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SEARCH

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

Targeted Analysis 2013/2/4

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List of abbreviations

TPG	Transnational Project Group
ICT	Information and Communication Technology
NUTS	Nomenclature des unités territoriales statistiques
GDP	Gross Domestic Product
R&D	Research & Development
SME	Small and medium sized enterprises
REMTH	Region of East Macedonia-Thrace
FCV-RE	FUNDACIÓN COMUNIDAD VALENCIANA- REGIÓN EUROPEA
RCC	Regional Competence Centres (in Campania)
EU	European Union

Foreword

This is the **Final Report** of ESPON 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. The research proposal **Structured empirical analysis for convergence regions: identifying success factors for consolidated growth / SEARCH** was designed in response to the Specification for ESPON Targeted Analysis Based on User Demand 2013/2/4: **SUccess for convergence regions' Economies (SURE)** (2009-2010) which was published on 18 August 2008, and proposed by the stakeholder Regions of Campania (Italy), East Macedonia-Thrace (Greece), Podlasie (Poland) and Valencia (Spain). The SURE Stakeholder Regions seek to understand why convergence regions are unable to improve economic performance and competitiveness.

Convergence regions and cohesion policy. It is commonly accepted that convergence regions within the EU do not only suffer from far below average GDP per capita, but are also forced to grow faster than other regions. In order to tackle this reality, many EU-funded projects aim at accelerating regional performance of these regions. Convergence Regions have a common goal: they want to grow faster than the average and ensure that this growth is consistent. The challenge is to accelerate GDP growth rates to catch up with the EU's mean welfare and sustain average growth rates. The gap between the current situation and the average GDP per capita is the potential gain in economic welfare for each region.

EU Cohesion Policy seeks to reduce economic regional disparities and, by doing so, improve the economic performance of European lagging regions. The success of Structural Funds varies according to the traditional indicators used for regional policy, such as GDP and unemployment which, sometimes, do not fully capture the territorial diversity associated with structural imbalances. Factors like demography, accessibility or urban-rural relations are critical to understand different development opportunities. Hence, the capacity to perceive the similarities in the physiognomy of lagging regions and the relevant success factors for economic growth in lagging regions will improve the implementation of Structural Funds.

The project. This project seeks to provide new ways of conceptualising and measuring imbalances within lagging European regions. This can be achieved by a systematic comparison of factors relevant for economic growth and successful cohesion policy over the last 15 years in convergence regions with both high and low growth rates and by a comparison of convergence regions with successful above average GDP regions. By using benchlearning models, particular attention will be given to possible policy actions for the management and implementation of

Convergence funds, and eventually indications will be provided for the interventions during the current programming period (2007-2013) in the stakeholders' regions. This approach will also have a wider EU relevance for all convergence regions within the European territory, and it will contribute to alerting public stakeholders on the regional, national and EU-level of similarities in the physiognomy of these regions and what relevant success factors can efficiently address the goals of cohesion policy to improve the implementation of the Structural Funds.

Multilevel approach. The objective of this project is to empower politicians and other regional stakeholders to make better regional policy in order to increase economic growth and build sustainability. To reach this goal, the TPG seeks to establish those factors that effectively make a difference in achieving sustainable growth and other factors that do not. To this end, different techniques for the identification and evaluation of the relevant factors have been adopted. The essence of the study is empirical (and not theoretical), and it includes two rather different approaches: (1) qualitative methods in depth interviews and case studies in the four stakeholder regions, (2) quantitative methods utilising a standardized social science survey instrument and related statistical analyses, moreover, employing regression techniques for the complementary analysis of regional growth factors in selected European regions.

Stakeholder involvement. The success of this Targeted Analysis has depended on the active and valuable collaboration of the Stakeholder Regions. In particular, decision-makers, civil servants, academics and the business community in the regions have responded to the questionnaires and been available for interviewing. The participation of the Stakeholders in the SEARCH Steering Committee and the interest of the Italian Ministry for Economic Development and the umbrella regional associations in the project have been particularly appreciated, and their feedback has been crucial for the Final Report. The Transnational Project Group (TPG) would like to take the opportunity to gratefully acknowledge the creative and constructive collaboration of the ESPON Co-ordination Unit and the ESPON Monitoring Committee. The TPG also warmly thanks all participants in the ESPON Seminar in Prague, the Internal Seminar in Malmö and the Open seminar in Alcalà, Spain, for their valuable feedback and comments.

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A. Executive summary

1 Analytical part: key messages and findings

Understanding differential growth of convergence regions

Understanding why some convergence regions continue to lag behind and others are able to accelerate their growth rates and catch up with the EU mean is of key importance for the success of EU cohesion policy. Searching for factors that affect above average and below average growth rates and that might relate to effective fund management and an effective public administration can help regional policy-makers to understand how to improve economic performance in lagging regions. This Final Report has analysed in particular the four stakeholder Regions of Campania (Italy), East Macedonia-Thrace (Greece), Podlasie (Poland) and Valencia (Spain) but has drawn some conclusions that can be useful to all Convergence and Phasing-out/Phasing-in regions benefitting from EU cohesion funds.

Three different groups of factors have been derived from the literature as a basis for the SURE/SEARCH analysis to better grasp the processes of economic growth in convergence regions:

- the **economic drivers,**
- **economic enablers** which are of relevance for *all* European regions,
- and those **factors relevant for an efficient allocation of resources** (like EU funds), which are most important *especially for convergence regions*.

Through the quantitative and qualitative analysis, as detailed in the table below, the influence exerted by the three factor groups on the economic growth of convergence regions and how they are interrelated has been studied. By analyzing differences between weak and catching up regions with below-average GDP, the extent to which the **factors relevant for an efficient allocation of resources** (like EU funds) are a precondition for exploiting economic drivers and enablers is investigated.

The project employs a stepwise multilevel comprehensive approach to analysing which factors account for differential regional growth, focusing on institutional and quality of life aspects, and what convergence regions can do to improve their economic performance and prosperity. Quantitative and qualitative analyses of the 4 Stakeholder regions are combined to identify, analyse, verify and interpret why some convergence regions continue to lag behind and others do not. A picture of the economy and its relationship with the institutional sector has emerged through a survey and interviews in the four stakeholder regions with politicians/civil servants, the business community, university professors and civil society. Case studies on innovation and multilevel growth generating policy measures and activities reveal how the institutional and private sectors may work together to generate sustained and sustainable growth and well being. SWOT analysis identifies the strengths, weaknesses, potential and risks of the stakeholder regions‘ respective development paths. Finally, regression analyses tests the results pertaining to regional economic

growth and whether or not and to what extent they can be transferred to all European regions was carried out.

Focus on regional economic and institutional systems

Consequently, the aim of the quantitative and qualitative analyses carried out by the research team was to identify shortcomings within the regional economic systems of convergence regions and allow for considerations on policy options. To achieve this, different aspects have been investigated in interlocking steps of the analysis as illustrated in the table below:

Key Steps	**Quantitative analysis**	**Qualitative analysis**
Relevant Factors for convergence regions' economies in the 4 Regions	Regional Survey Questionnaire	
Analysis of **differences** between above average GDP regions and weak/ catching up convergence regions	Regional Survey Questionnaire, Econometrics	Interviews, Case Studies
Investigating the **processes** and **mechanisms** within convergence regions, evaluating dependences and interrelations between different factors		Interviews, Case Studies
Verifying differences, dependences and interrelations in regard to factors for economic success in convergence regions	Econometrics	

Preconditions for economic success in convergence regions

The overriding challenge for the weak convergence regions is to ensure the necessary preconditions for a better economic performance. Success in implementing EU-funded programmes means both doing the right things (effectiveness) and doing things right (efficiency); this has been borne out at all levels of the qualitative analysis to be of utmost importance in weak convergence regions, where shortcomings in the efficiency of fund management and in some cases the overall allocation of resources and means have been identified. Effectiveness and efficiency can only be achieved if responsible regional civil servants have the appropriate skills and capability: In short, skills in spending the money should precede the attainment of funds if the weakest regions are to grow consistently faster and so catch up. The importance of efficiency of the public workforce in regard to fund management is fully borne out by the literature. This needs to be matched by efficient decision-making for fund allocation and implementation procedures and effective monitoring and evaluation systems. Conversely the principle concern of "catching-up" regions where the skills have already been acquired is the amount of funds available and the effectiveness of policy choices.

Additionally, an excellent coordination of different levels of government (regional, national, EU) in the allocation and implementation of regional economic development is required. A high level of decentralisation or national policies oriented to a balanced regional development can be seen to be particularly important for convergence regions, compared to regions with an above-average GDP. A further precondition for

the success of cohesion policy is the transparency and accountability of processes, including low levels of corruption and a stable regulatory framework.

Convergence regions are awarded significant funds but will be able to take **full** advantage of them to improve their performance only if the above mentioned preconditions are met.

Economic drivers and economic enablers

In terms of economic drivers (such as knowledge and innovation potentials, accessibility, connectivity, quality of life issues, economic settings and structure, EU funds amount and allocation, population and social aspects) and economic enablers (taxation, regulation, administration system and governance), the research has focused on those elements that can be influenced by regional policy-makers (in general, enablers like levels of taxation or labour conditions are for the most part decided at national levels). Economic driving factors which, from a scientific point of view, have a positive impact on economic growth are, for example, innovation potentials such as highly educated manpower, the quality of universities, research & development or the number of granted patents in a region. Other driving factors are accessibility, connectivity, quality of life or the economic structure within a region. While the presence of economic driving factors (such as a rich natural and cultural heritage, quality of life aspects, innovation potentials or specificities of the economic structure) was perceived by the stakeholders from the 3 Convergence regions, they were considered to be insufficiently exploited. Similar economic driving factors identified in Valencia were, on the other hand, perceived as sufficiently exploited by the interviewees. Despite the crisis in the construction sector which had been considered the principle economic driver in the past, stakeholders perceived that the commercial exploitation of the privileged weather and territory (natural and cultural heritage, the coast) conditions, and a focus on innovation potentials (fostering new technologies through the creation of institutes and a high investment in R&D) would consolidate the economic prosperity of Valencia. According to the interviews, the difference in achieving economic success would therefore appear to lie in the different exploitation (in terms of efficiency) of resources or economic drivers. One reason for Valencia's success, apart from satisfying the preconditions indicated above, was identified by regional stakeholders as the initial spark of investment in the construction sector, even though this has now proved unsustainable. However, over several decades this spark stimulated all other sectors of the regional economy. The findings from the stakeholders' response would suggest that the weak convergence regions are trapped in a negative circle of causality, and cannot find a way out, while Valencia has successfully left this negative circle and entered a positive helix of economic success.

Smart Growth: Innovation and the Knowledge Society – Stakeholder case studies of a key economic driver

Exploiting innovation potentials has been seen as an important economic driver by all interviewed stakeholders in the regions and as a necessary policy focus for future successful economic performance. The in-depth case studies into implemented innovation strategies have illustrated what regional economic processes can be generated by specific measures and investments in the knowledge economy,

complementing the findings of the literature review, the survey and the interviews. Furthermore, the case studies provide some insights and lessons learnt to a wider EU audience. Technogenesis in REMTH was designed new products and services development by individuals, while offering investment opportunities to interested bodies. Gateway to Podlasie increased local administrations' ICT competence and created the conditions for on line access to education and administrative services. The Regional Competence Centres in Campania were set up to serve as a liaison between the academic and business worlds, transforming research projects into successful entrepreneurial initiatives. In Valencia, the creation of a permanent structure was designed to act as a bridge between all the stakeholders in the Valencia region, aimed at promoting regional policies to the EU institutions, disseminating and participating knowledge and experiences and enhancing regional networks to be linked with EU institutions and programmes.

There was a significant difference in the approach in Valencia compared to the other three regions: Valencia created a sustainable structure which enabled regional actors to attract further EU funding in different socio-economic fields through the FUNDACIÓN COMUNIDAD VALENCIANA- REGIÓN EUROPEA, representing "one face to the EU", where knowledge is concentrated to the benefit of all regional actors.

The future of the Campania Regional Competence Centres, bringing together scientific and economic actors to transform research projects into successful entrepreneurial initiatives, on the other hand, depends greatly on their ability to transform into self-sustaining structures during the 2007-2013 programming period. The chosen strategies of both regions have capitalised on using their urban economies as innovation incubators, but the difficulty in creating permanent structures in the weak convergence regions may prove to be decisive. Rural regions face different challenges: REMTH has concentrated on fostering and stimulating innovation among enterprises, without providing any permanent structure or follow up to a successful project. In Podlasie, the choice was made to innovate the administrations and provide ICT public service access to citizens, investing primarily in improving the low administrative capacities and provision of public services.

In essence, some superior common **advantages and strengths** can be retrieved, as innovation strategies can both enhance the preconditions for a successful cohesion policy and reinforce economic drivers. In general, all the strategies were successful in improving regional/technological know-how and creating regional level knowledge clusters. Motivation and incentives to take part can be seen in all regions with the provision of organised knowledge exchange among different regional actors (administration, politicians, business, society) and thereby creation of synergies in administration and processes. In all cases, there was the promotion of knowledge and technology transfer, whether through training, dedicated support or the institution of technology-broker centres.

However, several **shortcomings and weaknesses** were identified. In effect, a lack of specific incentives resulted in a low level of private business initiatives: it was wrongly assumed that the private sector would become more active and prompt initiatives, successful implementation and future sustainability of further projects. In some cases, a lack of education and appropriate consciousness (first and foremost in the public

administration) has hindered the success of the innovation strategy, as has the lack of permanent, self-sustaining structures.
Moreover, the common inherent weakness and future threat of changing strategies and priorities with changes in regional government remains in all **four** investigated regions. Reflecting on the insights gained from the literature review, the survey and the interviews one can determine, that the innovation strategies examined in the different regions have all attempted to address the better **exploitation of resources** and improvements have been made with regard to regional processes in the field of innovation, which do not directly and immediately result in economic growth, but can be said to provide the appropriate **conditions**. However, despite some directly visible and measureable improvements, the lack of sustainability, private sector involvement and in some cases a disregard of local stakeholder needs may threaten their true success: only the future will show the real impact of those programmes.

Econometric analysis: verification and transferability

The complementary econometric analysis was carried out to verify the results from the foregoing analyses for the different region types in a wider EU context. Therefore, 230 European regions were incorporated in the analysis with the aim of an overall verification and a certain transferability of the results. To reach this aim, a simplification was made in regard to the output measure of regional success: GDP growth was used to test different factors[1] with respect to their importance and explanatory power in regard to regional economic success. Therefore, the findings of the econometric estimations are characterised by a high degree of standardisation and are not applicable to each specific regional context but can be seen as scientific complement to the foregoing analyses. Consequently, a distinction was made between 'below average GDP regions' and 'above average GDP regions' in a first step and, within the first category, between weak convergence regions and catching up regions (considered as regions with a higher than average GDP growth rate) in a second step.
The analyses revealed that certain enabling factors such as an **unequal distribution of economic wealth, primary sector employment, taxation** and **population growth** have the same impact on economic growth for convergence and above average GDP regions. However, several **driving factors** differ in below average and above average GDP regions. The **amount of EU Funds** received, for example, matters significantly for above average GDP regions and less for below average regions. This may indicate several things, although they remain to be proved. First, that EU funds may be transformed more efficiently into regional economic growth mainly in the "richer", above average GDP regions. Second and related to this, that more prosperous regions may have more capacity, know how or experience in tapping additional EU funds and attracting private investment in a self-perpetuating positive cycle. This does not deny the positive impact of EU funds in convergence regions[2], but points out the challenges faced by the weaker lagging regions.

[1] Table 1 Relevant factors of economic growth and their direction of influence

[2] A recently concluded study of GDP growth in the EU 15 has shown the positive if moderate effect of cohesion policy in Objective 1 regions (Busillo et al, 2010).

On the contrary, the **share of human capital in science and technology** would appear to matter more for convergence regions. When it comes to factors for a successful allocation of resources and an efficient cohesion policy, a high level of **decentralisation** matters most in convergence regions and not as much in above average GDP regions, while combining EU funds amount with the **level of corruption**, the analysis showed that EU funds only add to economic growth where there is the absence of corruption in convergence regions. This major finding supports empirically rather well the scientific theoretical and empirical literature on institutional efficiency and its impact on economic growth.

An interesting insight of the econometric analysis is that factors differ most between weak convergence regions and the two other regional sub-groups (catching up regions and above average GDP regions). In contrast to catching up regions, it seems that weak convergence regions, with a below average GDP per capita and a below GDP growth rate, cannot transform their potentials into economic growth, they are not affected by most driving factors and they do not react. In short, we could see that **catching up regions** and **above average** GDP regions are more successful in turning their potentials (based on several factors) into economic growth or to enable a successful cohesion policy than **weak convergence regions**. On the other hand, weak convergence regions seem not to react sufficiently to any of the factors discussed. To validate these findings, further research and especially further indicators for an efficient allocation of resources are needed.

Altogether, a clear convergence effect among European regions has been shown: less successful regions in terms of GDP per capita are growing faster (on average) than more successful regions. But whether this can be attributed to convergence policy has to be questioned critically. Today, it is clear that the observed stronger growth in many Mediterranean and some Eastern European countries was not based on a solid foundation, but on unsustainable real estate bubbles. Correspondingly, these countries will now suffer more. As one example, the statistical data available for Valencia does not cover the period of crisis; however, interviewees did see the need for identifying new sectors for investment and problems in finding financial resources. Poland has weathered the economic crisis better: it did not enter recession, its real estate prices have remained at a constant level and booming service and production industries have boosted domestic demand. However, the interviews could not take into consideration the most recent threats to European financial stability nor the potential effects of stringent budget consolidation measures. Clearly, the scientific findings cannot take into account the effects of the economic crisis for which there is a lack of data. However, some considerations have been made in the section on options for policy development, which regard the four stakeholder regions but of course will have broader implications.

2 Options for policy development

The policy options presented below are intended to provide indications of strategies and tools that can be implemented at regional level by the policy-makers of convergence regions to improve the economic performance of their territories.

National frameworks and the implementation of EU funded programmes.

According to the literature review, before making policy choices, it is essential that regional policy-makers and stakeholders fully understand the extent to which they can operate within national frameworks and with national administrations. This may vary considerably, and hamper the effectiveness and sustainability of policy. The political and administrative power that the regional administrations can wield in EU fund allocation has been found in the literature review and qualitative analysis to be an important factor for success. This is not merely a question of fund allocation (what to finance) but also on implementation: the success of a well-targeted policy may be undermined if it is implemented without taking the needs of the local stakeholders into consideration. Regional administrations should strive as far as possible towards fostering cooperation up-stream at national level and improving coordination down-stream to local administrations in terms of the implementation of Convergence programmes as well as streamlining European, national and regional funds allocation for maximum effectiveness. In the case of Greece, for example, the new administrative changes in regional and local government should streamline decision-making and increase accountability for local stakeholders.

Furthermore, it is essential to ensure that where regional administrations are assigned the political and administrative competence, they are able to manage EU funds efficiently In the literature review and econometric analysis, decentralisation has been found to be an important factor for the convergence regions' success providing the challenges it implies for EU fund management are faced effectively.

Preconditions for using EU funds efficiently – challenges for Convergence regions

Awareness as a growth factor. The findings have brought to light relevant factors for a successful cohesion policy that are preconditions for the improvement of economic drivers and therefore provide the key to improved economic performance for Convergence regions in general. In terms of the regional programming, the questionnaires and interviews in the stakeholder regions have revealed clearly the awareness in lagging regions that the effectiveness and efficiency of EU funds allocation is more important than the amount available if there is to be the intended and planned economic performance; otherwise, weak regions may lag even further behind, regardless of the amount of money available.

Efficiency more important than allocated funds. First and foremost the efficiency of the regional administration and institutional capacity in allocating funds and managing large sums is essential. Although to some extent this may be governed at national level, such as public pay scales, or bureaucratic frameworks, clear areas of regional competence can be identified. Firstly, regions need to attract and keep high-quality staff, provide training and allow for appropriate performance-based incentives. Internal competences need to be appreciated and exploited, allowing weaker regions to emerge from a negative circle of causality. However, given that 26 of the 27 EU

countries have excessive government spending deficits, ensuring the appropriate rewards for a qualified public administration is an increasing challenge. In convergence regions, attention should be directed to public administration capacity-building, the benefits of which will bear fruit for public administration efficiency in the current programming period and in the light of the 2020 strategy.

Need for stable regulatory frameworks. A further precondition that is significant for regional decision-makers is the need to provide a stable regulatory framework, ensuring public accountability and the transparency of processes. Again, national conditions often apply, and may lead to overlong bureaucratic processes, yet certain phenomena relating to, say, corruption levels or the informal economy, present specific situations that regional administrations must circumscribe in the implementation of public funds. Apart from the perceptions recorded at a qualitative level, the econometric analysis clearly revealed EU funds are only spent effectively and efficiently if there is an absence of corruption; where the corruption index is high, convergence policy will not lead to an improvement in economic performance. Increased internal controls in key risk areas, checks on public procurement procedures and on-going monitoring of the implementation of EU-funded projects should all be consolidated within the administrations.

Benefiting from Economic drivers

Generating growth by reducing regional disparities. The first principle to stress is that regional economic disparity (within a country) hinders economic growth, and this affects convergence regions in particular. Efforts should therefore be made to reinforce the convergence effect within countries as well as at EU level.

Economic growth as concomitant of population/migration policy. Population growth has been found to be highly positive significant for all regions in improving economic performance. There is a real risk of population decline for many less-affluent regions, characterised by relatively low levels of income, low labour force participation rates and a high proportion employed in declining economic sectors. At the other end of the spectrum, those regions facing steady population growth will face particular challenges in terms of sustainable urban development.

Human capital as driver in convergence regions. The econometric analysis revealed that the share of well-educated human capital, particularly in science and technology, although a driver for all regions, is particularly important for convergence regions. Stakeholders in the 3 Convergence regions stressed the shortcomings in regional ability to exploit appropriately this human potential; and the econometric analysis has supported the view that the weaker regions appear unable to benefit from available human capital as much as the other regions. On the contrary, stakeholders in Valencia stressed the availability of human capital, high quality universities and recognised that recent initiatives had been successful through investment in industrial innovation and new technology institutions, although further investment in this direction was seen as a key opportunity for improving economic performance, also in the context of the collapse of the construction sector.

Differentiated innovation policies necessary. Clearly no “one innovation strategy fits all” can be identified, but regional politicians should prioritise choices and investments to harness this human capital potential so it becomes a driver for

economic performance, in coherence with the priorities of the 2020 strategy, in particular based on the strengths and opportunities of the innovation projects funded in the preceding programme (as expressed in the case studies). Innovation policies must also be appropriately adapted to the business structure, given the high percentage of SMEs and businesses in traditional sectors or services.Whatever innovation policy is adopted, one clear message emerges from the case-study: it must be sustainable and the risk of a political sea-change minimised, best achieved by an effective cooperation with other relevant public bodies (ministries, research centres, etc) and the stimulation and involvement of local economic stakeholders.

Interdependence of key factors. One of the most important implications for policy-makers is that key factors are interdependent and, therefore, have to be addressed or improved in combination. In order to use public money efficiently, the regional civil servants have be adequately trained and high-qualified staff recruited to manage the funds. Only if the regulatory framework is stable, coherent and transparent, can a breeding ground for creativity and willingness to perform be established and the preconditions for improved economic performance exist. In essence, the imperative is doing the right things **plus** doing things right. This contrasts with prevalent viewpoints which argue whether economic growth is about doing the right things (like what sectors to invest in) **or** doing things right (improve management). In other words, regional actors have to pay heed both to allocating funds properly and to proper implementation.

Two-pronged strategy: optimizing resources and institutional frameworks

The present study makes a very strong case for a two-pronged strategy directed at economic growth both by promoting certain economic drivers and providing efficient institutional mechanisms and controls thereof. Several points can be made:

- In the case of Convergence regions the effectiveness of fund allocation (in terms of the doing the right things in the right way) is perceived to be more important than the actual amount of money available. In the current context, priority should be given to making sure that policy is well-targeted and funds are spent efficiently by civil servants, providing the appropriate conditions for the exploitation of economic drivers that already characterise the territory;
- The risk of concentration on a single sector as the engine for economic performance, is evident; however, diversification should be complementary to regional potentials – an innovation strategy, for example, could be directed to areas where there are traditional or niche skills as well as the NBIC sectors[3].
- Increased collaboration between all levels of public administration is perceived to be necessary to make economic growth work;
- Failure to invest in major transport and infrastructure projects will impact significantly on economic performance as indicated by the Stakeholder interviews in REMTH and Podlasie: Convergence Regions should concentrate funds on major infrastructural works to stimulate economic growth as in Valencia;
- Failure to invest in available human capital will lead to a self-perpetuating brain drain and severely hamper economic growth.

[3] Nanotechnology, Biotechnology, Information technology and Cognitive sciences

3 Need for further analysis/research

Research on institutional efficiency and economic growth. Several avenues for further research have emerged from this Targeted Analysis, Firstly, research on **how institutional efficiency can be generated** and **how it can be measured and monitored** would be of great interest for all European regions and Convergence regions in particular. Related research questions that are of importance are:

- Which **mix of incentive measures** will be most appropriate and efficient in addressing main aspects of the problem of inefficiency?
- Is **appropriate supervising** capacity available? How can it be generated?
- Do **existing institutions** correspond to the need for efficiency measures?
- What **problems of monitoring** and implementation will arise?
- Are **distributional arrangements** such as compensation measures, higher wages **necessary?** How can they be designed to help reduce the problem? How could their effect be measured?
- What review and monitoring **mechanisms of efficiency are already in place**?

Research on impact of quality of life characteristics on regional growth. A second major area where research is necessary, especially at regional level, is related to **Quality of Life**. Conceptual and methodical research would allow European regions to address **the extent to which quality of life aspects (including amenities, health, education, environment, housing, safety and social participation) affect regional economic performance** and whether regional territorial typologies can be identified appertaining to these characteristics.
Further research into factors necessary for a successful cohesion policy is necessary (econometric analysis is hampered by data availability problems). In this context, it would be very interesting for example to investigate **for convergence regions**

- if and how a certain level of education and training within the regional administration changes the efficiency of processes and the regional economic growth patterns and differential regional development,
- if and how different organisational patterns of public administration may affect speed and sustainability of closing the regional development gaps,
- how an altered level of decentralisation in different policy fields changes processes of closing regional differentials, and
- how long-term and sustainably established programmes and frameworks (without significant changes owing to new government or administration) could transform regional potentials in convergence regions into economic growth and well-being and how this could alter differential regional development.

As has been mentioned, it has not been possible to incorporate any data on the effects of the economic crisis on Convergence economies. Any future analysis on the convergence effect of EU cohesion policy should also consider its impact on the weak convergence regions, “catching-up” regions and “losing ground” regions. Given the Council’s current concern on budgetary policy, evolution of public debt and overall sustainability, it would be interesting to analyse data on regional public debt levels and regional sustainability.

B. Report - Main results, trends, impacts

0. Objective and research design

The **objective** of the project is to understand why some convergence regions continue to lag behind and others are able to accelerate their growth rates and catch up with the EU mean. To do so, a comparison between **weak convergence regions** (with below average GDP growth rates) and **catching up regions** (with above average GDP growth rates) is made. This is based on the characteristics of **convergence regions' economies** and **above average regions' economies as identified by the** literature review and complemented by the econometric analysis of the following types of regions:

- Above average GDP regions,
- Weak convergence regions, and
- Catching up regions.

Searching for factors that affect above average and below average growth rates and that might relate to effective fund management and an effective public administration is of special importance for convergence regions' economies, which receive large amounts of money on the basis of EU cohesion policy.

New concept of conceptualising and measuring regional imbalances within European convergence regions

Institutional *plus* economic and quality of life perspectives

Much research on regional economic growth takes a standard and simple focus on economic growth and standard accounting indicators. The commonly used classical growth indicators, however, may not capture all phenomena which affect growth and there is a growing concern about the adequacy of current measures of economic performance, in particular those based on GDP figures and the relevance of these figures as measures of societal well-being, as well as measures of economic, environmental, and social sustainability (Stieglitz, Sen, Fitoussi 2009).

In response to this, this targeted analysis takes a different stance: rather than simple **economic growth accounting,** we are interested in **accountability** and how regional economic growth might relate to and be increased by enhancing the accountability of regional institutions in bringing about well-being for citizens. Accountability and the efficiency of institutional frameworks have significant effects on the efficiency and growth rate of economies and economic well-being and there is an increasing societal need to accompany structural funding for economic growth with performance based accountability of public institutions (see Helgason 1997; King 2000; Scully 1988; Cubie 2006, OECD 2009). Therefore, attention is paid to the general question of how material progress, as captured in standard economic growth indicators and leading to economic well-being and quality of life, might be affected by the **choice of institutional frameworks and institutional performance**. Our research project is ultimately **conceptualized so as to shift emphasis from pure economic growth and a structural subsidy focus towards monitoring and assessing institutional performance in regions as a basis for sustainable development, well-being and overall improvement in quality of life.**

This research project, then, takes an **institutional perspective** on regional economic performance and develops

- multilevel stakeholder-oriented approaches,
- conceptual approaches as reflected in the choice of indicators and
- analytical measurement procedures

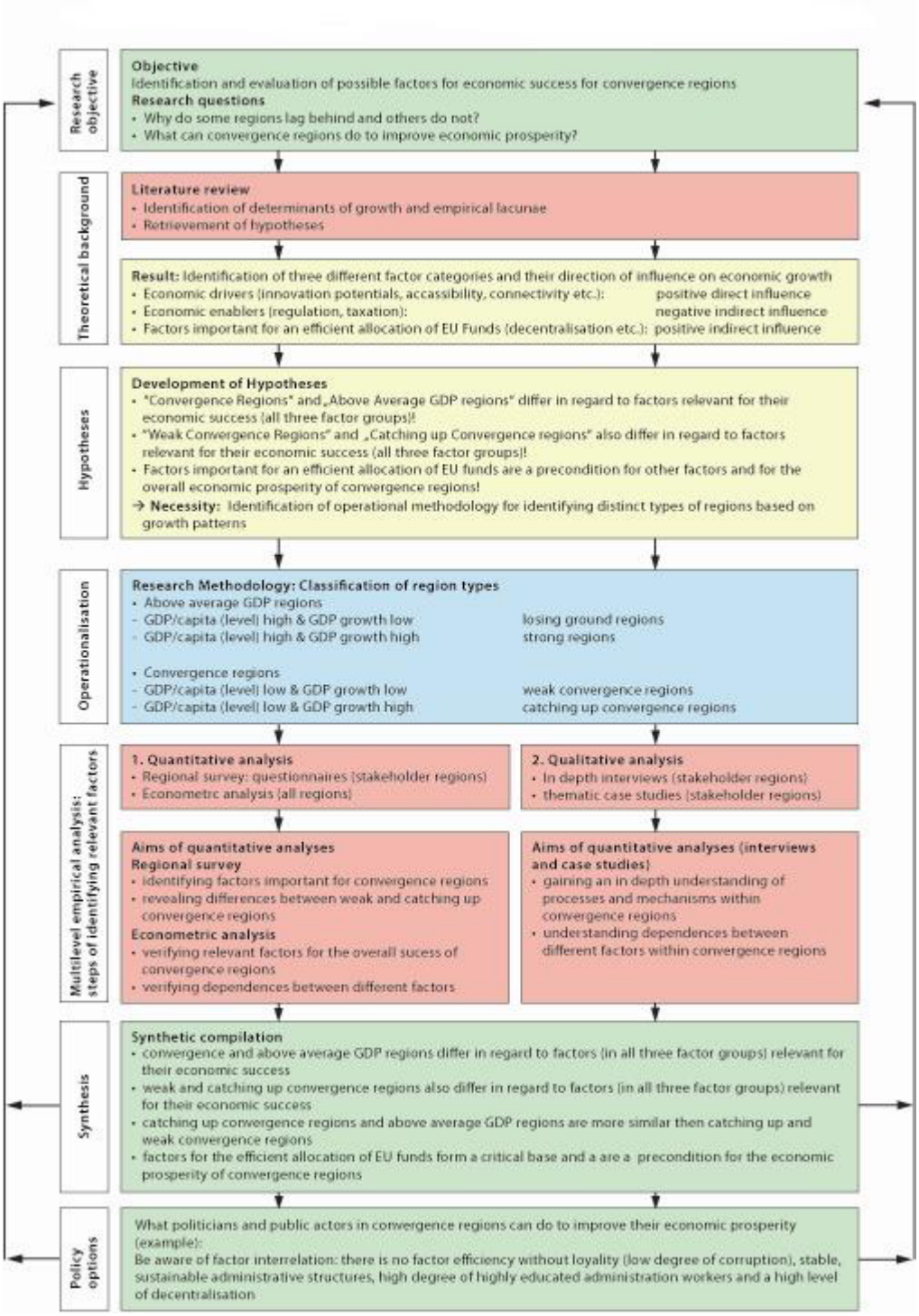
to capture determinants of regional economic growth with respect to its institutional embedding in convergence regions.

An **integrated approach** has been adopted in the research design as portrayed in graph 1. It shows a stepwise multilevel comprehensive approach to analyzing the problem of what factors account for differential regional growth and what convergence regions can do to improve their economic performance and prosperity. The graph illustrates how the research steps are interlinked and how the result of each single research step leads to the next step of analysis. The underlying principle is quite simple: with each step of analysis and results, we gain a deeper insight into the economic functioning of convergence regions, which is a necessary precondition in formulating some considerations on **policy options** at the end of the research process. There are several **innovative aspects** (marked in yellow in Graph 1) within the present report with regard to a better comprehension of convergence regions' economies:

- First, within the literature review we identify (theoretically) three different groups of factors: the **economic drivers** and **economic enablers** which are of relevance for *all* European regions, and those **factors relevant for an efficient allocation of resources** (like EU funds), which are most important *especially for convergence regions*. It is assumed, that convergence regions and above average GDP regions differ with respect to factors relevant for their economic growth. The distinction into three different groups of factors was made in order to better grasp the processes of economic growth in convergence regions. A detailed overview of the three groups of factors is provided in subchapters 1.2 – 1.4.
- Second, these factor groups all exert a different influence on the economic growth of convergence regions, which will be shown in the different steps of the quantitative and qualitative analysis.
- Third, the different groups of factors influence each other and are interrelated in a specific way: the factors relevant for an efficient allocation of resources (like EU funds) are a precondition for economic drivers and enablers. This will be investigated by analysing differences between weak and catching up convergence regions.

The three factor categories identified in the literature review are focused on in the further steps of the research: the in depth interviews with stakeholders, the survey of stakeholders, the case studies, and also in the econometric analysis, where a clear division is made between below average and above average GDP regions.

Graph 1 – Research Design SURE – Success for Convergence Regions' Economies



Focus on indicators combining economic growth and institutional aspects

Indicator lists capture the economic, social, environmental and institutional aspects of sustainable development in many different ways and there is no standard way of grasping them. Indicators convey broad images and for every aspect of sustainable development of the economy the appropriate the choice of appropriate indicators is

crucial. This study **focuses on regional economic growth *plus* the institutional dimension of sustainable development by a mix of indicators** such as the **economic drivers**: knowledge and innovation potentials, accessibility, connectivity, quality of life issues, economic settings and structure, EU funds amount and allocation, population and social aspects, and the **institutional enablers of regional development**: taxation, regulation, administration and governance. The **questionnaires and interviews** have been specifically designed and then matched in with the wider analysis and to deal with institutional efficiency issues, administrative competence, the reward system and quality of life issues[4].

The **complementary econometric analysis** captured the economic, institutional and quality of life aspects by focusing similarly on knowledge and innovation potential, economic drivers, accessibility indicators, quality of life, population, regional financial means, taxation and regulation, and decentralisation[5].

Support for policy formulation and evaluation

The institutional, economic and quality of life perspectives employed in this research help to identify impediments to economic growth that relate to the institutional framework and quality of life. As such, our research sets targets or benchmarks against which progress or failure can be assessed. Furthermore, we provide indicators which may serve as early warning about non-sustainable use of structural funds. We distinguish clearly between economic growth and improving economic well-being and turn attention to integrating sustainability and efficiency of the institutional framework and economic management into the policy framework of the EU, lest structural funds not be wasted.

Forward-looking policy analysis

This integrative perspective on economic performance, institutional framework and quality of life issues, related modes of analysis and choice of indicators allows past, present and future score-keeping on the sustainable performance of regional economies and the question as to whether the institutional frameworks play their part. Our research approach is transferable within the European context and may also alert other regions to conditions that could warrant changing certain allocation procedures of EU funds, linking funds to performance of institutional frameworks and applying more rigorous measures pertining to the institutional frameworks. Our approach also allows future empirical research in the form of longitudinal studies to track paths of development and their effects through time, and hence to allow performance measurements of the EU-institutional framework to make continuous adjustments to EU policies, as part of the societal requirements (see also Brignall and Modell 2000).

[4] See Scientific Report chapters 2.2 and 2.4 for Interview Forms and Questionnaires.
5 See Appendix II: Table 1. List of Indicators and Data Sources.

1. Lessons learned from the literature

1.1 Identification of growth factors

Reviewing the literature dealing with the overall economic performance of regions and **cohesion policy, three different kinds of factors relevant for the economic growth of convergence regions** can be identified. Some of these factors can be directly influenced by politicians and decision makers of a region or country or its business community while others cannot be influenced at all at regional level, in some cases depending on national competencies which vary from country to country. The first category comprises **potential factors which are important for the overall economic growth of all regions and can be influenced by regional actors.** Examples are accessibility or public R&D expenditures. Factors which cannot be influenced but have a direct economic impact are, for example, given circumstances like the current level of productivity. They may result from decisions taken in the past where there may have been a regional competence (path dependency) or objective quality of life aspects like a beautiful landscape and good weather conditions: regional decision-makers should take these factors into consideration in their strategies even if they cannot directly influence them. All these factors can be seen as so-called **"drivers"** or driving factors of the economy of all regions.

The second category comprises **factors which do not have a direct impact on the regional economic performance but an indirect effect** through, for example, changes of the institutional framework of a country or Europe. Examples of such regulatory variables are the taxation of incomes and companies or the regulation of markets and labour markets. These factors can be seen as efficiency indicators in the sense of to what extent regions are able to use their potential under given circumstances. These **"enablers"** also have, among others, an indirect influence on the economic growth of all kinds of regions. These factors are in general outside the competence of regional decision-makers (although there may be variations in regional taxation or labour markets). The third category contains factors which can be seen as preconditions for a **successful cohesion policy** and an effective management of financial means on the regional level, including EU funds. Examples of these factors are the efficiency of regional administration, the level of decentralisation within a country or political stability and the level of transparency (including low levels of corruption). Potential factors (economic drivers) relevant for the overall economic growth are described below. In section 1.3, an overview of factors (economic enablers) relevant for the efficient use and exploitation of different potential factors is provided. Section 1.4 introduces the factors relevant for the efficient allocation and spending of financial means including EU funds.

1.2 Potential driving factors of economic growth

Variables which have a direct positive impact for the overall regional economic growth are, on the one hand, the so-called "drivers" of overall economic growth which can be influenced by regional or national politicians. On the other hand, there are the driving

factors which cannot be influenced at a regional level or any other policy level. Policy relevant driving factors for all regions are, for example:

- **Knowledge and innovation potentials.** Knowledge and innovation potentials e.g. tertiary education, R&D expenditures are a precondition and a key factor for economic growth and long term success of a region and/or a country. In short, "Knowledge is more than a resource – the only meaningful resource of today" (Drucker 1993). If and how knowledge creation and innovation is stimulated depends to a large extent on regional circumstances and regional actors, be it in the government, the administration, regional opinion leaders from the scientific research environment or private entrepreneurs. Nevertheless, the national context or the so called "national innovation system", which consists of private companies, research institutions and the official regulatory framework, circumscribes the borders of possibilities and policy options for regional actors. The most recent European policy documents (European Council Conclusions 17 June 2010 adopting the Europe 2020 Strategy) confirm the central role of innovation and knowledge.
- **Accessibility (i.e. global and continental).** Another very important factor, namely accessibility, is determined by two variables: geographical location and infrastructure. While the geographical location cannot be changed, improving access to the national and world markets should be and is a key policy aim (European Commission 2007a). A region's accessibility is a key factor of economic success in a globalised economy. The level of regional competence varies both in terms of intra-regional, national or EU wide accessibility and national decision-making frameworks. 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 regions like Valencia 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).
- **Connectivity (i.e. broadband coverage, internet usage).** Regarding the accessibility to communication (connectivity), the access to modern information and communication technologies shows a European north-south and east-west divide, 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). Rural and mountainous regions may have objective difficulties in providing broadband connectivity and regions have a relevant policy competence in this area.
- **Quality of Life (i.e. amenities, health, education, environment, housing, safety and social participation).** In the global competition of talents, the quality of life of a given place becomes very important. Quality of life could include for example the freedom from crime along with the presence of health services and affordable housing (Hill 2005). Another important aspect, especially for remote areas with a low population density, is the relationship with the natural environment, i.e. protection and conservation. Thereby, conflicts between conservation efforts and other land uses may become more significant, as is the

case in the region of Podlasie for example. The natural environment is affected by climate change vulnerability where Southern Europe is most vulnerable. Social participation and a sense of community are particularly difficult aspects to measure. A perceived lack of security is significant aspect in Campania, for example. Health and education provision and their efficiency may also vary significantly at regional level in some countries, such as Italy, where they are decentralised. Quality of life aspects impact on the attraction of qualified workers and industries, and may result in disparities between regions in the same country where other factors are equal (tax and labour conditions for example).

- **Economic structure and economic aspects (e.g. labour market participation, unemployment).** The fifth progress report on EU Cohesion Policy 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. These aspects will be affected by demographic change - many of the European regions forecast to experience population decline by 2020 are less affluent regions characterised by relatively low levels of income, low participation rates and a high proportion of the workforce employed in declining economic sectors. A shrinking labour force will potentially impact on regional growth potentials in these areas (Barca 2008). Due to the high rate of unemployment (and unregistered unemployment in Poland) Stasiak e.g. asserts that Poland is in need of an economical revival and an increase in employment outside agriculture. There is some progress 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).
- **Regional financial means** (taxes, EU funds). The financial means of the public sector of a region are a key for investment and hence, economic growth. The sheer amount of the financial means of a region is determined first of all by regional incomes (e.g. taxes and other sources of regional income, including national contributions), the financial distribution and equalisation within a country between the different administrative levels, national contributions to regional structural funds (subsidisation of lagging regions) and national spending at the regional level, as well as EU cohesion policy: economic and social cohesion is defined by the Treaty of the European Community as one of its 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 EU model is thereby grounded on the recognition that “wide disparities are intolerable in a community, if the term has any meaning at all"[6]. The disparities within the European Union are among others reduced by financial flows (Structural Funds[7]) which empower local and regional actors and levels of governance and make them better able to capitalise on territorial and economic potentials (ESPON 2006a). Empirical evidence on the effectiveness of EU cohesion policy is mixed

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

and contradictory. A very recent study on EU-15 Objective 1 regions 2994-2010 has shown that cohesion funds have had a positive if moderate impact on growth (Busillo et al 2010). How important the correct management of public finances, including the control of public debt, is can be seen from the recent European Commission communication that all but one of the EU 27 Member States are now officially on the watch list of countries subject to an on-going deficit procedure, while 12 countries have passed appropriate budget consolidation measures (Economy Finance and Tax EC Press Release 16/6/10). Specific considerations on the effect of the debt crisis will be made in the Policy options.

- **Population growth.** Population growth is distributed very unevenly within and across European countries: in general, the cities are growing and the rural areas are becoming increasingly depopulated. Furthermore, demographic change will gradually limit the scope for future employment growth. With reference to Italy, the problem of huge pension obligations 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. Additionally, Italy's rate of natural population increase has remained negative since the early 1990s (Neal 2007). According to the prospective analysis of the Barca Report, demographic vulnerability will affect 33% of EU regions by 2020, with the highest share of elderly population (aged 65+) in Eastern Germany, Finland, Northern Spain and Italy (Campania is a notable exception in the predicted trend). Regional variability will depend on a combination of factors such as differences in fertility rates, migration flows, life expectancy, gender composition, health status, disability and the location and demographic patterns of ethnic groups. Considerations on this will be presented in the Policy Options.

Variables which cannot be influenced by the region or nation and its companies, politicians and decision makers, are, for example:

- the **state of development** at the beginning of the period (e.g. GDP/capita). Regions with **low GDP per capita** tend to have higher growth rates, all other factors being equal.
- **path dependency**, which means that past decisions and developments may still have an influence over the present. Or, in other words: history matters.

1.3 Factors relevant for the efficient exploitation of regional potentials

In a second step, factors constituting the economic and legal environment are of major interest with regard to efficiency considerations. Examples for such enabling factors are for example:

- the effective **taxation of companies**
- the effective **taxation of highly qualified employees**

Taxation is an important issue for regions' prospects for growth, which is defined principally at the national level but, depending on the national setting, there are possibilities for regions to increase or decrease the tax burden, at least to some extent, in a few countries to a large extent (e.g. Switzerland, the USA). In general, highly educated or qualified workers and companies search for places with a relatively

low tax burden. Considerations concerning the implications for convergence regions will be given in the Policy Options. The potential tensions between low tax regimes and appropriate rewards for highly qualified public employees are discussed below.

- the **regulation of labour markets**
- the **regulation of product markets**

Regulations work through many channels of an economic system, and the relationship between regulation and economic growth is very complex. The two dimensions of regulation reflect the extent to which policy settings promote or inhibit competition in the areas of product and labour markets.

1.4 Factors relevant for the efficient allocation of EU Funds

Beside this dichotomy between drivers and enablers of the overall economic growth, we can assume a higher impact of some factors for the efficient allocation of EU Funds than for others. When discussing these factors, it must always be borne in mind that the regional and national policy and administrative levels are tightly interwoven. Examples are the national and the regional innovation system (Doloreux & Parto 2004): in most countries, the state is responsible for financing the general education system, whereas the regions (e.g. Bundesländer, Kantone) may be responsible for the quality of their universities or at least for their innovation strategy. In addition, the regions are dependent for many of their competencies on the financial flows coming from national government. Thus, no clear single responsibility can be defined. Furthermore, the current measures adopted by EU governments to reduce public debt will have an impact on regional budgets and may affect regions' ability to meet fully their institutional commitments as cuts will be made in funds transferred from national level to regional level[8]. From the literature review, several of the most relevant factors for the successful assignment of EU funds on a regional scale, and therefore of utmost importance for convergence economies, are retrieved.

- **Efficiency and regional administration.** One of several crucial factors responsible for the efficiency of regional administrations is their administrative capacity considered quantitatively and qualitatively (European Commission 2007a). There must be sufficient human resources in a regional administration to enable processes to work and thereby foster the economy. When it comes to the quality of the regional administrative workforce, the level of education and their mentality or mind-set is of utmost importance. In public administrations, a major problem is, for example, the fact that incentives and management systems are generally inadequate to ensure the attraction and recruitment of high quality staff and their appropriate reward in a changing labour market that offers increasing opportunities in the private sector and abroad (World Bank 2006). The highly qualified are also attracted to low tax regimes, leading to a potential tension as the appropriate incentives to recruit and keep them must come from the public tax system. The private sector is, moreover, still shaped by a "post-Soviet mentality"

[8] The recent Italian Decree Law 78 published 31.05.2010, currently under discussion in Parliament, establishes a reduction in the transfer of national funds to the regions of 4,000 million euros in 2011 and 4,500 million euros in 2012.

(Haase et al 2004) in many Eastern European regions (e.g. in Podlasie) and thus the conversion to market-based principles in agriculture and industry is proceeding slowly. Furthermore, in the new EU member states, 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" is a serious issue and major problem (World Bank 2006). In Greece, rivalries amongst ministries lead to a lack of cooperation and coordination between the national and the regional governments. As a consequence, Greece's policies have not proved to be very successful on a regional level (Petrakos and Topaloglou 2006). The new administrative structure to be implemented in Greece in late 2010 will have a significant impact in the future on how cohesion policy is implemented in the country. Whether or not regions have the possibility to provide the appropriate incentives and career structure depends on the national legal frameworks for public employees (national or regional pay scales, public/private law contracts etc). The recently-adopted austerity measures will impact significantly on public employees, including salary cuts, caps on salary increases, job cuts and freezing of replacement for retiring employees. This will affect not only the quantity of human resources and the workload on the remaining resources but may rule out the possibility for regional governments to provide further incentives for staff.

- **Level of decentralisation.** The level of decentralisation or in other words, the political power (both, decisional and financial) of regional governments is a crucial factor for a successful fund management. In the region of East Macedonia Thrace, for example, the use of strategic environmental management, fiscal incentives (such as low company taxation) and rewards, marked-based instruments or civil liability have gone unheard for a long time (Skourtos 1995) due to a greatly centralised economic policy. Local administrative actors only have limited discretion and flexibility (Getimis & Giannakourou 2001) while the capital Athens has benefited from important new infrastructure (e.g. airport, metro, suburban train, new ring road) due to the Olympic Games in 2004.
- **Accountability and transparency (e.g. the level of corruption and informal economy).** EU-money flowing into countries or regions with a lack of accountability and transparency and a high level of corruption or organised crime is unlikely to be used entirely for programmed projects. Greece, together with Bulgaria and Romania, has one of the highest rates of corruption which is seen as a main reason for the current economic crisis. In Greece, the amount of bribe money paid is estimated to be 750 million Euros in 2008 (Statistics of Transparency International). A relevant problem in Southern Italy, for example, is the high level of corruption accompanied by a huge share of an informal economy, unrecorded and without paying taxes. Furthermore, the political systems in the Mezzogiorno have been characterised by longstanding and party-dominated local administrations (Tedesco 2006). It should be borne in mind that this list of factors considered crucial for the efficient allocation of EU funds is not conclusive nor is it selective. This can be seen in the debate on decentralisation and regional administrative capacity. It is argued, for example, that higher responsibility may be necessary, but not if it induces fund absorption (Horvat 2005). In general it is pointed out that decentralisation and capacity building need not go hand-in-hand.

Decentralisation without an enhancement of the administrative capacity is, on the other hand, fatal. In this context it is argued 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). In the following section, the three different groups of factors are summarized and hypotheses in the sense of the direction of impact (positive or negative) are identified.

1.5 Interrelations between different factor groups and hypotheses

The classification and listing of different factors cannot be seen as isolated or conclusive. On the one hand, there are several other factors, such as path dependency or regional cultures which have been shaped over years and which cannot be measured. On the other hand, there are various interrelations between different factors and factor groups, which must be taken into account as far as possible. One example is the potential tension between low tax regimes and the need to recruit highly qualified public employees.

Table 1: Relevant factors of economic growth and their direction of influence

No.	Factors of influence	Direction of influence	Factor category
1	Knowledge and innovation potentials	+	economic drivers
2	Accessibility (i.e. regional, intra-regional, national and international)	+	
3	Connectivity	+	
4	Quality of life	+	
5	Economic structure (e.g. high share of service sector)	+	
6	Regional financial means (EU funds)	+	
7	Population structure/growth	+	
8	Company taxation	-	economic enablers
9	Taxation for highly qualified persons	-	
10	Regulation of labour markets	-	
11	Regulation of product markets	-	
12	Efficiency of regional administration	+	EU funds allocation
13	Level of decentralisation (regional autonomy)	+	
14	Political loyalty and stability (e.g. low level of corruption)	+	

The hypotheses retrieved from the literature review indicate the direction of influence of relevant factors on the economic growth of a regional economy. Table 1 shows all policy relevant factors, their category as described above (drivers, enablers and factors relevant for the efficient allocation of EU-Funds) and the direction of their expected influence. The non-policy relevant factors (like path dependency) will be excluded in the further research. Discussion of the levels of institutional competence

has been made in the illustration of the literature review above and the implications for policy options will be discussed elsewhere.

Hypotheses with regard to different regional sub-groups and to factor interrelation are as follows:

1. Factors relevant for the **overall economic growth** of regions (economic drivers and economic enablers) differ for **convergence regions** and **above average GDP regions!** The rationale is that con**vergence regions start f**rom a lower level of "wealth" or economic development (level of **GDP/capita) than wealthier regions.** Therefore, factors which are important presently for wealthier regions may currently not be important for convergence regions but could become more important only over time. Similarly, due to the different initial conditions of the two types of regions some factors may be more important for convergence regions presently, but are not necessarily important for wealthier regions.
2. Factors relevant for the **overall economic growth** of regions (economic drivers and economic enablers) differ for **weak convergence regions** with low growth rates and **catching up convergence regions** with higher growth rates be same is true for catc**hing up and weak converg**ence regions. The success and high growth rates of catching up **regions can be explained** with the help of a **factor set that weak convergence regio**ns do not have.
3. **Factors** important for a**n efficient allocation of EU funds** (for a successful cohesion policy) are a **precondition for economic drivers a**nd enablers and for the **overall economic prosperity of con**vergence regions!
4. **Economic growth and development is not an evenly distribu**ted over space but rather tends **to create distinct territorial patterns of hi**gh gro**wth, medium, low or no growth areas. While some of t**hese territorial **patterns may partially be** explained by path development, history or geography, by and lar**ge we have to take into consideration r**egional econ**omic development milieus, institutional framework**s, regional governance, regional policy or generally speaking, economic, political, institutional, social and societal, geographic and a myriad of policy factors that are specific and often unique to an area or region. It is, therefore, even more important to understand what factors generate long-term economic growth and how they can be activated or levered by appropriate policy measures, financial incentives/ allocation of EU-funds. As such, this project takes a distinctly different approach to other ESPON or EU projects, which analyse within the framework of broad categories of territorial typology focusing on, for example: urban / metropolitan areas, rural regions, regions in industrial transition, sparsely populated areas, cross-border regions, mountainous regions, islands regions, coastal regions[9]. **The approach adopted focuses on local/regional political institutional frameworks, governance, and local and regional actors**. In this sense this research is generally framed within an institutional economical and actor/stakeholder oriented conceptualization rather than a technical geographical/territorial categorization. The research design, therefore, focuses in

[9] As proposed by the ESPON 2013 Typology Compilation.

all of its steps on growth factors and identifying factors which account for lower or higher regional GDP growth and identifies, by a series of qualitative and quantitative approaches, factors which very much relate to local/regional conditions, the institutional frameworks and actors and fostering economic growth. Higher growth versus lower growth as brought forth by governance, institutional frameworks, local and regional actors and networks of actors, then, is the distinguishing feature, and this will be analysed by in depth interviews of stakeholders, surveys of regional experts and case studies. Only as a **complementary analysis** will a larger number of EU regions be econometrically analysed by applying a growth function derived from the literature and both the qualitative and quantitative analyses of perceptions of growth factors obtained from the actor/stakeholder level. This will help to understand whether or not factors that distinguish growth versus lower growth regions as shown by case studies and in depth analyses in four stakeholder regions might carry weight in a larger context of similarly structured regions. We understand and analyse, then, growth as a process initiated and sustained by agents of change, institutional frameworks, institutions, stakeholders), and not as an aggregate result which may differ within or among the above-mentioned EU territorial typology. However, we do pay attention to EU territorial typologies in the sense that the SURE stakeholder regions have some distinct characteristics that are captured by the proposed territorial typology, as will be discussed in the Case Studies chapter.

2. Perspectives on regional economic growth

2.1 Methodology of the survey of regional stakeholders (quantitative approach)

Starting from the above developed hypotheses, the aims of the survey of regional stakeholders are

- First, **to identify growth factors** which stakeholders feel are important for convergence regions in regard to economic growth and prosperity and
- Second, **to reveal differences between catching up convergence regions and weak convergence regions with respect to different groups of growth factors** (economic drivers, enablers, factors related to the efficient allocation of funds) For this purpose, approximately 100 politicians, senior officials, socio-economic practitioners and opinion leaders in each of the four stakeholder regions were questioned by standardized survey instruments specifically developed for the regional survey of SURE/SEARCH (see Scientific Report Section 2.4). They were asked to respond to identify which factor**s they consider relevant** for a successful and consistent cohesion policy in lagging European regions and which factors they consider important for economic prosperity. The questionnaire thus covers primarily closed questions (e.g. of the type "Rate the relevance of this factor on a scale from 1 to 10"). The TPG aimed at a response rate of 30%. It was translated into local languages by the respective regional experts. (Experiences from other projects have shown that questionnaires in English are still a barrier for many regional decision makers and players.) They also drew up the list of the persons to be approached, in collaboration with each Stakeholder region and according to commonly-defined professional categories.

Table 2 lists the final number of questionnaires received 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 Podlasie.

Table 2: Regional and categorical division of respondents

	East Macedonia - Thrace	Podlasie	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 answers 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 cells in the response matrix, which is equivalent to 98.7% of possible answers.

2.2 Analysis of the survey of the regional stakeholders

The 68 questions making up the questionnaire were developed from the findings of the literature review and have therefore been divided into the three sub-groups (economic drivers, economic enablers and factors important for the allocation of EU funds). Not all 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. The choice of the 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 many different facets like the level of pollution, the quality of schools or the variety of amenities available needs to be covered by more questions than "amount of EU funds", which is quite a narrow issue. In the following, a list of twelve thematic groups in total, with the number of questions corresponding to each group in parenthesis, is presented:

Economic drivers

- Knowledge and innovation potentials (10 questions)
- Accessibility (6 questions)
- Connectivity (4 questions)
- Quality of life (11 questions)
- Economic settings and structure (11 questions)
- EU funds amount (1 question)
- Population and social aspects (3 questions)

Enablers

- Taxation (4 questions)
- Regulation (2 questions)

Important factors for the **successful allocation of EU funds**

- EU funds, allocation (4 questions)
- Administration and governance (11 questions)
- Decentralisation (1 question).

The analysis was carried out along the **regional** and the **categorical dimension**. Since the main focus of this work lies on the growth factors of regions with regard to consistent cohesion policies in disadvantaged European regions we further distinguished between weak convergence regions (the three regions lagging behind: East Macedonia &Thrace, Podlasie and Campania) and the so called "phasing-in region" or catching up region (having passed the threshold for success[10:]) Valencia. Two sets of statistical tests (chi-square test & pair-wise mean comparison) were conducted in order to determine whether or not the results are significantly different between regions and between professional categories.

