooperation applied to the NUTS3 scale although it succeeds in providing a range of ways in which 'territorial cooperation' might be understood.

First, there is the issue that territories do not cooperate, it is the people or people representing organisations who do the cooperating. This leads to the need to examine the cooperation of people both within and between territories. With respect to cooperation within rural territories, a second issue is raised: is there a scale which is so small as to render the concept of 'territorial cooperation' meaningless? Should, for example, the family farm be excluded on the basis of scale? A third issue is the degree to which the cooperation needs to formalised: does it need an organisational status or should it include local level, organic cooperation?

Many of the examples contained in the Exemplar Regions reports comprise what might be conceived as formal cooperation in which the local state plays a significant organisational role. This in turn raises a fourth issue: does territorial cooperation imply local state involvement, and if so is this in the specific form of cross-sectoral governance? For example, LEADER groups were a commonly cited form of cross-sectoral local governance, but were, in fact, significantly influenced by an organisation external to the territory: the EU.

The material that referred to territorial cooperation between proximate urban and rural regions raises a further issue: boundaries and government at the NUTS3 scale. Some regions defined as 'rural' at the NUTS3 scale include significant cities and are governed in an integrated (rather than cooperative) urban-rural way while others need to actively 'cooperate' across local state boundaries. In addition, in some cases the NUTS3 boundaries are somewhat arbitrary and do not coincide with the scale at which decision-making about the 'region' is made. This issue is particularly important given the emphasis the Exemplar Region reports placed on the local state's role in urban-rural cooperations.

Functional cooperation

This form of cooperation describes flows in and out of the rural regions and can usefully add to our understanding of how territorial cooperation crosses boundaries. The regular flows often necessitated well-developed infrastructure. For example, extra-rural links to major roads, high-speed railways and waterways may in turn imply a high degree of territorial cooperation between rural regions and partners in adjacent regions, and as such would appear to warrant inclusion in the broader definition of territorial cooperation. The flows themselves would certainly suggest a potential for territorial cooperation: people, ideas and knowledge all appear to flow in and out of the rural regions with a fluency that challenges the notion of isolated rural regions insulated from external influence by distance. People in local state organisations may well work in the urban areas but live in the rural areas, helping to make crossborder cooperations more seamless. Even though there are some people left behind amidst all the movement, they too are likely to have more extensive horizons than in the past, given the impact of tourists in some areas and the links of many people to younger family members who have left the locality. It is also worth remembering that urbanisation and counter-urbanisation movements are potentially circular and that the process of rural population change and the implications for human/social capital and links to other (urban) regions needs to be considered in this light.

Socio-economic connections

This third element relates to less dynamic forms of cooperation. Some of these, like the discussion of functional networks above, are suggestive of a propensity to cooperate with other regions. Some, though, stress that urban/rural cooperation is not only with cities beyond the rural region; there exist interdependencies between territories within the rural region, and in particular between service and employment 'hubs' and their rural hinterland. This would seem to be an important, if often implicit, form of territorial cooperation. The question is also raised as to whether or not local government amalgamations and coalitions should be described as territorial cooperation. In a number of cases the external impacts are viewed as being one way; i.e. external forces that impact upon a rural region, which implies that, depending on the context, territorial cooperation is not always a two way or necessarily a positive relationship.

Thematic networks review

Examining thematic networks in terms of their application to territorial cooperation is a relatively new area and our attempt at this has thus far been based around a review of the primarily academic literature. However, some important messages arise from this review and allow us to begin to formulate some policy goals with regard to fostering business and food networks in European rural areas.

Business networks

Business networks are an essential part of territorial cooperation. Business networks bond together businesses and economic actors and bridge localities. Through this they convey materials, goods, services but most importantly, information and knowledge. For local economic actors, business networks are agglomeration forces producing dynamic Marshalian and Jacobian like economies in a territorial cooperation-competition context. Dynamic Marshalian externalities are caused by the existence of firms and institutions in the same industry, and the most vivid example of such economies in the rural space are found in the food sector. The LEADER programmes, especially in their initial phases (I and II) actively promoted the networking of local businesses around a common product. Many of these initial attempts were then developed to well known clusters. Business clusters increase competitiveness because they affect the productivity and efficiency of individual businesses, stimulate innovations and support entrepreneurship. Business productivity and efficiency is enhanced by the efficient access to specialized inputs, services, employees, information, institutions, training programmes and other public goods. Clusters stimulate and enable innovations because they increase the likelihood of perceiving innovation opportunities, assist knowledge creation, facilitate experimentation and provide a strong incentive to strategic differentiation that is often the result of incremental innovations. Finally, clusters support entrepreneurship because they provide opportunities for new companies, encourage spinoffs and start-ups and the commercialization of new products from new companies.

Dynamic Jacob's externalities are caused by the scale or diversity of local economic activity beyond the studied industry allowing for some type of cross-fertilization (urbanization economies). The development of integrated agro-tourism services is an example of Jacobian like economies where businesses from various sectors (primary, manufacturing and services) participate in the production of an 'experience good'. Such business networks very often utilize 'common goods' such as tradition, heritage and landscape regulated by local and regional institutions. As noted earlier, besides all the ties bonding local businesses together, the forces bridging local businesses to the non-local and allowing them to tap into non-local resources are of equal importance.

The overall, and of course largely unanswered, question remains regarding the factors which allow some business networks to develop into successful growth mechanisms while others

remain stagnant. The basis for successful operation of business (cooperation) networks may perhaps be found within Camagni's other two factors, i.e., social capital and relational capital. In other words, a successful business networks masks a rich social capital and a thick institutional web able to transform opportunities into business and advance innovation and growth. Social capital and relational capital are pre-requisites to cooperation networks. Copus et al (2008) argue that while the regional rates of business innovation can easily be explained by business characteristics, the regional (trans-territorial) innovation gap is totally explained by unobservable and not easily measured factors such as social and institutional capital.

Food networks

There are a number of lessons for encapsulating food networks within the territorial cooperation agenda that are apparent from the brief review undertaken here. Five are particularly notable.

First, innovative mechanisms of distributing economic value for producers and processors are required, emphasising the benefit of policies which intervene in food networks. In turn this requires new types of entrepreneurial activity supported by networks and cooperation across territories and between sectors. Second, there is scope to foster new synergies and networks between food production and various multi-functional activities including agri-tourism and environmental schemes and projects. Essentially, the principles of food networks need also to embrace non-food related activities to help drive rural development. Third, the networks associated with the production, processing, distribution and consumption of food requires greater emphasis in addition to food quality and associated characteristics. This includes a need to recognise those networks forged upstream of the farm gate as well as downstream. Fourth, the relationship between regional governance frameworks in the EU and regional food innovations needs to be assessed, with a view to fostering greater regional development and local authority facilitation in new network building and in supporting Pillar II of the CAP.

Indeed, a central message picking up on this last point is that, fifth, the forms of cooperation being developed around short food supply chains and alternative food networks should be viewed in the context of a broader integrated rural development strategy, with not only economic but social, cultural and environmental benefits also recognised. In parallel with the elements of re-localisation of food production and consumption reported here, there are further calls (See for example, Slee, 2008) for a re-localisation of work, energy production, and the use of leisure time. According to Curry (2010), the pursuit of a number of these 'non-growth' characteristics is enjoying increasing popularity amongst rural communities and local food networks are now one tranche of bottom-up initiatives which are adapting this notion of re-localisation on the ground.

This drive towards sustainable development goals that are cutting across various aspects of the rural economy and society and which are based around the networks (and connexity) of a broad cross-section of rural stakeholders from the public, private and civic sectors, has clear application for territorial cooperation across rural Europe. Some suggestions on how these forms of re-localisation might translate into territorial cooperation are presented in the following section.

4. THE POTENTIAL FOR TERRITORIAL COOPERATION

Drawing on the empirical assessment undertaken in the previous section, this section aims to identify some policy implications based around the potential for territorial cooperation across rural Europe.

4.1. Territorial cooperation as a policy goal

There are many examples in the Exemplar Region reports of loosely defined 'territorial cooperation' being beneficial, but also evidence that it is not necessarily a positive force and can be a constraint. As a policy approach, territorial cooperation has to be defined and operationalised in such a way as to minimise the negative factors and effects. This subsection discusses the constraining factors and negative outcomes described in the exemplar region reports.

The reports raised a number of ways in which true territorial cooperation might be constrained. There was the simple fact that not all people in a locality trust each other and/or want to act cooperatively. Locally, suspicion and lack of trust was particularly noted between binary groupings: such as the indigenous and incomers; declining and thriving economic sectors, examples of which were given in the Neumarkt report. Because demand for land exceeded supply in Chemsko-Zamojski, conflicts sometimes ensued. Sometimes emerging government structures were viewed with suspicion, such as in North Yorkshire where there was a fear that city-regions would divide the rural area.

Another constraint on territorial cooperation that demanded more formal organisational representation was the lack of capacity in the rural areas. The Osrednjeslovenska report describes the failure of an early regional development programme to achieve its objective of cooperation between municipalities because of the absence of coordinating organisations and the Teruel region reports how the absence of an urban network means the territory is unable to functionally organise itself. In Ostrolecko-Siedlecki the boundary changes meant that there was low internal cohesion in the region. Early LEADER programmes in Mansfeld-Sudharz failed to involve the community/community organisations; the LEADER I programme on Skye clearly anticipated some deficit in this respect and employed community animators, providing a useful example of good practice to develop this type of institutional capacity. The North Yorkshire report reminds us that even when community sector organisations have a seat at the table of local governance structures, their opinions are not necessarily taken into account.

Territorial cooperation is less easy to orchestrate over a distance in regions with poor transport and telecommunications infrastructure, and/or where topography makes travel difficult. The main difficulties appear to be within the regions, so constraining both cross-border and internal cooperation. The remoter regions, such as South Savo, report poorly maintained roads. Many regions report on major transport developments as part of their on-going rural improvements programmes.

The complexity of governance and decision making is stressed in some regional reports (e.g., Skye, North Yorkshire). This reflects the fact that decisions are variously made at a number of scales (EU, nation state, regional, local etc), by a range of local cross-sectoral 'governance' organisations with a specific development focus (tourism, for example), and how territorial 'cooperations' such as LEADER areas cross traditional administrative boundaries.

Some forms of territorial cooperation have exploited or excluded some rural people or regions. The historic Highland Clearances on Skye saw landowners forcing tenants to take on unviable crofts in order to tie them into working for the landowner to ensure an adequate

livelihood. The North Yorkshire report describes how many decisions are imposed upon the region by distant and urban decision-making forums, and how the developing territorial cooperations of city-regions might exclude the more remote parts of their region. Another example in an Exemplar Region report is of how a different higher level territorial cooperation has had a negative effect on their region, and has limited their local territorial cooperation: the EU, as a supranational territorial cooperation, has drawn a boundary around its Schengen area. For Chemsko-Zamojski the effect of this is to constrain its historic territorial cooperation with the Ukraine.

An effect of urban-rural connexity is the development of rural land close to the cities. Concerns are raised in some reports about the need for such developments to be much more closely regulated than at present in order to avoid unsightly sprawl. Counter-urbanisation in some areas is leading to high demand for rural housing stock, making it difficult for local people to afford a home.

4.2. Territorial cooperation as a dynamic of society

Business and commodity networks have been at the centre of many bottom-up policy approaches and initiatives including the LEADER programmes. However, one should note that most efforts have been overly biased towards simply building and strengthening highly localised networks and lack appropriate channels to non-local domains of economic activity. Frequently, programmes exclude non-locals, or non-residents and thus restrain local networks from appropriate bridging mechanisms that may be potentially established by "extra-overts". Furthermore, many local business development programmes, due to their agricultural policy origin, address exclusively farmers and fail to address non-farm businesses or firms not linked to the agro-food or rural tourism industries. Business networks in rural areas substitute agglomeration sources of spillover effects as they link rural places to denser and richer urban networks and allow the operation of feedback mechanisms in innovation processes.

The presence of effective rural-urban collaboration involving the public, private and voluntary sectors has potentially great significance for rural development. However, formulating and implementing rural-urban partnerships poses as many challenges as benefits, and policy will ultimately have to be sensitive to these. The impacts of rural-urban partnerships are likely to be highly dependent on local, and ultimately *ad hoc*, contextual factors, thus as a driver of rural differentiation they are by no means straightforward as their impacts will not be felt uniformly across rural areas, however they are characterised. That said, the structures (both spatial and organisational) of governance, organisational support for rural businesses and local and strategic level planning will themselves provide a broad differentiator of rural areas, albeit one that is not easy to identify through secondary data.

To capitalise on these opportunities, synergy is therefore required between strategic (largely but not wholly urban) and very local level (largely but not wholly rural) governance to allow partnerships to be forged, perhaps facilitated in the first instance by national initiatives in a handful of member states. The potential barriers to rural-urban cooperation clearly need to be taken into account when developing any test bed for partnership initiatives such as that mentioned above. Further, it would seem crucial that the spatial structures of cooperation initiatives be selected carefully to minimise potential cultural differences and alleviate, as far as possible, the detrimental effects of competition between municipalities and the various levels of governance. This also needs to be balanced with a need to consider interactions at a regional level, between large urban and metropolitan areas and surrounding rural regions; and at a sub-regional level, between small and medium sized towns and surrounding rural locales. Thus, together with inherent differences between member states, a 'one size fits all' approach to fostering rural-urban cooperation is unlikely to prove successful.

