# ESPON PROGRAMME 2013

# Targeted Analysis PROJECT 2013/2/4

# SUccess for convergence Regions' Economies (SURE)

# Structured empirical analysis for convergence regions: identifying success factors for consolidated growth / SEARCH

# INTERIM REPORT

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The present Interim Report of ESPON Project 2013/2/4 is a team effort coordinated by the Lead partner University of Naples “Federico II”.

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## Objective

The present Interim Report portrays **three analytical steps** towards the final goal of the project to better understand and explain economic imbalances between different European regions, providing insight into the processes and factors behind the economic development of Convergence Regions. It also sets out the further proceedings of the TPG for the Final Report.

## Methodological Focus

In this report particular attention is paid to the description of the **methodological steps** towards the **identification of new factors and indicators** responsible for the success or failure of European regions' economies. Furthermore, first results from the literature review, the questionnaires and the interviews are presented here; however there is a strong focus on the methodology. The latter is the reason why this report can be understood as a "technical report" including some statistical findings rather than a "policy report". The interpretation of the results gained through the diverse analyses will be broadly presented in the final report of the project.

In the **first step** of analysis, different potential factors which are of importance for the success of regional economies have been retrieved from the literature (chapter 1). Furthermore, indicators which describe the factors have been allocated and ten hypotheses for the next steps of analyses have been derived (chapter 1.9). In the relevant theses which must be observed in the further analyses, we suggest that knowledge and innovation potential, population, economic structure, accessibility and connectivity, EU funds, administration and governance, quality of life and decentralisation have a positive effect on regional economic success. Taxation and regulation, on the other side have a negative effect.

Based on the results of the literature, the relative importance of these different aspects is still not known, in the following referred to as factors. The **second and third steps** are both part of the quantitative analysis and shed light on the relative importance of these different factors. To reach this aim, different regional actors have been asked about their opinion in regard to the reasons for the respective regional economic performance and the relevance for these different factors in in-depth interviews (**second step**) and structured questionnaires (**third step**).

## Interim results

The methodology of the content analysis for evaluating the interviews according to different relevant factors and their importance has been set up (chapter 2.1.1). Due to the fact that at the time of the analysis for the Interim report not all of the interviews have been at our disposal, we cannot draw final conclusions here. Nevertheless, a reference example of analysis has been made for the region of East Macedonia-Thrace (chapter 2.1.2). One can assume that the factors of the literature review have to be completed by some more factors (e.g. the distance to the economic centre of the country or the development of the surrounding areas) that are of significant regional importance.

In step three, a real statistical weighting has been conducted with the help of the structured questionnaires (chapter 2.2). Closed questions like "Which of the following aspects (e.g. easy

access to credit) are necessary for your region to be successful?" allowed for a concrete assignment of values to different factors which will be of importance also for the econometric analysis.

We learned here that factors which are of utmost importance for convergence regions are the right allocation of EU funds (the EU funds amount to a much lesser extent), connectivity (ICT), innovation potentials and accessibility. Factors that are of importance for phasing-in regions like Valencia are on the contrary quality of life (good schools, a safe environment etc.), accessibility, population and the amount of EU funds.

**Further Proceedings**

In chapter 3, an outlook of the final report is provided, including a first conceptual framework for the case studies which will be conducted in each of the stakeholder regions (chapter 3.1). Furthermore, first results of the quantitative part of the analysis are presented in chapter 3.2, granting an insight into chosen factors and respective indicators as well as data availability.

# 1 Literature Review

The huge body of recent literature devoted to the issue of regional economic competitiveness and catching-up processes in correspondence with EU cohesion policy (Crescenzi 2009, Bachtler & Wren 2006, Bradley, Petrakos & Traistaru 2005, ESPON 2005, ESPON 2006a, European Commission 2007a etc.) reflects the immense interest among scientists, politicians and the public in this topic. The complexity of economic competitiveness and politics is shown for example in Kramar (2006) who examined the conflicting goals of economic growth, in the following referred to as "growth", and cohesion policy with regard to economic incentives. The success and well-being of an economy (regional or national) is thereby most often measured through economic growth, which in turn is described by variables such as gross domestic product, employment, wages and salaries and so forth (Solow 1956, Barro 1991, Romer 1990). Since 1986, EU cohesion policy has been an important EU policy instrument (e.g. European Commission 2007a) through which regional differences in both an economic and structural sense are intended to be reduced over time. Today, most of the money, which is split into four "Structural Funds", goes to the Eastern European member states. Dealing with EU enlargement, studies of Brülhart et al. (2004) and Pfaffermayr et al. (2004) investigated its impact on regional growth. Bräuninger and Niebuhr (2008) examined the convergence process among EU regions between 1980 and 2002, taking into account the effects of spatial heterogeneity, while Bachtler and McMaster (2008) regarded the influence of Structural Funds in EU regions.

However, the common goal of most studies - mentioned above and in the current review - is the determination of factors that ensure the successful management of cohesion policies and factors that help to shed light on the regional differences in general economic performance. Especially the latter factors are particularly pertinent to determine the ability of ensuring the successful management of cohesion strategies.

Summarising literature findings on these topics, the Case Network Report (2008) assesses that there is "still room for further empirical research on factors leading to convergence and divergence in economic development among different groups of countries". At this point, the present study contributes by providing additional empirical research to better understand the processes and factors behind the economic development of regions against the background of cohesion policy. Both a qualitative and quantitative approach are pursued.

In the current EU funding period (2007-2013), three different objectives are defined within the framework of cohesion policy: **convergence**, **regional competitiveness & employment** and **European territorial cooperation**. All three of them are mainly financed through the European regional development fund (ERDF)[1]. The first objective, convergence, aims to accelerate economic development in the least developed regions of Europe. In regions covered by the Convergence objective, "ERDF focuses its intervention on modernising and diversifying economic structures as well as safeguarding or creating sustainable jobs, with action in the following areas:

- research and technological development (RTD)

[1] See European Commission: Regional Policy Info. (http://ec.europa.eu/regional_policy/funds/feder/index_en.htm 4.8.2009)

- innovation and entrepreneurship
- information society
- environment
- risk prevention
- tourism
- culture
- transport
- energy
- education
- health."

The following sections provide an outline of the findings of the literature review including the results of former ESPON[2] projects. The different areas of convergence as outlined in the ERDF, listed above and defined by the European Commission, are consequently grouped into several chapters. The main aim of the following literature review is to reveal possible factors of influence for the success of convergence regions' economies.

On the basis of the newest insights into the economic development and success of regions and nations, special attention is paid to the topic of innovation potentials and the conflicting goals of cohesion policy: In chapter 2.1, innovation aspects such as knowledge creation processes, R&D, technological development, human capital (including education), entrepreneurship etc. are discussed against the background of asymmetric territorial allocation and put into the context of cohesion policy. Chapter 2.2 explains economic processes in a broader socio-economic context: population developments, distribution and demography are significantly affecting economic processes now and in the future. Concentration tendencies of the population are generally affecting rural areas adversely. One possibility to reverse this trend lies, for example, in the stimulation of growth sectors (chapter 2.3), or in tailored improvements of regional accessibility and connectivity (chapter 2.4). In chapter 2.5, the major aims and effects of the EU funding policy are outlined. Additionally, there are other factors that influence the success of cohesion policy. Beside fundamental economic factors like price stability and low interest rates followed by investment and capital accumulation, the quality of work of public administrations on national, regional and local level is another critical factor (chapter 2.6). Chapter 2.7 gives a short overview of different factors which determine the quality of life in a certain place. Finally it is often external factors, notably globalisation, that are the main drivers behind structural changes at all levels and which have a large impact on economic development and job creation (European Commission 2007a). Chapter 2.8 outlines the relative importance of decentralisation and how unevenly political power is distributed among European regions. In chapter 2.9 a brief conclusion is drawn and insights from the literature review are presented. Nevertheless, the underlying aim in the following sections is to break down relevant economic topics and challenges – if necessary and possible – into a regional and local dimension, as this report is aimed at regional policymakers. The reason is that economic topics on a

[2] European Spatial Planning Observation Network

national scale (e.g. taxation or regulation) cannot or can hardly be influenced on a regional political level.

## 1.1 The regional dimension of knowledge and innovation

"Knowledge is more than a resource – the only meaningful resource of today" (Drucker 1993). To create new knowledge in order to convert it into new products or services and ultimately to raise regional competitiveness, two preconditions must be fulfilled: First, there must be regular interactions between different actors due to the high degree of the division of labour and the high level of specialisation in economic processes. Second, the knowledge creation process depends on what kind of knowledge has been created beforehand and what infrastructure had been set up in order to facilitate this process. Knowledge creation therefore depends principally on the technological trajectory and the evolution of context (Nelson & Winter 1974; Dosi & Nelson 1994, Boschma & Lambooy 1999). Both insights are central aspects of the innovation system concept (Freeman 1987, Lundvall 1992, Nelson 1993). This approach argues that the institutional framework shapes procedural mechanism of the knowledge creation process. This institutional framework has a more or less systemic character, meaning that different actors are functionally integrated in a somewhat confined network or a group that shares institutions (Bathelt & Depner 2003). Moreover, this institutional framework – or innovation system – is not specific to a sector, but influences many sectors. Innovation systems differ between places – be it countries, in the case of national innovation systems approach (NIS) (Freeman 1987, Lundvall 1992), or regions in the regional innovation systems approach (RIS) (Cooke 1992; Asheim & Gertler 2005). Among the latest research into the debate of regional and national innovation systems the argument has arisen that a purely regional innovation system does not exist since major institutions, such as the educational system, are provided by national governments (Doloreux & Parto 2004). Evidence for this result is given for example from Markowski (2007), who showed that the major innovative abilities exist in the Central and Northern European countries due to different policy strategies. Moreno et al. (2005), analysing 175 European regions over the period 1981-2001, also found that innovation and patent applications have been strongly concentrated in Northern and Central European countries. Nevertheless R&D and innovation have a clear regional – and even local – dimension. It is in clusters[3] or other informal networks (based on confidence and hence often on proximity) that knowledge is disseminated and transferred from research and technological centres to businesses. It is also at regional or local level that SMEs seek tailor-made business services and funding adapted to their needs. In this context, the role played by local or regional authorities in fostering such networks or to helping provide suitable services is essential (European Commission 2007a). Other attempts to explain the social and institutional conditions of regional competitiveness have also resulted in the emergence of such concepts as ‘learning region’ (Lundvall 1992, Morgan, 1997; Florida, 1995), ‘innovative milieu’ (Crevoisier, 2001; Maillat 1998), ‘industrial district’ (Becattini, 1992), ‘local productive system’ (Courlet, 2001).

[3] A cluster is defindes as "group of firms in the same industry, or in closely related industries that are in close geographical proximity to each other is meant to include geographically concentrated industries included so-called ‘industrial districts’ (Enright, 1998, 337)

Due to the fact that innovation and knowledge creation are not directly quantifiable and hence immeasurable, there exists an abundance of studies investigating the regional impact of indicators for innovation and knowledge potential such as human capital, education, R&D–activities (e.g. patents and publications) and so forth on economic growth (see e.g. Becker 1964, Glaeser & Saiz 2003, Florida 2002, Jaffe, Trajtenberg & Henderson 1999). The most recent study of the European Commission dealing with the measurement of Innovation (Innobarometer) focuses on innovation spending (including the effects of the current economic downturn), the role of innovation in public procurement tenders, the effects of public policies and private initiatives to boost innovation, and other strategic trends (European Commission 2009).

As Oughton et al. (2002) contend, in the light of the European evidence, traditional innovation policies based on entirely quantitative targets (e.g. the intensity of R&D expenditures) may not reduce and might even increase regional economic disparities. Thus, the relationship between knowledge and economic growth is not necessarily linear. Furthermore, a major insight provided by the ESPON Synthesis Report III (2006a) on the role of different territorial entities (divided into metropolitan regions, small and medium sized cities and rural regions[4]) has been that "Innovation potential, such as R&D and creativity, has a distinct territorial pattern" (ESPON 2006a). Innovation potential is therefore to be found mainly in urban areas and to a smaller extent in the rural periphery. This dynamic, fostered by innovation policies, leads to a more asymmetric concentration of competitiveness over time. According to Rosenfeld (2002), the main barriers of clusters in less favoured regions are:

- Deficits in physical infrastructure
- Lack of access to capital
- Weak technology institutional structures.
- Regional insularity and lock-in.
- Lack of skills and opportunities to acquire them
- Cluster hierarchies.

By contrast, cohesion policy aims to reduce regional socio-economic disparities. Thus one can assume that there exist some kind of inverse relationship between fostering innovation through innovation policy (one of the main aims of the European Union[5]) and cohesion policy because of the unequal distribution of actors within a country. Actors of innovation (enterprises, research labs, universities etc.) are much more concentrated in agglomerations then in the rest of a country. In order to minimize such inequalities and to foster economic development also outside of agglomerations, the general policy aim (of national governments and the EU) must be to foster and

[4] in the following we will refer to this distinction of classifying different regions

[5] "A strong scientific knowledge base is one of Europe's traditional key assets and has allowed us to become world class in several research fields. …. In its broad-based innovation strategy for the EU, the importance of improving knowledge transfer between public research institutions and third parties, including industry and civil society organisations, was identified by the Commission as one of ten key areas for action." (COM 2007).

secure innovation spillovers[6] from the urban economic centres to the small- and medium sized cities and the rural areas of a country.

In Finland for example, regions lagging behind others in terms of innovation built institutional bases in the form of university-industry collaborated knowledge transfer institutions. These institutions are taking part in regional cooperation, boosting the technological and economic transformation of the Finnish economy. Those outward linkages of enterprises (especially with research and development institutions of universities or polytechnics) are relevant mechanisms in less-favoured regions (Schienstock, Koski & Räsänen 1998).

Experiences from a disadvantaged rural area in Ireland show that development processes have been promoted by collective agents who acted as innovators and as real resources for local development. The activity from a voluntary and strongly local development organisation raised opportunities for innovation in local development activities (Pozzoli 2006).

Economic regeneration in any region results from the growth of existing firms and the creation of new enterprises. Both of these processes depend critically upon people, human capital being the rarest and most valuable development resource. In every region, there are a finite number of agents who have the motivation and skills to be successful businessmen, and they are the key to change and progress (OECD 2002).

Education and training are particularly important in the current crisis. In times of recession, budget constraints (in government, households and businesses) tend to reduce expenditure on education and training. On the other hand, due to rising unemployment, demand for training increases. Support for education and training during the current crisis can help displaced workers find new job opportunities and can thus support the restructuring process (OECD 2009).

## 1.2 Challenges : uneven population dispersion and demographic changes

The fourth report on economic and social cohesion (European Commission 2007a) points out that the dominant population trend in European regions is towards an increasing **concentration of** the **population** and economic activity in capital city regions (throughout the EU, with the exception of Berlin and Dublin) accompanied by a higher population growth rate in the suburbs than in the core of the city since the 1960s. Today, in some city regions, a reverse trend of higher growth rates of in first line younger people in the core city centre can be observed compared to the suburbs (e.g. in Zürich - process of counter-urbanization, due to e.g. gentrification[7]). In the ESPON applied research project 2013/1/1 "Future Orientations for Cities" the demographic results of the intra-urban migratory movements are synthesized as follows (At this point we refer to the cited official documents of ESPON and the European Commission for specific literature references):

- Generally, a younger population in (the centre of) the cities, notably through Gentrification

[6] Knowledge spillover effects and other synergies resulting from intense interactions of economic actors due to spatial proximity

[7] process of renewal and rebuilding accompanying the influx of middle-class or affluent people into deteriorating areas of a city that often displaces poorer residents

- A higher share of active households with children in the suburban areas through suburbanization
- Poor immigrants concentrated in some specific areas of the cities, either near to the centres or in specific parts of the suburbs (ESPON 2009).

On the one hand, city regions are the main drivers of a nation's economy (ESPON 2006a) due to the high density of economic activities and the resulting spillover effects On the other hand, the increasing concentration of population and economic activity in city regions could in the longer term constrain overall economic growth since negative externalities such as increases in housing costs, shortages of business space, congestion and pollution negatively affect the competitiveness of these areas (European Commission 2007a).

Next, the territorial dispersion of population and their prospective demographic structure is of major political concern. The main drivers of **demographic change** are fertility, life expectancy and migration. It is assumed that in about ten years Europe will face major economic challenges brought about by the decrease of the work force: the baby boom cohorts will start retiring from the labour market. The young cohorts entering the labour market will be much fewer as a result of low fertility. In about ten years, total employment in the EU could start to fall; in spite of rising employment rates (European Commission 2007b). In short: demographic change will gradually limit the scope for future employment growth. The European Commission identified five key policy areas in which constructive responses to the demographic challenge can be developed[8]. These are birth rates, employment levels, productivity growth, migration and the sustainability of public finances. On the part of Italy and Campania the problem of huge pension obligations, in common with other advanced industrial countries, is worsening as the population ages. Years of political patronage for government employees have increased the government budget and superannuation can only be solved with difficulties. Italy's rate of natural population increase has remained negative since the early 1990s (Neal 2007).

### 1.3 Challenges : economic growth sectors and the problem of unemployment

The fifth progress report on EU Cohesion Policy has shown that European **growth sectors** have largely contributed to convergence. However, important differences in the economic structure of regions remain and the pattern of catching-up differs between convergence and transition[9] regions. The convergence process between regions is dominated by the catching-up process of regions in Central and Eastern European, whereas convergence within countries is mostly a characteristic of regions in old EU member states (Cuaresma et al., 2009).

The analysis of the progress report reveals that convergence regions are undergoing a major economic restructuring: Substantial job creation is taking place in the service sector, while agriculture is shedding even more employment. Such restructuring requires a tailored policy

[8] Commission's Communication on 'The demographic future of Europe – from challenge to opportunity (COM 2006) 571, adopted on 12 October 2006.)

[9] Convergence regions still have a considerably lower GDP per head, at 58% of the EU average while Transition regions are getting closer to the EU average.

response (European Commission 2008). Structural policies (improving the efficiency of markets) will scarcely be sufficient to deal with these rural problems, since globalisation will increasingly put economic, social, institutional and legal parameters beyond the reach of regional governments (OECD 2002). A huge problem concerning the economic structure of a country and affecting rural areas especially is **unemployment**. In Poland, for example, according to 2005 data, there exists an unemployment rate of more than 20% affecting some of the Polish regions. There is a so called 'hidden' unemployment in agriculture of about 1.5 million people, which has a significant effect on economic development. Stasiak asserts that Poland needs an economical revival and a rise in employment outside agriculture. There is some hope in this direction: over the past two decades, rural regions in Poland have experienced notable structural change due to the transition to a market economy and increased integration in the world economy (Stasiak 2007).

### 1.4 Accessibility and connectivity

**Accessibility** is often presented as a clearly measurable variable that is determined by two factors: geographical location and infrastructure. While the geographical location cannot be changed, improving connectivity should be and is a key policy aim (European Commission 2007a). A region’s accessibility is a key factor in a globalised economy.

The accessibility of a region in general determines the extent to which it can participate in economic growth, since trade costs remain high for remote regions such as Podlaskie or East Macedonia & Thrace. As an example, the Spanish government used most of the regional policy funds given from the EU budget to construct transport infrastructures all over the country. Peripheral and underdeveloped regions were linked with developed regions via high-speed trains, highways and airways, facilitating a more balanced development of the different regions (Tanaka 2008).

Today, all regions in Europe are accessible anyway, but the degree and efficiency of accessibility varies. Without good accessibility, a region cannot profit from the international division of labour to the same extent as other regions and is less attractive for companies and highly qualified workers. The economic influence of accessibility has been tested by several authors (e.g. Sachs 1997, Gros and Steinherr 2004).

It becomes clear that accessibility is not a single clear concept; rather, many different things can be subsumed within the topic of accessibility. For example, one can distinguish between

A) The global accessibility of a region or how well it is connected with the rest of the world outside Europe.

B) The Continental accessibility of a region within Europe (BAKBASEL 2008).

Furthermore, one can distinguish between the accessibility for goods (determined by the transport or business infrastructure) and the accessibility for people (determined by people's infrastructure).

In different regions, varying forms of accessibility are relevant. In urban core regions for example, both business and people's accessibility are important whereas in an agricultural region the transport infrastructure is likely to be much more important. In conclusion, it can be assumed that it is not

accessibility and infrastructure in general that is important for the economic success of a region, but a specifically-tailored infrastructure for each region.

The region of Podlaskie for example, is still undergoing transformation from a socialist-planned economy to a capitalist market economy, trying to reduce its high dependence on agriculture. It has to push integration with Western Europe and at the same time to strengthen cooperation with eastern neighbouring countries. Its geographical location (transit function from Middle Europe to Russia) is a potential which is not used sufficiently due to poor relationships with post-Soviet Russia. For one thing, the region suffers from the disadvantage of higher access costs to EU countries compared to more central Polish regions. For another thing there is a huge backlog in modernising road and rail links. The lagging infrastructure of transport (and also of communication) is supposed to be stimulated in the preparations for the European Football Championships in 2012 (Markowski 2007).

In East Macedonia and Thrace aligned circumstances affect the region which is surrounded by a mountainous national border. Similar to Podlaskie both the remoteness of the area and its dependency on agriculture contribute to a contemporary marginalisation. As a result of increasingly uncompetitive industries such as the primary sector in its recent shape and of too few viable economic opportunities such as a specialisation in one of the above mentioned growth sectors, an outmigration of the working-age population is incited (OECD 2002).

Pereira and Sagalés (2007) show in the case of Spain that the positive aggregate effects of public investment are distributed rather unevenly regionally: Among the largest regions, Andalucía, Castilla-León, Madrid, Valencia, and País Vasco benefit more than proportionally from their share of Spanish GDP in the time period 1970-1995. Among the smallest regions the beneficiaries are Baleares, Canarias, Cantabria, Castilla-Mancha, and Murcia. As a consequence, public infrastructure has contributed to the concentration of economic activity in these ten regions, to the disadvantage of the remaining seven. This is a particularly important finding since five of the ten regions that benefit the most are among the six largest in the country.

Europe-wide disparities in multi-modal accessibility[10] show better overall accessibility for regions at the core of Europe and metropolitan regions, in particular those with international airports. The European core-periphery pattern is even more pronounced for accessibility by road or by train. This underlines the importance of airports to balanced European-wide accessibility. Consequently, a peripheral region is attractive for business establishments provided that the transportation infrastructure is connected with knowledge and innovation centres (ESPON 2006a; Cuaresma et al. 2009).

Regarding the accessibility to communication (**connectivity**), the access to modern information and communication technologies shows European north-south and east-west divides, as well as a rural-urban divide. This is true for the provision of infrastructure, the use of it and the economic benefits from it (ESPON 2006a).

[10] Multimodal accessibility expresses the combined effect of alternative transport modes, i.e. an aggregated picture of road, rail and air accessibility for a certain location. ESPON 2007: Mountain areas and their accessibility. (see http://www.espon.eu/mmp/online/website/functions/home/maps/1400/index_EN.html, August 2009)

The preliminary finding in this respect is that accessibility and connectivity are positively correlated with economic growth and productivity. In order to foster economic activities in disadvantaged regions, the improvement of accessibility and connectivity must be major political topics. The main political challenge here is the 'right' distribution of competencies among different levels of government within a country with respect to the empowerment of regional authorities.