[10]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.

The tests showed

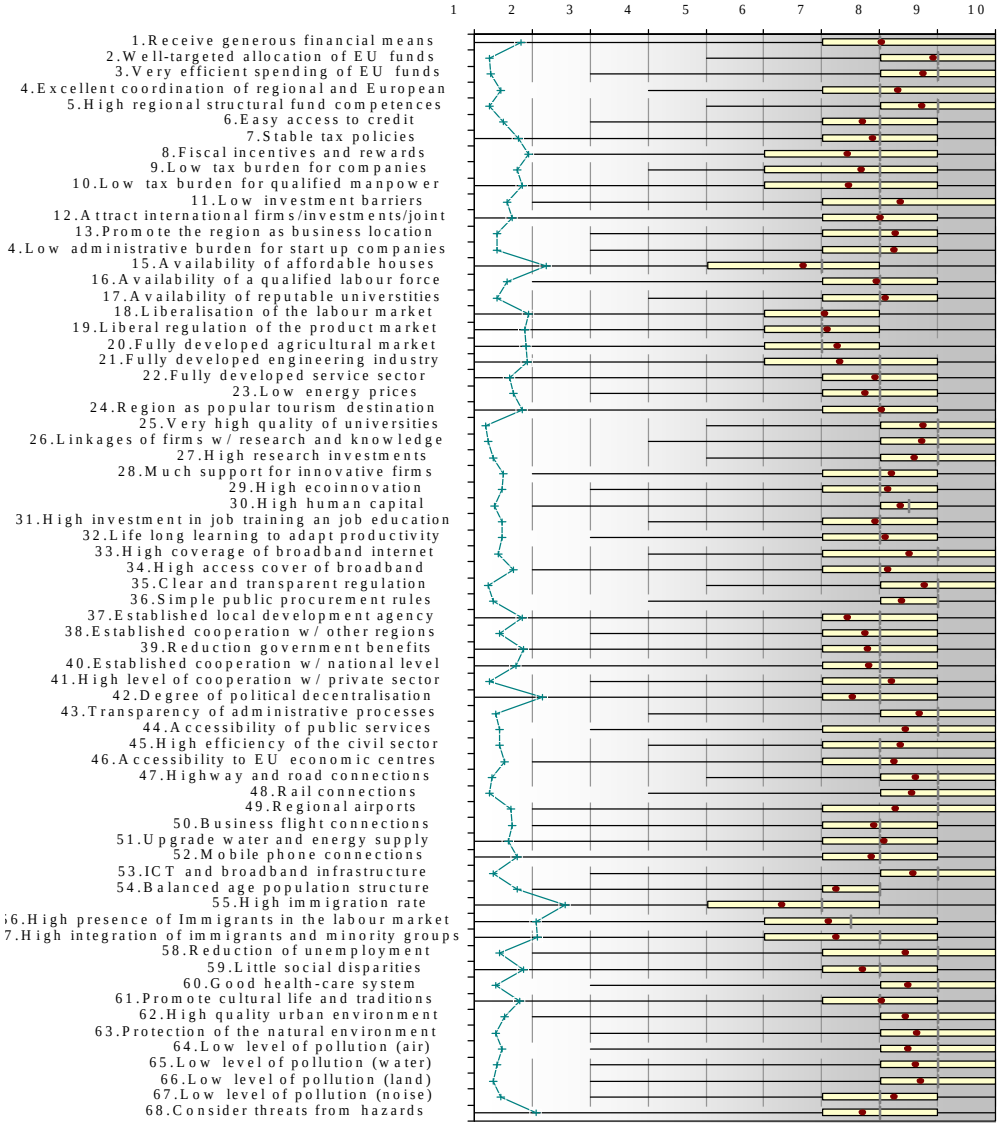
- first, that the way of answering (or the frequency of grades) is significantly influenced by the regional origin of a participant and barely by the profession. Professional groups even have a similar way of looking at things. In this context one also speaks of "professional cultures" (Bloor & Dawson 1994);
- second, that the region of East Macedonia-Thrace has more systematic deviations compared to the other three regions;
- third, that there is more homogeneity among the answers of the three Convergence regions compared to Valencia. It seems that the stakeholders in the Convergence regions have a similar way of judging different political, economic and social aspects.

2.3 Results of the four stakeholder regions

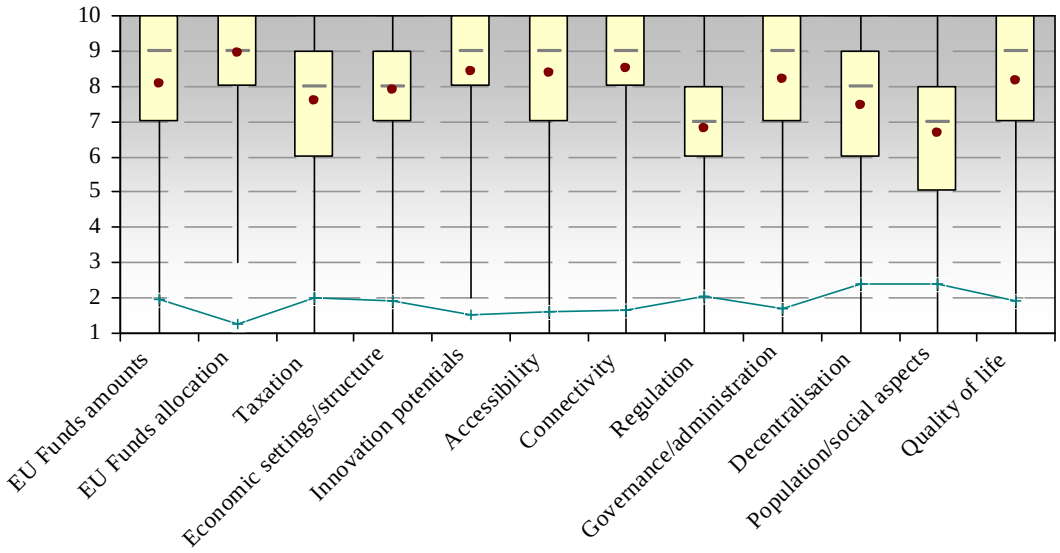
Graph 2 displays the results with respect to all 68 questions and important findings for the further analysis. Concerning the **EU funds aspect** one can clearly see the preferences of the respondents of the four stakeholder regions. Much more important than the sheer amount of EU funds (mean=8.0) is 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 achieve this efficiency, an excellent coordination of regional and EU policies (mean=8.3) as well as high regional structural fund competencies (mean=8.7) seem to be necessary preconditions. This is entirely consistent with the findings of the literature review and stakeholders are well aware of the fundamental importance of a qualified public administration.

Knowledge and innovation is furthermore important, i.e. 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 are **accessibility** (e.g. highways and roads (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 is **taxation** including stable tax policy (mean=7.8) or low tax burden for companies (mean=7.7) etc.

Graph 2 Results of all questions (point = mean; dash = median)



Graph 3 Importance of factors in weak convergence regions



Light-yellow box: lower (25%) and upper (75%) quartile; dash: median; dot: mean; level line: standard deviations; vertical axis: possible answers ranging from 1="not important at all" to 10="absolutely necessary"; horizontal axis: selected growth factors

Of utmost importance are EU funds amounts, EU funds allocation, innovation potentials, accessibility, connectivity, governance/administration and quality of life. Conversely, regulation and population/social aspects were identified as least important. Deviations from this tri-regional average are observed in East Macedonia-Thrace, where taxation, economic structure, decentralisation and population/social aspects are also considered crucial. The divergence in population/social aspects could be attributed to the specific demographics in the region (approx 1/3 Muslim and 1/6 Turkish), whereas the negative impact of the centralisation of Greek political decision-making was identified in the literature review. In contrast, 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 more essential quality of life with a 75%-quantile reaching up to 9.

2.4 Interpretations (lessons learnt)

In terms of the list of potential growth factors, Table 3 displays the ranking of the twelve factor groups in the four stakeholder regions, which are split into Convergence and catching up regions. The first order criterion is the median a group reached in the questionnaires; the second criterion is the mean value to obtain a hierarchy within a group of the same median. Even if median and mean were identical, the upper quartile was used as the third and final criterion. To sum up, Table 3 shows that almost all the factors found to be important in the literature review have also been considered important for the respondents, indicating that the right factors have been identified in the literature review. Whether further important factors for the economic growth of Convergence regions are missing will be assessed in the next empirical steps, the in-depth interviews and case study analyses.

Table 3 Importance of selected growth factors, average of Convergence regions and Phasing-in region

Weak Convergence regions (Campania, REMTH, Podlasie)				Phasing-in region (Valencia)			
	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

As a result of the analysis of the regional survey it can also be seen that **weak convergence regions and catching up regions differ** in their rating of different economic growth factors. For the weak convergence regions, the allocation of EU funds including well-targeted fund allocation to specific objectives and efficient spending are seen as most important factors (rank 1 of 12). Doing the right things (effectiveness) and doing things right (efficiency) with EU money is seen to be of utmost importance which indicates possible shortcomings in the efficiency of fund management and maybe in the overall allocation of resources. The efficiency of regional civil servants in charge of the allocation of funds is captured by the factor "Governance/admin". In the weak convergence regions, this factor is rated more important than in the catching up region, indicating lack of efficiency and the need for improvement in the former. To achieve this, civil servants' skills with regard to fund management and an excellent coordination of different levels of government are consequently assessed as very important in the survey (Graph 3). The importance of efficiency of the public workforce is clearly reflected in the literature review. Moreover, the pure amount of funds is rated much less important in the weak convergence regions (rank 7 of 12), indicating that skills are prioritised over the attainment of funds. By contrast, in Valencia the amount of EU funds granted is seen as much more important than the allocation of funds. This would indicate that fund management skills are deemed sufficient and hence less important in the perception of people whereas the importance of the amount of funds increases (believing the funds will be spent efficiently, the amount available is considered important).

Another difference between the two regional sub-groups can be found in the assessment of innovation potentials and connectivity: in the weak convergence

regions they are ranked much higher than in the catching up region. Yet, according to the literature review, innovation potentials and connectivity as economic driving factors are important for sustainable economic growth of all regions, not only for weak convergence regions. Therefore it may be presumed that innovation potentials and connectivity are perceived by stakeholders as satisfactory in Valencia and less satisfactory in weak convergence regions. Factors which are ranked quite equally are e.g. taxation and decentralisation, which depend to a large extent on national laws and constitutional frameworks.

2.5 Methodology of the in-depth interviews (qualitative approach)

In-depth interviews[11] were carried out to gain a broad understanding of the perception of growth factors and how they are perceived to interrelate within convergence regions. Interviews were designed with a special focus on the different factors influencing the economic growth of a region such as accessibility, innovation, knowledge economy etc.), the effectiveness of public administration and the successful implementation of cohesion policies in disadvantaged European regions, focusing on aspects within regional competence. Altogether 25 politicians, senior officials, socio-economic practitioners and opinion leaders in the four Stakeholder regions were interviewed in depth with respect to:

- *general questions* concerning the overall constitution of their region (reasons for the low GDP, main strengths, opportunities, threats, weaknesses) and
- *specific questions* dealing with the importance of different factors (such as the knowledge economy, accessibility etc.)

The number of interviews conducted per group is shown in Table 4. The interviews were carried out by the regional experts in local languages to avoid language problems and ensure maximal return and inside information on what the relevant success or failure factors are believed to be. The interviewees also responded to the structured questionnaires.

Table 4: Number of interviews, by professional category and stakeholder region

	Region of East Macedonia–Thrace	Podlasie Voivodship	Campania Region	Comunidad Valenciana	**Total n. of interviews**
politicians/civil servants	3	3	2	1	**9**
Business community	2	1	1	1	**5**
university professors	2	1	2	1	**6**
private sector	2	1	1	1	**5**
Total	**9**	**6**	**6**	**4**	**25**

[11] See Scientific Report section 2.3 for Interview questions.

A slightly revised interview format was developed for Valencia to fully reflect its nature as a Phasing-in region. The interview formats are included in the Scientific Report 2.2.

The interviews were structured into general questions concerning the overall economic situation 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.). Qualitative content analysis (Mayring 2000) was employed. This showed which factors of influence as identified by the literature review were found to be important by the interviewees (e.g. how important do you assess access to the knowledge economy to be?). It also allowed new categories and indicators to be incorporated in the hypothetical framework (e.g. what do you think are the principle reasons for the low GDP in your region?). To identify new factors and indicators of growth and check the factors found in the scientific literature, the interviews were analysed in two steps: the answers were first summarized and potential factors or indicators of influence were identified and grouped. Second, the factors were systematized in a table and the relative importance of the different factors was evaluated according to the number of answers and the assessment of factors by the interviewees.

2.6 Results of the interviews in the four stakeholder regions

In the following, a summary of answers and the identification of different factors/indicators of relevance to the interviewees of the four stakeholder regions are presented[12]. Next, the findings for the interview analysis are shown separately (Podlasie, Campania and East Macedonia-Thrace in a first group and Valencia as the catching up region). There are several impediments in the **weak convergence regions which the interviewees consider hinder economic development (*weaknesses/threats*)**. These are, for instance:

- Their geographic location: two of the regions are far away from the decision making centres of their country, are geographically isolated and therefore have problems in creating/attracting investments;
- Accessibility, e.g. railway, road and airport connections are underdeveloped;
- The economic structure is characterized by a high share of the agricultural sector, a low level of external relations of the economy and a high share of unemployment;
- Innovation potentials: insufficient exploitation of resources (e.g. human capital, new technologies), loss of resources (brain drain), low share of R&D investments, lack of long-time planning and strategies for the knowledge economy;
- Public administration: not sufficiently modernised (ICT), lack of specific competence, lack of long-term planning, all of which result in inefficiency and ineffectiveness;
- Population: depopulation of remote areas;
- Political and social aspects: organised crime (e.g. Campania), loss of civic sense and lack of social cohesion;

[12] Tab. C1 – Tab. C4 in Appendix 1 show the results for the individual stakeholder regions.

- Regulation: lack of legal regulations resulting in uncoordinated investments on one hand, on the other hand a perception of restrictive EU regulations (e.g. NATURE 2000 in Podlasie) leading to severe conflicts;
- Quality of life: not enough exploitation of the rich natural and cultural heritage.

There are only few factors which **foster economic development in the weak convergence regions (*strengths/opportunities*).** These are, for instance:

- Quality of life: existence of a rich natural and cultural heritage, multicultural character;
- Innovation potential: pool of human capital and existence of Universities;
- Economic structure: high share of mostly well functioning SMEs
- Geographic location/structure: proximity to neighbouring countries and markets (e.g. in Podlasie and East-Macedonia Thrace);
- A great opportunity is seen in the improvement of accessibility, e.g. highway and pipeline construction.

By contrast, there are diverse **factors in the catching-up region which** interviewees consider **foster economic growth.** These are, for instance:

- Economic structure: one sector (property sector and investments in construction) which boosted the whole economy accompanied by a booming tourism sector and an improved industrial sector;
- Regional administration: efficient activities (especially in spending funds), common effort of all institutions and public administration in collaboration with the private sector on R&D in different aspects. Sufficient qualified workers in the administration;
- Quality of life: privileged weather and territory conditions;
- Innovation potential: fostering new technologies through the creation of institutes, development of new market strategies, high investment in R&D activities;
- Decentralisation: decisions are taken close to citizens.

Furthermore, only a few factors in **the catching up region** *hinder* economic growth; these are, for example, inadequate financial resources, a fragmented agricultural sector, non-sustainable exploitation of water resources, too much bureaucracy in regional administration and a gap between a highly educated potential workforce and regional job opportunities.

Summing up,

- There are many factors which hinder economic development in the weak convergence regions and only a few that foster economic prosperity;
- In the catching up region Valencia, the situation is reversed: there are many factors stimulating the economy and only a few which hinder economic growth;
- The preconditions are similar in all regions; everywhere, there are quite good opportunities i.e. the environmental conditions exist, there are universities and human capital (although less developed in Podlasie), and there are SMEs and tourism attractions everywhere.

2.7 Lessons learnt from the Interviews

In the following, the results are interlinked and a coherent view is presented. Factors which helped Valencia to economically catch up concern economic drivers (the economic structure: investment in the construction sector, investment in innovation potential and quality of life) as well as factors relevant for an efficient allocation of resources such as the quality of regional administration and decentralisation (decisions are taken close to the citizens). When interlinking the different statements from the interviews, the following factors emerge as preconditions for Valencia's economic growth: the quality of work of the regional administration and other regional institutions, a functioning collaboration between different regional actors as well as a certain level of decentralisation (all factors relevant for a successful allocation of resources). Further factors are the commercial exploitation of the privileged weather and territory conditions, the quality of life (including amenities, health, education, environment, housing, safety and social participation) and concentration on the innovation potential: fostering new technologies through more recent initiatives such as the creation of technology transfer institutes, the development of new market strategies, and high investment in R&D have led to economic prosperity.

Concerning the weak convergence regions, economic driving factors are present, such as the existence of a rich natural and cultural heritage, a multicultural character (quality of life), innovation potentials or specificities of the economic structure which are seen as relevant for economic prosperity and which could be compared to or equal the factors in catching up Valencia. By contrast, a great difference can be found in the factors relevant for an efficient allocation of resources. Impediments for growth weak convergence regions are perceived to be the following:

- Political and social aspects: organised crime (e.g. Campania), loss of civic sense and lack of social cohesion;
- Heritage potential: not enough exploitation of the rich and often unique natural and cultural heritage;
- Innovation potentials: insufficient exploitation of resources (e.g. human capital, new technologies), loss of resources (brain drain), low share of R&D investments, lack of long-time planning and strategies for the knowledge economy;
- Public administration: ICT not modernised enough, lack of competence, lack of long-term planning, resulting in inefficiency and ineffectiveness and also in the regulatory framework (economic enablers);
- Regulation: lack of legal regulations resulting in uncoordinated investments on the one hand, and on the other hand restrictive EU regulations (e.g. NATURE 2000 in Podlasie) leading to severe conflicts.

Conclusively, **the main difference between weak and catching up convergence regions can be found, according to the interviewees, in the efficient exploitation of different available resources**.

Based on hypothesis two in the literature review (section 1.5) one can synthesise that factors relevant for regional economic success that differ for weak convergence regions compared to catching up regions can be retrieved. The significant difference is not seen in economic driving factors or enablers, but in factors relevant for a successful allocation and exploitation of resources. This finding not only reflects insights from the literature, but also supports the interpretations made based on the survey of regional stakeholders. The interview analysis also upheld the finding that those factors which are important for an efficient allocation of resources are a precondition for other factors (e.g. economic drivers) and for the overall economic prosperity of convergence regions.

In short, it seems that the weak convergence regions are trapped in a negative circle of causality and cannot find a way out. Furthermore it seems that Valencia has successfully left this negative circle. One could assume that it would only need one or more enabling actions, like the increase in public administration workforce salaries and performance-related incentives, perhaps coupled with investments in the innovation potentials, a stable regulatory framework and a crackdown on corruption to escape the negative circle and enter a positive helix of economic success. Further considerations will be made in the chapter on Policy options.

3. Case studies – qualitative analysis

3.1 Objective of the case studies

The aim of the case studies is to gain a broad understanding of processes and mechanisms of factors and factor interrelations within convergence regions. The case studies present experiences from the four stakeholder regions with respect to one specific thematic area. Factor interrelation and the functioning of economic processes within each region is shown by choosing one thematic field and comparing the actions, success or failure stories of the Stakeholders. Insights gained from this analysis can be of benefit for all European regions, as the four stakeholder regions represent a wide range of European territorial typologies (as described below).

3.2 Geographic- territorial context

It is useful for the transferability of the SEARCH results to examine the 4 stakeholder regions in terms of territorial typologies, and reflect on eventual insights. For the purpose of this exercise, the TPG has adopted the eight typologies proposed in the ESPON Typology Compilation Scientific Platform and Tools 2013/3/022 (Interim Report) as the basis for consideration. This will also allow some identification urban/rural typologies which are not mutually exclusive at NUTS 2 level, and the assessment of typologies and results currently in development in other ESPON 2013 projects. The eight typologies are:

- urban / metropolitan areas
- rural regions
- regions in industrial transition
- sparsely populated areas
- cross-border regions
- mountainous regions
- islands regions
- coastal regions

Bearing in mind that the Stakeholder regions are all NUTS 2, whereas urban/rural typologies are generally developed at NUTS 3 or NUTS 5 levels, the TPG has taken into consideration different data from existing typologies (such as FUAs[13], population density[14], DG REGIO Rural Urban Typology[15] as well as utilizing the Draft Typology of Rural Development Environments (ESPON EDORA[16]), to identify the appropriate characteristics for the NUTS 2 level, which will then be useful for some wider considerations in the econometric analysis, as well as remarking eventual NUTS 3 differences. In the case of Podlasie and REMTH, the EDORA typology does not identity any urban area at NUTS 3 level, so these regions have been classified as rural. For the purpose of this typology, the NUTS 2 regions with a coastal border have

[13] Source: ESPON 1.4.3 Functional Urban Areas accoding to their Population
[14] Source for inhabitants per km² for all 4 Regions 2006 - EUROSTAT - Population density, by NUTS 2 regions - [tgs00024] – Degree of urbanisation as defined by EEA
[15] Source : Fourth Cohesion Report, 2007 p. 58
[16] Source: p24 Interim Report – the final results are not yet available

been classified as coastal regions, but specifications made on other significant aspects. All the stakeholder regions fit into more than one typology as follows:

Campania: includes urban / metropolitan areas (Naples is a Metropolitan Functional Urban Area, Salerno is a medium FUA, Avellino, Benevento and Caserta are small FUAs, at NUTS 2 level the degree of urbanisation is intermediate); it is a coastal region[17]; the territory includes NUTS 3 rural regions. It is of interest to note the application of the EDORA Draft Typology to the territory - *with Peri-productivist agriculture* (Caserta, Benevento) and *New Rural Economy* (Salerno, Avellino); the NUTS 2 area includes NUTS 3 mountainous regions[18]. **Valencia**: includes urban / metropolitan areas (Valencia is a Metropolitan Functional Urban Area, Alicante is a large FUA and Elche and Castillon medium FUAs, at NUTS 2 level the degree of urbanisation is intermediate); coastal region[19]; The territory includes NUTS 3 rural regions. It is of interest to note the application of the EDORA Draft Typology – *New Rural Economy* (Alicante) and *Fordist Mixed Rural Economy* (Castillon); the NUTS 2 area includes NUTS 3 mountainous regions. **Podlasie**: rural region (*Depleting rural region* in the EDORA typology), cross border region (internal and external). **REMTH**: rural region (*with Peri-productivist agriculture* in the EDORA typology, coastal region (regional/local typology); cross-border region (internal and external); the NUTS 2 area includes NUTS 3 mountainous regions.

3.3 Innovation and knowledge economy as common theme

In order to reach a high quality and comparability among the four case studies it was agreed that the regional stakeholders identify one specific issue or strategy in their region for study by the TPG within the thematic scope of the information and innovation society. The strategy thus identified was to be described, placed in the respective political context, and finally its outcomes were to be evaluated.

The theme 'innovation and information society' was suggested initially by the stakeholder regions and was considered to be of major importance in regard to future economic growth. After the first steps of analysis, the literature review also gave an indication in the direction of knowledge information and innovation: There is a huge body of literature concerning this issue and regions have become increasingly the main actors in shaping and conducting regional advantage through innovation. Academically, this can be seen in concepts such as the regional innovation system, innovative milieus, clusters, technology transfer institutes, competence centres etc. Furthermore, looking at the results of the qualitative analyses, the 'knowledge economy and information society' theme was considered to be of utmost importance for regional actors (researchers, business people and politicians), especially in the three weak convergence regions Podlasie, East-Macedonia-Thrace and Campania

[17] In NUTS 3 terms, there are 3 coastal provinces. According to the typology developed in ESPON 2.1.5 based on population density and FUAs, Naples is Mega, Salerno is Transnational/national 2 and Caserta is Regional/Local 4.

[18] According to ESPON ATLAS Mountain areas and their accessibility – in accordance with the DG REGIO 2004 definition whereby NUTS 3 regions are defined as "mountain regions" only if over 50% of the population are living in 1x1 km grid cells identified in the Nordregio study on Mountain regions .

[19] Source as note 17. All the provinces are coastal, Valencia is Mega and Alicante and Castillon Transnational/National 2 - ESPON 2.1.5 typology.

(rank 2 of 12). Through the interview analysis it became clear that Valencia is already on a good trajectory in the direction of a well-established regional innovation system. This might be the reason for the fact it ranks seventh out of twelve possible factors in the regional survey (see Table 3). Furthermore, this leads to the assumption that innovation potential and connectivity might be a necessary precondition for the fostering of the economy. But 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 after analysing the interviews. In the case of East Macedonia-Thrace: the knowledge economy and accessibility are seen as the most important factors of economic development: "The knowledge economy is a necessary factor to boost the local economy and its competitiveness". Therefore, special attention is paid to the effective and efficient exploitation of the knowledge infrastructure and their improvements. In short, one can conclude on the basis of the literature review and the qualitative analysis (both survey and interviews) that this theme is considered to be very important for regional development and therefore is appropriate for the in-depth analysis in the case studies.

The importance given to this theme can be seen by the significant resources devoted to it in the Regional Operational Programmes, a trend seen in the 2000-2006 programming period and consolidated in the 2007-2013 Programmes. Furthermore, the 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. In addition, 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 and the i2010 Initiative (European Commission 2005a). 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. Moreover, national policies have recognised the importance of addressing this issue: in almost every national policy context, knowledge and innovation is considered a crucial theme. Finally, the recently-adopted 2020 Strategy names R&D and innovation as a key priority and the Council has agreed a target of 3% of GDP for public/private investment in R&D.

The case studies in full are included in the Scientific Report.

3.4 The case of Technogenesis in East Macedonia-Thrace

For the Region of East Macedonia-Thrace, the implementation of a Regional Innovative Action called "Technogenesis in REMTH" was chosen as a best practice example of the promotion of innovation and the establishment of a regional network to support innovation. The whole project was built on the results of a Regional Innovation and Technology Transfer Strategies and Infrastructure project (RITTS)[20] – Innovating Regions in Europe - implemented in REMTH.

[20] The RITTS projects were funded by DG Enterprise under the Innovation Programme and aimed to support regions to develop regional innovation strategies that would enhance regional innovation and competitiveness through optimizing innovation policies and infrastructure.

The case analysed took the form of a pilot action that referred to the strategic creation of a regional economy based on knowledge and technological innovation. Aiming to address the weaknesses of the innovation system of the region, its ambition was to accelerate the entrepreneurial efforts in the area and foster the achievement of better results, through the development of new products.

The **aim** of the project was to develop a new innovation strategy in REMTH, with the networking of public authorities, research and technological institutions, consulting agencies and local enterprises or individuals for the production of innovative products that would have a positive impact on competitiveness and growth. Among all the innovative actions funded in Greece, Technogenesis was the only one aiming directly at stimulating new products and services development by individuals, while offering investment opportunities to interested bodies.

Technogenesis in REMTH comprised **three lines of action**:

- **Regional Intelligence**: The aim was to motivate and bring forth the hidden regional knowledge with regard to new ideas and products. Altogether seven different promotion strategies (e.g. judgement of ideas, expert-supported brainstorming etc.) were applied to establish a continuous mobilisation process and an intelligent system (the Technogenesis model) which could work permanently in the region to stimulate innovation (even after project closure) and which would be transferable to other regions. The final outcome of this action was the mobilization of hundreds of citizens/businesses who submitted their innovative ideas for the development of 300 new products.
- **Exercise:** After a preliminary evaluation, 70 promising ideas were selected for the second stage of the project: the exercise and the experimentation of these ideas in Technological Clinics. The owners and holders of innovative ideas were encouraged to collaborate with technological service providers and to test the development potential of their product in these Clinics. Thereby, Exercise aimed not only at supporting the demand side, but also at addressing supply side issues, in particular by attempting to strengthen the creative role of the technology transfer professionals and increase their shareholding function. The Technology Clinics were set up to support the firms or individuals in taking the necessary steps before a new product idea was transferred to ready-to-production prototype status. At the end of this stage, the ten most mature and promising products (out of 70) entered the production process. It allowed the involved parties to understand the high risk of product development in a realistic environment, providing necessary support.
- **Technogenesis Paradigm**: After the Exercise action, funding action plans of the top 10 ideas (new venture funding) were developed. Additionally, a permanent regionally-based Investment Opportunity Forum was set up, which should have been held six times a year. Its purpose was mainly to identify potential investments and to promote them to potential investors.

The programme stimulated new forms of interactions between different types of enterprises. In REMTH, enterprises belong either to the traditional sectors, producing conventional and often mass products or the peripheral sector, producing more innovative products but lacking strategic orientation. Through the Technogenesis

project, interaction between these two sectors was stimulated as a sustainable regional alliance between mass production (the core sector) and flexible, customised production (the peripheral sector) was established. The major indirect added-value of the partnership was the involvement of a significant part of regional entrepreneurship; industries, academic institutions, services providers, local development companies and consulting firms were involved with innovation topics. Furthermore, individuals, students and social groups gained access to networking, creativity and entrepreneurship. There was considerable mobilisation within the region and this has allowed the local innovation potential to emerge. TECHNOGENESIS was the first Pilot in East Macedonia and Thrace that established a public-private partnership to support Innovation. For the contextual placement of Technogenesis, please read the case study in the Scientific Report.

Evaluation. Although "Technogenesis in REMTH" has proved to be valuable for the enhancement of innovation in the region and the creation of a network among the public sector, the private sector, the academic and research sector and the citizens, the absence of further funding and changes in the most important public administrations made it very difficult for its activities to continue. In short,

- the limited funding in innovation and
- the lack of coordination in the different entities

both have a negative impact on the sustainability of the model. In addition, limiting the development of regional innovation policies is the fact that regional General Secretariats lack both the trained personnel and to a certain degree the capabilities for the development of Regional Technology Development and Innovation schemes[21].

Table 5: SWOT analysis REMTH

STRENGTHS	WEAKNESSES
• Creation of clusters that never existed on regional level • Awakening of individual citizens in the region towards the production of innovative products • Creation of concrete business plans and funding of innovative ideas	• The non creation of permanent structures for the Investment Opportunity Forum and the Technology Clinics • Lack of political commitment for the continuation of such policies • Shortage of private initiative
OPPORTUNITIES	THREATS
• Take advantage of the innovative ideas data base created in the framework of the project • Make use of good practices in regional innovation strategy and cooperation between private and public sector • Take advantage of already set up structures to mobilise further innovative business activities	• Non sustainability of the project activities due to lack of public or private funding (dependency on co-funding schemes) • Lack of education and appropriate consciousness towards the notion of innovation • Stagnation of investments due to the general global economical instability and the economic and financial crisis in Greece

[21] The Greek Innovation System: Review Greece's Innovation Policy by the OECD", Hellenic Republic, Ministry of Development, General Secretariat for Research and Technology, Athens, August 2007

3.5 The case in Podlasie – improving infrastructure and digital competence

The case study of Podlasie demonstrates an approach adopted by the regional government since 2003 for the development of the information society in the Region. Digital literacy and the ability to utilize new channels of communication for the benefit of individuals, specific groups and the society as a whole have been recognised as one of the key factors for economic growth and quality of life. This case study looks at **three interconnected projects** coordinated by the regional government aiming at:

- Improving **infrastructure and services**;
- increasing the **competence of public servants** and the wider public; and
- **public on-line services/electronic services development** and consensus building action among a wide spectrum of regional stakeholders (with special attention to the needs of local government representatives).

It is worth noting that Podlasie region suffers from depopulation more than any other region in Poland. Digital divide exists in the form of poor awareness and the lack of digital competences among senior citizens and rural communities. Other challenges include poor ICT penetration at local government level. Starting from 2003, a number of ICT related actions were undertaken based on the 2010 Podlasie region development strategy. Concrete efforts in electronic services development and improved access of the public to public information began in mid 2003 when the first server centre for Podlasie was launched, together with the Public Information Bulletin, encompassing municipal, county and regional levels. In parallel, an information portal, “Gateway to Podlasie” was launched, in unison with an electronic document workflow system in twelve regional administration offices. The next stages of the ICT systems’ development included two projects described in this case study:

- Regional Network and Certification Management Centre, financed by the ERDF and encompassing 98 municipalities;
- ESF-financed ICT training course, managed by the Regional Employment Office.

A **stepwise procedure** was adopted. The first project was designed to introduce electronic services for citizens of Podlasie and create the conditions for on line access to education and administrative services. The system comprises of (among others) GIS modules allowing for access to spatial information resources of 3 large cities (Bialystok, Suwalki, Lomza). In the course of the project, the majority of municipalities (98) in Podlasie region were provided with a single system encompassing document repository, electronic document circulation, electronic signature (distributed among local government employees), a single e-mail system within the "gateway to Podlasie" portal and the possibility to upload content on the "gateway to Podlasie" platform, including the Public Sector Information bulletin. In May 2008, Podlasie formally fulfilled the requirements set forth by the Digitization of Entities Providing Public Services Act. The second project[22], focused on the training of employees willing to devote their after work time to improve their ICT competences to in turn become more competitive in the labour market. Altogether 634 training courses were carried out for 4867 individuals.

[22] ESF project within the Integrated Regional Development, Activity 2.1

Training in digital literacy increased user competence which will stay in the region forming a building block complementary to the “Gateway to Podlasie” project.

Table 1: SWOT analysis Podlasie

STRENGTHS • Potential for synergies in administration and processes (building infrastructure and digital competence) • Introduction of common standards in e-administration processes (electronic services) • New funding sources	WEAKNESSES • Generalizations and compromises resulting from the participation of Podlasie in the "Eastern Poland Broadband Network" project (providing broadband internet access to mostly remote and rural areas) • Marginal use of public online services by citizens and business
OPPORTUNITIES • Fundamental increase of know-how in digital literacy of civil servants • Improvement of efficiency of communication between the regional and the local level	THREATS • Unsatisfactory involvement of the municipalities and their needs in the programme leading to acceptance problems • Low acceptance of programme / results in municipalities resulting in delays already witnessed

3.6 The case of Campania – Regional Competence Centres

The **mission** of the **Regional Competence Centres** in Campania, based on the objectives of the Regional Development Strategy in the Campania OP 2000-2006 (budget allocation 208,725,000 €) is to coordinate project activities of applied research which respond to market demand, so as to favour transfer of the results to the market. Their primary purpose is to serve as a liaison between the academic and business worlds, transforming research projects into successful entrepreneurial initiatives. For their analysis, **regional documents and RCC reports** were studied and interviews with local experts, the manager of one Competence Centre (TEST) **and the regional Director of Technology Transfer Campania Centre were conducted.**

The objectives of the RCCs are to:

- create favourable conditions for research activities leading to transfers of the resulting technology;
- favour cooperation between research institutions and public or private partners, in order to accumulate a critical mass of know-how and human resources;
- promote the direct involvement of business enterprises in the planning and implementation of innovation; and
- foster the creation of a knowledge-based society.

The 10 Competence Centres operate in support of the following strategic sectors, in the interests of developing the territory:

1. Information & Communication Technology
2. New Biotechnological Materials (3 centres)
3. Health, Food and Agriculture
4. Environmental Safety, Monitoring and Protection

5. Cultural Heritage (2 centres)
6. Aerospace Logistics, Transport and Motor Vehicles
7. Energy.

The rationale behind the institution of the RCCs was first and foremost the belief that the formation of networks between private and public bodies is the main way to stimulate innovation in SMEs and extend the dissemination of R&D results. The need to create intermediary institutions that were neither business enterprises nor government agencies, but which formed an integral part of the local/regional system of innovation was recognized in Campania. The Centres represent a networking model with the objective of bringing together in a single pool the research capacities of public institutions existing in the region, such as research bodies, universities, laboratories, etc, that were previously unconnected. Each Centre has a specific mission. The AMRA Centre for the Analysis and Monitoring of Environmental Risk, for example, aims at transferring new technology to reduce environmental risk and to foster environmental protection. Its 300 scientists work in the fields of seismic, hydro geological, volcanic, costal and anthropogenic risk. Furthermore, laboratories and advanced equipment of about 15 million Euros are available.

Internationalization of the Regional Competence Centres. The Campania Region published an invitation to tender for the organization of activities to promote the internationalization of the results of the Regional Competence Centres, (Measure 3.16 Campania POR 2000-2006), aiming at fostering possible technology transfers generated by specific sector activities in the international markets in NAFTA, China and India and Europe. The goal was to elaborate a strategic model for Technology Transfer in international markets and plan initiatives to improve the development capacity of the Campania research system, by making use of advanced factors of competitiveness centred on technological research, knowledge and innovation and using an approach which promotes the logic of an “open system” between the region and research, focusing on the international markets and their needs for expertise. Unfortunately the internationalisation project has not seen the hoped-for results because of the lack of a strong entrepreneurship approach in the RCC management. After the public funds from the Campania OP 2000-2006, the RCC have since become legally independent, aiming at eventual self-sufficiency; however, it must be noted that only a few RCC are currently working successfully in an international context, and in general they are slow to compete internationally. Their future may be threatened by the necessary budget restraint in the adoption of austerity measures in Campania. However, the Centres provide a high quality of research, a high quality and quantity of human resources that could represent an opportunity for Campania. Furthermore, the absence of a true entrepreneurship approach in the management of the RCCs has impeded their success in the sense of international competitiveness. The challenge for the Regional Government is to reflect upon the errors committed, avoid repeating them and revitalize development eliminating the weakest, most inefficient sectors and investing in those providing opportunities for economic growth.

Table 7: SWOT analysis – Campania

STRENGTHS	WEAKNESSES
• giving rise to numerous initiatives to support groups of businesses capable of initiating R&D activities and strengthening the competitiveness of the production system • supplying technical, scientific and patent information and documentation, reports on the state of the art and market trends, business intelligence tools and technology monitoring, available to all businesses (during the start-up phase) and researchers • supporting future entrepreneurs from the conception of an entrepreneurial idea to the creation of the business.	• the RCC are hampered by their limits in attracting private financing • shortage of private initiative • the absence of a true entrepreneurship approach in the management of the Regional Competence Centres has impeded their success in the sense of international competitiveness.
OPPORTUNITIES	THREATS
• Establishment of conditions to facilitate access to innovation (existing in the scientific community) for regional actors • RCCs have made R&D knowledge more visible, helping innovation actors understand the potential of innovation and protect resulting intellectual property etc.	• few technology brokers • lack of regional business stimulating initiatives • changes in the "political strategy" could have negative effects on the efficiency and efficacy of Regional Competence Centres, still primarily dependent on public funds

3.7 The case of Valencia – a public foundation for regional stakeholders

The Valencia case study shows the evolution of a single strategy - the creation of a Facilitating Agency - considered as a permanent tool that can enhance and develop the information and knowledge society in the Valencia Community Region and exploit its achievements. The case shows how the transfer of know-how and knowledge has been channelled as the initial step for the creation of structures which, without a permanent tool for coordination and dissemination, could render the information and knowledge society merely theoretical.

The creation of a permanent structure as a vehicle for dissemination has been achieved by the establishment of a Public Foundation, the FUNDACIÓN COMUNIDAD VALENCIANA- REGIÓN EUROPEA (FCV-RE), which constitutes a bridge between all the Valencia region stakeholders, promoting regional policies to the EU institutions, and vice versa, disseminating knowledge and experiences, enhancing regional networks to be linked with EU institutions and programmes, and in reverse, bringing EU networks to the regional institutions and society agents and enterprises. Initially, the Valencia Government operated with social agents and public authorities directly. The complex level of information, projects, proposals and deals to be managed by the Government (or by civil servants) impeded the success of the different procedures because of the following problems: too much bureaucracy, restrictive, public-law labour legislation, funding alternatives etc.

In November 2003, the FCV-RE was founded as a vehicle for the Regional Valencian Government and its bodies, agencies and enterprises to participate in the policies, actions and programmes of the European Union, enhance awareness and disseminate knowledge, creating a permanent platform under the supervision

exercised by the Government. FCV-RE's mission is to foster the participation of all sectors present in the Valencia Community in EU policies, boosting knowledge and awareness of them, thereby enhancing competitiveness and growth, through innovation and the stimulation of a knowledge-based society. Furthermore, the FCV-RE has supported the Council of the Valencia Government in key policy areas such as Agriculture, Water and Sustainable Development, Research, Development and Innovation, Cooperation and Transnationalism, EU enlargement etc. and other areas of EU interest and the general interest of the Valencia Region.
Two initiatives launched within Valencia region are closely linked with the FCV-RE. In 2005, at the initiative of the Valencian Government, the **Investment Collection Valencia (VCI)** was established, commonly known as Valencian Community Investments, whose priority is to promote the advantages of the regional territory to foreign investors. In 2009, the Valencian Government launched the Competitiveness Plan for Tourism 2009-2011, and a new platform for the dissemination of knowledge and information management, the **Instituto Valenciano Tourism Technology (INVAT.TUR)**, promoted by the Region's Department of Tourism. This agency is intended primarily to "promote the relationship between tourism stakeholders in the Region, promoting the transfer of knowledge and technologies in the fields of research, technological development and innovation in tourism".
The effects of the initiatives and of FCV-RE are achieved at two main levels:

- Dissemination at municipal level;
- Dissemination at the level of other entities, both public and private.

With the assistance of this permanent structure, a huge number of EU-funded initiatives and projects have been launched in the following fields: water, agriculture, competitiveness and innovation, business-support, transport, sustainable development and climate change, health and pharmaceutical sector, external affairs and development cooperation.

Evaluation. The following major goals have been achieved:

- All the initiatives launched in cooperation with FCV-RE were able to attract **EU support in the form of extra funding** totalling **61,796,286.97** euros;
- At the time of its institution, in 2003, 18 people were working in the FCV-RE, today there are 45 employees;
- The thematic areas addressed have trebled, meaning that the knowledge and the dissemination possibilities have been increased and empowered;
- 80% of the entities in the Valencia Region intending to submit a project or proposal in any EU area use the FCV-RE as a supplier and have it as reference model.

Table 8: SWOT analysis Valencia

STRENGTHS	WEAKNESSES
• Effective, efficient communication system between different operators and the Valencia Regional Government through simple agreements. • Effective, efficient system of dissemination of information and knowledge. • Efficient system of analysis and framing ideas in the different thematic areas. • Acquisition and dissemination of experience and knowledge, creating a permanent reference "library" plus "laboratory" of projects. • Enhancement of international, national, regional and local relations. • Territorial dynamics with information and knowledge feedback.	• There is still political limit as the foundation cannot act by itself in decision making. In a change of political orientation, the strategy will also change. • Sometimes, similar ideas promoted by different social operators in the Valencia Region could enter in conflict when one of them receives the support of the FCV-RE, because of the public element. • The different public institutions sometimes cause friction with the FCV-RE contents and activities, because of the political implications.
OPPORTUNITIES	THREATS
• Wide data and contacts base means excellent opportunities of finding synergies for economic, cultural, research and development growth. • Becoming a reference point and sharing the know-how and experience acquired. • Improving the system by implementing sub structures for more specialized technicians. • Generator of extra funding at a time of regional budget restraint.	• High dependence on public funding. • High dependence on political strategies. • Subject to possible competition from private companies, as consultants, advisors, etc because governed by the public sector. • Effect of the financial crisis and austerity measures limiting potential co-financing for entities.

3.8 Lessons learnt from the case studies

Innovation society as improvement to regional conditions. In general, the strategies regarding the 'information and innovation society' in the convergence stakeholder regions have all led to an improvement of regional conditions. Furthermore, in each case, more advantages, strengths and opportunities resulted from the distinct programmes than problems and weaknesses. Although the programmes and initiatives are all quite different, there are some common **advantages and strengths**, which can be summarized as follows:

- Creation of transparency of regional (technological) know-how (and know-who);
- Creation of knowledge clusters on the regional level;
- Increase in regional know-how through specific trainings;
- Creation of motivation to innovate and incentives to take part and profit from the programme (e.g. awakening of individual citizens/businesses towards the production of innovative products);
- Organised knowledge exchange in different regional institutions (administration, politicians, business, society) and thereby creation of synergies in administration and processes;
- Creation of institutional transparency (e.g. regional administration);
- Creation of concrete business plans and funding of innovative ideas;
- Increase in inter-institutional interactions;
- Establishment of institutions which can serve as technology brokers;
- Promotion of knowledge and technology transfer;

- Introduction of readily available common standards as a driving force for further initiatives;
- Access to new funding sources beyond regional OPs (as was the case from the Ministry of Internal Affairs and Administration for the functional expansion of the "gateway to Podlasie" system and on-line public service platform).

Besides these strengths and advantages, the **shortcomings and weaknesses** of the above initiatives are of greater significance with regard to future improvements and lessons learned and to indicate policy options. To illustrate this, common weaknesses and threats for the stakeholder regions are presented with some specific examples.

- **Lack of brokers** between technological know-how and the business community;
- Lack of specific incentives resulting in low private business initiatives: in general it was assumed that the **private sector** would become **more active and involved** in the implementation and follow-up of EU-funded projects by prompting the initiation, successful implementation and proper sustainability of similar projects or follow-up initiatives;
- Lack of **public and private funding** threatens the sustainability of such programmes;
- Lack of **education** and appropriate consciousness (first and foremost in the public administration);
- There is a fine line in choosing the **right level of decentralization** for the implementation of a specific (EU financed) initiative. If the implementation is located in a high administration (e.g. the national or regional) level, the risk of refusal and dissatisfaction of the local citizens exists. Furthermore, the individual requirements and needs of the municipalities may go by the board as seems to be the case in Podlasie, where the regional government has decided to take charge of the whole e-Administration process. Another option would be to delegate some tasks to municipalities allowing them to develop their own information society projects. Therefore, an additional source of funding is needed which would allow for the support of their own initiatives, as municipalities know best what they need;
- **Non-creation of permanent structures**: programmes to stimulate innovation in the long run cannot depend mainly on the will of the political leadership at the time, as could be seen clearly for example in East Macedonia-Thrace. A better solution would be that once the institutional framework and the regional strategy are set up by the responsible authorities, their role then should remain mainly supervisory;
- The **notion of Innovation** must become an essential part of technological and university education as well as lifelong learning, so that all relative actors are aware of the advantage of Innovation and how it can be applied in practice.

3.9 Conclusions and transferable observations

Role of permanent structures in Valencia and Campania. First, in the Valencian approach, compared to the three other regions, besides the fact that Valencia was able to attract a significant amount of EU funding in different socio-economic fields, the fact that permanent structures in the three other regions were not created or are not fully sustainable seems to be crucial. The future of the Campania Regional

Competence Centres depends greatly on their ability to transform into self-sustaining structures during the 2007-2013 programming period, which shall vary from case to case. Furthermore, Valencia succeeded in focusing its strengths with respect to the EU into a single organisation which represents “one face to the EU”, where knowledge is concentrated to the benefit of all regional actors. Nevertheless, the common weakness and future challenge of a change in strategies and priorities with changes in regional government remains in all four investigated regions.

Coordination of R&D potential in Valencia and Campania. It is interesting that both Campania and Valencia seem to have been driven by the need to coordinate the real potential for applied research, innovation and the spread of knowledge in their territories, in the former case through potentially self-sustaining Regional Competence Centres, in the latter by the institution of the FCV-RE.

Utilizing established knowledge and urban potential in Valencia and Campania. In doing so, both regions have capitalized on established scientific knowledge relating agglomeration and urbanisation economies to economic growth. It is well established since the 1960s that urban areas have become the dominant centres of production and contributors to GDP growth and that urban agglomerations act as a magnet for further investment, clusters of businesses and firms. Theories have captured these effects using the terms agglomeration economies or urbanisation economies which refer both to savings (scale economies) possible from clustering in urban areas and to potentials that could be realized in these locations. More recently, the link between agglomeration research and innovation production has been explored more directly, (Ki 2001) and the ESPON 2013 FOCI project is examining the role of cities as innovation incubators. It must be clearly pointed out, however, that growth and innovation does only occur in urban areas as this would ignore the growth potentials of the majority of predominately rural EU regions, and the growth and innovation that has effectively emanated from rural areas.

Insufficient structures and involvement of municipalities in REMTH and Podlasie. On the other hand, REMTH has concentrated on fostering and stimulating innovation among enterprises, without providing any permanent structure or follow up to a successful project. In Podlasie the choice was made to innovate the administrations and provide ICT public service access to citizens. It is of note, furthermore, that in Podlasie, elements of the old centralised structure still seem to be present. A lack of decentralisation in conducting EU projects has been mentioned as an impediment for regions and communities. Generalizations and compromises resulting from the participation of Podlasie in the "Eastern Poland Broadband Network" project (providing broadband internet access to mostly remote and rural areas) have been made. Furthermore, there was an insufficient involvement of municipalities in decision-making which led to acceptance problems and delays in the whole programme. Despite this, the success in improving the capacity of civil servants must be appreciated.

It must be made clear that the case studies do not take into consideration the effects of the economic crisis on innovation and the knowledge society in the stakeholder regions, apart from identifying the potential threats.

4 Complementary econometric analyses (quantitative approach)

4.1 Econometric analyses of growth factors derived from interviews, survey and case studies

On the basis of the results from the literature review and the qualitative analysis (interviews), and the regional questionnaires, correlations, statistical analyses and regression models are used to evaluate the influence of different factors on the overall economic performance of different types of regions. In other words, the regression analyses tests whether or not and to what extent results pertaining to regional economic growth in the different types of regions studied can be transferred to all European regions following similar structural and some broad territorial and geographical patterns. This is done in order to show transferability to other regions with a similar structure and context, although we are aware that generalizations are difficult to make due to the fact that each region is different. But there are some regions which share more similarities than others. Furthermore, factors relevant for the effective and efficient use of EU Funds and other resources are tested. The latter is quite limited due to poor data availability. There are, for example, no reliable data on the educational level or salaries of public workforce at the regional level. There is especially a problem of data availability and quality in the eastern European countries and Greece**.**

In short, the aims of the econometric analysis are:

- to verify relevant factors for the overall economic success of convergence regions,
- to verify factors relevant for a successful cohesion policy,
- to analyse dependences and interrelations between different groups of factors and
- to reveal differences with regard to territorial patterns.

4.2 Selection of regions

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 regions shown in Table 9 below.

The regions have been selected first on the base of administrative divisions (regions at the highest politically relevant sub-national level in the hierarchy within a nation state with at least one representative directly elected by the local people).

In a few countries, other areas (mostly on a higher scale) have been chosen due to data quality and availability. Examples are:

- Sweden: instead of the 21 counties (län), the 8 national areas Riksområden (created by the European Union for statistical purposes) have been used as estimations due to much better data availability.
- Rumania: instead of the 41 counties (judite), development regions have been used due to much better data availability.
- Portugal: The 5 Portuguese regions on the mainland do not have regional governments but are included in the analysis due to a better data availability and comparability with Madeira and Azores which are autonomous regions with a regional government.

Table 9: Regions under investigation[23]

Country*	Name in local language	Name in English	Number	NUTS-level
Belgium	Région	Regions	3	NUTS1
Germany	Bundesländer	Länder	16	
UK	Government Office Regions	Government Office Regions	9	
Austria	Bundesländer	Länder	9	NUTS 2
Bulgaria	Oblast	Planning regions	6	
Czech Republik	Oblasts	Oblasts	8	
Denmark	Regioner	Regions	5	
Finland	Suuralueet / Storområden	Large areas	5	
France	Régions (without overseas)	Regions	22	
Greece	Periferia	Periferies	13	
Hungary	Statistical Regions	Statistical Regions	7	
Ireland	Statistical Regions	Statistical Regions	2	
Italy	Regioni	Regions	21	
Netherlands	Provinces	Provinces	12	
Norway	Landsdelene	Regions	7	
Poland	Województw	Voivodeships (Provinces)	16	
Portugal	Regions**	Regions	7	
Romania	Regiunile de dezvoltare ale României	Development Regions	8	
Sweden	Riksområden	National Areas	8	
Slovakia	Krajov	Regions (country)	4	
Spain	Comunidades Autónomas (without Ceuta, Melilla)	Autonomous Community	16	
Switzerland	Kantone	Cantons	26	NUTS 3
Total:			**230**	

*Countries without regional governments (Cyprus, Estonia, Iceland, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta and Slovenia) have been excluded from the analysis.

4.3 Data gathering and empirical setting

The main challenge in the data gathering was to set up a complete database with all relevant indicators retrieved from the previous analytical steps (literature review, questionnaires and interviews in the stakeholder regions). The main restriction is the data availability at the necessary regional depth (NUTS 2 level) and the actuality (mostly year 2007). The detailed variable description and sources of the database, which has been constructed exclusively for this targeted analysis, can be found in the annex.

The broader picture in a greater sample of EU-regions. To evaluate the influence of different factors identified in the literature review and the qualitative analysis on the overall economic performance (GDP per capita) and on the economic growth (GDP growth) of European regions, different methodological steps and econometric estimations are made. The first methodological step is the allocation of the 230 regions to different region types. The four categories most useful for our research questions are shown in Table 10. The regional classification is a result of average

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

(mean) divisions. Estimations will be conducted for "above average GDP" regions and below-average regions as an aggregate of two sub-categories (weak and catching up regions). Additionally, estimations will also be made for weak and catching up convergence regions.

Table 10: Classification of regions

		GDP per capita level		
		Low (below average)	*High (above average)*	
GDP growth	*High (above average)*	catching up n=65	Strong n=32	
	Low (below average)	Weak n=44	losing ground n=89	*mean*
		below n=109	n=121	*Total n=230*
		mean		

There are plenty of ways and possibilities to elaborate regional typologies, most of which are based on NUTS 3 data. Before the classification of the 230 regions, the methodological approach of other studies like the ESPON EDORA (European Development Opportunities in Rural Areas), DEMIFER and TeDi projects were carefully evaluated with respect to territorial patterns to assess their suitability for integration in the econometric analysis. As an example, the EDORA project has mainly a rural focus in defining Development Environments; the classifications are conducted at a NUTS 3 level, which is less suitable for comparison with the econometric analysis for the SURE/SEARCH research question as convergence regions are most often defined at a NUTS 2 level and the data used is principally at NUTS 2 level. However, an identification of the relevant typologies at NUTS 3 level for the 4 stakeholder regions has already been given. Relevant considerations will be given in the Policy Options. DeMIFER aims at mapping population variations (fertility, mortality, total migration). Population change is one of the variables influencing the overall economic growth of convergence regions; however at the time of completing this econometric analysis the necessary data was not available; furthermore the 7 typologies developed by the project will provide policy insights. From the draft map available in the DEMIFER Interim Report, the 4 stakeholder regions can be identified in 4 different typologies (Campania – *Family Potentials*; Podlasie – *Transitions*; REMTH – *Euromediterranean* and Valencia – *Young Potentials*). Implications will be discussed in the policy options. Furthermore, the TeDi targeted analysis with the classification in mountain, island, sparsely populated and peripheral areas concentrates on geographical specificities which, although not directly applicable for this econometric analysis, reveals a remarkable diversity in terms of economic profile and performance.

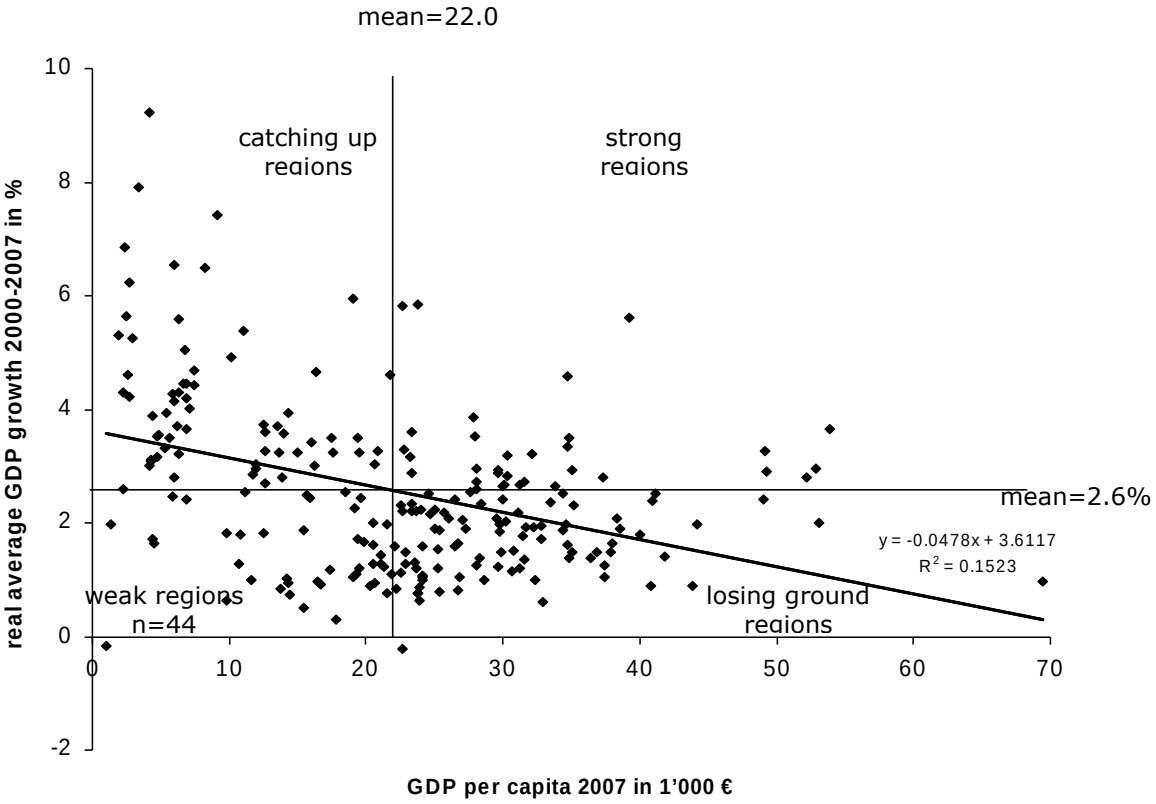
Given the available data used for the econometric analysis, and the complexity of identifying meaningful and consistent territorial typologies at NUTS 2 level where the policy impact is being assessed for the purposes of this project, it is not feasible to attempt to apply the 8 territorial typologies to the 230 regions assessed. However,

some simple classification can be made to provide some insight into the significance of territorial patterns. As outlined previously, therefore, this project takes a distinctly different approach from these other ESPON projects, analysing technically speaking within the framework of broad categories of territorial typology. In the majority of cases the typology is mixed and thus at NUTS 2 level is not useful; however, to verify whether there is a certain causality between population density (rural-urban differentiation) and future economic development, some analysis has been made using the above average or below average population density (of the 230 regions analysed) in the year 2000 as the baseline. Only 65 (=28%) of the investigated 230 regions in the sample had an above average population density; in other words, most have a below average population density. Both REMTH and Podlasie are rural regions, while Campania and Valencia (urban agglomerations) include also rural NUTS 3 regions. It can be assumed, therefore, that the stakeholder regions can be considered to some extent representative of other (and often predominately rural) convergence regions.