Of course, there are numerous forms of informal urban-rural relationships which are more difficult to both identify and assess the impacts of. These may, for example, manifest through the membership of societies and communities of interest bridging rural and urban areas as well as through social and kinship networks. Ultimately, all forms of rural-urban collaboration have the potential to open up rural economies and societies to new forms of knowledge, ideas, innovation and entrepreneurship, which evidence suggests can help drive rural development and performance in a positive way. This presents potential difficulties for policy in that informal networks are difficult to monitor and integrate into more formal governance structures. Nevertheless, these informal, *ad hoc* forms of rural-urban cooperation may well prove central to the goals of territorial cohesion policy, particularly with respect to allowing citizens 'to make the most of the inherent features of their territories'.

4.3. Policy implications synthesis

A synthesis of the key points arising from the Exemplar Regions analysis and review of the thematic networks is given in Appendix A. This is organised according to the categories of territorial cooperation derived from the inductive process. Implications from the reviews of food and business networks are treated separately. In each case the potential for territorial cooperation across rural Europe is addressed through consideration of objectives, opportunities, constraints, and drawing on some examples of good practice that are currently evident from the EDORA Exemplar Regions and wider literature.

Pulling out the salient points from this exercise, the following systematic policy implications with regard to developing the potential for territorial cooperation, can be identified:

- Cooperative ventures should seek to involve public, private and voluntary sectors and have clear goals which take account of regional and contextual differences.
- The EDORA typology could be employed to structure the set up of trans-national thematic networks, for example heritage networks in consumption countryside and diversification in agri-centric areas.
- Policy should seek to facilitate the potential for cooperation at all spatial scales and allow scope for contextual and political differences to play their part. Guidelines and pilot projects across the EDORA typology would serve as a good starting point.
- Territorial cooperation needs to become more central to the planning process at all spatial scales and where necessary extend beyond spatial to landuse planning. Pilot projects for the development of service hubs and other regional investment programmes should build in appropriate scope for public and cross-sectoral participation in the planning process.
- The transfer of advice and knowledge across spatial scales, for example from national to local administrations, should be facilitated where possible. The production of guidelines could draw on existing examples of good practice.
- Knowledge transfer across European universities and major companies should extend to both rural and urban regions, perhaps facilitated by one or two knowledge transfer hubs in each member state.
- The establishment of regional coordination units to integrate thematic networks such as food, business, energy, water etc into existing regional governance frameworks may prove beneficial.
- LEADER networks provide a good starting point to further develop and build knowledge and capacity across regions and member states. The wealth of good practice accumulated should be taken stock of, and again the EDORA typology could prove a useful way of structuring and coordinating this information.

5. CONCLUDING REMARKS

Despite being a crucial and central aspect to much of the EUs cohesion policy, the concept of territorial cooperation has remained ambiguous, with policy interventions lacking clarity and direction, particularly in a rural development context. Through its conceptual and empirical processes, this working paper has gone some way to shedding light on how the potential for territorial cooperation could be developed in order to facilitate rural development within and across member states. Clearly while rural-urban cooperation remains central to this, extending the remit of territorial cooperation beyond the paradigm of rural-urban interactions set out in the ESDP would make sense, particularly as power relations and other political and cultural barriers will not always readily facilitate cooperation between rural and urban administrations.

The facilitation of both horizontal and vertical cooperation across the various tiers of governance, whilst emphasising the processes of 'bonding' and 'bridging' that underpins each, may go some way to addressing this. More specifically, two broad aspects of territorial cooperation can be identified, each with logical policy options:

- "Horizontal" cooperation involving multi-sectoral, mutual interdependency between rural areas and nearby cities; and
- "Vertical" cooperation centred around thematic networks with both spatially proximate and spatially extended elements.

In the case of horizontal cooperation, the policy rationale is based on the assumption that better rural-urban integration is mutually beneficial for both kinds of territory, and therefore will result in economic and social benefits (growth) for the entire region. The challenge for ESPON is how to facilitate or "grow" more intensified rural-rural and rural-urban interactions through processes of 'bonding'. One option to facilitate this could be to develop a deliberate, integrated regional strategy to 'bond' the urban and rural parts of the region more effectively together. This might, for example, incorporate public transport strategies, multi-level governance initiatives, produce marketing and public procurement strategies. In light of food concerns and energy security issues, future rural development programmes could be orientated around the facilitation of local business / food / energy networks that also incorporate urban areas. In addition, local services could be a useful area of activity around which to facilitate networks through bonding, potentially incorporating 'services of general interest'.

With regard to vertical cooperation, there seem to be two possible policy rationales. The food networks analysis suggests a re-localisation strategy, whilst the business network literature suggests a balance between localised linkages on the one hand, and the necessity for "bridging" – "the strength of weak ties" - on the other. The logical approach to policy intervention that follows from this is one that facilitates re-localisation with strategic global links, moving beyond 'glocalisation' to acknowledge that maintaining both spatially proximate (rural-rural and rural-urban) and spatially extended, or relational, cooperation is a more realistic, and potentially beneficial, goal. This could form the basis of a variety of practical policy intervention options, for example local business forums to encourage the development of clusters; "matchmaking" by providing information about local companies; local public procurement policies; and trans-regional/national collaboration within themed networks. A menu-based approach, enabling regions to adopt measures that they see as relevant, could also have some merit.

The policy interventions and overarching implications suggested in this paper are designed to stimulate further debate in this area, and more immediately to feed into the suggestions for Cohesion Policy outlined in WP 28.

Appendix A: Synthesis of policy implications for territorial Cooperation arising from the Exemplar regions and thematic network reviews

	Objectives	**Opportunities**	**Constraints**	**Forms of intervention (Good practice)**
Cooperative ventures	Promotion of entrepreneurship, social capital, networks, strategic planning and local development. Encourage participation in local decision-making. Increase local and regional autonomy to foster technological innovation and strengthen cultural identity.	In-migration of dynamic stakeholders giving capacity for development. Administrative and municipal amalgamations which reinforce formal connections between rural and urban areas.	Over-dominance of public sector in programmes to the exclusion of private and civic sectors. Lack of community voice in participative planning. Conflicts between different social and demographic groups over preservation of local culture (i.e. locals and incomers). Lack of an appropriate network of settlements to structure and functionally organise a territory. Incidental administrative boundaries designed for statistical purposes leading to low levels of cohesion. Powerlessness of rural areas in governance structures. Domination of resourcing by distant, urban decision making forums.	National networks of village action groups to facilitate and share good practice on rural development. Community ownership schemes for land management. Employer-employee associations to promote profitable private business. Cross regional cooperation involving civic, public and private sectors for thematic developments (i.e. heritage, tourism) etc Town and Countryside co-existence programmes to foster economic development new employment opportunities at town fringes and to make links to neighbouring areas in region. Integration of county level decision making into metropolitan area. Joint marketing ventures between rural and urban areas (i.e. to promote tourism and produce).

Functional networks	Development of cultural and place-based tourism through attracting urban dwellers from proximate regions for rural getaways. Increase flows of knowledge and ideas from rural to urban and other rural regions.	Counterurbanisation in some regions puts population on upward trajectory.	Semi-subsistence agriculture limits inter-regional flows of goods. Outflow of young people for employment or education leading to de-population and human capital depletion. Inflows of older age groups. Transient nature of in-migration from outside EU means that income can be lost. Position of a rural region in relation to major cities; shorter distances do not necessarily facilitate stronger networks – travel times often more important. Poor road and rail connections can hinder inter-regional flows. National borders can constrain flows of goods and services between and within rural and functional regions.	Strategic county level planning for living in one place and working and shopping in another through development of regional centres and residential developments in rural hinterlands. Development of outdoor tourism potential to attract urban visitors. International marketing of rural tourism brands based on history, culture and identity. Involvement of national economic advisors and federal and state policy makers in local economic development. Strengthening of knowledge transfer between universities and rural regions through incubators to offer assistance, knowledge and skills to new enterprises, and to link to broader domestic and international business environments. Demonstration of rural practices, products and services in annual city events. Regional investment programmes in rural-urban road and rail networks to reduce commuting times and facilitate rural tourism by urban dwellers. Bridges between islands and mainland and construction of new and

				modernised border crossings to help facilitate flows of people and goods and services. Roll out of mobile and broadband networks to remoter rural areas.
Socio-economic connections	Small towns and intermediate urban areas to act as hubs of activity (in terms of employment and services etc) in rural regions.	Renewed interest in localisation agenda to take advantage of traditions and local culture to benefit of cultural tourism, development of small craft businesses and agro-tourism. EU accession can open up markets and enhance selling prices for some produce. Accession can lead to increased levels of foreign investment and with it increased cooperation between member states.	Regionalisation can reduce powers in smaller municipalities. City and functional regions can marginalise rural areas in terms of services and decision-making. Mainstreaming of rural policies can leave remoter rural areas without effective formal links to the wider region. Complexity of governance structures and sponsorship from too many organisations can lead to fractured nature of development projects Negative impacts of farmers and ancillary industries in local economies in remoter areas with reduced support through the CAP post 2013. Regional restructuring and boundary issues can cause	Polycentric development to encourage urban (and regional) service hubs serving attractive rural hinterlands. And strong rural-urban relations. Development projects involving a small number of public sector organisations to maintain interest and focus. Suburbanisation planning to involve participative planning with rural residents.

			difficulties following EU accession. Potential negative affects of unchecked suburbanisation on rural areas.	
Food networks	Fostering rural development through value adding, territorial branding Strengthening urban-rural linkages in terms of understanding and appreciation of food provenance (with benefits for education and health) Develop new synergies and networks between food production and various multi-functional activities including agri-tourism and environmental schemes and projects. Fostering greater regional development and local authority facilitation in new network building and in supporting Pillar II of the CAP.	Established discourse of alternative food networks and short supply chains from which to learn lessons Broadening the scope and principles of food networks to wider forms of rural activity, development and cooperation Extend the relocalisation agenda to other areas, drawing on food networks experience and structures	Small numbers and size of alternative food producers Restrictive and constraining bureaucracy for alternative production Shortfall in intermediaries (abattoirs, wholesalers etc) extensive inter-regional networks Physical and IT infrastructure may limit developments	Establish regional coordination units to integrating food network development in regional governance frameworks Regionally coordinated projects to facilitate mobilisation of producers and processors through existing successful key network members. Thematic re-localisation programmes coordinated at regional or sub-regional levels, initially to learn lessons from food network initiatives.

Business networks	Bond local businesses together Bridge local businesses with the non-local space Support clusters as a competitive growth strategy	More competitive businesses Common understanding of externalities (culture, heritage, environment, landscape) and how to manage them Establish channels of trans-territorial cooperation	Business networks as factors creating inertia and supporting lock-in	Programmes assisting and supporting local business networks (LEADER I, II, +) Programmes supporting trans-territorial cooperation Programmes enriching networks' nodes with educational and training opportunities, research, product development and promotion.

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EDORA

(European Development Opportunities for Rural Areas)

Final Report Annex 1 Part 28

Scientific Working Paper No. 28

Implications for Cohesion Policy in Rural Europe

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1. Introduction

The EDORA project focuses on the opportunities of different types of rural regions. This concluding working paper on the implications for policy to promote competitiveness and cohesion in Rural Europe draws on all the previous work packages of the project. Moreover it provides an account of existing approaches to cohesion policy, and the recent reform discussions, and takes these as the starting point for an analysis of their particular relevance to rural areas. Following the project outline and discussion this can be seen as highlighting the meta narratives of rural change (Working Paper 10) and Future Perspectives for rural regions (Working Paper 26). It will be a main task of this Working Paper to use the evidence developed in the previous parts of the project and to draw together and underscore the policy conclusions. In this regard the following questions will be important to be addressed in the analysis of policy implications:

- What are the implications of changes (thematic analysis, Working Papers 1-9) for different rural regions (typology of regions, Working Paper 24)? How do they relate to main challenges and opportunities?
- What policy options have been discussed for the main fields of activity for rural regions?
- How can networks and cooperation (urban-rural relationships, respectively trans-regional cooperation, evolving rural-global links; Working Paper 10 and 27) be seized as development opportunities?
- How can institutional resistance, experienced as inertia to policy changes, be overcome?
- How can the current priorities and application processes be adjusted to reflect increasingly the (diversified) 'rural' opportunities?
- How can the European policy framework be adapted to the specific types of 'rural' regions, and reflect the need for rural-urban and, in general, inter-regional territorial cooperation, including in particular the various administration levels and actors?
- How can the different policy implications take account of scenarios of the future?
- How would these varied answers refer to Macro, Meso and Micro regions?

Based on various European studies on rural development conceptualization and policy analysis, and the thematic review of the EDORA project, the analysis of policy implications is set in a framework that addresses challenges and opportunities for different types of rural regions with reference to the various meta-narratives explored in the analytical part of the project. It also takes account of the main theoretical concepts of a comprehensive rural development paradigm, and addresses a range of "generic" policies. According to diverse contents and intervention types these could affect different levels of policy implementation and apply primarily to, or require differentiation between, Micro, Meso and Macro regions. It follows from the recognition of "connexity" as an overarching driver of regional development,

and the application of the networks approach, that the various conceptual issues and policy dimensions tend to be inter-linked to a great extent.