## 1.5 Public funding of regional economies: The EU cohesion and funding policy

Economic and social cohesion is defined by the Treaty of the European Community as one of the main operational priorities. Cohesion is to be achieved through the promotion of growth enhancing conditions and the reduction of development disparities between the EU regions and Member States which are key targets of the European Cohesion Policy.

The objective of the European Cohesion Policy is defined in Articles 2 and 4 and Title XVII of the Treaty establishing the European Community. According to Article 2, Cohesion Policy should "promote economic and social progress as well as a high level of employment, and achieve balanced and sustainable development". Article 158 adds, "in particular, the Community aims to reduce the disparities between the levels of development of the different regions and the backwardness of the least favoured regions or islands, including rural areas".

The EU model is grounded on the recognition that "wide disparities are intolerable in a community, if the term has any meaning at all"[11]. The disparities within the European Union are among others reduced by financial flows (Structural Funds[12]) which empower local and regional actors and levels of governance and make them better able to capitalise on territorial and economic potentials (ESPON 2006a).

Finally, it is a political question how and whether the flows from the Structural Funds are allocated among weaker regions, distributed evenly or provided for richer regions.

The lagging regions in the EU-15, which were major recipients of financial support under cohesion policy during the period 2000–2006, showed a significant increase in GDP per head relative to the rest of the EU between 1995 and 2004. In 1995, 50 regions with a total of 71 million inhabitants had a GDP per head below 75% of the EU-15 average. In 2004, in nearly one in four of these regions, home to almost 10 million, GDP per head had risen above the 75% threshold. In spite of this progress, absolute disparities remain large. This is partly as a result of recent enlargement and partly as growth tends to concentrate - during the initial phases of development - in the most dynamic areas within countries (European Commission 2007b). In the period after the 2004 enlargement of the EU, however, there is no guarantee that the Structural Funds will necessarily promote regionalisation especially in Central and Eastern Europe, at least in the short to medium term (Bachtler & McMaster 2008).

An aspect at the heart of literature debates on EU cohesion policy is the argument that Structural Funds have increased the influence of regional and local actors in economic development. In contrast, it is argued that higher responsibility may be necessary, but not if it induces fund

[11] see http://europedia.moussis.eu/books/Book_2/5/12/01/02/index.tkl?all=1&pos=136 (12 Oct. 2009)
[12] for detailed overview of the EU structural funds see: http://ec.europa.eu/regional_policy/funds/prord/sf_en.htm

absorption (Horvat 2005). In countries where regions face severe development challenges and have limited administrative capacity, a more centralised structural fund programming is needed to ensure an effective implementation. It is pointed out that decentralization and capacity building to absorb post-accession funding need not go hand-in-hand. Centralized structural fund programming and management may be needed to ensure the effective implementation of priority programmes. The authors stipulate that the massive increase of cohesion policy funding for the EU new member states agreed for the 2007-2013 period requires huge investment in institutional capacity to ensure efficient and effective management, with the priority being to ensure sound financial management and control (Bahloul et al. 2006).

However, there exists a basic structural problem as the European Union lacks the right to tax citizens or firms. Therefore it also lacks the means to deal with the reallocation of funds independently of member States. Recipient regions consider money from Brussels as extra means, while central governments in the countries see the funds as a substitute for their own fiscal revenues (notwithstanding the principle of additionality[13]). Unfortunately, in the EU countries, there is a tendency to employ self-regulatory methods, leaving no sign of the use of framework regulations. However, EU Structural Funds have not automatically ensured a strong role of regions and a regionally based development (Neal 2007, Wisniewski 2007). There are a few examples where some kind of progress in the direction of decentralised competencies can be observed. In Podlaskie for example, a clear decentralisation of tasks and a renunciation of the recent nation-state model can be observed. But local administrations do not receive enough financial assistance to implement these tasks.

In the ESPON (2005) report on "Territorial effects of Structural Funds" the influence of EU Structural Funds (covering Cohesion and Structural Funds) on a territorially balanced and polycentric development has been investigated. The analysis referred mainly to the funding period of 1994-1999, whereas the Structural Funds analysis in this report mainly investigates the period 2000-2006. One of the main findings in the report was that in terms of territorial cohesion, differences between countries may have decreased, but differences between regions have remained (or have been further accentuated), which implies that cohesion policy has thus not been particularly successful in realising its main goal. Furthermore, there is no significant correlation between the type of region and the impact of the Structural Fund intervention. It was concluded that in order to achieve effective structural policies, national and European policies need to be co-ordinated so as to make them compatible (ESPON 2005).

## 1.6 Administration and governance aspects

The administrative structure of a country and its efficiency on a regional level is another critical factor which influences the effectiveness and the impact of European cohesion policy. It is among the most significant criteria to be mindful of when dealing with Structural Funds (European Commission 2007a). As a consequence, an inefficient civil sector, specifically the lack of

[13] Additionality means that the funds of the European Community should not be replaced, but be in addition to national regional policy funds (OECD 2002).

administrative capacity is one of the main factors of underdevelopment (Horvat 2005).The following section sketches out administrative and governance factors that may influence regional processes. National borders adjoining the regions of, for example, Podlaskie and East Macedonia & Thrace constitute administrative barriers to economic exchange. The characteristics of a national border differ depending on the political, socio-economic and territorial context. In large parts of Europe, open borders allow for the establishment of cross-border functional regions, in many cases with a polycentric network of cities. Indeed, nearly one quarter of all larger cities have the potential for commuting areas across national borders (ESPON 2006a).

With reference to Podlaskie, it is noteworthy that the serious social and economic situation and the connected lack of endogenous capital prevent the establishment of transboundary relationships as it is managed between EU countries. Further, as maintained by Haase et al (2004), a "post-Soviet mentality" of the local population as well as of a large part of the local authorities has to be taken into consideration. Thus the conversion to market-based principles in agriculture and industry is proceeding slowly. In addition, Stasiak (2007) concedes that there is an inadequate large-scale division into four agricultural regions adopted by the Ministry of Agriculture and Rural Development which does not consider enough the multi-functionality and needs of each region.

Concerning Campania, the continuous effort to improve the economic level of the south of Italy, also referred to as the Mezzogiorno, has been a constituent part of Italy's post-war economic policy. Nevertheless, disparities in the standard of living between the southern regions and the economic northern regions have not been reduced significantly. Per capita income in the south was still only 55% of the northern level by the end of the 1980s and it appears that the south had become structurally dependent on domestic payments, which persists until today (Neal 2007). That leads to the question of why the policies failed despite the massive inflow of capital for several decades. None of the strategies adopted, such as the movement of firms toward the south or the creation of adequately equipped industrial clusters, seems to have worked (Braunerhjelm et al. 2000). Economists often explain the backwardness of the Mezzogiorno by the pervasiveness of the informal economy in Italy. The political systems have been characterised by longstanding and party-dominated administrations, which is a common feature of most local political systems in the Mezzogiorno (Tedesco 2006). This domestic political resistance has to be overcome in order to push through much-needed economic reforms towards competitiveness and agricultural renewal (Neal 2007).

In the case of East Macedonia and Thrace, Greek policy, in particular the patterns of interaction between administrative and societal actors, has so far been predominantly interventionist[14]: The use of strategic environmental management, fiscal incentives (such as low company taxes) and rewards, marked-based instruments or civil liability have gone unheard for a long time (Skourtos 1995). Moreover, the domestic economic policy can be declared much centralised that define substantive objectives and leave local administrative actors only limited discretion and flexibility (Getimis & Giannakourou 2001). While the capital Athens has benefited from some important new infrastructure (e.g. airport, metro, suburban train, new ring road) due to the Olympic Games in

[14] Interventionism: "The policy or doctrine of intervening, esp. government interference in the affairs of another state or in domestic economic affairs" (dictionary.com/Aug 09)

2004, regional development and the reduction of regional inequalities should be high on the list of priorities. Petrakos and Topaloglou (2006) assert that there seem to be a number of factors or conditions that may influence regional policy adversely. Firstly, Greece has the highest level of public debt among all EU countries, which will require significant spending cuts in future. This may affect the ability of the government to allocate more funds to regional development policies. Second, there are institutional problems regarding the nature of rivalries amongst ministries which leads to a lack of cooperation and coordination. Regional policy does not appear to be a top priority in practice. In addition, notwithstanding some moves to involve the regional level more in policy administration, there is a natural tendency towards administrative centralisation in Greece. To sum up, Greece's policies have not proved to be very successful on a regional level (Petrakos and Topaloglou 2006).

All in all, the question of the effectiveness and efficiency of regional authorities is an awkward one. A study by the World Bank (2006), dealing with the administrative capacity in the new EU member states, identifies an "unwillingness of politicians to give up their traditional relationship of power and patronage over the civil service in the interests of creating a professional merit based administration" as a serious issue. Furthermore, the study stresses that incentive and management systems are generally inadequate to ensure the attraction and recruitment of high quality staff in a changing labour market which is offering more and more opportunities in the private sector and abroad. Also Horvat (2005) sees an inefficient civil sector, specifically the lack of administrative capacity, as one of the main factors of underdevelopment especially in Eastern European countries.

Economic and spatial planning demonstrate significant potential to political audiences in meeting the challenges of joined-up government and joined-up governance, as discussed by authors such as Evans et al. (2005) or Giguère (2005), whereby all parts and levels of government and society as a whole work together towards a common goal. The ability of regional governments to enforce better control in the management and use of the EU Structural Funds may be a key determinant of the influence of funds policy on regional economic growth.

## 1.7 Quality of life and environmental aspects

European policy and legislation sets the framework condition for territorial and economic development. Nevertheless, the nation state, in particular its policies and historical legacy, exerts a significant influence on the development of European regions. In this chapter, the quality of life of regions is discussed. While taxation or regulation policies are strongly shaped on a national governmental level, quality of life is and can be primarily shaped by local and regional authorities. The degree to which local and regional authorities can shape and influence the quality of life within their region depends mostly on the decentralisation and the allocation of political power. The latter factor exhibits huge differences among European countries.

There are many different approaches which are defining factors relevant for the quality of life of a certain location. Hill (2005), for example, stresses freedom from crime along with the presence of health services and affordable housing, which he argues are factors that make a local area a desirable place to live in. An important aspect for development, especially of remote areas with a

low population density, is the relationship with its natural environment, i.e. protection and conservation. Conflicts between conservation efforts and other land uses may become more significant. With respect to climate protection, the conservation of biodiversity, and the protection of natural resources, more policies are expected to be developed in the environmental sphere in the future (Stasiak 2007). Jeppesen (2003) has observed that a pronounced and relatively comprehensive set of rules and policies has emerged in the EU during the past 30 years with regard to climate protection, the conservation of biodiversity, and the protection of natural resources. From an individual region's perspective, positive externalities of environment-friendly measures, saving potentials for producers through European-wide common environmental standards, or the reduction of competitive disadvantages in those countries which already have relatively high standards are the main arguments favouring more intense, coordinated action in this field of policy.

Another and very recent approach was made by the US scientist R. Florida (2002) who points out that three main factors constitute the quality of life for young creative workers: Technology, Talent and Tolerance (the three T's). In contrast, Harvard professor Glaeser (2003) argues that more conservative factors such as peaceful and well-kept suburbs and a good and safe school environment for children are much more important factors for highly educated parents.

One can see that there are plenty of possible variables which determine the quality of life of a region. Some of them (like well-kept suburbs or the recreation facilities) can be influenced more, others less (e.g. the tolerance of the inhabitants against foreigners) and others again cannot be influenced (e.g. the natural environment or the climate) at all by central governments. Again here, the right allocation of competences with regard to quality of life is essential.

## 1.8 Decentralisation and the allocation of political powers

As can be seen from the previous literature, there are plenty of potential factors that might influence the economic success of a region. The crucial question here is to which extent a certain political or any other official authority is able to influence those factors: It makes a difference whether the decision making or the implementation of different policy strategies take place on the EU-wide level (like the allocation of fund-means), on a national level (like taxation and regulation) or on a regional level (like incubators of universities, business parks, private schools, infrastructure etc.).

In a study recently published by the AER (Assembly of European regions) it was clearly demonstrated that a significant difference exists with regard to decentralisation among EU-countries. Even within some countries (e.g. Italy, Finland, Portugal), severe differences exist regarding the allocation of political power: some regions have more and some have less power to decide and implement political issues (AER 2009). Within the EU, Germany leads the rank order, followed by Belgium and Spain. Austrian regions and the autonomous regions of Italy are also above the sample average. The former socialist countries Bulgaria, Estonia, Latvia and Lithuania are positioned at the bottom of the ranking, together with Greece. On this basis, one can address the question of who is responsible for the success or failure of a certain factor influencing the overall economic performance in a certain European region. In this context it is hard to say how the

economic success of a region would look like if powers and responsibilities would have been allocated differently in the past, let's say 20 years.

Nevertheless, we are convinced that decentralisation is a major factor of influence with regard to the economic development of a region and should therefore be taken carefully into account.

## 1.9 Summary and results of the literature review

The literature review revealed several factors that might be of significant influence with regard to the **successful** development **of convergence regions' economies**. If and to what extent they influence economic growth will be conclusively derived from the empirical analyses later on. Table 1 provides an overview of the potential factors of influence, some examples and keywords that make the respective factor subsumable, as well as an extract of the literature cited in the respective context.

**Table 1: Potential factors of success for convergence regions**

| Factors | Examples, keywords | Literature cited, e.g. |
|---|---|---|
| knowledge and innovation potentials | spillovers, patents, publications, universities, human capital, r&d activities, national and regional innovation system | Drucker 1993; Nelson & Winter 1974; Dosi & Nelson 1994, Boschma & Lambooy 1999, Freeman 1987, Lundvall 1992, Nelson 1993; Cooke 1992; Asheim & Gertler 2005; Freeman 1987, Lundvall 1992; Doloreux & Parto 2004; Markowski (2007); Lundvall 1992, Morgan, 1997; Florida, 1995; OECD 2002, ESPON 2006a; etc. |
| population | agglomeration economies, territorial dispersion (urban centre-suburbs; capital cities, small and medium sized cities, rural areas); demographic changes (ageing of the population) | European Commission 2007a, ESPON 2009, European Commission 2007b, ESPON 2006a, Neal 2007 |
| economic aspects | sectoral mix of industries, localisation economies, growth sectors, clusters, industrial structure, sectoral innovation systems, unemployment | Cuaresma et al., 2009, European Commission 2008, OECD 2002, Stasiak 2007 |
| accessibility and connectivity | people's infrastructure, business or transport infrastructure, IT-infrastructure | European Commission 2007a, Tanaka 2008, Sachs 1997, Gros and Steinherr 2004, BAKBASEL 2008, Haase et al. 2004, Markowski 2007, OECD 2002, Pereira and Sagalés 2007, ESPON 2006a, Cuaresma et al., 2009 |
| EU funds policy | structural Fund, cohesion fund, cohesion policy, reduction of economic disparities | ESPON 2006a, European Commission 1996, European Commission 2007, Bachtler & McMaster 2008, Bahloul et al. 2006, Neal, 2007, Wisniewski, 2007, ESPON 2005 |
| administration and governance | education of administrative workforce, cross-border functional regions (commuting areas) | European Commission 2007, Horvat 2005, ESPON 2006a, |

| | | |
|---|---|---|
| | | Haase et al. (2004), Stasiak (2007), Neal 2007, Braunerhjelm et al. 2000, Tedesco 2006, Neal 2007, Skourtos 1995 etc. |
| quality of life | safety, good schools, well-kept suburbs, health system, education system, natural environment, cultural amenities, recreation potential, tolerance of population | Hill (2005), Jeppesen (2003) , (Stasiak 2007), Florida (2002), Glaeser (2003) |
| decentralisation | power to decide and implement policy programmes, regional competences and duties | AER (Assembly of European regions) (2009) |

When analysing the middle column it becomes clear that some of the factors that contribute to the success or failure of regional economic development are more delimited and others are more elusive. While knowledge and innovation potential, accessibility and population, for example, seem clearly definable, the quality of administration and governance or decentralisation seems harder to pin down.

Another point that becomes clear while comparing the different factors is that they partly overlap each other and are not clearly separable. The concept of economic clustering, for example (Porter 1990), assumes that economic advantages result from a concentration of similar economic activities. An example of a 'cluster region' is the “Third Italy” and the shoe production located there. In this context, one can also speak of an 'innovative milieu', because knowledge-intensive linkages among different actors are the critical success factor. The concept of clustering can be assigned to the innovation and knowledge potential factor on the one hand and to the 'sectoral mix of industries' factor on the other. As a consequence, the table and the technical allocation in it (that reflects the structure of the chapters) must be seen as a collection of thoughts and concepts that for now do not correspond to hard numbers and variables. One aim of this 'openness' is to be flexible enough to incorporate the input from the questionnaires and interviews given by regional officials of four different European regions in the following empirical chapters.

Nevertheless, in a first step of analysis, hypotheses will be retrieved from the literature review and the theoretical analysis of potential factors of success of European regions' economies. In the further (second) qualitative analytical step, the hypotheses and factors will be extended and valued due to the input from the questionnaires and the interviews. On this basis, all relevant factors of success should be identified. To which extent those factors influence the economic development of European regions and to reveal possible other factors of influence will be part of step three of the analysis – the econometric model. At the end of the three steps we will clearly see which factors have a strong influence and which factors have less influence on the economic development of regions.

## 1.9 Hypotheses retrieved from the literature review

The hypotheses retrieved from the literature review are shown in Table 2. The *first column* contains the possible factors of influence of regional economic success. The *second column* contains possible indicators or variables which could grasp the identified factors, regardless whether those indicators exist in official statistics or not. Whether and which indicators are available from statistical sources will be revealed later on in Chapter 3.2. The proper hypotheses can be seen in *column three*, where the expected direction of influence of a certain factor or indicator on the economic success of a regional economy is indicated. Column four shows additionally whether (according to the literature review) the competence of the factors of influence is located rather on the regional level (reg), the national level (nat) or the European level (EU).

**Table 2: Hypotheses: potential factors and their influence on regional economic success**

| No. | Factors of influence | Possible indicators (examples, not concluding) | direction of influence | Level of competence in most countries/regions |
|---|---|---|---|---|
| **1** | **knowledge and innovation potentials** | r&d-outcome: patents, publications | + | EU, reg, nat |
| | | r&d-input: investments | + | reg |
| | | amount and quality of universities | + | reg, nat |
| | | highly qualified workforce | + | reg |
| | | knowledge infrastructure: amount and quality of incubators, technology parks etc. | + | reg |
| **2** | **population** | population density (agglomeration economies) | + | reg |
| | | age structure of the population: workforce | + | reg |
| **3** | **economic aspects** | sectoral mix of industries (economic structure), e.g. development of different markets (agricultural, engineering, service); specialisation on a certain industry, e.g. tourism | + | reg |
| | | low investment barriers | + | reg, nat |
| | | setting for start-up companies and their rate of foundation | + | reg |
| | | unemployment | + | reg, nat |
| **4** | **accessibility and connectivity** | high business or transport infrastructure, gas and oil pipelines, well-endowed IT-infrastructure | + | reg, nat |
| **5** | **EU funds policy** | amount/share of structural Funds | + | EU, nat, reg |
| | | effective allocation of funds | + | reg |
| | | coordination of regional, national and EU policies | + | EU, nat, reg |
| **6** | **administration and governance** | education of administrative workforce, cross-border functional regions (commuting areas) | + | reg |
| **7** | **quality of life** | safety, good schools, well-kept suburbs, health system, education system, natural environment, cultural amenities, recreation potential, tolerance of population | + | reg |
| **8** | **decentralisation** | power to decide and implement policy programmes, regional competences and duties | + | nat, reg |
| **9** | **taxation** | Manpower taxation | - | reg |
| | | Company taxation | - | reg |
| **10** | **regulation** | Product market regulation | - | nat |
| | | Labour market regulation | - | nat |

reg = regional policy level, nat = national policicy level, EU = EU policiy level

Summarising the findings of step one of the analysis, ten potential factors of influence can be identified for the success of regional economies. We assume that the following eight out of ten factors have a positive influence on the regional economic success:

- Knowledge and innovation potentials
- Population
- Economic structure

- Accessibility and connectivity
- EU funds
- Administration and governance
- Quality of life
- Decentralisation

Taxation and regulation on the other hand have a negative effect.

# 2 Qualitative aspects of regional growth

The aims of the qualitative part of the analysis are

- to retrieve additional quantitative factors (and modify the hypotheses) for the success or failure of European regions' economies which will be verified in the quantitative analyses later on and
- to identify potential qualitative factors that might lead to the success of European regions' economies which cannot be captured by the quantitative analysis.

In order to achieve these aims, the answers of the questionnaires and interviews from the stakeholder regions (three convergence regions (Campania Region, Podlaskie Voivodship, Region of East Macedonia–Thrace) and one phasing-in region (Comunidad Valenciana)) should provide evidence and information that can provide clarification.

## 2.1 Method and results of the structured interviews

The interviews with politicians, practitioners, academics etc. from the stakeholder regions have been designed to have a special focus on different factors influencing the success of a region's - principally economic - development (factors such as accessibility, innovation, knowledge economy etc.), the effectiveness of public administration and the successful implementation of cohesion policies in disadvantaged European regions.

The politicians and policy makers in the different regions are seen as the most important stakeholders and prime targets of the results of the projects. If they are to understand the results of the analysis, it must be clear what they think and why. Therefore, it was agreed in the first Steering Committee meeting with the stakeholder regions in Naples on 29th of June 2009 to conduct the interviews (and also the questionnaires) according to the following categories and proportions in each of the four stakeholder regions:

- politicians and senior civil servants – 33% (group 1)
- business community and intermediaries – 22% (group 2)
- university professors and other experts – 22% (group 3)
- private sector – 22% (group 4)

The interviews have been carried out by the respective regional experts in local languages in order to avoid language problems and ensure maximal return and inside information on what the relevant success or failure factors are believed to be. The structured interviews had a focus on open questions (e.g. of the form "What do you think is important?" or "Why is this relevant?"). The interviewees also responded to the structured questionnaire (see chapter 2.2).

The number of interviews conducted so far per group is shown in Table 3. At the time of the analysis of the interviews for the purposes of the Interim report, only one region (Region of East Macedonia–Thrace) had completed all interviews including a description of the major problems or difficulties they had (e.g. in understanding of the key terms). The delay in conducting the

interviews was due primarily to the difficulties in fixing appointments with the key policy-makers; however, at the time of delivery of this report (2 November 2009), appointments have been made for the remaining interviews.