Most of the regions (89) in the sample belong to the group of losing ground regions, with an above average per capita GDP in 2007 but a below average GDP growth rate from 2000 to 2007. Examples of losing ground regions are the region of Brussels, the canton of Zürich, Hamburg or Paris (Île de France). The second highest number of regions (65) can be found in the group of catching up regions, with a below average level of GDP per capita but an above average growth rate. Examples of regions in this group are e.g. the Comunidad Valenciana, the Região Autónoma da Madeira or the region of Podlasie. These two groups, the losing ground and the catching up regions, are the dynamic ones in the sample; they will probably change their position in the long run on the supposition that they keep their trajectory. Due to the pure fact that most regions are losing ground or catching up, we can see a clear convergence effect within Europe over the last years. The case of Podlasie (lower GDP than the national Polish average, but higher GDP growth than the 230 regional average) illustrates the general convergence effect.

In contrast to the dynamic catching-up and losing-ground regions, it is assumed that the strong and the weak regions remain in their position over years. The group of strong regions with an above average GDP per capita and an above average GDP growth comprise regions such as Oslo, London, Stockholm or the autonomous region of Aland (Finland). The weak regions, with a below average GDP per capita and a below average GDP growth contain e.g. Campania, East Macedonia-Thrace or Sicily. When considering the trend line in Graph 4, the convergence effect among European regions between 2000 and 2007 becomes visible: the higher the GDP per capita, the lower the GDP growth rate. This is an important finding as a base for the further empirical analysis in the sense that the GDP/capita level at the beginning of a period has to be taken into account in the estimations.

Graph 4: Convergence effect among European regions



Source: Oxford Economics 2009 (own calculation)

4.4 Regression analyses of convergence regions and above average GDP regions

Taking the convergence effect as a starting point, the **research questions** of interest for the evaluation of convergence as a whole and above average GDP regions are:

- Which factors best explain the overall **economic growth** of *convergence* regions? What are the **main drivers** of economic growth in convergence regions?
- What differences are there between the drivers of economic growth in *convergence* regions and above average GDP regions?
- Do existing territorial patterns make a difference for future growth (path dependency of regions)?

The differences between weak and catching up regions are investigated in the same manner below.

4.5 Focus cross-section analysis and regression model

From a theoretical point of view there are two approaches to econometrics: either cross section analysis or panel data analysis. The latter is very appealing as it uses all information available. However, there are a few restrictions. First, the focus is on the explanation of variation in the data between the regions and not of the variation over time. Second, many changes in the explanatory variables require several years to

have an effect on economic performance.[24] Thus, our panel set covering only 7 years is not capable of identifying such lag structures. Third, not all data are available as time series, some is only available for one year (e.g. the degree of decentralisation) or for the period as a whole (e.g. EU funds). As a consequence we have restrained from panel data analysis and focused on cross section analysis. The left hand variable then is average **GDP growth over the period 2000 to 2007**.

TableTable 11 displays the relevant factors which are included in the regression model and the expected sign of influence of the indicators (research hypotheses). Additionally, GDP per capita in the year 2000 is included in the analysis. The regression analysis is done by applying separate performance estimates for the different types of regions, using the following specification:

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

where α, β and γ are fixed but unknown parameters, ε is an error term, the Xs are various economic and political variables affecting economic performance which cannot be influenced by the regional authorities (such as geographical accessibility or national regulation). The Zs 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. The null hypothesis is: $\beta_1 = 0$, $\beta_2 = 0$ etc., which means that the respective variable has no impact on economic performance. In a second step, the coefficients of the different equations are compared and tested against each other.

However, if we are interested whether the differences in the estimated parameters are significant, it is easier to combine the groups pair-wise using the following specification:

$$\text{Performance} = \alpha + \beta_1 * X_1 + \beta_{1d} * D * X_1 + \ldots \alpha_d * D + \gamma_1 * Z_1 + \gamma_{1d} * D * Z_1 + \ldots + \varepsilon,$$

where α, β, ε, 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 β_{1d} and γ_{1d} (using Wald tests). Assuming performance to be measured by GDP growth, and we are interested in the impact of various factors on economic growth and whether this impact is identical for convergence regions and non-convergence regions, the dummy variable is defined as

D = 1 if GDP per capita is above average (non-convergence regions) and

D = 0 if GDP per capita is below average (convergence regions).

Thus, the impact of X_1 on GDP growth for the convergence region is captured by β_1, for the non-convergence regions by $\beta_1+\beta_{1d}$. The null hypotheses of equality of the parameters across the two groups under consideration take the following form: $\beta_{1d} = 0$, $\gamma_{1d} = 0$, etc. (it would also be possible to formulate joint hypotheses of the form $\beta_{1d} = \gamma_{1d} = 0$, implying that all parameters are identical for the two groups of regions).

[24] According to a recent study of the OECD, infrastructure and human capital require three years to positively influence growth. Innovation is even a longer-term process and only has a positive effect on regional growth after five years. (Regions Matter: economic recovery, innovation and sustainable growth, OECD Publishing 2009, p. 45)

Table 11: Variables for the econometric analysis[25]

No. factors	Factors	No. indicators	Indicators	direction of influence	Factor category
1	**knowledge and innovation potential**	1.1	patent applications	+	**economic drivers**
		1.2	shanghai score points	+	
		1.3	human resources in science and technology	+	
		1.4	tertiary educated workers	+	
		1.5	R&D-expenditures	+	
2	**Accessibility**	2.1	multimodal accessibility	+	
		2.2	airport connectivity (by car)	+	
		2.3	potential accessibility (air)	+	
		2.4	potential accessibility (multimodal)	+	
3	**Connectivity**	3.1	internet users	+	
4	**quality of life**	4.1	adult (working age) mortality rate	-	
5	**economic structure**	5.1	Participation rate (labour market)	+	
		5.2	Informal economy	+	
		5.3	primary sector employment	-	
		5.4	Unequal distribution of GDP per capita among regions within a country	+	
6	**regional financial means (amount)**	6.1	EU structural funds 1994-1999	+	
		6.2	EU structural funds 2000-2006	+	
7	**Population**	7.1	population density	+	
		7.2	population growth	+	
8	**Region size**	8.1	Region size (area in km²)	+	
9	**Taxation**	9.1	manpower taxation	-	**economic enablers**
		9.2	company taxation	-	
10	**Regulation**	10.1	regulation of product markets	-	
		10.2	regulation of labour markets	-	
11	**Efficiency and loyalty of administration and government**	11.1	(negative) corruption index	+	**EU funds allocation**
12	**Decentralisation**	12.1	Vertical	+	
	Decentralisation	12.2	Indicator	+	

[25] A table of sources and technical details can be found in the appendix II.

4.6 Results and Interpretations

The results of the estimations are presented in Table 12, which shows the influence of different factors on the economic growth of convergence regions, on above average GDP regions and the difference of growth patterns between the two region types. Several factors (of those in Table 11) had to be excluded due to problems with statistical multicollinearity, data quality and implausibility regarding the direction of influence. The first column shows the variables not excluded due to the above problems until the end of the estimation process that thus have explanatory power in regard to economic growth. Column two shows the results for convergence regions, including the coefficient and the significance (evaluated through t-statistic and probability). Column three shows the results for above average GDP regions and column four the difference between above average GDP and convergence regions.

Most important for our interpretations are two things: the value sign (positive or negative) and the significance of the coefficients in column two and three. The higher the value of the coefficients, the higher the estimated influence on economic growth, whereas the sign points out the direction of influence. If the coefficients in column four are significant, there is a difference between convergence regions and above average GDP regions. By contrast, if the coefficients are not significant, there is no difference between the two region types in regard to factors influencing economic growth.

Table 12: Main drivers of economic growth for convergence and above average GDP regions[26]

Variables	Convergence regions (n=109)	Above average GDP regions (n=121)	Difference between the two region types	Factor category
GDP per capita 2000	-0.12***	-0.04***	0.08**	Convergence control variable
Unequal distribution of GDP per capita 2007 among regions within a country	-9.20***	-10.04***	-0.84	Economic drivers
Population growth 2000-2007	83.70***	78.60***	-5.10	
Share of human capital in science/technology 2007	0.08***	0.01	-0.06***	
Share of human capital in the primary sector 2007	-0.16***	-0.02	0.14**	
Manpower Taxation	-3.10**	-4.54***	-1.44	Economic enabler
Vertical Decentralisation	0.03***	0.00	-0.02**	EU funds allocation
EU funds 2000-2006	-1.11E-09***	2.56E-09***	3.66E-09***	Economic driver
EU funds 2000-2006 multiplied with corruption 2007	1.32E-10**	-3.18E-10***	-4.50E-10***	EU funds allocation
R-squared	**0.74*** **	**0.68*** **		

* significant at a 10 per cent error level
** significant at a 5 per cent error level
*** significant at a 1 per cent error level

[26] For Technical notes see the list of Indicators and data sources in the appendix II

On the base of those considerations, the following findings and interpretations can be derived for each of the relevant factors:

GDP per capita. The variable had to be included in the equation to account for level effects: Regions with a low level of GDP per capita at the beginning of the period, in our case in the year 2000, tend to grow faster than regions with a high GDP per capita in 2000. This effect can be shown here very clearly: A high level of GDP per capita in 2000 has a significant negative impact on the GDP growth of both convergence and above average GDP regions, which means that there is in fact convergence. The negative impact is slightly higher for convergence then for above average GDP regions and the difference between them is significant, meaning that the convergence regions altogether are catching up in regard to economic growth.

Regional economic disparities. Regional economic disparities within the countries included in the estimation are demonstrated by the gini-coefficient for GDP per capita 2007. The gini-coefficient is a statistical measure for inequalities in e.g. income and wealth. In this analysis, a high value of the gini-coefficient corresponds with a high level of inequality between the regions of a European country. As we can see in Table 11, high regional economic disparities have a significant negative impact on economic growth, especially for convergence regions. There is also a negative significant impact for the above average GDP regions. In short: Economic inequality hinders economic growth.

Population growth. Population growth is highly positive significant both for convergence and above average GDP regions. However, there is the problem of causality: does population growth follow GDP growth or is it vice versa?

Share of human capital in science and technology. Human capital is and will be the future resource number one in regard to innovation and economic growth. Not surprisingly, the coefficient is positively significant in convergence regions and positive (but not significant) in above average GDP regions. That implies that the share of well educated human resources is very important, especially for convergence regions in order to catch up. Furthermore, the higher coefficient (0.08) within convergence regions shows a high sensitivity: Starting from a lower base, the rise of the share of human capital in convergence regions makes a difference regarding GDP growth.

Share of human capital in the primary sector. The share of human capital working in the agricultural sector has a significantly negative impact on regional economic growth first and foremost in convergence regions. This is due to the low productivity in comparison with other sectors (industry and services) of the economy.

Taxation of highly qualified manpower and companies. Faced with a background of an increased battle for talents in the EU economy, the taxation on a highly qualified workforce has a significant negative impact on economic growth of catching-up and above average GDP regions. As one of the enabling factors, national (or regional) governments must decide very carefully which tax policy they will pursue and promote.

Vertical decentralisation. The vertical decentralisation within a country is also positively significant for convergence regions. The indicator of vertical decentralisation reflects the number of tiers and the amount of elements within the regional tier of a country where a tier is defined as the vertical level of jurisdiction with at least one representative directly elected by the regional people (see AER 2009, S. 24). This result shows how important it is, especially for convergence regions, to take the decisions close to the citizens, in the regions or in the communities.

EU funds. When it comes to the amount of EU Funds in the period from 2000 to 2006, there is a significant negative impact in convergence regions and a significant positive impact in above average GDP regions. That means that the money can be transformed most efficiently into regional economic growth only in the "richer", above average GDP regions. From the interviews we learnt that some factors seem to be a precondition for other factors being effective, for example that EU funds only add sito economic growth when there is an effective and efficient administration, meaning only in the absence of corruption and where there is transparency.

When X_1 is the amount of EU funds flowing into a region, they have no effect, unless the corruption index (X_2) is low. This effect can be tested by multiplying EU funds with the Corruption Index in the following equation:

$$\text{Performance} = \alpha + \beta_1 * X_1 + \beta_2 * X_2 + \beta_3 * X_1 * (X_2) + \ldots + \varepsilon$$

The result of such a regression might be that neither β_1 nor β_2 are significant, but β_3 is significantly positive, indicating that both terms are necessary for a positive effect on performance.

EU funds and Corruption Index. When multiplying EU Funds with the Corruption Index, the result is positive and significant in regard to economic growth. This means, EU money is only applied effectively and efficiently if there is an absence of corruption above all in the national government or regional/local administrations. Vice versa we can state, that public money in corrupt states does not lead to economic well-being because of different reasons such as a waste of money, political patronage, lack of transparency in tendering, a lack of completion of major projects and the presence of organised criminal groups. Generally it is more likely in these cases that national/regional funds may be assigned with less transparent procedures; EU funds on the other hand are increasingly controlled in both an administrative and financial sense.

Besides corruption, other criteria of successful fund management such as the qualification of the staff in regional administrations and governments should be included in the estimation. Due to the quickly changing staff structure unfortunately data is not available at this level of detailed analysis. Nevertheless, future research in this direction would be very interesting. It is also worth noting that the effective size of a region, measured by simple km2, is positive significant for convergence and above average GDP regions. A possible explanation is that size matters in the sense of growth potentials.

4.7 Regression analyses of weak and catching up regions

After analysing the differences between "poor" below-average GDP regions and "rich" above average GDP regions, two questions of major interest are the following:

- Is there a significant difference between the factors explaining the overall economic performance and the overall economic growth of the *weak* regions and the *catching up* regions?
- What are the differences between those two regional sub-groups?

Or in other words: why are Valencia and Podlasie gaining and why are Campania and East Macedonia-Thrace losing ground?

The same analysis as for all regions described in detail above has thus also been conducted only for the group of convergence/below-average regions. The sample has therefore been split into weak regions (n=44) and catching up (n=65) regions. Altogether, 109 regions have been analysed (compared to 230 regions in the initial equation). The reduction of the regional sample leads in many cases to a lower degree of significance and some results must therefore be interpreted carefully.

4.8 Findings and Interpretations

Table 13 on the following page shows the main drivers of economic growth for weak convergence regions and difference to catching up regions.

GDP per capita. For both weak convergence and the catching up regions, the GDP level at the beginning of the period has a significant negative impact on economic growth. Altogether, the convergence effect can be seen here very clearly. Furthermore, it shows that the catching up regions are gaining more ground than the weak convergence regions, due to a higher negative value.

Regional economic disparities. For catching up regions, it is important that GDP is distributed quite equally across the country: a more equal distribution of GDP seems to foster economic growth in catching up regions. Furthermore, there is a large difference between weak convergence and catching up regions; weak convergence regions do not seem to react to regional economic imbalances within a country.

Population growth. Population growth is again (same as above) highly positive significant both, for weak convergence and catching up regions. The problem of causality remains: does population growth follow GDP growth or is it vice versa? Nevertheless, population growth is a good control variable for GDP growth and is therefore taken into account.

Share of human capital. The share of human capital in science and technology as a proxy for the regional pool of talents is very useful for catching up convergence regions in regard to economic growth. In contrast, weak convergence regions do not seem to profit from human capital in a significant way, they cannot transform regional potential.

EU funds. EU Funds can only add to economic growth in catching up regions if corruption is at a low level. In the equation, one cannot see any positive effect of EU Funds contributing to economic growth in weak convergence regions.

Table 13: Main drivers of economic growth for weak convergence regions and difference to catching up regions

Variables	weak convergence regions (n=44)	catching up regions (n=65)	Difference between the two region types	Factor category
GDP per capita 2000	-0.08***	-0.22***	-0.13**	Convergence control variable
Unequal distribution of GDP per capita 2007 among regions within a country	-0.58	-21.52***	-20.94***	Economic drivers
Population growth 2000-2007	35.68 *	89.29***	53.61	
Share of human capital in science and technology 2007	0.003	0.06**	0.062*	
Share of human capital in the primary sector 2007	-0.08	0.01	0.089	
EU funds 2000-2006	-5.35*e-10 *	-5.92*E-10	-5.67E-11	
EU funds 2000-2006 * corruption 2007	-6.94*e-11 *	5.04*E-11	-1.90E-11	EU fund allocation
R-squared	**0.41*** **	**0.54*** **		

* significant at a 10 per cent error level
** significant at a 5 per cent error level
*** significant at a 1 per cent error level

Main findings. Altogether one can assume that on the one hand there are a few economic drivers, such as a high share of human capital in science and technology, size of the region or low economic disparities, which clearly affect economic growth in catching up regions. Catching up regions seem to be able to transform their regional potential into economic success. Even if there are only few driving factors and no enablers which explain economic growth, catching up regions succeed in escaping the negative circle of causality. On the other hand, there are hardly any factors affecting economic growth in weak convergence regions which means that weak convergence regions do not react, even in the case of EU funds coupled with a low level of corruption.

Implications. The main reasons for this are that weak convergence regions cannot transform their regional potential into economic results; they seem to be stuck in a negative circle of causality, as we saw in the results of the interview analysis in chapter • . As a result, if, for example, the highly educated leave the region to search for job opportunities in a more successful region, taxation for the tertiary educated also becomes redundant. If there are no job opportunities for the highly educated, if the quality of universities is low or offer few research opportunities, if the salaries for

workers in the regional administration are low, most people with a higher educational degree and demands will leave the region.

The main finding here is that weak convergence regions are stuck in a growth trap and a circle of negative causality. There is also the risk that those regions like Podlasie with the lowest GDP per capita may initially grow faster, but as the convergence effect takes hold, gradually these growth rates slow down. But, as was the case in Valencia, there are ways out of this circle. With the help of national governments and the EU it must be possible to establish a continuous programme of investment in drivers, enablers and in factors relevant for the effective allocation of EU funds in order to escape the trap and catch up.

4.9 Summary and interpretations

On the base of the results of the econometric analysis it can be asserted that

- The findings broadly reflect and verify many insights from the former analyses
- There are several factors which *do not* differ between convergence regions and above average GDP regions, these are:
  - Unequal distribution of economic wealth (GDP);
  - Population growth;
  - Personal taxation.

The difference between convergence and above average GDP regions can mainly be found in:

- Vertical decentralisation, which is much more important in convergence regions. An explanation could be that processes are still centralised in many convergence regions, such as those in Greece and much of Eastern Europe, which leads to problems of acceptance and commitment among local administrations and citizens. The importance of regional stakeholder participation in decision-making, particularly on the allocation of EU funds, also emerged from the literature review and qualitative analysis;
- EU funds allocation in combination with corruption, which is much more important for convergence regions. The allocation of EU Funds in convergence regions is only effective and efficient when there is an absence of corruption;
- Share of human capital in science and technology, which is much more important in convergence regions. There is a high potential in attracting and keeping human capital in the convergence regions.

C. Options for policy development

1. EU relevant strategies for the regional level within national frameworks

The policy options presented below are intended to provide indications of strategies and tools that can be implemented at regional level for the policy-makers of convergence regions to improve the economic performance of their territories. The effects of the economic crisis and financial instability currently experienced by nearly all EU countries have not been considered in our analyses due to data availability, However, some general and long-term policy considerations can be given. Whilst on the one hand some specific mention will be made to options directed to the 3 Convergence stakeholder regions, attention will be paid to ensure that they are EU relevant and the appropriate transferability of the results. Furthermore, appropriate options will also be given for Valencia that can also be of interest to other catching-up regions, in particular in the light of the current economic and financial climate. Where applicable, reference will be made to the research currently in progress by other ESPON 2013 TPGs that can provide insights for policy-makers at a wider EU level. It is understood that there is no statistical data available to take into account the effect of the economic crisis and current measures adopted by national governments to curb public debt; however some reasoned considerations are made for their potential significance for the stakeholder regions in assessing and implementing policy options. The options presented have all been considered also within the general framework of the EU 2020 strategy (EUCO 13/10).

National frameworks and the implementation of fund allocation. In general, before making policy choices, it is essential that regional policy-makers and stakeholders fully understand the extent to which they can operate within national frameworks and with national administrations. This may vary considerably, and hamper the effectiveness and sustainability of policy. The political and administrative power that the regional administrations can wield in EU fund allocation has been found in the literature review and qualitative analysis to be an important factor for success. In Greece, for example, the centralised economic policy has limited the decision-making powers of local administrations, while the lack of coordination further hampers success. Conversely, EU-funded policies of national competence may lead to significant benefit for regional administrations, such as in Spain where heavy investment in infrastructure connected the more peripheral and lagging regions to the more-developed regions, fostering a balanced polycentric development. This is not merely a question of fund allocation (what to finance) but also on implementation: the case study analysed for Podlasie reveals that the success of a well-targeted policy may be undermined if it is implemented without taking the needs of the local stakeholders into consideration. Regional administrations should strive as far as possible towards fostering cooperation up-stream at national level and improving coordination down-stream to local administrations in terms of the implementation of Convergence programmes. Furthermore, it is essential to ensure that where regional administrations are assigned the political and administrative competence, they are able to manage EU funds efficiently. Through the various steps of the research, three different types of factors (economic drivers, enablers and factors relevant for a

successful cohesion policy) have been identified for a better economic performance. The analysis of these factors and their interrelations will form the basis for the policy options.

2. Preconditions for using EU funds efficiently – challenges for convergence regions

2.1 Awareness as a growth factor

The findings have brought to light several factors relevant for a successful cohesion policy that are preconditions for the improvement of economic drivers and therefore provide the key to improved economic performance for Convergence regions in general. One of the most interesting findings in terms of the regional programming of cohesion policy is that the awareness in lagging regions that the effectiveness and efficiency of EU funds allocation is more important than the amount available. Unless this awareness is guaranteed, Convergence programmes will simply not lead to the intended and planned economic performance and weak regions may lag even further behind, regardless of the amount of money available.

2.2 Efficiency more important than allocated funds

First and foremost the efficiency of the regional administration and institutional capacity in allocating funds and managing large sums is essential. It is worth noting that this factor was perceived by all survey respondents in the 3 Convergence regions and stressed in the interviews. Interestingly, the efficiency of the public administration was one of the factors contributing to Valencia's success, according to the regional stakeholders interviewed. Although to some extent this may be governed at national level, such as public pay scales, or bureaucratic frameworks, clear areas of regional competence can be identified. Firstly, regions need to attract and keep high-quality staff, provide training and allow for appropriate performance-based incentives. Internal competences need to be appreciated and exploited, allowing weaker regions to emerge from a negative circle of causality. However, given that 26 of the 27 EU countries have excessive government spending deficits, ensuring the appropriate rewards for a qualified public administration is an increasing challenge. Budgetary consolidation measures focussing on expenditure restraints, in the case of Greece, Italy and Spain, have capped or cut public salaries, blocked public sector recruitment and cut national funding to regional and local administrations. In convergence regions, attention should be directed to public administration capacity-building – the case study analysed in rural Podlasie has increased the ICT competence of civil servants, the benefits of which will bear fruit for public administration efficiency in the current programming period.

2.3 Need for stable regulatory frameworks

A further precondition that is significant for regional decision-makers is the need to provide a stable regulatory framework, ensuring public accountability and the transparency of processes. Again, national conditions often apply and may lead to overlong bureaucratic processes, yet certain phenomena relating to, say, corruption

levels or the informal economy, present specific situations that regional administrations must circumscribe in the implementation of public funds. Apart from the perceptions recorded at a qualitative level, the econometric analysis hasrevealed EU funds are only spent effectively and efficiently if there is an absence of corruption; where the corruption index is high, convergence policy will not lead to an improvement in economic performance. Increased internal controls in key risk areas, checks on public procurement procedures and on-going monitoring of the implementation of EU-funded projects should all be consolidated.

3. Benefitting from Economic drivers

3.1 Generating growth by reducing regional disparities

The findings concerning the economic drivers that can improve performance provide interesting implications for policy-makers. The econometric analysis broadly reflects the economic drivers indicated by the literature review and perceived by regional stakeholders, but may be particularly revealing in understanding the poor performance of weak convergence regions and the improved economic performance of the catching-up regions. Only drivers that can be influenced by regional policy-makers are considered here. The first principle to stress is that regional economic disparity (within a country) hinders economic growth, and this affects convergence regions in particular. Efforts should therefore be made to reinforce the convergence effect within countries as well as at EU level.

3.2 Economic growth as concomitant of population/migration policy.

The econometric analysis has retrieved economic drivers that are important for all regions. Population growth has been found to be highly positive significant for all regions in improving economic performance. The Barca Report (Regions 2020) has already indicated the risk of population decline for many less-affluent regions, characterised by relatively low levels of income, low labour force participation rates and a high proportion of the workforce employed in declining economic sectors. At the other end of the spectrum, those regions facing steady population growth will face particular challenges in terms of sustainable urban development. The trends and projection models being developed by ESPON 2013 DEMIFER on migration, fertility, and mortality will be of particular interest for Convergence regions threatened by population decline (lagging regions within DEMIFER *Challenge of Decline* and *Transitions* clusters for example) as the relationship between demography and economic growth is mutual.

3.3 Economic growth and population trends in the stakeholder regions

In terms of the 4 Stakeholder Regions, the following observations can be made in harmony with the available results from DEMIFER. The two urban agglomeration stakeholder regions both reveal positive population growth trends: Valencia has a positive natural increase and positive net migration; Campania, a younger age structure than the EU average and a high natural balance. The 2 rural regions, Podlasie and REMTH face some challenges. REMTH can be characterised as part of the *Euromediterranean* cluster, where the trend of above-average share of elderly

population should be counterbalanced by positive net migration, which may be facilitated by its geographical location: however local concerns on the low education level of the minority populations currently resident need to be addressed, as well as current unemployment rates. Podlasie, like all of Poland is classified as Transitional, and local concerns stressed the out-migration of well-qualified human resources, as well as the depopulation of the more rural areas in the region so actions should be directed to reverse these processes. The geographical location of both REMTH and Podlasie could provide an opportunity to reverse negative population trends as well, but stakeholders' perception of tensions from cultural and religious differences among minority populations need to be addressed by appropriate integration policies.

3.4 Human capital as driver in convergence regions

The econometric analysis revealed that the share of well-educated human capital, particularly in science and technology, although a driver for all regions, is particularly important for convergence regions. The qualitative analysis here revealed that for all 3 stakeholder regions benefitting from Convergence funds, qualified human resources were present, supported by local universities, but insufficiently utilised, leading to a brain drain or underemployment. Stakeholders stressed shortcomings in regional ability to exploit appropriately this human potential and the econometric analysis has supported the view that the weaker regions appear unable to benefit from available human capital. On the contrary, Valencia stakeholders noted the availability of human capital and universities, recognising that recent investment initiatives in industrial innovation and new technology institutions had been successful; further investment here was seen as a key opportunity to improve economic performance in the context of the collapse of the construction sector.

3.5 Differentiated innovation policies necessary

Clearly no "one innovation strategy fits all" can be identified, but regional politicians should prioritise choices and investments to harness this human capital potential so it becomes a driver for economic performance, in coherence with the priorities of the 2020 strategy, in particular based on the strengths and opportunities of the innovation projects funded in the preceding programme (as expressed in the case studies). Whatever innovation policy is adopted, one clear message emerges from the case-study analysis: it must be sustainable and the risk of a political sea-change minimised, best achieved by an effective cooperation with other relevant public bodies (ministries, research centres, etc) and the stimulation and involvement of local economic stakeholders.

3.6 Interdependence of key factors

One of the most important implications for policy-makers is that key factors are interdependent and, therefore, have to be addressed or improved in combination. In order to use public money efficiently, the regional civil servants have be adequately trained and high-qualified staff recruited to manage the funds. Only if the regulatory framework is stable, coherent and transparent, can a breeding ground for creativity

and willingness to perform be established and the preconditions for improved economic performance exist. In essence, there is an imperative for doing the right things **plus** doing the things right. This is in contrast to prevalent viewpoints which argue whether economic growth is about doing the right things (like what sectors to invest in) **or** doing things right (improve management). In other words, regional actors have to pay heed both to allocating funds properly and to proper implementation.

3.7 Two-pronged strategy: optimizing resources and institutional frameworks

While this finding has not gone unnoticed by others, the present study makes a very strong point for a two-pronged strategy attacking economic growth both by promoting certain economic drivers and providing efficient institutional mechanisms and controls thereof. Several points can be made:

- In the case of Convergence regions the effectiveness of fund allocation (in terms of the doing the right things in the right way) is more important than the actual amount of money available. In the current context, priority should be given to making sure that policy is well-targeted and funds are spent efficiently by civil servants, providing the appropriate conditions for the exploitation of economic drivers that already characterise the territory;
- The risk of concentration on a single sector as the engine for economic performance, is evident; however, diversification should be complementary to regional potentials – an innovation strategy, for example, could be directed to areas where there are traditional or niche skills as well as the NBIC sectors;
- Increased collaboration between all levels of public administration is necessary to make economic growth work;
- Failure to invest in major transport and infrastructure projects will impact significantly on economic performance; funds should be streamlined and could be concentrated on major projects;
- Failure to invest in available human capital will lead to a self-perpetuating brain drain and severely hamper economic growth.

4. Specific policy suggestions for stakeholder regions

The four stakeholder regions have revealed different economic growth patterns, trends, approaches and paths of success. As such, policy considerations must be also targeted accordingly, as is clearly evident from our research.

4.1 Campania – improvement of public administration efficiency and coordination of funds in key areas

Stakeholders' perceptions are that the significant potential for economic drivers (human capital, innovation clusters, geographical location (within Italy and the Mediterranean, notably economic opportunities through fostering cooperation in the basin with other S. Italian regions, the full exploitation of the port and transport hub structures), natural and cultural heritage, high-value traditional productive sectors,

urban centres, good infrastructure) has been undermined by a lack of governance, inefficiency, decline in social cohesion and civic sense and the lack of accountability and presence of organised crime. Coordinated actions at all levels of government to improve the quality of life (security and service provision first and foremost) in urban centres in Campania would help to contrast these negative aspects. Furthermore, it would be advisable to streamline funding, coordinating more closely between different European and national funds (such as FAS[27]), and integrate policies where applicable in the Southern regions to maximise benefits. The success of the Valencia model suggests the allocation of funds to large-scale infrastructural projects. In coherence with these recommendations, it is clear that policy-makers should also concentrate on improving the efficiency of the public administration and the accountability and transparency of processes, in a coordinated strategy at all levels of government. Monitoring and evaluation of allocation decisions for EU and national funds is essential. Furthermore, the potential of the well-qualified human capital in the region needs to be fully exploited as a major resource for the region.

4.2 Valencia – innovation, natural and cultural heritage

Following the collapse of construction sector and the financial crisis which is severely affecting SMEs, stakeholders' perceive potential economic drivers to be exploited are innovation and industrial potential and sustainable tourism, exploiting the natural and cultural heritage. Tourism stakeholders should be encouraged to adopt quality and environmental standards to ensure the sector remains attractive in an increasing competitive market. However, although in general public employees are seen as sufficiently qualified and efficient, there are concerns over bureaucracy and appropriate incentives in the public sector. Continued coordination in attracting additional funding and assisting the industrial sector to innovate are priorities that will also help to keep well-qualified human capital in the region. The example of the FCVRE in bringing together public and private actors in the Region and promoting Valencia in Europe has been very successfully and should be consolidated: so far, it has also shown a significant ability to attract further funding which will be necessary in this period of economic constraint if the Region is to fulfil its innovation potential. Further efforts in general in consolidating collaboration between regional government and economic stakeholders should be encouraged also in the Region itself.

4.3 REMTH – modernising public administration for better utilizing regional potentials

The major potential for growth is seen in its geographical location, the innovation potential of human capital and the variety of natural and cultural resources. The infrastructure gas and oil pipeline projects that will pass through REMTH are seen as the most important boost for the regional economy if this can provide the impetus to create an energy hub. However, the distance from the political centre, limited

[27] Italian national funds for under-developed areas.

decentralisation and lack of efficiency may hinder their efficient exploitation. The economic structure shows little sign of innovation and remains predominately rural. In this context, the new administrative reforms in Greece will provide an ideal opportunity to ensure regional government is closer to citizens, respects local needs and potential and provides the key pre-conditions of governance and accountability. A new focus towards sustainable and green development in the outlying regions in Greece, coupled with enhancing accessibility particularly for marginalised groups of citizens, the provision of better, more competitive services and a permanent fight against corruption should be adopted regional level. However, necessary capital investments may be hampered by budget constraints; for example, any delay in completion of much-needed highway infrastructure would mean the region might not benefit fully from its cross-border location. There is a real risk of the out-migration of qualified human capital during this period of fiscal constraint; policies should also address the low level of economic innovation by providing sustained and sustainable and coordinated support. Finally, better collaboration between policy-makers and socio-economic stakeholders should be fostered to ensure transferability and sustainability of EU-funded policies.

4.4 Podlasie – improvements in the economic structure

Development opportunities for Podlasie should concentrate on reinforcing the economic drivers of the region (accessibility, improving human capital, quality of life) and modernising the public sector (mindset and practices) in order to ensure that in the future these economic drivers will lead to a significant improvement in economic performance. The threat of delays to the airport construction and fast train to the capital may significantly affect its economic performance and generally the road and rail network need to be improved if the region is to achieve its development potential. Significant improvements need to made in the economic structure as the region is still characterised a lack of business investment and over-dependence on agriculture, while the informal economy is strong. Appropriate allocation of funds and capital investment are key issues in the region. A two-level approach is therefore needed: on the one hand, policy needs to be well-targeted towards improving human capital, guaranteeing accessibility, connectivity and exploiting the natural resources to diversify the economic structure; on the other, the capability and efficiency of public administration needs to be seriously addressed, providing training, modernisation in practices and appropriate incentives. Particular concerns were voiced on the need to reinforce the knowledge economy through investment in education and establishing technology transfer institutes (businesses, universities and administrations). Despite achieving above-average growth in the period analysed, the region still lags significantly behind much of Poland and there is a real risk that growth will slow down unless funds are well-allocated, bearing in mind local needs rather than a centralised approach, and spent efficiently.

D. Key analysis, diagnosis, findings and the most relevant indicators

The results from the previous parts have been brought together into one coherent view to answer the following questions:

- Is there a difference concerning factors of economic prosperity between above average GDP regions and convergence regions?
- Is there a difference between weak and catching up convergence regions?
- Are there factors important for an efficient allocation of resources in convergence regions and do they serve as a precondition for other factors within an economic system?
- Can the hypotheses developed on the base of the literature be confirmed?
- How can the results of the literature review, the qualitative analyses and the quantitative analyses be put into a larger context and transferred to a wider EU audience?

1. Methodology - Identification of factors relevant for convergence region economies

As a starting point to answer these questions, the literature in the thematic field of regional economic development has been reviewed in order to collect factors, which are not only relevant for all European regions, but especially for Convergence regions' economies. The possible relevant factors have been collected, described and classified according to the following categories:

- firstly, economic drivers, which exert a direct positive influence on economic development and which can be seen as the motor of regional development,
- secondly, economic enablers, which can both interfere economic growth processes and act as engine of regional economic growth,
- thirdly, factors relevant for an efficient allocation of resources which can be seen as fuel for the engine of regional economic growth, especially for convergence regions.

All categories may be necessary to start the process of economically "catching up" in convergence regions' economies and to keep it sustainable.

The hypotheses, which were formulated at the beginning of the analysis, assumed that factors and processes differ between convergence regions and richer regions (with a GDP above the EU average) and second between catching up and weak convergence regions in order to identify what makes the difference of long lasting economic success. Third, it is expected that factors important for an efficient allocation of resources (such as EU funds) are a precondition for other factors and for the overall economic prosperity of convergence regions.

Consequently, the aim of the quantitative and qualitative analyses was to identify shortcomings within the regional economic systems of convergence regions. To reach this aim and to confirm or deny the hypotheses, different aspects have been investigated in different steps of the analysis (for a detailed overview of the single research steps see graph 1 in section 0):

- General **identification of factors** relevant for convergence regions' economies (as a verification of the literature review) (quantitative analysis: regional survey);
- Analysis of **differences** between above average GDP regions and both kinds of convergence regions, weak and catching up (qualitative analyses: interviews, case studies, quantitative analysis: regional survey, econometrics);
- Investigating the **processes and mechanisms** within convergence regions, evaluating dependences and interrelations between different factors (qualitative analyses: interviews, case studies);
- **Verifying** differences, dependences and interrelations in regard to factors for economic success in convergence regions (quantitative analysis: econometrics).

2. Identification of factors relevant for convergence region economies

In weak convergence regions, the following factors have been judged very important by regional actors (politicians, scientists, opinion leaders and the business community) in the regional survey:

- **allocation of EU funds**, including well-targeted fund allocation to specific objectives and efficient spending is seen as the most important factor (rank 1 of 12). Doing the right things (effectiveness) and doing the things right (efficiency) with the EU money seems therefore to be of utmost importance. This outcome indicates on shortcomings in the efficiency of fund management and maybe of the overall allocation of resources and means.

In order to reach this efficiency

- **an excellent coordination of regional and EU policies as well as**
- **high regional structural fund competencies**

seem to be required and are assessed as very important in the survey (see 2.4 Interpretations (lessons learnt).

Doing the right things (effectiveness) and doing things right (efficiency) with the EU money seems to be of utmost importance in weak convergence regions which indicates possible shortcomings in the efficiency of fund management and maybe of the overall allocation of resources and means. This assumption is also supported by the rating of the factor "governance/admin", which reflects the skills and capability of civil servants and which is also of a higher importance in Convergence regions. Additionally, an excellent coordination of different levels of government (regional, national, EU) is required.

2.1 Findings from the literature

The importance of efficiency of the public workforce in regard to fund management is clearly reflected in the literature review. But as the literature review also shows, there are certain trade-offs between high salary levels (as incentives for highly qualified staff) and low taxation which are challenging politicians and regional officials to develop the right policy strategies and tools.

Two points are noteworthy

- **pure amount of funds** (total amount of financial means from cohesion policy) is rated much **less important in weak convergence regions** (rank 7 of 12) indicating that skills of how to spend the money must precede the attainment of funds. On the contrary, in catching up regions, where these skills of fund management already exist, emphasis is made on the amount of money available.
- **innovation potentials and connectivity** are important for sustainable economic growth of all regions.

The results of the regional survey however showed that innovation potentials and connectivity are perceived as satisfactory (=less important) in Valencia and less satisfactory (=more important) in weak convergence regions. Other factors which depend to a large extent on national laws and constitutions as taxation and decentralisation are ranked equally in the two region types. In addition to the findings from the survey of regional stakeholders, further factors which hinder economic growth could be recognised (e.g. geographic isolation, underdeveloped transport infrastructure, organised crime) for the weak convergence regions in the survey, whereas only a few factors which stimulate economic growth could be retrieved (e.g. quality of life, innovation potential). In contrast, many factors foster economic growth in the catching up region Valencia, and only a few hinder economic growth.

2.2 Findings from in depth interviews

These showed that the **preconditions for economic drivers are quite similar in all convergence regions**, in terms of the presence of opportunities: factors which helped Valencia to catch up economically concern firstly economic drivers like the economic structure (investment in the construction sector), innovation potential and quality of life. But the weak convergence regions (Campania in particular) also invested in their innovation system and are equipped with potential for a high quality of life. This finding clearly reflects the outcome of the literature review in the sense that factors conceptualised as economic drivers are indeed most important for the overall economic growth of all regions. The interview analysis made clear that the difference in economic growth is seen most of all in the

- **different exploitation** (in terms of efficiency) **of regional resources** with the help of, for example, an **efficient regional administration** and
- a certain **degree of decentralisation** (decisions taken are closer to the local stakeholders).

When interlinking the different interviews in Valencia, the efficiency of the regional administration and other regional institutions, a functioning collaboration between different regional actors as well as a certain level of decentralisation (all factors relevant for a successful allocation of resources) have been a precondition in Valencia's economic improvement and are largely missing in all three weak convergence regions. M, the commercial exploitation of the climate and territory conditions (quality of life), the innovation potential, fostering new technologies through the creation of institutes and development of new market strategies accompanied by a high investment in R&D have led to economic prosperity.

On the other hand, the main reasons for the **failing of weak convergence regions'** economies are also factors relevant for an efficient allocation of resources such as:

- organised crime (e.g. Campania), loss of civic sense and lack of social cohesion;
- not enough exploitation of the rich natural and cultural heritage (Quality of life);
- insufficient exploitation of resources (e.g. human capital, new technologies), loss of resources (brain drain), low share of R&D investments, lack of long-time planning and strategies for the knowledge economy (Innovation potentials);
- ICT not modernised enough, lack of competence, lack of long-term planning, resulting in inefficiency and ineffectiveness (public administration);

and also in the regulatory framework (economic enablers):

- Regulation: lack of legal regulations resulting in uncoordinated investments on the one hand and on the other hand restrictive EU regulations (e.g. NATURE 2000 in Podlasie) leading to severe conflicts.

Summing up, the main difference between weak and catching up convergence regions can be found, according to the interviewees, in the **efficient exploitation of different resources** which also validates the findings of the survey of regional stakeholders. It seems that that the weak convergence regions are trapped in a negative circle of causality**,** and cannot find a way out. On the other hand it seems that Valencia has successfully left this negative circle. One could assume that it would only need one or more enabling actions, like the increase of public administration workforce salaries, coupled with investments in the innovation potentials, a stable regulatory framework and the abolishment of corruption to escape the negative circle and enter a positive helix of economic success.

2.3 Findings from the case studies

The aim of the case studies, which were conducted by the local experts in consultation with the regional stakeholders, was to illustrate regional economic processes as generated by specific strategies and investments into the knowledge economy, and to complement the literature review, the survey and the interviews. Furthermore, the case studies were intended to allow the comparison of results and provide the insights and lessons learnt to a wider EU audience. Although the initiatives to foster information and innovation society in the four regions are all quite different, some superior common **advantages and strengths** can be retrieved:

- Creation of transparency of regional (technological) know-how and creation of institutional transparency (e.g. regional administration);
- Creation of knowledge clusters on the regional level, increase of regional know-how through specific training;
- Creation of motivation to innovate and incentives to take part and profit from the programme (e.g. awakening of individual citizens/businesses towards innovative products);
- Organised knowledge exchange among different regional institutions and actors (administration, politicians, business, society) and thereby creation of synergies in administration and processes;
- Creation of concrete business plans and funding of innovative ideas;
- Increase and improvement of inter-institutional interactions;
- Establishment of institutions which can serve as technology brokers;
- Promotion of knowledge and technology transfer;
- Introduction of common standards readily available to everybody as a driving force for further initiatives;
- Access to new funding sources beyond regional OPs (as was the case from the Ministry of Internal Affairs and Administration for the functional expansion of the "gateway to Podlasie" system and on-line public service platform).

Beside those strengths and advantages, the **shortcomings and weaknesses** of the above described programmes and initiatives are the following:

- **Lack of brokers** between technological know-how and the business community;
- Lack of specific incentives resulting in low private business initiatives: altogether it was assumed that the **private sector** would become **more active and involved** in the running of e.g. EU programs by prompting the initiation, successful implementation and proper sustainability of similar projects;
- Lack of **public and private funding** threatens the sustainability of such programmes;
- Lack of **education** and appropriate consciousness (first and foremost in the public administration);
- There is a fine line in choosing the **right level of decentralization** for the implementation of a specific (EU financed) initiative;
- **Non-creation of permanent structures**.

In short, we can see that there are some differences in the Valencian approach compared to the other three regions:

- Valencia was able to attract a huge amount of EU funding in different socio-economic fields through one organisation, the FUNDACIÓN COMUNIDAD

VALENCIANA- REGIÓN EUROPEA, which represents “one face to the EU”, where knowledge is concentrated to the benefit of all regional actors;

- On the other hand, the fact that permanent structures in the three weak regions were not created sufficiently seems to be decisive. The future of the Campania Regional Competence Centres depends for example greatly on their ability to transform into self-sustaining structures during the 2007-2013 programming period, which shall vary from case to case.

Nevertheless, the common weaknesses and future challenge of changing strategies and priorities with changes in regional government remains in all four investigated regions. Reflecting on the insights gained from the literature review, the survey and the interviews one can determine, that the operational programmes undertaken in the different regions have all addressed the better **exploitation of resources** (such as the increase/improvement of skills, creation of transparency etc.) within the region in different fields (innovation, ICT etc.). Improvements have been made with regard to regional processes in the field of innovation, as evidenced by the case studies, which do not directly and immediately result in economic growth, but provide the appropriate conditions. Although there are some improvements that are already directly visible, the future will show the real impact of those programmes.

2.4 Findings from the econometric analysis

The complementary econometric analysis was carried out to verify the results from the foregoing analyses for the different region types in a wider EU context. Therefore, 230 European regions have been incorporated in the analysis with the aim of an overall verification and a certain transferability of the results. To reach this aim, a simplification was made in regard to the output measure of regional success: GDP growth was used to test different factors with respect to their importance and explanatory power in regard to regional economic success. Therefore, the findings of the econometric estimations have to be treated carefully: the findings are characterised by a high degree of standardisation and are not applicable to each specific regional context but can be seen as scientific complement to the foregoing analyses. Consequently, a distinction was made between convergence regions and ’above average GDP regions’ in a first step and between weak convergence regions and catching up regions in a second step. The analyses revealed that some factors have the same impact on economic growth for convergence and above average GDP regions, such as an

- **unequal distribution of economic wealth**,
- the **primary sector employment** as indicator for the rural economic structure of regions, or
- **manpower taxation** (all having a negative impact on economic growth), as well as
- **population growth**, and

Driving factors which differ in convergence and above average GDP regions are

- **amount of EU Funds** received. The latter matters principally for above average GDP regions and not for convergence regions. It would appear (but still remains to be proved) that the money can be transformed efficiently into regional economic growth only in the "richer", above average GDP regions.
- the **share of human capital in science and technology** (which matters more for convergence regions).

When it comes to factors for a successful allocation of resources and an efficient cohesion policy,

- a high level of **decentralisation** matters most in convergence regions and not as much in above average GDP regions;
- combining EU funds amount with the **level of corruption**, the analysis showed that EU funds only add to economic growth in the absence of corruption in convergence regions.

In contrast to catching up regions, it seems that weak convergence regions, with a below average GDP per capita and a below GDP growth rate cannot transform their potentials into economic growth, they are not affected by any driving factor and they do not react. In short, we could see that **catching up regions** and above average GDP regions are more successful in turning their potentials (based on several factors) into economic growth or to enable a successful cohesion policy than **weak convergence regions**. On the other hand, weak convergence regions seem not to react to any of the factors discussed.

3. Summary of Findings

Summing up, the following insights and synthesis could be gained from the different steps of analyses:

- The factors which have been described in the literature review are important for convergence regions' economies;
- The importance of factors differs between weak and catching up convergence regions;
- The assumption of **hypotheses one**, that factors relevant for regional economic success (economic drivers) differ for all convergence regions and "wealthy regions", should be adjusted: factors differ most between weak convergence regions and the two other regional sub-groups (catching up regions and above average GDP regions);
- **Hypotheses two**, that factors relevant for regional economic success (economic drivers and economic enablers) differ for weak convergence regions with low growth rates and catching up regions with higher growth rates can be fully approved;

- Based on **hypothesis three** it can be stated that those factors, important for an efficient allocation of resources are a precondition for other factors (e.g. economic drivers) and for the overall economic prosperity of convergence regions. To validate this finding, further research and especially further indicators for an efficient allocation of resources is needed.

Altogether, a clear convergence effect among European regions has been shown: less successful regions in terms of GDP per capita are growing faster (on average) than more successful regions. But whether this can be attributed to convergence policy has to be questioned critically. Today, it is clear that the observed stronger growth in many Mediterranean and some Eastern European countries[28] was not based on a solid foundation, but on unsustainable real estate bubbles. Correspondingly, these countries will now suffer more. As one example, the statistical data available for Valencia does not cover the period of crisis; however, interviewees did see the need for identifying new sectors for investment and problems in finding financial resources. However, even the interviews could not take into consideration the most recent threats to European financial stability nor the potential effects of very recent stringent budget consolidation measures. Clearly, the scientific findings cannot take into account the effects of this crisis given the lack of data. However, some considerations have been made in the options for policy development, which regard the four stakeholder regions but of course will have broader implications.

[28] Poland is a notable exception as it has not gone into recession and property prices have remained constant.

E. Issues for further analytical work and research, data gaps to overcome

Two areas of interest for further research have emerged from this Targeted Analysis. These are:

- Issues of generating economic growth through strengthening institutional efficiency and
- Issues of successful cohesion policy, as outlined next.

1 Institutional efficiency

The econometric analysis in the Report concentrates on the economic driving and enabling factors and identified institutional efficiency among others as important in this regard. How institutional efficiency can be stimulated is a clear avenue of future research for European regions. There is a significant body of scientific literature based upon which institutional efficiency and value chains generated by efficient institutions can be analysed (e.g. Douglass C. North 1971, 1990 linking economic growth and the theory of institutions, also Borner, Bodmer, Kobler 2003 who turn attention on designing incentive measures for encouraging efficiency in the public sector and the institutional framework and raise other important questions in this context:

- Which **mix of incentive measures** will be most appropriate and efficient in addressing main aspects of the problem of inefficiency?
- Is **appropriate supervising** capacity available? How can it be generated?
- Do **existing institutions** correspond to the need for efficiency measures?
- What **problems of monitoring** and implementation will arise?
- Are **distributional arrangements** such as compensation measures, higher wages **necessary**? How can they be designed to help reduce the problem? How could their effect be measured?
- What review and monitoring **mechanisms of efficiency are already in place**?

How institutional efficiency changes can be measured is certainly also relevant for European regions or the regions analysed by our study. For models of how this can be achieved see, for example, Pinheiro Chousa et al. 2005.

2 Quality of Life

As pointed out by Green et al. 2005, the **growth of a regional economy** is not only related to marketable endowments of land, labour and capital, but also **based on non-market attributes** That concept is not entirely new (capitalization theories Roback 1982, 1988) and others (Graves 1979) who hold that levels of local unemployment broadly relate to local quality of life and the role of amenities. The quality of life is associated with economic growth, but also with uneven regional development. Natural amenity-based development is an important determinant in population, employment and income growth. For European regions and certainly those studied by us, the following questions are important:

- **how do amenities** (education, R&D environments, natural amenities, tax and policy incentives) relate to and promote regional economic growth;
- **what specific amenity-based strategies** are more promising than others in generating regional economic growth;
- **what level of amenities** is necessary for maintaining status quo of growth, what level is appropriate to generate positive income growth in a region, what level induces catching up, converging growth or growth beyond the average?

In terms of methodically addressing these issues Green et al. 2005 turn attention to the way, quality of life, respectively specific amenity and quality of life characteristics can be captured. Wei-Bin Zhang 2005 also relates economic growth to inequality, unemployment, education, research, knowledge creation and utilization. Such conceptual and methodical groundwork allows also for European regions to address the additional issue:

- How do quality of life characteristics/local characteristics influence regional economic growth?

3. Issues of successful cohesion policy

Our research has focused on the economic drivers and enablers and to a lesser extent on factors relevant for a successful cohesion policy (in the main due to data availability problems). The main objective of cohesion policy is to diminish the gap between different regions, more precisely between less-favoured regions and affluent ones. In this context, it would be very interesting for example to investigate **for convergence regions**

- if and how a certain level of education and training within the regional administration changes the efficiency of processes and the regional economic growth patterns and differential regional development,
- if and how different organisational patterns of public administration may affect speed and sustainability of closing the regional development gaps,
- how an altered level of decentralisation in different policy fields changes processes of closing regional differentials, and
- how long-term and sustainably established programmes and frameworks (without significant changes owing to new government or administration) could transform regional potentials in convergence regions into economic growth and well-being and how this could alter differential regional development.

Effects of the economic crisis. As has been mentioned in the Report, it has not been possible to incorporate any data on the effects of the economic crisis on Convergence economies. Any future analysis on the convergence effect of EU cohesion policy should also consider its impact on the weak convergence regions, “catching-up” regions and “losing ground” regions. Given the Council’s current concern on budgetary policy, evolution of public debt and overall sustainability, it would be interesting to analyse data on regional public debt levels and regional sustainability.

APPENDIX I: Scientific Report

1 Complete Literature Review with References

1.1 Competitiveness and catching up processes as research topics

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. In the current period 2007-2013, cohesion policy will benefit from 35.7% of the total EU budget or 347.41 billion euros (current prices). Over 81 per cent is thereby spent for the objective of "Convergence", followed by the objective "Regional Competitiveness and Employment" (circa 16%) and European Territorial cooperation (2.5%). Most of the "Convergence" money 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”. Indeed, studies evaluating regional policies so far have shown mixed and contradictory resuts. A very recent study assessing the impact of EU Regional Policy in the EU 15 Objective 1 regions, using regression discontinuity design, has shown a positive if moderate cohesion effect on regional economic growth (Busillo 2010). 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 qualitative and quantitative approaches are pursued.

Focus on convergence regions. 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)[29]. 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) , 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[30] 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.

1.2 Determinants of success of convergence regions – economic drivers

Altogether, three different kinds of factors, relevant for the economic success of convergence regions, can be retrieved. Some of these factors can be influenced by companies, politicians and decision makers of a region or country while others can scarcely be influenced at all. The first category comprises potential **factors which are important for the overall economic growth of a region.** Examples of potential factors which can be influenced by regional actors are accessibility or public R&D expenditures. Factors which can scarcely be influenced but have also a direct economic impact are for example actual circumstances (like the actual level of productivity) resulting from decisions taken in the past (path dependency) or objective quality of life aspects like a beautiful landscape and good weather conditions. Nevertheless, all these factors can be seen as so called **"drivers"** or driving factors of the economy. The second category comprises **factors which do not have a direct impact on the regional economic performance but an indirect effect** through for example changes in the institutional framework of a country or Europe. Examples for such regulatory variables are the taxation of manpower and companies or the regulation of markets and labour markets. Those factors can be seen as efficiency indicators in the sense of to which extent a region is able to use its potentials under the given circumstances. These **"enablers"** also have among others a direct influence on a successful cohesion policy and the efficiency of fund investments. The third category contains factors, which can be seen as **precondition for a successful cohesion policy** and an effective management of financial means on the regional level, including EU funds. Examples of these factors are the efficiency of regional administration, the level of decentralisation within a country or its political stability (including low corruption). Next, a short overview of the results of the literature review is presented. In chapter 0, potential factors relevant for overall economic growth are described. In chapter 0, an overview of factors relevant for the efficient use and

[29] See European Commission: Regional Policy Info. (http://ec.europa.eu/regional_policy/funds/feder/index_en.htm 4.8.2009)
[30] European Spatial Planning Observation Network

exploitation of different potential factors is given. Chapter 0 introduces factors relevant for the efficient allocation of financial means (including EU funds).

Economic drivers. This subchapter provides a short overview of the most important factors and variables which have a direct positive impact for the overall regional economic growth found in the literature. On the one hand, we have so called "**drivers" of the overall economic growth** which can be influenced by regional or national politicians and on the other hand, we have driving factors which cannot be influenced on a regional or any other policy level. Next, a rough distinction is made between factors **which are politically modifiable,** most often on a regional policy level, and those which are not. The categorisation should give an overview of the factors most often mentioned in the literature but is not conclusive. Policy relevant driving factors are, for example:

Knowledge and innovation systems. "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 has 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 the 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[31] 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 levels 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).

Due to the fact that **innovation and knowledge creation** are **not directly quantifiable** and hence measurable, 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[32]) 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.

[31] 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)

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

By contrast, cohesion policy aims to reduce regional socio-economic disparities. Thus one can assume that there exists some kind of inverse relationship between fostering innovation through innovation policy (one of the main aims of the European Union[33]) 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 than in the rest of the 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 secure innovation spillovers[34] 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).

Even population distribution 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, first, younger

[33] "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).

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

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[35]). 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
- 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[36]. These are birth rates, employment levels, productivity growth, migration and the sustainability of public finances. In Italy in general 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).

Economic restructuring and job creation. 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

[35] 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

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

remain and the pattern of catching-up differs between convergence and transition[37] 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 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).

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 Podlasie 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, 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

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

[37] 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.

- 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 Podlasie, 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 circumstances affect the region which is surrounded by a mountainous national border. Like Podlasie, 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[38] 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

[38] 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

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). 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.

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"[39]. The disparities within the European Union are among others reduced by financial flows (Structural Funds[40]) 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

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

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 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[41]). 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 Podlasie 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).

Quality of life and environmental aspects. European policy and legislation sets the framework condition for territorial and economic development. Nevertheless, the

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

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 towards 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.

1.3 Factors relevant for the efficient exploitation of regional potentials

In a second step, factors constituting the economic and legal environment are of major interest in regard to efficiency considerations. Examples for such enabling factors are for example:

- the effective taxation of companies
- the effective taxation of and highly qualified employees

Taxation is an important issue to regions' prospects for growth, which is defined to a large extent on the national level but, depending on the national setting, there are possibilities for regions to increase or decrease the tax burden, in many countries at least to some extent, in a few countries to a large extent (e.g. Switzerland, USA). In general, highly educated or qualified workers and companies search for places with a relatively low tax burden.