The evidence provided by the analysis of main drivers of rural change and the framework for rural differentiation underlines the project's main objective: to investigate the scope for enhancing development opportunities in different types of rural areas. This task cannot be allocated to a specific geographical level as its sole responsibility, but has to be addressed at the various territorial levels and in coordination between the associated administrations. The presentation of a number of selected exemplar regions intended to portray the scope of regional patterns and development pathways, (Working Papers 11-22) highlights micro-scale processes. At a higher level, the typology framework established through the EDORA Cube (Working Paper 24), the meta-narratives (Working Paper 10) and its extension through contrasting scenarios in the future perspectives work (Working Paper 26) raises our understanding of different perspectives of development in non-urban environments. This paper will also make use of the analysis of the potential for territorial cooperation (see the separate Working Paper 27) that is considered to provide a crucial element for territorial cohesion policies in non-urban regions.

Thus the previous work packages have addressed a number of important policy issues and implications for territorial cohesion policies. The following structure of the Working Paper takes account of the different aspects of these analyses. Following these analyses, different aspects and dimensions of a wide set of policies with significant territorial impacts have been highlighted in the summary sections of those working papers. This working paper has the task to begin a discussion of those elements that are most useful in the elaboration of policies for Territorial Cohesion in a non-urban context.

It starts with the objectives of Territorial Cohesion policy and an overview of the evolution of the EU policy framework, before focusing on the widening scope for "rural" policy and including recent shifts in policy discourse towards re-strengthening solidarity arguments. In the second section it addresses rural change developments and the major theoretical foundations to draw on rural amenities. This leads to the conception of general considerations for criteria for cohesion policies for non-urban regions (in the third section) which are oriented towards a place-based approach. General aspects for territorial cohesion policies in non-urban regions are presented that extend to a full coverage of all types of "territorial capital". The main thrust for policies on territorial cohesion aims not just at enhancing "hard" and "soft" capital sources, but includes a comprehensive coverage of all types of "territorial capital". It focuses on the innovatory elements of addressing the wide array of different kinds of "assets" available / shaped within non-urban environments and explores main policy considerations with a view to making best use of opportunities that are specific to rural regions.

2. Policy Objectives for Territorial Cohesion

2.1. *EC policy framework for Territorial Cohesion*

Policy implications are discussed by decision-makers and stakeholders at different levels in the context of a policy rationale for rural differentiation, drivers of change and emerging opportunities. The rising interest for the territorial dimension, expressed in this debate, might

be due to the implications of global processes for local configurations of power and the search of local actors for shaping place-specific opportunities. In particular, they reflect the Community's fundamental aims of achieving economic competitiveness, sustainable development and coherence of the European continent. The three policy agendas providing the respective context are the Lisbon Agenda, the Gothenburg Agenda and the inclusion of 'Territorial Cohesion' in the Treaty of Lisbon (art 3). With the recent intensification of the discussion the authority of the Lisbon Agenda declined and the focus shifted towards a renewed assessment of a territorialised Social Agenda, emphasizing a development policy which aims at both efficiency *and* social inclusion (Jouen 2009). Fabrizio Barca who prepared, commissioned by the EC Commission, a thorough analysis and proposal for a reformed cohesion policy put it in the following words, " a policy aimed at giving places the opportunity to make use of their potential (efficiency) and all people the opportunity to be socially included independently of where they live (social inclusion)". This involves an optimistic message about the part of endogenous development and the opportunities for (different types of) rural areas in the future cohesion policy.

Integrating territorial cohesion in the objectives of the Treaty underpins increasing relevance of the concept in European policy-making and academic spheres over recent years. The 'Territorial Agenda of the European Union' (EU 2007), a high ranking political document, provided the background to inclusion of the concept that had evolved from discussions taking place in the early 1990s, and promulgated by the ESDP in 1999. The Hungarian Presidency is working towards a revision of the territorial Agenda in the first half of 2011 (Salamin 2010) that should reflect the recent changes of the policy context. This might bear important implications for governance in rural regions (see e.g. Box 1 below on rural regions and Europe 2020 Strategy).

Emphasising territorial cooperation and the need to address territorial trends remains central to ESPON activities. The Green Paper on Territorial Cohesion (EC 2008) continues this process and argues that the territorial diversity of the EU is a vital asset that can contribute to the sustainable development of the EU as whole. To turn this diversity into strength, new themes of policy action, new sets of relationships binding EU territories at different levels and new forms of cooperation, coordination and partnerships have to be sought. The concept sets out the following aspects as main issues to the debate (Hübner 2009):

"Viewing cohesion from a territorial angle calls attention to themes such as sustainable development and access to services. It also underlines that many issues do not respect administrative boundaries and may require a coordinated response from several regions or countries, while others need to be addressed at a local or neighbourhood level."

"An integrated place-based approach pursued by cohesion policy is ideally suited to respond to complex and strongly embedded issues, such as regional development, but in order to maximise synergies better coordination with sectoral policies is necessary. Territorial cohesion also stresses the added value of partnership with a strong local dimension, which ensures that policies are designed and implemented with local knowledge."

2.2. *Policy objectives for territorial cohesion*

In terms of defining the policy concept, following Ahner (2010) a common general understanding emerges from the debate which is based on the original definition of territorial cohesion in the 3rd cohesion report:

"Territorial cohesion is about

- *ensuring harmonious, sustainable and polycentric development.*
- *enabling citizens and enterprises*
  - *To make the most of the inherent features of different terrritories in a sustainable way*
  - *To benefit from and contribute to European integration and the functioning of the Single Market wherever they happen to live or operate.*

Territorial cohesion is facilitated through an integrated approach including:

- *Coordinating the territorial dimension and impacts of sectoral policies at each level from local to European.*
- *Vertical coordination between levels in a multilevel governance scheme.*
- *Cooperation between territories to allow functional approaches."*

As a general reference, the objective of territorial cohesion can be understood as constituting a policy framework which provides measures to achieve a more balanced development by reducing regional disparities, avoiding territorial imbalances and by making sectoral policies, which have a spatial impact, and regional policy more coherent. The sub heading 'Turning territorial diversity into strength' chosen for the Green Paper (EC 2008) is perceptive in identifying the diversity of the European Union while recognising its position as a focal point for territorial cohesion.

Table 1: Policy documents influencing the debate of territorial cohesion

Policy documents	Main aspects	TC relevance
ESDP (1999)	Integrated spatial approach; focusing on poliycentricity, linkages and sustainability	Build a theoretical framework for spatial planning in the European context
Lisbon Strategy (2007)	Achieving a competitive European space: growth and employment	TC a politically accepted objective of the EU
EU, Territorial State and Perspective (2007)	Elaborate the evidence base	Policies to develop 'territorial capital'
EU, Territorial Agenda (2007)	Territorial governance	Issues to be tackled, reflecting terriorial diversity and priorities
EC, Green Paper on Territorial Cohesion (10/2008)	Turning territorial diversity into strength	TC in debate and practice
Contributions to Green Paper discussion	388 contributions to TC discussion	Harmonious development for different territories (impacts, governance, functional approaches, and cooperation)
Barca report (04/2009)	A place-based approach	Coordinated, reinvigorated public action at all levels
Commissioner D. Hübner, reflection paper (04/2009)	Reflection on issues integrated in debate	Sustainable development, accessibility and institutions in a place-based approach
CoR, White Paper (06/2009)	Multilevel governance	Encouraging participation and reinforcing effectiveness
EC, 6th Progress Report (06/2009)	Regional dimension of creativity and innovation	The state of the debate on TC: improving understanding
EC, background paper, Kiruna meeting (12/2009)	Make use of the territorial potential	Territorial cooperation, coordination and analysis
Commissioner P. Samecki, orientation paper (12/2009)	Focus on EU2020 strategy	Future priorities of TC
Spanish Presidency, cohesion policy objectives (01/2010)	Cohesion policy a top EU agenda	Integration to EU 2020 strategy
2nd TCUM seminar (03/2010)	Scales of policy intervention	Functional regions and territorial cooperation
COM, Strategic Report (03/2010)	Overview of implementation of cohesion policy 2007-2013, from national strategic reports	Progress in TC implementation
EC, Europe 2020 (including consultation)	New economic strategy in Europe (with 1,400 contributions)	EU headline targets; lack of social and environmental priorities
EC, Paper on budget review (09/2010)	Link to future definition of cohesion policy	
EC, 5th Cohesion report (12/2010)	Future of cohesion policy	
Hungarian Presidency, revised Territorial Agenda (1st half 2011)	Reflect changing policy context	Raise understanding and implementation of TC activities
EC, legal proposal for cohesion policy post 2013 (1st half 2011)	Feeding into consultation process	

Source: Faludi 2009, Ahner 2010

The consultation on the Green Paper on Territorial Cohesion, started in late 2008, was the initial reference and base to much of the subsequent policy debate on shaping territorial cohesion policy. Table 1 provides a condensed overview on some of the major relevant contributions to that discourse, which is currently at a decisive stage. The notion to "make use of the territorial potential" of all regions and to aim at a place-based approach has been deepened in a series of conferences of different European institutions and through respective reports. The most intensive discussions probably took place in preparing and drawing lessons from the Barca report (2009). Its core thrust of proposals and consequences for a more targeted policy approach will be discussed in more detail in section 3.1.

Box 1: Rural regions and Europe 2020 Strategy

With the proposal of strategic targets to be achieved by 2020 the Commission proposes to address priorities of action in the different policy fields. Europe 2020 puts forward three mutually reinforcing priorities:

* Smart growth: developing an economy based on knowledge and innovation.

* Sustainable growth: promoting a more resource efficient, greener and more competititve economy.

* Inclusive growth: fostering a high-employment economy delivering social and territorial cohesion.

Territorial cohesion is hence addressed as a key concept in the inclusion strategy of the EC. This will exercise considerable implications on rural areas which could be highlighted by spatial differentiation of the EU headline targets for the strategy:

- 75% of the Population aged 20-64 should be employed.
- 3% of the EU's GDP should be invested in R&D.
- Climate/energy targets ("20/20/20" aim) should be met (including an increase to 30% of emissions reduction)
- The share of early school leavers should be under 10% and at least 40% of the younger generation should have a tertiary degree.
- 20 million less people should be at risk of poverty.

All of these indicators reveal a particular spatial distribution and parts of rural regions experience long-lasting development gaps that are fundamental to the need for regional policies. The proposed flagship initiatives put forward main activities relating to these aspects and underpin the need for a place-based approach for applying these policy priorities. The seven flagship initiatives include:

"*Innovation Union",*

"Youth on the Move",

"A digital agenda for Europe",

"Resource efficient Europe",

"An industrial policy for the globalisation era",

"An agenda for new skills and jobs", and

"European platform agains poverty".

It seems crucial that the territorial dimension is included in the national response to this approach. This would reflect the spirit of the Territorial Cohesion discussion and search for a strategy to make use of the specific regional assets in all types of regions. Particularly for the non-urban areas this approach is important. It also reflect a more general concept for a new approach to regional policy that is summarized by the OECD (2009b) as "moving from subsidising business and employment in poorer regions to promoting growth in all types of regions". In particular an enhanced understanding of the complex inter-relationships and the need for differentiated policy application calls for a thorough conceptualization of the multi-level governance going well beyond traditional distinctions between top-down and bottom-up approaches. As such the EC strategic proposals can be seen as an incentive to reinforce targeting of territorial cohesion considerations.

During the Spanish presidency in the first half of 2010 a specific focus was put on Cohesion policy as a top EU agenda. In an exercise involving a large selection of experts and stakeholders across Europe an "urban-rural narrative" has been developed and the acceptance of new perspectives tested through a questionnaire. Its contribution highlights the need for a thorough investigation of urban-rural relationships and spatial trends in conceptualizing the new pattern of spatial relations, becoming visible through increased flows and implying analysis beyond core and periphery paradigms (Spanish Presidency 2010).

Another important dimension in the discussion is the again increased consideration on sustainability issues as exemplified by the Renewed EU Sustainable Development Strategy (2006). Though it does not include any section specifically dedicated to territorial issues there are several territorial indications and it presents cross-cutting challenges of significant spatial impacts. In particular it links to the Lisbon Agenda and Social Inclusion aspects as well as natural resources and provides an interesting input to current considerations on territorial cohesion implementation. All this discussion is meant as input to the process started with the Europe 2020 Strategy (EC 2010). Within that strategy the EU goals to be achieved by 2020 are presented through headline targets for main economic, societal and environmental dimensions which would have to be translated into national targets and trajectories. The flagship initiatives proposed by the Commission (see box) underpin the spatial dimension of these priorities and demand an integration of these activities into the debate for an update of the Territorial Agenda. In addition to the presentation of the EU budget review (September 2010), the 5th Cohesion report (planned for December 2010) and the legal proposal for the Cohesion policy post 2013 (planned for the first half of 2011), the Hungarian Presidency has set as one of the priorities to engage in this update of the Territorial Agenda (Salamin et al. 2010). The preparation and discussion will undoubtedly raise the concern for territorial cohesion aspects and include the analysis of the role of rural regions in cohesion policies.