**Table 3: Response per group of interviewees in the stakeholder regions (preliminary results)**

| | group 1 | group 2 | group 3 | group 4 | **sum** | **completeness** |
|---|---|---|---|---|---|---|
| Region of East Macedonia–Thrace | 3 | 2 | 2 | 2 | **9** | **complete** |
| Podlaskie Voivodship | 3 | | 1 | 1 | **5** | **in progress** |
| Campania Region | 1 | 1 | 2 | 1 | **5** | **in progress** |
| Comunidad Valenciana | 1 | 1 | 1 | | **3** | **in progress** |

The following chapter 2.1.1 provides a short description of the employed methodology of the interview analysis. In chapter 2.1.2, the results of the analysis are presented as an example for the Region of East Macedonia–Thrace. The interviews from the other three regions (Podlaskie Voivodship, Campania Region and Comunidad Valenciana) will be evaluated in the same way as soon as all interviews have been collected. Showing the incomplete results would risk providing a false impression of the whole regional situation – for that reason the other partial analyses have been left out of the interim report. The complete results and interpretations will be shown in the final report.

### 2.1.1 Method of the analysis of the structured interviews

The interviews have been structured into general questions concerning the overall constitution of the respective region (reasons for the low GDP, main weaknesses and strengths etc.) and specific questions dealing with the importance of different factors (such as the knowledge economy, accessibility etc.). Within the analysis main elements of the qualitative content analysis (Mayring 2000) have been employed. The content analysis is in its classical variant indeed mute about the arising of different categories (Krippendorf 1980). However, in general two different approaches for defining categories with the help of content analysis can be perceived: an inductive or a deductive process can lead to the definition of different categories.

In the current study, both the deductive and the inductive approach have been employed. First, the factors of influence have been retrieved from the theoretical analysis in a deductive way and have then been incorporated in the interviews (e.g. how important do you assess the access to the knowledge economy?). Second, the analysis of the interviews has also an inductive component by incorporating new categories and indicators in the hypothetical framework (e.g. what do you think are the principle reasons for the low GDP in your region?).

To reach the goal of retrieving new factors and indicators and to check for the factors already revealed from the scientific literature, the interviews have been analysed in four steps: the answers have been firstly summarized and potential factors or indicators of influence have secondly been identified and grouped. Thirdly, the factors have been concentrated in a table and the relative importance of the different factors has fourthly been evaluated according to the mere number of answers and the assessment of factors through the interviewees.

At the end of the analysis of the interviews of all 4 regions, the hypothesis table (Table 2) will be completed in accordance to the answers of the interviewees.

### 2.1.2 Results of the Region of East Macedonia-Thrace (Greece)

In the following, a thematic summary of answers and the identification of different factors/indicators of relevance to the interviewees of the region of East-Macedonia-Thrace are presented. Thereby not each question is summarized separately, but two thematic groups are formed. Group one contains the answers of the general questions like reasons for the low GDP per capita (problems and weaknesses), threats, strengths, opportunities and first priority actions, the latter being considered to be of major importance. The general questions allow for the identification of new factors that have not been grasped by the literature. The second group contains the results of the specific questions dealing with specific factors of major relevance such as the knowledge economy or accessibility.

**Group one: general questions (searching for factors) (Questions 1.1 – 1.7)**

The principal reasons for the **low GDP per capita** and **lagging development** (**weaknesses**) in the region are, according to the interviewees, the following (Q1.3, Q1.5):

- **Geographical location**: The great *distance* (900 km) from the highly centralized decision making centre (Athens) and as one consequence a long period of *isolation* for many decades due also to geo-political reasons. Furthermore, problems in creating investments far from the decision making centre.
- **Accessibility:** Late completion of *basic infrastructures and investments*, lack of adequate *transport infrastructures*, especially the lack of *railway services* (transport of containers, lack of logistics) and *railway connections* to the ports and the industrial areas. As a consequence of the underdeveloped infrastructure, there is low level of competitiveness.
- **Economic structure and policies**: Concentration of development policies on *agriculture and farming*. Development policies should therefore concentrate on manufacturing, tourism and services. Additionally a low level of *externalization of the economy.*
- **Minorities:** The sizable Muslim *minority* has a very low educational level and low living standards – partly due to the internal policies of its leadership.
- **EU & national policies**: not enough funding for new developments.

The main **threats** that hinder the economic development of the region are the following (Q1.5):

- **Development of neighbouring countries** Being downgraded to a secondary region in terms of regional importance compared to the neighbouring Regions of Bulgaria and Turkey.
- **Globalisation:** Harsh *competition* in the open market is a threat to the local industrial production
- **EU policies:** Local agricultural economy is threatened with the *diminishing of EU subsidies*

- **Innovation:** Low percentage of *exploitation* and inclusion of *new technologies* at the entrepreneurial sector of the area, low number of companies that are occupied with *research and development*.
- **Unemployment:** High percentages of *unemployment* that are basically *affecting women* and the main productive age groups of 25-34 in both sexes.
- **Economic results:** Low level of consumer income, absence of new investments
- **Economic mismanagement:** No effective use of the natural and human resources

The main **strengths** that can improve the economic performance of the region and shift it from the Convergence Objective are the following (Q1.4):

- **Geographical location:** The region is a Gateway to the Balkans, South-East Europe and Black Sea in a strategic way.
- **Accessibility:** Completion of the Egnatia *Highway* (*Transportation Hub)*; Construction of a crucial international *natural gas pipe line* (TGI), future plans for the construction of two more (Nabuco and South Stream) and the planned *oil pipeline* between the cities of Burgas – Alexandroupolis (opportunity of becoming South East Europe's Energy Node).
- **Policy reasons:** Tempting motives to attract investments through the Development Law 3299/2004
- **Innovation potentials:** The 3rd largest higher education institution provides an excellent background for development through *knowledge*, in terms of creating *supporting institutions* (eg. research institutes to support university activities, scientific establishments, convention tourism)
- **Quality of life:** The 3rd largest higher education institution is also taking advantage of (in identifying and promoting) the *rich cultural heritage* of the area, together with the *multicultural character* of Thrace as a *bridge between different civilizations* (which is also an aim for the EU itself).

The main **opportunities** that can improve the economic performance of the region and shift it from the Convergence Objective are the following (Q1.4):

- **Development of neighbouring countries:** The *geopolitical* and *economical changes* in the South East Europe (entrance of Bulgaria and Romania in the EU, Turkey as a pre-accession country), the *stabilization in the neighbouring area* (basis for further cooperation)
- Exploitation of existing companies
- **Quality of life**: Exploitation of *natural and cultural heritage*
- **Economic structure and policies**: Manufacture of *well targeted agricultural products*, (innovative, high quality products, and biological products), consulting companies, transport services and university services in terms of research.

The principal "**first priority actions**" that were proposed for the regeneration of the region are the following (Q1.7):

- **Economy:** *openness* of the economy to the international markets, restructuring of the economy: development of *manufacturing*

- **Administration and governance**: Reformation of *administrative structures* (higher flexibility), *combined efforts* from public and private actors in *development policies*, Integrated *marketing plan for tourism and trade*
- **Innovation:** Promotion of higher education and research projects, *share of human capital* but principally the effective and efficient *exploitation of human capital*

**Group two: specific questions (evaluating selected factors) (questions 2.1 – 2.8)**

Relevance of different factors: knowledge economy, accessibility, decentralisation and the effectiveness of public administration:

- **Knowledge economy** (very important) (Q2.2): necessary factor to boost the local economy and its competitiveness. However, apart from the Democritus University of Thrace and the Technical College of Kavala (which should be much better exploited) and the vocational training programmes, there is a lack of technological development and innovation. Last but not least, interviewers from the 1st category made an emphasis on programmes for the improvement of education infrastructures as well as the Technogenesis programme (unique in Greece), which funded more than 70 innovative business plans in the Region.
- **Accessibility** (very important) (Q2.3): Everybody stressed the importance and the new potentials of the Egnatia Highway created for the region due to its strategic geographical location. The inhabitants do not feel isolated anymore and the number of visitors in the area has been increased. The completion of the vertical axes to Bulgaria, though, remains a top priority.
- **Decentralisation** (important) (Q2.6) is an important factor for economic performance as long as the sub-national bodies are more aware of the needs of their territories and have the required capacity to manage the EU and public funds. Further decentralisation will be welcomed since local authorities acquire specialized human capital in order to design and implement adequately co-funded projects.
- **Effectiveness of public administration** (Q2.7): public administrations should be modernised (including ICT) and improve their administrative structure in order to be more flexible and effective. There is a divergence of opinion between the 1st group of interviewers and the other groups. While the 1st group state that public administration is effective and inter-administration cooperation is sufficient, the other groups emphasise quite the opposite. Few people have the required capacities and willingness to do their best but in most cases they are getting no more than an ethical reward.

Additional information has been retrieved from the region's role in a larger territorial context and the region's long term strengths for an outlook and a future vision of regional development:

- Region's role in **larger territorial context** (Q2.4): Energy: the region can play an important role in the neighbouring area due to the planned construction of the oil pipeline Burgas – Alexandroupolis as well as the completion of the TGI gas pipe line (at least up to the area of Thrace), which may as well improve the income of the region by transforming it to an energy node (new investments, settlement of new companies etc.).
- Region's **long term strengths** (Q2.5): alternative forms of tourism, manufacture and biological agricultural products, geographical location as a cross-road between Southeast Europe and Black Sea should be exploited (Transportation hub).

Table 4 contains steps three and four of the interview analysis, where the different factors and indicators are concentrated and the relative importance has been evaluated. A factor has been considered as important when less than 50 per cent of the interviewees mentioned the factor to be important. Where there were more than 50 percent of interviewees considering a factor important, it became very important.

**Table 4: Summary of interview results of East Macedonia-Thrace and importance of factors**

| factors | reasons for low GDP (problems)/weaknesses/threats | strengths/chances/ opportunities | relevance for interviewees |
|---|---|---|---|
| geographical location | long distance to decision making centre Athens >isolation, problems in creating investments | gateway to Balkans, South-East Europe and the Black Sea (strategic importance) | important |
| development of surrounding areas | threat of being downgraded to a secondary region compared to Bulgarian or Turkish regions | stability of neighbouring countries Bulgaria and Romania in the EU Turkey as EU candidate | important |
| accessibility | transport infrastructure (railway services and –connections) Underdeveloped road connections | Egnatia Highway Natural gas pipeline (TGI) Two more gas pipelines planned Oil pipeline (Burgas – Alexandroupolis) | Very important |
| minorities | low education level, low living standards | | important |
| Economic structure and economic policies | concentration on agriculture and farming, low level of tourist and manufacture development, low level of externalisation of the economy, threat of diminishing EU agricultural subsidies | low level of consumer income, absence of new investments, ineffective use of natural and human resources and lacking exploitation of existing companies | important |
| Innovation potentials, knowledge economy | Low exploitation and inclusion of new technologies in the local enterprises, low exploitation of human capital, low share of companies investing in R&D, lack of technological innovation | Democritus University of Thrace and Technical College of Kavala: Breeding ground for supporting institutions, production of knowledge and innovation, human capital | Very important |
| Quality of Life | No efficient exploitation of the rich cultural heritage | Rich cultural heritage and its exploitation Multicultural character Bridge between civilisations | important |
| Funding | Not enough funding for development | | important |
| Globalisation | Harsh competition for the local industry | | important |
| Unemployment | High share of unemployment, especially women and both sex age groups between 25 and 34 | | important |
| decentralisation | Further decentralisation must go hand in hand with specialised human capital | | important |
| Public administration | Not enough modernised (ICT) | Improvement of administrative structures necessary (flexibility and effectiveness) | important |

N = 9; important <50% of the interviewees, very important >50% of the interviewees

The relevance or importance of the different factors of influence of regional economic development will form a crucial input for the econometric analysis.

## 2.2 Method and results of the questionnaires

Approximately 100 politicians, senior officials, socio-economic practitioners and opinion leaders in each of the four stakeholder regions have been asked to answer the questionnaire presented in the inception report. They have been questioned which factors they consider to be relevant for a successful and consistent cohesion policy in lagging European regions. The questionnaire covers thus primarily closed questions (e.g. of the type "Rate the relevance of this factor on a scale from 1 to 10"). The TPG aimed for a take-up response of 30%.

The questionnaire has been translated by the respective regional experts, who also drew up the list of the persons to be approached, in collaboration with each Stakeholder region. (Experiences from other projects have shown that questionnaires in English are still a barrier for many regional decision makers.)

Table 5 lists the received questionnaires per region and per professional category. One can clearly see that comparative groups with comparative roles are included from each region which allows for proper evaluation. The highest represented professional group are politicians and civil servants followed by the business community, the private sector and university professors. East Macedonia - Thrace is the region with the highest response to the survey, followed in order by Campania, Valencia and Podlaskie.

**Table 5: Regional and categorical division of received questionnaires**

| | East Macedonia - Thrace | Podlaskie | Campania | Valencia | Total |
|---|---|---|---|---|---|
| Politicians/ Civil servants | 16 | 11 | 8 | 11 | 46 |
| Business community | 12 | 10 | 7 | 11 | 40 |
| University professors | 7 | 5 | 11 | 7 | 30 |
| Private sector | 9 | 7 | 14 | 6 | 36 |
| **Total** | **44** | **33** | **40** | **35** | **152** |

The total number of possible observations is 10'336 (152 individuals multiplied by 68 questions). Subtracting 111 cases, in which the candidates were not aware or did not know an answer, and further excluding 21 cases with no answer at all, we get a remaining number of 10'204 actual observations, which is equivalent to 98.7% of possible observations.

### 2.2.1 Methodology

The 68 questions making up the questionnaire were divided first into ten different groups, which in turn represent the chosen variables based on the theory, as described in the literature review. On the base of the results of the interviews and the first frequency analyses of the questionnaires, we decided to split the EU funds into two different groups (amount and allocation of funds) which were assessed quite differently by the respondents. Furthermore, accessibility and connectivity were considered separately because they are not necessarily connected.

Not all the questions have been arranged according to the groups they belong to as a control for contradictory answers. For the same reason, some questions were asked twice, with slightly different phrasing.

In the following, a list of twelve thematic groups, with the number of questions corresponding to each one in parenthesis, is presented:

- Knowledge and innovation potentials (10 questions)
- Population and social aspects (3 questions)
- Economic settings and structure (11 questions)
- Accessibility (6 questions)
- Connectivity (4 questions)
- EU funds, amounts (1 question)
- EU funds, allocation (4 questions)
- Administration and governance (11 questions)
- Quality of life (11 questions)
- Decentralisation (1 question)
- Taxation (4 questions)
- Regulation (2 questions)

The choice of different numbers of questions in each group is due to the complexity of each topic as observed in the academic and political literature. For example the notion of "quality of life", which consists of several different facets like the level of pollution, the quality of schools or the variety of cultural activities, needs to be covered by more questions than "amount of EU funds", which is quite a narrow issue.

The analysis was carried out in two dimensions: the regional dimension and the categorical dimension. Since the main focus of this work lies on the success of regions with regard to consistent cohesion policies in disadvantaged European regions we further distinguished between "convergence regions" (the three regions lagging behind: East Macedonia &Thrace, Podlaskie and Campania) and the so called "phasing-in region" (having passed the threshold for success[15]: Valencia).

### 2.2.2 Statistical tests

Before starting the main analysis two sets of statistical tests were conducted, with the aim of determining whether or not results are significantly different between regions and between professional categories. To give an example we analysed whether politicians give systematically higher grades than academics do or whether Polish give systematically lower grades than Italians do in a statistically significant way. Another explanation would be whether the ratings are made independently of regional origin and of professional background. The two different tests are explained in Box 1 (chi-square test) and Box 2 (pair-wise mean comparison).

[15]GDP per capita of less than 75% of the EU-15 average in 2000-2006 but more than 75% of the EU-15 average in 2007-2013.

**Box 1: Chi-square test**

**Method:** The first test is a so-called **Chi-square test**, which investigates the frequencies of the different characteristics between different statistical units. This means that it is determined for example whether or not the Spanish give about as many 10s, 9s, 8s and so forth for a certain issue as Greeks do, and the same among the professional categories (in terms of frequencies of grades). Thus the two hypotheses are:

- H0: frequencies are independent of regional origin and professional background
- H1: frequencies are not independent of regional origin and professional background

Grades 1 to 4 have been aggregated in order to avoid cells without or only few observations.

**Result:** Table 6 shows the **regional dimension** of testing: In 64 out of the 68 questions (94%) the null hypotheses could be rejected at a confidence level of 5%. This means that there is a probability of only 5% or less that the differences between the regions are caused by a statistical error – in 94% of the questions.

In the **categorical dimension** it is the exact opposite: in 64 out of the 68 questions the null hypotheses could not be rejected at a confidence level of 5%, so that the probability of a statistical error is greater than 5%.

**Table 6: Chi-square test results, number of questions (α=5%)**

| | regions | categories |
|---|---|---|
| not significant | 4 | 64 |
| significant | 64 | 4 |
| % of rejection | 94% | 6% |

The chi-square test showed us that the way of answering (or the frequency of grades) is significantly influenced by the regional origin of a participant and barely by the profession.

This result is in so far very interesting, as it reveals major differences between the respective regional origins of a person. An explanation could be that the regional context of a person, including the education, the influence of regional policies etc. is strongly influencing the opinion of a person in a political and economic sense. This regional context is in the following referred to as regional culture which can also be found as an approach in scientific literature dealing for example with globalisation and innovation (regional innovation systems) (e.g. Camagni 1991, Asheim & Gertler 2005). In the literature, those regional differences in culture could, beside others, be the reason for regional advantages (e.g. the emergence of regional clusters) or regional disadvantages, of course always combined with other location factors.

On the other hand we can see that the professional groups have a similar way of looking at things, one also speaks of "professional cultures" (Bloor & Dawson 1994). This may be caused by the fact that most people in Europe chose their profession, whereas only a minority of people decide to move and live in another cultural environment.

**Box 2: Pair-wise comparison**

**Method:** In addition to the Chi-square test a differential test was performed by **pair-wise comparing** the mean values of two regions or two categories. Four regions and four categories make a total of twelve pair-wise comparisons for each question. This test reveals whether or not a specific question attains the same mean value regardless of regional and professional differences. Hence, the two hypotheses for each pair are as follows:

- H0: $\mu 1 = \mu 2$: mean values are independent of regional origin and professional background
- H1: $\mu 1 \neq \mu 2$: mean values are not independent of regional origin and professional background

with $\mu$ = mean value

**Results:** According to the findings illustrated in Table 7 and Table 8 the null hypotheses can be rejected in 32% to 69% of the 68 questions at a confidence level of 1% as to the **regional dimension**. Concerning the **categorical dimension**, one can determine only two cases of a systematic deviation between two values, while null hypotheses cannot be rejected at the confidence level of 1% for the vast majority of comparisons.

**Table 7: Differential pair-wise test results A, regional level (α=1%)**

| | EMT - P | EMT - C | EMT - V | P - C | P - V | C - V | | V-CO | CO |
|---|---|---|---|---|---|---|---|---|---|
| not significant | 38 | 46 | 21 | 52 | 44 | 42 | | 107 | 136 |
| significant | 30 | 22 | 47 | 16 | 24 | 26 | | 97 | 68 |
| % of rejection | 44 | 32 | 69 | 24 | 35 | 38 | | 48 | 33 |

Abbreviations: EMT for East Macedonia-Thrace, P for Podlaskie, C for Campania, V for Valencia, CO for Convergence Regions

**Table 8: Differential pair-wise test results B, categorical level (α=1%)**

| | Po – Bu | Po – Prof | Po – PS | Bu – Prof | Bu – PS | Prof - PS |
|---|---|---|---|---|---|---|
| not significant | 68 | 67 | 68 | 68 | 67 | 68 |
| significant | 0 | 1 | 0 | 0 | 1 | 0 |
| % of rejection | 0 | 1.5 | 0 | 0 | 1.5 | 0 |

Abbreviations: Po for politicians, Bu for business community, Prof for university professors and PS for private sector.

Similar to the test results of the chi-square test, the results from the pair-wise comparisons in Box 2 also show that the regional origin of a person has a major influence on judging things, in contrast to the professional background, which has only little influence. Thereby, the comparison between the region of East Macedonia-Thrace and Valencia (Table 7) shows an especially high significant rejection result (69%) which implies that the answers in the region of East Macedonia-Thrace differ significantly from those of Valencia. The second highest difference can be perceived between East Macedonia-Thrace and Podlaskie (44%), followed by Campania and Valencia (38%). On the other

hand relatively little difference exits between the regions of Podlaskie and Campania (24%), between East Macedonia-Thrace and Campania (32%). In between, average differences can be found between Podlaskie and Valencia (35%).

Summing up, there is firstly strong evidence of systematic differences in the evaluation between the different regions and no systematic differences between the professional categories. Secondly, the region of East Macedonia-Thrace has more systematic deviations compared to the other three regions. We will see in the further analyses in which way the answers of the region of East Macedonia-Thrace differ from the other regions.

Thirdly, there is more homogeneity among the answers of the three convergence regions, which is shown by a significant rejection quote of 33%, compared to the convergence regions as aggregate and Valencia (rejection: 48%). This gives slight evidence for the similarity of the convergence regions among each other compared to Valencia as a phasing-in region. It seems that the actors of the convergence regions have a similar way of judging different political, economic and social aspects.

Nevertheless, the absolute values of the grades are not of major interest for the further analysis, but rather the relative difference between the questions within a certain region or category. The latter allows a ranking of the various issues.

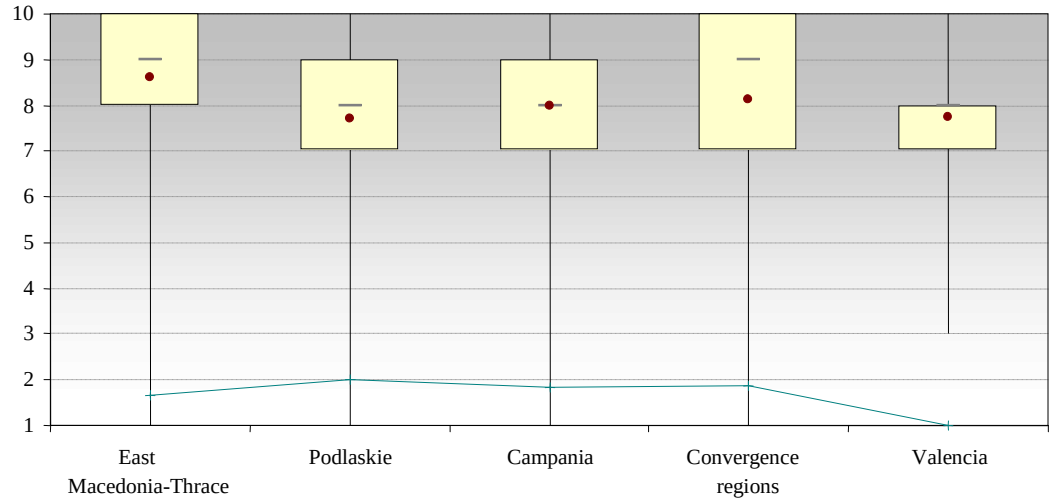
### 2.2.3 Results of the questionnaires

This chapter contains a series of graphs underlying the different results. The chosen way of illustrating the results in box plot graphs has the advantage of displaying much information in a clear manner using very little space. For more details simple frequency tables by region and by professional category have been annexed to the report. Within each graph there is the light-yellow box representing the area between lower and upper quartile (25%- and 75%-quantile), the dash showing the median, the dot illustrating the mean value and the line, which connects the values of the standard deviations of the different units. In addition, the range is represented by the vertical line coming out of the box reaching down to the minimum value and up to the maximum value (in case the upper quartile does not equal the maximum value). The most important measure for our analysis is the median as it is resistant to outliers unlike the mean value.