- the regulation of labour markets
- the regulation of product markets

Regulations work through many channels of an economic system, and the relationship between regulation and economic growth is very complex. The two dimensions of regulation reflect the extent to which policy settings promote or inhibit competition in the areas of production and labour markets.

1.4 Factors relevant for the efficient allocation of EU Funds

Beside this dichotomy between drivers and enablers of the overall economic growth, we can assume a higher impact of some factors for the efficient allocation of EU Funds than for others. When discussing the factors in the following, we must always bear in mind that the regional and the national policy and administrative level are highly interwoven. Examples are the national and the regional innovation system (Doloreux & Parto 2004): in most countries, the state is responsible for the general education system, whereas the regions (e.g. Bundesländer, Kantone) are responsible for the quality of their universities and their innovation strategy. Furthermore, the regions are dependent for many issues on the financial flows coming from the national government. Thus, no clear single responsibility can be defined. From the literature review, we can retrieve several factors that are most relevant for the successful assignment of EU funds on a regional scale.

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 administrative capacity is one of the main factors of underdevelopment (Horvat 2005).The following section sketches the administrative and governance factors that may influence regional processes. National borders adjoining the regions of, for example, Podlasie 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 **Podlasie,** it is noteworthy that the serious social and economic situation and the connected lack of endogenous capital prevent the establishment of transboundary relationships as have been 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[42]: 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 to be very centralised in that it defines substantive objectives and leaves 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 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

[42] 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)

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. Horvat (2005) too 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.

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 power and others have less 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 what the economic success of a region would look like if powers and responsibilities had 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.

1.5 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 A 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.

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.

Table A: 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)

Hypotheses retrieved from the literature review. The hypotheses retrieved from the literature review indicate the direction of influence of relevant factors on the economic growth of a regional economy. Table B shows all relevant factors, their category as described above (drivers, enablers and factors relevant for the efficient allocation of EU-Funds) and the direction of their expected influence. The non-policy relevant factors will be excluded in the further research.

Table B: Relevant factors of economic growth and their direction of influence

No.	factors of influence	direction of influence	factor category
1	knowledge and innovation potentials	+	economic drivers
2	accessibility	+	
3	connectivity	+	
4	quality of life	+	
5	economic structure (for example high share of service sector)	+	
6	regional financial means (EU funds)	+	
7	Population structure/growth	+	
8	Company taxation	-	economic enablers
9	Taxation for highly qualified persons	-	
10	Regulation of labour markets	-	
11	Regulation of product markets	-	
12	Efficiency of regional administration	+	EU funds allocation
13	Level of decentralisation (regional autonomy)	+	
14	Political loyalty and stability (e.g. low level of corruption)	+	

2 Perspectives on regional economic growth

2.1 In depth Interviews in the Stakeholder Regions

Guidelines for the interviewers.

General Guidelines were provided for all the local experts carrying out the in depth interviews to ensure not only clear and sufficient responses but that the same techniques were used in the different stakeholder regions. The local experts attended a meeting in Naples with the TPG to discuss the issues and were sent clear indications on procedures and techniques. These Guidelines are indicated below. Interviews were conducted with representatives of the following categories:

- Politicians/ Civil servants
- Business community
- University professors
- Private sector

The politicians and the decision-makers to be interviewed were identified in coordination with the Stakeholder Region, according to the agreed categories. Firstly the prospective interviewees from a long list were contacted informally to check their availability. Then, each interviewee was sent a personalised letter of invitation based on the letter below, in their own language, explaining the purpose of the interview and

the context of the ESPON Targeted Analysis project, the interview questions and the survey questionnaire a week before the due interview. Interviewees were asked to make about an hour of their time available. All interviewees were informed that, with their permission, their interviews would be recorded. All interviewers were instructed to pose only one question at a time, in succession, to engage in critical quizzing of the interviewee's replies during the interview, and to pay particular attention to the comprehensibility of the questions and terms used and the understanding of the key concepts.

The progression of the interviews.

The first phase was crucial to the success of the interview as it is essential that the interviewees understand why they are being interviewed and how the information they provide will be used.

Phase 1: Introduction

- Welcome
- Topic: what is the survey about?
- Who conducts the survey for whom?
- What is the purpose and aim of the research?
- Benefit of the project?
- What happens to the data?
- Results will be made accessible
- What is expected of the interviewees.
- Duration of the interview.
- Express appreciation for the collaboration.
- Address for queries (E-Mail).
- Explain the recording device. Ask if the interviewee agrees to a record.

Phase 2: Opening of the interview (1. General questions)

- The first two questions (1.1 and 1.2) are methodologically intended for establishing contact and to relate the topic to the experiences of the interviewees.
- If an answer is very general or brief, develop the topic: can you elaborate? describe (what is the situation in your case?), ask for explanations (why such is the case?), Evaluate the answer (how is this in your region compared to other regions?)
- Avoid suggestive questions (I suppose that…).

Phase 3: Specific questions

- The second set of questions (2.1 to 2.7) more concentrates on scientific based questions.
- The politically charged questions are asked towards the end.

Phase 4: conclusion

- Personal data
- Make a clear statement by which time the interviewees will receive results.

2.2 Interview Form

The form below was developed for the 3 Convergence Regions.

Instructions and complementary remarks are written in italics.
First, please read the following introduction to the interviewee:

Introduction

Dear Mr. /Mrs. _____

In the framework of the EU-funded ESPON project Targeted Analysis: **SUccess for convergence Regions' Economies / SURE - "Structured empirical analysis for convergence regions: identifying success factors for consolidated growth / SEARCH**" - PROJECT 2013/2/4, the University of Federico II Naples and the University of Basel have commissioned us to conduct interviews to determine potential factors that influence economic performance in the 4 regions (Campania Region - Italy, Podlasie Region - Poland, Valencia Region - Spain and the Region of East Macedonia & Thrace – Greece) that are stakeholders in the project.

The aim of this project is to seek to understand why certain current convergence regions have been able to improve economic performance and competitiveness while others have not. A key question is, therefore, what relevant success factors of your region can efficiently address the goals of Cohesion Policy to improve the implementation of the Structural Funds.

Your opinion is very important to us. We are very grateful that you devote your time to giving this interview. Please note that your statements in this interview or any parts thereof will not be published, and only used by the academic experts as an important input into the whole project as well as for the calculation of the weighting of the key factors that make up economic growth of your region.

We would like to take this opportunity of thanking you for your cooperation, also on behalf of _____, stakeholder in the Targeted Analysis.

Please indicate all information (this may eventually be needed for further queries):

Interview partner					
Name of interviewee:					
Organisation/Profession:					
Function/Position:					
Highest level of education:					
Sex:	☐ male	☐ female			
Age:	☐ <30	☐ 30-40	☐ 40-50	☐ 50-60	☐ 60+

email of interviewee:
Phone number:

1. General questions

Please read the following text as introduction (before starting with question 1.1):

Remember that this project should provide evidence and knowledge capable of clarifying factors that influence the implementation of successful and consistent cohesion policies in disadvantaged European regions. **The goal of this study is to identify the factors that ensure successful management of cohesion actions as well as the factors that help to understand the differences on general economic performance.**

1.1 In what way the **promotion of the economy** is part of your everyday work?

1.2 What aspects of your region **most appeal to its inhabitants** and to companies?

1.3 What do you consider the **principal reasons for the low GDP** per capita and lagging development of your region?

1.4 In your opinion, what are the **main strengths and opportunities in terms of** development possibilities and potentials of your region that serve to improve your region's economic performance?

1.5 What are the **main weaknesses and threats** for the sustained economic growth of your region?

1.6 What are the **most effective growth promotion practices** in your region?

1.7 What would be your **first priority action** to regenerate your region?

2. Specific questions

2.1 The way **local people and actors are exploiting local, including human potential** can be important for a region's economic development.

→How do you assess this aspect in relation to your region?

2.2

A major insight provided by a former ESPON Project on spatial scenarios[1] is that most territorial and economic goals cannot be realised without substantive **investments in non-territorial policies**. Allowing regions to upgrade their productive environment and enter into the knowledge economy involves important improvements in general education, research and innovation systems.

b)→How important do you assess the strength of the knowledge economy (with its emphasis on education, research, technological development, innovation and entrepreneurship) **in** your region? Please explain your reasons.

2.3

Since increasing the competitiveness of Europe and its regions is one of the main aims of the Lisbon Strategy **accessibility** remains important. More remote regions have to accept relatively poor accessibility and higher transport costs. On the other hand Nordic countries show that even less urbanised and less accessible areas can be prosperous.

→How do you assess **the importance of accessibility** as compared to other growth factors for your region?

2.4 It is well known that different regions or types of region play different roles in the economic development of an area or country (ESPON 2006[2]).

a) →In your opinion, **which role does your region play** in economic development of a larger territorial context (such as your country or a clearly defined large region, such as Southern Italy)?

b) →Is your regional economic strategy aligned with this role?

2.5 It is often **external factors**, like the current economic crisis, that are the main driving factors of structural changes at all levels and which have a large impact on economic development and job creation in the European regions. Thus, longer term aspects will be crucial for the upswing after the crisis.

→What are your **region's long term strengths** to facilitate a faster and more sustainable economic rebound compared to other regions?

2.6 The vertical organisation of a state and the share of power with sub-national government bodies (known as decentralisation) are often considered to be relevant for economic performance.

→Does local and regional responsibility help to spend EU and other public Funds more efficiently?

→Is decentralisation a relevant factor for economic development?

What other factors in this context would you consider important?

2.7

The administrative structure is another critical factor which influences the effectiveness and the impact of European cohesion policy. It is among the strongest criteria to be mindful when dealing with Structural Funds (European Commission 2007[3]). Regarding governance there are three questions listed below:

The **effectiveness of public administrations** working at national, regional and local levels is a crucial factor (effectiveness in the sense of well-targeted and spent funds).

a)→How do you asses this aspect in your region? Are there any factors that impede and/or might increase the effectiveness of public administration?

With respect to different **dominant administrative cultures**, there are established modalities to enable public administrations at different levels to work together.

b) →Are these modalities sufficient in your country/region?
If yes, please explain why.
If no, please explain why.

The **human capital factor** inside the different administrative levels is just what the name implies - the value of the human assets or qualifications of the collaborators.

c) →How do you assess the human capacity of the different administrative levels to manage
successfully strategic planning tools and their implementation?

d) →Do public administrations recognize/reward sufficiently the value of human capital?

2.8 We have come to the end of the interview.
→Is there anything else you feel would add to sustained economic development of your region?

The following Interview Format was developed for **Valencia,** with slight variations to reflect its position as a catching-up Region.

Instructions and complementary remarks are written in italics. *First, please read the following introduction to the interviewee:*
Introduction
Dear Mr. /Mrs. _____ In the framework of the EU-funded ESPON project Targeted Analysis: **SUccess for convergence Regions' Economies / SURE - "Structured empirical analysis for convergence regions: identifying success factors for consolidated growth / SEARCH**" - PROJECT 2013/2/4, the University of Federico II Naples and the University of Basel have commissioned us to conduct interviews to determine potential factors that influence economic performance in the 4 regions (Campania Region - Italy, Podlasie Region - Poland, Valencia

Region - Spain and the Region of East Macedonia & Thrace – Greece) that are stakeholders in the project.

The aim of this project is to seek to understand why certain current convergence regions have been able to improve economic performance and competitiveness while others have not. A key question is, therefore, what relevant success factors of your region can efficiently address the goals of Cohesion Policy to improve the implementation of the Structural Funds.

Your opinion is very important to us. We are very grateful that you devote your time to giving this interview. Please note that your statements in this interview or any parts thereof will not be published, and only used by the academic experts as an important input into the whole project as well as for the calculation of the weighting of the key factors that make up economic growth of your region.

We would like to take this opportunity of thanking you for your cooperation, also on behalf of _____, stakeholder in the Targeted Analysis.

Please indicate all information (this may eventually be needed for further queries):

Interview partner	
Name of interviewee:	
Organisation/Profession:	
Function/Position:	
Highest level of education:	
Sex:	☐ male ☐ female
Age:	☐ <30 ☐ 30-40 ☐ 40-50 ☐ 50-60 ☐ 60+
email of interviewee:	
Phone number:	

1. General questions

Please read the following text as introduction (before starting with question 1.1)

Remember that this project should provide evidence and knowledge capable of clarifying factors that influence the implementation of successful and consistent cohesion policies in disadvantaged European regions. The recent experience of Valencia is very important in understanding how these regions can be successful.

The goal of this study is to identify the factors that ensure successful management of cohesion actions as well as the factors that help to understand the differences on general economic performance.

1.1 In what way the **promotion of the economy** is part of your everyday work?

1.2 What aspects of your region **most appeal to its inhabitants** and to companies?

1.3 What do you consider the **principal reasons for the** prospering growth of your region during the last years?

1.4 In your opinion, what are the **main strengths and opportunities in terms of** development possibilities and potentials of your region that will serve to maintain and continue to improve your region's economic performance?

1.5 What are the **main weaknesses and threats** for the sustained economic growth of your region?

1.6 What are the **most effective growth promotion practices** in your region?

1.7 What would be your **first priority action** to boost even more your region?

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2. Specific questions

2.1 The way **local people and actors are exploiting local, including human potential** can be important for a region's economic development.

→How do you assess this aspect in relation to your region?

2.2 A major insight provided by a former ESPON Project on spatial scenarios[1] is that most territorial and economic goals cannot be realised without substantive **investments in non-territorial policies**. Allowing regions to upgrade their productive environment and enter into the knowledge economy involves important improvements in general education, research and innovation systems.

a) →How important do you assess the access to the knowledge economy (with its emphasis on education, research, technological development, innovation and entrepreneurship) **for** your region? Please explain your reasons.
b)→How important do you assess the strength of the knowledge economy (with its emphasis on education, research, technological development, innovation and entrepreneurship) **in** your region? Please explain your reasons.

2.3 Since increasing the competitiveness of Europe and its regions is one of the main aims of the Lisbon Strategy **accessibility** remains important. More remote regions have to accept relatively poor accessibility and higher transport costs. On the other hand Nordic countries show that even less urbanised and less accessible areas can be prosperous.

→How do you assess **the importance of accessibility** as compared to other growth factors for your region?

2.4 It is well known that different regions or types of region play different roles in the economic development of an area or country (ESPON 2006[2]).

a)→In your opinion, **which role does your region play** in economic development of a larger territorial context (such as your country or a clearly defined large region, such as Southern Italy)?

b)→Is your regional economic strategy aligned with this role?

2.5 It is often **external factors**, like the current economic crisis, that are the main driving factors of structural changes at all levels and which have a large impact on economic development and job creation in the European regions. Thus, longer term aspects will be crucial for the upswing after the crisis.

→What are your **region's long term strengths** to facilitate a faster and more sustainable economic rebound compared to other regions?

2.6 The vertical organisation of a state and the share of power with subnational government bodies (known as decentralisation) are often considered to be relevant for economic performance.

→Does local and regional responsibility help to spend EU and other public Funds more efficiently?

→Is decentralisation a relevant factor for economic development?
What other factors in this context would you consider important?

2.7 The administrative structure is another critical factor which influences the effectiveness and the impact of European cohesion policy. It is among the strongest criteria to be mindful when dealing with Structural Funds (European Commission 2007[3]). Regarding governance there are three questions listed below:

The **effectiveness of public administrations** working at national, regional and local levels is a crucial factor (effectiveness in the sense of well-targeted and spent funds).

a) →How do you asses this aspect in your region? Are there any factors that impede and/or
might increase the effectiveness of public administration?

With respect to different **dominant administrative cultures**, there are established modalities to enable public administrations at different levels to work together.

b)→Are these modalities sufficient in your country/region?
If yes, please explain why.
If no, please explain why.

The **human capital factor** inside the different administrative levels is just what the name implies - the value of the human assets or qualifications of the collaborators.

c)→How do you assess the human capacity of the different administrative levels to manage successfully strategic planning tools and their implementation?

d→Do public administrations recognize/reward sufficiently the value of human capital?

2.8 We have come to the end of the interview.
→ Is there anything else you feel would add to sustained economic development of your region?

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[1] ESPON (2006): Spatial Scenarios, Final Thematic Bases and Scenarios. ESPON Project 3.2. Report, Vol. 3, Luxembourg.

[2] ESPON (2006): Territory matters for Competitiveness and Cohesion. Facets of regional diversity and potentials in Europe. ESPON Synthesis Report III. Luxembourg.

[3] European Commission (2007): Growing Regions, growing Europe. Fourth report on economic and social cohesion. Luxembourg: Office for Official Publications of the European Communities.

Questions without references elaborated by the authors.

2.3 Results of the interviews in stakeholder regions

East Macedonia-Thrace (Greece), 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 long 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 a low level of competitiveness.
- Economic structure and policies: Concentration of development policies to agriculture and farming. Development policies should therefore concentrate on manufacturing, tourism and services. Additionally there is 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 low 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 strategic Gateway to the Balkans, South-East Europe and Black Sea.
- **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 to become South East Europe's Energy Node).
- **Policy reasons:** Tempting motives to attract investments through Development Law 3299/2004
- **Innovation potentials:** The 3rd largest higher education institution in Greece provides an excellent background for development through *knowledge*, in terms of creating *supporting institutions* (e.g. research institutes to support university activities, scientific establishments, convention tourism)
- **Quality of life:** The 3rd largest higher education institution in Greece is also taking advantage (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 a recent 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 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 *manufacture*
- **Administration and governance**: Reform of *administrative structures* (higher flexibility), *combined efforts* from public and private actors in the *development policies*, Integrated *marketing plan for tourism and trade*
- **Innovation:** Promotion of higher education and research projects, *share of human capital* but first and foremost effective and efficient *exploitation of human capital*

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 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 Project (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 still 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 have acquired 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. Divergence of opinion between the 1st group of interviewees (namely, politicians and civil servants) and the other groups. While the 1st group supports that public administration is effective and cooperation among them is sufficient, the other groups urge to say 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, manufacturing and biological agricultural products, geographical location as a cross-road

between Southeast Europe and Black Sea should be exploited (Transportation hub).

Tab. C 1 contains steps three and four of the interview analysis, where the different factors and indicators are concentrated and the relative importance[43] has been evaluated.

Tab. C 1: 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

[43] A factor has been considered as important when less than 50 per cent of the interviewees mentioned the factor to be important. Whether there were more than 50 percent of interviewees considering a factor important, it became very 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

Results of the Region of Podlasie (6 interviews), 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**: One reason for the low investment rate is the peripheral character (low degree of urbanisation) and the geographic location of the region: countries east of the border are not attractive trading partners for high value added industries. **Political stability**: The region has suffered from instability (occupation & partitions) in the past. **Accessibility:** Lack of proper infrastructure (no airport, bad road conditions, poor railroad access). Insufficient connections between cities. The energy supply infrastructure is also causing huge problems.
- **Connectivity:** Numerous areas without broadband or GSM coverage, no real implementation of IT solutions (only concepts on paper exist until now).
- **Innovation:** Low quality of universities
- **Economic structure and policies**: There is a strong focus on agricultural industries in Podlasie (no prospective industry) and therefore the real size of the

GDP is difficult to measure. There is a lack of investment due to low attractiveness for economic and real estate investors (lack of Greenfield investment in the region). Furthermore, there is a high share of unregistered economic activity. There has been a misallocation of resources because Podlasie was treated as a nature reserve. Limited local public expenditures are due to the fact that there are not many employers in the area. No jobs mean no tax revenues.

- **EU & national policies:** Slow and lengthy procedures hamper access to EU funding opportunities.
- **Human capital:** Low level of educated specialists, sparse competent management and regional public officials. Most talented leave the region due to poor job opportunities and low quality of the universities.
- **People's attitude:** The traditional way of thinking and lack of motivation (to do something for a greater good) among regional elites hinders the progress of the region.

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

- **Accessibility:** A main threat lies in the delay of the completion of the airport and the fast train connection to Warsaw by 2020 instead of being finished by 2015.
- **Innovation:** Inefficient exploitation of resources for education and research; brain drain to larger cities and to other countries.
- **Regional Administration:** Lack of intercommunity coordination impairs effectiveness of allocation. This is most visible in the northern part of the region where local communities are signing decades-long agreements with wind power operators (energy plants), with notable detrimental effects on the landscape. A lack of competence in the regional government leads to the threat of missing out community funding.
- **EU & national policies:** Restrictive approach of NATURE 2000 regulations (of the European Commission and the national government) makes people weary of investment (low awareness of what may and what may not be built) accompanied by much more paper work and resulting in Eco-terrorism. Various groups and officials take the notion of environmental protection to the extreme.
- **Quality of life:** Threat for national parks of falling prey to real estate and agricultural industries.
- **Regulation:** Lack of legal regulations which translates into uncoordinated investments, e.g. spread of wind powered energy plants.
- **Economic mismanagement:** Old structures in the top management which is not innovative and open, the same people in the same places for years.
- **Population:** Depopulation of remote areas.

The main **strengths** that can improve the economic performance of the region and shift it from the Convergence Objective are the following (Q1.2 & 1.4):

- **Geographical location:** The proximity to Warsaw's huge market, which is just 180 km away from Bialystok. In the long run also the proximity to the Russian boarder could be a big advantage.
- **Quality of life:** Podlasie has a great merit as a natural reserve with pristine air, beautiful unspoilt landscapes and a friendly attitude of the people who understand its uniqueness. Podlasie is a remote area, where life goes with a slower pace. The Bialowieza primal forest is a great asset of the region. Moreover the strong traditions and the multicultural structure of society are significant assets which would be lost if they were not supported by the Structural Funds.
- **EU & national policies:** EU supported projects help to sustain local culture and promote and renovate historic sites.
- **Innovation potentials:** The main strength of the region lies in its human capital.
- **Economic aspects:** Cheap labour and locations for Greenfield investments. Furthermore, the region has a high tourism appeal (tourists coming from the rest of Poland and also from abroad). Maintaining of traditions (such as crafts, bakeries, traditional food produce) by local companies continues.

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

- **Accessibility:** With the fast train connection, commuting to Warsaw will become possible. Podlasie's population will no longer have to move there for employment. Furthermore, the airport and the appropriate local road connections e.g. to travel to Bialystok are important for foreign investments. The Via Baltica highway which is under construction at present will greatly improve access to the western part of the region and the city of Lomza.
- **Innovation:** There is a large unused potential of human capital.
- **Economic structure and policies**: Restructuring of the economy: moving from industry to services. There is great tourism potential.
- **Innovation**: Investments in high tech sectors would be important with the aim to keep the human capital in the region and to stop the brain drain to larger cities. Furthermore, there is no business centre in Bialystok, but plans for a university campus exits. A business centre which links the economy and academia would be a great opportunity for the region. Another lies in general in enhancing the human capital of the region. Contacts with the outside world are of utmost importance: study visits, trade missions, visits of Podlasies' representatives with successful regions representatives, exchange of ideas etc. to raise the visibility of the region and improve circumstances.
- **Population**: There is a threat of tensions due to communication barriers among people from different cultures and religions
- **Administration**: The region could benefit from a dedicated foreign investment promotion department within the regional government, tasked only with the

promotion of the region abroad. Additionally, raising the level of management in the regional government would result in a much better economic outcome.

- **EU & national policies**: EU structural funds; ROPs and development of Eastern Poland financed projects which are oriented on peoples and companies needs and are complementary to national projects all represent opportunities.

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

- **Economy:** The promotion and development of tourism industry is proposed. The orientation of IT projects to the needs of businesses and creation of targeted portals is another priority.
- **Accessibility:** The completion of the airport will significantly raise communication and exchange with the rest of the world. Completion of the fast train connection is a priority. Better broadband coverage in rural areas is needed.
- **Administration and governance**: Training visits abroad (to leading regions) for key decision makers and representatives of local administration together with units dependent on local government should be carried out in order to learn from the best (leading economic regions) how things should be done. Orientation on citizens needs in regional government run projects is necessary. Additionally a business specific section should be developed, where companies will benefit from functionalities for citizens and also benefit from dedicated solutions which simplify procedures between companies and administration.
- **Innovation:** Investment in education is the key priority.

Specific questions (evaluating selected factors) (questions 2.1 – 2.8)

Relevance of different factors such as the **knowledge economy**, **accessibility, decentralisation** and the **effectiveness of public administration** etc.:

- **Knowledge economy (very important):** The interviewees did not overestimate the role of the knowledge economy for Podlasie region. But almost all interviewees emphasised the importance of the knowledge economy (e.g. universities, high tech sector) for the future of the region. Almost all interviewees mentioned the need and importance of an institution (such as a Business park or a Science and Technology park) which would enable the contact between the industry, academia and administration and would help to keep the highly skilled personnel in the region. A clearly-identified threat is the brain drain of human capital, especially in rural areas. Incentives, e.g. stipends or work position at the university must be created to keep the people in all parts of the region. Furthermore interactions between companies or between companies and academia are still characterised by solo efforts: "Cooperation of industry and academia is in its infancy". Furthermore it was noted that one large university would be more effective and would have a greater prestige than three small ones.
- **Accessibility (very important):** All interviewees also expressed the need for basic infrastructure and stressed the "greatest importance" of accessibility. The

completion on time of the highway and the fast train connection are of utmost importance for the development of the region.

- **Economic structure and economic policies (very important):** All interviewees mentioned the enormous potential of the region's tourism industry.
- **Connectivity:** Connectivity is an important issue. There is a big gap between the ICT infrastructure in Bialstok (good broadband coverage) and the rural part of Podlasie. Furthermore, there is more orientation of IT projects on the needs of businesses than on citizen needs.
- **Decentralisation (important):** Opinions are divided: In the case of building a consistent ICT infrastructure, the competences should be at the regional level (because the competences are there) not at the local or national level. On the other hand it was mentioned that centrally (regional level) implemented initiatives, such as the "ePublic Offices" do not work because they were not agreed with local authorities.
- **Effectiveness of public administration** (important): Competences are varying in different areas: the competences and effectiveness of public administration in road development for example is very good, but there is no sufficient regional IT knowledge. The lack of competences on the regional scale can be explained by lower wages in the public sector than in the private sector. Additionally, public servants and politicians tend to be passive and do not initiate action. Furthermore, there is a problem of uneven reporting: the region has to report to the national government (which is often behind in development issues) but not the other way round. At present, there is a good climate for cooperation with NGOs due to the position created by the City Hall. More such initiatives are desirable.

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): Great opportunities for Podlasie as tourist destination (1); the food sector is very modern and robust (2); lingerie industry (3), forestry industry (4); crafts and traditional industries (5)

Region's long term strengths (Q2.5): The region's long term role is based on services, tourist industry and innovativeness. Tourist infrastructure (national parks) should be extended.

Tab. C 2: Summary of interview results of Podlasie and importance of factors

Factors	reasons for low GDP (problems)/weaknesses/threats	strengths/chances/opportunities	relevance for interviewees
geographical location	peripheral character, low urbanisation	proximity to Warsaw's huge market	Important
development of surrounding areas	sealing of Podlasie's boarders to Belarus (suffering of the economy afterwards); no attractive trading partners for high value added industries east of Podlasie	Bialystok may act as a gateway to the east; Podlasie was always supporting civil rights and prodemocracy movements in Belarus; workers from Belarus, Ukraine and Russia are working	Important

		in Podlasie	
political stability	instability in the past (occupation, partitions)		
Accessibility	insufficient infrastructure (weak road infrastructure, poor railroad access). Main threat is the delay of the completion of the airport and the fast train connection (possible postponement from 2015 to 2020).	chances: new & better road connections (e.g. through via Baltica highway which is under construction); construction of true international airport; fast train connection Bialystok to Warsaw	very important
Connectivity	no real implementation of IT solutions so far, no broadband or GSM coverage in many areas	chance of investment in broadband; orientation of IT projects on the needs of companies and citizens	Important
public perception	low media interest for economic affairs, insufficient promotion of regional economy	chances: presentation of regional potential, conferences and media work ("there is more than just forest in Podlasie") (outside the region); raise awareness of self realisation possibilities (inside the region)	
economic structure and economic policies	high share of agricultural industry; lack of proper business infrastructure and investment; threat of larger forest areas of falling prey to real estate and agricultural industries; limited local public expenditures, not many employers, no tax revenues, scarce Greenfield investment; many unregistered economic activities	chances: development and promotion of tourism (e.g. extension of national parks); restructuring of agricultural industry and other branches; creation of new businesses; active involvement of the chamber of commerce and branch associations; cheap labour; creation of a foreign investment promotion department within the regional government	very important
innovation potentials, knowledge economy	brain drain in larger cities or other countries; no long time strategy of universities, lack of improvement efforts of universities; attention is only paid to the Lisbon Strategy goals; no business centre; companies seldom cooperate (conservative culture)	Chances: human capital, knowledge based economy, investment in education (plans of university campus); introduction of new university courses; creation of science and technology park; networking between industry, academia and administration; innovation in general	Very important
quality of life		strong local culture; high cultural diversity; historic sites; multicultural structures; tourism appeal of the region (national park); pristine air, peace and quiet	Important
Funding		concerted efforts in utilization of funds, especially in ROP (regional operational)	Important
Decentralisation	centrally implemented initiatives (e.g. "ePublic Offices")	put emphasis on local level initiatives	Important

Public administration	lack of competence in the regional government in different areas (e.g. CT), lower wages in the public sector lead to difficulties in human capital attraction	cooperation with national government (e.g. in ICT initiatives); orientation on citizens needs	Important
Regulation	restrictive approach of NATURE 2000 regulations bearing conflicts with environmental activists (eco-terrorism); lack of legal regulations resulting in uncoordinated investments		
Population	depopulation of remote areas; communication barriers among different cultures and religions		

Results of the Campania Region (6 interviews), 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):

- **Social aspects:** Chaotic networks of knowledge, personal affection, low accumulation of cognitive capital for businesses and institutions have all been identified. The latent capital comes from a regression towards an overall loss of civil sense. Furthermore, there is a lack of social cohesion. Loss of cooperative and individual culture as societal value.
- **History:** The history of the Campania region and Naples is seen as a major reason for the low GDP.
- **Economic aspects**: The credit system, the agricultural crises (excluding agro-industry), the decline of industrial production and at the same time the acceleration of centralization and concentration processes in the trade sector; the contraction of the tourism demand are all identified as weaknesses.
- **Regional Administration**: The absence of a strategic, long term and systemic approach on local development in public government administration is notable. There is no long term planning. Additionally, there is a lack of managerial capacities among local civil servants for the programming and management of the Structural Funds. Furthermore, it is difficult and complicated for the private sector to enter the serious development programmes of the public administration.
- **Human capital:** There is no exploitation of regional human potential.

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

- **Social aspects:** The main threat is the danger of losing a sense of the Euro-Mediterranean and global identity.

- **Organised crime:** There is a high rate of organised and non-organised crime (safety) that during the present economic crisis is trying to expand and condition the legal economy. The legal economy suffers from a fiscal system that does not block the leakage of monies to criminal organisation.
- **Economic aspects:** There is competition from European regions with a similar system of supply (e.g. tourism & natural resources).

The main **strengths** that can improve the economic performance of the region and shift it from the Convergence Objective are the following (Q1.2 & 1.4):

- **Accessibility:** Most interviewees stressed the existence of excellent road and rail connections due to an improvement of the infrastructures for the overall accessibility and urban transport and the significant port development potential as a major strength of the region.
- **Quality of life:** There are exceptional natural and cultural resources.
- **Innovation potentials:** The availability of professional young persons (human capital) and the presence of Universities and Technology Transfer Institutes (Regional Competence Centres) are stressed.
- **Economic aspects:** The urban landscape and the existence of highly professional SMEs in the following sectors: rural, artisan, commercial, tourist, which require frameworks, promotion in clusters, productive chains and systems in urban areas, industrial and artisan districts have been stressed. Furthermore, the high quality agricultural products (such as wine and buffalo mozzarella), artisan products (such as gold, leather, clothing) and industrial production (transport and space industries) are notable.

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

- **Geographic location:** The region has an enviable strategic position in the centre of Italy
- **Innovation:** The potential of visible and invisible resources is enormous, the difficulties (or opportunity) lies in the creation of a network of cognitive and strategic human capital, social capital.
- **Economic policies**: These include the creation of a network with Mediterranean regions;
- **Economic aspects**: The availability of unexploited industrial and commercial areas is an opportunity. Especially the brown-field areas (east Naples: ex-refineries, west Naples: former steelworks) provide a great opportunity for businesses paradoxically in part due to the incredible delay in their development.
- **Innovation**: There is a proliferation of experience in the laboratories of change, a meeting between different disciplines and experiences to reach a critical mass of actions, whether animation or projects ("Any project must pro---ject" and push forward the future).

- **EU & national policies**: EU funds can be used to create material and immaterial infrastructure.

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

- **Fight crime**: All interviewees stressed the utmost importance to fight organised crime: one must put into effect and coordinate actions to contrast crime, entrepreneurial expansion and money movements controlled by organised crime in order to reassure citizens and protect the legal economy. The illegal building of entire city quarters irrespective of the urban planning regulations must be stopped. In areas of water and land decontamination and waste etc. organised crime has exercised a huge interception of money movements, strengthening its own power of social control in large parts of Campania.
- **Political aspects**: Almost all interviewees mentioned the importance of programmes to improve the environment (e.g. waste management, ground and water recovery), integrated policies for enterprises to improve competitiveness of city systems and productive areas, and the need to improve the quality of life of citizens
- **Economic aspects & policies:** Research and ICT for SMEs, make more sound the distribution of incentives to enterprises.
- **Social aspects:** Actions mentioned are making places and institutions more pervasive, forming spaces of creativeness, developing new identities, increase strategic governance at an appropriate scale both of institutions and enterprises, selecting the networks and nodes able to develop cognitive capital, morality and ethical improvement through action, not words.
- **Accessibility:** A priority is to increase accessibility, strengthening the logistic and infrastructural assets (providing East/West and North /South relations) in order to open Campania and southern Italy to the Mediterranean and Eastern Europe.
- **Administration and governance**: To regenerate Campania region it is necessary to change the public administration governance: a common vision on local development is needed. One could make the public administration more efficient by reducing bureaucracy and simplifying procedures.

Specific questions (evaluating selected factors) (questions 2.1 – 2.8)

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

- **Knowledge economy (very important):** Almost all interviewees mentioned the importance of the knowledge economy as a precondition for the regional development. It was posited that (until now) there was no plan to exploit human potential, education, research and innovation systems. As human capital only exists in cognitive networks, a rearrangement of project, social, economic and civil networks is necessary. Although Naples University has always been a reference point for research and innovation it is felt there are no initiatives to foster

innovation and it is difficult to break the current formality of hierarchical and paternalistic governance in e.g. universities. Organisations (e.g. enterprises, universities) must learn from the outside, what involves a revolution of traditional hierarchies of transmission of knowledge, "the linear sequence from R&D like manna from heaven is overturned". The attempt of the Centres of Competences (TTIs) seemed revolutionary at their conception but these should have broken with the hierarchical model of knowledge production. Recently due to the economic crisis a programme for the enhancement of human resources has been adopted (research grants, continuous training etc). Additionally, a funded proposal for SMEs exists (Creation of Natural Trade Centres) which aims to promote the development of urban economies. In general, research and vocational training have to be managed by the private sector in collaboration with the regional public administration.

- **Accessibility (important):** This plays a strategic role in regional development in Campania due to the SME-structure of industry. Especially the realization of the regional metro railway system, car parks and the support (vicinity of supply) of the city economy raise the quality of life.
- **Decentralisation (important):** In general decentralisation was seen as a relevant factor for economic development if local and regional responsibilities are able to spend EU and other public funds efficiently. This does not happen due to the absence of an evaluation approach for the regional government. Furthermore, there is a great division in competences in local administrations that have blocked any attempt to concentrate the economic efforts and management on specific projects. In this context it was warned that over-decentralisation can create confusion. In Southern Italy there is a need to collaborate with the national government.
- **Effectiveness of public administration (very important)**: public management in Campania is not effective and efficient, especially in regard to the spending of EU-funds. The reasons are among others the splitting up of the collective programming phases and the lack of interlocution during the implementation of actions. Furthermore, there are no established modalities to enable public administration at different levels to work together because there is no knowledge integration and evaluation based on work performance. Additionally, there is no permanent staff for local development management due to regular general/local elections which hinder regional strategic planning free from policy change. It was suggested that the current institutional organisation, which is based on clearly identifiable lobbies, needs to be made more functional.

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): Concerning the role of Campania in a larger territorial context, the opinions differ widely. Some of the interviewees stressed that Campania does not play a relevant role in Southern Italy, that Campania is no longer an engine nor a leader region compared to other Mediterranean regions

("Puglia has worked much better") and that there is no collaboration among regions or with the national government.

Others mentioned that Campania has a great role and is an important node between North and South, East and West and towards Eastern Europe. In this context the ERDF regional strategic document sees Campania as an infrastructural logistic platform for the development of Southern Italy. Furthermore, Campania has excellent industrial and artisan products.

Region's long term strengths (Q2.5): The tourist industry and the cultural resources represent an unrepeatable occasion. The aeronautical and rail sectors are also of strategic relevance for regional development. Nevertheless, some of the interviewees doubted that there are any long term strengths for regional development. For the prediction of rebound economic crises, the construction of a diffused infrastructural system aimed at the improvement of supply of citizens, quality of life and competitiveness of the productive aggregations would be important.

General remarks on sustained economic development of Campania region (Q2.8):

The state should coordinate economic choices in the Southern regions and grant financial aid. It would be desirable that funds (available at national (CIPE) or EU level) could be used together among regions, local administrations and central government. The State has to be more present in the south (security & strategic guidelines). Additionally, the city as a complex infrastructure should be investigated to design new policies for regional development, bringing back the concept of the Regions of Europe through networks. Identity and diversity must be the multiplication factor of potential resources.

Tab. C 3: Summary of interview results of Campania and importance of factors

Factors	reasons for low GDP (problems)/weaknesses/ threats	strengths/chances/ opportunities	relevance for interviewees
geographic location		enviable strategic position in the centre of Italy	Important
social aspects	overall loss of civil sense, lack of social cohesion, loss of cooperative and individual culture. Danger of losing a sense of Euro-Mediterranean and global identity.	opportunity: making places and institutions more pervasive, forming spaces of creativeness, developing new identities, increase strategic governance, develop cognitive capital	very important
political stability	organised crime that is trying to expand is a major threat	Opportunity: fight organised crime. Put into effect and coordinate actions to contrast crime	very important
History	The history as major reason for the low GDP		Important

economic aspects	credit system, agricultural crises, decline of industrial production, acceleration of centralization and concentration processes in the trade sector. Threat: Competition from European regions with a similar system of supply (tourism, natural resources).	urban landscape, existence of highly professional SMEs in different sectors (e.g. rural, artisan, tourism), High quality of agricultural products, artisan products and industrial production. Opportunities: Exploitation of industrial and commercial areas, research and ICT for SMEs	important
Economic policies		opportunities: creation of a network with Mediterranean regions; embracing large, conceptual projects announcing more openness	Important
regional administration	absence of a strategic, long term and systemic approach on local development in public government administration, no long term planning; inefficiency of spending of EU funds; no collaboration of different levels of public administration	Opportunity: change the public administration governance: a common vision on local development is needed; Reduction of bureaucracy.	very important
accessibility		existence of excellent road and railway connections. Opportunity: Increase accessibility in order to open Campania and southern Italy to the Mediterranean and Eastern Europe	Important
quality of life		natural and cultural resources represent an unrepeatable occasion	very important
innovation potentials	No plan to exploit human potential, education, research and innovation systems. Lack of initiatives of fostering innovation. Threat: current formality of hierarchical and paternalistic governance (e.g. in universities)	enormous resources, e.g. availability of professional young people, presence of Universities & Technology Transfer Institutes. Opportunity: proliferation of experience in the laboratories of change, meeting between different disciplines; rearrangement of different networks to foster cognitive networks which enable human capital. Open up of organisations to the outside.	very important
EU policy		Opportunity: EU funds to create material and immaterial infrastructures	Important
Political aspects	poor waste/wastewater management	Opportunity: evolve programs to improve the environment (waste management, ground and water recovery)-> improve the quality of life of citizens	very important
decentralisation	Absence of an evaluation approach for the regional government inefficient spending of EU funds. Great division of competences blocks economic efforts and concentration on specific projects.Overdecentralisatio can create confusion.	Opportunity: collaboration of Southern Italy with the national government	Important

Results of the Region of Valencia (4 interviews), general questions (searching for factors) (Questions 1.1 – 1.7)

The principal reasons for the prospering **growth** of the region are, according to the interviewees, the following (Q1.2, Q1.3):

- **Quality of life:** The privileged weather and territory conditions are cited.
- **Economic aspects**: Almost all interviewees saw the main reason for the economic prosperity of Valencia in the property sector (and the service sector) because everybody invested in construction and in doing so allowed the overall economy to grow. But now the property bubble has collapsed and new opportunities must be found, e.g. in the service sector. Additionally, the tourism industry, a consequence of the good weather and territory conditions, is booming. Many European residents have chosen Valencia as a second residence, especially when they retire. The industrial sector has also been improved during the last 5-8 years by using new technologies.
- **Regional Administration**: The effort of all the institutions and public administration working together and in cooperation with private companies on the R&D of different aspects, e.g. technologies, enhancement of exterior relations, consortiums and conventions for tourism etc is cited.

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

- **Economic aspects:** Most interviewees saw the major difficulty of the region in finding financial resources. Banks do not offer enough financial means, especially for SMEs which are dependent on financial liquidity. As SMEs do not have access to credit, they may fail, leading to unemployment, and the economy starts to suffer. Furthermore, the industrial sector has no significant enhancement and exterior market strategy. Another aspect is the agricultural industry and farming sector which is split into small cooperative associations that do not unite to achieve common targets.
- **Innovation:** There is a gap between the availability of human capital (highly specialised and educated people in diverse fields) and adequate job opportunities. There is also a gap between university and private industry.

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

- **Economic aspects:** The interviewees identified the question of the availability of financing resources, which are very difficult to ensure nowadays. Many new sectors need high and strong investments but there is a high risk for investors that threatens the financing.

The main **strengths** in terms of development possibilities and potentials of the region are the following (Q1.2, Q1.3, Q1.4):

- **Accessibility:** There are good roads, good air connections, good sea port facilities and no restrictions
- **Quality of life:** the good weather and territory conditions make Valencia a privileged Mediterranean region
- **Innovation potentials:** Valencia region is starting to stress the importance of having been pioneer in new technologies and this is registered in many new technology institutes. During the last years new technological institutes have been set up with the purpose to support new segments of the market to develop more competitive products and services. The institutes will help to set up new markets and will therefore create new jobs.
- **Economic aspects:** It is a tourist destination (temporary or permanently) as a consequence of good territorial and weather conditions
- **Administration:** There is good management in tourism which should be encouraged in the future to be competitive.

The main **opportunities** in terms of development possibilities and potentials of the region are the following (Q1.4, Q1.6):

- **Innovation**: Research, development and application of new technologies**,** new market strategies and new application of communication tools are cited.
- **Economic policies**: The main opportunity lies in the sustainable exploitation of the resources water and territory. Local and regional administrations must manage these resources carefully and sustainably. Policies have to be focused on regional traditions and the business culture linked to tourism and services in order to protect the environment. Therefore, the coordination between the public and the private sector plays an important role. Furthermore, citizens have to be involved in the process.
- **Economic aspects**: Tourism and investments in new technologies are opportunities beside the property sector for Valencia. Additionally, the industrial sector needs to be improved in order to become more competitive compared to other countries.

The most effective **growth promotion practices** are (Q1.6):

The Valencia region has recently shown public and private administrations how to obtain all possible funds that are available by the European Commission. This needs first and foremost the support of the public and/or private sector and finally needs qualified professionals. This is a chain which is creating new opportunities for learning, experience and finally business opportunities. Another point is developing marketing strategies and technological applications.

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

- **Political aspects**: The promotion of the external image of the region as a strong economic operator is a priority.
- **Economic aspects & policies:** The priority is the encouragement (incentives) of the SME industries to invest in growth combined with new technologies. Here, the support of the public sector is needed to foster the industrial sector. New market segments must be opened, supported by the knowledge and information society. The technological institutes are doing a good job but need to be more supported by the public administrations. At the same time financing operations have to be reactivated. Another point is to provide the territory for tourists and foster investments focused on the tourist sector.

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

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

- **Knowledge economy (incl. human capital) (very important):** All interviewees stressed the fundamental and essential role of human capital, education, R&D of new technologies and the creation of a knowledge society for economic growth: new technologies need people who can adapt and handle it. But there is much more to do in Valencia: the education should be adapted to the current situation of the international economy. The current crisis shows that new education programmes are needed to better face economic needs. It is also important to boost the social participation in the decisions taken by the regional/local authorities, to train the civil society and to encourage everybody to be innovative. In this context, a knowledge centre creation is one of the current strategies. The public sector has to promote innovation through all technological institutes, universities etc. because it cannot be expected that the private sector invests much in innovation due to the concentration of mostly short term results. Emphasis on education, research etc. will also be crucial to afford future changes of the market and the economy and to overcome barriers ("Think global, act local!")
- **Accessibility (very important):** This is considered very important, but Valencia has no problems here compared with other factors. The region has an excellent infrastructure which helps to foster economic growth. For instance, the regional agricultural products can be placed in other European markets due to the good communications and infrastructures. The same is true for the shoe sector which has become more competitive during the last years thanks to the good accessibility. Accessibility has to be planned to be sustainable with respect for the environment.
- **Decentralisation (important):** Decentralisation is fundamental for economic success: in Valencia, decentralisation has always been present and has contributed to the economic growth in the last years. When the administration is closer to the citizens they know better their needs. As a consequence it is more appropriate that projects are more decentralised according to citizens needs. Administrations close to citizens and companies needs will spend EU or public

funds more appropriately. Nevertheless, the management of funds has to be anchored in every level of public administration and responsibilities have to be recognised. Especially the responsibility of financing has to be more decentralised.

- **Administrative cultures**: Although each administration level has its particular culture, they have a good communication channel and the priorities are well pre-defined; there is a need for better cooperation between the different levels of government and public administration, especially in regards to the financing aspect. A precondition here therefore is political will. Furthermore, there is too much bureaucracy; the processes must be speeded up.
- **Human capital inside administrations**: This aspect is fundamental to achieve good management of resources. There is a clear need to have sufficiently trained people in each level of responsibility. Although there are sufficient qualified workers in the public administration their work should be better rewarded and more training courses are recommended.
- **Effectiveness of public administration (very important)**: The management of funds and financial resources has been carried out efficiently. Several actions and projects have been implemented with great results. Examples are: improving the infrastructure and social aspects. Nevertheless, the management of funds can always be improved. For example language skills still represent a barrier in the collaboration with other regions under EU programs. There are many complications in fulfilling paperwork and project proposals, assisting in conferences and seminars etc.

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): Its physical capital like the transport infrastructure which promotes international commerce and specialisation, opens new markets and boosts the increase of productivity. The regional strategy of constantly improving services, skills, activities and organisations in order to create employment, business opportunities and attract foreign investments and people goes hand in hand with the national strategy and is fully assumed.

Region's long term strengths (Q2.5): There is a large pool of citizens with high knowledge, new technologies, new research to boost innovation; territorial and climate advantages must be promoted in order to remain a great touristic destination. Furthermore, the industrial sector is a key element that will produce sustainable economic rebound.

Tab. C 4: Summary of interview results of Valencia and importance of factors

Factors	problems/weaknesses/ threats	reasons for prospering growth/ strengths/opportunities	relevance for interviewees
political aspects		opportunity: boost social participation in decision making process of the city council; encourage innovation	Important
economic aspects	Threat: difficulty in finding financial resources especially for SMEs. Lack of exterior market and growth strategy of industry. Fragmented agricultural sector.	Main reasons for growth: property sector and investments in construction, booming tourism industry & improved industrial sector.	very important
Economic policies	Threat: non- sustainable exploitation of the resources water and territory.	Opportunities: Local and regional administrations must manage resources carefully. Exterior promotion of the Valencia region economy; Encouragement of the SME industry to invest in growth and new technologies, supported by the public administration.	very important
regional administration	Threat: reward of qualified public workers is too low. Also, more training courses would be good. threat: too much bureaucracy and slow processes that must speed up.	strength & growth reason: Common effort of all institutions and public administration in collaboration with the private sector on R&D of different aspects. Strength of efficient public administration, especially in spending funds, fostering tourism industry and new technologies. Also sufficient qualified workers in the administration.	very important
accessibility		strength: good roads, good air connections, good sea port facilities and no restrictions. Accessibility has contributed to the growth of different industries (e.g. food & shoes).	very important
quality of life	Threat: non- sustainable exploitation of water and land resources .	privileged weather and territory conditions	very important
innovation potentials	Gap between highly educated people (from the universities) and job opportunities (in the private sector)	opportunities: research, development and new technologies, fostering new technologies through the creation of institutes, development of new market strategies	very important
administrative cultures	threat: too much bureaucracy and as a consequence slow processes .	strength: good cooperation and communication. Opportunity: Need for better communication in regard to financing aspects.	Important
decentralisation		strength: Fundamental for economic success. Decentralisation was always present in Valencia.	very important

2.4 Results of the survey of regional stakeholders

Structured Questionnaire

1. For your region to be successful, which of the following aspects are important?

Please grade on a scale of 1-10. A "10" always means "Absolutely essential", "1" means "Not relevant at all". "Not aware" means that you are not able to judge.

1.1 EU funds and taxation aspects:	10 Absolutely essential	9	8	7	6	5	4	3	2	1 Not relevant at all	*Not aware/ cannot judge*
Generous financial means	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Very efficient allocation of EU funds	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Clearly defined fund allocation to specific objectives	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Excellent coordination of regional and European policies	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
High regional structural fund competences	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Easy access to credits	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Fiscal incentives and rewards	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
A low tax burden for companies	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
A low tax burden for qualified manpower	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Do you have any comments on these aspects?

_____

1.2 Economic aspects:
Low investment barriers
Attract international firms and/ or investments/joint ventures
Promote the region as a business location
Availability of attractive housing
Liberalisation of the labour market
Liberal regulation of the product market

Agricultural market
Low energy prices
Region as a popular tourism destination

Do you have any comments on these economic aspects?

_____

1.3 Education and innovation aspects:	10 Absolutely essential	9	8	7	6	5	4	3	2	1 Not relevant at all	*Not aware/ cannot judge*
Very high quality of universities	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
More linkages of firms with research and knowledge institutions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
High research investments	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Much support for innovative firms	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
High ecoinnovation (= products and processes that contribute to sustainable development)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
High human capital (Tertiary graduation rate)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
High investment in job training and job education	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
High access cover of broadband internet at private households	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Do you have any comments on these education and innovation aspects?

_____

1.4 Governance and administration aspects:	10 Absolutely essential	9	8	7	6	5	4	3	2	1 Not relevant at all	*Not aware/ cannot judge*
Clear and transparent regulations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Establish local development agency	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Established cooperation with other regions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Reduction of government deficits	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Degree of political decentralisation	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Transparency of administrative processes	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
High efficiency of the civil sector	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Do you have any comments on these governance and administration aspects?

_____

1.5 Population and social aspects:	10 Absolute decisive	9	8	7	6	5	4	3	2	1 Not decisive at all	*Not aware / cannot judge*
Balanced age structure of population	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
High immigration rate	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Reduction of unemployment	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Very little social disparities	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Very good health-care system	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Promote cultural life and traditions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Do you have any comments on these population and social aspects?

_____

1.6 Accessibility and infrastructure aspects:	10 Absolutely decisive	9	8	7	6	5	4	3	2	1 Not relevant at all	*Not aware/ cannot judge*
Excellent accessibility of the European economic centres	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Very good highway and road connections	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Extend rail connections	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Extend the capacity of regional airport(s)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Many business flight connections	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Upgrade water and energy supply	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Very good mobile phone connections	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Do you have any comments on these accessibility and infrastructure aspects?

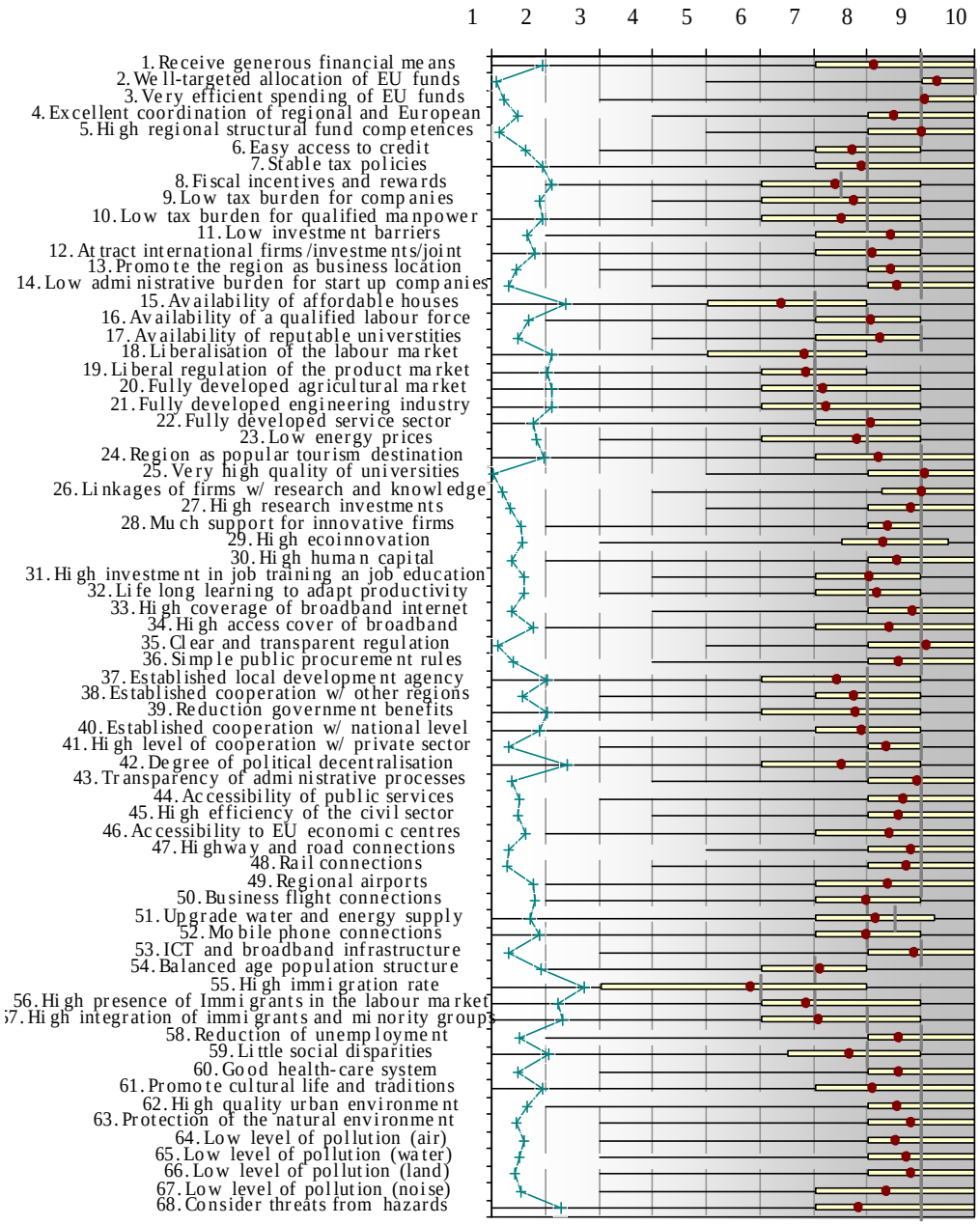
_____

1.7 Quality of life and environmental aspects:	10 Absolutely decisive	9	8	7	6	5	4	3	2	1 Not relevant at all	*Not aware/ cannot judge*
High quality of urban environment (e.g. clean streets, green space)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Protection of the natural environment	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Very low levels of pollution	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Consider threats from hazards (e.g. earthquakes, forest fires, drought)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

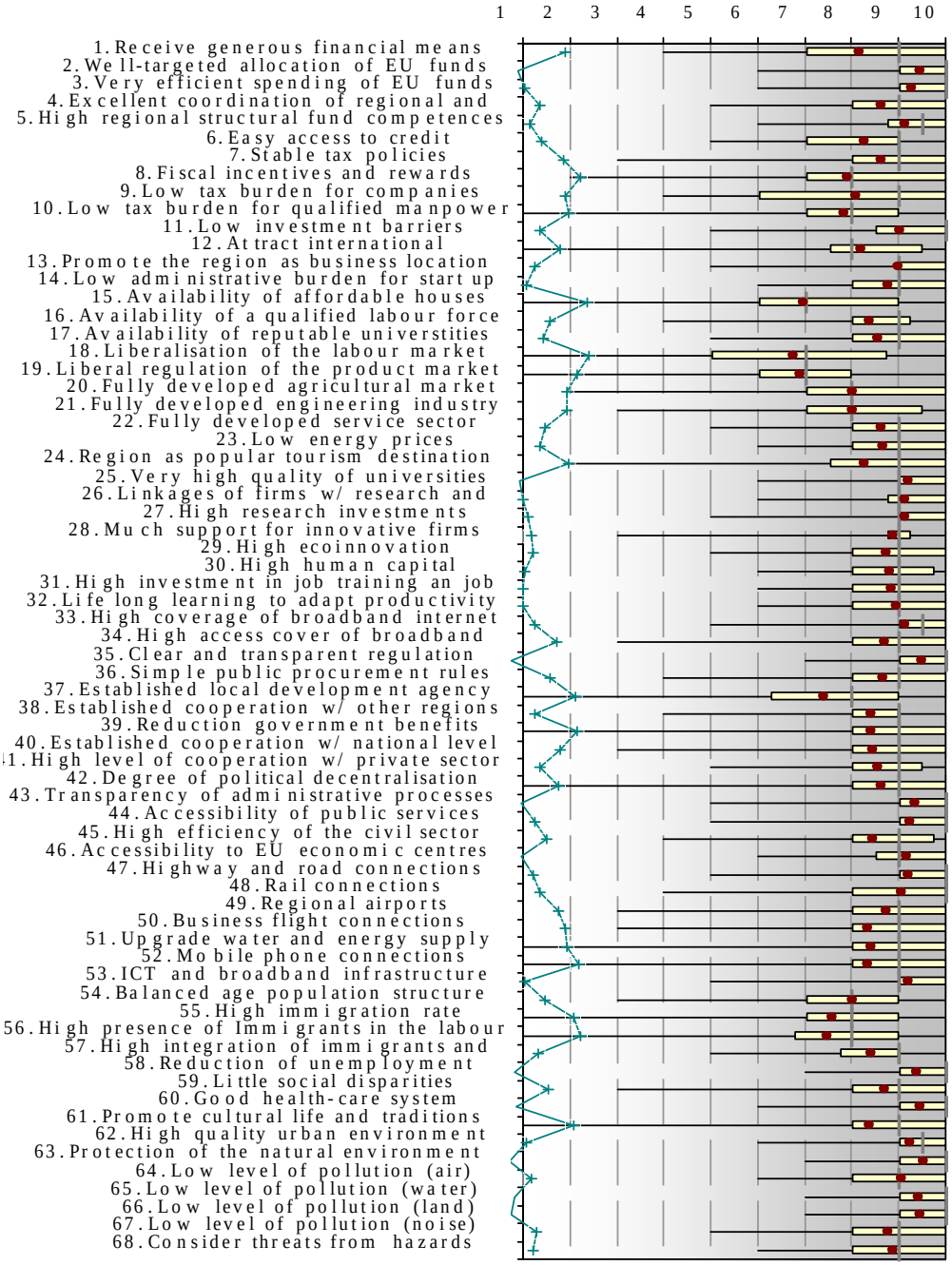
Do you have any comments on these quality of life and environmental aspects?