2.3. *A widening scope for rural policy*

Rural development has emerged as a significant policy field since the early 1990s and has attracted increasing attention within spatial development policies. It has been mainly developed within CAP as a sectoral policy extending its scope of action gradually towards non-agricultural activities. The process for a broader rural policy started simultaneously about two decades ago when the EU's Cohesion Policy became a significant source of funding for rural development and integration of sectoral policies was a key target. This process was most clearly expressed in the late 20th Century with considerable changes in thinking about rural development, shifting it from a narrowly defined agricultural production policy to a broader range of issues and increasing linkages and coordination activities with other policies impacting on rural regions. However with CAP reform and particularly through Agenda 2000 the installation of the Rural Development Regulation as the Second Pillar of CAP brought about a separate policy strand, labeled as *the* rural policy that is again integrated into CAP. Nevertheless a number of stakeholders and non-agricultural actors (at all levels) have continued to raise the understanding for the relevance and implications of a wide range of policies for "rural" issues. This shift in policy thinking was best described in the international debate by the introduction of the term of the "New Rural Paradigm" by OECD (2006) addressing the underlying conceptual changes. Though its focus has diversified from an exclusively agricultural production policy to a more broadly based rural policy, actual implementation within the EU is still linked closely to agricultural institutions and actors. The recent changes thus refer more to the policy concept than to its delivery, resulting in a situation where most of the measures still derive from the Common Agricultural Policy, but with other policy domains, particularly Regional Fund and Environmental Policy, taking an increasing interest in rural development. As the EDORA typology illustrates (See WP 24), EU rural policy has to address a wide diversity of economic, social and demographic conditions apparent in different Member states, and in different areas within Member States.

Comparative studies on policy implementation observe a “mismatch” between the policy rhetoric and rural policy shifts, indicating a high dependence on policy traditions and institutional challenges (Copus and Dax 2010).

2.4. *Rural challenges and policy response*

The changes and continuing challenges for reform are driven by a number of factors that have been taken into account in the thematic analysis (WP1-9), the Synthesis Report (WP10) and the exemplar regions reports (WP11-22). Moreover the typology work (WP24) and country profiles (WP25) highlight the diversity of non-urban regions. This detailed analysis underpins the diversified expectations and future perspectives (WP26) and in turn reflects the increased awareness of territorial aspects influencing non-urban regions evident in a variety of policy dossiers (see section 1.2). The ‘rural challenges’ have been addressed by placing special emphasis on enhancing the role of the local level and on increasing the focus for ‘integrated approaches’. An analysis of the main underlying policy concepts calls for activities beyond the current framework. For example, in addition to farm structures development, more attention will have to be paid to location aspects of rural activities, social challenges and environmental and landscape issues. The key aspects for understanding rural change have been conceptualized at the beginning of the project and have been investigated through thematic reviews (WP1-9), highlighting the extent to which each of them contributes to the clarification of our understanding of on-going changes of regional development processes and particularly effects on activities and performance of rural areas. A wide array of the expectations for a more coordinated policy approach is integrated in the concept of regional governance which can be considered central to territorial cohesion implementation.

The following table provides a structured overview on the various themes particularly relevant for non-urban policies and cohesion strategies (Table 2). It is arranged along the ‘meta-narratives’ which have been analysed in the earlier stages of the project (WP 10, Lee et al. 2009). These three alternative accounts of change, labeled as ‘meta-narratives’, are quite common perspectives that are esteemed more or less relevant according to regional contexts and our focus of attention on development issues. As each of these perspectives emphasizes different aspects as core explanations of the changes affecting rural areas, and the inter-relations of areas, they also lead to slightly different conclusions about how to promote rural growth. From a conceptual viewpoint they are not mutually exclusive, and therefore the debate about policy implications can draw relevant conclusions from all of them. With the overarching context of ‘connexity’ as a backdrop to these meta-narratives it becomes clear that the linkage between the narratives, and conclusions for policy implications based on these, is of core relevance, and policy concepts have to reflect the whole picture of development opportunities and policy response available. The table highlights also the analytical focus and the evidence provided through the EDORA project, in analyzing core driving forces for rural change through the thematic reports and allocated in the table to main challenges of rural regions (WP1-Wp9) and in presenting regional examples that reveal the great diversity and need for multi-sectoral activities in all regions (abbreviations indicating the main policies addressed by the 12 exemplar regions reports).

Table 2: Policy approaches, rural opportunities and policy response

Meta Narrative	Challenges [1)]	Opportunities	**C**oncepts**/ Rationales**	**P**olicy **Domain**	**Specific** regional examples[2) 3)]
agri-centric meta-narrative	Improve agricultural competitiveness (WP9) • Secure provision of positive external effects • Integrate environment and territorial effects in sector (agr., land use) activities	Diversification Quality products Public goods provision	**Multifunctionality** Farm restructuring	Agriculture Rural Development policy Competitiveness Education and training Land use, e.g forestry	Agr: T, SS, LR, CZ, OS, NY RD: MS Comp: JK, Z Edu: CZ For : JK, Z, SS, CZ, NY
urban-rural meta-narrative	• Cope with development difficulties due to location (remoteness) and low population density (WP6) • Link remote areas to centres (WP4) • Overcome development gaps • Address functional division between different types of areas (environment, economy, culture)	Functional specificities Rural amenities Quality of Life aspects Information technology	Regional governance **Endogenous growth** Neo-endogenous development ISEZ/local economy approaches	Infrastructure Telecommunication Spatial Planning Public services Transport Mobility Regional economy	Inf: CZ Plan: N, LR, OS Pub: Z, T, SS Transp: SK, N, OS Reg: MS, N
meta-narrative of economic competitiveness and global capital	• Achieve innovation and regional growth (WP3) • Adapt to demographic changes (WP1) • Improve employment perspectives and income distribution (social exclusion) (WP2) • Take account of global cultural changes (WP5) • Cope with global (climate) change (WP8)	Human and social capital development Networks Clusters Consumption countryside Global cultures	**Globalization** Networks Post-productivism Ecological modernization **Sustainable development**	Demography (migration) Social inclusion and gender empowerment Equality Employment Tourism Heritage Energy Environment	Dem: T, MS, LR, CZ Soc: O, Z, T, MS, LR Equ: CZ, NY Tour: JK, Z, T, SK, MS, N, OS, NY Energ: CZ Env: SK, MS, OS
overarching context of connexity	• Understand institutional change as main driver (WP7) • Provide appropriate coordination mechanisms (between sectors, levels and perspectives) • Relate regional strategies to the different dimensions of connexity (economic, social, cultural and political)	Cooperation Network structures Relational space	"holistic" and integrated approaches **Systemic** concepts	Regional policy Territorial Cohesion policy	Int: O, Z, MS, LR

[1)] Thematic **Working Paper reports key**: Rural demography (WP1), Rural employment (WP2), Rural business development (WP3), Rural-Urban relationships, (WP4), Cultural heritage (WP5), Access to services of general interest (WP6), Institutional capacity (WP7) Climate change (WP8), Farm structural change (WP9).

[2)] **Exemplar Regions key**: NY: North Yorkshire, England (Intermediate, service sector, accumulating); N: Neumarkt, Germany (Predominantly rural, diversified, accumulating); OS: Ostrolecko-siedlecki, Poland (Predominantly rural, agriculture, depleting); MS: Mansfeld-Sudharz, Germany (Intermediate rural, diversified, depleting); O: Osrednjeeslovenska, Slovenia (Intermediate rural, accessible; accumulating); Z: Zasavska, Slovenia (Intermediate accessible, diversified, below average performance);

CZ: Chelmsko-Zamojski, Poland (Predominantly rural, diversified, depleting); SK: Skye, Scotland (Predominantly rural, remote, consumption countryside, above average); JK: Jonkoping, Sweden (Predominantly rural, close to city, consumption countryside, above average); SS: South Savo (Predominantly rural, remote, diversified, below average); T: Teruel, Spain (Predominantly rural, remote, diversifying, accumulating); LR: La Rioja, Spain (Intermediate rural, accessible; accumulating). K**ey for policy fields** addressed: Agr: Agriculture, RD: Rural Development, Comp: Competitiveness, Edu: Education and training, For: Forestry, Inf: Infrastructure, Plan: Spatial planning, Pub: Public services, Transp: Transport, Reg: Regional economy, Dem: Demography, Soc: Social inclusion and gender empowerment, Equ: Equality, Tour: Tourism, Energ: Energy, Env: Environment, Int: Integrated approaches.

The EDORA thematic analysis was particularly focused on addressing rural changes and revealing evidence for different "types" of rural regions. Taking stock of the "state of the art" of rural development research[1] the following nine themes were selected as indicative areas of main driving forces:

- Rural demography
- Rural employment
- Rural business development
- Rural-Urban relationships
- Cultural heritage
- Access to services of general interest
- Institutional capacity
- Climate change
- Farm structural change

The economic, social, environmental and policy processes analysed in this work have been synthesized into a coherent structure of three "meta-narratives", and also to support evidence for the overarching theme of "connexity". As Lee et al. (2009) argue we have been alerted

"to the increasingly interconnected world in which we live, and this provides an overarching context for the changes affecting rural areas of Europe. For example, Castells (1996) introduced the concept of 'Network Society', while Healey (2004) argues that mid-twentieth century 'Euclidean" concepts of planning have been challenged by a relational conception of spatial planning which understands place as a social construct, continually co-produced and contested; views connections between territories in terms of 'relational reach' rather than proximity; sees development as multiple, non-linear, continually emergent trajectories; and recognizes the changed context of a network society and multi-scalar governance. In this context … Mulgan (1997) … defines connexity as connectedness and interdependence, and his central theme is the increasing tension which arises between freedom and interdependence in this networked world. A crucial feature is that the interrelatedness of

[1] The thematic analysis was focused on the main driving forces. In addition to the assessment available from that part of the project, a wide range of "rural research" studies contain findings on other aspects. These are particularly FP7 projects (e.g. DORA, IMPACT, RESTRIM; TERESA and TOP-MARD; and CARERA, ETUDE, FARO, RuDI and RUFUS) as well as other comparative studies on rural development implementation (like NORD I and II) and studies within the ESPON programme 2006 (ESPON 2.1.3 on territorial impact of CAP, ESPON 1.2.2 on urban-rural interrelations and ESPON 3.2 on scenarios) and the current ESPON programme (FOCI, DEMIFER and TeDi).

places is no longer to be considered only in 'Euclidean' terms of physical distance, but rather in terms of their relational interdependence often across considerable distances."

Similarly the exemplar regions reports (WP11-22) address a multitude of policy aspects with varying focus and in different detail. Some of the common findings on policy implications are:

- Basic requirements on skills have to be improved by the increase of education attainment of workers, oriented at future needs of the labour markets.
- Agricultural land is re-conceptualised in the framework of multi-functionality as of high environmental and cultural value. This new perspective would be addressed through taking increasingly account of the 'public good' character of land use management and the potential for continued diversification of activities.
- Landscape development and proper management of natural environment remains a crucial task for securing assets of rural spaces.
- Stimulating empowerment of rural communities is key to success of a comprehensive territorial-based regional policy
- In spite of the changes of physical relationships in territorial development, accessibility and transport policy remain key areas for shaping non-urban quality of life and development opportunities.
- Public programmes have to be promoted that integrate innovative action for entrepreneurship, social capital, networks, strategic planning and local development
- Besides the complexity of development activities, these are full of contradictions and conflicts, reflecting the notion of the 'contested countryside'.
- Differentiation within the non-urban regions is highly expressed through differences in opportunities and productivity (e.g. mountain areas, islands and peripheral contexts vs. easily accessible non-urban areas).
- Marginalization threats and dependence on public support must not be overlooked in any reform debate
- Regional policy is seen as a holistic task to include the various dimensions of territorial development
- Many impacts and regulations from outwith the regional boundaries impact on non-urban regions (both positively and negatively) and call for the inclusion of all the higher tiers of governance (global, EU, national) as a significant driver for changes at the regional and local level as well.

3. Towards a more comprehensive assessment of rural opportunities

While it is widely acknowledged that a global economy emerged (or extended) in the second half of the twentieth century, it is important to differentiate its territorial impact. Taking account of fundamental divergences between regions, in terms of level of integration, competitivity and economic growth we can experience a significantly uneven regional performance across Europe. This is a long-term driving element in the targeting of territorial cohesion approaches of the European Union. Rural and peripheral contexts have been

equated for a long time with considerable development problems suffering from persisting weaknesses of integration. With recent technological changes the potential to link them more closely to the global networks of value making and wealth has altered the perception and provided opportunities for making increased use of local potential. At the heart of this changed logic is the recognition that networking and connectivity is crucial to overcome any segmentation and barriers of development, which of course is particularly relevant to non-urban regions (Dax et al. 2010). The recent policy shifts with regard to the meaning of territorial cohesion (addressed above) has provided changed priorities in perceiving rural areas not primarily as "dependent" regions, but through focusing on its diversity and specific features as regions with particular opportunities. As many studies and the empirical analysis of this ESPON project underscore this potential is often not visible at first sight and has to be nurtured through targeted (policy) action. This section aims at presenting the emerging discourse of different narratives of rural change, its influence on how rural opportunities are perceived, and the need to focus on rural amenities in order to make a more comprehensive use of the different kinds of assets based in rural regions.