#### A) General results

The findings of the statistical tests described above are also perceived graphically (see Graph 1). Across the entire sample of questions it is obvious that East Macedonia-Thrace rates all aspects higher than the other three regions. This is represented by a higher score of all relevant measures (median, mean, upper and lower quartile) of about one grade point, consequently also pulling up the results of the "convergence regions" as a whole. Valencia on the other hand answered with a more moderate rate, though with the same median and mean as Podlaskie and Campania, but with a much smaller box, range and standard deviation. One interpretation of this difference may be that being relatively successful, Valencia does not see as many improvements to be made concerning the twelve success factors compared to the convergence regions.

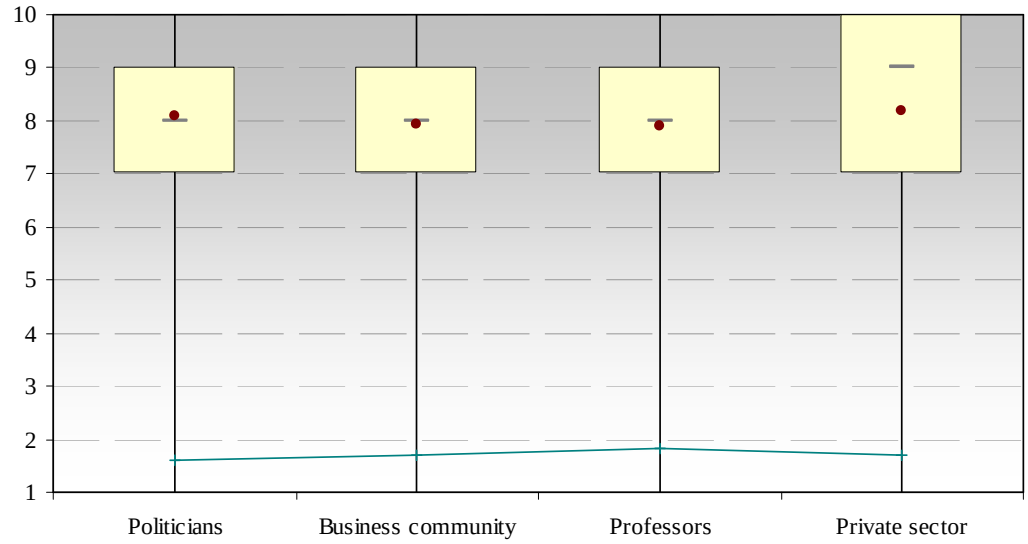
**Graph 1: All questions, regional dimension**




Light-yellow box: lower (25%) and upper (75%) quartile; dash: median; dot: mean; level line: standard deviations; vertical line: range; vertical axe categories ranging from 1="not important at all" to 10="absolutely necessary"

With regard to the professional categories, there is a tendency towards a slight overvaluation coming from the private sector – though statistically not significant – while the remaining three groups show almost identical results (see Graph 2).

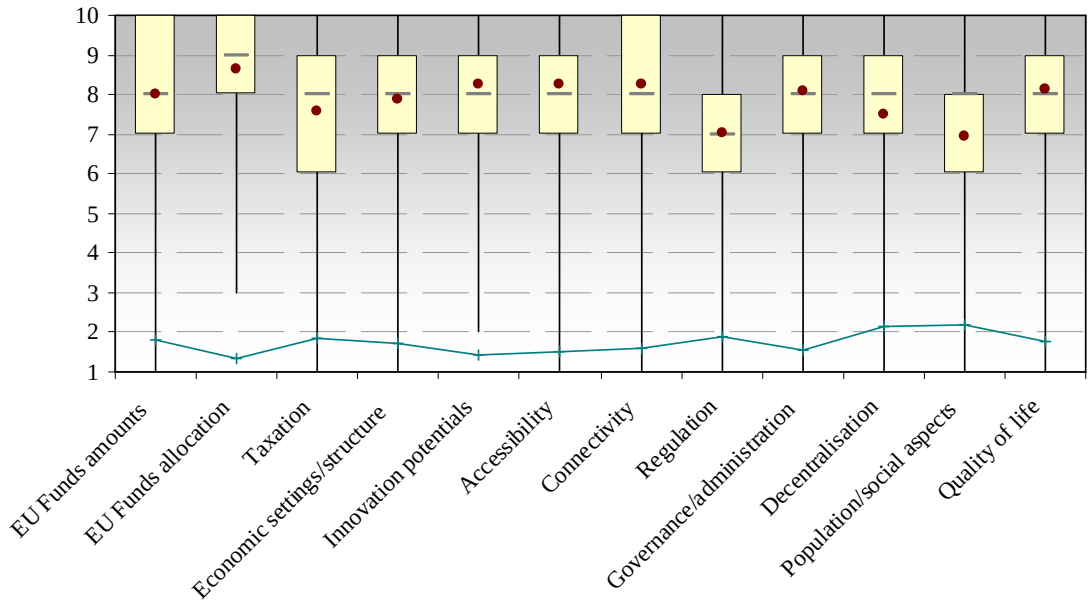
**Graph 2: All questions, categorical dimension**




Light-yellow box: lower (25%) and upper (75%) quartile; dash: median; dot: mean; level line: standard deviations; vertical line: range; vertical axe categories ranging from 1="not important at all" to 10="absolutely necessary"

Looking at the twelve groups of questions it is obvious that EU funds allocation is considered most important across all participants; fairly important are EU funds amounts and connectivity. The least important are regulation and population/social aspects, as displayed in Graph 3.

**Graph 3: All questions, factor groups**




Light-yellow box: lower (25%) and upper (75%) quartile; dash: median; dot: mean; level line: standard deviations; vertical line: range; vertical axe categories ranging from 1="not important at all" to 10="absolutely necessary"

In Graph 4 the results of all 68 questions, including the same measures as the other box plots are displayed.

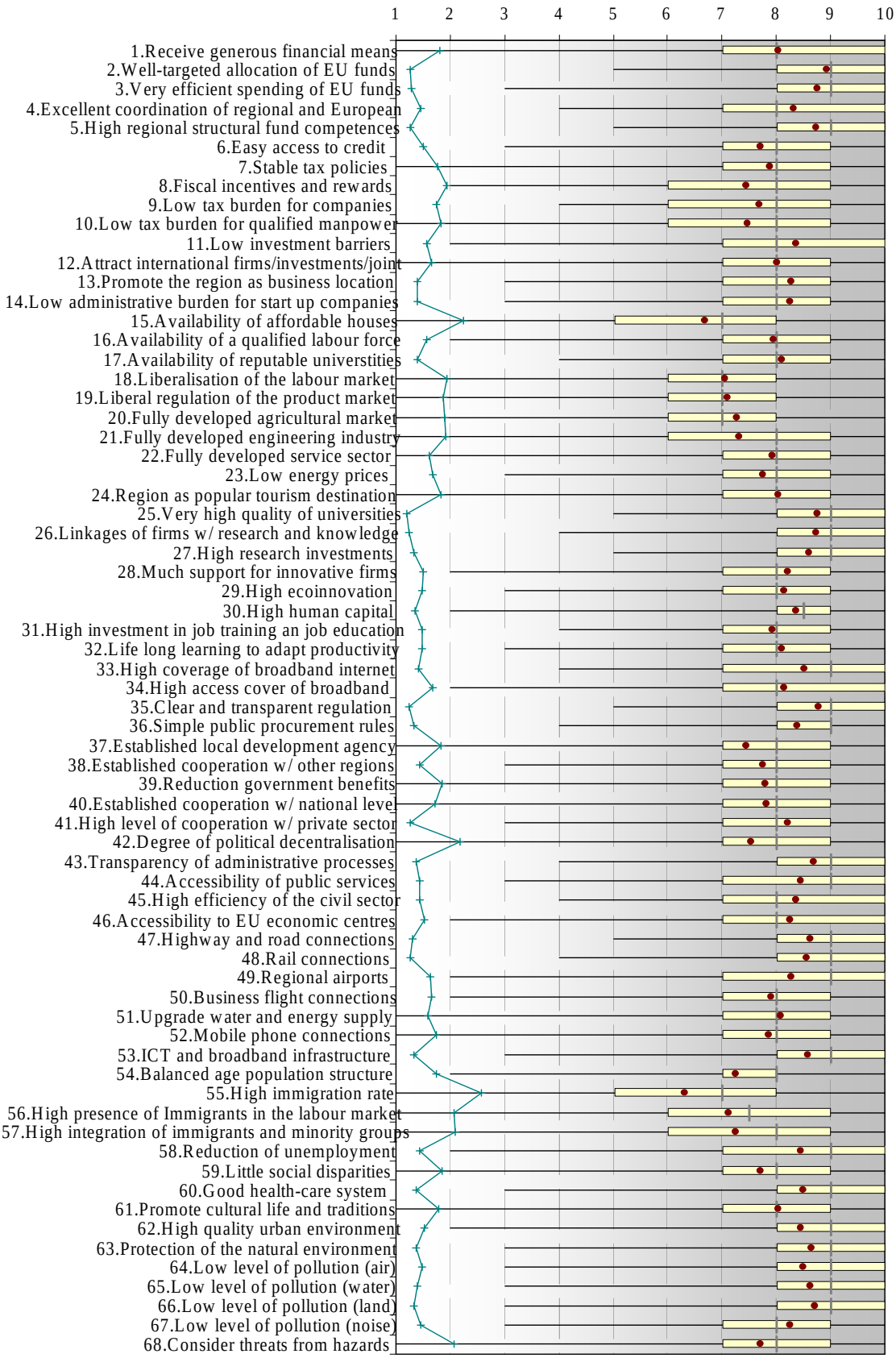
Concerning the **EU funds aspect** one can clearly see the preferences of the respondents of the four stakeholder regions (Graph 4): much more important than the sheer amount of EU funds (mean=8.0) is their well-targeted allocation (mean=8.9), what can be considered as effectiveness. Doing the right things with the assigned EU money is of upmost importance. Additionally, efficient spending is nearly as important as the effectiveness. Once the money is applied to a certain thematic project or field, it is also important to do the things right and right means efficient (mean=8.7). It makes a clear difference if the money suffices e.g. for one or five infrastructural projects. To reach this efficiency, an excellent coordination of regional and EU policies (mean=8.3) as well as high regional structural fund competencies (mean=8.7) seems to be a needful precondition.

Also of utmost importance is the **knowledge and innovation** aspect, e.g. high quality of universities (mean=8.7), linkages between firms and research institutions (mean=8.7) or high human capital (8.3).

In the same league we find **accessibility** (e.g. highway and road (mean=8.6), railway connections (mean=8.5)), **connectivity** (e.g. high coverage of broadband) and the **quality of life aspect** (low level of land pollution (mean=8.7).

Much less important than the listed aspect is the **taxation** aspect of the regions including stable tax policy (mean=7.8) or low tax burden for companies (mean=7.7) etc.

**Graph 4: Results of all questions (point = mean; dash = median)**




light-yellow box: lower (25%) and upper (75%) quartile; dash: median; dot: mean; level line: standard deviations; vertical line: range; vertical axe categories ranging from 1="not important at all" to 10="absolutely necessary"

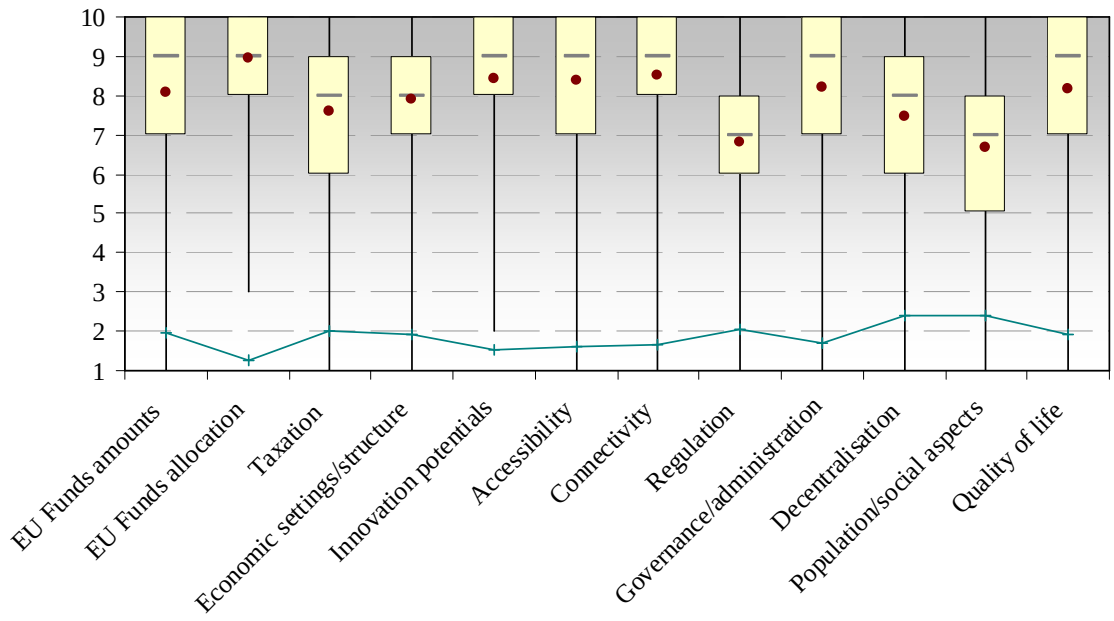
The **economic settings** on the other side are far from unimportant: low investment barriers (mean=8.3), attraction of international firms/investments (mean=8.0), the promotion of the region as a business location (mean=8.2) or low administrative burdens for start-ups are considered very important. This goes hand in hand with a clear and transparent **regulation** (mean=8.7) or simple procurement rules (mean=8.3).

Analogue to Graph 4 we conducted the same analysis separately for the Convergence regions as a whole and for all four stakeholders separately. Additionally, the analysis was made for the different professional groups. All graphs are displayed in the appendix.

**B) Regional results**

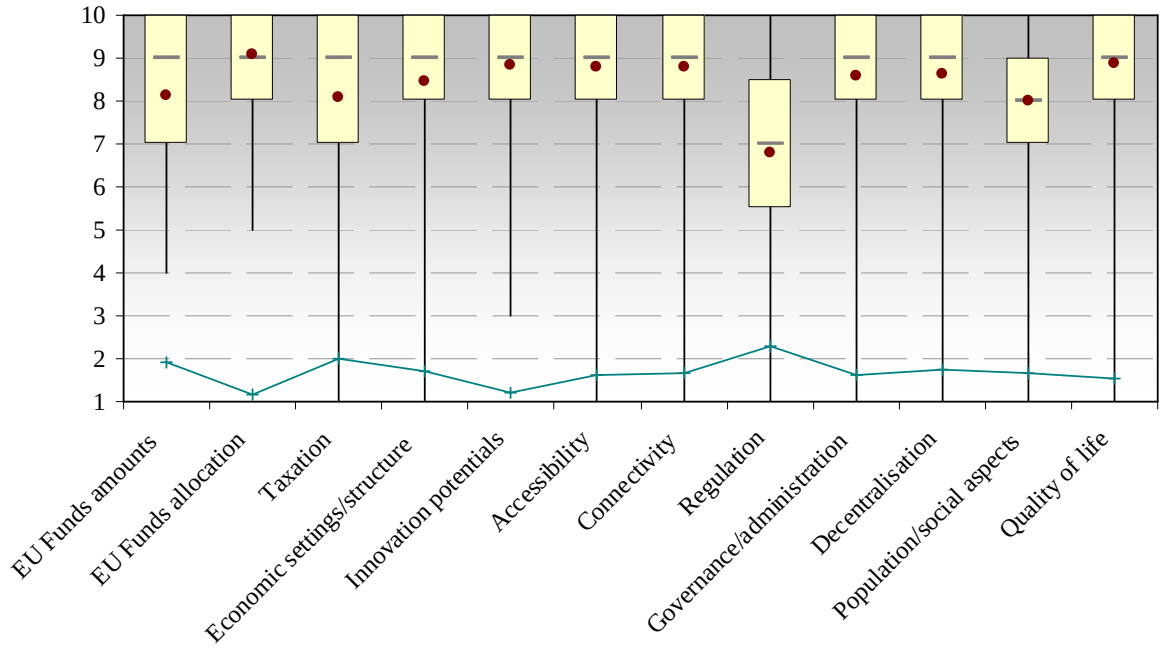
The convergence regions as aggregate find some issues or factors to be more important than others, as Graph 5 shows. Of utmost importance are EU funds amounts, EU funds allocation, innovation potentials, accessibility, connectivity, governance/administration and quality of life. On the other side regulation and population/social aspects are least important. Deviations from this tri-regional average are observed in East Macedonia-Thrace, where taxation, economic settings/structure, decentralisation and population/social aspects are also considered very crucial (Graph 6).

**Graph 5: Importance of factors in Convergence regions**




Light-yellow box: lower (25%) and upper (75%) quartile; dash: median; dot: mean; level line: standard deviations; vertical line: range; vertical axe categories ranging from 1="not important at all" to 10="absolutely necessary"

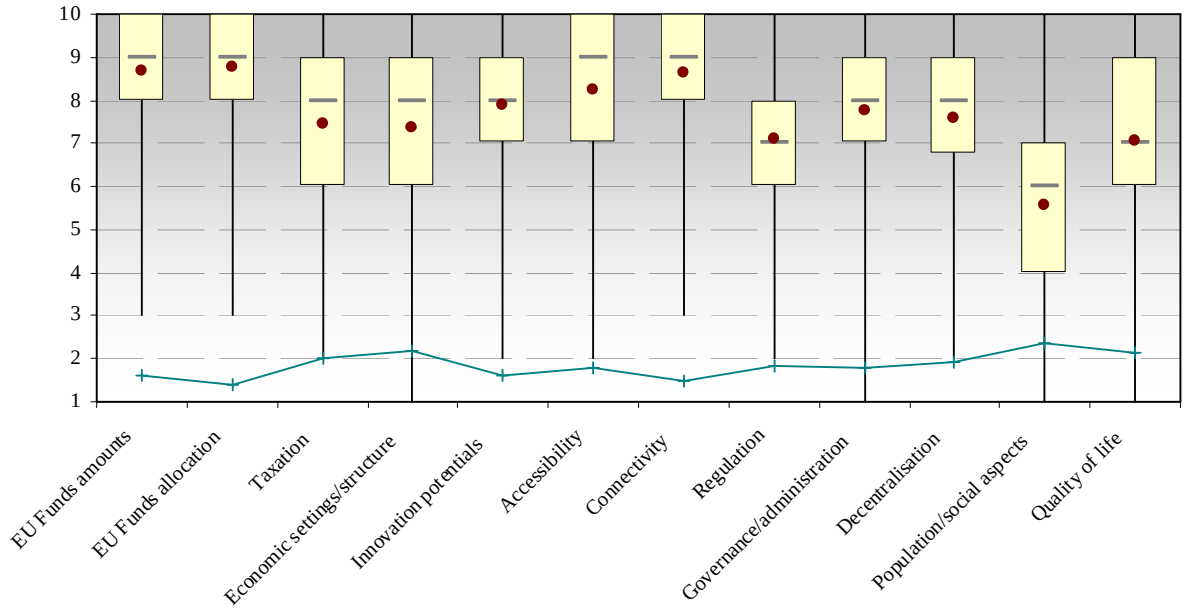
**Graph 6: Importance of factors in East Macedonia/Thrace**




Light-yellow box: lower (25%) and upper (75%) quartile; dash: median; dot: mean; level line: standard deviations; vertical line: range; vertical axe categories ranging from 1="not important at all" to 10="absolutely necessary"

In Podlaskie (see Graph 7) innovation potentials and governance/administration are only of medium importance and quality of life surprisingly of low importance. Population/social aspects, although generally not really considered to be a key factor, obtains the poorest rating of all groups across all questionnaires.

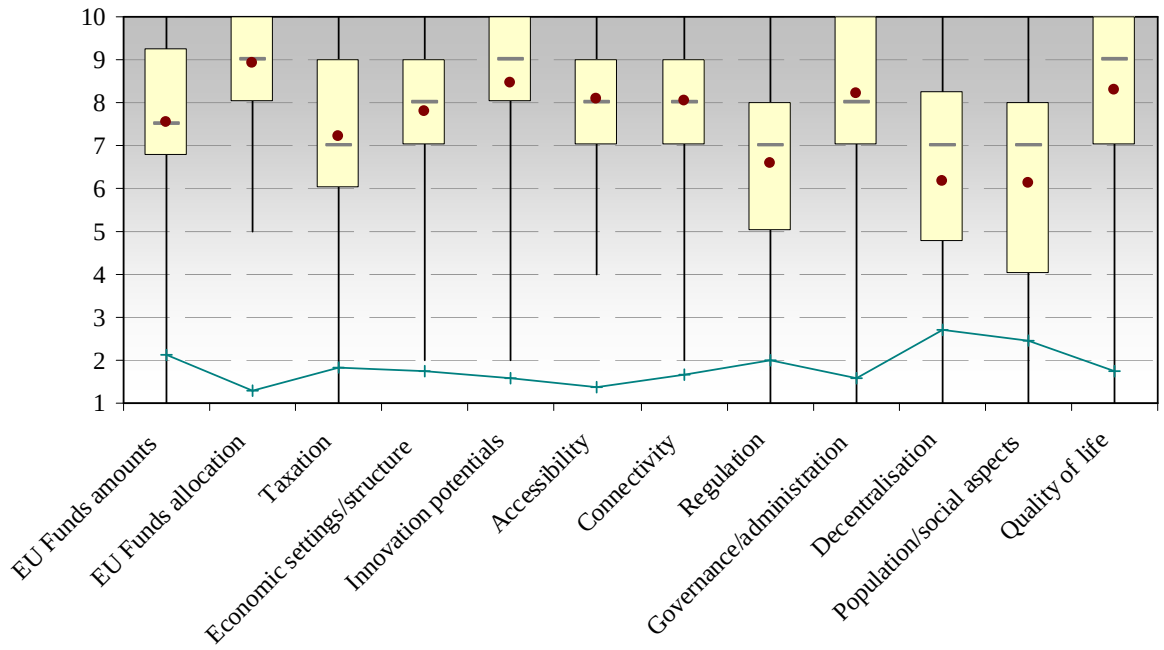
**Graph 7: Importance of factors in Podlaskie**




Light-yellow box: lower (25%) and upper (75%) quartile; dash: median; dot: mean; level line: standard deviations; vertical line: range; vertical axe categories ranging from 1="not important at all" to 10="absolutely necessary"

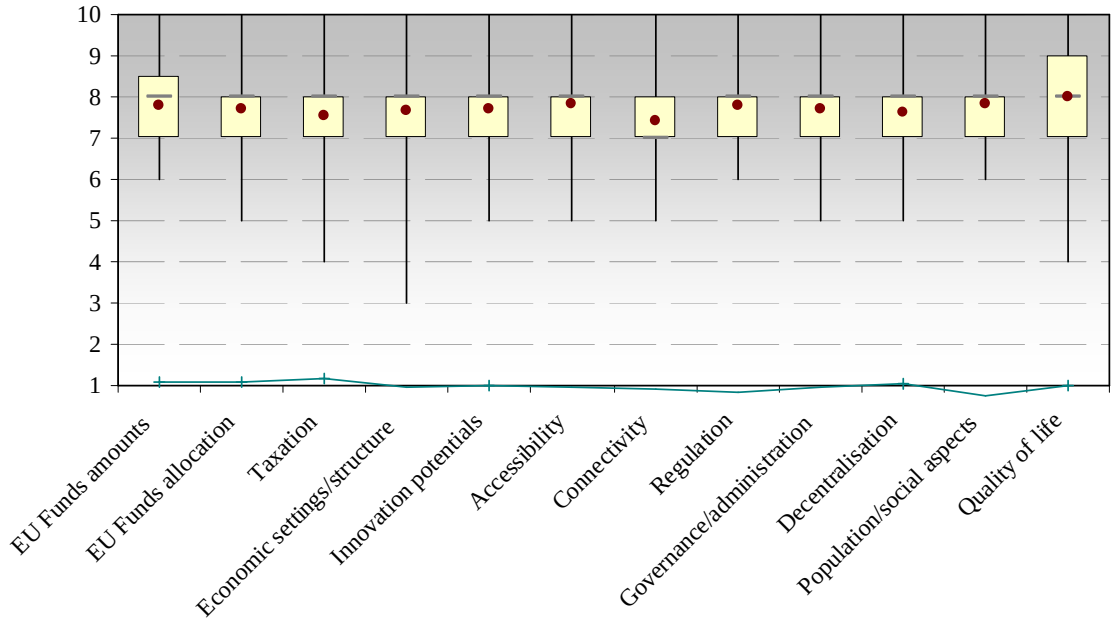
Finally in Campania (see Graph 8) EU funds amounts, accessibility, connectivity, and governance/administration are of medium importance, decentralisation and population aspects of least significance.