Results of the structured questionnaires

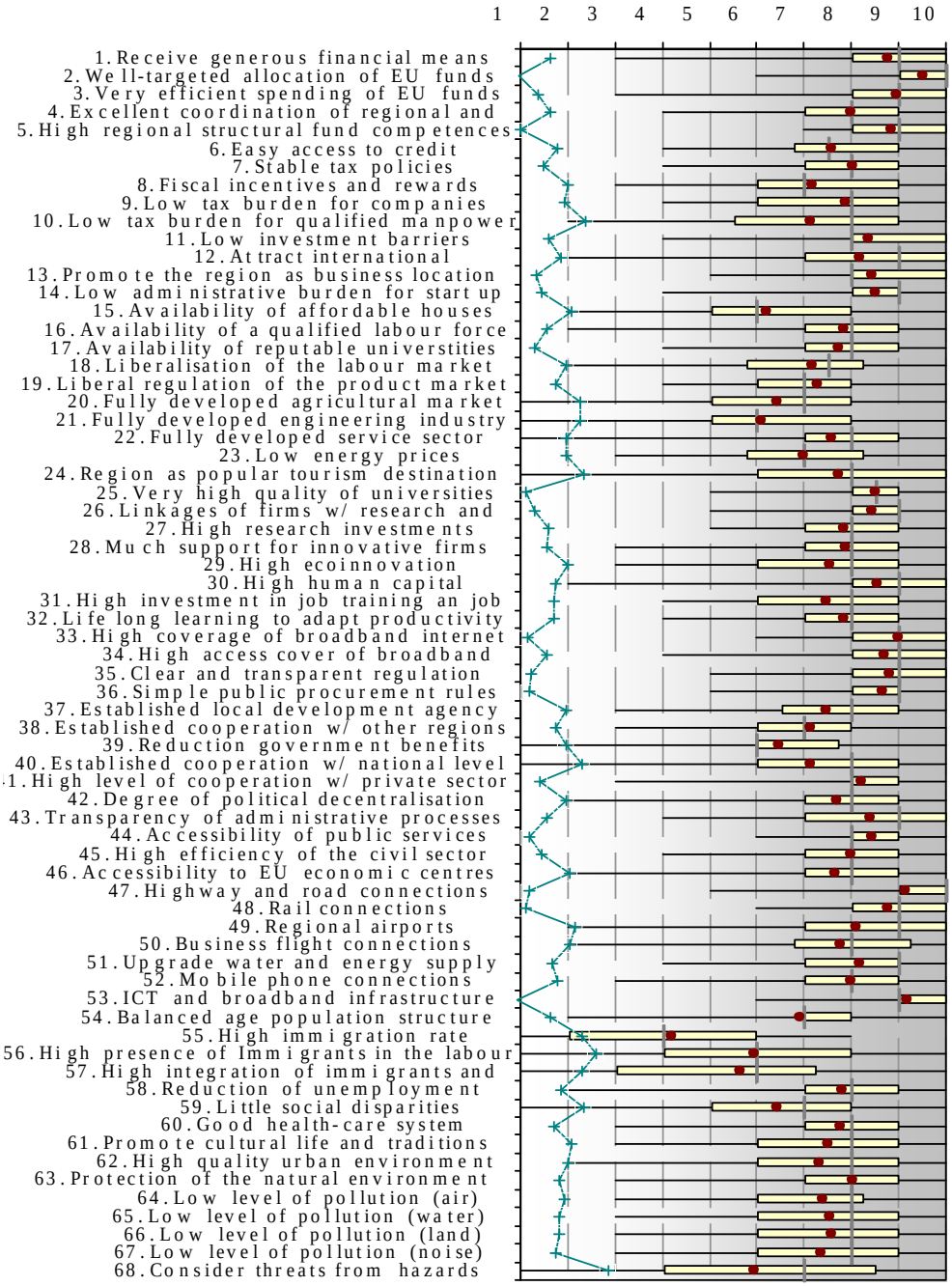
Graph A1: All questions, convergence regions



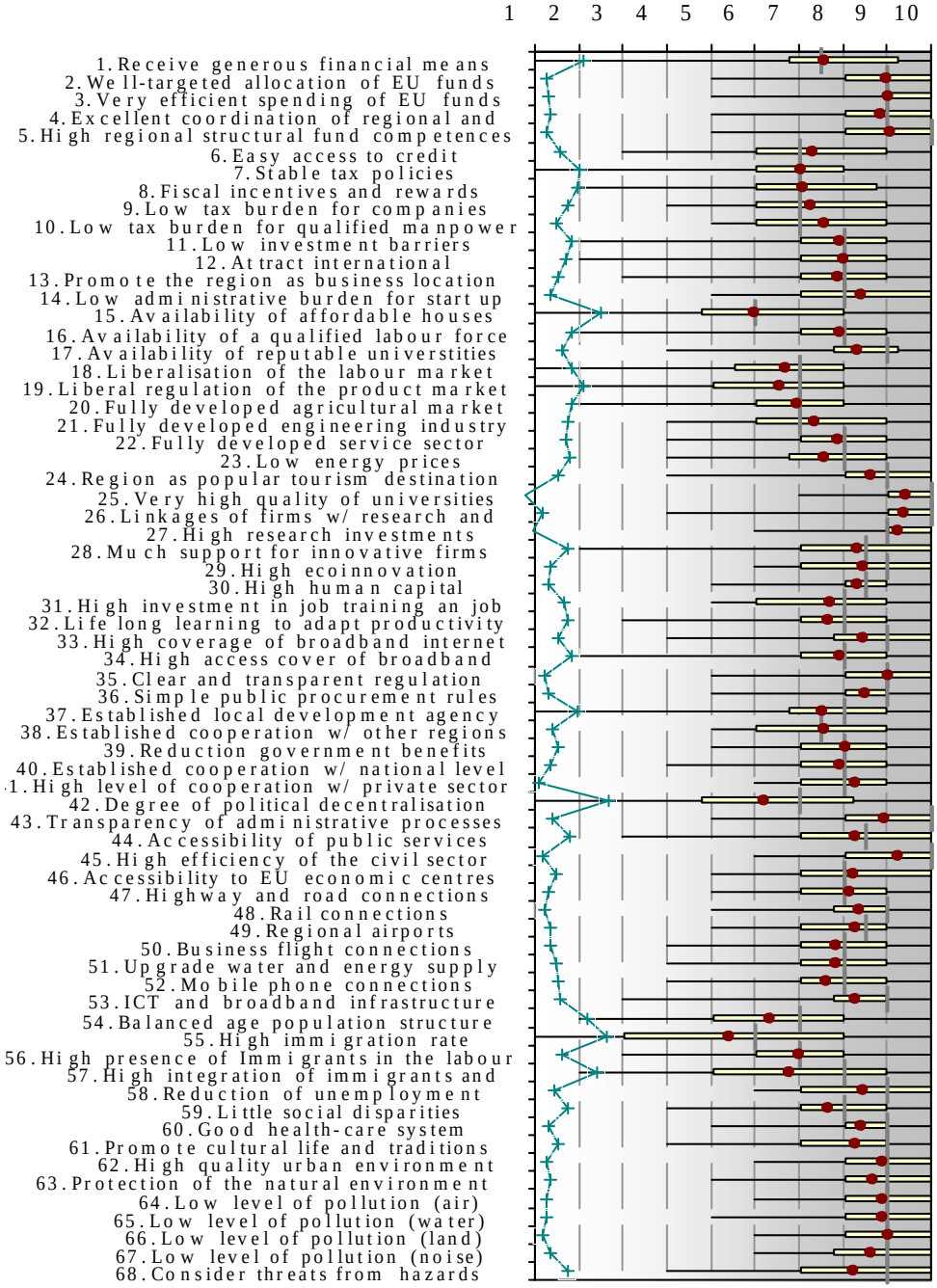
Graph A2: All questions, East Macedonia Thrace



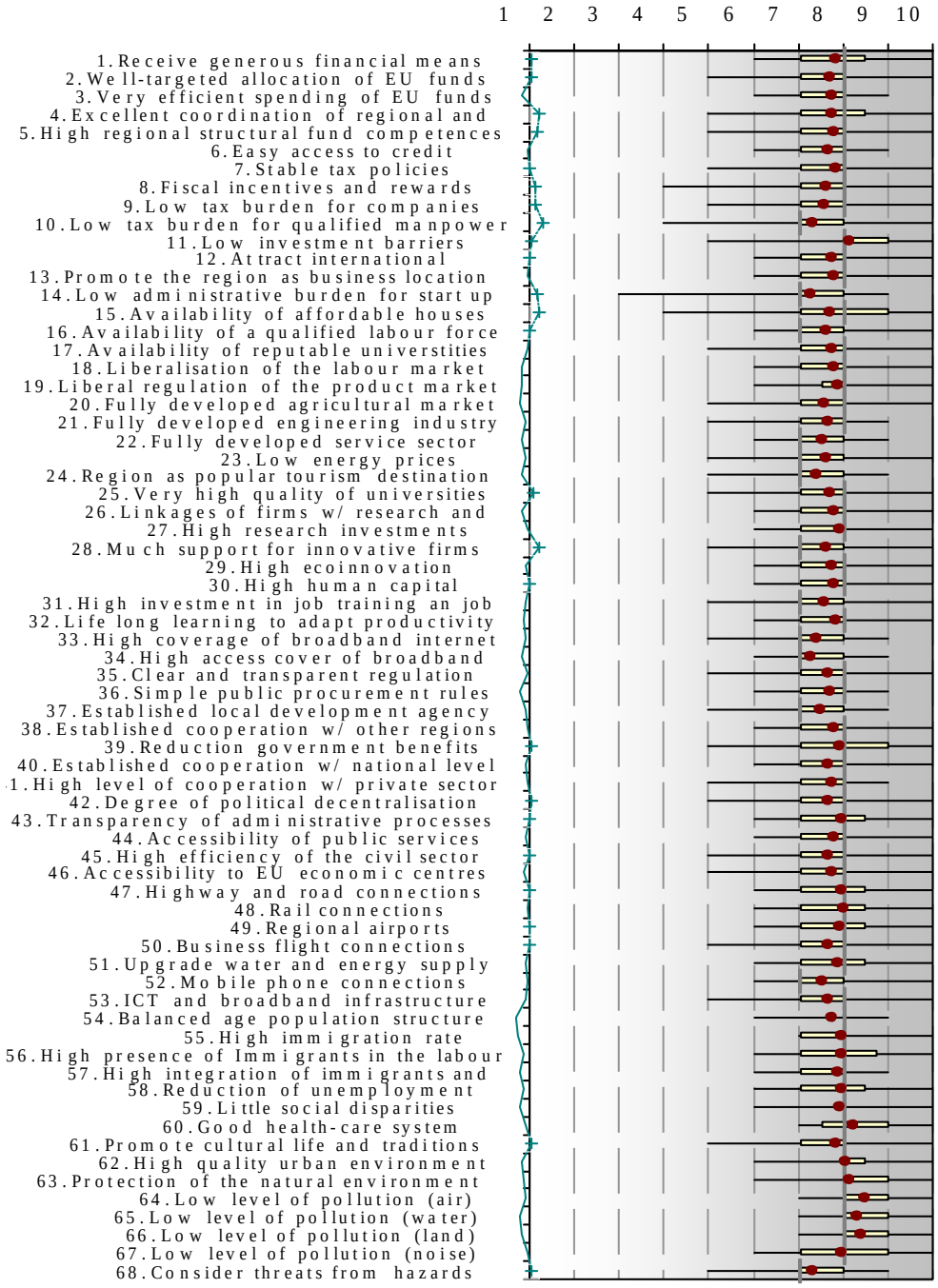
Graph A3: All questions, Podlasie



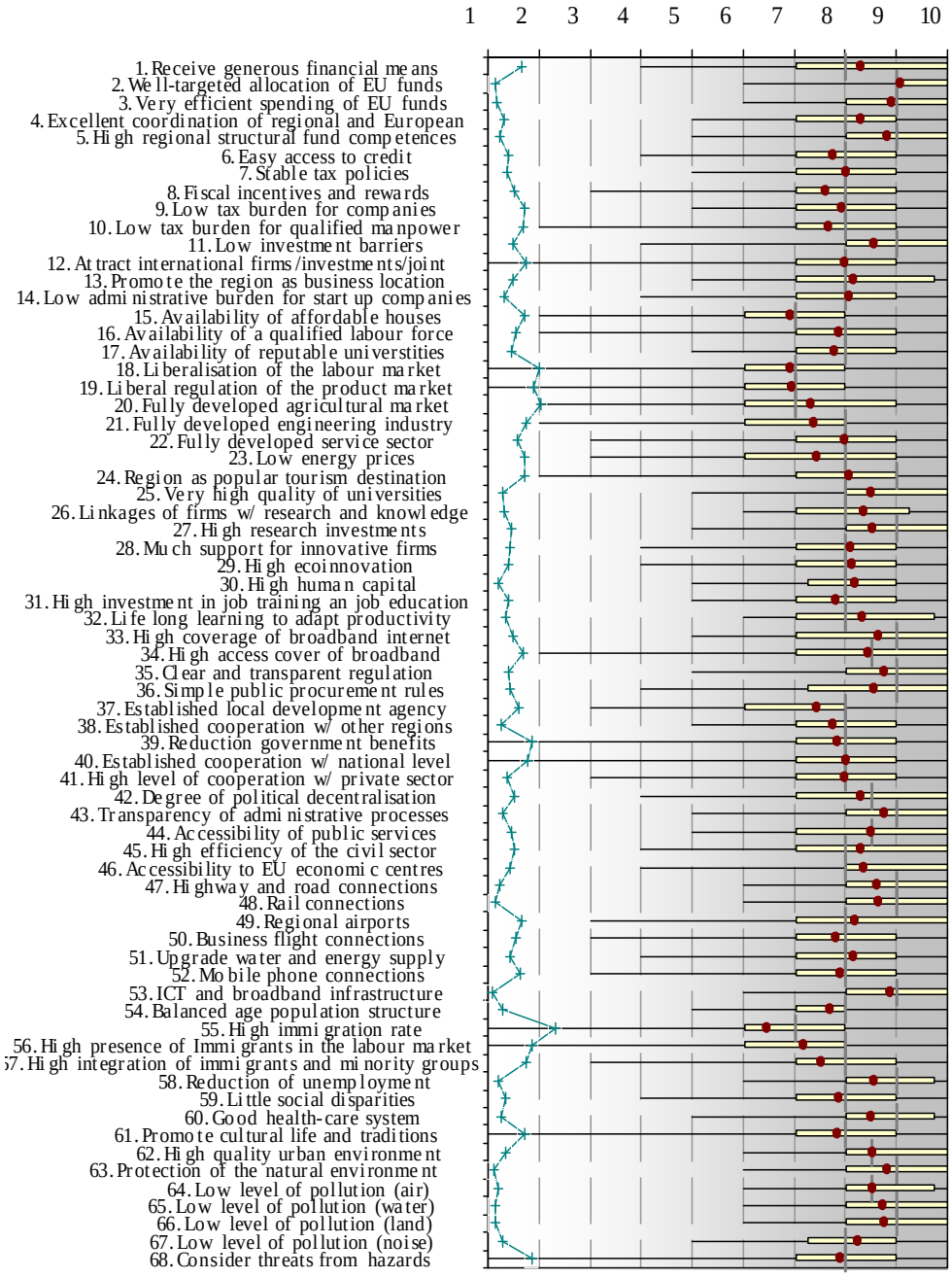
Graph A4: All questions, Campania



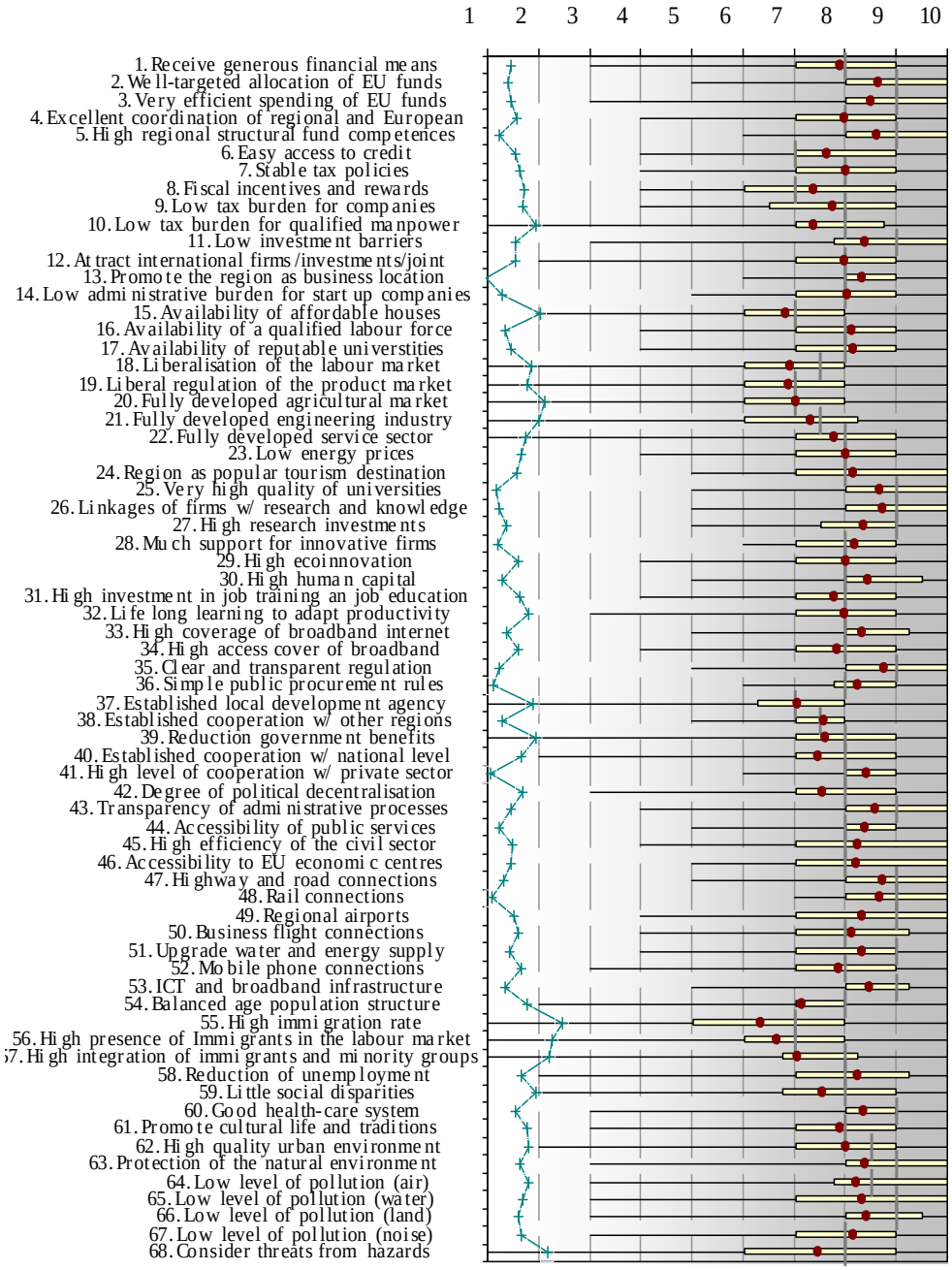
Graph A5: All questions, Valencia



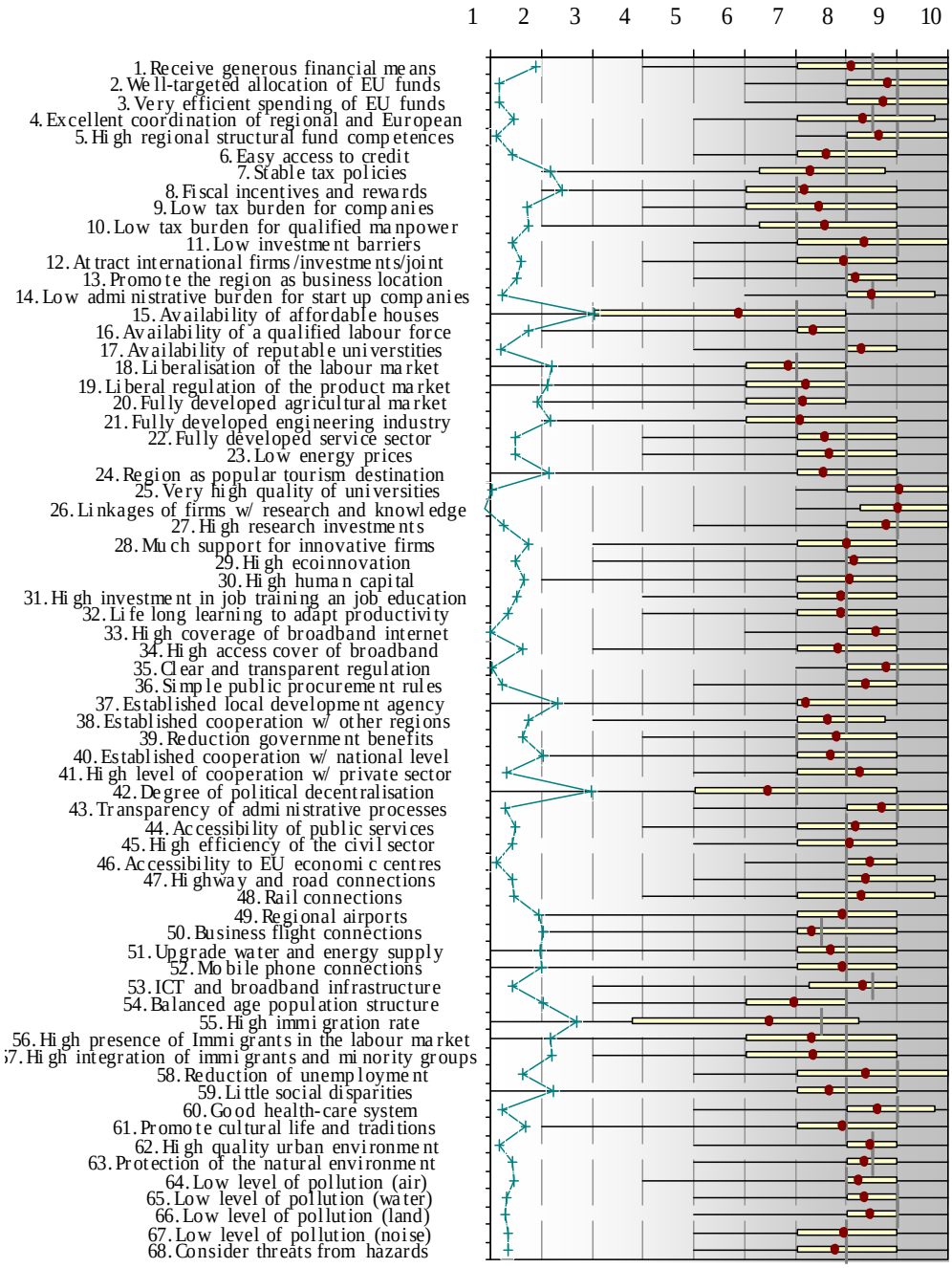
Graph A6: All questions, politicians



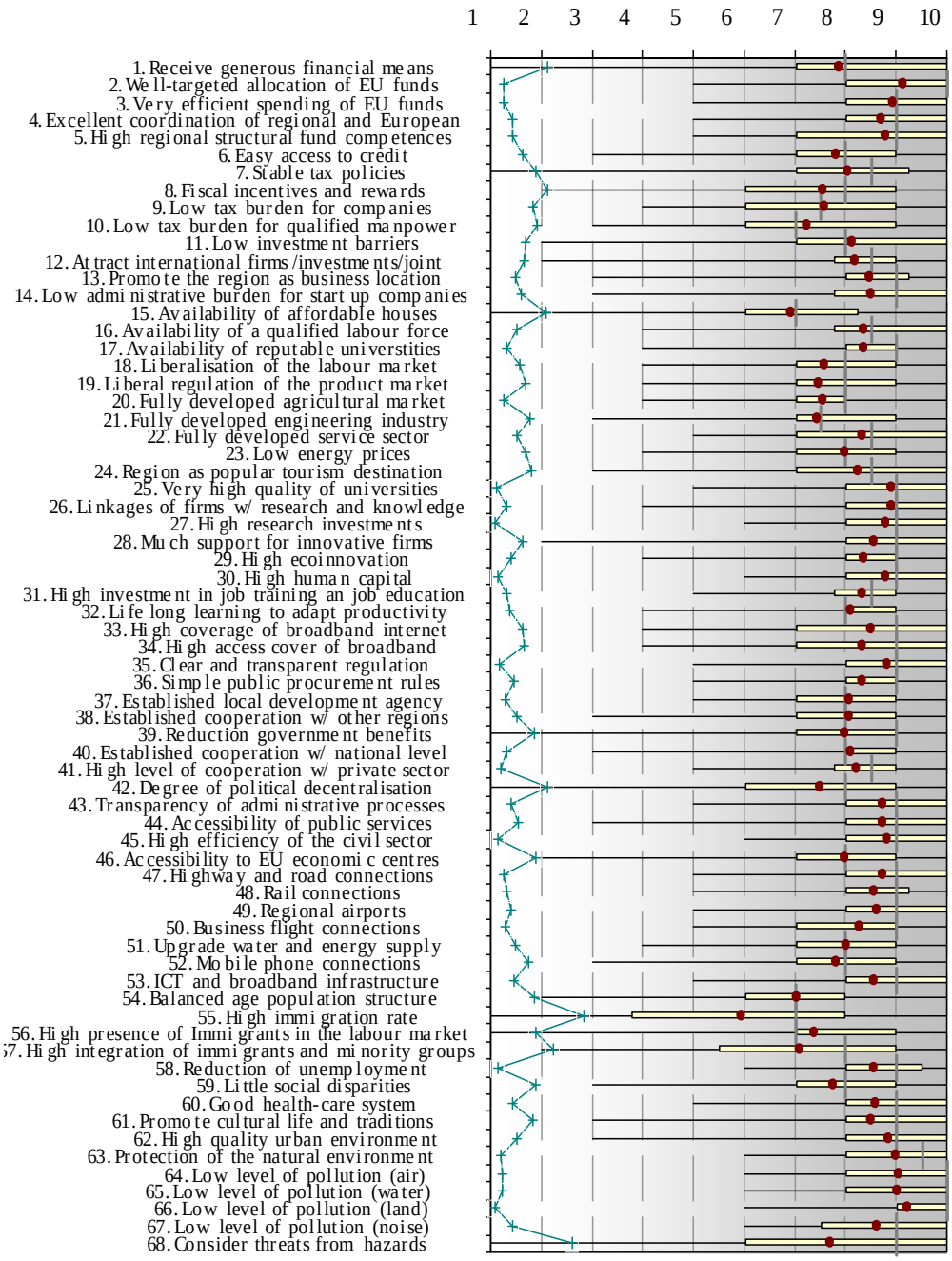
Graph A7: All questions, business community



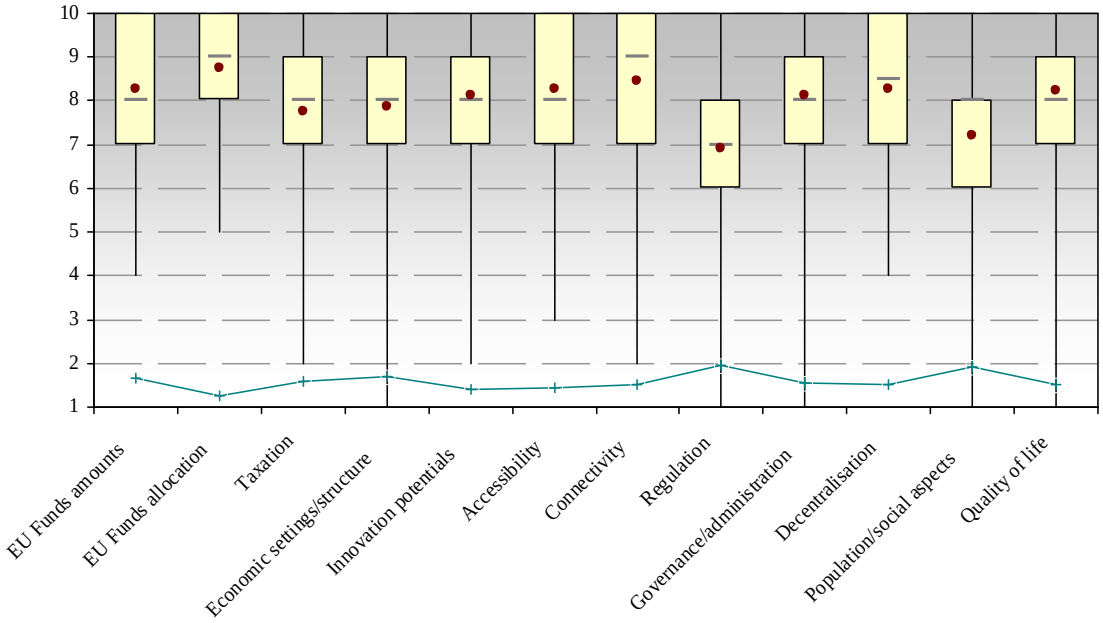
Graph A8: All questions, university professors



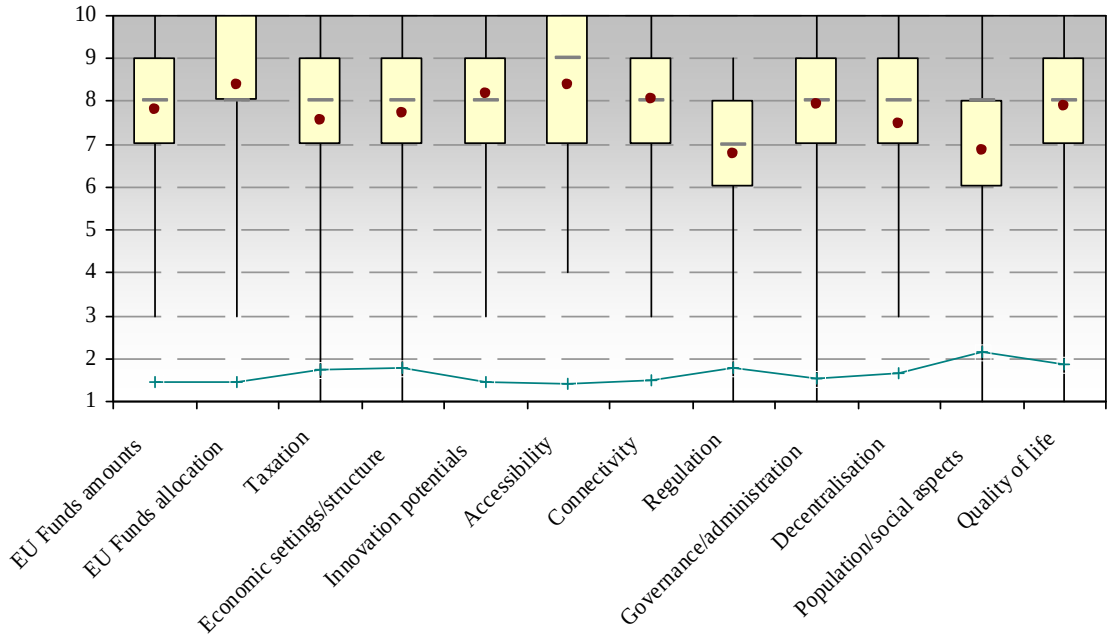
Graph A9: All questions, private sector



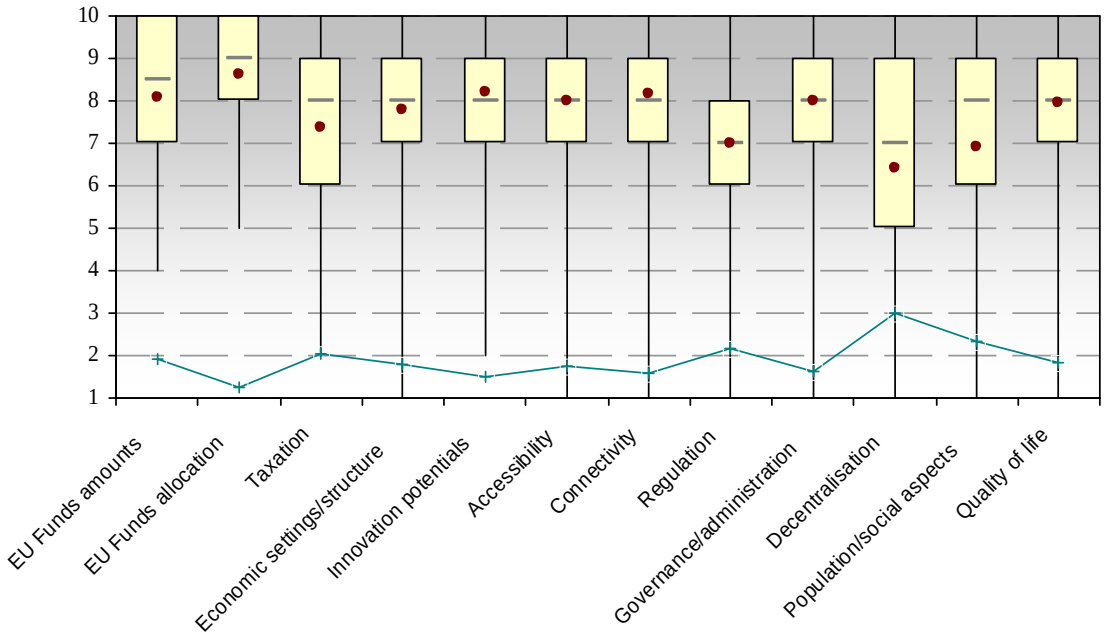
Graph A10: Politicians



Graph A11: Business community



Graph A12: University professors



Graph A13: Private sector

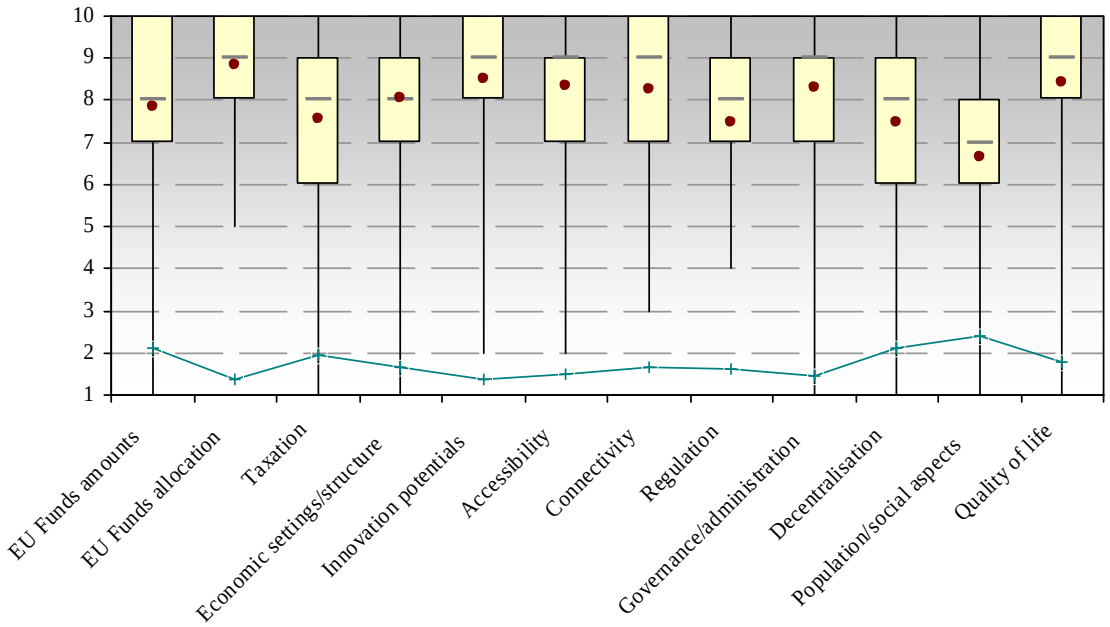


Table D1: Simple frequencies of thematic groups professional category REMTH

thematic groups of questions	professional categories	Simple frequencies **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 D2: Simple frequencies of thematic groups professional category in Podlasie

thematic groups of questions	professional categories	Simple frequencies **Podlasie**												
		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 D3: Simple frequencies of thematic groups professional category -Campania

thematic groups of questions	professional categories	Simple frequencies **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 D4: Simple frequencies of thematic groups professional category in Valencia

thematic groups of questions	professional categories	Simple frequencies **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

2.5 Detailed result steps of the econometric analysis

Tab. E 1: Main drivers of economic growth for convergence regions

Dependent Variable: GDPG
Method: Least Squares
Sample: 1 230 IF GDP<MEAN_GDP
Included observations: 109

	Coefficient	Std. Error	t-Statistic	Prob.
C	8.570562	1.733797	4.943234	0.0000
GDP00	-0.120857	0.038181	-3.165326	0.0021
GIN	-9.199621	3.334020	-2.759318	0.0069
POPG	83.69814	15.81198	5.293338	0.0000
AREA	3.08E-05	8.41E-06	3.664145	0.0004
INET	-0.108632	0.027182	-3.996415	0.0001
HRSC	0.075721	0.017373	4.358491	0.0000
HRAG	-0.163484	0.038102	-4.290682	0.0000
TAXM	-3.102541	1.454078	-2.133683	0.0354
DECVE	0.028155	0.009455	2.977807	0.0037
FUN00	-1.11E-09	3.91E-10	-2.831230	0.0056
FUN00*COR	1.32E-10	6.08E-11	2.172604	0.0322

R-squared	0.735242	Prob(F-statistic)	0.000000
Adjusted R-squared	0.705218	Mean dependent var	3.095820
F-statistic	24.48836		

Tab. E 2: Main drivers of economic growth for above average GDP regions

Dependent Variable: GDPG
Method: Least Squares
Sample: 1 230 IF GDP>MEAN_GDP
Included observations: 121

	Coefficient	Std. Error	t-Statistic	Prob.
C	7.737770	1.034265	7.481423	0.0000
GDP00	-0.035913	0.013095	-2.742471	0.0071
GIN	-10.03848	1.136218	-8.834998	0.0000
POPG	78.59702	12.44639	6.314842	0.0000
AREA	1.07E-05	2.75E-06	3.890644	0.0002
INET	0.015104	0.007338	2.058295	0.0419
HRSC	0.014092	0.011900	1.184212	0.2389
HRAG	-0.019153	0.045492	-0.421014	0.6746
TAXM	-4.544434	0.979635	-4.638906	0.0000
DECVE	0.003881	0.004936	0.786350	0.4334
FUN00	2.56E-09	4.70E-10	5.437598	0.0000
FUN00*COR	-3.18E-10	7.13E-11	-4.465224	0.0000

R-squared	0.682497	Mean dependent var	2.078589
Adjusted R-squared	0.650455	Prob(F-statistic)	0.000000
F-statistic	21.30031		

Tab. E 3: Difference between economic growth for convergence regions and above average GDP regions

Dependent Variable: GDPG
Method: Least Squares
Sample: 1 230
Included observations: 230

GDPG=C(1)+C(2)*GDP00+C(3)*GIN+C(4)*POPG+C(5)*AREA+C(6)
*HRSC+C(7)*HRAG+C(8)*TAXC+C(9)*DECVE+C(10)*FUN00
+C(11)*COR+C(101)*FUN00*COR+C(99)*DUMMY_GDPCU
+C(12)*GDP00*DUMMY_GDPCU+C(13)*GIN*DUMMY_GDPCU
+C(14)*POPG*DUMMY_GDPCU+C(15)*AREA*DUMMY_GDPCU
+C(16)*HRSC*DUMMY_GDPCU+C(17)*HRAG*DUMMY_GDPCU
+C(18)*TAXC*DUMMY_GDPCU+C(19)*DECVE*DUMMY_GDPCU
+C(20)*FUN00*DUMMY_GDPCU+C(21)*COR*DUMMY_GDPCU
+C(102)*FUN00*DUMMY_GDPCU*COR

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	4.552314	0.901314	5.050752	0.0000
C(2)	-0.034539	0.012082	-2.858645	0.0047
C(3)	-5.343662	1.680052	-3.180653	0.0017
C(4)	74.43596	12.88229	5.778162	0.0000
C(5)	9.53E-06	3.06E-06	3.118212	0.0021
C(6)	0.030824	0.011838	2.603787	0.0099
C(7)	-0.059879	0.033424	-1.791473	0.0747
C(8)	-4.585802	1.502817	-3.051470	0.0026
C(9)	0.001904	0.006842	0.278286	0.7811
C(10)	-1.24E-10	2.77E-10	-0.448217	0.6545
C(11)	0.037492	0.063399	0.591373	0.5549
C(101)	2.48E-11	4.35E-11	0.570239	0.5691
C(99)	11.80248	3.480150	3.391372	0.0008
C(12)	-0.065931	0.052245	-1.261968	0.2084
C(13)	-16.80627	5.755337	-2.920119	0.0039
C(14)	19.88224	25.11378	0.791687	0.4295
C(15)	1.33E-05	9.53E-06	1.399787	0.1631
C(16)	0.037257	0.023466	1.587736	0.1139
C(17)	0.071180	0.063369	1.123256	0.2626
C(18)	-0.639553	3.351864	-0.190805	0.8489
C(19)	-0.013065	0.015027	-0.869444	0.3856
C(20)	-1.68E-09	9.50E-10	-1.766147	0.0789
C(21)	-0.425770	0.238200	-1.787446	0.0753
C(102)	2.26E-10	1.47E-10	1.537927	0.1256

R-squared	0.771976	Mean dependent var	2.560668
Adjusted R-squared	0.746517	Prob(F-statistic)	0.000000
F-statistic	30.32230		

Tab. E 4: Main drivers of economic growth for weak convergence regions

Dependent Variable: GDPG
Method: Least Squares
Sample: 1 230 IF GDP<MEAN_GDP AND GDPG<MEAN_GDPG
Included observations: 44

	Coefficient	Std. Error	t-Statistic	Prob.
C	3.421814	1.227623	2.787349	0.0085
GDP00	-0.083168	0.027061	-3.073414	0.0041
GIN	-0.581349	2.573627	-0.225887	0.8226
POPG	35.68323	17.76368	2.008774	0.0523
AREA	-9.36E-06	1.17E-05	-0.799429	0.4294
HRSC	0.002997	0.016409	0.182627	0.8561
HRAG	-0.075664	0.035783	-2.114538	0.0417
FUN00	-5.35E-10	2.35E-10	-2.275145	0.0291
FUN00*COR	6.94E-11	3.77E-11	1.840152	0.0742

R-squared	0.414918	Mean dependent var	1.443510
Adjusted R-squared	0.281185	Prob(F-statistic)	0.009392
F-statistic	3.102586		

Tab. E 5: Main drivers of economic growth for catching up convergence regions

Dependent Variable: GDPG
Method: Least Squares
Sample: 1 230 IF GDP<MEAN_GDP AND GDPG>MEAN_GDPG
Included observations: 65

	Coefficient	Std. Error	t-Statistic	Prob.
C	13.55492	2.782488	4.871512	0.0000
GDP00	-0.215977	0.048880	-4.418496	0.0000
GIN	-21.51942	5.437275	-3.957758	0.0002
POPG	89.29098	27.76086	3.216435	0.0022
AREA	2.48E-05	1.13E-05	2.196359	0.0322
HRSC	0.064554	0.025623	2.519403	0.0146
HRAG	0.013322	0.068120	0.195569	0.8457
FUN00	-5.92E-10	9.83E-10	-0.602133	0.5495
FUN00*COR	5.04E-11	1.51E-10	0.333751	0.7398

R-squared	0.535663	Mean dependent var	4.214307
Adjusted R-squared	0.469330	Prob(F-statistic)	0.000000
F-statistic	8.075274		

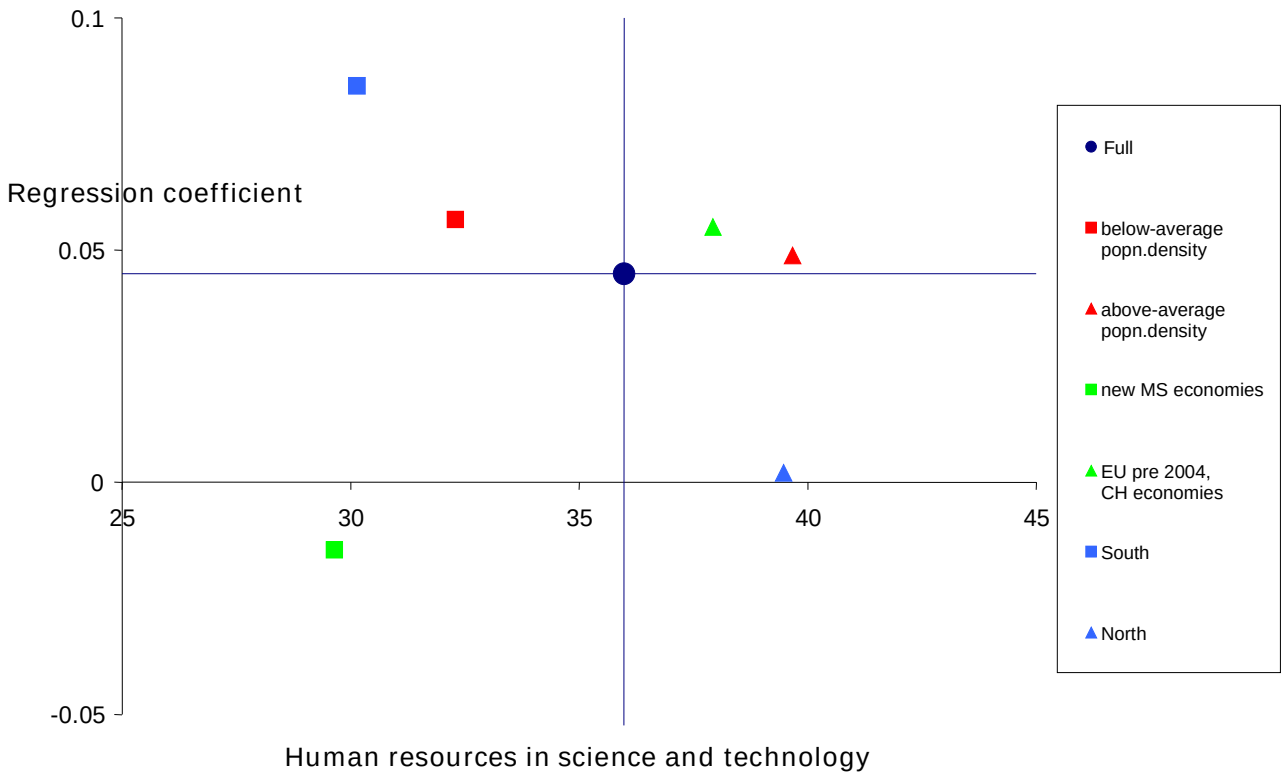
Tab. E 6: Difference between economic growth for weak and catching up convergence regions

Dependent Variable: GDPG
Method: Least Squares
Sample: 1 230 IF GDP<MEAN_GDP
Included observations: 109
GDPG=C(1)+C(2)*GDP00+C(3)*GIN+C(4)*POPG+C(5)*AREA+C(6)
*HRSC+C(7)*HRAG+C(8)*FUN00 +C(101)*FUN00*COR+C(99)
*DUMMY_GDPCU+C(12)*GDP00*DUMMY_GDPCU+C(13)*GIN
*DUMMY_GDPCU+C(14)*POPG*DUMMY_GDPCU+C(15)*AREA
*DUMMY_GDPCU+C(16)*HRSC*DUMMY_GDPCU+C(17)*HRAG
*DUMMY_GDPCU+C(20)*FUN00*DUMMY_GDPCU+C(102)*FUN00
*DUMMY_GDPCU*COR

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	3.421814	1.853539	1.846098	0.0681
C(2)	-0.083168	0.040858	-2.035563	0.0447
C(3)	-0.581349	3.885815	-0.149608	0.8814
C(4)	35.68323	26.82066	1.330438	0.1867
C(5)	-9.36E-06	1.77E-05	-0.529472	0.5978
C(6)	0.002997	0.024776	0.120957	0.9040
C(7)	-0.075664	0.054027	-1.400486	0.1648
C(8)	-5.35E-10	3.55E-10	-1.506859	0.1353
C(101)	6.94E-11	5.69E-11	1.218757	0.2261
C(99)	10.13311	3.027712	3.346788	0.0012
C(12)	-0.132809	0.058635	-2.265000	0.0259
C(13)	-20.93807	6.081546	-3.442886	0.0009
C(14)	53.60775	35.91458	1.492646	0.1390
C(15)	3.42E-05	2.02E-05	1.693121	0.0939
C(16)	0.061558	0.033164	1.856161	0.0667
C(17)	0.088986	0.079712	1.116344	0.2672
C(20)	-5.67E-11	9.17E-10	-0.061832	0.9508
C(102)	-1.90E-11	1.42E-10	-0.133906	0.8938

R-squared	0.805649	Mean dependent var	3.095820
Adjusted R-squared	0.769342	Prob(F-statistic)	0.000000
F-statistic	22.18973		

Graph E.1: Sensitivity of human resources in different kinds of regions



Note: X-axis: mean of the policy variable in the respective subsample (higher value = higher share of human capital)

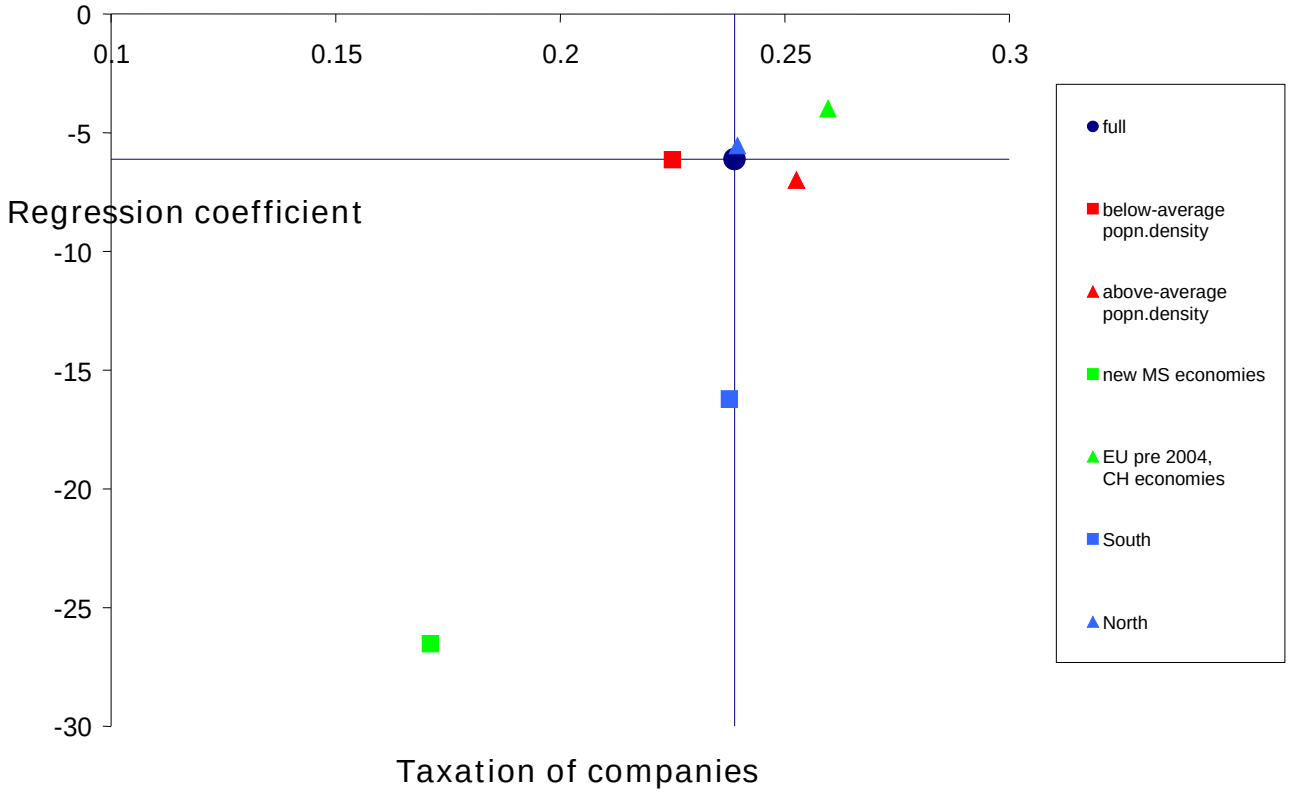
Y-axis: estimated value of coefficient from standard growth equation for respective subsample

Interpretation: the higher the value of the coefficient, the higher the sensitivity of the factor investigated

full = full sample average

Source: BAKBASEL / ZEW / BFS / Cato Institute

Graph E.2: Sensitivity of taxation of companies in different kinds of regions



Note: X-axis: mean of the policy variable in the respective subsample (higher value → higher taxation)
Y-axis: estimated value of coefficient from standard growth equation for respective subsample

Interpretation: the higher the value of the coefficient, the higher the sensitivity of the factor investigated
full = full sample average

Source: BAKBASEL / ZEW / BFS / Cato Institute

3 Complete case studies

The Four Case Studies described next are:

1. TECHNOGENESIS in REMTh - Region of East Macedonia – Thrace

2. Gateway to Podlasie: Podlasie Region

3. Technology Transfer Regional Competence Centres - Campania Region

4. Enhancement of Knowledge and the Information Society in the Valencia Region

3.1 TECHNOGENESIS in REMTh - Region of East Macedonia – Thrace

Abstract. The aim of this report is to present the implementation of the project "Technogenesis in REMTH" in the Region of East Macedonia – Thrace, as a best practice example in the promotion of innovation and the establishment of a regional network to support innovation. "Technogenesis in REMTH" was a project funded under the ERDF Innovative Actions Programme -DG Regio - which has also been shortlisted for an award by the European Commission. The aim of the project was to develop a new innovation strategy in REMTH, with the networking of public authorities, research and technological institutions, consulting agencies and local enterprises or individuals for the production of new innovative products that would have a positive impact to competitiveness and growth. The project aimed to eliminate the weaknesses in the Region's innovation system, speed up business initiatives and endeavours and maximise results. Among all innovative actions that have been funded in Greece, Technogenesis was the only one that aimed directly at stimulating new products and services development by individuals, while at the same time it offered investment opportunities to interested bodies. This case study is structured as follows: in the First Chapter, the main objectives of the project are presented. Chapter Two illustrates the methodology for the implementation of the project. Chapter Three is concentrated on the compliance of the project within the European, National and Regional contexts respectively. Chapter Four presents the direct and indirect results of the project, and Chapter Five includes an evaluation of the project's results and recommendations for its future prospects.

Purpose and scope. In the context of the **"Technogenesis in REMTH"**, emphasis was given to the formation of a new innovation strategy directed towards a sustainable endogenous *technogenesis*[*] potential **focusing mainly on the creation of a synergetic surplus with new product developments**. This innovation strategy was in essence a tailor-made endeavour to favour the creation of a sustainable partnership in industry (between the core and peripheral sector) with efficient interfaces linking industry, technological institutions, society and capital. The objectives of the **"*Technogenesis* in REMTh"** were fulfilled with activities under the following three action lines:

A. Regional Intelligence
B. Exercise
C. Technogenesis Paradigm

A. Regional Intelligence. The main objective of this action was to identify and present the innovative new product ideas of the Region through a well organized,

[*] The term "technogenesis" comes from Dirk-Jan F. Kamann and Peter Nijkamp, Technogenesis: Origins and Diffusion in a Turbulent Environment, in Technological Forecasting and Social Change, No 39, pg. 45-66 (1991).

perspicuous and if possible permanent model. The following *measures* were implemented under this action:

- *Mobilization for ideas' generation* through awareness campaigns, training seminars and educational courses that also enhanced Human Resources skills.
- *Soliciting individual and group ideas*: under this activity concrete and immature ideas were selected through expert-supported brainstorming.
- *Refining of ideas* which included spotting of ideas, evaluation and examination of their existing application to other areas through physical and virtual support
- *Clustering of ideas* (grouping and/or combination of ideas) in order to proceed with the most suitable partnerships through expert-supported brainstorming and we*b-supported network*ing.
- *Rough evaluation* / "Think Tank"- supported evaluation for the selection of ideas in order to make a list.
- *Expanding of ideas* - Creation of a product portfolio using hands-on assistance that included dealing with intellectual property rights, market feasibility studies, concept feasibility analyses, and formation of initial business cases around the new product ideas.
- *Technogenesis Gate* - Including the creation of a web site for the provision of information and guidance. Under this site, management tools (including the necessary training tool) were developed that covered the following areas: inward looking, outward looking, and forward looking. These management tools included remedies for problems such as operations values, business process reengineering, administrative processes, and new product development management. The most important aspect was the design and development strategy, along with the definition of the final product. Other aspects such as the systematic evaluation of the competitive capacity, market analyses, technology watch and IPR management were also addressed. Finally, creativity capacity, which is the basis of forward looking, was addressed as a key element for attaining effective change.