3.1. *Drawing on narratives of rural change*

A fundamental challenge in fostering sustainable rural communities, in economic, social and environmental terms, is to manage the tension between continuity and change (Arnason et al. 2009). As Lee et al. (2010) point out in their summary on the thematic papers and exemplar regions analysed within the EDORA project, a number of changes are influenced by specific perspectives on territorial opportunities, which are translated through the application of sectoral policy programmes and the expressed need for coordination of policies. For example many rural communities seek to attract in-migrants and return migrants (who bring new ideas, start businesses, and maintain the viability of services) but fear an attendant displacement of local people and practices, especially those fundamental to cultural and environmental sustainability. The neo-liberal tendency toward deregulation has depleted the state's ability to manage these tensions in the interests of sustainability, so heightening such difficulties. It is apparent that the state, and its partners in multi-level governance, require stronger powers and a fuller set of policy 'tools' with which to seek to manage these tensions.

The wide range of thematic project analysis (Working Papers 1-9) and the exemplar regions reports (Working Papers 10-22) underpin the need for deliberative processes and collective action, as well as the mobilisation of actors (especially the least powerful) to develop strategic agendas in a context of diffused power relations. Usually rural areas are understood in a context of "globalisation (that) is, in essence, about power – about the lack of power of rural regions to control their own futures, and about the increasing subjection of rural regions to networks and processes of power that are produced, reproduced and executed on a global scale" (Woods 2005, 33). However, as Woods recognizes and many recent studies on rural development underscore, people and policy-makers in rural areas are not entirely passive in the face of global forces, with many opportunities to resist and negotiate these forces, with the aim to remain competitive in a globalised world (Lee et al. 2010, 21). Rural action therefore presents a huge challenge of cultural change for social actors in rural development. It is set in a dialectic between continuity and change, and will be a process of negotiation (or

at least a contested political task) between maintaining traditional values of society, economy and environment and fostering and embracing new approaches to them.

The changes involved are crucial in the process of conceiving opportunities in non-urban regions. Beyond the social dimension of the changes it is even more complex to address their spatial implications. Though the tensions generated by the divergent options are felt by local actors and decision.-makers, general approaches for regional development tend to focus on traditional perceptions of the regional identity. On-going cultural changes that are quite important for the population and epitomized in youth culture are hardly taken up "positive" incentives to development considerations. However, realizing (global) societal developments would require taking account of such new phenomena and their relevance for rural regions. A more explicit approach to take account of the changes in the power relations and cultural aspects would mean also implications for including additional social actors in rural development, develop further local institutions, and address relational resources and mobilising capabilities as key priorities for development activities.

Besides the social and cultural changes, the narratives point to the vulnerability or the resilience of rural areas to 'shocks'. These include, for example, the disruptions associated with the collapse of the Soviet hegemony and the post-Soviet transition leading to the loss of full employment, with many other rural areas in Western Europe also being affected by the closure of major employers, the loss of key services, and the effects of economic recession. In terms of spatial differentiation, the importance of the post-Soviet transition may be highlighted in terms of the distinctive pathways experienced by rural areas in Eastern Europe and the ways in which these still constrain options and strategies today. Several of the exemplar regions, for example, had been subject to significant 'shocks' in the recent past, including the collapse of mining, or of communism. But not all shocks have negative consequences – some have eventually induced positive development trajectories, as they have incited to adaptive strategies actions aimed at the recovery of regional economy.

3.2. *The People and Places 'left behind'*

The presentation of leading narratives has sometimes underestimated the social aspects of regional development. It seems therefore imperative to recall the internal differentiation and social developments and movements within the regions. Too often policies focused on issues of efficiency and respective policy documents have underplayed the position of the people left behind in these processes. This is experienced especially in some rural places where a spiral of decline has to be noted, but even without such depressing prospects there are many rural places where people are 'trapped'. This term describes both the lack of opportunity that some people face, and their lack of mobility in these areas. These two aspects, that is poverty *of* rural places and poverty *in* rural places (Lee et al. 2010) have to be addressed attentively in any deliberation on non-urban regional strategies. While the aspect of individual poverty or social exclusion aspects would be seen as primarily the responsibility of horizontal ESF interventions, the recent policy discussion suggests taking it increasingly into account in territorial cohesion policy considerations. At least taking account of the spatial implications of the sector policy would enable a more comprehensive impact assessment and allow a better targeting of solidarity aspects as presented as specific focus in the policy discussion (Barca 2009, Ahner 2009). In addition the social dimension and its changes (e.g. ageing of population, migration effects and shifts in the nature of employment structures, public services provision) might have a significant effect on the use of local potential and should not be underestimated.

3.3. *The specific relevance of natural capital*

Another aspect which is core to the development opportunities in rural regions is the role of natural capital in regional development plans. As the patterns of natural resources are a key differentiating indicator between rural and urban areas they are often also addressed as the main features and drivers of rural policy. Though this view cannot hold true with the evidence on rural regions' changes over recent decades, the influence of natural capital on general land use and interrelations with other economic and social activities in these regions is commonly accepted. The concept of sustainable development was elaborated as a tool to take account of the additional dimensions related to resource use in a more holistic approach. As the Council of the European Union in its review of the EU Sustainable Development Strategy (2006) argues, quite a number of unsustainable trends still persist and new challenges are arising. This assessment provided the incentive for the review. It sees its main challenge to gradually change the current unsustainable consumption and production patterns and the non-integrated approach to policy-making. Both targets have significant territorial implications and hence relate, in consequence to the wide approach of sustainable development, to almost all sector policies. The focus here should be to highlight the specific relevance of environmental performance, the synergies seen with the Lisbon Strategy and the specific challenges associated with the management of natural resources. The proposed actions can be realized as a revival of the sustainable development approach and underpins considerations on a more balanced territorial policy. One exemplary international document highlighting the specific concern for assets related to the combination of natural resources within regions is the European Landscape Convention that entered into force in 2004. It highlights particularly the asset base, a systemic approach of interpreting landscape development and the need for cooperative action to achieve quality objectives (Council of Europe 2008). Another recent document on the territorial dimension of environmental sustainability has been prepared by the European Environment Agency (2010). It emphasizes the importance to incorporate the environmental dimension as a viewpoint for developing and assessing policies and programmes of territorial cohesion. Relevant examples are the adaptation to climate change and the need for cross-cutting analysis, covering areas from flood risk management to agriculture and to biodiversity protection.

One deficiency in the discourse seems to be that, in general, policy makers define sustainable development using economic criteria for decision making, indicating that there are no agreed and reliable ways to include the valuation of environmental or natural capital (Gren and Isaacs 2009). While the natural assets are more and more addressed as a key resource which is of concern to all the population of a nation, they just take a secondary role in the narratives on rural change. In response to current developments, growth and innovation strategies are understood in a much broader definition. In working towards a sustainable growth path the OECD has intensified the concern to tackle environmental degradation and climate change from an economic perspective. In its Green Growth strategy it envisages two clear opportunities that can be harnessed: innovation and green growth. There is a specific regional and local dimension of green growth that includes consideration how to foster green innovation and support creation of green jobs in cities as well as in the context of rural development. In particular, the development of renewable energy in rural areas and local initiatives to tackle climate change are explored (OECD 2010). As these new

developments and natural resources in general may have particular value for society as a whole, the increased focus on amenities has provided an impetus for rural initiatives and enlarged the scope of rural policy for many regions. It should not be neglected that many non-urban contexts refer to these natural resources as a main component of their development potential.

3.4. *Rural challenges and opportunities*

Rural areas of Europe are experiencing major changes which pose challenges for EU territorial cohesion. These have been summarised in WP10 of the EDORA project in terms of the economic, social, political and environmental processes which lead to spatial differentiation (Lee et al. 2010, pp.2-15). These processes are complex and manifold, and researchers offer competing explanations for these trends. In reviewing these explanations it has been found helpful to characterise these in terms of three meta-narratives, namely an agri-centric meta-narrative, an urban-rural meta-narrative, and a meta-narrative of economic competitiveness and global capital. Each of these can be interpreted as linked to a common and overarching context for change which is the increasingly interconnected and interdependent world in which we live. While these inter-relations can be assessed as the foundation (for cultural development and economic growth) of modern society, it should not neglect the tensions this brings to population in the various parts of the world. This period of historical transition we live in has been termed the 'Network Society' already more than a decade ago (Castells 1996). Presently "*the urgency for such a new approach to understanding the kind of economy, culture, and society in which we live is heightened by the crisis and conflicts that have characterized the first decade of the twenty-first century*" (Castells 2010, p. XVII). Global financial crisis and the transformation of employment, of communication, and on space and time in the human experience have impacted on everybody's life and underscore the theoretical observations. The important issue for our considerations is that all these elements entail significant spatial implications, which have to be analysed for their different effects for the various types of regions and specific contexts.

Two inter-related issues emerged as key to understanding the changes affecting rural areas in Europe, and the emerging spatial differentiation. These are, first and foremost, the nature of the *interaction between places*, and, second, the '*assets*' on which people can draw in 'shaping' the future of their place. The importance of the interactions between places is apparent in the processes of economic restructuring, migration, commuting, access to services and the other drivers of change reviewed.

From the analysis in the EDORA project it was concluded that two types of interaction were *both* important in understanding the differential performance of rural places in Europe. The first, the interaction *between rural and urban places* causes spatial differentiation around settlement hierarchies and accessibility/remoteness from centres of population, with distance from urban centres presenting the defining asset/handicap. The second, which is often overlooked in the analysis of rural regions, but nevertheless is of equal and growing importance, is the interaction *between the local and the global*, or at least between localities and places elsewhere. This implies that spatial differentiation is primarily shaped by the locality's relational interactions and its other relevant assets, the institutional capacity, education levels, entrepreneurial spirit, social networks, identity and ability for collective

mobilisation as well as its natural and cultural heritage. Most academic research on business networks and regional growth points to the importance of global linkages rather than linkages to the local town. While urban- rural linkages are still relevant for commuting, service provision, “local foods” and day-trip leisure activities, these activities cannot provide a sufficient basis for most rural economies. Rural economies based on these activities risk being too “passive”, following rather than leading. This understanding obviously affects the structure and nature of opportunities recognized within an area, and the views on the policy options.

A great part of these opportunities are linked to the rich variety of amenities that is available in rural areas. The term of “rural amenities” has been coined by OECD over the 1990s referring to “ a wide range of natural and man-made features of rural areas, including wilderness, cultivated landscapes, historical monuments, and even cultural traditions” (OECD 1999, 7). In addition basic characteristics of amenities include aspects of utility, consumption (within or outside the area), and a strong association with specific territorial attributes. It was analysed that significant potential of many natural and cultural resources remains untapped and that any attempt for harnessing such amenities involves striking a balance between use and conservation.

The development of a typology of rural regions within the EDORA project posed a considerable challenge. The risk to add another, sophisticated, methodologically-refined spatial delimitation between ‘urban’ and ‘rural’ areas had to be avoided. The task to map or measure interactions in relational space and the often intangible assets identified by numerous researchers as central to these processes led to the creation of the EDORA cube. As this provides rather an analytical framework in the form of three-inter-related typologies, it is supposed to turn the attention of policy makers to the interplay of the three dimensions reflected through them. As these are (i) rurality/ accessibility, (ii) degree of economic restructuring, and (iii) socio-economic performance (accumulation or depletion) several of the main features of rural areas are addressed in one of its facets. From the conceptual viewpoint developed through the analysis of this project further investigations on the aspects of interactions (of people and places) are required. Such empirical evidence would both contribute to substantiate the relevance of the overarching narrative of “connexity” and provide areas for policy action addressing these complex relationships.

3.5. *Future options for rural regions*

Following from the analysis of rural change and the elaboration of narratives to describe the processes affecting rural regions the EDORA project has explored in a short foresight exercise the range for future options of rural regions. Due to limited resources it was not possible to engage in the complete range of activities commonly associated with a conventional foresight, and particularly not with the required extensive participatory elements. Nevertheless the emphasis on scenario building allows to sketch alternative descriptions of possible futures for rural regions in the EU. The future perspectives developed (Meredith 2010) are tools that assist reflection on the implications of contemporary and known issues within a medium to longer-term perspective. Following the analysis of macro- and micro-scale patterns of rural differentiation in the project work, they

present an outline for options of different types of rural regions, mirrorred against a range of scenarios.

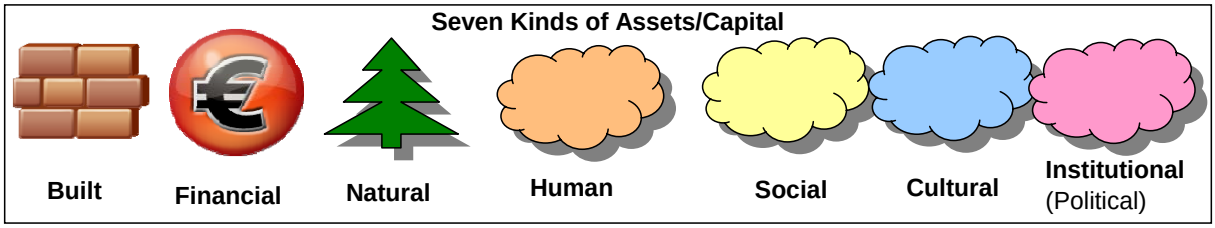
The objective is to consider how future development may reconfigure the territorial capital associated with the different types of rural regions identified in the EDORA typology and, hence, their socio-economic development. This aim has been pursued through the identification of two high level “drivers” of change that have been selected through the project analysis. These two general aspects have been used as axes for future change and parameters for the development of four scenarios.