**Graph 8: Importance of factors in Campania**




Light-yellow box: lower (25%) and upper (75%) quartile; dash: median; dot: mean; level line: standard deviations; vertical line: range; vertical axe categories ranging from 1="not important at all" to 10="absolutely necessary"

**Graph 9: Importance of factors in Valencia**




Light-yellow box: lower (25%) and upper (75%) quartile; dash: median; dot: mean; level line: standard deviations; vertical line: range; vertical axe categories ranging from 1="not important at all" to 10="absolutely necessary"

As Graph 9 illustrates, the phasing-in region Valencia is characterized by a more stable outcome, with a median of 8 for all groups of questions but one and with a mean of nearly always slightly below 8. "Outliers" are the least important connectivity with a median of 7 and the considerably most essential quality of life with a 75%-quantile reaching up to 9.

### C) Categorical results

In line with the findings of the statistical tests all four professional categories ranked the twelve groups more or less in the same way. In fact, the four graphs look very similar to Graph 3, and can therefore easily be left out of the main part of this report – they are presented in the appendix.

## 2.2.4 Summary of the results of the questionnaires

Coming back to the list of potential success factors, Table 9 displays the ranking of the twelve groups in the convergence regions and the phasing-in region according to the questionnaires, which should help us weight these success factors derived from the twelve groups for the empirical analysis. The first criterion is the median a group reached in the questionnaires but as can be seen there are several groups with the same value. Therefore, as second criterion we used the mean value to obtain the hierarchy within a group with the same median. If even median and mean are identical, the upper quartile was used as the third and final criterion.

**Table 9: Importance of factors, average of convergence regions and phasing-in region**

| **Convergence regions** | | | | **Phasing-in regions** | | | |
|---|---|---|---|---|---|---|---|
| | Factors | Median | Mean | | Factors | Median | Mean |
| 1. | EU funds allocation | 9 | 8.94 | 1. | Quality of life | 8 | 7.99 |
| 2. | Connectivity | 9 | 8.49 | 2. | Accessibility | 8 | 7.83 |
| 3. | Innovation potentials | 9 | 8.43 | 3. | Population/social | 8 | 7.82 |
| 4. | Accessibility | 9 | 8.39 | 4. | EU funds amounts | 8 | 7.80 |
| 5. | Governance/admin | 9 | 8.23 | 5. | Regulation | 8 | 7.80 |
| 6. | Quality of life | 9 | 8.18 | 6. | EU funds allocation | 8 | 7.70 |
| 7. | EU funds amounts | 9 | 8.08 | 7. | Innovation potentials | 8 | 7.69 |
| 8. | Economic settings | 8 | 7.92 | 7. | Governance/admin | 8 | 7.69 |
| 9. | Taxation | 8 | 7.60 | 9. | Economic settings | 8 | 7.66 |
| 10. | Decentralisation | 8 | 7.47 | 10. | Decentralisation | 8 | 7.63 |
| 11. | Regulation | 7 | 6.80 | 11. | Taxation | 8 | 7.54 |
| 12. | Population/social | 7 | 6.67 | 12. | Connectivity | 7 | 7.42 |

# 3 Outline of the final report

The final report will include the remaining results of the interview analyses, summaries of the questionnaires and interviews conducted in each stakeholder region and interpretations from the regional survey. Furthermore, it will contain a summary of interpretations of case studies which will be performed in all four regions, all having one common theme (see chapter 3.1 for details). Finally, the econometric analyses will reveal to what extend the different factors influence the economic performance of convergence regions in comparison to more successful regions (e.g. phasing-in regions) (see chapter 3.2).

## 3.1 Case studies

The superior aim of the case studies is to present underlying lessons learned from the four stakeholder regions that could be of benefit for all European regions. The theme 'innovation and information society' was a common suggestion at the first Steering Committee held in Naples on June 29th.

Looking at the results of the qualitative analyses, the 'knowledge economy and information society' theme is of major relevance for the regional actors. As we can see in Table 9, innovation potentials and (ICT)-connectivity are ranked second and third after the allocation of EU funds in convergence regions. In contrast, the same themes are ranked seventh and twelfth in the phasing-in region Valencia. This is very interesting and leads to the assumption that innovation potential and connectivity might be a necessary precondition for the fostering of the economy. Once the knowledge economy and ICT base is stable, it moves out of consciousness and might therefore become less relevant in people’s perception.

This impression is justified by looking at the interviews of the region East Macedonia-Thrace, where the knowledge economy is, besides accessibility, seen as one of the most important factors of economic development: "The knowledge economy is a necessary factor to boost the local economy and its competitiveness". Thereby, special attention is paid to the effective and efficient exploitation of the knowledge infrastructure (including different programmes) and their improvement.

The knowledge economy and information society theme is ideally suited for case study investigations because it is not dependent on any particular geographical location and has an explicit but different meaning for every nation and every region. Furthermore, knowledge and innovation are anchored deeply within the EU context: the Lisbon European Council of March 2000 set the objective of making Europe the most competitive and dynamic knowledge based economy in the world by the year 2010, reaffirmed in the renewed Lisbon Strategy in 2005. In order to measure innovative outcomes, the European Innovation Scoreboard (EIS) is a useful tool which provides a comparative assessment of the innovation performance of EU Member States under the EU Lisbon Strategy. Also, national policies have recognised the importance of addressing this issue: in almost every national policy context, knowledge and innovation is handled as a crucial theme.

Recently, more and more regional actors are seeking to establish a well functioning innovation system which provides positive outcomes for the regional economy and creates a certain level of economic stability and prosperity.

The four case studies should therefore all have the common title of 'innovation and information society' within they are free to investigate their individual, region-specific tasks and issues. The underlying consideration of this 'openness' with respect to different issues is a chosen intent: there might be strong similarities among different groups of regions within the EU. As a consequence, providing four different examples will address four different groups of regions, whereas the difference between the groups can primarily be found in the respective socio-economic, geographic and political context.

In the following, a brief suggestion of an outline of the case studies is provided (which shall be adjusted as appropriate by each region):

- Purpose and scope
- Methodology
- Contextual placement
- EU context (political)
- national context (socio-economic, geographic, political)
- Regional context (socio-economic, geographic, political)
- Observations
- Results (lessons learned)

Each case study should not exceed 16 pages.

## 3.2 Quantitative analysis

### 3.2.1 Relevance and methodology

The objective of the quantitative analysis is to identify and understand the statistically significant factors for success for convergence regions. This activity comprises the data gathering (and collation) (chapter 3.2.2) and the empirical econometric analysis (chapter 3.2.4). In regard to the main research question, why some regions are successfully catching up and others do not, the analysis will be of high relevance especially for the three convergence stakeholder regions. The analysis will show which factors determine economic growth in regions, which are still performing poorly (most of the convergence regions) and others – which are successfully catching up (e.g. phasing-in region Valencia). To reach this aim, the European regions under investigation (chapter 3.2.3) have first to be classified according to

- their economic performance (level of GDP around 1994) and
- their economic development (economic development 1994-2007),

as indicated in more detail in chapters 3.2.3 and 3.2.4.

The following econometric macro level analysis in chapter 3.2.4 does not only shed light on the four stakeholder regions in terms of what are the relevant factors for success but also serves as example for all European regions which are facing major problems in economic performance and development. This insight will thereby be gained by a direct comparison of the four groups of regions as indicated in Table 13.

However, the four stakeholder regions will be highlighted in the macro analysis and their results will be interpreted in place of all European regions lagging behind. The classification of the regions will be the first step of the empirical analysis and will be conducted for the final report.

### 3.2.2 Data gathering (preliminary)

The main challenge in the data gathering is to set up a complete database with all relevant indicators retrieved from the previous analytical steps (literature review, the questionnaires and the interviews in the stakeholder regions). The main restriction is the data availability in the necessary regional deepness (NUTS 2 level) and the actuality (year 2007). According to the results of the interviews (to be completed) and the questionnaires, different factors MUST be included in the econometric analyses. Those factors can be divided into

- data to measure economic performance (such as GDP growth or employment) and
- data to explain economic performance: so called location factors such as accessibility or taxation.

Table 10 shows the preliminary factors and indicators which have firstly been evaluated as important or very important (and therefore must be included in the analyses) and which are secondly on hand for the econometric analyses. The order of different factors in Table 10 is still random regarding their importance. For the final report and in the econometric analysis, the factors will be incorporated as weighted values in accordance to the final results of the interviews and questionnaires.

**Table 10: Factors and indicators for success for the econometric analysis (preliminary result)**

| **factors** | | **Indicators** |
|---|---|---|
| **left hand variables**: the "success" of regional economies<br>data to measure economic performance | | |
| economic performance | | real GDP, employment |
| **right hand variables**: factors and indicators of regional success<br>data to explain economic performance: location factors | | |
| 1 | knowledge and innovation potential | patents, Shanghai score points, HR in science and technology |
| 2 | population | population density, population changes |
| 3 | economic aspects | unemployment, Informal economy, Employment in high-tech industies |
| 4 | accessibility, connectivity | multimodal accessibility, Communication technology |
| 5 | EU funds policy | EU structural funds |

| | | |
|---|---|---|
| 6 | administration and governance | corruption index |
| 7 | quality of life | *To be completed* |
| 8 | decentralisation | decentralisation Index |
| 9 | taxation | manpower taxation, company taxation |
| 10 | regulation | regulation of product and labour markets |
| 11 | geographical isolation | distance from the economic or political centre to the region |

Table 11 shows sources and details of the various indicators. For the final report this table will be completed by further research and by the missing results from the interviews.

**Table 11: Description of Indicators and sources for the econometric analysis (preliminary result)**

| **Indicator** | **Description and sources** |
|---|---|
| real GDP | total and per capita. Time series data are available for most of regions at NUTS 2 level of the EU 27 countries (Oxford Economics Database). Data of some regions can only be retraced until 1995 or even 1996 (Bulgaria). |
| employment | Oxford Economics Database. Data on NUTS2 level for all regions only starting from 1997 for workplace based employment, though no complete time series at all for residence based employment due to missing data for Bulgaria up until 2003, for Norway up until 1999 and for Switzerland and Denmark up until the present days. |
| unemployment | level and rate from Oxford Economics DB: data on NUTS2 level for almost all regions starting from 1999 (except Bulgaria, Denmark and Switzerland). |
| population | EUROSTAT: data on NUTS2 level for almost all regions starting from 1994 (except Denmark, Poland and Slovakia). |
| area | EUROSTAT: complete |
| corruption index | Transparency international, www.transparency.org (1998-2008) |
| informal economy | International Labour Organisation (ILO) |
| accessibility | potential accessibility multimodal in 2001 available on regional level (database of ESPON). Since only on NUTS3 level available, GDP weighted average of NUTS2 or NUTS1 level.<br>Three missing regions: Azores and Madeira of Portugal as well as the Canary Islands of Spain. |
| communication technology | share of internet users in 2002 plus proportion of firms with own website in 2002 (ESPON database on NUTS2 level). Averages for Belgium, Germany and UK data (NUTS1),<br>population weighted for internet users, GDP weighted for firms. Missing data for Norway and Denmark, partly for Finland. For some reason Switzerland has identical values for all regions. |
| patents | applications to EPA for 2004 on NUTS2 level (EUROSTAT). Missing data on Denmark, Norway, Switzerland and London. |
| hr in science and technology | EUROSTAT, 2007, complete |
| employment in high-tech | EUROSTAT, 2007, missing data on some regions of Bulgaria and Greece. |

| | |
|---|---|
| industies | |
| shanghai score points | Shanghai Jiao Tong University, 2007 |
| regulation | Labour and product markets, 2006, OECD Database. Missing data on Bulgaria and Romania. |
| taxation | companies and qualified manpower, 2007, BAKBASEL Database. Estimates on regional level for Eastern European countries and partially for France. Missing data on Bulgaria, Greece, Portugal, Romania and partially Switzerland. |
| decentralisation | BAKBASEL decentralisation index 2006 including administrative, functional, political and vertical decentralisation, deciding autonomy, financial autonomy, as well as quantitative, qualitative and decentralisation indicators. |
| EU structural funds | for the period 1994 – 1999: official document form EC, only Objectives 1, 2 and 5b (2 and 5b were merged after 2000) used, obviously only for countries having joined the Union before 1994.<br>For the period 2000 – 2006: official site of the European Commissions' regional policy:<br>http://ec.europa.eu/regional_policy/country/prordn/index_en.cfm Using only objectives 1 and 2. Since "for the 1994-1999 and 2000-2006 programming periods the Commission has only been responsible for the amounts per Member State or per programme...", multiregional programmes had to be allocated by estimation, with the regions with the lowest GDP p.c. receiving the highest share (1 - share of GDP p.c. of total GDP p.c.). Missing data obviously on Bulgaria and Romania as well as on Denmark. |

Note: due to regional reforms in Denmark, it is difficult to find data or to allocate it properly to the new regions.

Furthermore, the factors must be subdivided in three categories (according to what have already been made theoretically in Table 2):

- factors that are in the competence (under control) of the regional or local authorities (such as culture, parts of education, in some countries taxes),
- factors that are in the competence (under control) of the national or supranational authorities (such as legal system, regulation of labour markets, and for many countries the tax system),
- factors that are not under political control (exogenous factors, such as climate or geographical part of accessibility).

### 3.2.3 Regions under investigation

It is clear that no relevant statistical analysis can be carried out using data for the four stakeholder regions alone. Therefore data will be used for the following regions shown in Table 12. The regions are further classified in old and new (eligible since 2004 or 2007) EU member states.

**Table 12: Regions under investigation[16]**

| **Country*** | **Name** | **Number** | **Eligible since 2004/2007** | **NUTS-level** |
|---|---|---|---|---|
| Belgium | Regions | 3 | | NUTS1 |
| Germany | Bundesländer | 16 | | |

[16] principle: highest politically relevant sub-national level (= region)

| | | | | |
|---|---|---|---|---|
| The UK | Government Office Regions | 12 | | |
| Austria | Bundesländer | 9 | | NUTS 2 |
| Bulgaria | Planungsregionen | 6 | X | |
| Czech Republik | Groups of Kraje | 8 | X | |
| Denmark | Regions | 5 | | |
| Finland | Suuralueet | 5 | | |
| France | Regions (without overseas) | 22 | | |
| Greece | Periferies | 13 | | |
| Hungary | Groups of Comitates | 7 | X | |
| Ireland | Statistical Regions | 2 | | |
| Italy | Regione | 21 | | |
| Netherlands | Provincies | 12 | | |
| Norway | Landsdelene | 7 | | |
| Poland | Województw | 16 | | |
| Portugal | Regions** | 7 | | |
| Romania | Planungsregionen | 8 | X | |
| Sweden | Riksomrade | 8 | | |
| Slovakia | Groups of Kraje | 4 | X | |
| Spain | Comunidades (without Ceuta, Melilla) | 17 | | |
| Switzerland | Cantons | 26 | | NUTS 3 |
| **Total:** | | **234** | | |

*Countries without politically relevant regions (Cyprus, Estonia, Iceland, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta and Slovenia) will be excluded from the database and the study.
**Portugal: The 5 regions on the mainland are only of administrative relevance; however Madeira and Azores are autonomous regions.

Given the data from above, this will establish the identification of (1) a group of successful European regions, that were below the average level around 1994, but have seen consistently above average growth rates since then (thus successfully catching up), and (2) a group of unsuccessful European regions, that were below the average level around 1994 and have experienced consistently below average growth rates since then for both the old and the new member states (thus still performing poorly).

### 3.2.4 Econometric analysis

This economic and statistical assessment of performance and potential influencing factors to explain differences in economic performance between strong and weak regions in Europe with special emphasis on factors that are of special interest to lagging areas will be the core of the project. It will include reflection on the two periods of EU Cohesion Policy (1994-1999 and 2000-2006). The extensive econometric analysis will explain the differences in economic performance of regions within and across countries using differences of the above factors.

The empirical analyses can be divided into two parts. First, the number of variables that might have an explanatory influence on the differences in economic performance has to be reduced by employing a factor analysis and identifying principle components. The result of that first step will serve as an input to the econometric regression model.

Second, the econometric analysis will show which factors help explain variances in economic performance between different convergence regions. To this end an econometric model of the following form will be tested:

$$\text{Performance} = \alpha + \beta_1 * X_1 + \beta_2 * X_2 + \beta_3 * X_3 + \ldots + \gamma_1 * Z_1 + \gamma_2 * Z_2 + \gamma_3 * Z_3 + \ldots + \varepsilon ,$$

where $\alpha$, $\beta$ and $\gamma$ are fixed but unknown parameters, $\varepsilon$ is an error term, X are various economic and political variables affecting economic performance which cannot be influenced by the regional authorities (such as geographical accessibility or national regulation). Z are different aspects of variables that can be influenced by regional authorities (such as infrastructure or education). The variables X and Z are used to explain the variance of performance over the different regions. In this model, the X-variables serve as control variables, while the Z-variables deserve our full attention: Hypotheses will be derived for each $\beta$ and $\gamma$-parameter. The statistical relevance of the (particularly regional) policy variables can then be tested by simple Wald-tests (see below).

Performance in the above equation is primarily the level of economic activity (GDP per capita) and the dynamics of economic activity (GDP growth). However, it is also possible to use this framework for explaining the social participation rate (employment in percent of the population) or job growth. When using GDP growth as an endogenous variable, the equation has to be amended by the GDP per capita level at the beginning of the growth period to account for different starting levels. Technically, this level term acts as an error correction term which can be interpreted (and tested for) as a conversion term.

As mentioned above, there will be a variety of regional policy indicators in the databank. Obviously it will not be possible to include them all in an econometric regression. Problems from multicollinearity and the loss of degrees of freedom will most probably lead to insignificant estimates only. To reduce the number of variables for explaining variation in economic performance the identified principle components from a factor analysis (see above) will be used as well. Alternatively, indicators attracting high attention in the political discussion (such as the distribution of taxes) will be used.

Two types of estimation methods will be used:

(a) cross section regression analysis using average level information (such as GDP 2000 to 2006) or average rates of change (such as GDP growth 1994 to 2006),

(b) panel data regression analysis pooling cross section with annual time series information (as from 1994) allowing to include much more information and richness to the analysis. However, this approach is much more demanding, especially because the whole lag structure has to be modelled explicitly.

The complete list of factors and indicators will be used after the completion of the qualitative analysis and further research on data availability in accordance with the research hypotheses.

The econometric analyses will be carried out separately for convergence regions in the Old EU and for convergence regions in the new EU member States. Afterwards we will be able to test whether the estimated coefficients from the two groups differ significantly (whether the two groups are samples from an identical population). In addition the values of those factors that prove relevant across the different groups of regions can be compared.

It also might be helpful for the understanding of economic development to use data from all regions in Europe but according to the following distinction of four categories:

**Table 13: Distinction of regions**

| | | GDP growth 1994 to 2007 | |
|---|---|---|---|
| | | high | low |
| GDP per capita level in 1994 | high | strong | losing ground |
| | low | catching up | weak |

Of course, the focus is on the regions on the lower line (the convergence regions, i.e. the regions that started from a low level in 1994, including those successfully catching up and the weak regions still performing poorly). However, it is interesting to know whether the relevant factors for the high level regions and the low level regions are the same or different, thus to know whether there might be a different policy or policy mix appropriate for the convergence regions.

This analysis can be done by applying separate performance estimates for the four different types of regions. However, if we are interesting whether the differences in the estimated parameters are significant, it is easier to combine the four groups pair-wise using the following specification:

$$\text{Performance} = \alpha + \beta_1 * X_1 + \beta_{12} * D * X_1 + \ldots + \gamma_1 * Z_1 + \gamma_{12} * D * Z_1 + \ldots + \varepsilon ,$$

where $\alpha$, $\beta$, $\varepsilon$, X and Z are defined as above. D is a dummy variable taking the value 1 if the respective region belongs to one type and 0 if the respective region belongs to the other type. We then can test for the estimated parameters $\beta 12$ and $\gamma 12$ (using Wald tests). The null hypotheses of equality of the parameters across the regions groups under consideration (or adjacent groups in the above table) take the following form:

$\beta_{12} = 0$ and $\gamma_{12} = 0$, individually to be tested by simple t-tests, or

$\beta_{12} = \gamma_{12} = 0$, combined to be tested by an F-test.

These pairwise tests will show:

- whether high level and low level regions have the same influencing factors
- whether high growth and low growth regions have the same influencing factors
- whether strong and losing-ground regions have the same influencing factors
- whether weak and catching-up regions have the same influencing factors
- whether catching-up and strong regions have the same influencing factors
- whether weak and losing-ground regions have the same influencing factors

respectively, whether the size of the influence is identical or different.

As a result of this extensive empirical analysis, light should be shed on issues such as:

- Which aspects of regional policy help and which are most important for explaining economic performance?
- Which policy areas “count” for regional development and should be put into the hands of the regional level?
- Which aspects of regional policy help and which are most important for explaining economic performance in which type of regions?
- Are there significant differences in the relevance of the factors for the different types of regions?