The final outcome of this action was the mobilization of hundreds of innovative citizens who submitted their innovative ideas for the development of 300 New Products. After a primary evaluation, 70 promising ideas were selected to pass on to the second action line of the project: the exercise and the experimentation of these ideas in the Technological Clinics. It is worth mentioning that the envisioned outcome of this action was the modelisation of the above-described process, so that it would formulate an intelligent system (the *Technogenesis* model) that could work permanently in the Region (even after the closure of the project), which would be also transferable to other regions.

B. Exercise. This term referred to the application of methodology and demonstration Technology Clinics in the particular sector of New Product Development, which would help to increase the potential of the owners or holders of the innovative ideas around new products, to both anticipate and avoid technical and non-technical barriers in the deployment of their ideas, and the likely customers and/or market rejection. This effort was normally the shared responsibility of both the clinic coordinator and the

technological services provider, which are typically different bodies. A major benefit of sharing the idea of a likely new product with technological service providers and other specialists is the shift of the emphasis of their relationship from *suppliers* to innovation partners and, eventually, shareholders. In practice, **Exercise** aimed not only at supporting the demand side, but also at addressing supply side issues, in particular by attempting to strengthen the creative role of the technology transfer professionals and increase their shareholding function. Thanks to **Exercise**, the region would increase its potential of innovative technological structures (Technology Clinics) providing support to firms or individuals. Such kind of structures are lacking in the region mainly due to the business culture and practice focusing on applied technology, which is far away from the concept of sustainable *Technogenesis*. Technology Clinics were introduced to support the firms or individuals to take the necessary steps before a new product idea is transferred to ready-to-production prototype status.

It is not always or necessarily the best choice to take the decision to manufacture a prototype in a new product development process. If it can be avoided, the venture entrepreneur can save valuable resources and start-up costs. However, a prototype can highlight product development problems. Usually this is the decision of the new product development managers who have the experience to evaluate whether prototyping is necessary and minimize the risk of new product development. This decision was taken within the Technology Clinics where the technological services provider and the clinic co-ordinator (facilitator) acted, according to their expertise and after thorough evaluation, as the product development managers. In addition, the Technology Clinics gave the opportunity to 10 ideas out of the 70 (the most mature and promising) to acquire and secure the necessary expertise to set up the production according to a well-organized schedule of engineering runs in order to achieve the production milestones and introduce the new product to the market in time. The whole implementation process of **Exercise** would make the involved parties familiar with the real hard road that must be travelled from a good idea to a real product, recognizing the relevant high risk. Through this process they can understand that the problem of the new product development is not the perceived threat of uncertainty, which is embodied in all business functions, but the way to handle it.

C. Technogenesis Paradigm. In order to fix a *Technogenesis* Paradigm from the previous **Exercise**, capital should have been injected to fuel the 10 most promising and marketable undertakings. The aim of this action line was to prevent a new product development partnership from early termination, due to the perceived threat of uncertainty and the lack of seed capital, and to limit this threat -the innovation non-exit objective. By diminishing the death toll at this crucial stage, the rates of new product development and of real new business creation were supported through the following measures:

- *New Ventures Funding*: Provision of a grant (up to 100.000 Euros), which was given to the 10 “graduates” of action 2 Exercise, in order to be used for the creation of clusters, joint ventures, spin-offs and/or start-ups.

- *Investment Opportunity Forum*: The aim of this measure was to stimulate the establishment of a permanent regional-based (physical as well as web-based) Investment Opportunity Forum, that would also formulate the conditions under which the reserves of private capital that exist in the Region would be used for investments related to such innovation. Its purpose was to identify potential investments and to promote them to the relevant potential investors, both formal and informal. This forum was planned to take place every six months and it would be the prelude to the Venture Capital Forum that takes place once a year in Greece. At the same time it would deal with opportunities from the Region of Eastern Macedonia & Thrace alone, but the structure and the context would be the same as the national context. Ideas from potential investors would be presented in the form of a business plan and one-to-one interviews with the potential investors would follow. The Forum was intended to be permanent and as a first step, it would communicate its purposes and a time schedule for future activities to the region's interested parties. The members of the Forum would be selected by the SC of the project, which was constituted by a private-public partnership and ensured a consensus on the methodology, inputs and results.

Methodology. The Technogenesis Project was built on the results of the Regional Innovation and Technology Transfer Strategy project (RITTS)[44], which was implemented in REMTH. In that sense, "Technogenesis in REMTH" had actually the form of a pilot action that referred to the strategic creation of a regional economy based on knowledge and technological innovation. It was an active intervention against the weaknesses of the innovation system of the region and its ambition was to accelerate the entrepreneurial efforts in the area and the achievement of better results, through the development of new products.

The Region of Eastern Macedonia & Thrace is characterised by both :

- the 'core', thus the traditional industry that consumes large quantities of capital just to maintain its market share, producing conventional products and by relatively small yet flexible enterprises
- the 'peripheral sector', that responds more rapidly to the new demands by producing new and innovative products, but lack strategic orientation, experience and the relevant mechanisms to acquire risk capital funds.

As a consequence, the project dealt with the embodiment of alternative production models through the networking of enterprises of both kinds mentioned above on one level and through the physical and web-based network of these with local research and technological institutions on another. These networks also included targeted social groups with an interest in the specific actions, as well as economic citizens acting as stand-alone units in the process of innovation. Finally, the mobilisation of dormant private funds would be of major importance in this process.

[44] The RITTS projects were funded by DG Enterprise under the Innovation Programme and aimed to support regions to develop regional innovation strategies that would enhance regional innovation and competitiveness through optimizing innovation policies and infrastructure.

With the above **model proposed**, the Region of Eastern Macedonia & Thrace had given the ability to limit the outward uncertainty of the core sector, and transform it to positive external effects for the peripheral sector as well as the overall regional economy. The regional innovation dependency was intended to be mutated into a sustainable regional alliance between mass production (the core sector) and flexible, customised production (the peripheral sector). A core sector company could use this model to initiate "partnering" with a small innovative firm, sharing the risks and rewards of exploiting mutually beneficial opportunities. The core sector would bring in strategic vision, experience, and market access opportunities, whereas the peripheral sector would add specialised know-how, energy, creativity and flexibility. The combination of these skills is the essential element for a successful innovation system in the region. In addition, the local technological institutions would also use this model to sharpen their RTDI activity in order to better respond to the real needs of the regional economy. This model would help also individual researchers and innovators to gain self-reliance and confidence and would act as a catalyst to and an agent for change in the area of innovation financing. With this model, REMTh envisaged creating sustainable *technogenesis* long-term partnerships able to cope with the new shocks, threats and/or challenges that will occur. It is not accidental that the partnership of the project was compromised by a large number of regional innovation stakeholders, nation-wide research institutions and private organizations with a strong innovation portfolio. In particular, the Steering Committee (SC) was constituted with representatives from the following bodies:

- Prefecture of Kavala – Drama – Xanthi
- Prefecture of Rodopi – Evros
- Local Unions of Municipalities and Communities
- The Democritus University of Thrace
- The Technical Education Institution of Kavala
- The Hellenic Banks Association
- The Region's Chambers of Industry and Commerce
- The Regional Development Fund of REMTh
- The Managing Authority of the ROP of REMTh

It is worth mentioning that the project was executed via a public-private partnership, co-ordinated by the Region's General Secretariat, with participation from:

- Local authorities and regional government
- Regional Chambers of Industry and Commerce
- Higher education and research institutions, including:
    - Urenio Research Unit, Aristotle University of Thessaloniki
    - The Centre for Research and Technology Hellas
    - Democritus University of Thrace
    - Technological Educational Institute of Kavala
- Thessaloniki Technology Park
- Private organisations, such as:

- ATLANTIS CONSULTING LTD
- BRAINSTORMING LTD
- CAPITAL TRUST SA
- CITE – CENTRE FOR INNOVATION AND TELEMATICS
- DATACON LTD
- DIADIKASIA SA
- EMETRIS SA
- EUROCONSULTANTS SA
- EUROTEC SA
- FORMAT CONSULTANTS SA
- HELLENIC TECHNOLOGY TRANSFER CENTRE SA
- INNOVATIA LTD
- LOCUS CONSULTANTS LTD
- METRON CONSULTING GP
- ORGANOTECHNICAL SA
- PLANNING SA
- UNITECH HELLAS LTD

- Private companies partners of innovators for new product development, such as
  - PRISMA ELECTRONICS SA
  - AGRIFERT SA
  - "LAMDA" GP
  - ANIMAPPD - INTERACTIVE
  - ELECTRICAL SIGNS LTD
  - NIKOLAOS DASTERIDIS SA
  - DNALEX SA
  - COSMOKIDS
  - CHRISTINA MILANI & ASSOCIATES

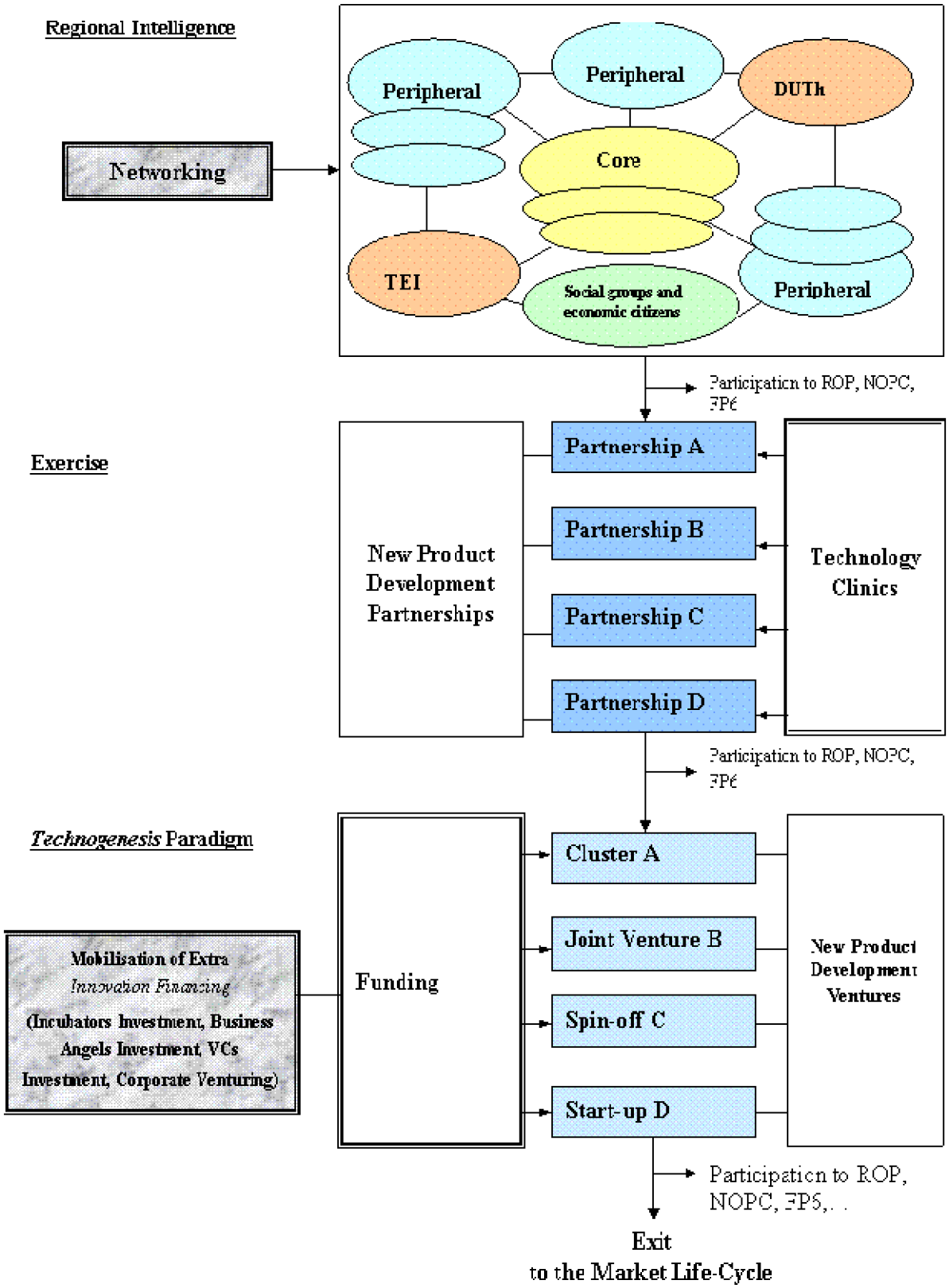
The synergetic surplus of this partnership enabled the Region to face the absence of risk capital measures, address the uncertainty of innovation and fuel the development of the SMEs. Schematically, the whole strategy representing the proposed model is shown in the graph below.

Contextual placement of different aspects. Given the above description of the Technogenesis Project, there was considerable coherence with the EU policies as well as with the **ROP** of the Region, the National Operational Programme for Competitiveness **(NOPC)** and the National Operational Programme for Information Society **(NOPIS)** 2000-2006.

EU context. Throughout the industrialised world, economic transformation, rapid technological change and increasing globalisation are giving greater prominence to the nature and performance of individual regional economies. “Technogenesis in

REMTh" consists of a set of pilot actions and includes projects that are closely related to EU policies **on research and innovation**. EU activities in this area are driven by the need to improve the scientific and technological basis of Community businesses to enable them to compete in the global market. "Technogenesis in REMTh" shared the same goal. The importance of actions at regional level in order to encourage the creation and growth of innovative enterprises and to improve the operation of key interfaces in the innovation system was recognized by the EU and urged a coherent approach to the strengthening of these interfaces in Member States' regional innovation strategies. "Technogenesis in REMTh" responded to that by re-examining the role of each and every one of the key players (including public and private actors), establishing synergies and taking advantage of complementarities among regional instruments to achieve a reinforced partnership among all those involved.

In addition, Technogenesis was very close to the objectives of the 6th Research Framework Programme **(FP6)** 2002-2006 which was comprised three main objectives, with innovation a prominent component of each. The first aimed at focusing and integrating research on 7 strategic themes, The second covered four areas of activity: research and innovation, human resources and mobility, research infrastructures and science and society. The third addressed the coordination and development of research and innovation policies; it covered the benchmarking of innovation policy at national and regional levels and supported exchange of experience between policy makers as the basis for accelerated improvement of the environment for innovation throughout EU. Research and innovation aimed to improve the coherence of the European innovation system as a whole, through shareholder networks, regional innovation strategies and economic and technological intelligence activities. "Technogenesis in REMTh" addressed the same areas with its action lines and its results gave an additional value to those of the EU for the region


Regional Intelligence
Networking
Peripheral
Peripheral
DUTh
Core
TEI
Social groups and economic citizens
Peripheral
Participation to ROP, NOPC, EPS
Exercise
New Product Development Partnerships
Partnership A
Partnership B
Partnership C
Partnership D
Technology Clinics
Participation to ROP, NOPC, EPS
Technogenesis Paradigm
Mobilisation of Extra Innovation Financing (Incubators Investment, Business Angels Investment, VCs Investment, Corporate Venturing)
Funding
Cluster A
Joint Venture B
Spin-off C
Start-up D
New Product Development Ventures
Participation to ROP, NOPC, EPS,. .
Exit
to the Market Life-Cycle

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National context (socio-economic, geographic, political). According to the European Trend Chart on Innovation 2006, Greece is facing the following three major challenges in innovation:

- Low innovativeness and extroversion of the business firms
- Not enough RTD as a basic component of the business strategies
- Life-long learning remains the poor relative of the education and training system

Under this framework the Technogenesis Project in REMTH contributed to the main objectives of the National Operational for Competitiveness 2000-2006 (NOPC) and the National Operational for Information Society 2000-2006 (NOPIS). In particular, the principal aims of the **NOPC** were the creation of new businesses, the strengthening of quality-orientated and sustainable competitiveness of businesses as well as their participation in the changing global market, their integration into the new economy and the improvement of the provision of services to SMEs. A special objective of quality-orientated competitiveness in the Research & Technological Development sector under NOPC was to encourage the creation of new ventures and to assist the creation of new competitive advantages based on cohesive technical and economic networks.

Synergies also existed with the **NOPIS** where basic actions were education and training adapting to the new economy needs, supporting e-business, facilitating new businesses, strengthening competitiveness of small and medium-sized enterprises, enhancing the skills of human resources, promoting employment in the new economy, enabling low-priced internet access and offering public access to digital services. The Technogenesis Gate and the Investment Opportunity Forum fall within this area as well. Taking these into consideration, the compatibility of **"Technogenesis in REMTh"** with the main Community Programmes running in the region are obvious. In fact we can say that the **"Technogenesis in REMTh"** served as a "test bed" for the ROP 2000-2006 in the area of Innovation and Competitiveness, offering also the platform for appropriate and adequate SMEs and economic actors' participation. Furthermore, it served as a facilitator for regional participation in the NOPC and the NOPIS 2000-2006 to take the regional innovation and competitiveness one step forward.

Regional context (socio-economic, geographic, political). Given the region's relatively poor overall economic performance compared to the whole country and the EU in terms of GDP, which is mostly due to the low productivity of agriculture, **there is a significant difference in terms of innovation in manufacturing.** According to the data of the National Innovation Survey for 1997-1998, REMTh achieved second place in Greece in the number of innovative firms (mainly innovating in-house and less involved in innovation in cooperation) as a percentage of manufacturing industries, which exceeded 50% compared to less than 15% in 1994-96. The innovative products, however, account for only 13.6% of turnover of the manufacturing firms, although this figure was dramatically increased from 3.8% in 1994-1996. Apparently, this almost radical industrial change emerged as a response to the competitive

challenges – threats - of 1991-1995, the so-called industrial decline period (de-industrialisation). The implementation of the RITTS project (1998-2001) revealed that there are still many bottlenecks to be overcome. Addressing fundamental problems appears to be a higher priority than continuing investment in innovation, which could constitute a major advance towards greater competitiveness and growth for longer-term development.

The innovation dependency of REMTh has resulted in a dual regional production system, based on the dual segmentation theory, which assumes a core and a peripheral sector. Dominating and technically sophisticated industries (textiles, wood, marble, construction materials, paper, energy, chemicals, plastics) are part of the core sector. They operate in stable and safe segments of markets applying modern, capital-intensive, mass-production techniques. In the peripheral sector, relatively small firms (crafts, ICT, enabling services) operate with flexible technologies, catering new but fluctuating and risky markets in order to have the extra edge and succeed. Apparently, there is a much greater focus of the core sector on fundamental problems (infrastructure, labour) and externalisation of uncertainty of innovation (protection and sharing of knowledge, access to and mobilisation of human and financing resources, access to innovative customers/markets, etc) than of the peripheral sector. The configuration of these two sectors is weak and incapable of seizing new opportunities or addressing new threats, making the overall production system clearly vulnerable. The basic reason for this weak linkage has been the shortage of synergetic surplus of such partnership in addition to the absence of risk capital measures, to address the uncertainty of innovation and fuel the development and/or growth of the smaller risky "partners". Finally, the Region has significant Tertiary Education Institutions. The Democritus University of Thrace (DUTH) and the Technological Education Institute of Kavala (TEI) are the Higher Education and R&D Institutions. Both work in close collaboration with the local authorities and industry. Other Institutions are the National Agricultural Research Foundation, the Institute for Geology and Mineral Exploration and the Hellenic Tobacco Institute. Around 650 people are employed in R&D activities.

TECHNOGENESIS was very closely related to two major regional Programmes which offered a wide range of experience in managing projects granted with public funding:

- the Regional Operational (ROP) of REMTH under the 3rd Community Support Framework, as the Managing Authority of ROP was appointed Managing Body of the Project;
- the Programme for granting 'Private investment aids' as the Planning and Development Directorate of Region of EMTh acted both as responsible regional manager for private investment aids and as Final Beneficiary responsible for implementation of TECHNOGENESIS.

The **ROP** 2000-2006 of the Region Eastern Macedonia & Thrace supported the development of a modern self-reliant regional economy, and the reinforcement of its

external economic orientation through the exploitation of the geographical position of the region, its natural environment and mining wealth, and the use of new technologies. The second action line of the ROP, Innovation and Competitiveness, was focused mainly on the development of the infrastructure necessary for business as a key element for the promotion of growth of existing companies and the encouragement of new ones to be located in this region. Consequently the results of "Technogenesis in REMTh" action lines could enhance the efforts of the Managing Authority of ROP to increase these measures' value, defining uncertainties, incompatibilities and new regional particularities before the definition of the final specification. Then the infrastructure of ROP will be more customized to the needs of a permanent system for new venture development.

Results. TECHNOGENESIS in REMTH has successfully achieved most of its objectives, as explained in the following sections of this report and has created a significant impact in the region. TECHNOGENESIS Model for new product development stimulated the following:

- hundreds of innovative citizens submitted their ideas and gradually revealed their development potential: collection of 300 innovative ideas initially,
- primary evaluation and creation of a portfolio of the 70 most promising ideas,
- integration of these ideas into a concrete action plan by means of business planning and technological development and finally
- funding action plans of the top 10 ideas to achieve a final industrial design or new product development.

To achieve and on occasion exceed the expected results, many innovative methods, tools and practices were introduced to deal with all new product development aspects such as template leaflets for recording of new product ideas, confidentiality and non disclosure agreements, model evaluation methods, model business plans, design of new products' technology clinics, innovation study and surveys. Furthermore, the partnership of local stakeholders, private companies in the region, local and regional authorities was achieved due to an efficient management system by the appointed bodies in charge, provision of technical assistance services and coordination activities from expert consultants in innovation and technology transfer.

The major added-value of the partnership was the involvement of a significant part of regional entrepreneurship: industries, academic institutions, services providers, local development companies, and consulting firms have dealt with innovation topics. Furthermore individuals, students and social groups have gained access to networking, creativity and entrepreneurship. There was considerable mobilisation within the Region and this has allowed the local innovation potential to emerge. TECHNOGENESIS was the first Pilot Action in the Region of East Macedonia and Thrace that established a public-private partnership to support Innovation. In particular, the main results of "Technogenesis in REMTH" were the following:

Direct

- Mobilization of the Regional Innovation potential by a wide-reaching publicity campaign (over 20 publicity events)
- Collection and Initial Evaluation of 300 Innovative Ideas (exceeding the 200 numerical target figure)
- Drafting and delivery of Business Plans for the Selected 70 new product ideas out of the 300 contributed ideas
- Design and implementation of the Technology Clinics for curing weaknesses of business plans, before capitals are invested
- List of potential investors and investees
- Foundation of Investment Opportunity Forum for attracting investors
- Direct implementation financing of 10 most promising Innovative Business Plans after evaluation, with total grants of € 800.000 and private contribution € 200.000
- Awarding 10 students for their innovative ideas
- Development of TECHNOGENESIS Innovation Web Portal (www.technogenesis.gr).

Indirect

- Mobilization of REMTH citizens and raising awareness about the innovation support opportunities.
- Regional employment reinforcement –REMTH is threatened by deindustrialization- by the development of alternative services and products and the encouragement of local industries to widen their products variety.
- Development of a new product market matching the E.C. model (Lisbon strategy etc)
- Real support of private initiative with actual benefits for the participants.

Moreover, a series of accompanying measures were implemented for the dissemination of results and the exchange of experiences. In particular, three investment days including several parallel events were implemented in the frame of Investment Opportunities Forum

- 1st Day (24/10/2005, GRECOTEL GRAND HOTEL EGNATIA, Alexandroupolis): it was composed of one main event and two workshops: 'Financing Research for New Product Development', 'Investment Opportunities in REMTH'
- 2nd Day (14/12/2005, HOTEL XENIA, Komotini): it was composed of three workshops: 'Training Seminar of 12 innovators 'graduates' from Clinics', 'Innovation and Entrepreneurship', 'Financing Innovation'
- Forum's Conclusive event (5/7/2006, ZAPPEION Conference and Exhibition Centre, Athens): in this event, which was incorporated in the 'Science and Innovation (S&T) Week 2006', innovators of 10 new ventures were awarded by the Greek Minister of Development

Moreover, the interregional exchange of experience and creation of interregional networks between REMTH and four other Greek regions (North Aegean, Central Macedonia, Thessaly, Crete) was established for the dissemination of the project's objectives and results to other regions. Under this activity REMTH participated in the following events:

- "Interregional event for Presentation Approved RPIA", Crete, 23-24/6/2003
- "2nd Seminar of Greek Regions", Larissa, Greece 11-13/2/2004
- "6th International Venture Capital Forum (Athens, 14-15/6/2005)
- "Final Conference of RPIA Crete Region - CRINNO" (Crete, 28-29/11/2005
- A Seminar for interregional exchange of experience and networking was organised on 28/11/2006 in Hotel Le Chalet (Xanthi), in combination with the Final Dissemination Event, in which the four collaborating regions (North Aegean, Central Macedonia, Thessaly, Crete) participated.

Last but not least, it is important to mention that TECHNOGENESIS in REMTH was in the catalogue of 51 nominees for the European Union's constitution of "European Enterprise Awards 2006" in the section for the Entrepreneurial Trailblazer Award, which rewards actions that promote an entrepreneurial culture and mindset. More than 400 regional and local authorities from twenty-eight participating countries competed in the national rounds of the European Enterprise Awards. 51 of them (including TECHNOGENESIS) had been selected to compete, as they were proved successful in facilitating business and supporting entrepreneurship across Europe.

Observations, evaluation and impact on future. The recent catalytic changes in the political status of Europe have enhanced the region's prospects for growth. The regional border zone represents an ideal crossroad for supporting a wider communications network of people, technologies and products, given the potential that was revealed in the last decade. **"Technogenesis in REMTh"** helped the region to move towards a new innovation strategy focusing on the development of regional network behaviour among different segments of the regional production system, the local technological institutions, technological service providers, researchers and innovators, and sources of finance, based on self-reliance and confidence, that **create a synergetic surplus**, still lacking, on new product developments to be consumed in the process of a long-term competitiveness and growth. It is not accidental, that according to the Review of Greece's Innovation Policy by OECD 2007, REMTH is still presenting low performances on innovation. This means that there is a long way to catch up the other European regions in terms of technological innovation development.

Although **"Technogenesis in REMTh"** has proved to be valuable for the enhancement of innovation in the Region and the creation of a network among the public sector, the private sector, the Academic and Research sector and the citizens, the absence of more funding and the changing structures on the mentioned sectors (especially the changes in the most important public administrations) made it very difficult its activities to continue. This means that the limited funding on innovation and

the lack of coordination among the different entities have a negative impact on the sustainability of the model that has been developed in the **"Technogenesis in REMTh".** In addition, the environment for the development of successful regional innovation policies is unwelcoming due to the fact that regional General Secretariats lack both the trained personnel and to a certain degree the capabilities for the development of Regional Technology Development and Innovation schemes[45]. The following SWOT table illustrates the pros and cons of the above mentioned project.

STRENGTHS	WEAKNESSES
• Creation of clusters that never existed on regional level • Awakening of individual citizens of the region towards the production of innovative products • Creation of concrete business plans and funding of innovative ideas	• The non creation of permanent structures for the Investment Opportunity Forum and the Technology Clinics • Lack of political commitment for the continuation of such policies • Shortage of private initiative
OPPORTUNITIES	THREATS
• Take advantage of the innovative ideas data base created in the framework of the project • Make use of good practices in regional innovation strategy and cooperation between private and public sector • Take advantage of already set up structures for the mobilization of further innovative business activities	• Non sustainability of the project activities due to lack of public or private funding (dependency on co-funding schemes) • Lack of education and appropriate consciousness towards the notion of innovation • Stagnation of investments due to the general global economical instability (economic recession)

Summarizing, we can safely draw the following conclusions:

- 'Technogenesis in REMTH' offered the first opportunity for the development of synergies among key actors concerning the promotion of innovation strategies.
- The foundations for the further development of 'Technogenesis in REMTH' are there for their further exploitation.
- Experience proved that such initiatives cannot depend mainly on the will of the time to time political leadership. Since the institutional framework and the regional strategy is set up by the responsible authorities, their role then should remain mainly supervisory.
- The private sector must become more active and involved in the running of such schemes by prompting the initiation, successful implementation and proper sustainability of similar projects.
- The notion of Innovation must become an essential part of technological and university education as well as lifelong learning, so that all relative actors be

[45] The Greek Innovation System: Review Greece's Innovation Policy by the OECD", Hellenic Republic, Ministry of Development, General Secretariat for Research and Technology, Athens, August 2007

aware of the role of Innovation and its advantages and how it can be applied practically in the economic and business sector.

Concluding, we can argue that experience gained from regional authorities through 'Technogenesis in REMTH' in conjunction with the proper involvement of the private sector can pave the way to the design and the implementation of projects under the following Programmes, which are implemented in the new programming period 2007-2013:

- Regional Operational Macedonia – Thrace 2007-2013 (ROP) for Region EMTh under the Priority Axis 6 "Digital Convergence and Competitiveness„ since its main interventions pertain to i) incorporating novelty services and ICT applications such as e-commerce, education and training, networking, etc. into the Mass Media and to ii) promoting of investment and entrepreneurship plans in various production areas, with an emphasis on the modernization of tourist infrastructure and services.
- The National OP for Competitiveness and Entrepreneurship which has as its primary development goal the improvement of competitiveness and outwardness of the country's corporations and productivity system, with emphasis on the aspect of innovation. The OP's goals include also the marketing and supplying of natural gas to households and industries, the interconnection with international integrated production and services systems, the forming of Greek and international business collaborations, commerce and accompanying services, Industry – Commerce – Services networking, etc.
- Competitiveness and Innovation Framework Programme (CIP) for the period 2007-2013 and especially the 'Entrepreneurship and Innovation ', which particularly focuses on SMEs.
- 7th Framework Programme (FP7) of the European Community for research, technological development and demonstration activities (2007-2013).

3.2 Gateway to Podlasie: Podlasie Region

Purpose and scope. The following case study aims to demonstrate the approach taken by Podlasie's regional government towards the development of information society. Digital literacy and ability to utilize new channels of communication for the benefit of individuals, specific groups and the society as a whole were recognised as one of the key factors for economic growth and quality of life. The immediate impact of public sector on the state of information society in the region is through improved quality and availability of their services. Starting from 2003 the Podlasie regional government has been engaged in a complex overhaul of its services and workflow systems. This case study looks at two interconnected projects coordinated by the regional government; impacts of those projects were seen both in improved infrastructure and services as well as in the raised competence of public officials and the wider public. They are presented in unison as they answer to the needs of both supply and demand sides in the Administration – Citizen interaction and they are both

related to the same services. The subject of the third project which is briefly discussed in addition also relates to public on-line services, however it was from its onset envisaged as a consensus building action among a wide spectrum of regional stakeholders, with special attention to the needs of local government representatives.

Methodology. Data collected for the benefit of this case study was acquired through desk research, telephone interviews and analysis of project documentation. Information on the legal, political and strategic context was acquired through the analysis of legal and strategic documentation, later quoted in references.

Contextual placement of different aspects

EU context (political). Although general priorities were formed on national level in the national development plan 2004-2006, and were further specified in respective Operational Programmes, the overriding factor for the majority of rural ICT/IS expenditure carried out through Structural Fund support was the local needs and availability of local funds (or the lack of). For the 2000-2004 period, strategic documents in place were making vague and non specific references to the Lisbon Strategy, the scope of ICT/IS investment was largely dependent on needs identified by beneficiaries. **The ICT Strategy of Poland – ePolska (2004-2006)** related to **eEurope 2005** priorities and set forth ambitious goals, which included access to a telephone land line for each household by the end of 2005, 5% of them should also have a broadband access by the end of that year (at the end of 2008 that figure stood at 11 %, which was however much below the EU average) and by mid 2004 increasing the number of computers with internet access sufficient for holding computer studies class, so that no more then 5 pupils are assigned to one computer (primary and junior high schools) and no more than 1 high school student per each computer. By 2006 all of the aforementioned computers were to have a broadband access to internet.

i2010 calls for creation of a single European information area – the **Strategy of Information Society development in Poland up to 2013** approached this by its declaration to increase the percentage of businesses using on-line retail and trade, increase in access to the 20 basic public services and a greater share of citizens taking advantage of on-line registries. The integration of European Information Society advocated by **i2010** was to be achieved by raising the level and accessibility of education (on all levels) and promoting the concept of ICT assisted lifelong learning, demand driven adjustments to training content, and the use of ICT as a medium further enabling citizen participation in public, social and cultural life. The third priority of the i2010 initiative calls for integration within the European information society through, among others, answering needs of aging society (technologies for better health, independent living –smart homes). The Directional **Strategy for Information technology development in Poland until 2013**, and **Perspectives for transformation of Information Society to 2020** includes the declaration that in 2020 at the latest each Polish patient will have an electronic health record, and e-prescriptions will be in common use, thus translating into lowered costs of health services.

The **eEurope 2005** action plan demands that Member States ensure broadband access for all public administration bodies. The Directional **Strategy for Information technology development in Poland until 2013**, and **Perspectives for transformation of Information Society to 2020** translates this obligation into national strategic frameworks by putting most pressure on rural municipalities and small towns, calling for the direction of resources to those areas. This will allow supplying them with computer hardware and connecting infrastructure, coordination of actions aimed at acquisition of Structural Funds for ICT/IS development and the support of local and regional broadband initiatives and exchange of good practices.

The recognition of the role of public services and a single European information area in the **i2010** and the **Strategy of Information Society development in Poland up to 2013** was expressed by the call for a wide use of standardized and interoperative ICT solutions, access of wide array of pan-European public sector services, and access to reference registries and other PSI with intention of their reuse for content and service creation. Local and regional initiatives, such as the Gateway to Podlasie are an attempt to fulfill those demands.

The **2020 National Strategy for ICT development of Poland**, adopted in 2005 by the Ministry of Science and ICT Implementation defined the following priorities: 1. Providing all citizens and entreprises with infrastructure for access to on line services; 2. Development of broad and valuable on-line services available via internet and digital audiovisual media; 3. Development of digital content; 4. Broad education for the development of Information Society. Regional Development ranks high throughout the document, which calls for large subsidies destined for building infrastructure in rural, remote and sparsly populated areas, where such investment is not, under normal circumstances, economically viable. This problem was later adressed in the Innovative Economy Operational Programme, where there currently exists a funding opportunity for such projects (action 8.4).

Public services on line gained importance over following years – this was in large part the consequence of EU legislation (such as Services and PSI Directives). Their role was finally sanctioned with **Digitization of Entities providing public services Act (2005)**, which demands that all public bodies provide the citizen with an online delivery of their services. With the onset of the 2007-2013 financial perspective, regions became increasingly aware of the need for strategic documents which, reflecting specificities of a given region, deliver an action plan for ICT/IS development. A number of regions already have a separate IS Strategy, others included ICT/IS chapters in their Regional Innovation Strategies or in Regional Development Strategies. The quality of those documents varies greatly, in some instances. Strategic documents in place for the 2007 – 2013 period are far more transfixed in the EU strategic framework. It should be noted that at present most of the regions have their own ICT/IS policies in place and they are compliant with EU level policies, in some instances they also call for the creation of Local Digital Agendas. Against this backdrop, Podlasie is lagging behind, as **no ICT/IS policy is present to this day.**

National context (socio-economic, geographic, political). Since 1989, Poland has faced the need for a fundamental overhaul of the legal, administrative and political framework. All policies, strategies and guidelines have had to be either revamped or created. In the context of regional and rural policies, it was the administrative reform (Municipal Government Act, 1990) which brought about the biggest change – the delegation of administrative competences to the regions and the re-appearance of local and regional governments was the decisive factor which empowered them to take the responsibility for local development. In the mid 1990's, Poland had not yet made coherent attempts to structure and prioritize ICT/IS policy; it had to take a back seat to other, more pressing needs such as privatization, monetary reform, etc. The development of the IT industry followed the general global trend; it did not, however, translate to more than basic hardware and software development. The growth of the information & communication market and services was not impressive, being additionally hampered by strict regulation and dominating state telecoms operator (TP S.A.). While ICT/IS infrastructure in large cities was best described as inadequate, problems with access and availability were even more compounded in rural and remote areas.

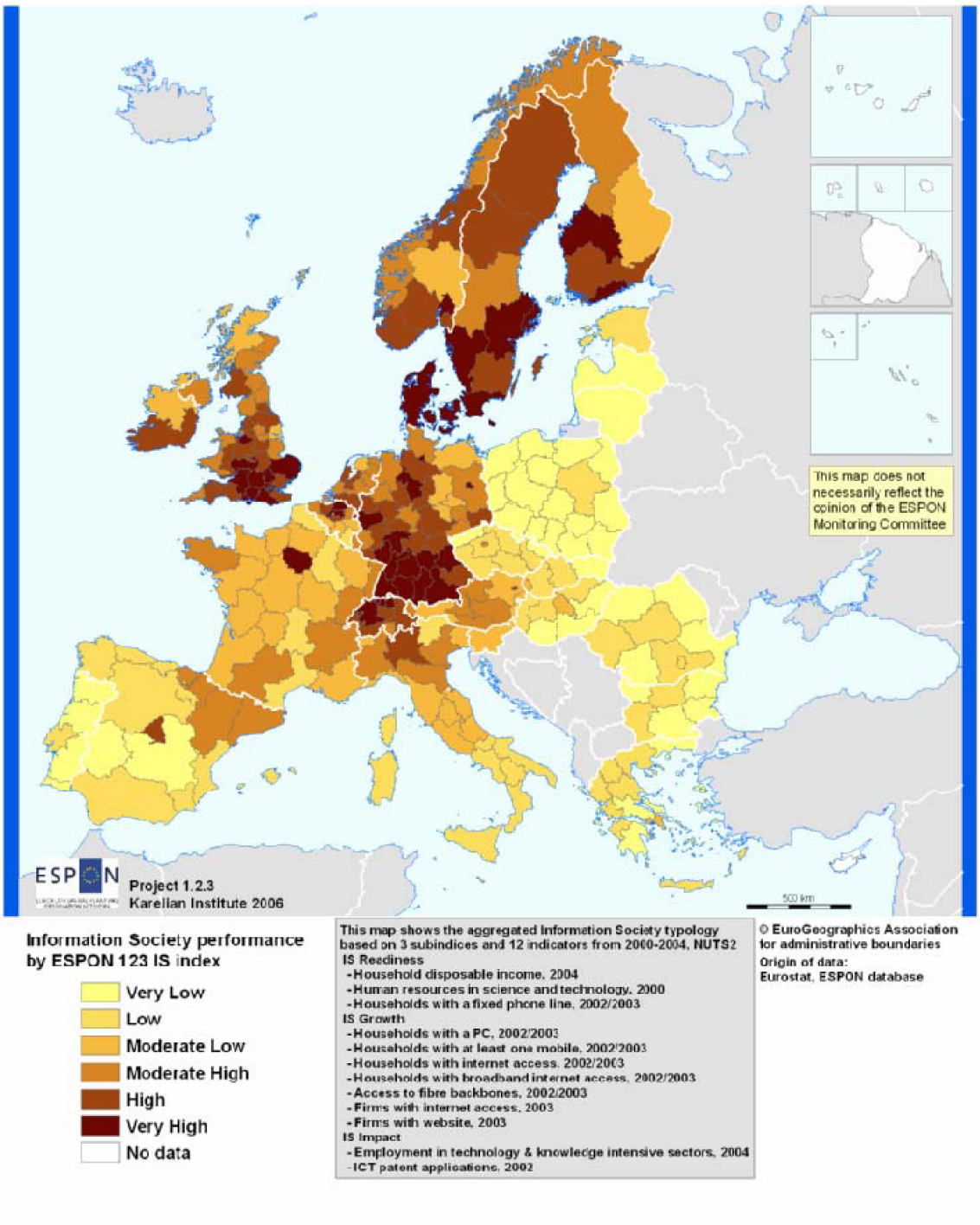
The first significant move towards an integrated ICT/IS policy with defined priorities was marked with the adoption of the Policy on Telecommunications Development, passed in 1998 by the Polish Government. In 2000, the State Committee for Scientific Research drafted a strategic document Aims and Directions of Information Society Development in Poland, calling for the preparation of citizens for the digital age and on Sept. 11th, 2001, the Council of Ministers adopted ePoland – a plan of actions for the development of the Information Society in 2001-2004. This official document laid the ground for future ICT/IS policies. Among its priorities was ICT for rural areas, stressing the need for the support of IS in rural areas through providing access to cable network, data transmission, and the encouragement of capital investment leading to improvement in ICT infrastructure.

In the period leading up to Poland's accession to EU, national objectives were defined by the acquis communautaire, although it should be noted that The State Committee for Scientific Research (later - in 2004 - transformed into the Ministry of Science and ICT implementation) drafted the working paper Suggested directions for Information Society development in Poland until 2020 in 2004, pressing to allow foreign providers to operate in the country, thus delivering a greater push for the introduction of e-services and better access to those services. Priorities for regional (similarly to national) development are in general underlined by the need for investment in infrastructure. On the eve of accession to the EU, Poland still did not have a consistent strategy for ICT/IS. 2005 marked the turning point in ICT/IS policy, with the drafting of the Strategy of Information Society development, the National Plan for the development of ICT, but most prominently passing of the adoption of ICT in public sector Act (on February 17, 2005).

Regional context (socio-economic, geographic, political). Podlasie's rural areas face problems specific to that region - Podlasie is hit harder by depopulation then any other region in Poland. Counties facing problem more then any others include Hajnówka and Bielsk Podlaski. Digital divide exists in the form of poor awareness and lack of digital competences among senior citizens and rural communities. Other challenges included poor ICT penetration at local government level. The level of digital divide may be shown with the ESPON 1.2.3 composite IS index. The index has been compiled using the scores of the ESPON countries for the eEurope index and Networked Readiness.

ICT related actions deemed necessary for regional development were: further expansion of modern ICT infrastructure with cross-organizational dimension, provision of opportunities for distance work, creation and support for information Centres – especially in public, pedagogic and school libraries, as well as in teacher education Centres, training and ICT technology transfer, with priority given to support for widespread use in SMEs, including those in rural areas. Additional actions named by the Strategy were the support of innovative SME projects leading to wider use of ICT, building of Information Society through wide use of ICT in education and lifelong learning, company management, services including electronic services and trade, etc., the dissemination of knowledge about benefits from innovative use of ICT in products, processes and services, and the improvement in quality of public services through the use of ICT. In response to those mounting challenges, Regional government launched a project realized within the Integrated Regional Development OP which included implementation of electronic document circulation, the launch of the "Gateway to Podlasie" regional portal, implementation of e-signatures, virtual front office and GIS - in a pilot action for future large scale implementation.

The phenomenon of synergy between various sources of funding is difficult to formulate when there is no sectorial IS development strategy in place - actions were undertaken based on the 2010 Podlasie region development strategy. which contains brief general statements on the importance of information society. Regional Authorities failed to create a single strategic document outlining the policy which would be a compromise between regional and local objectives. Instead, they concentrate on investment in their own, flagship projects which, when completed, show a substantial mismatch between intended and actual impact.



Observations.

Podlasie took the first steps in the development and improved access of the public to public information and electronic services in 2001, but concrete efforts begun in mid 2003 when the first server centre for Podlasie was launched, together with a Public Information Bulletin, encompassing municipal, county and regional levels. In parallel, an information portal, “Gateway to Podlasie” was launched, in unison with electronic document workflow system in 12 regional administration offices. The next stages of the ICT systems’ development included the 2 projects described in this case study:

- Regional Network and Certification Management Centre, financed from ERDF and encompassing 98 municipalities;
- ICT training course, managed by the regional Employment Office, financed from ESF

Implementation of electronic services for citizens of Podlasie – the realization of a PLN 26 M project aiming at the implementation of electronic services, and the creation of conditions for on line access to education and administrative services. The system comprises of (among others) GIS modules allowing for access to spatial information resources of 3 large cities (Bialystok, Suwalki, Lomza). In the course of the project, the majority of municipalities (98) in Podlasie region were given a single system encompassing document repository, electronic document circulation, electronic signature (distributed among local government employees), a single e-mail system within the "gateway to podlasie" portal and the possibility to upload content on the "gateway to podlasie" platform, including the Public Sector Information bulletin. It is also worth mentioning that the systems underlying the “Gateway to Podlasie” allowed for the integration of two other projects realized by the regional Police and Fire departments, the subject of which was investment in infrastructure allowing for the improvement of workflow, and benefiting from functionalities present in the “Gateway to Podlasie”.

The project consisted of a number of components:

- **Information portal of the Podlasie Region ”Gateway to Podlasie”** - a CMS application built on ASP.NET platform -for content management which offers standard CMS functionalities.
- **Podlasie Region Public information Bulletin** – a CMS application built on a PHP platform which is currently utilized by 60 local governments and 61 dependant units.
- **Webpage design application** for local governments
- **On-line public services and electronic document workflow systems** used by 133 local administrations; it consists of 2878 procedures – the number is constantly growing, as the application allows users to add their own procedures through on a need basis. Access to data at: http://cu.wrotapodlasia.pl/pages/sg.html
- **Podlasie Region Certification Centre (CCWP)** – issuing certified electronic signatures; within the project, 2181 certificates were made available for issuing. More information at: http://ccwp.wrotapodlasia.pl
- **Geographic Information Systems** for cities of Łomża, Suwałki and Białystok.

Additionally, the project allowed for acquisition of hardware equipment – Server rooms in Podlasie Marshall’s Office and in Łomża, Suwałki and Białystok and accompanying infrastructure, operating systems and firewall software as well as the installation and configuration of technical infrastructure.

In terms of achieved results, the project achieved following indicators:

- New electronic document workflow systems –97,
- Updated electronic document workflow systems–1,
- Electronic document archiving systems –98,
- Antivirus systems –1377,
- Servers, databases/applications –125,
- Archiving and data backup systems –98,
- Server platforms for applications –103,
- GIS platforms –3,
- Entities connected to virtual network –98,
- Expansion of the Gateway to Podlasie portal,
- Added functionalities of the e-Administration portal,
- Creation of content publishing application for local governments - 1
- Single electronic mail system for local governments -1
- Introduction of digital signature for local governments - 97
- Setting up and implementation (in selected municipalities) of an electronic platform for the cataloguing and invoicing of local taxes and fees.
- Foundation of the basis for electronic public services in city halls of Białymstok, Łomża and Suwałki.

As of May 1st, 2008, Podlasie formally, according to the regional government, fulfilled the requirements set forth by ***the Digitization of Entities providing public services Act***. In reality however, citizens of Podlasie do not make use of public electronic services launched by the government.

"Improvement of practical ICT knowledge and professional skills among employees in Podlasie" was a ESF project[46] focused on the training of employees willing to devote their after work time to improve their ICT competences to in turn become more competitive on the labour market. Within the project budgeted at PLN 5 033 000 (~ € 1.3 M), 634 training courses were carried out and 4867 individuals completed the course, which included the following topics:

- Practical use of modern ICT systems in the document management business and administrative processes (system administrators);
- Practical use of modern ICT systems in the management of electronic customer-administration/client&public servant/employee transactions (e-Administration & e-Business ICT systems);
- Practical use of modern ICT systems in management;
- Back-office type systems;
- Modern channel of electronic Communications between the public servant/employee (advanced e-mail and Workgroups systems);
- Practical use of electronic signature in the work process of the administration/public officials.

[46] Within the Integrated Regional Development , Activity 2.1

In parallel to the 2 above projects, the Euroregion Niemen, together with East Poland Science & Technology Park in Suwalki realized the e-Sudovia project which was intended as an awareness raising action for representatives of local governments and local leaders. As such, it included a training component, which consisted of 2 workshops: “Methodology of innovative and information potential measurement” and “Innovative growth and information society cooperation network”. In addition to these workshops, the beneficiaries of the project participated in a study visit to Stoszowice municipality in Lower Silesia, where they had an opportunity to witness the success of eVita municipal broadband project. e-Sudovia also launched a thematic portal which allows for access to project results (reports) and literature in its knowledge base library - it includes articles on innovation strategy and reports from research and statistics. It is worth adding that the coordinator of e-Sudovia project undertook an ambitious effort to conduct a questionnaire research of the innovative environment and use of ICT in Sudovia subregion. In its course, 1343 questionnaires were completed by representatives of local public administration, businesses and individuals.

Results (lessons learned). Podlasie region fails to capitalize on previous experiences of local governments and good practices from other regions in the area of providing IS infrastructure. Podlasie region was not able to exploit synergies in respect to regional and rural policies at the level of infrastructure and digital competences, although the regional government maintains that it undertakes efforts to balance existing supply and demand through support for creation of skeleton networks reduces expenditure incurred by operators and "last mile" suppliers and it searches for alternative sources of funding beyond the regional OP. An example of that may indeed be the additional public funding acquired from the Ministry of Internal Affairs and Administration for the "Functional expansion of the "gateway to Podlasie" system and on-line public service platform". Contract signed on Oct. 16th, 2008.
Regional government maintains that as a consequence of the „Gateway to Podlasie” and follow up project in which public e-services were implemented a number of public services were nominally at least partially available on-line. The number of pages containing information for citizens placed on-line amounted to 2937, of which 1914 were on-line forms. 160 cases were initiated on-line: in addition 500 cases were registered and tracked on-line in local government offices. Regional officials admit that until now, no measurement of project’s impact on region’s economy has been measured therefore savings in terms of time and money may be difficult to estimate, they are however not dismissible. This claim seems overly optimistic however, as there is a low awareness of those services among the wider public and taking into account the total expenditure incurred for this aim, 160 cases initiated on-line (meaning that statistically, less than 8.5 % of available forms were used) are grossly inadequate. Local governments were offered a range of functionalities and channels of communication to their communities: according to project reports 25 of them utilized an administrative tool to create their own web services; in addition 130 of them have their own page at the Public Information Bulletin service (integrated with “Gateway to Podlasie”). On the eve of legislative changes which will sanction actions and declarations made by the citizen from his or hers trusted profile as admissible, it is

expected that use of on-line services will gain in popularity. This hope may be justified by the example of e-declarations project coordinated by Polish Ministry of Finance, which saw 80 thousand users submitting their income tax declarations for fiscal year 2008 in just 2 months from its launch.

Upon the conclusion of EU funding for the “Gateway to Podlasie”, the regional government has decided to build on its results with the help of ERDF support in the new financial perspective. Main ICT/IS initiatives planned for the 2007 – 2013 period include the following projects which have already been selected for funding in the Regional OP:

- Integration of electronic systems, optimizing them towards the needs of local communities and public administration
- Creation of internet access infrastructure for local administrations and their dependencies
- Improvement of access to public services for the citizens of Podlasie, dissemination of public and commercial education services, expansion of system platforms and back offices
- Creation of thematic vortal and IT systems in health care providers managed by local government, communication between patient and health care providers, electronic documents, electronic health records.

It should be noted, however, that the regional government has decided to take charge of the whole e-Administration process, instead of delegating some tasks to municipalities and organizing calls for funding in which municipalities compete with their own information society projects. Currently, local administrations are engaged in a debate with the regional government on what would be the best approach and both sides have valid arguments. Regional government maintains that the municipalities and counties of Podlasie have a varied potential and resources. As a consequence, the competences and capacities necessary for a successful implementation of a project are lacking in some areas, therefore they would be in danger of further exclusion as they would not be able to compete for funding on even terms with developed areas such as Suwałki, Białystok or Łomża. Moreover, according to the regional government, central coordination by the regional government allows for the easier adoption of common standards and a more favourable negotiating position in talks with subcontractors, due to the greater volume of the order. The beneficiaries of the e-Administration solution – i.e. the municipalities of Podlasie – will receive a ready, out of the box solution which they will easily employ in their services to the public.

Meanwhile, local administrations strongly disagree with the above and maintain that while they are conscious of the benefits of common standards, they could be easily maintained even when e-administration systems are implemented independently, as there are frames of minimum interoperability already in place. Moreover, even though the overseeing of the regional government is justified in the implementation of a standard e-Administration system, individual municipalities have unique needs

resulting from their local specifics, therefore there should be a source of funding which would allow for the support of their own initiatives, as municipalities know best what they need. Savings made by end user – whether defined as a municipality or a single regional public institution – are often only a result of expenditure incurred from the regional government, such as is the case of certified electronic signatures acquired within the “gateway to Podlasie” project and later distributed free of charge.

Currently however the centralized approach prevails, which is further evidenced by yet another, large scale information society project. Podlasie region will benefit from the Development of Eastern Poland interregional OP and through this instrument, the region will participate in the "Eastern Poland Broadband Network" project. the aim of the project is to provide broadband internet access to mostly remote and rural areas. Podlasie is among the 5 regions which will benefit from the skeleton broadband network built within this project and since the guiding principle is the improvement of internet access in the eastern Poland as a whole, the coordination must be carried out at the above regional level. This leads to inevitable generalizations and compromises, which leave many local communities unsatisfied and voicing their objections. This in turn results in delays – already witnessed at the current stage of documentation and feasibility study preparation.

In conclusion, the projects investigated have substantially contributed to the introduction of electronic administration services to the public: the ESF financed ”Improvement of practical ICT knowledge and professional skills among employees in Podlasie” project provided fundamental training in digital literacy to a large audience and those user competences will stay in the region forming a building block complementary to the “Gateway to Podlasie” project. The strength of the latter is, most notably, a common standard readily available to all municipalities of the region and a driving force for further regional e-Administration initiatives. Weaknesses of those projects are rooted in the central approach, which is inherently less sensitive to local needs and requirements. The “Gateway to Podlasie” has a great potential provided legal conditions change and allow for the adoption of the trusted profile as a substitute for a certified electronic signature – which is a very likely scenario. the widespread adoption of public electronic services by both citizens and businesses will allow for significant savings in time and resources for both sides, thus contributing to economic growth of the region.

3.3 Technology Transfer Regional Competence Centres - Campania Region

Introduction. National and regional policies in Italy as well as in other European Union (EU) countries have increasingly adopted innovation as a strategy to promote the creation of new products and processes and knowledge diffusion at the territorial level. Knowledge creation leads to innovation, so it is important to identify the sources of knowledge creation and adopt specific actions to improve them. The linkage between policies and territory in this framework is essential, because only the local policy makers have a wide and in-depth knowledge of the economic and social structure of the territory to devise the best policy actions in order to meet the goal of boosting innovation and competitiveness.

The policy makers play a role of catalyser that facilitates the transfer of new knowledge from Research Centres and universities towards firms and vice-versa. Modern theories on technology creation and diffusion converge on one point: the logic of a "system", where all stakeholders are involved and become demanders and suppliers of new knowledge. In this case study, the territorial unit of analysis is the Campania Region. The study is structured in the following order: in the first section, the project is presented; section 2 illustrates the compliance of the project within the European and National context; section 3 presents the methodology; section 4 presents results of the project, and section 5 gives an evaluation of the project.

The Project - Mission. The mission of the Regional Competence Centres, based on the objectives of the Regional Development Strategy, and in keeping with the objectives contemplated in Measure 3.16 Campania ROP 2000-2006, under which the Centres were established with funding of 208,725 Meuro, was to coordinate project activities of applied research that respond to market demand, so as to favour the transfer of the results to the market. The primary purpose of the Centres is to serve as a liaison between the academic and business worlds, transforming research projects into successful entrepreneurial initiatives.

Objectives. The Centres work to:

- Create favourable conditions for research activities leading to transfers of the resulting technology;
- Favour cooperation between research institutions and public or private partners, in order to accumulate a critical mass of know-how and human resources;
- Promote the direct involvement of business enterprises in the planning and implementation of innovation;
- Promote the creation of a knowledge-based environment.

The Competence Centres operate in support of the following strategic sectors, in the interests of developing the territory:

- Information & Communication Technology
- New Biotechnological Materials

- Health, Food and Agriculture
- Environmental Safety, Monitoring and Protection
- Cultural and Tourist Resources
- Aerospace Logistics, Transport and Motor Vehicles
- Energy.

The **strategic sectors** of operation were identified under three criteria of selection:

1. the presence of important business operations, highly representative of the regional economy as a whole, which, in order to maintain their competitive positions and aim at further development, need to stimulate their R&D activities;
2. the presence of a top-flight research system capable of attracting major enterprises and promoting the "birth" of high-tech companies;
3. the use of the regional research system as a tool for meeting the priority social and development-related needs of the Campania Region;

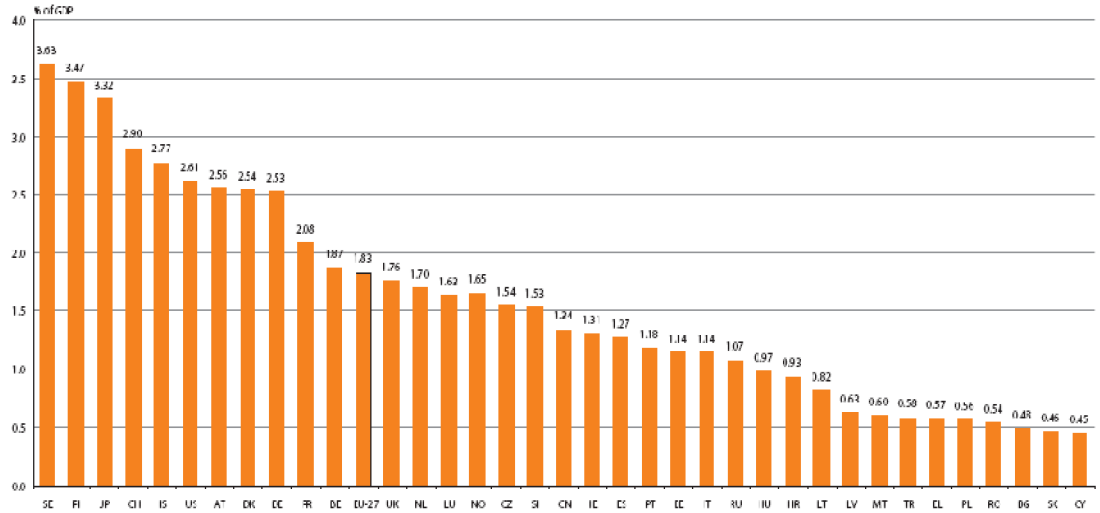
The Demonstrator Project is a three-year long research project developed by the Regional Competence Centres for demonstrative purposes, in order to assess:

- the capacity of the implementing subjects to engage in joint efforts;
- the integration of the significant amount of scientific instrumentation at the disposal of the Centres;
- the possibility of tying the phase of pre-competitive development to the pre-existing scientific idea;
- the transfer of technology.