Climate change and the model of economic governance are therefore selected as the key “exogenous” drivers of rural change over the next two decades. Climate change represents a (global) driver that is substantially different from any other influencing factor, with fundamental importance to rural regions. The question is whether it will be gradual or rapid. Although there is some scope in decision-making, the answer to this question will have a significant impact on which model of governance emerges in the years to come. The variety of approaches for European society stretches out from a “free market” system, the continuation of a system not unlike the present with the market playing a pivotal role or an adoption of elements of an “interventionist model”, which calls for a stronger role of governments to manage future economic and social developments. In terms of policy implications, the range of uncertainty raises some concern for addressing adaptation strategies and the pace of changes to account for. However, due to the significant societal changes related to technological developments and the rapid social, economic and cultural development in a number of countries, i.e. China, Brazil, Russia, and India, global production and consumption would alter in all scenarios – which will impact severely on all types of rural regions. These developments are giving rise to greater competition for natural, human and capital resources. While this might include risks for (specific types of) rural regions in the European Union, it might also raise awareness for rural amenities and lead to more comprehensive programmes to tap the full potential of rural regions.

3.6. *Making use of rural assets*

The project’s analyses synthesises the major drivers of rural change by presenting evidence on both specificity and generalisation. It seems particularly important to address the complementary features of economic, social, environmental and institutional processes, and to attach to any generalisation argument a caveat highlighting the persisting diversity of rural areas. In a theoretical framework the various elements for a comprehensive view on territorial development opportunities have been addressed by more and more sophisticated concepts. For example, “endogenous growth” action had provided a contrast to previously prevailing exogenous support (Stöhr 1985). With an increasing recognition of the importance of inherent assets to both leading and lagging regions, the concept of rural amenities has subsequently altered the state of mind within these regions drastically (OECD 1999). In order to explore the local potential more systematically, different types of ‘Community Capitals’ have been elaborated to understand how resources and expertise can be allied with local assets to build economic and social success (Braithewaite 2009). The application of these ‘soft’ approaches are considered central to reversing the downward trends in low performing (rural) regions (Emery and Flora 2006).

Figure 1 : Seven Kinds of Capital



Source: after Braithewaite 2009

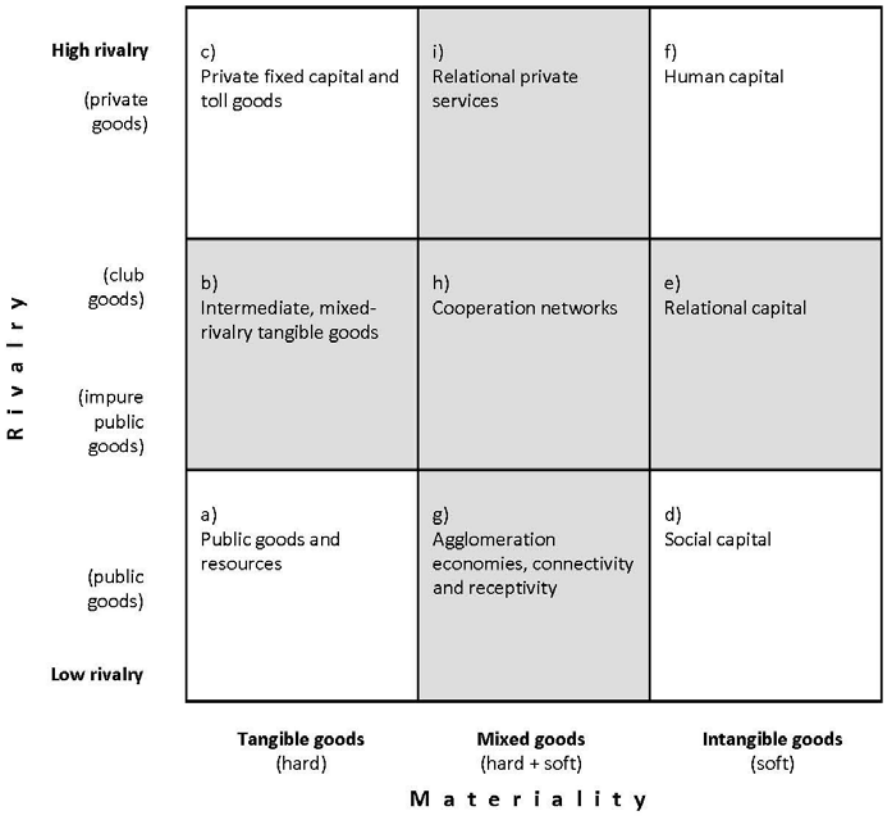
The asset-based approach has enlarged the scope of activities for rural action. It was elaborated first in a local development context, especially in the developing world and not so much as part of EU rural development. Building on the fundamental capital resources of physical, financial and natural capital, the social dimension, cultural context and political relevance for local development has been shown increasingly as core elements of local and regional development. These various contributions have contributed to see regional development influenced increasingly by qualitative aspects and led to a more systemic understanding of local development action. Each of these assets/capitals have a specific role and they are not mutally replicatable (or just to a limited extent). In particular the active role of policy in providing the foundations for shaping and nurturing the development opportunities at the local scale are of core priority. This includes the relevance of public investment at higher levels that are highly influential on the infrastructure and basic environment for development activities.

The set of (seven) capitals used in in these asset based approaches to rural community development have been taken up by an extended version of basic capitals in the development process by Camagni (2008) by providing a theoretical taxonomy of 'territorial capital'. The concept classifies all potential sources of territorial capital in a three-by-three matrix, building upon the two dimensions of rivalry and materiality (Figure 2). The most interesting aspect is that it seeks to intregrate hard and soft elements and puts the capacity "to convert potential relationality into effective relationality and linkages among economic agents" into the centre of the regional policy schemes, labelling the intermediate classes of the matrix the 'innovative cross' (Camagni 2008, 37). Most of these activities have so far not been applied generally in regional policy and potential of regional action thus remained unused. The activities debated in these intermediate cases of activities are seen as innovation as they require new sets of rules and forms of governance which are increasingly based on cooperation and aim at enhancing private/public synergy.

Recently findings from the 7th Framework Programme project, titled "Intangible Assets and Regional Economic Growth" (IAREG) analysed various aspects of terriotrial capital and focused on the assessment of the intangible assets for regional performance The authors found that intangible assets play a crucial role in determining regional performances and "all countries considered show a clear tendency to increase the share of intangibles over tangibles, confirming the growing role of knowledge capital in the competitive behaviour of the firms" (Surińach et al. 2010, 33). They also underline that the local economic environment should be carfelully taken into account when designing and implementing economic policy as the regional features strongly influence firms localisation choices and hence economic performance of regions.

Though this classification of territorial capitals is a clearly structured theoretical taxonomy that is characterized by a two-dimensional structure, there are significant overlaps between the categories and difficulties in allocating policy action to a specific “type” of territorial capital. It thus seems relevant to alert decision makers on the different capital dimensions and raise understanding of “relational” activities, but not a suitable template for developing policy proposals. Paying particular attention to activities that go beyond the ‘traditional’ ones also links to the need to translate abstract potentials into actual assets. This provides a detailed reference for addressing the inter-relatedness of places, as characterized by the overarching theme of “connexity”. The elements amenable for territorial cooperation are core to this structure and are discussed in more detail in Working Paper 27 on territorial cooperation (Courtney 2010). The EDORA analysis, in many respects, refers to the activities addressed within the innovative cross, i.e. the linking activities of territorial capital enhancement. This presentation of the inter-linkages of capital resources as the innovative elements can be seen as an option to map the various types and aspects of capitals available/required in development processes. Taking this concept as an analytical tool for analysing e.g. case studies like the exemplar regions in this project reveals the difficulty to attach the various elements and action to the specific boxes of this schematic presentation. Very often the examples cover several parts of the matrix and relate to a wide set of “capitals”. This underpins the relevance and characteristics of local capital for various development aspects. As such it might seem more appropriate to refer to the more action oriented notion of “asset”, being transferred into amenities of the regions. The two concepts thus focus our concern on paying attention to the various components of capital resources and the requirement to combine the different capital sets to achieve development momentum. The different orientations of the two concepts could inspire practical concerns on establishing policy programmes and actual measures within the rural regions, e.g. focus on medium- and long-term effects of capacity buidling in rural regions and linkages of local actors and population to other other cultures would require a thorough investigation of delivery mechanisms, spin-off effects and effectiveness.

Figure 2: The innovative cross of territorial capital



Source: Camagni 2008

In terms of drawing conclusions on policy impacts it seems important that the degree of regional disparities has not been significantly diminished over the last few decades. Though regional policy in Europe has been strengthened, and the Structural Funds and the Cohesion Fund have been oriented towards the regions and countries with weaker economic performances, the territorial effects remain mixed. While centres in these areas have gained many incentives and could in theory reduce the gap between their GDP per capita and the European average, differences in economic performances for less accessible parts of Europe (for example the new MS and Mediterranean countries) and within the countries persist. This calls for on-going activities and renewed strategies of regional policy towards non-urban regions.

Evidence from the previous work in the EDORA project suggests that there is an opportunity to address policy action in non-urban contexts that develops specific assets which are core to regional development. The exemplar regions , as well as the thematic reports highlighted numerous aspects for activities pointing in this direction. The policy implications from these reports have been summarized in the following list with the aim to reveal the contribution to building place-based assets. They were grouped into “basic” assets, infrastructure, social and cultural elements, territorial cooperation activities and (regional) governance issues. The differention into the asset domains is thought as illustration of exemplary aspects to which policy intervention could apply. It seems particualrly important to develop the scope of assets recognized at the regional level. This includes activities to ensure the efficient provision of

public services for the local population. As these set of assets is considered fundamental to any further regional development it is termed here as a group of “basic” assets that requires priority in policy considerations. As cooperation is another form of action that tends to have a specific place in developing local actions and in linking to exogenous actors this aspect is analysed in more detail through a specific work package (Courtney et al. 2010).

Table 3: Policy Implications from EDORA analysis

Asset Domain	Objectives	Opportunities	Constraints	Forms of Intervention
Develop “basic” assets	- Nurture local assets and raise awareness - Ensure efficient public services	Sector adjustment, labour market, improved education levels, open space; open space and high environmental performance	Lack of critical mass, innovation and access; Sparsely populated and peripheral locations	enhance local and regional products, focus on quality schemes; diversification activities; address whole set of rural assets
”Infrastructure” development	- Improve accessibility - Adapt new transport and communication technologies to rural needs - Address underestimated natural capital	highly developed transport systems, virtual connectivity; recreational values	Gap to provision level in centres; in relation high costs per unit; Limited awareness of “soft” infrastructure	Targeted mobility projects to enhance public access; ICT coverage in rural areas; economic use of natural capital (environmental assets)
Social and cultural assets	- Empowerment and local involvement - Make use of cultural heritage - Enhance social capital - Demographic change and new social groups (migration) - Reduce social exclusion / deprivation	Social and cultural changes globalisation of local population new incentives by incomers; full integration of all stakeholders and social groups	Traditional views and high reliance on region specific pathways; closed relationships and overreliance on “bonding” social capital; marginalisation experienced as overwhelming threats to many (peripheral) regions reduction of social welfare policies	Integrate culture programmes in local action (e.g. Leader); intensify lcoal participation Projects highlighting role of immigration; exchange programmes; social services provision Targeting specific groups (young, women, handicapped etc.)
Territorial cooperation	- Strengthen urban-rural linkages - Increased flows and networks	Counterurbanisation localisation agenda, in-migration, (alternative) food networks, externalities	Lack of networking and inclusion, outflow of peole, limited numbers and size of partners, poor infrastructures, conflicts, “border” constraints, complexity of governance, inertia and lock-in.	Village action groups, joint marketing ventures, strategic planning, service hubs and polycentric development, regionally coordinated projects (e.g. Leader), trans-territorial cooperation.
Governance	Integrate sectors and different “territories” - Provide for vertical/horizontal coordination - Enhance private-public service development	high demand on integrative solutions; increased understanding on connectivity; Dependence on new actors and relationships	Complex set of arrangements, often beyond capacity; vague concept and high reliance on policy forces; long-term aspects of institutional development	Regional for a and vision processes, integrating a multitude of stakeholders; scenario development and future perspectives; comprehensive, territorial-oriented management; Programmes accounting for contrasting parts of region

This overview relates the policy action fields selected to relevant opportunities, constraints and exemplary forms of intervention recognized in a region. In terms of policies, it was noted in the analysis of the exemplar regions that whichever type of interaction between places is seen as more important in explaining rural change will suggest a different focus for state intervention. Thus, if rural areas' spatial differentiation were explained primarily in terms of proximity to cities, governments might be expected to prioritise investment in transport infrastructure and physical accessibility to bring more rural areas within urban zones of influence, encouraging a greater reach of commuting into urban labour markets. Other approaches would concentrate rural places' strategies on their own endogenous potentialities in interacting with places near and far, drawing on their social, cultural and institutional assets. In many examples the high number of local actors and the need for linking to non-local actors has been highlighted as a common feature of current policy approach and local practice (for a detailed discussion of business and food networks see Courtney et al. 2010). At higher levels governments might instead engage in a much broader range of interventions, building institutional capacity and framing social capital development; investing in education, training and digital inclusion; and fostering local entrepreneurial spirit. Furthermore, the thematic reports address most of the "capital" dimensions, and in many cases the issues are relevant for several of the place-specific assets. Nevertheless the thematic analysis underpins the need for targeted action on soft forms of territorial capital that are, however, much more demanding on governance and private actors. These aspects related with cooperation activities have been explored in detail in WP 27 and provide an important background to readjusting relevant policies.