### 5.3. Synthetic compilation

In this part of the analysis, the results from the previous parts will be brought together into one coherent view: What are the lessons stakeholders and regional decision makers can learn from this targeted analysis? What are the common results of the literature review, the qualitative analysis and the quantitative analysis? Where did we find deviations? How can they be interpreted? Can nevertheless conclusions be drawn for policy making? It will also be interesting for the overall objective of the project to compare the econometric outcomes with the results from the questionnaire (what do the regional decision makers think are the relevant factors for prosperous development and what are the statistically significant factors?).

This reasoned synthesis of the results (literature, interviews, questionnaires, econometrics and case studies) will be presented to and discussed with policy makers in the regions in order to deepen the relevance of the results and to improve the presentation of the results. This will include benchmarking and bench learning experiences to reinforce the use of the targeted analysis in the implementation of operational programmes and in strategic decision making.

The project will be concluded by a final report, consisting of distinct parts suitable for politicians/policy decision-makers, socio-economic practitioners and academics. Selected topics will provide information on experiences, methodologies and strategies including public administration and EU Structural impacts. The Final Report will include the four case studies.

To ensure optimal effectiveness and efficiency of the project, upstream and downstream communication is crucial during the whole project. Interaction with all regions involved will permanently challenge both the research process and the outcomes of the research. For this purpose, local expertise and close collaboration with the regional stakeholders by the TPG is a fundamental key to the success and relevance of the research.

# ANNEX I References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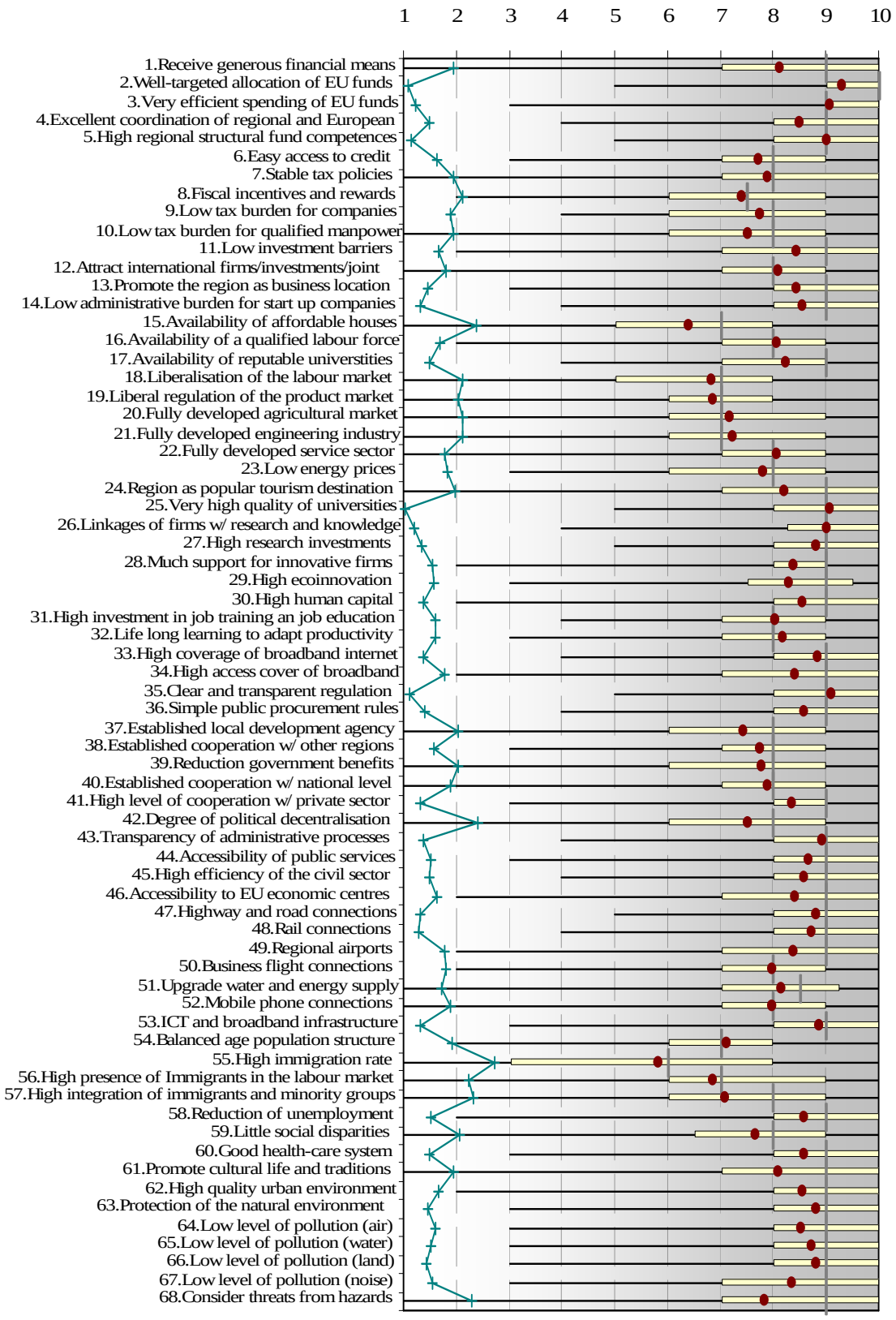
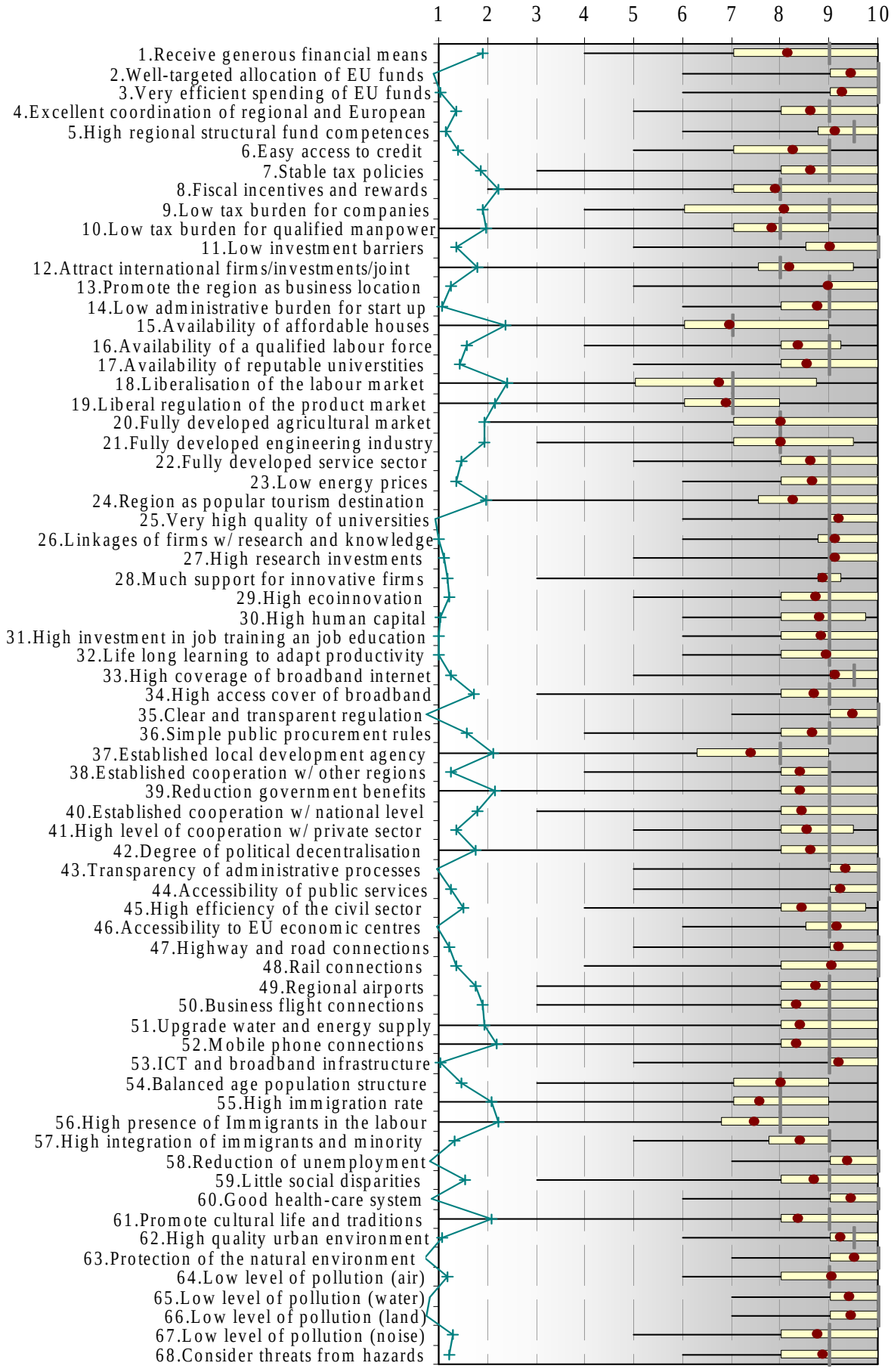
# ANNEX II Graphs

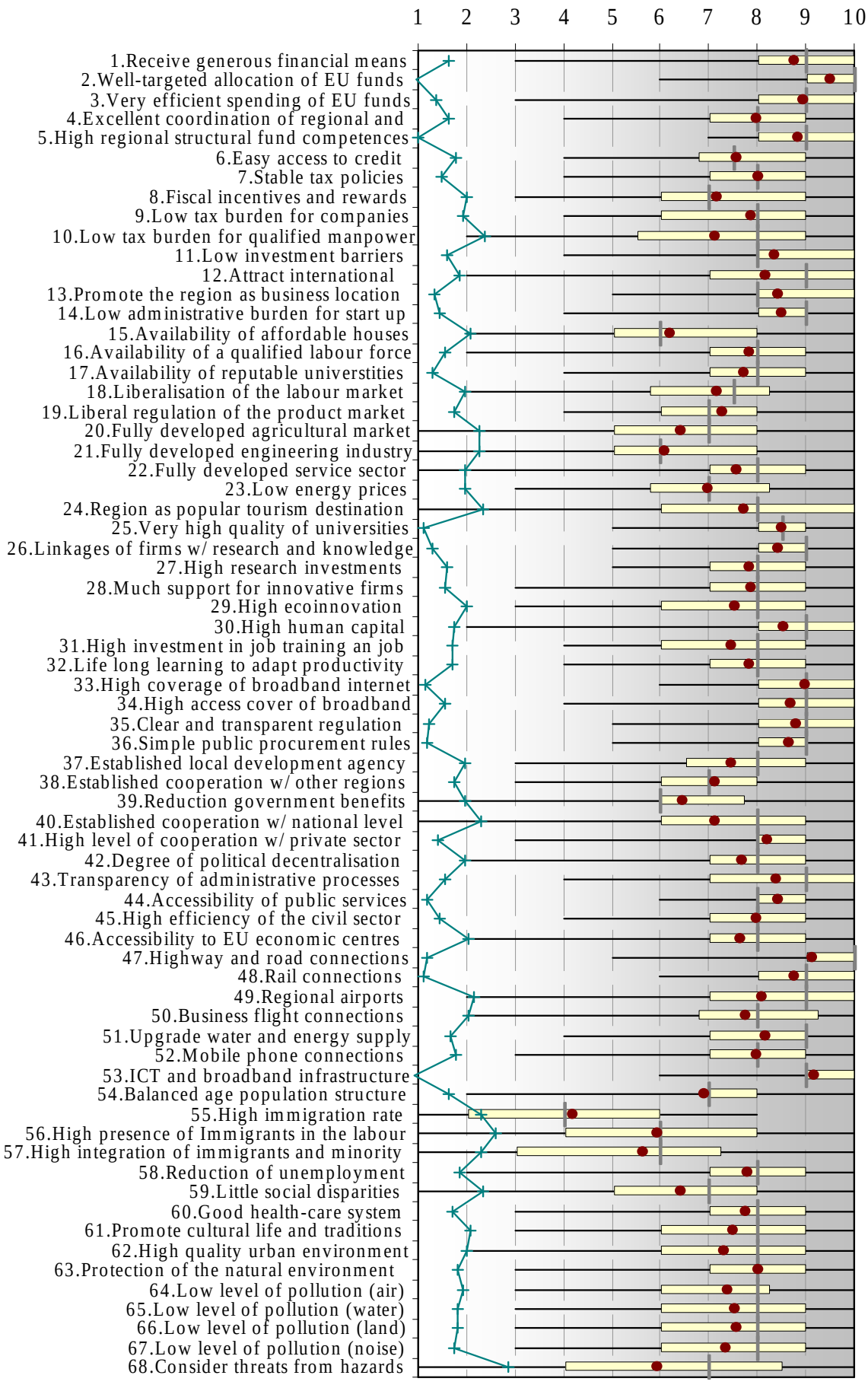
Graph A1: All questions, convergence regions



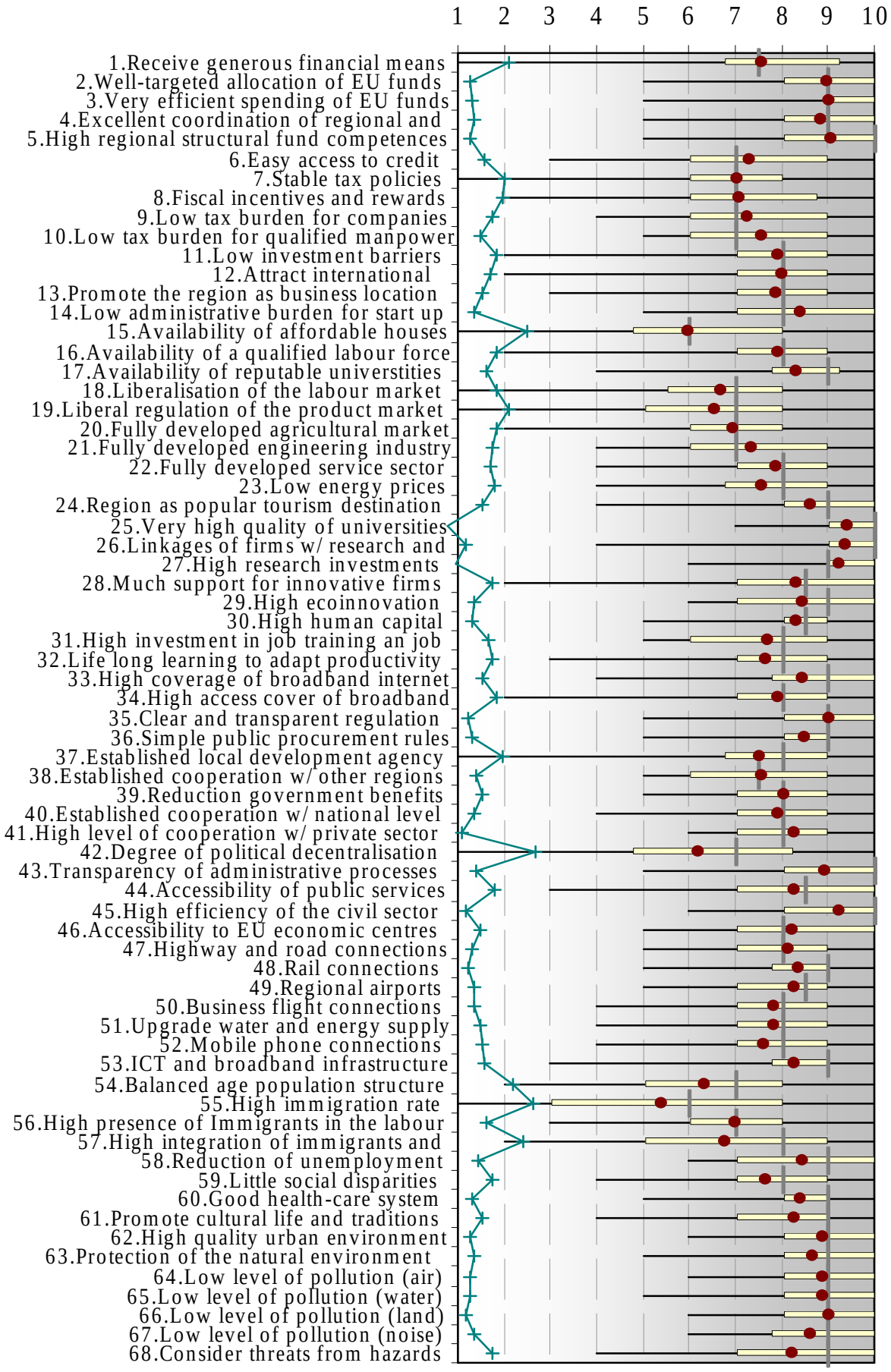
Graph A2: All questions, East Macedonia-Thrace