Context. Recent developments in the broader debate on innovation go further, making a distinction between the knowledge economy and a knowledge-based economy that is indeed the ideal target of the **EU** Commission according to the Lisbon strategy. The interesting consideration, based also on previous analyses that see knowledge as a resource, is that knowledge is no longer only an output but also an input.

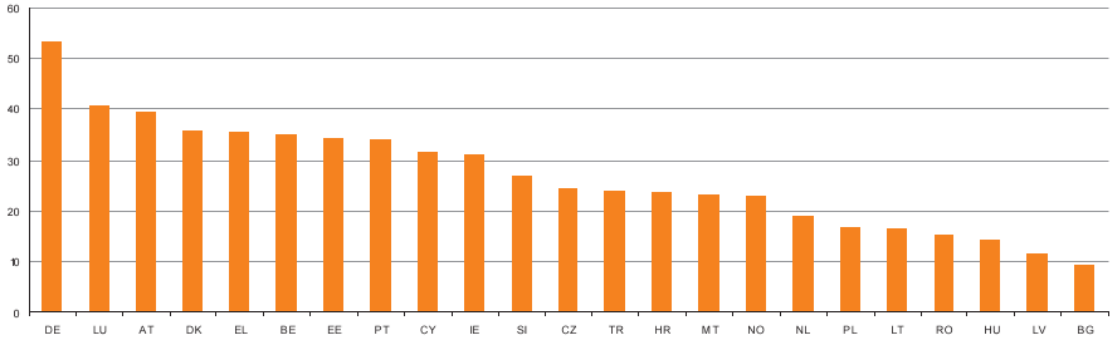
Italy was a late industrialized country, it did not make any serious effort to overcome its backwardness by establishing new modern institutional forms at the frontier of the most advanced research (Fig. 1-2). Italy's private industrial and service sector (excluding financial, social and personal services) is the third largest in Europe, behind Germany and the United Kingdom, in terms of persons employed; 47 per cent are employed in micro-enterprises (1-9 employees), thus confirming the extremely fragmented nature of the Italian production system, with its many small enterprises (ISTAT, 2009). In Italy, there are approximately 4.3 million micro enterprises (1-9 workers), 95 per cent of the total. From the economic point of view, however, it is enterprises with over ten workers that produce two thirds of total value added (ibid). The small firm network has developed historically on a local, regional and vocational basis.

Fig. 6.3.1 R&D intensity (R&D expenditure as % of GDP), all sectors, EU-27 and selected countries — 2007



Source: Science, technology and innovation in Europe- EUROSTAT- 2009

Fig. 2 Innovative enterprises that introduced organisational and/or marketing innovations by country, as a percentage of all enterprises, available EU-27 Member States and selected countries, 2006



Source: Science, technology and innovation in Europe- EUROSTAT- 2009

This network consists of a large number of small and medium-sized enterprises (SMEs) operating in traditional sectors (clothing, textiles, leather products, footwear, furniture, spectacle frames, gold & jewellery, sportswear) and industrial machinery (textile apparatus, medical instrumentation). Districts and clusters have largely been recognized as efficient nexus of knowledge creation, but the recent process of delocalization has represented a real challenge to the existence and performance of districts.

The Italian core R&D system is much more recent than SME networks. It consists of large firms with R&D departments, small high-tech firms, universities, large public

research institutes and the national government. The Italian R&D system is characterised by:

- low R&D capability in several industrial sectors due to relatively few large firms and few small high-tech firms;
- lack of technologically progressive public procurement;
- R&D activities have been rarely addressed to specific policies:
- a lack of coordination;
- insufficient dialogue between the SMEs and the core R&D system.

The formation of networks between private and public bodies is the main way to stimulate innovation in SMEs and extend the dissemination of R&D results. So, the need has emerged to create intermediary institutions that were neither business enterprises nor government agencies, but which formed an integral part of the local/regional system of innovation. This is the rationale behind the institution of the Regional Competence Centres.

Methodology. Information, Knowledge, Research and Innovation are of strategic importance for the degree of competitiveness of an economic system. These factors, by producing a virtuous circle of the spread and establishment of innovation, on the one hand will raise the technological standard Italian businesses have to meet, and on the other create a positive fallout by encouraging technology transfer. In the Campania Region, the competitiveness of the economic system is supported by a network which promotes ideas, makes room for applied creativity and gives opportunities for experimental innovation. The Regional Competence Centres are structured with the idea of bringing together scientific bodies in Campania dedicated to scientific and applied research into a network involving universities, scientific and industrial research institutes, schools and vocational training Centres, and businesses. They represent a networking model with the objective of bringing together the supply of research existing in the region but previously unconnected, in a plurality of public institutions such as research bodies, universities, laboratories, etc. Initially financed completely by public funds (2000-2006), the Regional Competence Centres have been transformed into independent private law research bodies, still mainly financed through public funds. In practice, their financial self-sufficiency and capacity to attract private investments is still low, although it varies significantly among the Centres.

Results. There are 10 Regional Competence Centres:

1. AMRA
2. BENECON
3. BIOTEKNET
4. DFM
5. GEAR
6. ICT
7. INNOVA
8. NT

9. PRODAL
10. TEST

AMRA- Regional Competence Centre for the Analysis and Monitoring of Environmental Risk. The Centre's mission consists in the transfer of new technology for the reduction of environmental risk from research to businesses. The competitive advantage of AMRA consists in having the use of state-of-the-art technological instrumentation, availing of a team of multi-discipline experts and in supplying services at the forefront in terms of innovation and in some cases unmatched in Europe. In pursuit of its work, AMRA has access to 300 researchers, laboratories and advanced equipment worth of €15 million, in particular in the fields of seismic, hydrogeological, volcanic, costal and anthropogenic risk. The AMRA Centre backs those interested in the environmental protection of large areas through the planning and development of the Early Warning system. The know-how, acquired by the Centre, for the treatment of data provided by the Seismic Antennae is useful for the development of a services sector in the area of environmental control and construction engineering. AMRA offers consultancy in defining the technical-economical picture of a fluidized bed gasifier plant to businesses, including SMEs, who wish to operate in the sectors of mass and energy recovery from pre-treated municipal solid waste, and in particular, post-consumer packaging.

BENECON – Regional Competence Centre for Cultural Heritage, Ecology and Economy. Benecon provides analysis and evaluation of the territory, environmental reclamation, recovery and preservation of landscape, archaeological, urban and built environments and in addition designs and develops green businesses and eco-museum areas. The Benecon Centre avails of 250 researchers from four universities in Campania and two research centres and a wealth of state-of-the-art scientific instrumentation. The range of activities of the research centre is focused on three macro-areas: the Environment, the Description of the Territory and the investigation of the Structure and Chemistry of Materials. The Centre holds a patent for the Carta Uni.Te.Mi.Ca (Catalogued Minimal Unit of the Territory Map), a platform which appoints the network of competences through the processes of differentiation and measurement of all the material and immaterial components of natural and man-made environments. The Centre supplies support to strategic environmental evaluation processes for territorial planning, introducing the principle of pre-emptive environmental analysis to any type of planning choice (Directive 2001/42/CE).

BIOTEKNET - Regional Competence Centre in Industrial Biotechnologies. BioTekNet carries out activities of research, development, training, consulting and technological transfer in the biotechnology sector, with the goal of establishing as a system and developing through integrated management the professional skills and know-how of its partners in a sector of strategic importance for the economic and industrial development of the Campania Region and of Italy as a whole. A specific focus of the activities of BioTekNet is the development of industrial processes and technologies that utilise biological systems or their components, in particular as regards the following area of expertise: biosensors, biomedical applications,

fermentation processes for the production of pharmaceuticals, nutraceutics and cosmeceutics, and biotechnologies for the environment and the food industry. BioTekNet offers the world of production:

1. applied research
2. development of industrial processes and technologies that use biological systems of their components, in particular with regard to:
   - biotechnological production processes for the chemical and pharmaceuticals industry (the development of pharmaceuticals, nutraceutics and cosmeceutics);
   - innovative biosensors;
   - biotechnologies for the environment and the food industry;
   - biomedical applications
3. consulting and services
4. advanced chemical and structural analyses
5. bioinformatics
6. fermentation technologies
7. methods for the bio-treatment of liquid waste
8. economic-managerial assistance with the start-up of knowledge-based enterprises and the development of highly innovative industrial projects
9. advanced training on-the-job training of researchers skilled in the transfer of technology and the implementation of innovation in production processes
10. activation of training procedures for the creation of professional figures with highly specialised technical expertise.

BIOTEKNET also provides the production system with a wide range of skills and know-how able to support companies during the design and implementation of R&D projects and the industrialisation of the results, in the form of a streamlined organisation that assists companies during the phase in which partners are procured and project proposals are drawn up, as well as in the subsequent phase of project management, all with a willingness to share the risks of research in the course of joint projects.

DFM - Regional Competence Centre for Molecular Diagnostics and Pharmaceutics. DFM's mission focuses both on the "discovery" of molecular basis and the related activities of technological transfer towards enterprises. The main goal is to create new medications and/or diagnostics tools coming from natural or from synthesis processes which are applicable in pathologies of high social impact. The excellence of DFM's research is guaranteed by the active participation of over 250 researchers of the Centre's implementing bodies: The Biostructures and Bioimagining Institute of the National Council for Research Naples (CNR), the Interuniversity Centre for Instrumental Analysis Services of the University of Naples Federico II, the Department of Experimental Oncology of the National Institute of Tumours- G. Pascale Foundation and the Department of Biomorphological and Functional Sciences of the University of Naples Federico II. DFM has a network of highly specialized laboratories, for both research and technical analysis. DFM has an important role in the research and development of anti-angiogenic strategy for the treatment of tumours

and in the design and development of new cardiovascular medication. DFM researchers have registered twenty patents in these fields, twelve of which developed with industrial partners.

GEAR – Regional Competence Centre for GEnomics for Applied Research. GEAR focuses on the development of applied research in human healthcare, facilitating the diffusion of results obtained and supporting industrial development in the fields of structural and functional genomics. Public and private enterprises are offered high quality consultancy and services for the development of innovative products and processes. GEAR is supported by a network of highly specialized laboratories from the major research institutions of Campania Region and the activity is organized in four sections: drug discovery and analysis, diagnostic tool development, discovery management, and technical development. The Centre's main competitive advantages lie in the scientific excellence of its work, tested by the high number of local, national and international collaborations. The Centre's expertise, quality, know-how and technology are available to industrial partners.

CeRICT – Regional Competence Centre for the Information and Communication Technology. CeRICT supplies advanced research in the ICT sector, through technology transfer and supporting spin-offs business. The resources and competences that make-up ICT are joined with two Departments: Information Technology and Telecommunications Technology and eight Hubs. The Departments and Hubs are designed to guarantee the structural concentration and managerial coordination of the research institutes, forming a critical mass of competences and human and technological resources. Each Hub or Department constitutes an access portal to this critical mass of competences and resources.

INNOVA – Regional Competence Centre for the Development and Transfer of Innovations in Cultural and Environmental Heritage. The activities carried out by INNOVA are focused in three macro-areas of the cultural and environmental heritage sector: diagnostics, conservation and renewal, promotion and use. INNOVA's strength lies in having created a network of excellence of integrated competences (human resources and instrumentation) in the field of applied research in Cultural and Environmental Heritage, in the high level of innovation of its output (applications, products, services) and in the integrated systems supplied. The Competence Centre assists in the development of technological innovations, guaranteeing a direct link to SMEs and external organizations interested in integrating the results of the research developed. INNOVA coordinates and integrates research groups from a pool of more than 320 researchers in all the technical-economic-scientific fields involved in the development and transfer of innovations in Cultural and Environmental Heritage.

ProdAl – Regional Competence Centre for Agri-food products. The ProdAl approach is to satisfy the - constantly monitored - needs expressed by the agri-food industrial chain. ProdAl draws on the contributions of research groups from the University of Salerno, University of Naples "Federico II", Second University of Naples, University of Naples "Parthenope", University of Sannio, the Italian National Research

Council and the Experimental Station for Food Preservation Industry – Angri. It operates by integrating the multidisciplinary capabilities of human resources to support the agri-food enterprises through the industrial chain. The organisation model is able:

- to overcome the fragmentation of the research groups acting in the agri-food field in Campania, showing the effectiveness of synergic and multidisciplinary teams
- to highlight the applicative potential of research carried out by research institutions
- to build a stable network of competences acting through an effective system integration
- to make research results available for the productive chains to increase the quality and the added value of products
- to answer to the explicit and implicit demand of transferable research of the industrial system
- to make a new institution consistent and able to manage wide innovative actions in the agri-food field
- to educate professionals for the innovation management of the enterprises in different fields of the agri-food productive chain.

TECNOLOGY - Regional Competence Centre for New Technology Solutions for Production Activities. The Regional Competence Centre – Technology - carries out research, development and transfer of innovative technological solutions within strategic areas for Campania's manufacturing network. The added value of the Centre can be found in the highly innovative quality of solutions manifested in its products and processes pertaining to:

- polymers, composites and biomaterials
- advanced components, devices and sensors
- modelling
- planning and testing of industrial applications
- industrial engineering
- energy systems integration
- automation and control of production processes.

The Centre has a network of departments of the universities and research centres of Naples who in the last 6 years have developed valid competences and delivered ambitious outputs, resulting from important product and process innovations.

TEST - Regional Competence Centre for Technology Environment Safety Transport. TEST experiments, in real and virtual settings, the functionality of vehicles and their components, of infrastructure networks and of propulsion services and systems with a low environmental impact. TEST manages a wealth of equipment and instrumentation and coordinates and synthesizes the best vitality and competences in research and training in the field of regional transport, gained from its 200 researchers structured in 8 modern and efficient laboratories. TEST centralises the coordination of marketing by operating in terms of Customer Relationship Management and

maintaining a strategic capacity to preside over critical factors based on a market-oriented logic. TEST avails of facilities dedicated to the development and the innovation of vehicles and their components, with state-of-the-art plants for numeric testing and virtual reality simulation activities in the field of concurrent engineering methods. TEST has developed innovative production processes in aeronautics.

Internationalization of the Regional Competence Centres. The Campania Region, in Decree n.143 published 17/06/2007, published an invitation to tender for the planning of services and organization of activities to promote the internationalization of the activities and results of the Regional Competence Centres, financed under the Measure 3.16 of the Campania POR 2000-2006, aimed at possible technology transfers generated by specific sector activities in the international markets of the following areas:

- NAFTA
- China and India
- Europe

The model for the internationalization of the results of the Regional Competence Centres has been developed bearing in mind that the internationalization project should essentially produce the following assets for the Campania system of research and innovation:

- the specificity of the RCC: the RCC as the best practice “producer” of innovation in its specific sector;
- the strategic importance of a structured and continuous connection between demand and supply of innovative and/or high knowledge density products;
- the collaboration between all the players in the chain: the research and knowledge world, business world and intermediaries (services and finance), whether public or private bodies.

The goal has been to elaborate a strategic model for Technology Transfer in international markets and a plan of initiatives for improving the development capacity of the Campania research system, by making use of advanced factors of competitiveness centred on technological research, knowledge and innovation and using an approach which promotes the logic of an “open system” between the region and research, with an eye permanently on the international markets and their needs for expertise (RCC).

Unfortunately the RCC internationalisation project has not seen the hoped-for results because of the absence of strong entrepreneurship approach in the RCC management. In fact, after the initial financing from the Campania POR 2000-2006, the RCC should become independent from public funds, also offering competitive research and innovation services on the market, yet only few RCC are working in an international context, and in general they are slow to compete.

Evaluation. The future challenge facing the Regional Competence Centres is to become self-sustaining permanent structures that do not rely on structural fund or public finances for their existence, and consequently not be ultimately dependent on political strategies. Furthermore, the absence of a strong entrepreneurship approach in the management of the Regional Competence Centres has impeded a success story in the sense of international competitiveness.

Strengths. The Technology Transfer Regional Competence Centres have opened a new era for Campania Region Innovation System. The project has established the conditions to facilitate access to innovation existing in the scientific community, stimulating regional public research institutes to:

- make their available know-how more visible;
- know in advance the potential application of their innovations;
- protect the resulting intellectual property;
- organize the distribution of their activities based on market criteria;
- promote knowledge and technology transfer to businesses - concrete, practical, and close to their current reality;
- stimulate technology development in order to support new innovation projects in close collaboration with trade associations and local authorities.

Moreover, the Technology Transfer Regional Competence Centres promote local development in following ways:

- matching the values of the region's economic tradition, experience, identity and culture with the horizons opened by research;
- giving rise in the region to numerous initiatives to support groups of businesses capable of initiating the development and strengthening the competitiveness of the production system;
- supplying technical, scientific and patent information and documentation, reports on the state of the art and market trends, business intelligence tools and technology monitoring, which are important strategic tools available to all businesses (during the start-up phase of innovation projects) and researchers;
- making available tools and resources;
- supporting future entrepreneurs during the critical stage from the conception of an entrepreneurial idea to the creation of the business. This includes offering support necessary to analyse the technological scenario, the potential market and probability of success, basic services for managing the business, and also possible sources of venture capital, selecting the initiatives with the highest probability of success.

Weaknesses

- There are few technology brokers;
- Weakness of regional business stimulating initiatives;
- Inability to attract substantial private financing.

Opportunities

- High quality of research;
- High quality and quantity of human resource;
- Exploiting the current economic crisis as a resource

Economic crisis is not only a period of difficulty, but it is also an opportunity: to reflect upon the errors committed; to avoid repeating them in future; to revitalise development starting from new foundations, as the “creative destruction” of the weakest, most inefficient sectors opens up new opportunities for the redevelopment and growth of the production system.

Threats

- Political strategy could have negative effect on efficiency and efficacy of Technology Transfer Regional Competence Centres
- Shortage of private initiative

3.4 Enhancement of Knowledge and the Information Society in the Valencia Region

Abstract. The present report intends to provide an in-depth analysis of the evolution of a single strategy considered as a permanent project, what can be considered by itself as a powerful tool to enhance and develop the information and knowledge society in the Valencia Community Region and its consequences. Through different actions, projects and networks, the Valencia Region Strategy has implemented a permanent system which can be considered as a good practice that started as a project with the creation of a Foundation, and could be a model to be studied in four different levels:

- EU level,
- National Level,
- Regional Level,
- Local level.

The analysis will show how at these levels, the strategy applied has had its impact on different operators: decision makers and local authorities, non profit entities and enterprises; and the interactions between all these operators to achieve common results with respect to the information and knowledge society , coordinated through a tool created as a Public Foundation, the FUNDACIÓN COMUNIDAD VALENCIANA-REGIÓN EUROPEA (FCV-RE), which acts as a bridge between all the stakeholders and operators in the Region, promoting Regional policies to EU institutions, bringing EU policies to the Regional institutions and disseminating and participating in the knowledge and experiences enhancing regional networks linked with EU institutions and programmes, and in reverse, bringing EU networks to regional institutions, socio-economic stakeholders and enterprises. As a conclusion to the study, the importance of how to channel the transfer of know-how and knowledge is highlighted, as the initial step for the creation of structures, which, without this channel of permanent presence and dissemination, could leave empty the information and knowledge society only theoretical.

Purpose and Scope of the FCV-RE. Initially, the Valencia Government operated with all the social agencies and public authorities directly. The level of information, projects, proposals and deals to be carried out directly by the Government through its officials was complex and success limited because of the following problems:

- any decision to be carried out as a Government found was hampered by bureaucracy (too many signatures, delays, non flexible decisions etc);
- generally, officials are regulated by a strict labour legislation, hindering mobility, while the officials are often hampered by language limits, insufficient preparation and lack of flexibility;
- how to receive specific lines of funding apart from the funds received directly as a Regional Government.
- other organisational problems (between different entities, the possible discrimination when dealing with social operators, etc).

In 2000, the Valencia Government launched its strategic plan for application of the EU policies and approach to the EU institutions, embodied in its “Integrated Operational programme 2000-2006”, and after over 2 years of implementation, instituted the FCV-RE in November 2003, a public foundation used as a vehicle for the Regional Valencian Government and its entities, agencies and enterprises, to participate in the policies, actions and programmes of the European Union, enhance and promote the knowledge of them, creating a permanent platform under the control of the supervision exercised by the Valencia Government.

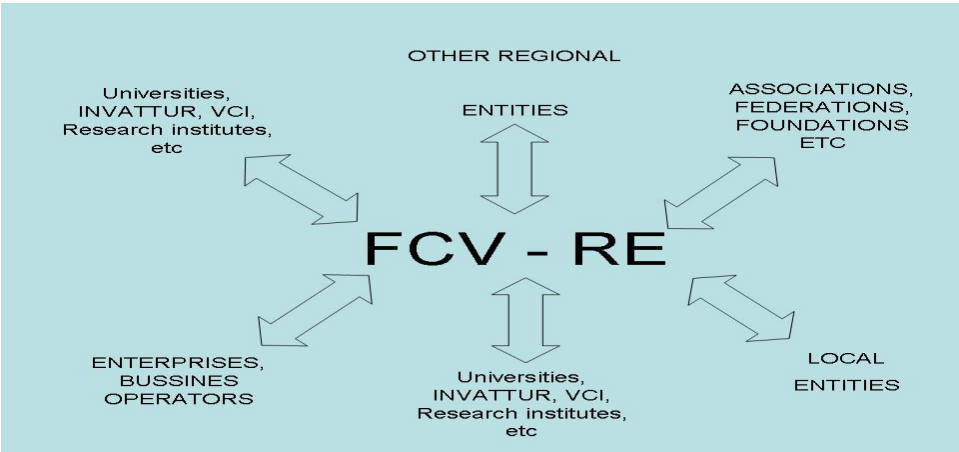
The FCV-RE has the mission of enhancing the participation of any sector present in the Valencia Community in the policies developed by the EU, and boosting the knowledge of them, thereby enhancing competitiveness and growth, through promoting innovation and a knowledge-based society. Furthermore, the mission of FCV-RE includes assisting the Council of the Valencia Government, the “Generalitat” in the following policy areas: Agriculture, Water and Sustainable Development, Research, Development and Innovation, Cooperation and transnationalism, European Union Enlargement, European and Institutional regional and structural funds, Academic programmes, Training and culture, Communication and Information, Economic and enterprise growth, Infrastructure and transport, and any other area subject to EU interest and to the general interest of the Valencian Region.

The FCV-RE functions as follows:

1. Comprehensive monitoring of EU initiatives with a direct impact on the Valencian Community in the institutional, economic, social, cultural sectors and any others deemed appropriate. To this end, the Foundation will establish a direct communication with the community bodies responsible for these initiatives, using the material and human resources available
2. Promoting and facilitating knowledge of the initiatives of the European Union to develop and have an impact on the Valencian Community to citizens, businesses and institutions in the Valencia region,. through the use of systems and information society tools, in particular Internet
3. Training, information and awareness of the Valencian society as a whole on the European integration process through outreach activities such as awareness days, informational seminars and conference
4. Advice and consultations on EU matters, including funding, through the media and techniques and software tools available
5. Assisting the various departments of the Government with responsibility for implementing the Integrated Operational Programme 2000-2006 Valencia, and Community actions after that date resulting in the new regional policy framework 2007-2013, in areas of interregional cooperation, sustainable development, urban and rural development, social policies and seeking participation and support for interregional cooperation projects and promoting cooperation and future of regional policy.

Finally, the Foundation also embodies the legal representation of the Valencian Community in Brussels and in itself serves as a tool at the service of any entity linked to the Valencia stable, thus overcoming the potential problems at bureaucratic administrative level that could hamper the achievement of the Valencian Government targets for the information society and knowledge dissemination.

Methodology. The FCV-RE is linked to other external initiatives, described below. In 2005, the Valencian Government established the Agency of Investment Collection Valencia (VCI), commonly known as Valencian Community Investments, whose mission is to communicate the advantages of Valencia to foreign investors, helping to boost the business network and networking and exchange of experiences, business practices, technological knowledge, and strategies. Thus, the VCI is intended to promote a multiplier effect in attracting investment, coordinating, strengthening and unifying the efforts of different public administrations of the Community in accordance with the strategic plan defined by the Generalitat. The main activity of the VCI is the provision of services to investors, seeking to maximize the appeal of the distinctive features offered by the environment of the Valencian Community by promoting relocation to the area. Moreover, the VCI facilities administrative and bureaucratic procedures, coordinating and providing advisory services in defining, developing and implementing new investments and expansions of existing investments. VCI also provides database access, consulting services, training programs and market research, sectoral analysis and diagnostics.
In 2009, the Valencian Government launched its Plan for Tourism Sector Competitiveness 2009-2011, and a new platform for the dissemination of knowledge and tools for information management, the Instituto Valenciano Tourism Technology (INVAT.TUR), promoted by the Department of Tourism in the Valencia region. This is intended primarily to "promote the relationship between tourism stakeholders in the Region, promoting the transfer of knowledge and technologies in the fields of research, technological development and innovation tourism." Actions will aim to increase innovation as a key tool for improving the competitiveness of tourism businesses in the region. These two examples are strongly linked with FCV-RE's role, which in terms of actions related to information society and knowledge, serves as a "hard" depository of ideas, knowledge, contact and collaboration which, after processing and the development of its business, becomes a Diffuser effect, which may be represented graphically as follows:



These effects are realized at two main levels:

- Dissemination at municipal level;
- Dissemination to other entities, both public and private.

To this end, below are some of these entities that have signed cooperation agreements with FCV-RE:

Valencia Farmers Association, Port Authority of Alicante, Port Authority of Castellón, Port Authority of Valencia, College of Europe, CACSA, Diputación de Castellón, Employers Federation contractors Valencian Administration (Fecoval), Institución Ferial Alicante (IFA), Feria de Valencia Institution, Autonomic Communication Secretariat, Port Study Institute Foundation (FEPORTS), Rural Banking Federation, Valencian Federation of Savings Banks, Valencian Federation Municipalities and Provinces (FVMP), IMPIVA, Valencian Association of Consumers and Users, Moviment Valencia del Consell Europeu, WOKISS. (WIELKOPOLSKA's CENTRE FOR EDUCATION AND SELF-GOVERNMENT STUDIES), S. Hall Antonio de Benagéber, Young Entrepreneurs Association of Valencia, Craft Centre Valencia, Iberdrola, FUNDESO, Frits and glazes Association, REIVAL, CR JIJONA and nougat, INTER, ATEVAL, Universidad Autónoma Gabriel René Moreno (Bolivia), Fishermen's Guilds Provincial de Castellón, Valencia and Alicante, Convention Valencian Federation of Rural Banks, Tyrius Convention, Valencianos Audiovisual Producers Association Convention, Valencian Investment Agreement, Fecoval, AEFJ, FEMEVAL, ProAV, CV EUROCONSUMO,VALENCIANO CENTRO DE ROSARIO,VALENCIA FAIL "THE TURIA", VALENCIAN, ALTA RIBERA JOINT, COUNCIL CHAMBERS OF THE CV, ANFFECC (Addenda), Irrigation Community FEDERATION OF VALENCIA,WATER AND PROGRESS FOUNDATION, CENTRO DE SAN JUAN VALENCIANO, CULTURAL CENTRE OF COLONEL DORREGO VALENCIANO, VALENCIANO CENTRO DE MENDOZA,REGIONAL UNION VALENCIA DE MAR DEL PLATA, SOCIAL CENTRO DE SAN ROMAN VALENCIANO, VALENCIA COLLECTIVE OF CHILE , VALENCIA ASSOCIATION OF MONTEVIDEO, Centre Valencia "senyera" DE SAO PAULO, VALENCIANO CENTRE OF PERU,VALENCIANO CENTRO DE CORDOBA,CENTRO DE BAHIA BLANCA VALENCIANO "PORTAL VALENCIÀ", VALENCIA CULTURAL ASSOCIATION, CENTRO DE SALTA VALENCIANO,VALENCIANO CENTRE OF DOMINICAN REPUBLIC,CV advanced tertiary FEDERATION,ASECAM , CASA REGIONAL DE PARIS,CULTURAL CENTRE OF THE RHONE VALENCIANO,SEACAVA,ASCER, VALENCIA CENTRO UNESCO, AULA U.E. DE LA UPV, FEMEVAL, Regional Ministry of Health, Consular Corps Accredited in Valencia.

Contextual Placement. As a sample of the different themes and areas implemented by the FCV-RE and disseminated through and/or with its associates, the following can be mentioned:

Water - Valencia, following the 60/2000/CE Directive making use of European funds, has made great efforts in the modernization of irrigation systems, upgrading of

distribution networks, water purification and recycling, reuse achieving 2/3 of purified water. The Communication COM (2007) 414 on Water Scarcity and Drought Control in the European Union established the possible courses of action in this area, which is particularly relevant for the Comunitat Valenciana. President Francisco Camps wrote the opinion of the Committee of the Regions 313/2007, which was adopted in April 2008, enabling Member States to carry surplus water transfers under certain conditions and within integrated planning for measures of economy, efficiency and reuse. The European Commission in its Communication COM (2008) 875 adopted this position and accepted that the transfer or desalination solution depends on each individual case. The Generalitat developed, the Territorial Plan of Flood Risk Prevention - PATRICOVA, to meet European obligations established in the Floods Directive 2007/60/EC.

The main asset of the Comunitat Valenciana is the knowledge and experience. Hence currently it promotes regional cooperation platforms in order to exchange practices and lead common positions that allow better policies and better implementation. Valencia led the development of Mediterranean regional document that led to World Water Forum in Istanbul in March 2009 in conjunction with the European Water Partnership and the Conference of Peripheral Maritime Regions. The Assembly of European Regions Summer School held in August 2009 in Valencia, addressed "Water, commitment to the future '. Valencia experts cooperate with EU candidate countries in implementing the Water Framework Directive.

Agriculture in the Region has a great historical tradition even though it represents only 3% of GDP, and has a crucial influence on the maintenance of territorial cohesion in large parts of the interior, such as olive trees in the Maestrat or wine in Utiel-Requena, inland Alicante, Valencia and Castellón. Agriculture contributes to the conservation of ecosystems, such as rice farming in the Albufera. The FCV-RE seeks to inform the sector of EU trends and promote the interests of the Valencian countryside in the development of various regulations and directives as well as search and report on the opportunities that will enable a competitive positioning of regional food businesses within and outside the European market. Another objective is the best use of instruments and European programmes to achieve the objectives of sustainable development, meeting environmental standards and managing waste from farming.

In terms of **Competitiveness and Innovation**, Valencia traditional sectors have shown in recent decades a great ability to adapt to changes in the economic environment and sustain their international competitiveness. In the current economic situation, innovation is considered a key element for companies to successfully overcome their challenges. The Comunitat Valenciana strongly supports the policies of Innovation in R + D + i as a driver of competitiveness of the sectors. This support is provided in the creation of Technological Institutes, National Research Council Centres, and local research Centres and boost innovation and research projects that emerge from regional universities.

The FCVRE supports economic and social actors to participate in EU Programmes such as the Seventh Framework Programme, the Competitiveness and Innovation Framework Programme (CIP) under Intelligent Energy for Europe and Eco-innovation, etc. The economic structure of Valencia is very similar to that of more advanced regions and is dominated by services and industry sector. The service sector represents 64% of total GDP. The industry has a relative weight greater than the national average, reaching 31.4%, while the primary sector has been losing weight steadily and now accounts for only 2.2% GDP in 2008 amounted to 102,4 million €, representing a growth of 3.7% over the previous year. (Source IVEX).

Exports of the Region reached a value of € 19.362 million in 2008, representing an increase of 4.4% over the same period last year. This places Valencia as the second region in Spain in terms of exports, with 10.4% of total exports of Spain. (Source IVEX).
IMPIVA (Institute for Small and Medium Industries Valenciana) has been the fundamental tool for the success of the Valencia region in the field of business support, promoting the integration, assimilation and application of industrial design techniques in business and fostering cooperation agreements for production, technological, trade and joint investment. In addition, it supports the implementation of projects to implement quality systems and environmental improvement in SMEs, and drives innovation of industrial enterprises in management and organizational processes in order to achieve greater competitiveness. The IMPIVA and FCVRE have a collaboration agreement for the promotion of their common activities, for example, the project Seimas. Similarly, the FCVRE has signed partnership agreements with various business associations, to support their activities at European level of monitoring policies and seek funding through European projects.

Transportation has been and remains a key element of many of the strategies in the region. The Foundation is fully aware of its strategic value and, in its role as interlocutor between the region and the rest of Europe, in the most relevant policies that affect regional interests and disseminating the possibilities offered by EU funding for infrastructure and transport EU funding programs (Marco Polo II, Ten-T, FP7, Ecotechnology, programs, urban transport, energy, etc.). This diffusion of information is not unidirectional from the EU to the Region, as the Foundation is, in turn, a platform through which Valencia organizations and institutions can access the different forums of decision and cooperation in Europe, and share views and expertise in important areas such as ports policy, rail infrastructure and sustainable urban transport. The FCV-RE is the coordinator of the Working Group on Transport Network ERRIN (focused on regional cooperation in research and new technologies). Currently FCV-RE is developing projects related to urban transport (CityMobil www.citymobil-project.eu), urban logistics (Castle) and training of port personnel (SEATRAINING, www.seatraining.info). In recent calls for European programmes such as Interreg IVC, TN MED, Intelligent Energy for Europe or Life, more than 25 funded projects have Valencian partners. The FCV-RE task is to inform and support all public and private institutions, together with other European regions wishing to participate in European projects in the **environmental sector**. Another of our tasks is

to provide timely information on developments in Community legislation on environmental matters.

The Valencia region has been the leading Spanish region to receive EU funds for environmental conservation through the management of projects submitted to LIFE. Since the start of the programme in 1992, the Region has participated in over 60 projects dedicated to reducing the environmental impact caused by industrial processes, through technology innovation in energy efficiency, use of renewable energy agricultural land reclamation and urban best management and waste water. Moreover, it seeks to protect, conserve, restore, monitor and facilitate the functioning of natural systems, natural habitats and wild flora and fauna, with the aim of halting biodiversity loss, and in particular, diversity genetic resources in the European Union by 2010.

The Foundation is responsible for those actions aimed at strengthening relations between regions and fostering interregional cooperation through various means. The Region is part of the Committee of the Regions. Within this institution, it is in turn part of the Commission on Sustainable Development (DEVE) and the Decentralized Cooperation and External Relations (RELEX), where it is actively involved with the development of opinions and presentation of amendments. Valencia is a member of the Lisbon Monitoring Platform of the Network of Subsidiarity and the newly created Motor Intergroup. Valencia also promotes interregional cooperation through institutions such as the Assembly of European Regions and the Conference of Peripheral & Maritime Regions where it participates in various working groups.

Similarly, the FCVRE serves on different European networks that are platforms for the exchange of good practices and support of new consortia for EU projects, such as: Lisbon Network, ERRIN - Network of European Regions Research and Innovation, Elisa - The European Network for Social Inclusion and Local Action. ENSA – European, Interregional Network for Social Policies, Erik Network of European regions based on Innovation, Wateregio Enterprise Europe Network, EUREGHA network: European Regional Local Health Authorities.

FCVRE uses its central location in the heart of Europe to strengthen ties of cooperation with other European regional offices. One of the most effective is the exchange of personnel. FCVRE's office has signed exchange agreements with the Italian region of Veneto, with South Denmark (Denmark), West Midlands (UK) and has played host to experts from other regions such as Istria (Croatia), Molise (Italy) Helsinki (Finland). In addition, the FCVRE is defining concrete actions with "key" regions such as Baden-Württemberg, including an agreement for joint actions of cooperation in various fields. During the first call of Interreg IVC in October 2008, out of a total of 497 project proposals, 41 were approved. 4 funded projects include FCVRE which implies an outright grant budget of 958,695 euros in the field of environment and innovation.

The **European Project Lab** is a cross-sectional area that supports the generation of ideas and the implementation of projects of the Foundation Comunidad Valenciana-European Region. The objective is to track and maximize the participation of the Valencian Community in projects to improve the figures of competitiveness, social cohesion and job creation. The main priorities are to:

- Assist in the search for partners and support for the submission of projects to European programmes.
- Organize training courses for staff and professionals FCVRE Valencia to Valencia encourage participation in projects.
- Report on seminars, conferences and other activities to raise awareness of the European Union.

The FCV-RE follows the 7th Framework Programme for Research and Development of the European Commission (2007-2013) under the theme "Health". The FCV-RE actively participates in the OPEN DAYS organized by the Committee of the Regions and the European Commission. In 2010, the Region will participate through the consortium "BIRTH - Regions for Innovation in the Field of Health", which brings together 10 regions from 9 countries to disseminate methods of public and private investment in the health sector. The Foundation monitors the group CORE HEALTH (Working Party on Public Health) of the Spanish regions in Brussels. The Foundation facilitates participation in European affairs of pharmaceutical services and the College of Pharmacists of Valencia and consumers' associations and patients. The Foundation keeps track of the major policies and programmes in public health, consumer protection and pharmaceutical services and collaborates in the work of the communication model of a Valencian regulated pharmacy.

Valencia has led since 2005 the working group RELEX among Spanish regional offices, with an ambitious work plan that includes regular meetings with officials of European institutions, embassies and international organizations to address the EU's relations with third countries. The FCV-RE provides assistance in matters of great importance for economic and social actors in the Valencian Community such as development assistance and participation in international tenders. Under the so-called "Euro-Mediterranean Process", the European Union (EU) is committed to creating a free trade area with the neighbouring countries of the Mediterranean basin by the year 2010 that includes the countries of southern and eastern Mediterranean. The ENPI Operational Programme "Mediterranean Sea Basin", one of the instruments of the European Neighbourhood Policy, was adopted by the European Commission, on August 14, 2008. The Autonomous Region of Sardinia is the Managing Authority; however, given the complexity of the programme and its broad geographic scope, there are two decentralized Antennas, one located in Valencia, with jurisdiction over the Western Mediterranean, and the other located in Aqaba (Jordan) with jurisdiction over the Eastern Mediterranean.

The FCV-RE aims to inform the social partners in the Region on the activity of European institutions and access funding community development projects that help improve working conditions in Europe, develop life-long learning and achieve the

objectives of the Lisbon agenda on employment and equality and effective implementation of the European Employment Strategy. The employment department has a wide base of contacts and facilitates contact with the Valencian Community institutions, professional associations and other European regional offices. It compiles and distributes information on institutional developments, news and calls for projects and offers users best practices, seminars, conferences, job fairs and updated documents on topics such as entrepreneurship, occupational training, active employment policies, promotion mobility of workers, monitoring of flexicurity, equality, non-discrimination, work/life balance, etc.

In Brussels the office brings together local administrations and social partners in the Valencian Community, facilitating technical jobs in the Brussels office and incorporating them into a comprehensive work programme including detailed knowledge of the different areas of the foundation and the services offered Valencian citizens such as employment and local development agents (AEDL's) which allow the participation of local communities across the Valencian community within a specific legal framework. Assistance is provided for access to EU funding and cooperation projects. A Professional Counselling Service, in collaboration with the Human Resources Department, provides all those interested in working within the framework of European institutions and / or international, practical information, tips and personal advice to improve their skills and their chances of entering the European labour market. It provides information and assistance to all unemployed registered at the offices of Servef and access to the AUTOSERVEF service from the office.

The FCV - RE also offers technical assistance, information and monitoring on the various European Union initiatives related to tourism as a source of sustainable development for the Valencia region, as well as guidance in the design of regional strategies city marketing and marketing. In this sense, the services provided by the FCVRE relate to transversal, cross-cutting issues, for example, transport, environment, R & D and innovation, information society and rural development. Moreover, the FCVRE promotes Valencian identity at European level reporting best practices through its regional tourism report, and the organization of conferences, seminars and workshops and activities exchange with various stakeholders. Furthermore, the Foundation aims to promote tourist values and enhances the development of tourism in general, with a special emphasis on rural tourism and conference tourism and conventions.
The preservation and dissemination of **cultural heritage** of Valencia abroad are two of the primary objectives of the FCV - RE, to raise awareness of the cultural richness of the community. Since 2003, the FCVRE has organized more than 60 cultural activities in Brussels to promote its film, music, painting, sculpture, photography, literature and crafts.
The FCVRE has collaboration agreements with several entities working Valencia in the **social field**, such as the Valencia Institute for the Care of Invalids and Social Action (IVADIS) or the Foundation for the Study of Prevention and Assistance to Drug Addiction (Fepade) that have been incorporated a staff member in the Brussels office to encourage their involvement in the European Union. Furthermore, the Comunitat

Valenciana, through FCVRE, participates actively in various social networks as the European Network for Social Policy Interregional Network (ENSA), the European Network for Local Inclusion and Social Action Network (ELISA) or Red European Regions for the Study of Immigration (Red ERLAI). The FCVRE is actively involved in policies, initiatives and programmes of the European Union in social affairs, migration, education, citizenship and immigration through the management and development of European projects in programmes such as PROGRESS, Life Long Learning, and Europe for Citizens.

The Department of Financial Policy and Investment Attraction FCV - RE collaborates in the implementation of the objectives of **financial policy**, in coordination with the Catalan and Valencian Institute of Finance, among others.

The Department's functions are:

1. In coordination with the IVF: Prudential supervision of credit institutions and securities markets. Politics of public credit. Management of public sector borrowing Valencia
2. Relations with other Spanish or foreign government and financial institutions, n particular with the European multilateral financial institutions (including the European Investment Bank, European Investment Fund, European Bank for Reconstruction and Development, Development Bank of Council Europe) or associations representing the general interests such as the European Association of Public Banks
3. Monitoring of the financial instruments of the DG Regio (JEREMIE, JESSICA, JASPERS, JASMINE) and the other institutions of the Union
4. Monitoring and reporting of the activities of European institutions (Parliament, Commission, Court of Justice, Committee of the Regions), in this area, particularly with the DG Internal Market, Economic and Financial Affairs and Regional Policy.
5. Follow up of the guidelines and initiatives of the Basel Committee on Banking Supervision and the Committee of European Banking Supervisors and the Committee of European Securities Markets
6. Follow up of public consultations, procedures for drafting legislation and provision.
7. Attracting investment to the Region in coordination with VCI, IVEX, IMPIVA
8. Monitoring State aid policy
9. Support for preparatory work for the Spanish Presidency, January to June 2010.
10. Relations with the Permanent Representation of Spain to the EU, with groups of the Cooperation Group of the Spanish Regional Offices (CORE), through informal networks of European interregional cooperation, as well as the European Regions and States that are considered appropriate for the Generalitat Valenciana.

During 2008, the FCV-RE participated in several projects that were aimed at the implementation of **ICT** in various fields. Forestur, i-SET, Holon, e-Business for Crafts, or i-AFIEL Webpol are some outstanding examples. The Foundation is continuing its commitment to promote the participation of public and private entities in the Region of the programmes funded by the European Union research and innovation in the field of

ICT. Since its inception, the Foundation has set a goal that the Region is fully incorporated the Information Society and Knowledge. Following a model of close collaboration between public and private sectors, the FCVRE developed a dual strategy, aimed both at civil society and the Valencia Council.

With regard to relations with the Council, FCVRE actively promotes the deployment of ICT in public services and information of the Government and related public entities. Regarding civil society, last June, a representative of the Business Association of ICT Companies of Valencia first visited the headquarters of the Foundation in Brussels. This initial contact began a close relationship between the two entities with the aim of promoting the ICT sector. Besides its importance as an economic sector with significant potential for growth, the ICT sector is called on to be a driving force of Valencian SMEs, contributing to its modernization and competitiveness. The FCV-RE intends to further exploit the opportunities offered by the European Union for widespread use of ICT in all areas of the Valencian society. Since 2008, the Foundation has issued 'INFSO', a monthly compendium of technical notes on developments concerning the Information Society in the European Union for economic and social actors in Valencia. The FCV-RE has followed calls by the European Commission published in 2008 in the context of programs dedicated to the promotion of Information Society and the introduction of new technologies. In particular, the FCVRE has informed stakeholders about the calls published inside the section ICT's 7th Framework Programme for Research and Development (FP7) and the specific programme of support for the policy on ICT (ICT-PSP), in CIP. It has also closely followed the calls within the Lifelong Learning programme, eParticipation, eSafety, eContentplus SaferInternet. To increase the likelihood of success of the Valencian institutions in obtaining European funding it is necessary to know the outlines of any notice prior to publication, for which the FCVRE attaches particular importance to informal contacts with officials.

Promoting the participation of Valencia entities in projects for the Information Society requires a network of constant and effective partners. As is known, the European Commission co-finances projects carried out by consortia that bring together participants from different countries. With the aim of seeking potential partners for European projects, the FCVRE maintains contacts with over 70 European regions through the ICT Working Group ERRIN .

In terms of **communication**, the Foundation's mission is to bring Europe closer to the Region and Europe Region, as its communication strategy is developed in two directions: within the Region and externally. The communication unit provides information and communication services to their employers and conventions, as well as various entities of the Region in all initiatives related to the present European Union. Moreover, given its mission, the Foundation disseminates the initiatives that have received European funding in any of the calls for the European Commission. It also disseminates information from Brussels international events and thus helps to promote and strengthen the image of the Comunitat Valenciana abroad.

The FCV-RE uses the following tools for its communication strategy:

- The **website** of the FCVRE is in many cases the first contact with regional stakeholders. For this reason it is permanently updated in three languages (Castilian, Valencian and English) with the latest relevant information related to the actuality of the Comunitat Valenciana. Companies and institutions can also find information about European projects in progress and partner searches.
- Email Alerts: Infoeuropa is a web subscription service for alerts and timely information on calls for proposals and other opportunities created by European institutions.
- Newsletters: The FCVRE circular is published weekly with the latest news about the activities organized and practical information of interest to the people of Valencia who reside in the European capital. The Foundation also publishes the "Business Innovation" newsletter, with information updated weekly targeting European SMEs.
- Press Releases: The most relevant information about the Foundation and institutions in the Region of Europe are reflected in periodic press releases disseminated to media and the more than 1,500 accredited journalists in Brussels.

The Foundation also disseminates its activities through digital signatures, its own development of identity visuals and logos for European projects and audiovisual material.
The Foundation also manages the website www.activoseneuropa.eu, on European citizenship co-funded by DG Information PE. The aim of the website is to promote active European citizenship and provide information about European institutions, the rights of citizens of the European Union and the opportunities it offers. The website has content in three languages (Castilian, Valencian and English).

The Foundation provides support to European consortia in the preparation and drafting of reports and press releases, as well as in the production of audiovisual material (promotional videos and audio clips) for subsequent inclusion in specialized newsletters, and actively participates in the creation, management and updating of web pages of EU funded projects.

Results. The FCV-RE has been successful in securing the participation of Valencia Region bodies in EU programmes, bringing significant additional funding into the Region as can be seen by the list that follows:

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TOURISME	514.200,00 €
BIOVID	1.866.407,00 €
ECOLIGHT	2.433.746,00 €
URBANBAT	1.720.000,00 €
RUISNET	492.250,00 €
SEEMSEED	419.855,00 €
e-SEVESO	668.160,00 €
FINNETSME	51.096,00 €

SIMPYC	313.331,00 €
CENTURIO	44.590,00 €
WEBPOL	391.751,00 €
ENEBRO MARINO	3.278.216,00 €
ECO-RICE	1.962.795,00 €
NEAC	175.500,00 €
DON@M	1.998.241,00 €
ISME	187.600,00 €
TRANSEA	155.297,00 €
CITY TO CITY	2.161.500,00 €
EUROESTIBA	325.823,28 €
SHOES INNOVA	182.980,00 €
ECODIPTERA	1.669.463,00 €
ZEROPLUS	1.697.884,00 €
RFO PERSPECTIVE 2007-2013	1.190.921,24 €
PROCURA	106.215,00 €
ADR	20.000,00 €
CITY MOBIL	20.781.001,00 €
TAXI DRIVERS	48.706,00 €
REUTILIZACIÓN DE RESIDUOS PARA LA CERÁMICA	4.031.604,00 €
FORESTUR	152.540,00 €
INNOVAFUN	140.688,00 €
BIS-RTD	71.352,00 €
ERLAIM	24.992,00 €
I-AFIEL	107.698,00 €
IEC-SME	236.718,00 €
IPP	38.000,00 €
e-BUSINESS FOR CRAFT	59.050,00 €
EUROSPARKS	2.000,00 €
ROUTES	45.474,00 €
i-SET	204.900,00 €
PATH TO RES	130.316,00 €
ENERGY NEIGBOURHOODS	118.757,00 €
EASY	148.895,00 €
HOLON	112.580,00 €
SEIMED	2.347.550,00 €
RURALE.EVOLUTION	106021,06

BATsGRAPH	471.881,00 €
Best4VarioUse	463.373,88 €
MORE4NRG	115.650,00 €
CASTLE	298.325,00 €
VOICES	87.954,00 €
U@MareNostrum	66.340,00 €
Small City Commerce	70.664,00 €
SHIFT	143.000,00 €
CHORD	120.000,00 €
INNOVATE- MED	286.746,00 €
ECOTURF	431.346,00 €
QUALITY CARE	20.000,00 €
GOING LOCAL	6.780,00 €
Laser Mark	993.248,00 €
TOTAL FUNDS RECEIVED	***61.796.286,97 €***

Other results achieved are:

1. In 2003, 18 people were employed in FCV-RE, 45 employees are working now.
2. In parallel, the initial thematic areas were only a third of the areas addressed today, illustrating that the knowledge and the dissemination possibilities have been increased and empowered.
3. The level of technical expertise acquired by the staff and the quality of the knowledge and information disseminated has been considerably improved.
4. The high level of specialization of the staff working in the different areas has procured better assistance and transfer of information and knowledge, mainly employed under private contracts encouraging the competitive spirit, and a results-based management approach.
5. 80% of the entities in the Valencia Region that submit any proposal in an EU call use the FCV-RE as a supplier and a reference model.

Observations, evaluation and impact on future

STRENGTHS	WEAKNESSES
• Effective and efficient system of communication between the different operators and the Valencia Regional Government with simple agreements. • Effective and efficient system of transfer and dissemination of communication, information and knowledge. • Efficient system of analysis and framing ideas in the different thematic areas. • Acquisition, accumulation and dissemination of the experience and	• There still exists a political link where the foundation cannot act by itself on decision making. In case of change of political team orientation, the strategy will also change . • Sometimes, similar ideas promoted by different social operators in the Valencia Region could enter in conflict when one of them receives the support of the FCV-RE, basically because of the public element. • The different public institutions created are sometimes in friction with the FCV-RE contents and activities, because of the political implications.

knowledge, creating a permanent focus of reference as a “library” plus “laboratory” of projects. • Enhancement of the international, national, regional and local relations. • Territorial dynamic with information and knowledge feedback.	
OPPORTUNITIES • Good data base and contacts means excellent opportunities of finding synergies for economic, culture, research and development growth. • Being a reference and sharing the know-how and experience acquired. • Improving the system by implementing sub structures that could permit more specialized technicians.	THREATS • High dependence on public funding. • High dependence remains on political strategies • Subject to possible competition with private companies, as consultants, advisors, etc because governed by public sector.

A real example of the application of successful practices in a key business in Valencia can provide a relevant insight into the support provided by FCV-RE in innovation and knowledge dissemination. The economic climate in the Valencia Region has been strongly influenced by the construction and real estate sector. In the last two years, FCV-RE has given support to the implementation of new strategies adopted by the construction enterprises and any enterprise related to it. An example is one of the Groups based in Alicante, called GRUPO MARJAL. This group followed the different principles disseminated by the FCV-RE and applied several EU principles to their commercial strategy, such as diversification of their business in different sectors of activity (tourism, real state, public construction, fish farming, incorporating in each the EU principles and Strategies, incorporating also new lines of alliances with other regions through the cooperation in common projects. This group has been awarded the first quality building standard in the Valencia Region, incorporating energy efficiency, eco construction materials and environmental and landscape respect in their project; equally, a system of social integration has been created through agreements with several nonprofit social integration foundations; the creation of an internal team of technicians to incorporate the latest advances in technology applied to housing, tourism public construction and fish farming, in combination with the University of Alicante and the University of Elche. Furthermore, they are promoting the first intelligent campsite in Europe, incorporating the latest technology, and they are highly successful on being approved in public construction tendering, because of the evaluation of their proposals.

Summary of conclusions

The politicians and governments (even EU institutions) are not the engine of the economy. They are a vehicle for the economic strategy, and their impact on the economy is important, especially on tax and social security regulations, offering Public Services but not interfering effectively in the market. The high qualification of "civil servants" will help to lessen bureaucracy and improve the agility on decisions on how to apply legislation and how to deal with administrative procedures. However, they cannot create innovation or activate the economy in practice. In Spain, public employees are highly protected by legislation, with more advantages than normal

workers (incentives), and they limit their work to a rigid application of their contractual obligations, and most importantly, they lack a civic sense in public institutions. Generally speaking, there are no incentives to move up the career ladder once a certain position has been attained, because legislation protects them, guarantees salary increments (whatever the performance) and job changes are highly unlikely. One of the main principles of success of the FCV-RE model has been the fact that its staff are motivated by a competitive spirit, encouraged to train and enhance their skills, thereby allowing the tasks assigned by the regional government to be implemented.

The EU funding programs are mainly focused on public entities and private nonprofit entities, in an age of business exchange of information and knowledge and strong networks. Establishing permanent structures of dissemination and permanent database of contacts and nets; and a relevant control system of the grants procedure, it could be possible to issue funds directly to companies and self employed persons who are really the engine of the economy.

Nowadays, the information and knowledge society works on two different levels: the information society is always "controlled" by public servants and governments making the relevant dissemination of information, participating in the main forums through policies etc. On the other hand, knowledge is mainly managed by large companies and multi-national corporations. SMEs need, better tools to access knowledge and information and funding programmes related to innovation and enhancement of new structures for dissemination and business models. By themselves and without the right institutional support, good ideas and projects will never see the light, so politicians should be forced to create better systems of dissemination to bring information and knowledge to enterprises, entrepreneurs and self employed. In the Valencia Region, SMEs were unconsciously led to work as part of the big multinational promoters system: the large companies could have access to bank funds, and better access to politicians and governments. The access to innovation, to information and knowledge is now directly accessible to the SMEs through the different dissemination tools used by the FCV RE.

It can be said that the Valencia Government was "forced" to use a Foundation to: simplify the bureaucracy and act more quick and effectively; have a motivated and well qualified team (far from the civil servant system and legislation); have a channel of direct communication to any operator or person in/with the Valencia Region for dissemination of information and knowledge; find a different path to obtain EU funds; have a permanent platform to improve institutional relations on the one hand, and private economy relations on the other, have a powerful tool for lobby relations, and be prepared to participate in EU funding programmes, achieving concrete results.

Innovation and urban centres - further considerations. It is interesting that both Campania and Valencia seem to have been driven by the need to coordinate the real potential for applied research, innovation and the spread of knowledge in their

territories, in the former case through potentially self-sustaining Regional Competence Centres, in the latter by the institution of the FCV-RE.

In doing so, both regions have capitalized on established scientific knowledge relating agglomeration and urbanisation economies to economic growth. It is well established since the 1960s that urban areas have become the dominant centres of production and contributors to GDP growth and that urban agglomerations act as a magnet for further investment, clusters of businesses and firms. Theories have captured these effects using the terms agglomeration economies or urbanisation economies which refer both to savings (scale economies) possible from clustering in urban areas and to potentials that could be realized in these locations. More recently, the link between agglomeration research and innovation production has been explored more directly, (Ki 2001). He compares two aspects of agglomeration economies to determine a dominant force in innovating. He holds the notion that urbanization economies prove to be important because cities are a space for new ideas, information, and learning facilities through residential amenities for R&D and foreign-born workers; better business conditions; and an effective cumulative learning than localization economies. Large firms tend to decentralize functions beyond the localized areas, or develop vertical integration where innovation depends more on primate cities than a localized area. Small-and-medium-sized firms are found to be more competitive than co-operative in a localized industry. In the Italian context, research at the NUTS 3 level has shown that innovative activities are considerably more spatially concentrated than production, but that there are also large differences across sectors in the spatial patterns of innovation. In mechanical engineering, industrial equipment and instruments sectors innovative activities tend to cluster around local systems of contiguous provinces, while in most chemical and electronic sectors innovative activities tend to concentrate in few metropolitan provinces surrounded by other non-innovative provinces (Breschi 1998).

The interim results and research currently being carried out by ESPON FOCI will provide further insights into the role of cities in furthering intellectual cross-fertilization as centres for the integration of human capital and as incubators of invention. The notion is that urban centres sustain their development through unfolding innovation, which in turn is an essential element of the explanation of their competitiveness. Urban growth is linked to innovation cycles, following a hierarchical diffusion process over time. In that logic, the major urban specialisations can be linked to the main innovation cycles. Within a city, innovation is a multi-scalar process which combines at a variable extent according to the city size, internal and external interactions of medium and large spatial range. Two main processes explain that transformation in production processes and services: an increasing share of intangible capital (R&D, education, human capital …) and the diffusion of new technologies of information and communication. ESPON FOCI will provide data on European cities' centrality within scientific and technological networks on NBIC technologies (nanotechnology, biotechnology, information technology and cognitive science), in a first example in the interim report based on participation in Framework Programmes - both Valencia and Naples have a mid betweenness centrality score, (less than the national capital but similar say to Turin) p.34-5.