From the synthesis paper (Lee et al. 2010) it was concluded that both types of intervention are vital, but that the second, i.e. a focus on "soft" measures and relational aspects of policy support, has been relatively neglected in many rural areas. The experience of the Leader Community Initiative and other local action programmes would provide interesting examples of empowerment and pooling local and regional resources towards enhancing the "soft" development measures, and in particular relational capital. The high profile attained by these initiatives, despite the comparably little funding, denotes the decisive role of the applied measures for the local actors. It illustrates that there is a breadth of the range of interventions required in many rural areas which represents a challenge for the coordination and integration of policies among the plethora of agencies engaged, not only horizontally within the area but vertically through multi-level governance.

Institutional development has been acknowledged as a core dimension for policy reform, but, as the relevance in the discussion on making use of place-based assets reveals, is a highly demanding long-term process. Rural development activities are situated in a traditional legacy and link to "historical pathways" that dispose of context specific features and a high resistance to institutional changes. Pilot action schemes, like the Leader programme or other local action programmes had an initial impact on the local institutions and stakeholder involvement, but had to realize their limits as soon as they were raised to mainstream programmes.

In all the debate and experiences developed so far on capacity building and empowerment activities in rural regions it has to be emphasized that significant tensions emerge for rural action. These are due to the implications of external forces where European and global

economic, social and cultural changes bear considerable significance for rural regions. In searching for local responses to these global processes it seems decisive to make sure that power, autonomy and control relations are kept at the local level to ensure that local people benefit. The so-called “bottom-up” approach highlighted as a flagship approach to local programmes, like the Leader programme, is a starting point in this regard. It seems important to examine the diversity of local political responses with the aim of addressing social integration in this process (Halfacree et al. 2002). In a rural context this means that local actors are specifically linked to a bundle of their resources and assets, and any development strategy needs to pay attention that they retain ownership of “their” assets in the process of using them for development.

Finally, reflecting on how these insights and the typology of rural development opportunities might be translated in policy formulation and into a multi-level governance system, leads to issues well beyond the current programme structures and implementation. Some of the elements have been raised at various occasions in the policy debate (see above, sub-chapter 1.2), mainly being influenced by sectoral policy and stakeholders views. The difficulty of addressing the whole set of regional assets or the wide range of ‘territorial capital’ poses also considerable legal and administrative challenges. One possibility would be for the Commission to seek to develop a menu of policy measures which would allow governance stakeholders at all levels to address the particular problems of their own (non-urban) area, as implied by the subsidiarity principle and embodied in the former Community Initiatives, like the Leader programme. With the recent experience of mainstreaming of the Community Initiatives a similar process was initiated, but the consequences from the considerable administrative changes on the contents and process of Leader action are not yet fully identified. It seems that the high aspirations were not realized, but on the contrary the autonomy of local action groups has weakened in many contexts. This has also made reliance on endogenous potential much more difficult. Unfortunately, it seems that all in all institutional development has not progressed at the same pace (as programme targets) and opportunities might be missed in the current period (Strahl et al. 2010). The insights from EDORA, and the typology, could be elaborated to ensure that such a menu of policy measures was sufficiently comprehensive to meet the challenges identified for the range of ‘ideal types’ of Europe’s diverse rural regions. Such a tool could then be used by DG Agriculture in refining the RDR for the period post-2013, by DG Regio in similarly refining cohesion policy instruments, and by local and regional stakeholders in considering the options appropriate to their own area strategies.

4. Towards a place-based cohesion policy (recommendations)

4.1. *Targeted policy approach*

At the spatial scale the policy goal of rural development is twofold: to ensure development of rural spatial units and make sure that disparities are bridged. However, the recent debate largely extends this perspective and includes two more activity driven goals: One that focuses on mobilizing underutilized resources in various types of regions and releasing potential of (rural) regions, and the other to conceive Cohesion Policy as a core process contributing to strengthening solidarity in the integration of European spaces (Ahner 2009). The policy context originally was set by the *Lisbon Strategy,* but recently superseded by the

rise of discussion on the Europe 2020 Strategy. The Lisbon agenda's aim is to make the EU "the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion, and respect for the environment". The First Action Programme for the implementation of the territorial Agenda of the EU mentions a number of key policies, based on their relevance in terms of territorial impact. The most important are those with the largest budgets, i.e. Cohesion Policy and the EU Rural Development Policy, but Transport Policy and Sustainable Development Strategy are also relevant policies. Moreover, the Integrated Maritime Policy, the Environmental Action Programme, the Research and Innovation Policy and Neighbourhood Policy, have a significant territorial impact. Although not mentioned in the Territorial Agenda Pillar 1 of CAP, Cultural Policy and Employment and Social Affairs Policy should also not be neglected given their spatial implications. The on-going policy discourse is intensively seeking to address the challenges of cohesion policy. Set in terms of multi-level governance, the framework focuses on learning processes in European spatial planning, although no agreed overall picture can be expected as a tangible outcome (Faludi 2009). Currently it is struggling with issues of harmonizing the divergent perspectives (EC 2008) on territorial cohesion and finding the future definition and appropriate scales of policy intervention (Ahner 2010).

Policy *analysis* relating to current rural development practice is often as segmented as policy *application*. It is mainly limited to CAP Pillar 2 as the "tight" Rural Development Policy and Structural Funds action in non-urban regions. As the implementation of various policy aspects is split to the different "sectors" a comparative overview can only achieved by drawing on various studies. So far the focus has been on "Rural Development Programmes" implementation as the realization within the CAP framework. These account for about 24% of CAP expenditure or about 10% of the overall EU-budget for the period 2007-2013. However, Structural funds spending on rural regions attains about the same level as the ex-post evaluation of Cohesion policy programmes 2000-2006 for EFRD programmes specifies, at least for the five Member States analysed as case studies (metis 2009). If these programme levels seem restricted one has to take account that main Territorial cohesion policies assume the bulk of the EU Budget: With Structural Funds - SF (about 369 billion €), Common Agricultural Policy - CAP (367 billion €), the Research Framework Programme – FP (54 billion €) and the Competitiveness and Innovation Framework Programme - CIP (almost 4 billion €), the relevant policy fields address more than 90% of the total EU budget.

Policies for rural areas have been largely equated with a focus on rural development concepts and priorities emanating from the application of RDPs as the Second Pillar of CAP. The main debate therefore was on increasing the policy relevance within CAP and all coordination activities with other policies were seen as additional action. The priorities addressed within the RDP are: Increasing the competitiveness of the agricultural and forest sector (axis 1), enhancing the environment and countryside through support for land management (axis 2) and improving the quality of life in rural areas and promoting diversification of economic activities through measures targeting the farm sector and other rural actors (axis 3). In addition the implementation of local development strategies through Local Action groups is now continued within the RDPs (Leader mainstreaming) as a horizontal task. Though this framework extends beyond the farming sectors, the actual application of the programme in the Member States is almost entirely limited to agricultural

actors. Their relevance for the MS is quite diverse and hence the specific context and impact on rural regions has to be assessed case by case.

Yet all of the policy action addressed in the territorial cohesion debate would in fact be relevant. A place-based approach needs to address the considerable difficulties, faced by researchers and evaluators, of coordinating and cooperating across different sectoral “worlds”, with separate sets of actors and stakeholders, and different development views (Copus and Dax 2010, p.66). This perspective is one of the core arguments of Fabrizio Barca, director-general of the Italian Finance Ministry in the synthesis on policy options for regional policy. In the so-called Barca Report, published by the Commission in April 2009, he argued "Cohesion policy, conceived as a place-based development policy, is the only modern way for the EU to perform its development task," adding then that "a development policy for all places of the Union is indispensable for the Union's very existence. Those who limit EU interventions to 'poor' member states wrongly assume that cohesion policy is a mechanism for financial redistribution" (Barca 2009).

However, Barca specified that regional policy requires a change of direction especially with regard to assessing the results obtained through specific indicators. He called for the role of the European Commission to be strengthened and a negotiation process that increases the scope for discussing goals through the simultaneous debate on resources, governance and goals for the next funding period.

The European framework for the current programme period has provided some possibilities to take care of the country-specific situations and needs. The national strategies for spatial development and rural development require the geographical divergences to be addressed and the main spatial strategies for each country to be set out. A realization of functional area zoning and an increase of territorial cooperation puts a stronger emphasis on the local level (micro-regions). But in other cases functional areas require cooperation on a macro-regional scale (e.g. Baltic Sea area, Danube basin).

4.2. *Addressing the complexity of territorial development*

Rural development policy delivery still is primarily focused on agriculture and hardly takes sufficient account of broad (territorial) rural development. The policy framework and acitivities “address only a subset of the wide array of issues relevant to the development of rural regions and the well-being of their inhabitants” (OECD 2006, p.56). As more disaggregated analysis reveals, rural areas are extremely diverse and rural policy making thus requires context-specific strategies. The EDORA project provides information on the different types and elaborates on issues surrounding typologies and policy trajectories.

Cohesion policy therefore requires specific attention to governance strategies that increase impact assessment of a range of policies and focus on policy coherence. Since local and regional contexts run the danger of becoming submerged in large-scale decisions, it is particularly important to address the characteristics of specific geographical areas and the needs of different types of rural areas. Innovation at the local level thus has to focus on governance issues to achieve policy integration and increase effectiveness of rural policies.

Cohesion aspects with regard to the challenges of sustainable development are particularly relevant for different “types” of rural regions and have an increasing relevance as a counterweight to concentration trends. They include a comprehensive assessment of the continuing processes of EU economic and social integration, globalisation and economic restructuring; the development of information and transport technologies, taking account of the specific needs of peripheral areas; the reflection of the changing political geography of Europe (enlargement, regionalism); and the trends in socio-demographic structures of EU population and environmental degradation threats (energy supply, climate change implications).

Policy implications will have to focus on the interrelations of regions and highlight the need to value the opportunities of different rural regions. The aspiration to raise understanding of the nexus between different sectoral policies, contributing to either integrative concepts or increased policy coherence, is as important for non-urban as for other regions. Given the high complexity of network structures in a multi-level governance system, it cannot be expected to act on standard development strategies for all regions. Within a focus on non-urban development some general principles will be highlighted so as to take full advantage of the differential opportunities in these areas, which has hitherto often been overlooked.

4.3. *Principles for non-urban policy orientation*

Territorial cohesion is understood as a concept that may vary according to contexts and cultures. Nevertheless, given its complexity and the need for a targeted approach, a number of guiding principles and main elements can be summarized that are particularly relevant for the situation in non-urban environments. Many of these recommendations have been addressed at various stages of the project. Moreover, a host of recent policy targeted research (e.g. Bryden and Hart 2004, Talbot et al. 2009, Copus and Dax 2010) has addressed various elements of the policy arena, primarily on rural development policy implementation, which can also serve as a backdrop to the discussion of the following elements for non-urban policy orientation.

General conditions

There is a significant didactic role in analyzing rural development processes and in raising understanding of rural challenges and opportunities. All too often a sectoral bias still dominates which makes a comprehensive assessment of these challenges almost impossible. Further activities to achieve meaningful statistics for territorial comparison (beyond agriculture) are crucial to enhance benchmarking and “success” measurement.

National and regional contexts determine policy implementation to a high degree. This path dependency has to be taken into account in policy reforms, and policy traditions and “good practice” should be used for nurturing creativity and innovative action in the future.

Cohesion policy principles

- Territorial cohesion addresses a series of “generic” policies that should be analysed for their territorial impact (in realistic terms) and coherence and cohesion aspects.
- The full range of territorial capital can be considered relevant. A strategic choice of core elements is extremely important in a non-urban context. Empowerment of local actors,

cooperation (in various dimensions and with various meanings) and an increased attention for social and cultural development aspects are of special priority.