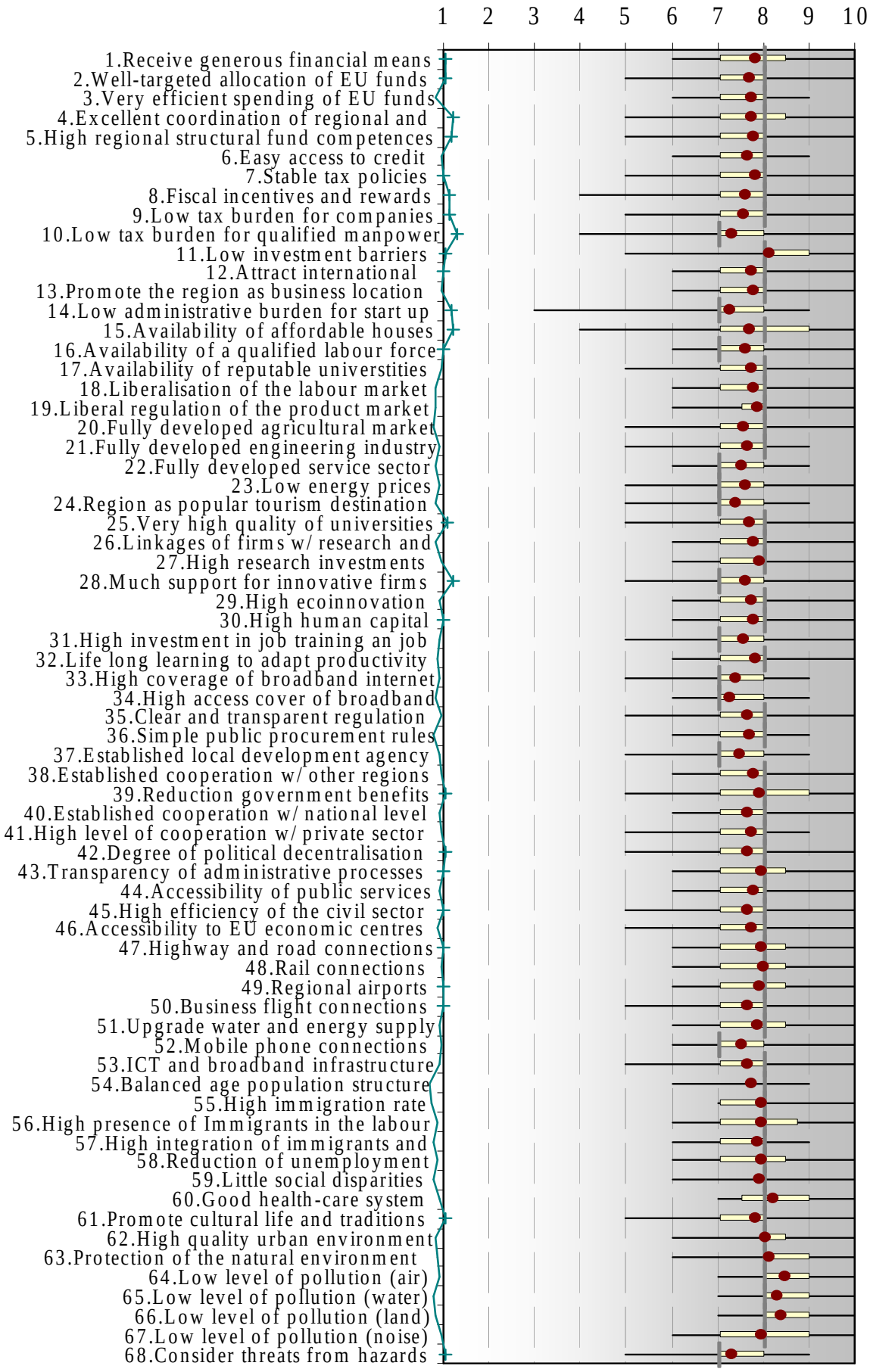
Graph A3: All questions, Podlaskie



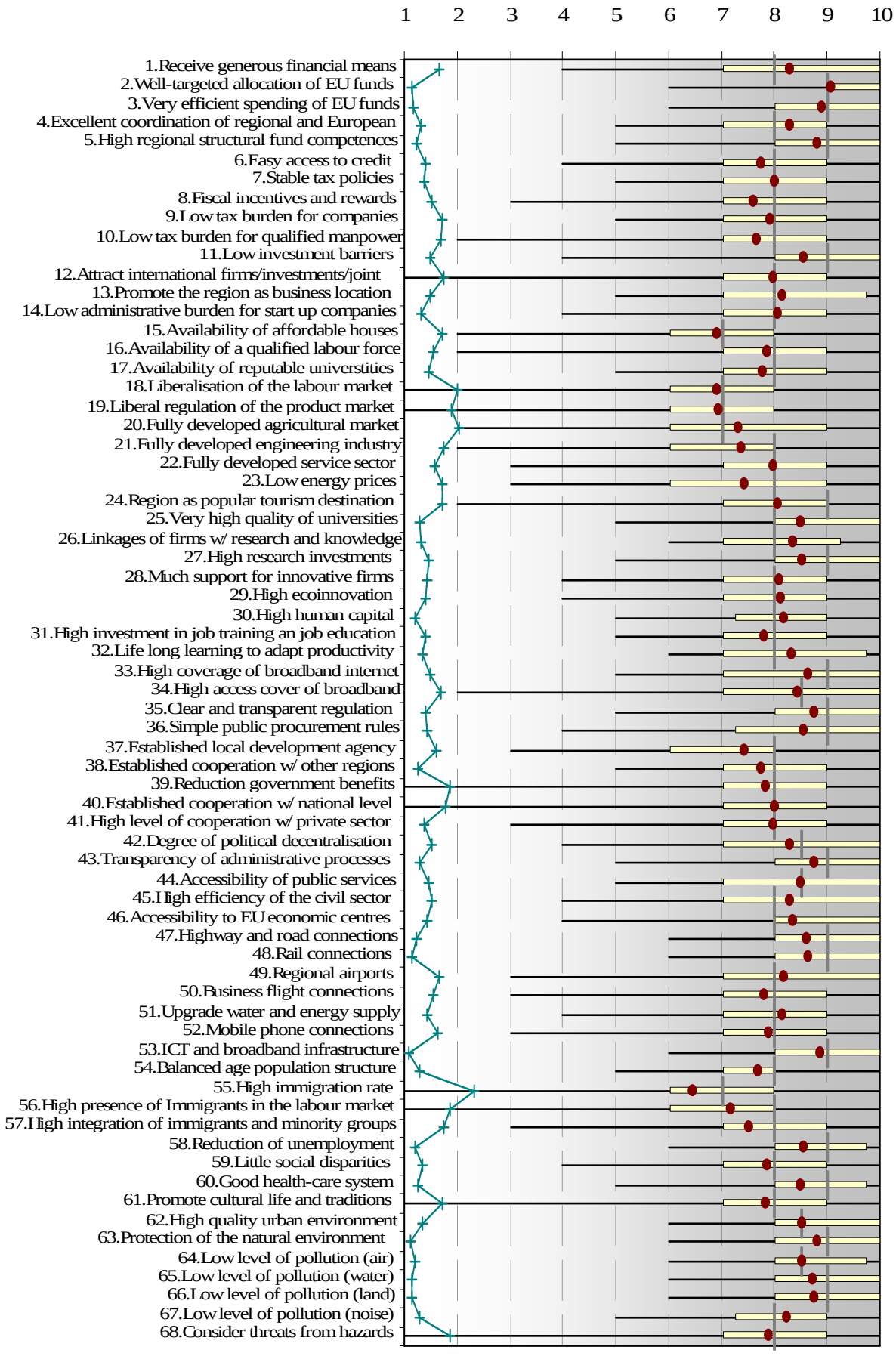
Graph A4: All questions, Campania



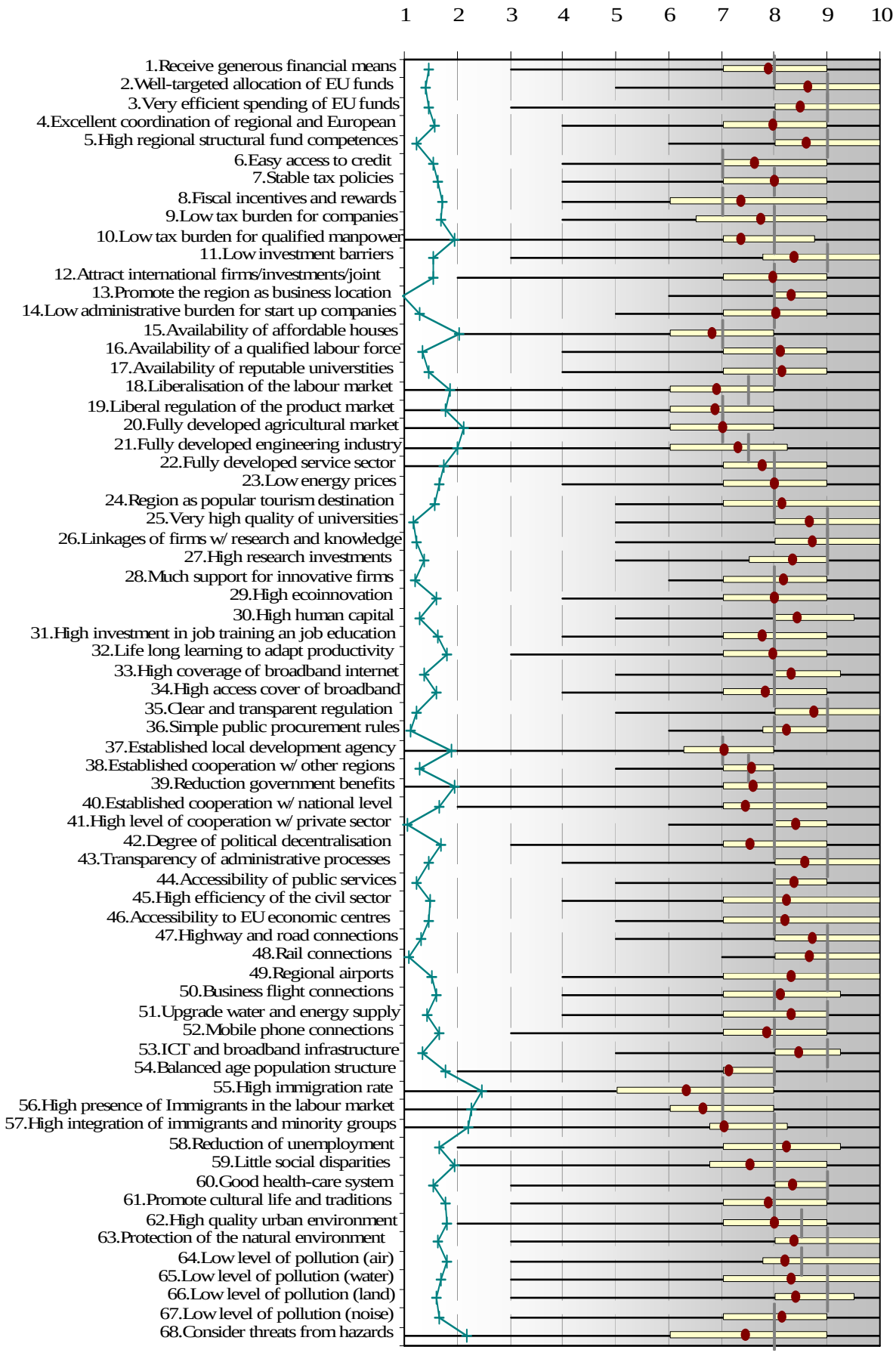
Graph A5: All questions, Valencia



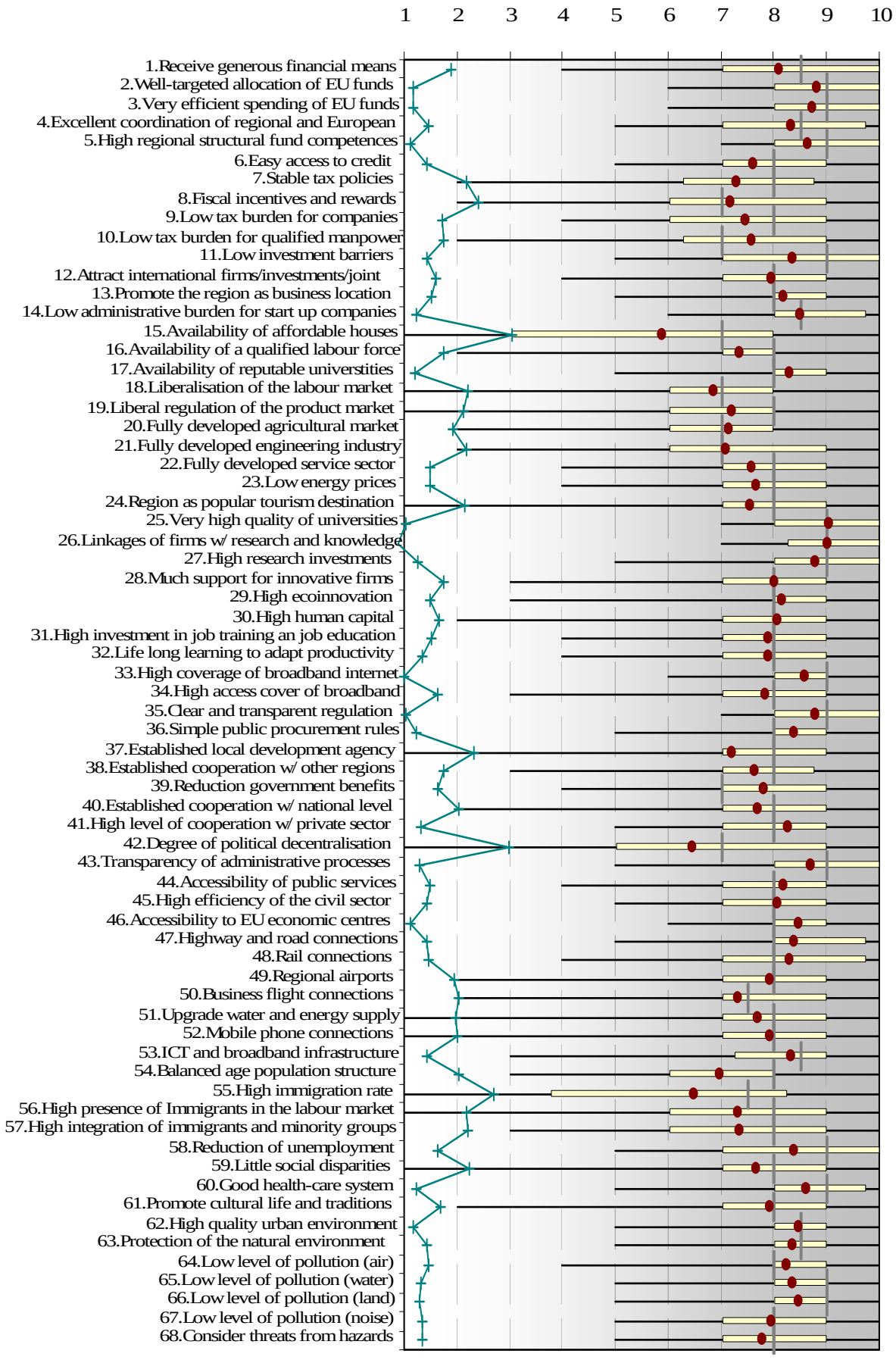
Graph A6: All questions, politicians



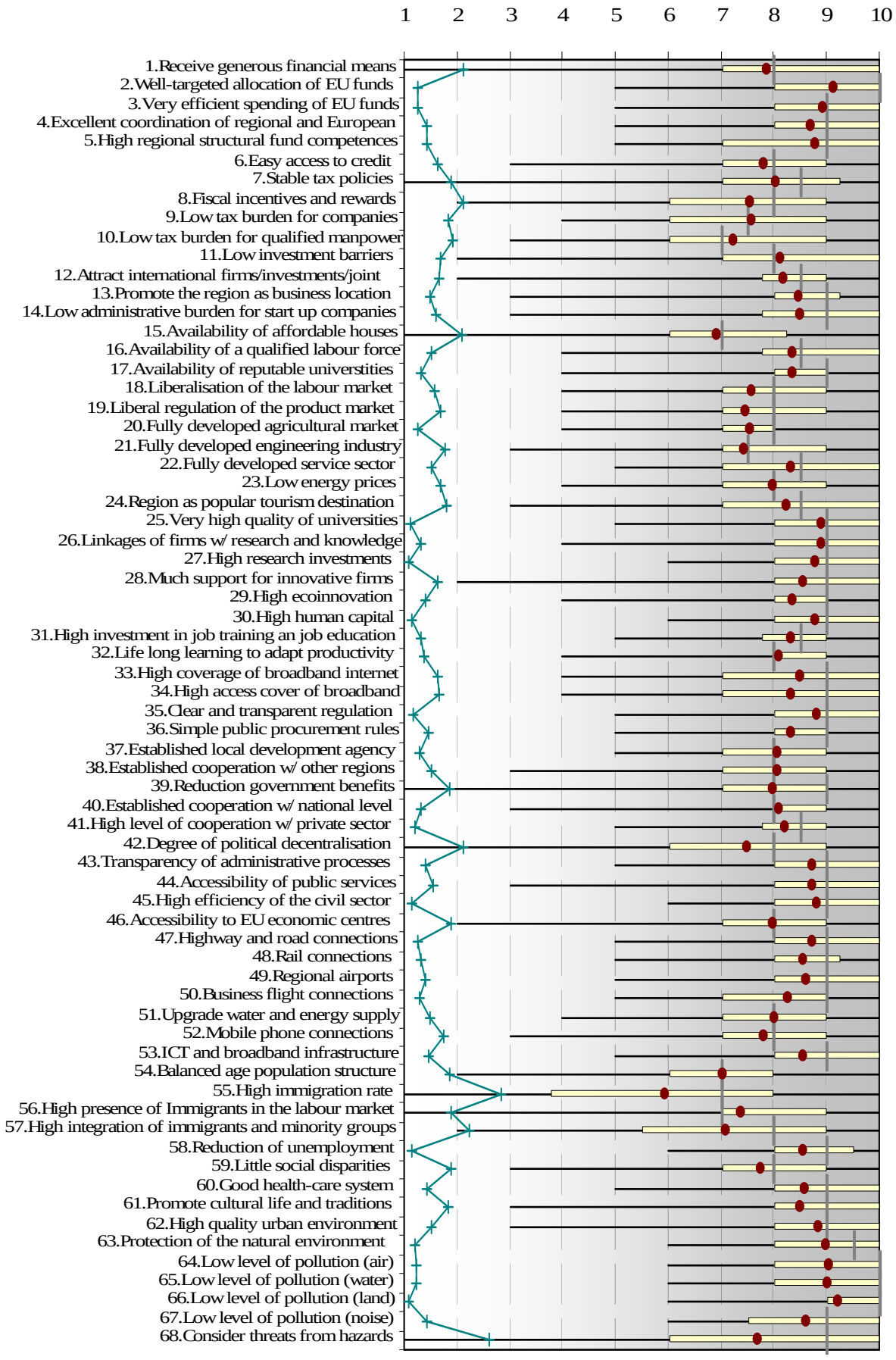
Graph A7: All questions, business community



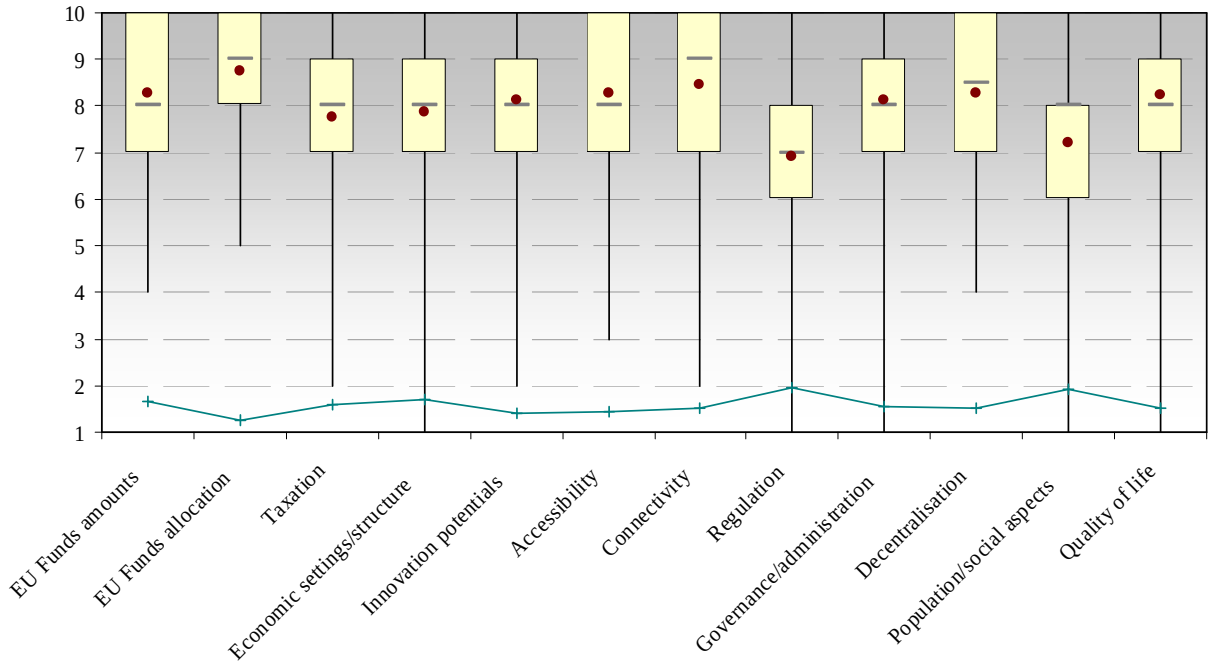
Graph A8: All questions, university professors



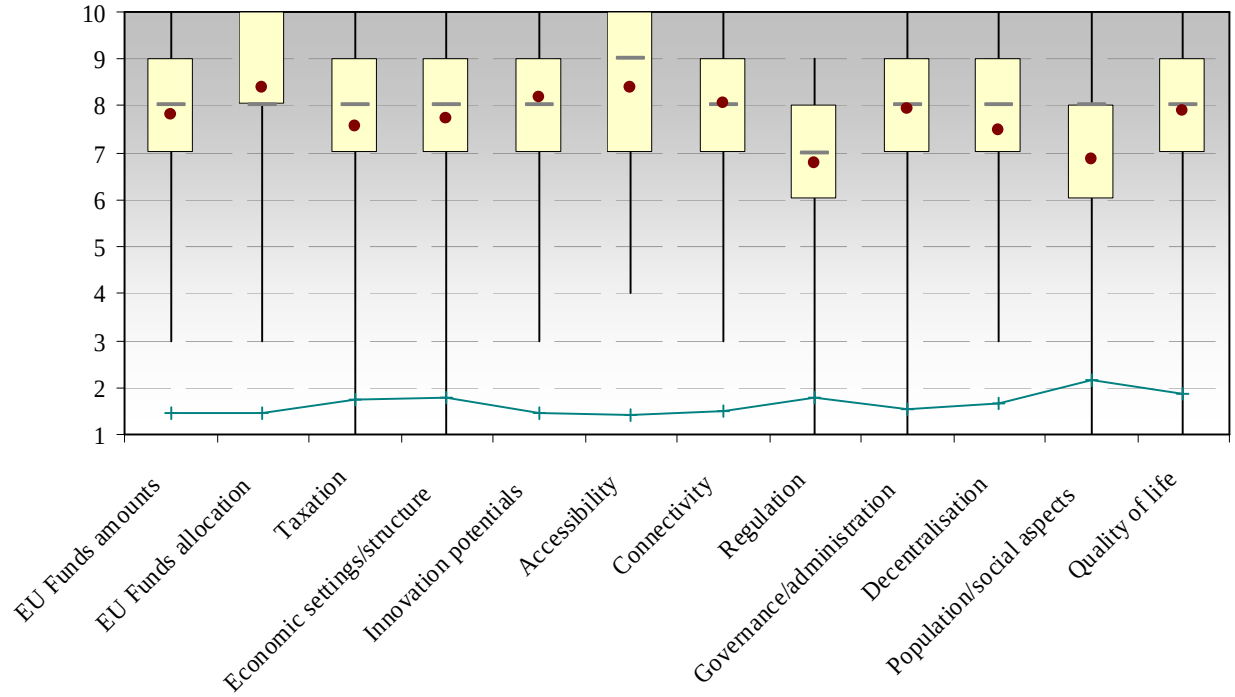
Graph A9: All questions, private sector



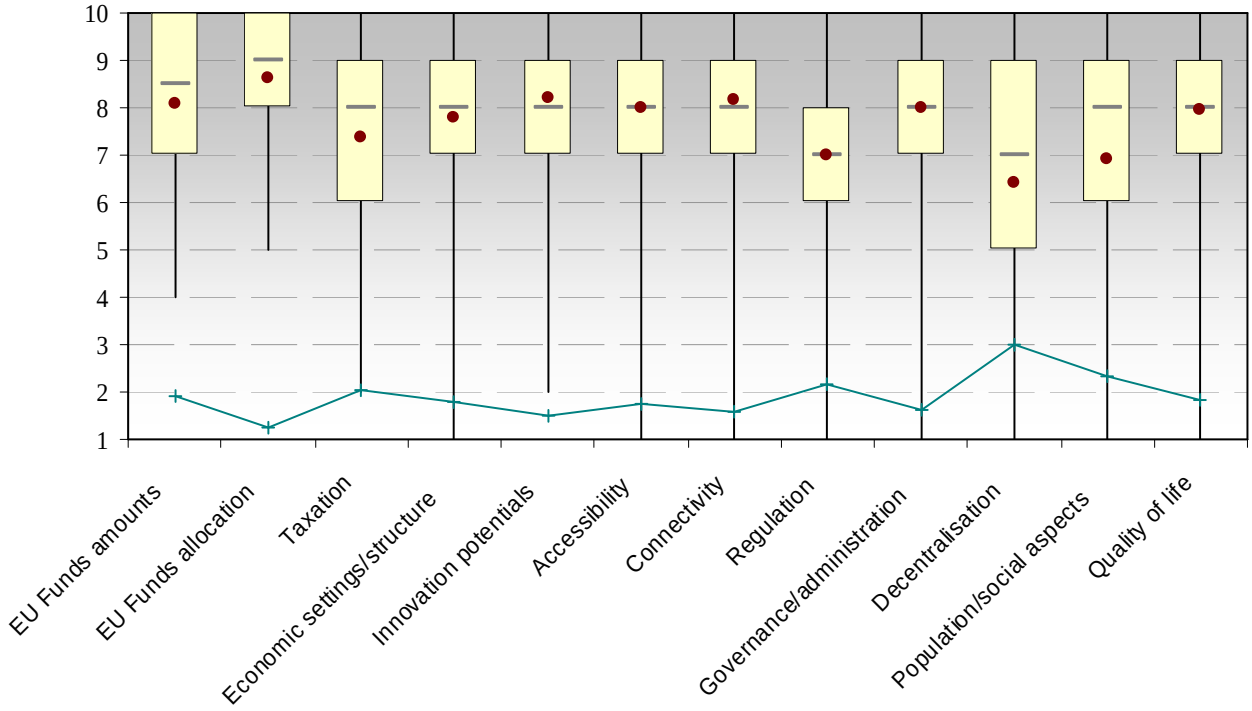
Graph A10: Politicians



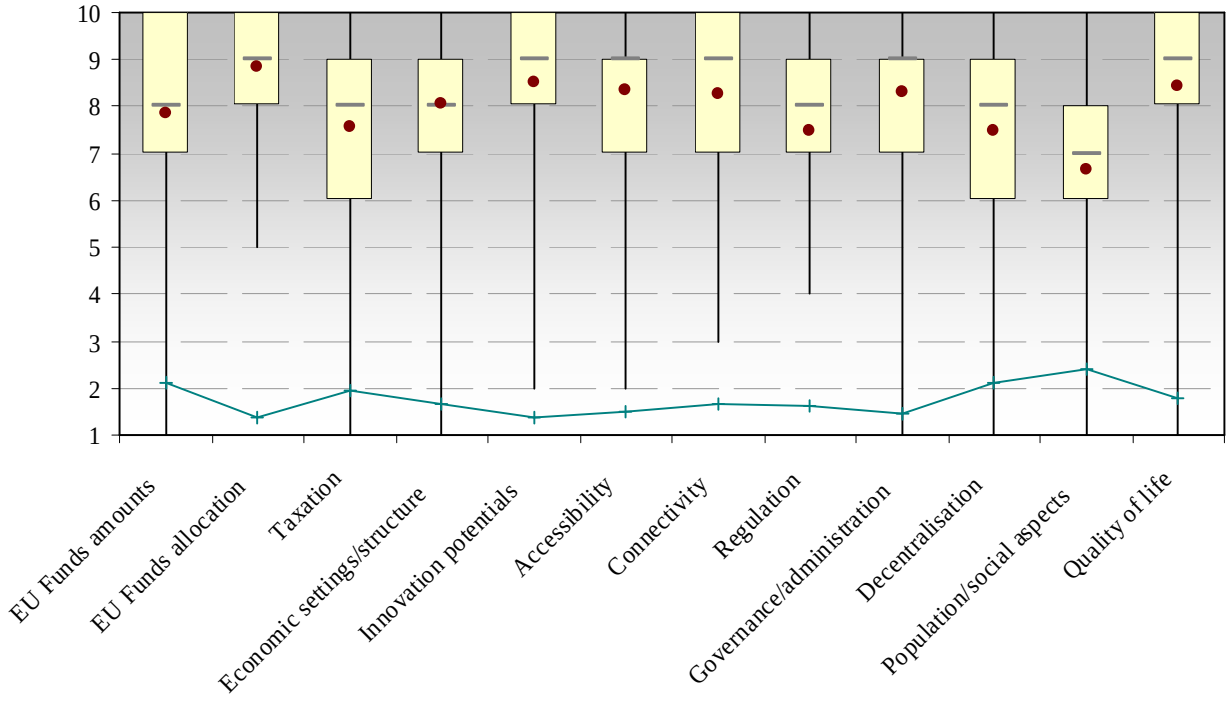

Graph A11: Business community



Graph A12: University professors




Graph A13: Private sector



# ANNEX III Tables

Table A1: Simple frequencies of thematic groups per region and professional category in East Macedonia-Thrace

| thematic groups of questions | professional categories | Simple frequencies of the region of **East Macedonia–Thrace** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | cannot judge | no answer | sum |
| Knowledge and innovation potentials | 1 | 0 | 0 | 0 | 0 | 3 | 4 | 12 | 39 | 51 | 50 | 1 | 0 | 160 |
| | 2 | 0 | 0 | 0 | 1 | 1 | 6 | 12 | 17 | 43 | 39 | 1 | 0 | 120 |
| | 3 | 0 | 0 | 1 | 1 | 2 | 1 | 7 | 17 | 17 | 22 | 2 | 0 | 70 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 48 | 31 | 0 | 0 | 90 |
| Population and social aspects | 1 | 2 | 0 | 0 | 1 | 0 | 5 | 10 | 11 | 11 | 6 | 2 | 0 | 48 |
| | 2 | 0 | 0 | 0 | 0 | 1 | 6 | 5 | 11 | 7 | 5 | 1 | 0 | 36 |
| | 3 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 2 | 7 | 5 | 2 | 0 | 21 |
| | 4 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 4 | 12 | 3 | 2 | 1 | 27 |
| Economic settings and structure | 1 | 2 | 1 | 0 | 0 | 7 | 12 | 16 | 31 | 46 | 56 | 1 | 4 | 176 |
| | 2 | 1 | 0 | 0 | 1 | 2 | 8 | 17 | 23 | 32 | 46 | 2 | 0 | 132 |
| | 3 | 1 | 1 | 2 | 2 | 7 | 10 | 9 | 15 | 11 | 16 | 3 | 0 | 77 |
| | 4 | 0 | 0 | 1 | 0 | 0 | 2 | 6 | 13 | 35 | 41 | 0 | 1 | 99 |
| Accessibility | 1 | 0 | 0 | 2 | 1 | 0 | 4 | 8 | 16 | 18 | 44 | 2 | 1 | 96 |
| | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 4 | 5 | 25 | 32 | 0 | 0 | 72 |
| | 3 | 1 | 0 | 1 | 1 | 5 | 3 | 4 | 9 | 9 | 9 | 0 | 0 | 42 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 17 | 31 | 0 | 0 | 54 |
| Connectivity | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 3 | 8 | 13 | 35 | 2 | 0 | 64 |
| | 2 | 0 | 0 | 0 | 1 | 5 | 1 | 2 | 7 | 15 | 17 | 0 | 0 | 48 |
| | 3 | 1 | 0 | 1 | 0 | 1 | 0 | 4 | 4 | 14 | 2 | 1 | 0 | 28 |
| | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 4 | 8 | 22 | 0 | 0 | 36 |
| EU funds, amounts | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 1 | 3 | 2 | 6 | 0 | 0 | 16 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 3 | 3 | 1 | 1 | 12 |
| | 3 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 7 |
| | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 5 | 0 | 0 | 9 |
| EU funds, allocation | 1 | 0 | 0 | 0 | 0 | 1 | 4 | 3 | 7 | 19 | 30 | 0 | 0 | 64 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 12 | 13 | 20 | 1 | 0 | 48 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 6 | 7 | 10 | 0 | 0 | 28 |
| | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 4 | 27 | 0 | 0 | 36 |
| Administration and governance | 1 | 1 | 0 | 1 | 3 | 1 | 4 | 18 | 29 | 42 | 73 | 2 | 2 | 176 |
| | 2 | 1 | 0 | 0 | 0 | 3 | 11 | 11 | 21 | 45 | 35 | 5 | 0 | 132 |
| | 3 | 1 | 0 | 1 | 1 | 11 | 7 | 11 | 15 | 9 | 19 | 2 | 0 | 77 |
| | 4 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 9 | 51 | 34 | 0 | 0 | 99 |
| Quality of life | 1 | 1 | 0 | 0 | 0 | 3 | 7 | 13 | 27 | 45 | 77 | 2 | 1 | 176 |
| | 2 | 0 | 0 | 0 | 1 | 2 | 8 | 7 | 22 | 34 | 58 | 0 | 0 | 132 |
| | 3 | 3 | 1 | 1 | 0 | 3 | 1 | 6 | 17 | 26 | 18 | 1 | 0 | 77 |
| | 4 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 6 | 26 | 59 | 0 | 2 | 99 |
| Decentralisation | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 9 | 0 | 0 | 16 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 3 | 1 | 0 | 12 |
| | 3 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 7 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 0 | 0 | 9 |
| Regulation | 1 | 0 | 2 | 0 | 0 | 5 | 7 | 4 | 6 | 0 | 6 | 2 | 0 | 32 |
| | 2 | 1 | 0 | 0 | 2 | 4 | 2 | 4 | 5 | 4 | 0 | 2 | 0 | 24 |
| | 3 | 3 | 0 | 1 | 0 | 1 | 4 | 0 | 3 | 1 | 0 | 1 | 0 | 14 |
| | 4 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 8 | 2 | 0 | 0 | 18 |
| Taxation | 1 | 0 | 1 | 1 | 0 | 1 | 11 | 4 | 10 | 16 | 20 | 0 | 0 | 64 |
| | 2 | 1 | 0 | 0 | 2 | 1 | 4 | 8 | 6 | 9 | 13 | 4 | 0 | 48 |
| | 3 | 0 | 1 | 4 | 0 | 4 | 4 | 5 | 3 | 2 | 5 | 0 | 0 | 28 |
| | 4 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 4 | 10 | 17 | 0 | 0 | 36 |

Table A2: Simple frequencies of thematic groups per region and professional category in Podlaskie

| thematic groups of questions | professional categories | Simple frequencies of the region of **Podlaskie** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | cannot judge | no answer | sum |
| Knowledge and innovation potentials | 1 | 0 | 0 | 0 | 2 | 6 | 9 | 19 | 26 | 28 | 15 | 5 | 0 | 110 |
| | 2 | 0 | 0 | 0 | 5 | 9 | 8 | 12 | 18 | 24 | 20 | 4 | 0 | 100 |
| | 3 | 0 | 2 | 2 | 1 | 2 | 4 | 8 | 15 | 10 | 5 | 1 | 0 | 50 |
| | 4 | 0 | 0 | 0 | 1 | 0 | 2 | 15 | 17 | 27 | 8 | 0 | 0 | 70 |
| Population and social aspects | 1 | 2 | 0 | 5 | 1 | 3 | 6 | 6 | 5 | 1 | 3 | 1 | 0 | 33 |
| | 2 | 3 | 5 | 3 | 0 | 6 | 3 | 6 | 3 | 1 | 0 | 0 | 0 | 30 |
| | 3 | 0 | 0 | 2 | 3 | 1 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 15 |
| | 4 | 3 | 0 | 1 | 1 | 1 | 2 | 7 | 5 | 0 | 0 | 1 | 0 | 21 |
| Economic settings and structure | 1 | 0 | 2 | 4 | 4 | 2 | 20 | 14 | 28 | 22 | 24 | 1 | 0 | 121 |
| | 2 | 4 | 3 | 6 | 4 | 11 | 9 | 12 | 26 | 15 | 20 | 0 | 0 | 110 |
| | 3 | 1 | 2 | 0 | 3 | 7 | 9 | 8 | 7 | 9 | 8 | 1 | 0 | 55 |
| | 4 | 1 | 0 | 2 | 3 | 5 | 3 | 13 | 16 | 19 | 15 | 0 | 0 | 77 |
| Accessibility | 1 | 0 | 0 | 0 | 1 | 6 | 4 | 6 | 11 | 15 | 21 | 2 | 0 | 66 |
| | 2 | 0 | 0 | 0 | 0 | 3 | 5 | 14 | 7 | 10 | 20 | 1 | 0 | 60 |
| | 3 | 0 | 2 | 1 | 1 | 1 | 1 | 6 | 2 | 9 | 6 | 1 | 0 | 30 |
| | 4 | 0 | 1 | 1 | 1 | 0 | 2 | 2 | 8 | 14 | 13 | 0 | 0 | 42 |
| Connectivity | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 7 | 7 | 24 | 0 | 0 | 44 |
| | 2 | 0 | 0 | 1 | 1 | 2 | 2 | 5 | 10 | 9 | 10 | 0 | 0 | 40 |
| | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 5 | 7 | 4 | 1 | 0 | 20 |
| | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 10 | 12 | 0 | 1 | 28 |
| EU funds, amounts | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 7 | 0 | 0 | 11 |
| | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 1 | 3 | 2 | 0 | 0 | 10 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 0 | 5 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 4 | 0 | 0 | 7 |
| EU funds, allocation | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 8 | 11 | 22 | 0 | 0 | 44 |
| | 2 | 0 | 0 | 1 | 1 | 2 | 1 | 8 | 11 | 7 | 9 | 0 | 0 | 40 |
| | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 7 | 7 | 0 | 0 | 20 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 6 | 16 | 0 | 0 | 28 |
| Administration and governance | 1 | 1 | 0 | 1 | 2 | 9 | 12 | 18 | 27 | 26 | 23 | 2 | 0 | 121 |
| | 2 | 1 | 1 | 0 | 7 | 10 | 11 | 20 | 19 | 16 | 21 | 4 | 0 | 110 |
| | 3 | 0 | 1 | 2 | 1 | 0 | 3 | 13 | 12 | 13 | 7 | 3 | 0 | 55 |
| | 4 | 0 | 0 | 1 | 1 | 1 | 4 | 5 | 27 | 25 | 12 | 1 | 0 | 77 |
| Quality of life | 1 | 1 | 0 | 1 | 4 | 6 | 14 | 21 | 28 | 27 | 18 | 1 | 0 | 121 |
| | 2 | 1 | 5 | 13 | 3 | 15 | 20 | 11 | 8 | 21 | 11 | 2 | 0 | 110 |
| | 3 | 2 | 0 | 2 | 1 | 10 | 9 | 12 | 7 | 8 | 0 | 4 | 0 | 55 |
| | 4 | 2 | 1 | 1 | 1 | 0 | 8 | 9 | 24 | 11 | 13 | 6 | 1 | 77 |
| Decentralisation | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 3 | 4 | 0 | 0 | 11 |
| | 2 | 0 | 0 | 0 | 1 | 0 | 3 | 2 | 0 | 3 | 1 | 0 | 0 | 10 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 0 | 0 | 0 | 5 |
| | 4 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 3 | 1 | 0 | 0 | 0 | 7 |
| Regulation | 1 | 0 | 1 | 0 | 2 | 3 | 2 | 4 | 6 | 3 | 1 | 0 | 0 | 22 |
| | 2 | 0 | 0 | 0 | 1 | 3 | 4 | 5 | 2 | 2 | 2 | 1 | 0 | 20 |
| | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 0 | 3 | 0 | 0 | 10 |
| | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 7 | 2 | 2 | 0 | 0 | 14 |
| Taxation | 1 | 0 | 0 | 0 | 0 | 3 | 7 | 7 | 8 | 10 | 9 | 0 | 0 | 44 |
| | 2 | 0 | 1 | 0 | 4 | 4 | 3 | 5 | 5 | 9 | 8 | 1 | 0 | 40 |
| | 3 | 0 | 1 | 0 | 1 | 0 | 4 | 4 | 6 | 2 | 2 | 0 | 0 | 20 |
| | 4 | 0 | 0 | 2 | 3 | 4 | 2 | 2 | 1 | 9 | 4 | 1 | 0 | 28 |

Table A3: Simple frequencies of thematic groups per region and professional category in Campania

| thematic groups of questions | professional categories | Simple frequencies of the region of **Campania** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | cannot judge | no answer | sum |
| Knowledge and innovation potentials | 1 | 0 | 1 | 0 | 0 | 5 | 6 | 10 | 17 | 18 | 23 | 0 | 0 | 80 |
| | 2 | 0 | 0 | 1 | 0 | 3 | 3 | 8 | 14 | 19 | 22 | 0 | 0 | 70 |
| | 3 | 0 | 0 | 0 | 1 | 3 | 9 | 6 | 21 | 33 | 37 | 0 | 0 | 110 |
| | 4 | 0 | 1 | 0 | 5 | 4 | 10 | 12 | 34 | 27 | 46 | 1 | 0 | 140 |
| Population and social aspects | 1 | 0 | 0 | 0 | 0 | 3 | 4 | 3 | 9 | 1 | 2 | 2 | 0 | 24 |
| | 2 | 0 | 2 | 2 | 1 | 3 | 1 | 5 | 6 | 1 | 0 | 0 | 0 | 21 |
| | 3 | 1 | 2 | 8 | 1 | 2 | 2 | 3 | 5 | 3 | 4 | 1 | 1 | 33 |
| | 4 | 1 | 7 | 4 | 2 | 1 | 7 | 3 | 9 | 6 | 0 | 2 | 0 | 42 |
| Economic settings and structure | 1 | 0 | 1 | 0 | 4 | 16 | 4 | 16 | 15 | 19 | 12 | 1 | 0 | 88 |
| | 2 | 0 | 0 | 2 | 2 | 1 | 7 | 24 | 14 | 16 | 11 | 0 | 0 | 77 |
| | 3 | 0 | 0 | 1 | 3 | 6 | 10 | 17 | 24 | 27 | 32 | 1 | 0 | 121 |
| | 4 | 0 | 2 | 1 | 4 | 10 | 12 | 35 | 37 | 25 | 27 | 1 | 0 | 154 |
| Accessibility | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 14 | 13 | 4 | 0 | 0 | 48 |
| | 2 | 0 | 0 | 0 | 1 | 2 | 2 | 7 | 7 | 14 | 9 | 0 | 0 | 42 |
| | 3 | 0 | 0 | 0 | 1 | 2 | 4 | 11 | 17 | 11 | 19 | 0 | 1 | 66 |
| | 4 | 0 | 0 | 0 | 0 | 6 | 10 | 15 | 21 | 25 | 6 | 0 | 1 | 84 |
| Connectivity | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 9 | 7 | 5 | 6 | 0 | 0 | 32 |
| | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 7 | 8 | 6 | 0 | 0 | 28 |
| | 3 | 0 | 0 | 1 | 1 | 0 | 3 | 6 | 11 | 6 | 16 | 0 | 0 | 44 |
| | 4 | 0 | 0 | 0 | 3 | 6 | 5 | 6 | 10 | 21 | 5 | 0 | 0 | 56 |
| EU funds, amounts | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 3 | 0 | 0 | 8 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 7 |
| | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 2 | 6 | 0 | 0 | 11 |
| | 4 | 1 | 0 | 0 | 2 | 0 | 2 | 3 | 3 | 2 | 1 | 0 | 0 | 14 |
| EU funds, allocation | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 13 | 14 | 0 | 0 | 32 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 7 | 15 | 0 | 0 | 28 |
| | 3 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 12 | 7 | 20 | 0 | 0 | 44 |
| | 4 | 0 | 0 | 0 | 0 | 4 | 1 | 8 | 7 | 11 | 25 | 0 | 0 | 56 |
| Administration and governance | 1 | 0 | 0 | 0 | 0 | 4 | 13 | 14 | 11 | 24 | 21 | 0 | 1 | 88 |
| | 2 | 0 | 0 | 1 | 1 | 2 | 4 | 12 | 26 | 14 | 17 | 0 | 0 | 77 |
| | 3 | 1 | 0 | 0 | 2 | 5 | 7 | 19 | 25 | 24 | 38 | 0 | 0 | 121 |
| | 4 | 0 | 0 | 2 | 0 | 5 | 18 | 26 | 29 | 34 | 39 | 1 | 0 | 154 |
| Quality of life | 1 | 0 | 1 | 0 | 0 | 4 | 8 | 13 | 21 | 20 | 21 | 0 | 0 | 88 |
| | 2 | 0 | 0 | 0 | 0 | 4 | 8 | 11 | 12 | 26 | 16 | 0 | 0 | 77 |
| | 3 | 1 | 2 | 1 | 0 | 4 | 7 | 14 | 31 | 27 | 33 | 0 | 1 | 121 |
| | 4 | 1 | 0 | 3 | 6 | 6 | 10 | 13 | 20 | 30 | 64 | 1 | 0 | 154 |
| Decentralisation | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 4 | 0 | 0 | 0 | 8 |
| | 2 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 7 |
| | 3 | 4 | 0 | 2 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 11 |
| | 4 | 1 | 0 | 0 | 1 | 2 | 3 | 0 | 3 | 3 | 1 | 0 | 0 | 14 |
| Regulation | 1 | 2 | 0 | 0 | 1 | 2 | 3 | 4 | 4 | 0 | 0 | 0 | 0 | 16 |
| | 2 | 1 | 0 | 0 | 5 | 0 | 0 | 2 | 4 | 2 | 0 | 0 | 0 | 14 |
| | 3 | 0 | 0 | 1 | 1 | 2 | 2 | 6 | 5 | 3 | 1 | 1 | 0 | 22 |
| | 4 | 0 | 0 | 0 | 3 | 3 | 4 | 8 | 4 | 5 | 1 | 0 | 0 | 28 |
| Taxation | 1 | 0 | 0 | 0 | 0 | 6 | 2 | 9 | 8 | 5 | 1 | 1 | 0 | 32 |
| | 2 | 0 | 0 | 0 | 0 | 6 | 6 | 7 | 4 | 5 | 0 | 0 | 0 | 28 |
| | 3 | 0 | 1 | 1 | 3 | 4 | 6 | 5 | 3 | 10 | 11 | 0 | 0 | 44 |
| | 4 | 1 | 1 | 0 | 0 | 4 | 16 | 13 | 9 | 3 | 8 | 0 | 1 | 56 |

Table A4: Simple frequencies of thematic groups per region and professional category in Valencia

| thematic groups of questions | professional categories | Simple frequencies of the region of **Valencia** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | cannot judge | no answer | sum |
| Knowledge and innovation potentials | 1 | 0 | 0 | 0 | 0 | 4 | 16 | 42 | 40 | 8 | 0 | 0 | 0 | 110 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 6 | 42 | 45 | 9 | 8 | 0 | 0 | 110 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 32 | 12 | 1 | 0 | 0 | 70 |
| | 4 | 0 | 0 | 0 | 0 | 1 | 1 | 14 | 24 | 11 | 9 | 0 | 0 | 60 |
| Population and social aspects | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 10 | 18 | 3 | 0 | 0 | 0 | 33 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 19 | 5 | 1 | 1 | 0 | 33 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 13 | 4 | 0 | 0 | 0 | 21 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 7 | 2 | 0 | 2 | 0 | 18 |
| Economic settings and structure | 1 | 0 | 0 | 0 | 0 | 4 | 8 | 45 | 50 | 14 | 0 | 0 | 0 | 121 |
| | 2 | 0 | 0 | 0 | 0 | 2 | 9 | 42 | 49 | 16 | 2 | 1 | 0 | 121 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 26 | 28 | 16 | 6 | 0 | 0 | 77 |
| | 4 | 0 | 0 | 1 | 0 | 0 | 3 | 27 | 24 | 8 | 2 | 1 | 0 | 66 |
| Accessibility | 1 | 0 | 0 | 0 | 0 | 2 | 5 | 19 | 31 | 9 | 0 | 0 | 0 | 66 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 25 | 28 | 6 | 7 | 0 | 0 | 66 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 18 | 11 | 2 | 0 | 0 | 42 |
| | 4 | 0 | 0 | 0 | 0 | 1 | 2 | 13 | 9 | 10 | 1 | 0 | 0 | 36 |
| Connectivity | 1 | 0 | 0 | 0 | 0 | 1 | 7 | 17 | 16 | 3 | 0 | 0 | 0 | 44 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 5 | 18 | 17 | 3 | 1 | 0 | 0 | 44 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 9 | 5 | 1 | 0 | 0 | 28 |
| | 4 | 0 | 0 | 0 | 0 | 1 | 3 | 13 | 5 | 2 | 0 | 0 | 0 | 24 |
| EU funds, amounts | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 2 | 0 | 0 | 0 | 11 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 4 | 2 | 0 | 0 | 0 | 11 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 1 | 0 | 0 | 7 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 1 | 0 | 0 | 6 |
| EU funds, allocation | 1 | 0 | 0 | 0 | 0 | 1 | 5 | 13 | 17 | 8 | 0 | 0 | 0 | 44 |
| | 2 | 0 | 0 | 0 | 0 | 2 | 8 | 8 | 17 | 5 | 4 | 0 | 0 | 44 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 13 | 4 | 2 | 0 | 0 | 28 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 8 | 4 | 1 | 0 | 0 | 24 |
| Administration and governance | 1 | 0 | 0 | 0 | 0 | 3 | 13 | 45 | 48 | 12 | 0 | 0 | 0 | 121 |
| | 2 | 0 | 0 | 0 | 0 | 1 | 6 | 42 | 50 | 17 | 5 | 0 | 0 | 121 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 34 | 21 | 2 | 0 | 0 | 77 |
| | 4 | 0 | 0 | 0 | 0 | 2 | 6 | 23 | 22 | 8 | 4 | 1 | 0 | 66 |
| Quality of life | 1 | 0 | 0 | 0 | 0 | 1 | 8 | 33 | 56 | 23 | 0 | 0 | 0 | 121 |
| | 2 | 0 | 0 | 0 | 1 | 0 | 4 | 25 | 56 | 27 | 7 | 1 | 0 | 121 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 35 | 23 | 6 | 0 | 0 | 77 |
| | 4 | 0 | 0 | 0 | 0 | 2 | 6 | 15 | 19 | 15 | 9 | 0 | 0 | 66 |
| Decentralisation | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 3 | 1 | 0 | 0 | 0 | 11 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 4 | 2 | 0 | 0 | 0 | 11 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 1 | 0 | 0 | 7 |
| | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 2 | 0 | 0 | 0 | 6 |
| Regulation | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 7 | 11 | 3 | 0 | 0 | 0 | 22 |
| | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 16 | 0 | 0 | 0 | 0 | 22 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 4 | 3 | 2 | 0 | 0 | 14 |
| | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 0 | 1 | 0 | 0 | 12 |
| Taxation | 1 | 0 | 0 | 0 | 0 | 4 | 3 | 17 | 16 | 4 | 0 | 0 | 0 | 44 |
| | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 10 | 22 | 6 | 2 | 0 | 0 | 44 |
| | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 11 | 5 | 2 | 0 | 0 | 28 |
| | 4 | 0 | 0 | 0 | 3 | 1 | 2 | 6 | 8 | 4 | 0 | 0 | 0 | 24 |