- Particularly the social and cultural activities imply a long-term vision of territorial development. Similarly, behavioural aspects, which are widely related to culture-specific reflections on addressing societal challenges, have strong implications on future action. Climate change, for example, underlines the need for taking into account a long-time frame and necessitates a fundamental change in policy considerations.
- Understanding rural environmental and recreational public goods is decisive for the specific territorial opportunities in these areas, linking it to other sector activities, particularly tourism.
- Selected policy strands would constitute a mix of policy interventions to act at macro, meso and micro level. At the macro level the selection of explicit Territorial Cohesion policies, policy changes and general issues of technology and energy development would be the prime elements. Policy implementation at the meso level would focus on the place-based strategy, networks, interventions implementation, subsidiarity and governance issues, and the regional response to crisis. The most important will be that all efforts are taken to mobilize territorial potentials at lower levels and to conceive local actors as the main stakeholders.
- The diversity of rural areas suggests that policy processes cannot be executed through standardised action but have to be framed in terms of a targeted and tailored support mechanism.
- This implies new governance settings that have been designed in the terms of the "place-based paradigm" (Barca 2009). The main issues to be addressed in this approach are selecting priorities, the important role of networks and public interventions, subsidiarity and effective governance and realising the relevance of each of the various spatial levels (macro to micro).
- Policy interventions should support a "neo-endogenous" process to develop combinations of "measures" for each region, based upon the systematic macro-scale variation across Europe, as described through the framework of the EDORA typologies. As the specific constellation of local and regional assets (both tangible and intangible) vary in a more unsystematic way across Europe, these would have to be assessed through local or regional audits. Framing the discussion of different development perspectives in the various meta-narratives as described within EDORA might enhance involvement and contribute to a wider set of aspects and increased linkages of rural action.

The proposed regional audits suggest a process to take full account of development assets and explore required and most effective activities for each region. These considerations ought to be supported by general guidelines that translate the framework of regional typologies and meta-narratives into a set of relevant intervention priorities (see Table 4). In particular it is necessary that adequate methods to take account and assess the level and development of soft measures provision in the regions are elaborated. The interventions proposed have to take account of the wide range of local assets (see Figure 2, above) and

hence underscore the need to tie concrete strategy development as closely as possible to the actors' level. However, there is also a need for a more appropriate balance in EU rural policy as illustrated by the matrix of Table 4. Of course, this is a tentative presentation of policy interventions and priorities might differ between stakeholders, regional representatives and cultural contexts. Moreover, the overall assessment of the whether the implications are dominated by (external) challenges), fairly balanced or characterized by their specific opportunities is influenced by the policy interventions and might undergo significant alterations over time.

Table 4: Linking Meta Narratives, Intervention Priorities and the Typologies

Type/ Meta-Narrative	Agri-Centric	Urban-Rural	Globalisation (Restructuring)
IA **IR** **PRA**	o Agri-environmental measures. o (Re)training of former farm workers.	o Land use planning. o Environmental policy. o Housing policy for "traditional" rural low income groups.	o Support for "traditional" rural population which is left behind by the NRE (education and training, community development).
PRR	o Farm structures policy o Local and quality products marketing o LFA support? o Training o Diversification schemes	o **Broadband provision.** o **Human capital development (entrepreneurship, IT)** o **Business network support for SMEs** o **Support for diversification.**	o **Broadband provision.** o **Human capital development (entrepreneurship, IT)** o **Business network support for SMEs** o **Support for diversification.**
Agrarian	o **Farm structures policy** o **Local and quality products marketing** o **Training** o **Diversification schemes**	o Local and quality products marketing. o Human capital development (entrepreneurship, IT)	o Support for diversification o Human capital development (entrepreneurship, skills for new activities). o Inward investment of NRE activities.
Consumption Countryside	o Diversification schemes o Training (hospitality services etc) o Local and quality products marketing o LFA support?	o Diversification schemes o Training (hospitality services etc) o Local and quality products marketing	o Diversification schemes o Training (hospitality services etc) o Local and quality products marketing.
Diversified (Secondary)	o Agri-environmental measures. o (Re)training of former farm workers.	o Agri-environmental measures. o (Re)training of former farm workers. o Housing policy for "traditional" rural low income groups.	o **Diversification schemes.** o **Human capital development (entrepreneurship, IT)**
Diversified (Market Services)			o **Measures to preserve local cultures, strengthen communities etc**

Source: Copus 2010

This complex policy framework requires a realistic assessment of the potential and pace of policy reform. Given the prevalent inertia towards policy changes, it is crucial to suggest incremental steps. In particular the gap between public “rural development” discourse and policy implementation has to be addressed by increasing the links between research and policy and fostering impact assessment. This discussion has to extend beyond the “traditional” rural policy dimensions to make explicit reference to emerging rural opportunities.

An analysis of programme application reveals that the relationship between Rural Development Policy and Cohesion Policy is still immature and that realistic integration of policies is not yet an option. It should be the priority to overcome the segmentation of administration and provide “territorial” analytical frameworks. Playing on a dialectic between continuity and change, it, for example, might become important to focus on a model of “disintegrated rural development” (Shucksmith 2010), engaging in a continuous process of negotiation to achieve desired outcomes.

Box 2: Urban-rural narratives and spatial trends in Europe (Spanish Presidency, 2010)

The Spanish Presidency engaged in taking up the policy debate on spatial trends and aimed at a stronger integration of the scientific and political debate. It draws particularly on work related to rural-urban linkages and spatial dynamics in Europe and analysed the opinions of experts in this field. The following major trends on rural-urban issues and spatial dynamics have been based on interim findings of various ESPON projects, including ESPON 1.1.2 project on rural-urban relations and EDORA, and documents prepared in the course of the discussion of the EU Green Paper on Territorial Cohesion as well as international debate of territorial dynamics (e.g. within the OECD):

1. Fuzziness of rural and urban geographies
2. New geography of flows: beyond core and periphery paradigms
3. Networked relationships: “Connexity” paradigm
4. Towards place-based development strategies: promoting attractiveness
5. Economic diversification of rural areas
6. Territorial identity still matters
7. More efficient and sustainable management to reduce territorial conflicts
8. Providing universal access to basic services
9. Empowering local communities and project-based partnerships
10. Cooperation in territories with variable geometries

It is apparent that the focus of the discourse shifts from a classification typology separating urban and rural spaces towards a concept that is more oriented towards the relation between different spaces. There is a widespread acknowledgement of changes underway which are however not taken up fully in actual policies. This leaves lots of questions for the pending policy reform considerations and simultaneously indicates the need to include more appropriately the different narratives in it. The thrust of ideas so far seems to be on utilizing the preexisting assets and less on nurturing activities to increase attractiveness and shape amenities of rural (and urban) areas.

Enhance the scope of assets in non-urban regions

This working paper builds on the analytical foundation for a more appropriate territorial cohesion policy, provided through the evidence developed in the EDORA project. It aims particularly at taking account of contemporary rural realities. With the typology framework of three distinct dimensions in mind (accessibility, structural aspect and performance dimension) the overlaps and linkages of these dimensions at the regional level turns out to be a crucial issue. Strict categories of rural and urban places will no longer reflect the implications of the different analytical dimensions. Policy frameworks would have to be adjusted according to their specific hierarchy of objectives and could alter from case to case. This refers back to the notion that building typologies is not a technical task, but categorizes areas according to the relevant *policy* targets (OECD 1994). The policy implications for addressing the opportunities of a "place" are analysed against a wide set of (place-based) assets and underscore the crucial relevance of cooperation activities and linkages to be enhanced by policies of different administrative levels. This links back to the analysis of the overarching theme of increasing connexity highlighted as general trend for non-urban regions of all types. The actual conclusions have to be specified through case by case approaches translating regional performance, structures and relationships into conclusive strategies and place-based policies.

The complex policy framework and institutional inertia towards policy changes, suggest expecting incremental adaptations of existing policies. Yet, extending the time-frame over the next 20 years underpins the need to consider long-term aspects, like climate change and the reference of the structure of the economic model towards these changes, already in current reforms. Postponing decisions might neglect some of the opportunities or imply (adverse) effects on the potential of and choices for non-urban regions.

Spatial trends across Europe indicate the increased inter-relations between urban and rural areas. The analysis of the Spanish Presidency highlights these trends and argues that traditional distinctions between the spatial categories might lose relevance and a more integrated analysis seems more appropriate (see Box 2 above). It has been highlighted in the analysis of driving forces and specific features of rural areas that local assets that are particularly related to natural resources and land use issues might play a much more prominent role for rural parts than for urban parts of our regions. The valorization of cultural heritage, quality of landscape and environmental performance is hence a predominant dimension in developing the asset base for non-urban regions. However, this is by no means enough, and would neglect the recent changes and rising challenges of these areas: Social inclusiveness, cooperation and involvement of local actors, has become an essential economic asset that contributes to make rural places more attractive. Promoting attractiveness of the non-urban regions is therefore core to future policies. As the analysis of regions to define a "typology" shows, diversification of rural areas is a differentiating factor. Yet, rural regions still are strongly related to the task of achieving sustainable resource management systems. However, it seems important to address the full range of assets available and required for regional development. With the persisting gap between urban and rural parts in terms of access to basic services, a high rate of social exclusion and development gaps in economic indicators (see Spanish Presidency 2010), there is an on-going need for integrated policies in non-urban regions.

These approaches have to be supported and carried out through local/regional actors and hence empowering local communities is central to any effective “rural” development policy. It seems particularly difficult to manage the increasing territorial complexity and cooperation initiatives are needed at all levels. The increased relationships underpin the relevance of paying particular attention to networking activities and concepts of territorial governance, achieving effective vertical and horizontal coordination. The analysis of the potential for territorial cooperation within this project (WP27, Courtney et al. 2010) has underpinned evidence that the concept of territorial cooperation has remained ambiguous, with policy interventions lacking clarity and direction, particularly in a rural development context. Having in mind the dynamic aspects of ‘ideal’ territorial cooperation and network activities, the difficulties and constraints in the application are often overlooked. Exclusion of groups of inhabitants, lack of capacity, aspects of distance and accessibility, and complexity of governance and decision making are severe constraints in a traditional administrative context. Territorial cooperation has to be defined and operationalised in such a way as to minimize the negative factors and effects. Many efforts have been overly biased towards simply building and strengthening highly localized networks, neglecting important aspects of non-local domains of economic activity. It is particularly the balance between challenges and benefits in rural-urban partnerships and the synergy between strategic and local level governance that are required to capitalize on the opportunities of territorial cooperation. The emphasis of the strategic global links seems therefore the main neglected part in most horizontal and vertical cooperation approaches. Territorial cooperation needs to become more central in future cohesion activities, addressing both its contextual aspect and the requirement of a strategic, balanced approach to further develop and build knowledge and capacity across regions and member states.

5. Conclusions

Territorial Cohesion is a policy concept that is influenced by a host of sector policies. Its main objectives cannot be matched adequately by simply adding up the various activities of these policies, but have to be addressed in coordination and strategic priority setting processes. The focus of this working paper is the role of different types of rural regions in these policies and the current discussion of policy reform. It elaborates on a differentiated view of territorial perspectives, and on the implications for policy to promote competitiveness and cohesion in rural Europe, drawing from the previous work packages of the EDORA project. It seems particularly important to look ahead to the implications of the discussion of EU2020 priorities and its flagship policies. Most of them include strong spatial impacts and are particularly relevant for rural regions. The following key messages for implications for cohesion policy in rural Europe arise from the project analyses:

- A clear definition between rural and urban parts of a country is often looked for, but represents less and less the *socio-economic reality* of spatial allocation. Different dimensions of social, economic and environmental indicators are highlighted in the regional typology exercises (like the EDORA Cube), addressing the need for differentiation according to the underlying policy objectives. A strict separation of rural and urban regions can provide an analytical tool, but would hardly be sufficient to cope with current demand of territorial cohesion policies.

- This implies that *interaction* between places has increased substantially and is now a common characteristic to virtually all (types) of regions. The overarching narrative of “connexity” presents a general framework and indicates the need to pay increasingly attention to “relational” aspects.
- Intensification of local urban-rural cooperation alone seems not sufficient to address the core significance of actual inter-relations of regions. Even if globalization trends are commonplace, *“global” linkages* are hardly included in relevant policy approaches.
- “Rural” or non-urban regions are to be enabled to draw on the resumption of concern for solidarity in territorial cohesion discourse for lagging regions. The arising *opportunities for rural regions* have to be nurtured by .addressing its specific potential.
- Policies need to remain realistic in referring to particular assets on which people can draw in shaping the future of their (rural) places. The pitfall of “stylized fallacies” about agrarian and consumption countryside have to be avoided and more realistic generalizations developed. These might include a more comprehensive understanding and utilization of “territorial capitals” and a targeted approach towards conceptualizing relevant *rural assets* as main development opportunities; the pro-active support of appropriate cooperation action as core policy activity and contribution to enhancing linkages and empowering actors; and an analytical view on geographical (local urban-rural and “global” cooperation) and non-spatial relationships.
- These policies cannot be realized by exclusive programmes for different types of regions, but would have to be conceived through *place-based strategies* that seek to enhance the particular amenities and respond to the development needs of the specific regional contexts. Again it is important to address the full range of assets and not be overly influenced by historic views on regional challenges and opportunities. A menu of policies referring to the different dimensions of social, cultural, economic and natural assets and institutional development of a region would provide a range of instruments from which priority measures would have to be selected.

These findings link to the recent discussion of territorial cohesion policies which emphasize the need to engage in a flexible place-based policy to ensure that assets are exploited. Innovation and growth can thus extend also to remote, rural regions if respective opportunities are seized. Cohesion policies should be oriented at this altered perspective and aim at focusing on the development potential in all areas.

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