3.5 **Summary reports in Local Languages**

Note: The following translations present a summary of the results for the stakeholder regions. They have been adapted and integrated with information contained in the Final Report in accordance with the specific indications and requirements of each Stakeholder Region to ensure effective dissemination and assist the appropriate use of the results by the Stakeholders.

Summary Report – Greek

Περίληψη

1. Αναλυτικό μέρος: βασικά μηνύματα και διαπιστώσεις

Κατανοώντας τη διαφορετική ανάπτυξη στις περιφέρειες σύγκλισης

Κατανοώντας γιατί ορισμένες περιφέρειες σύγκλισης συνεχίζουν να καθυστερούν σε ρυθμούς ανάπτυξης, ενώ ορισμένες άλλες καταφέρνουν να επιταχύνουν τους αναπτυξιακούς τους ρυθμούς και να πλησιάζουν το μέσο όρο της Ε.Ε., είναι εξαιρετικά σημαντικό για μια επιτυχή πολιτική συνοχής της Ε.Ε. Ερευνώντας τους παράγοντες που επηρεάζουν τους αναπτυξιακούς ρυθμούς, πάνω και κάτω από το μέσο όρο, καθώς επίσης και τους παράγοντες που σχετίζονται με την αποδοτική διαχείριση των πόρων και την αποδοτική δημόσια διοίκηση, οι περιφερειακοί φορείς που ασκούν πολιτική, είναι δυνατόν να καταλάβουν με ποιο τρόπο μπορούν να βελτιώσουν τις οικονομικές επιδόσεις των αναπτυξιακά καθυστερημένων περιφερειών.

Τρεις διαφορετικές κατηγορίες παραγόντων επιλέχθηκαν από τη βιβλιογραφία, ως βάση για την ανάλυση του SURE/SEARCH, προκειμένου να διερευνηθεί η διαδικασία της οικονομικής ανάπτυξης στις περιφέρειες σύγκλισης: οι **καθοριστικοί οικονομικοί παράγοντες** (economic drivers) και οι **οικονομικοί καταλύτες** (economic enablers) που είναι σημαντικοί για όλες τις Ευρωπαϊκές περιφέρειες και οι **παράγοντες που συνδέονται με την αποδοτική κατανομή των πόρων** (όπως για παράδειγμα τα κονδύλια της Ε.Ε,), οι οποίοι είναι *ιδιαίτερα* σημαντικοί *για τις περιφέρειες σύγκλισης*. Στην ποσοτική και στην ποιοτική ανάλυση, μελετήθηκε τόσο η επίδραση των παραπάνω παραγόντων στην οικονομική ανάπτυξη όσο και η μεταξύ τους αλληλεξάρτηση. Αναλύοντας τις διαφορές μεταξύ των αδύναμων περιφερειών σύγκλισης και των περισσότερο αναπτυγμένων περιφερειών σύγκλισης, με ΑΕΠ μικρότερο του μέσου όρου, εξετάστηκε ο βαθμός με τον οποίο οι παράγοντες που συνδέονται με την αποδοτική κατανομή των πόρων (όπως για παράδειγμα τα κονδύλια της Ε.Ε,) αποτελούν προϋπόθεση για την εκμετάλλευση των καθοριστικών οικονομικών παραγόντων και των οικονομικών καταλυτών.

Συγκέντρωση στα περιφερειακά οικονομικά και θεσμικά συστήματα

Συνεπώς, ο σκοπός της ποσοτικής και ποιοτικής ανάλυσης της ερευνητικής ομάδας, ήταν να προσδιορίσει τις αδυναμίες των οικονομικών συστημάτων των περιφερειών σύγκλισης και να προτείνει την ανάπτυξη κατάλληλων επιλογών πολιτικής.

Για να επιτευχθεί αυτό, διάφορες απόψεις διερευνήθηκαν στην ανάλυση με αλληλοσυνδεόμενα βήματα

- Γενικός καθορισμός των παραγόντων που σχετίζονται με τις οικονομίες των περιφερειών σύγκλισης στις περιφέρειες αυτές (ποσοτική ανάλυση: περιφερειακή έρευνα).
- Ανάλυση των διαφορών μεταξύ των «πάνω από το μέσο όρο του Α.Ε.Π. περιφερειών» και των δύο τύπων περιφερειών σύγκλισης, δηλ. των «αδύναμων περιφερειών σύγκλισης» από των «αναπτυσσόμενων περιφερειών σύγκλισης» (ποιοτική ανάλυση: συνεντεύξεις, περιπτωσιολογικές μελέτες, ποσοτική ανάλυση: περιφερειακή έρευνα, οικονομετρία).
- Εξέταση των διαδικασιών και των μηχανισμών εντός των περιφερειών σύγκλισης, αξιολόγηση της εξάρτησης και της αλληλεπίδρασης μεταξύ διαφόρων παραγόντων (ποιοτική ανάλυση: συνεντεύξεις, περιπτωσιολογικές μελέτες).
- **Επαλήθευση** διαφορών, εξαρτήσεων και συσχετίσεων σε σχέση με τους παράγοντες για την οικονομική επιτυχία των περιφερειών σύγκλισης (ποσοτική ανάλυση: οικονομετρία).

Προϋποθέσεις για την οικονομική επιτυχία των περιφερειών σύγκλισης

Η μεγάλη πρόκληση των αδύναμων περιφερειών σύγκλισης είναι να εξασφαλίσουν τις απαραίτητες προϋποθέσεις προκειμένου να βελτιώσουν τις οικονομικές τους επιδόσεις. Επιτυχία στην υλοποίηση των προγραμμάτων που χρηματοδοτούνται από την Ε.Ε. σημαίνει και να κάνεις σωστά πράγματα (αποτελεσματικότητα) αλλά και να κάνεις πράγματα με το σωστό τρόπο (αποδοτικότητα). Από την ανάλυση που προηγήθηκε, προκύπτει ότι αυτό έχει εξαιρετική σημασία για τις αδύναμες περιφέρειες σύγκλισης, στις οποίες παρατηρήθηκε ότι υπάρχουν αδυναμίες στη διαχείριση των κονδυλίων, και σε ορισμένες περιπτώσεις, στη γενική κατανομή των πόρων. Η αποτελεσματικότητα και η αποδοτικότητα μπορούν να επιτευχθούν εφόσον οι αρμόδιοι δημόσιοι υπάλληλοι στις περιφέρειες έχουν τις κατάλληλες ικανότητες και εμπειρίες. Οι περιφέρειες σύγκλισης λαμβάνουν σημαντικό μέρος των κονδυλίων, αλλά μπορούν να τα αξιοποιήσουν πλήρως μόνον αν πληρείται η παραπάνω προϋπόθεση. Εν συντομία, οι ικανότητες για την απορρόφηση των κονδυλίων πρέπει να προηγούνται από την εξασφάλιση των κονδυλίων, έτσι ώστε οι αδύναμες περιφέρειες να αναπτύσσονται σταθερά γρηγορότερα, προκειμένου να πλησιάσουν τις πιο αναπτυγμένες περιφέρειες της Ε.Ε. Η σπουδαιότητα της αποδοτικότητας των δημόσιων υπαλλήλων σχετικά με τη διαχείριση των πόρων επισημαίνεται σε όλη την βιβλιογραφία. Αντιθέτως, η βασική ανησυχία των πιο αναπτυγμένων περιφερειών, όπου έχουν ήδη αποκτηθεί οι ικανότητες για τη διαχείριση των κονδυλίων, είναι η ποσότητά τους και η αποτελεσματικότητα των πολιτικών επιλογών.

Επιπλέον, απαιτείται πολύ καλός συντονισμός στην κατανομή των πόρων και στην υλοποίηση της περιφερειακής οικονομικής ανάπτυξης σε όλα τα επίπεδα (περιφερειακό,

εθνικό, ευρωπαϊκό). Ιδιαίτερα σημαντικό για τις περιφέρειες σύγκλισης, σε σύγκριση με τις περιφέρειες των οποίων το Α.Ε.Π. είναι πάνω από το μέσο όρο, είναι ο υψηλός βαθμός διοικητικής αποκέντρωσης σε συνδυασμό με εθνικές πολιτικές που προσανατολίζονται στην ισορροπημένη περιφερειακή ανάπτυξη. Ακόμη μια προϋπόθεση για μια επιτυχημένη πολιτική συνοχής είναι η διαφάνεια και η υπευθυνότητα στον τομέα των διαδικασιών, δηλαδή η ύπαρξη χαμηλού επιπέδου διαφθοράς και ενός σταθερού ρυθμιστικού πλαισίου.

Καθοριστικοί οικονομικοί παράγοντες (economic drivers) και οικονομικοί καταλύτες (economic enablers)

Αναφορικά με τους καθοριστικούς οικονομικούς παράγοντες και τους οικονομικούς καταλύτες, η έρευνα επικεντρώθηκε σε εκείνους που μπορούν να καθοριστούν από τους περιφερειακούς φορείς που ασκούν πολιτική (διότι γενικά, οι οικονομικοί καταλύτες, όπως π.χ. η φορολογία και οι όροι απασχόλησης, ρυθμίζονται κυρίως σε εθνικό επίπεδο). Οι καθοριστικοί οικονομικοί παράγοντες, που από επιστημονική άποψη έχουν θετική επίδραση στην οικονομική ανάπτυξη, είναι για παραδείγματος χάριν **η ικανότητα προς καινοτομία,** όπως π.χ. το υψηλά εκπαιδευμένο εργατικό δυναμικό, η ποιότητα των πανεπιστημίων, η έρευνα και η ανάπτυξη ή ο αριθμός των χορηγημένων διπλωμάτων ευρεσιτεχνίας σε μια περιφέρεια. Άλλοι καθοριστικοί παράγοντες είναι προσβασιμότητα, η συνδεσιμότητα, η ποιότητα ζωής ή η οικονομική δομή μιας περιφέρειας. Αν και η παρουσία καθοριστικών οικονομικών παραγόντων (όπως η φυσική και πολιτιστική κληρονομιά, οι ποιοτικές πτυχές της ζωής, οι δυνατότητες καινοτομίας ή οι ιδιαιτερότητες των οικονομικών συστημάτων) επισημάνθηκε από τους φορείς των 3 περιφερειών σύγκλισης, παρόλα αυτά θεωρούν ότι δεν έχουν αξιοποιηθεί επαρκώς. Αντιθέτως, στη Βαλένθια, παρόμοιοι καθοριστικοί οικονομικοί παράγοντες αξιοποιήθηκαν επαρκώς. Παρά την κρίση στον κατασκευαστικό τομέα, ο οποίος θεωρήθηκε ως βασικός καθοριστικός οικονομικός παράγοντας στο παρελθόν, οι φορείς πλέον αντιλαμβάνονται πως η εμπορική εκμετάλλευση των κλιματολογικών και των εδαφικών συνθηκών (ποιότητα ζωής), καθώς επίσης και η εστίαση στις δυνατότητες καινοτομίας (δηλ. η ενθάρρυνση νέων τεχνολογιών μέσα από τη δημιουργία ιδρυμάτων και μεγάλων επενδύσεων στην Ε&Α) θα μπορούσε να ενισχύσει την οικονομική ευημερία της Βαλένθια. Επομένως, η διαφορά στην επίτευξη της οικονομικής επιτυχίας φαίνεται να οφείλεται στη διαφοροποιημένη αξιοποίηση (όσον αφορά την αποδοτικότητα) των πόρων ή των καθοριστικών οικονομικών παραγόντων. Ένας ακόμα λόγος, στον οποίο η Βαλένθια οφείλει την οικονομική της επιτυχία, εκτός από την εκπλήρωση των προϋποθέσεων που αναφέρθηκαν παραπάνω, ήταν και η αρχική «έκρηξη» των επενδύσεων στον κατασκευαστικό τομέα, παρόλο που αυτό τώρα έχει αποδειχθεί ότι δεν είναι βιώσιμο. Ωστόσο, αυτή η «έκρηξη», για πολλές δεκαετίες, πυροδότε όλους τους άλλους τομείς της περιφερειακής οικονομίας. Συνοψίζοντας, οι αδύναμες περιφέρειες σύγκλισης φαίνεται να είναι παγιδευμένες σε έναν αρνητικό κύκλο αιτιότητας και δεν μπορούν να προσδιορίσουν τα αίτια που εμποδίζουν την οικονομική ανάπτυξη, ενώ η Βαλένθια έχει εγκαταλείψει επιτυχώς αυτόν τον αρνητικό κύκλο και έχει εισέλθει σε μια θετικά ανερχόμενη κυκλικά (helix) οικονομική επιτυχία.

Έξυπνη Ανάπτυξη: Καινοτομία και κοινωνία της γνώσης

Από τις συνεντεύξεις στις εν λόγω περιφέρειες, προέκυψε ότι η εκμετάλλευση των δυνατοτήτων της καινοτομίας είναι καθοριστικός παράγοντας και συνεπώς είναι απαραίτητη η εστίαση των πολιτικών στον τομέα αυτό για την επίτευξη επιτυχών οικονομικών επιδόσεων στο μέλλον. Οι περιπτωσιολογικές μελέτες (case studies) στον τομέα των στρατηγικών καινοτομίας αποκάλυψαν το είδος των περιφερειακών οικονομικών διαδικασιών που μπορούν να επιτευχθούν μέσα από συγκεκριμένα μέτρα και επενδύσεις στην οικονομία της γνώσης, συμπληρώνοντας με αυτόν τον τρόπο τα αποτελέσματα που προέκυψαν από τη βιβλιογραφία, την έρευνα και τις συνεντεύξεις. Επίσης, οι περιπτωσιολογικές μελέτες παρέχουν καλές πρακτικές και παραδείγματα προς μίμηση σε ένα ευρύτερο κοινό της Ε.Ε.

Υπήρξε μια σημαντική διαφορά στην προσέγγιση της Βαλένθια από τις άλλες τρεις περιφέρειες: η Βαλένθια δημιούργησε μια βιώσιμη δομή, η οποία έδωσε τη δυνατότητα στους περιφερειακούς φορείς να προσελκύσουν περαιτέρω χρηματοδότηση από την Ε.Ε. σε διάφορους κοινωνικο-οικονομικούς τομείς μέσω της Ευρωπαϊκής Περιφέρειας της Βαλένθια – Ίδρυμα Αυτόνομης Κοινότητας της Βαλένθια, η οποία εκπροσωπείται από «ένα κοινό πρόσωπο στην Ε.Ε.», όπου η γνώση συγκεντρώνεται προς όφελος όλων των περιφερειακών παραγόντων. Από την άλλη, η τύχη των Ιδρυμάτων Μεταφοράς Τεχνολογίας της Καμπάνια, τα οποία συνδέουν επιστημονικούς με οικονομικούς παράγοντες με σκοπό να μετατραπούν τα ερευνητικά έργα σε πετυχημένες επιχειρηματικές πρωτοβουλίες, θα εξαρτηθεί κυρίως από την ικανότητά τους να μεταμορφωθούν σε αυτοσυντηρούμενες δομές κατά την προγραμματική περίοδο 2007-2013. Οι επιλεγμένες στρατηγικές και των δύο περιφερειών κεφαλαιοποιούν την χρησιμοποίηση των αστικών τους οικονομιών ως εκκολαπτήρια καινοτομίας. Όμως, η δυσκολία δημιουργίας μόνιμων δομών στις αδύναμες περιφέρειες αποδεικνύεται ότι είναι ιδιαίτερα ανασταλτικός παράγοντας. Από την άλλη πλευρά, η Περιφέρεια Ανατολικής Μακεδονίας – Θράκης επικεντρώθηκε στην ενθάρρυνση της καινοτομίας μεταξύ των επιχειρήσεων, χωρίς όμως να παρέχει μια μόνιμη σταθερή δομή ή μία συνέχεια σε ένα επιτυχημένο έργο. Στην Podlaskie η επέλεξαν αρχικά να επενδύσουν κυρίως στη βελτίωση των διοικητικών ικανοτήτων και στην παροχή δημόσιων υπηρεσιών. Επομένως, η επιλογή ήταν ο εκσυγχρονισμός της δημόσιας διοίκησης και η παροχή δημόσιων υπηρεσιών Τεχνολογιών Πληροφορικής και Επικοινωνιών (Τ.Π.Ε.)στους πολίτες.

Στην ουσία, μπορούν να εντοπιστούν κοινά πλεονεκτήματα και δυνατότητες, καθώς οι στρατηγικές καινοτομίας ενθαρρύνουν και ενισχύουν παράλληλα τους καθοριστικούς οικονομικούς παράγοντες. Σε γενικές γραμμές, όλες οι στρατηγικές ήταν επιτυχείς στο να βελτιώσουν την περιφερειακή / τεχνολογική τεχνογνωσία και στο να δημιουργήσουν συνέργειες γνώσης σε περιφερειακό επίπεδο. Κίνητρα συμμετοχής παρατηρούνται σε όλες τις περιφέρειες μέσω της οργανωμένης ανταλλαγής της γνώσης ανάμεσα σε διαφορετικούς περιφερειακούς παράγοντες (διοίκηση, πολιτικοί, ιδιωτικός τομέας, πολίτες – κοινωνία) και της δημιουργίας συνεργειών στη διοίκηση και στις διαδικασίες. Σε όλες τις περιπτώσεις, προωθήθηκε η γνώση και η μεταφορά τεχνολογίας είτε μέσω της εκπαίδευσης και της αφοσιωμένης υποστήριξης είτε μέσω του θεσμού των technology-broker centres.

Ωστόσο, παρατηρήθηκαν αρκετά ελαττώματα και αδυναμίες. Στην πράξη, η έλλειψη συγκεκριμένων κινήτρων είχε ως αποτέλεσμα το χαμηλό βαθμό ανάληψης ιδιωτικών επιχειρηματικών πρωτοβουλιών. Είχε υποτεθεί λανθασμένα ότι ο ιδιωτικός τομέας θα γινόταν πιο δραστήριος και θα αναλάμβανε άμεσα πρωτοβουλίες για τη βιωσιμότητα

επιπλέον έργων. Σε ορισμένες περιπτώσεις, η έλλειψη εκπαίδευσης και κατάλληλης νοοτροπίας (ιδιαίτερα στη δημόσια διοίκηση), καθώς και η έλλειψη μόνιμων αυτοσυντηρούμενων δομών, στάθηκαν εμπόδιο στην επιτυχή υλοποίηση των στρατηγικών καινοτομίας.

Επιπλέον, παραμένει και για τις τέσσερις υπό εξέταση περιφέρειες, η μόνιμη δομική αδυναμία και μελλοντική απειλή των εναλλασσόμενων στρατηγικών και προτεραιοτήτων, που οφείλεται στις αλλαγές στην περιφερειακή κυβέρνηση. Ένα βασικό συμπέρασμα που προέκυψε από την βιβλιογραφία, την έρευνα και τις συνεντεύξεις, είναι ότι σε όλες τις στρατηγικές καινοτομίας που εξετάστηκαν στις 4 περιφέρειες δόθηκε ιδιαίτερη έμφαση στην καλύτερη αξιοποίηση των πόρων. Επίσης, σημειώθηκε σημαντική βελτίωση όσον αφορά τις περιφερειακές διαδικασίες στον τομέα της καινοτομίας, οι οποίες δεν επιδρούν άμεσα στην οικονομική ανάπτυξη, αλλά κατά κάποιο τρόπο δημιουργούν τις κατάλληλες προϋποθέσεις. Παρόλο που υπάρχουν ορισμένες άμεσες και μετρήσιμες επιπτώσεις από την υλοποίηση των παραπάνω στρατηγικών και προγραμμάτων, ο πραγματικός αντίκτυπός τους θα φανεί στο μέλλον.

Οικονομετρική ανάλυση: επαλήθευση και μεταβιβασιμότητα

Η συμπληρωματική οικονομετρική ανάλυση πραγματοποιήθηκε για να επαληθεύσει τα αποτελέσματα από τις προηγούμενες αναλύσεις για τους διαφορετικούς τύπους περιφερειών στο πλαίσιο της ΕΕ. Επομένως, 230 ευρωπαϊκές περιφέρειες ενσωματώθηκαν στην ανάλυση με σκοπό να γίνει μια γενική επαλήθευση και να υπάρχει η δυνατότητα μεταβίβασης των αποτελεσμάτων. Για να επιτευχθεί αυτός ο σκοπός, έγινε μια απλοποίηση όσον αφορά τη μέτρηση των αποτελεσμάτων της περιφερειακής επιτυχίας: Η αύξηση του ΑΕΠ χρησιμοποιήθηκε για να εξεταστεί η σημασία και η επιρροή των διαφορετικών παραγόντων σε σχέση με την περιφερειακή οικονομική επιτυχία. Συνεπώς, τα συμπεράσματα των οικονομετρικών εκτιμήσεων χαρακτηρίζονται από έναν υψηλό βαθμό τυποποίησης και δεν ισχύουν σε κάθε συγκεκριμένο περιφερειακό περιβάλλον αλλά μπορούν να χρησιμοποιηθούν ως επιστημονικό συμπλήρωμα στις προηγούμενες αναλύσεις. Επομένως, σε πρώτη φάση, έγινε διάκριση μεταξύ των περιφερειών που βρίσκονται «κάτω από το μέσο όρο του Α.Ε.Π.» και «επάνω από το μέσο όρο του Α.Ε.Π.» και, σε δεύτερη φάση μεταξύ των «αδύναμων περιφερειών σύγκλισης» και των «αναπτυσσόμενων περιφερειών σύγκλισης». Από την ανάλυση προέκυψε ότι ορισμένοι παράγοντες, όπως η άνιση διανομή του οικονομικού πλούτου, η απασχόληση στον πρωτογενή τομέα, η φορολογία και η πληθυσμιακή αύξηση έχουν την ίδια επίδραση στην οικονομική ανάπτυξη τόσο στις περιφέρειες σύγκλισης όσο και στις περιφέρειες που βρίσκονται πάνω από το μέσο όρο του Α.Ε.Π. της Ε.Ε. Ωστόσο, ορισμένοι καθοριστικοί οικονομικοί παράγοντες διαφέρουν μεταξύ των περιφερειών «κάτω του μέσου όρου του Α.Ε.Π.» και των «επάνω του μέσου όρου του Α.Ε.Π.». Για παράδειγμα, η ποσότητα των κονδυλίων είναι σημαντικότερη για τις περιφέρειες πάνω από το μέσο όρο του Α.Ε.Π. και λιγότερο σημαντική για τις περιφέρειες κάτω από το μέσο όρο του Α.Ε.Π. Αυτό μπορεί να σημαίνει διάφορα πράγματα, τα οποία απομένει να εξεταστούν. Πρώτον, ότι τα χρήματα μπορούν να μετουσιωθούν αποτελεσματικά σε οικονομική ανάπτυξη κυρίως στις «πλουσιότερες» περιφέρειες που είναι πάνω από το μέσο όρο του ΑΕΠ. Δεύτερον, ότι οι πιο εύπορες περιφέρειες έχουν μεγαλύτερη ικανότητα, τεχνογνωσία ή εμπειρία στην άντληση

περισσότερων κονδυλίων από την Ε.Ε. και ενδεχομένως στην προσέλκυση ιδιωτικών επενδύσεων μέσα από έναν θετικό κύκλο που συνεχώς ανανεώνεται.

Αντιθέτως, το μερίδιο του ανθρώπινου κεφαλαίου στην επιστήμη και στην τεχνολογία φαίνεται να είναι περισσότερο σημαντικό για τις περιφέρειες σύγκλισης. Όσον αφορά τους παράγοντες για την επιτυχή κατανομή των πόρων και την αποδοτική πολιτική συνοχής, φαίνεται ότι ο υψηλός βαθμός διοικητικής αποκέντρωσης έχει μεγαλύτερη σημασία για τις περιφέρειες σύγκλισης σε σχέση με τις περιφέρειες που βρίσκονται πάνω από το μέσο όρο του Α.Ε.Π. Συνδυάζοντας το ποσό των κεφαλαίων της Ε.Ε. με το επίπεδο διαφθοράς, η ανάλυση δείχνει ότι τα κονδύλια της Ε.Ε. αυξάνουν την οικονομική ανάπτυξη μόνο ελλείψει διαφθοράς. Αυτό το αποτέλεσμα υποστηρίζεται πλέον από την επιστημονική θεωρητική και εμπειρική βιβλιογραφία αναφορικά με την αποδοτικότητα των θεσμών και την επίδραση που έχουν στην οικονομική ανάπτυξη.

Ένα ενδιαφέρον συμπέρασμα της οικονομετρικής ανάλυσης είναι ότι οι παράγοντες διαφέρουν περισσότερο μεταξύ των αδύναμων περιφερειών σύγκλισης και των άλλων δύο υπο-κατηγοριών (των αναπτυσσόμενων περιφερειών σύγκλισης και των πάνω από το μέσο όρο του Α.Ε.Π. περιφερειών). Σε αντίθεση με τις αναπτυσσόμενες περιφέρειες σύγκλισης (catching up regions), οι αδύναμες, με κάτω από το μέσο όρο του κατά κεφαλήν ΑΕΠ και κάτω από το ποσοστό αύξησης του ΑΕΠ, δεν μπορούν να μετουσιώσουν τις δυνατότητές τους σε οικονομική ανάπτυξη, δεν επηρεάζονται από οποιοδήποτε σημαντικό οικονομικό παράγοντα και δεν αντιδρούν αναλόγως. Εν συντομία, βλέπουμε ότι οι **αναπτυσσόμενες περιφέρειες σύγκλισης** και οι **περιφέρειες που είναι πάνω από το μέσο όρο του Α.Ε.Π**. είναι περισσότερο σε θέση να μετουσιώσουν τις δυνατότητές τους (βασιζόμενες σε διάφορους παράγοντες) σε οικονομική ανάπτυξη ή να εφαρμόσουν με επιτυχία μια πολιτική συνοχής από ότι **οι αδύναμες περιφέρειες σύγκλισης.** Από την άλλη πλευρά, οι αδύναμες περιφέρειες σύγκλισης φαίνεται να μην αντιδρούν θετικά σε κανέναν από τους παράγοντες που εξετάστηκαν. Για να επαληθευθούν αυτά τα συμπεράσματα, είναι απαραίτητη περαιτέρω έρευνα ιδιαίτερα όσον αφορά τους δείκτες για την αποδοτική κατανομή των πόρων.

Συνολικά, παρουσιάζεται μια σαφής επίδραση σύγκλισης ανάμεσα στις ευρωπαϊκές περιφέρειες: οι λιγότερο επιτυχείς περιφέρειες σε σχέση με το κατά κεφαλήν Α.Ε.Π. αναπτύσσονται γρηγορότερα (κατά μέσο όρο) από τις περισσότερο επιτυχείς περιφέρειες. Κατά πόσο αυτό οφείλεται στην πολιτική συνοχής είναι ένα θέμα που πρέπει να εξεταστεί σοβαρά. Σήμερα, είναι ξεκάθαρο ότι η μεγαλύτερη ανάπτυξη που παρατηρείται σε πολλές χώρες της Μεσογείου και της Ανατολικής Ευρώπης δε βασίστηκε σε σταθερά θεμέλια, αλλά στη μη βιώσιμη διόγκωση της αγοράς ακινήτων. Αντίστοιχα, αυτές οι χώρες θα υποφέρουν τώρα περισσότερο. Για παράδειγμα, τα διαθέσιμα στατιστικά στοιχεία για τη Βαλένθια δεν καλύπτουν την περίοδο της οικονομικής κρίσης, ωστόσο, στις συνεντεύξεις αναφέρθηκε η ανάγκη για την ανάληψη επενδύσεων σε καινούριους τομείς, καθώς επίσης και προβλήματα στην εξασφάλιση χρηματικών πόρων. Βέβαια οι συνεντεύξεις, παρόλο που είναι πρόσφατες, δεν μπορούσαν να λάβουν υπόψη τις πρόσφατες απειλές στην ευρωπαϊκή οικονομική

σταθερότητα ούτε και τα πιθανά αποτελέσματα των πρόσφατων αυστηρών μέτρων για τη σταθεροποίηση των προϋπολογισμών. Σαφώς, τα επιστημονικά συμπεράσματα δεν μπορούν να λάβουν υπόψη τις επιπτώσεις της οικονομικής κρίσης γιατί υπάρχει έλλειψη στοιχείων. Ωστόσο, κάποιες εκτιμήσεις έγιναν στην παρακάτω ενότητα που αφορά στις επιλογές για την ανάπτυξη πολιτικών, για τις τέσσερις συμμετέχουσες περιφέρειες, οι οποίες φυσικά μπορούν να έχουν ευρύτερες επιπτώσεις.

2. Επιλογές για τη Χάραξη Πολιτικής

Οι επιλογές πολιτικής που παρουσιάζονται παρακάτω έχουν ως στόχο να παρέχουν παραδείγματα για τις στρατηγικές και τα εργαλεία που μπορούν να εφαρμοστούν σε περιφερειακό επίπεδο, για τους υπεύθυνους χάραξης πολιτικής των περιφερειών σύγκλισης, με σκοπό τη βελτίωση των οικονομικών επιδόσεων στην περιοχή τους. Οι συνέπειες της οικονομικής κρίσης και οικονομικής αστάθειας που παρατηρούνται σήμερα από σχεδόν όλες τις χώρες της ΕΕ δεν ελήφθησαν υπόψη κατά τις αναλύσεις μας, λόγω της μη διαθεσιμότητας δεδομένων. Ωστόσο, είναι δυνατόν να δοθούν κάποιες γενικές και μακροπρόθεσμες εκτιμήσεις της πολιτικής.

Εθνικό Πλαίσιο και η υλοποίηση χρηματοδοτούμενων προγραμμάτων από την Ε.Ε..

Σε γενικές γραμμές, πριν από την επιλογή πολιτικών, είναι σημαντικό οι περιφερειακοί φορείς χάραξης πολιτικής και τα ενδιαφερόμενα μέρη, να κατανοήσουν πλήρως τον βαθμό στον οποίο μπορούν να λειτουργούν εντός του εθνικού πλαισίου και σε συνεργασία με την εθνική δημόσια διοίκηση εν γένει. Αυτό είναι δυνατόν να ποικίλλει σημαντικά, και να παρεμποδίζει την αποτελεσματικότητα και τη βιωσιμότητα μιας πολιτικής. Η πολιτική και διοικητική εξουσία που οι περιφερειακές αρχές μπορούν να ασκούν κατά την κατανομή των ευρωπαϊκών κονδυλίων, έχει παρατηρηθεί στην επισκόπηση της βιβλιογραφίας και της ποιοτικής ανάλυσης, ότι αποτελεί σημαντικό παράγοντα επιτυχίας. Αυτό δεν είναι απλώς ένα ζήτημα κατανομής κεφαλαίων (τι θα χρηματοδοτηθεί δλδ), αλλά και εφαρμογής: η επιτυχία μιας καλά στοχευμένης πολιτικής μπορεί να υπονομευθεί, εάν εφαρμόζεται χωρίς να λαμβάνονται υπόψη οι ανάγκες των τοπικών φορέων. Οι περιφερειακές διοικήσεις πρέπει να προσπαθήσουν όσο το δυνατόν περισσότερο προς την προώθηση της συνεργασίας προς τα πάνω, δλδ σε εθνικό επίπεδο, και τη βελτίωση του συντονισμού προς τα κάτω, δλδ στην τοπική αυτοδιοίκηση, όσον αφορά την εφαρμογή των προγραμμάτων σύγκλισης. Επιπλέον, είναι απαραίτητο να διασφαλισθεί ότι, όταν οι περιφερειακές διοικήσεις αναλαμβάνουν την πολιτική και διοικητική ευθύνη, είναι σε θέση να διαχειρίζονται κονδύλια της Ε.Ε. αποτελεσματικά.

Προϋποθέσεις για την αποτελεσματική χρησιμοποίηση των κονδυλίων της ΕΕ - προκλήσεις για τις περιφέρειες Σύγκλισης

Η ευαισθητοποίηση ως παράγοντας ανάπτυξης. Τα αποτελέσματα της έρευνας παρουσιάζουν τους σχετικούς παράγοντες για μια επιτυχημένη πολιτική συνοχής που αποτελούν προϋπόθεση για τη βελτίωση των οικονομικών παραγόντων και συνεπώς παρέχουν το 'κλειδί' για τη βελτίωση της οικονομικής απόδοσης στις περιφέρειες σύγκλισης

εν γένει. Αναφορικά με τον περιφερειακό προγραμματισμό, η ευαισθητοποίηση στις υστερούσες περιφέρειες σχετικά με το ότι η αποτελεσματικότητα και αποδοτικότητα της κατανομής των κονδυλίων της ΕΕ **είναι πιο σημαντική** από το διαθέσιμο ποσό, είναι απαραίτητη, αν πράγματι υπάρχει πρόθεση να υπάρξει η προσδοκώμενη και προγραμματισμένη οικονομική επίδοση. Διαφορετικά, οι αδύναμες περιφέρειες μπορεί να μείνουν πίσω ακόμα περισσότερο, ανεξάρτητα από τα χρηματικά ποσά που έχουν στη διάθεσή τους.

Η αποδοτικότητα πιο σημαντική από τα διατιθέμενα κονδύλια. Πρώτα απ ’όλα, **η** αποτελεσματικότητα της περιφερειακής διοίκησης και η θεσμική της ικανότητα σχετικά με την κατανομή των πόρων και τη διαχείριση μεγάλων ποσών είναι καθοριστική. Παρά το γεγονός ότι σε κάποιο βαθμό αυτό μπορεί να ρυθμίζεται σε εθνικό επίπεδο, όπως π.χ. η μισθολογική κλίμακα ή το γραφειοκρατικό πλαίσιο κτλ., σαφείς τομείς αρμοδιότητας μπορούν να εντοπιστούν σε περιφερειακό επίπεδο. Πρώτον, οι περιφέρειες πρέπει να προσελκύουν και να διατηρούν υψηλής ποιότητας προσωπικό, να παρέχουν διαρκή εκπαίδευση και κατάλληλα κίνητρα που να βασίζονται στην απόδοση. Οι εσωτερικές αρμοδιότητες θα πρέπει να εκτιμηθούν και να αξιοποιηθούν, επιτρέποντας στις ασθενέστερες περιοχές να βγουν από τον αρνητικό κύκλο της αιτιότητας. Ωστόσο, δεδομένου ότι 26 από τις 27 χώρες της Ε.Ε. έχουν υπερβολικά ελλείμματα αναφορικά με τις κρατικές δαπάνες, το να εξασφαλίσουν τις κατάλληλες ανταμοιβές για μια ικανή και αποδοτική δημόσια διοίκηση είναι μια όλο και μεγαλύτερη πρόκληση. Στις περιφέρειες σύγκλισης, έμφαση πρέπει να δοθεί στη διοικητική ικανότητα (capacity-building) της δημόσιας διοίκησης, τα οφέλη της οποίας θα αποφέρουν καρπούς ως προς την αποτελεσματικότητά της στην τρέχουσα προγραμματική περίοδο και την Στρατηγική του 2020 (2020 Strategy).

Ανάγκη για σταθερό ρυθμιστικό πλαίσιο. Μια περαιτέρω προϋπόθεση που είναι σημαντική για τα περιφερειακά κέντρα λήψης αποφάσεων είναι η ανάγκη να παράσχει ένα σταθερό ρυθμιστικό πλαίσιο, εξασφαλίζοντας τη δημόσια ευθύνη και τη διαφάνεια των διαδικασιών. Και πάλι, οι εθνικοί όροι συχνά εφαρμόζονται, και μπορεί να οδηγήσουν σε μακροχρόνιες γραφειοκρατικές διαδικασίες, αλλά ορισμένα φαινόμενα που αφορούν, για παράδειγμα, τα επίπεδα της διαφθοράς ή της ανεπίσημης οικονομίας (παραοικονομίας), παρουσιάζουν ιδιαίτερες καταστάσεις που οι περιφερειακές διοικήσεις πρέπει να περιορίζουν κατά την εφαρμογή των δημόσιων δαπανών. Εκτός από τις αντιλήψεις που καταγράφονται σε ποιοτικό επίπεδο, η οικονομετρική ανάλυση έδειξε σαφώς πως τα κονδύλια της Ε.Ε. δαπανώνται αποδοτικά και αποτελεσματικά **μόνον εφόσον** υπάρχει έλλειψη διαφθοράς. Όταν ο δείκτης διαφθοράς είναι υψηλός, η πολιτική σύγκλισης δεν θα οδηγήσει σε βελτίωση των οικονομικών επιδόσεων. Αυξημένοι εσωτερικοί έλεγχοι σε βασικούς τομείς ‘υψηλού ρίσκου’, στενή παρακολούθηση των διαδικασιών των δημοσίων προμηθειών και η συνεχής παρακολούθηση της εφαρμογής και υλοποίησης των χρηματοδοτούμενων από την Ε.Ε. έργων, θα πρέπει όλα να διασφαλισθούν από τη διοίκηση.

Ωφέλειες από τους καθοριστικούς οικονομικούς παράγοντες

Προώθηση της ανάπτυξης με μείωση των περιφερειακών ανισοτήτων. Η πρώτη αρχή που πρέπει να αναφερθεί είναι ότι η περιφερειακή οικονομική ανισότητα (στο εσωτερικό μιας χώρας) παρεμποδίζει την οικονομική ανάπτυξη και αυτό επηρεάζει ιδιαίτερα τις περιφέρειες

σύγκλισης. Θα πρέπει, λοιπόν, να γίνουν προσπάθειες για την ενίσχυση της επίδρασης της σύγκλισης στο εσωτερικό των χωρών όσο και στο κοινοτικό επίπεδο.

Η οικονομική ανάπτυξη συνακόλουθη με την πληθυσμιακή/μεταναστευτική πολιτική. Η αύξηση του πληθυσμού αποδεικνύεται πως είναι ιδιαίτερα σημαντική για όλες τις περιφέρειες αναφορικά με την βελτίωση των οικονομικών επιδόσεων. Υπάρχει ένας πραγματικός κίνδυνος μείωσης πληθυσμού για τις λιγότερο εύπορες περιφέρειες, οι οποίες χαρακτηρίζονται από σχετικά χαμηλά επίπεδα εισοδήματος, χαμηλά ποσοστά συμμετοχής στο εργατικό δυναμικό και υψηλό ποσοστό του εργατικού δυναμικού που απασχολείται σε παρακμασμένους οικονομικούς τομείς. Από την άλλη πλευρά, οι περιοχές που αντιμετωπίζουν σταθερή αύξηση του πληθυσμού θα αντιμετωπίσουν ιδιαίτερες προκλήσεις όσον αφορά τη βιώσιμη αστική ανάπτυξη.

Το ανθρώπινο κεφάλαιο ως παράγοντας ανάπτυξης στις περιφέρειες σύγκλισης. Η οικονομετρική ανάλυση αποκάλυψε πως η συνδρομή του καλά εκπαιδευμένου ανθρώπινου κεφαλαίου, ιδιαίτερα στους τομείς της επιστήμης και τεχνολογίας, αν και αποτελεί καταλυτικό παράγοντα για όλες τις περιφέρειες, είναι ιδιαίτερα σημαντική για τις περιφέρειες σύγκλισης. Οι ενδιαφερόμενοι φορείς στις 3 περιφέρειες σύγκλισης υπογράμμισαν τις αδυναμίες στην ικανότητα της περιφέρειας να αξιοποιήσει κατάλληλα το ανθρώπινο δυναμικό, ενώ η οικονομετρική ανάλυση έχει υποστηρίξει την άποψη ότι οι πιο αδύναμες περιφέρειες δεν είναι σε θέση να επωφεληθούν από το διαθέσιμο ανθρώπινο κεφάλαιο. Αντίθετα, οι εμπλεκόμενοι φορείς στη Βαλένθια τόνισαν τη διαθεσιμότητα που υπάρχει σε ανθρώπινο κεφαλαίο, σε υψηλής ποιότητας πανεπιστήμια και αναγνώρισαν ότι οι πρόσφατες πρωτοβουλίες είχαν επιτυχία μέσω των επενδύσεων στην καινοτομία στο χώρο της βιομηχανίας και σε θεσμούς νέων μορφών τεχνολογίας. Οι συνεχώς διογκούμενες επενδύσεις προς την κατεύθυνση αυτή θεωρήθηκαν ως καθοριστική ευκαιρία για τη βελτίωση των οικονομικών επιδόσεων της Περιφέρειας της Βαλένθια, στο πλαίσιο ιδίως της κατάρρευσης του τομέα των κατασκευών.

Απαραίτητες διαφοροποιημένες πολιτικές για την καινοτομία. Είναι σαφές ότι «μία στρατηγική για την καινοτομία για όλους" (one innovation strategy fits all) δεν είναι δυνατόν να εντοπιστεί, αλλά οι περιφερειακοί πολιτικοί θα πρέπει να βάλουν σε προτεραιότητα επιλογές και επενδύσεις που θα αξιοποιούν αυτή την ικανότητα σε ανθρώπινο κεφάλαιο, έτσι ώστε να καταστεί κινητήρια δύναμη για οικονομική απόδοση, σε συνάφεια με τις προτεραιότητες της Στρατηγικής για το 2020, ιδίως βάσει των πλεονεκτημάτων και των δυνατοτήτων των καινοτόμων σχεδίων που χρηματοδοτούνται από προηγούμενο πρόγραμμα (όπως αυτό παρουσιάστηκε στην περιπτωσιολογική μελέτη). Όποια και αν είναι η πολιτική καινοτομίας που ακολουθείται, το μήνυμα που προκύπτει από την περιπτωσιολογική μελέτη είναι σαφές: πρέπει (η πολιτική καινοτομίας) να είναι βιώσιμη και ο κίνδυνος αλλαγής από πολιτικές ανακατατάξεις να ελαχιστοποιηθεί, να επιτευχθεί με πιο αποδοτικό τρόπο, μέσω αποτελεσματικής συνεργασίας με άλλους αρμόδιους δημόσιους φορείς (υπουργεία, ερευνητικά κέντρα, κλπ) και ευαισθητοποίησης και συμμετοχής των τοπικών οικονομικών φορέων.

Αλληλεξάρτηση μεταξύ των βασικών παραγόντων. Ένα από τα κύρια συμπεράσματα για τους υπεύθυνους χάραξης πολιτικής είναι ότι οι βασικοί συντελεστές είναι αλληλένδετοι και, ως εκ τούτου, πρέπει να αντιμετωπιστούν ή να βελτιστοποιηθούν από κοινού. Για να αξιοποιηθεί αποτελεσματικά το δημόσιο χρήμα, οι δημόσιοι υπάλληλοι της Περιφέρειας

πρέπει να είναι επαρκώς εκπαιδευμένοι και το προσωπικό που προσλαμβάνεται για τη διαχείριση των κονδυλίων υψηλά εξειδικευμένο. Μόνο εάν το κανονιστικό πλαίσιο είναι σταθερό, συνεκτικό και διαφανές, μπορεί να υπάρξει ένα πρόσφορο έδαφος που θα ενθαρρύνει τη δημιουργικότητα και θα επιτρέψει τη δημιουργία των κατάλληλων προϋποθέσεων για τη βελτίωση των οικονομικών επιδόσεων. Στην ουσία, η επιτακτική ανάγκη είναι και να γίνουν τα σωστά πράγματα αλλά και τα πράγματα να γίνουν σωστά**.** Αυτό έρχεται σε αντίθεση με τις επικρατούσες απόψεις που υποστηρίζουν το κατά πόσον η οικονομική ανάπτυξη εξαρτάται από το να γίνονται σωστά πράγματα (όπως σε ποιους τομείς να επενδύσει κάποιος) ή να γίνονται τα πράγματα σωστά (βελτίωση δλδ. της διαχείρισης). Με άλλα λόγια, οι περιφερειακοί φορείς πρέπει να δώσουν προσοχή τόσο στην ορθή κατανομή των κεφαλαίων όσο και στη σωστή εκμετάλλευσή τους.

Διττή στρατηγική: βελτιστοποίηση των πόρων και των θεσμικών πλαισίων.

Η παρούσα μελέτη αποτελεί ισχυρό επιχείρημα για μια διττή στρατηγική οικονομικής ανάπτυξης τόσο μέσω της προώθησης ορισμένων οικονομικών παραγόντων όσο και με την παροχή αποτελεσματικών θεσμικών μηχανισμών και ελέγχων. Ειδικότερα, τονίζονται τα παρακάτω σημεία:

- Στην περίπτωση των περιφερειών σύγκλισης, η αποτελεσματικότητα της κατανομής κονδυλίων (από την άποψη του να κάνει τα σωστά πράγματα με τον σωστό τρόπο) είναι πιο σημαντική από το πραγματικό ποσό των χρημάτων που διατίθεται. Στο τρέχον πλαίσιο, προτεραιότητα πρέπει να δοθεί στη διασφάλιση πως η πολιτική που ακολουθείται είναι καλά στοχευμένη και τα κονδύλια δαπανώνται αποτελεσματικά από τους δημοσίους υπαλλήλους, παρέχοντας τις κατάλληλες προϋποθέσεις για την εκμετάλλευση των οικονομικών παραγόντων που ήδη χαρακτηρίζουν την περιοχή
- Ο κίνδυνος της προσκόλλησης σε ένα μοναδικό τομέα ως κινητήρια δύναμη για την οικονομική επίδοση, είναι προφανές. Ωστόσο, η διαφοροποίηση πρέπει να είναι συμπληρωματική προς το περιφερειακό δυναμικό. Για παράδειγμα, μια στρατηγική καινοτομίας θα μπορούσε να κατευθυνθεί σε παραδοσιακούς ή εξειδικευμένους τομείς, καθώς επίσης και σε τομείς νανοτεχνολογίας, βιοτεχνολογίας και πληροφορικής.
- Η αυξημένη συνεργασία μεταξύ όλων των βαθμίδων της δημόσιας διοίκησης είναι αναγκαία για να καταστεί αποδοτικό το έργο της οικονομικής ανάπτυξης,
- Αποτυχία να πραγματοποιηθούν επενδύσεις σε μεγάλα έργα μεταφορών και υποδομής, θα έχει σημαντικό αντίκτυπο στις οικονομικές επιδόσεις μιας Περιφέρειας.

3. Ανάγκη για περαιτέρω ανάλυση / έρευνα

Έρευνα για τις θεσμική αποτελεσματικότητα και την οικονομική ανάπτυξη. Διάφοροι δρόμοι για περαιτέρω έρευνα έχουν ανοίξει από τη συγκεκριμένη Στοχευμένη Ανάλυση. Πρώτον, η έρευνα σχετικά με το πώς μπορεί να επιτευχθεί θεσμική αποτελεσματικότητα, όπως και το πώς μπορεί να μετρηθεί και να παρακολουθηθεί, παρουσιάζει μεγάλο ενδιαφέρον για όλες τις ευρωπαϊκές περιφέρειες και ιδίως για τις περιφέρειες σύγκλισης. Ερωτήματα που αφορούν την έρευνα και παρουσιάζουν ενδιαφέρον είναι τα εξής:

- Ποιος **συνδυασμός μέτρων ενθάρρυνσης** θα είναι ο πιο κατάλληλος και αποτελεσματικός για την αντιμετώπιση των κύριων πτυχών του προβλήματος της αναποτελεσματικότητας;

- Είναι **η ικανότητα επιτήρησης** η κατάλληλη; Πώς μπορεί να βελτιωθεί;
- Ανταποκρίνονται **τα υφιστάμενα θεσμικά όργανα** στην ανάγκη λήψης πιο αποδοτικών μέτρων;
- Ποια **προβλήματα σχετικά με την επιτήρηση** και την εφαρμογή θα προκύψουν στο μέλλον;
- Είναι **απαραίτητες οι διανεμητικές ρυθμίσεις**, όπως τα μέτρα αποζημίωσης και οι υψηλότεροι μισθοί; Πώς μπορούν να σχεδιαστούν για να βοηθήσουν στη μείωση του προβλήματος; Πώς θα μπορούσαν να μετρηθούν οι επιδράσεις από τα μέτρα αυτά;
- Ποιοί **μηχανισμοί ελέγχου και παρακολούθησης** της απόδοσης είναι ήδη **σε ισχύ**.

Έρευνα για τον αντίκτυπο των χαρακτηριστικών της ποιότητας ζωής στην περιφερειακή ανάπτυξη. Ένας δεύτερος βασικός τομέας, στον οποίο απαιτείται περαιτέρω έρευνα, ιδιαίτερα σε περιφερειακό επίπεδο, σχετίζεται με την **Ποιότητα Ζωής**. Η εννοιολογική και μεθοδολογική έρευνα θα επιτρέψει στις ευρωπαϊκές περιφέρειες να αναδείξουν **το βαθμό στον οποίο τα χαρακτηριστικά της ποιότητας ζωής επηρεάζουν την περιφερειακή οικονομική απόδοση** και το κατά πόσον η περιφερειακή εδαφική τυπολογία μπορεί να προσδιοριστεί βάσει αυτών των χαρακτηριστικών.

Περαιτέρω έρευνα για τους παράγοντες που απαιτούνται για μια επιτυχή πολιτική συνοχής είναι απαραίτητη (η οικονομετρική ανάλυση παρεμποδίζεται από την έλλειψη δεδομένων). Στο πλαίσιο αυτό, θα ήταν πολύ ενδιαφέρουσα, για παράδειγμα, **η διερεύνηση αναφορικά με τις περιφέρειες σύγκλισης**:

- εάν και με ποιο τρόπο ένα συγκεκριμένο επίπεδο εκπαίδευσης και κατάρτισης στην περιφερειακή διοίκηση αλλάζει την αποτελεσματικότητα των διαδικασιών και αυξάνει τον περιφερειακό οικονομικό ρυθμό και διαφοροποιεί την περιφερειακή ανάπτυξη,
- εάν και πώς οι διαφορετικές οργανωτικές μορφές της δημόσιας διοίκησης μπορούν να επηρεάσουν την ταχύτητα και τη βιωσιμότητα της κάλυψης των κενών της περιφερειακής ανάπτυξης,
- πώς ένα τροποποιημένο επίπεδο αποκέντρωσης σε διάφορους τομείς πολιτικής μπορεί να αλλάξει τις διαδικασίες κάλυψης των περιφερειακών διαφορών, και
- πως μακροχρόνια και εγγυημένα ως προς τη βιωσιμότητα προγράμματα και πλαίσια (χωρίς σημαντικές τροποποιήσεις που να οφείλονται σε αλλαγές στην κυβέρνηση και τη διοίκηση) θα μπορούσαν να μετατρέψουν τις δυνατότητες αυτές στις περιφέρειες σύγκλισης σε οικονομική μεγέθυνση και ευημερία και πώς αυτό θα μπορούσε να μεταβάλει τη διαφορετικότητα της περιφερειακής ανάπτυξης.

Όπως έχει αναφερθεί στην έκθεση, δεν κατέστη δυνατό να ενσωματωθούν όλα τα δεδομένα με τις επιπτώσεις της οικονομικής κρίσης στις οικονομίες σύγκλισης. Οποιαδήποτε μελλοντική ανάλυση σχετικά με το αποτέλεσμα της σύγκλισης, της πολιτικής συνοχής της ΕΕ, πρέπει επίσης να εξετάζει τον αντίκτυπό της στις αδύναμες περιφέρειες σύγκλισης (και στις αναπτυσσόμενες περιφέρειες, αλλά και στις περιφέρειες που αναπτυξιακά υστερούν). Δεδομένης της υφιστάμενης ανησυχίας του Συμβουλίου σχετικά με τη δημοσιονομική πολιτική, την εξέλιξη του δημόσιου χρέους και τη συνολική βιωσιμότητα, θα ήταν ενδιαφέρον να αναλύσουμε τα δεδομένα για το περιφερειακό δημόσιο χρέος και την περιφερειακή αειφορία.

Summary Report – Italian

1. CONCETTI CHIAVE

Analisi del differenziale di crescita nelle regioni dell'obiettivo convergenza della politica UE di coesione

Comprendere il perché alcune regioni continuano ad essere in ritardo di sviluppo rispetto ad altre è di importanza strategica per il successo delle politiche di coesione dell'UE.

Identificare i fattori che influenzano il tasso di crescita, collegati ad una gestione efficace sia dei fondi che della pubblica amministrazione, può aiutare i policy maker regionali a capire come migliorare le performance in queste regioni.

Il rapporto finale ESPON-SURE ha analizzato questi fattori in tutte le regioni europee che beneficiano dei fondi strutturali dedicati alla strategia di Convergenza e Phasing-out/Phasing-in, in particolare approfondendo le 4 Regioni UE partner di progetto: Campania (IT), Est-Macedonia-Tracia (GR), Podlasia (Polonia) e Valencia (Spagna).

Dall'analisi della letteratura, i fattori aventi effetti sullo sviluppo economico sono raggruppabili in tre macro categorie:

- fattori che stimolano lo sviluppo economico **(*economic drivers*),**
- fattori che creano le condizioni per lo sviluppo economico (***economic enablers***),
- fattori rilevanti per una efficace allocazione delle risorse pubbliche, questi ultimi particolarmente importanti per le regioni in ritardo di sviluppo.

L'analisi svolta, quantitativa e qualitativa (sintetizzata nella tabella che segue), ha indagato l'influenza di questi fattori e delle loro interconnessioni sullo sviluppo economico nelle regioni della convergenza. Inoltre è stata analizzata la rilevanza dei **fattori connessi alla efficace allocazione delle risorse**, confrontando regioni deboli e regioni *catching up* (con tasso di crescita del PIL superiore alla media) entrambe al di sotto della media UE.

L'analisi ha tenuto conto anche degli aspetti istituzionali e degli indicatori della qualità della vita. Il quadro generale dei sistemi economici e delle loro relazioni con il sistema istituzionale delle 4 regioni è emerso più chiaramente attraverso le interviste effettuate con amministratori e politici, rappresentanti del mondo imprenditoriale, dell'università, della ricerca e della società civile.

La SWOT analisi è stata utilizzata soprattutto per identificare **in prospettiva** forze, debolezze, opportunità e rischi.

Inoltre i casi-studio selezionati in ciascuna regione hanno fatto emergere alcune delle modalità di intervento pubblico-privato che potrebbero essere in grado di generare una crescita innovativa e sostenibile.

Infine la *regression analysis* ha valutato quali fattori possono essere trasferiti ad altre regioni d'Europa.

Focus sui sistemi economici e istituzionali regionali

Scopo dell'analisi - qualitativa e quantitativa - è stato quello di identificare "le debolezze" dei sistemi economici regionali e le implicazioni politiche in termini di *public governance*. A tal fine differenti aspetti sono stati analizzati:

Key Steps	**Quantitative analysis**	**Qualitative analysis**
identificazione dei fattori generali rilevanti per lo sviluppo economico delle regioni della convergenza	*Regional Survey* Questionario interviste	
studio delle differenze tra la media dei PIL delle regioni della convergenza	*Regional Survey* Questionario, analisi econometrica	Interviste e casi studio
studio dei processi e dei sistemi presenti nelle regioni della convergenza, individuandone le dipendenze e le interrelazioni		Interviste e casi studio
verifica delle differenze, delle dipendenze e delle interrelazioni dei fattori che influenzano lo sviluppo nelle regioni della convergenza	analisi econometrica	

Precondizioni per lo sviluppo economico delle regioni della convergenza.

La sfida fondamentale per le regioni della convergenza consiste nel garantire le precondizioni dello sviluppo.

Il successo nell'utilizzazione dei fondi UE risiede nel "*fare le cose giuste*" (efficacia) e nel *farle bene* (efficienza); in tutti i fattori di analisi questo è risultato della massima importanza, in particolare per le regioni della convergenza, in cui le maggiori carenze sono state identificate nella adeguata allocazione dei fondi (frammentazione). A tal fine è risultato inoltre particolarmente importante che la macchina amministrativa sia efficientemente organizzata e dotata dei livelli adeguati di *skill* e di capacità idonee.

In sintesi, nelle regioni più fragili, in cui la crescita deve paradossalmente essere più veloce, **la capacità di spendere appare più importante della quantità della spesa effettuata**; al contrario, delle regioni "catching up", in cui gli skill sono già acquisiti e l'ammontare dei fondi serve a rafforzare l'efficacia delle scelte politiche.

Inoltre, un buon coordinamento tra i diversi livelli di governo (regionale, nazionale ed europeo) sembra avere maggior peso nelle regioni della convergenza che in quelle con un PIL al disopra delle media.

Un'ulteriore precondizione per una politica di successo è la trasparenza e la responsabilità riconoscibile nei processi, incluso l'eliminazione della corruzione e una struttura normativa stabile.

Economic drivers e economic enablers

In merito agli *economic drivers* - fattori che stimolano lo sviluppo economico, tra i quali, vanno annoverati il potenziale innovativo, la conoscenza, l'accessibilità e i collegamenti la qualità della vita, le infrastrutture e l'organizzazione degli insediamenti produttivi - e agli *economic enablers* - fattori che consentono lo sviluppo economico, quali il regime di tassazione, i regolamenti e i sistemi amministrativi e di governance - lo studio si è focalizzato, in particolare, su quei fattori che possono essere influenzati dalla scelte politiche regionali, come livello di istruzione, qualità delle università, investimenti in ricerca e sviluppo, accessibilità, connettività, qualità della vita, struttura economica di una regione e potenzialità, cultura e risorse naturali di un territorio, tralasciando – pur consapevoli della loro importanza – quelle condizioni influenzate soprattutto dalle scelte nazionali (tassazioni governative e leggi nazionali).

Dalla ricerca è emersa nelle regioni della convergenza **una scarsa valorizzazione degli *economic drivers*** laddove la Comunità Valenciana ha invece innescato un ciclo virtuoso di successo economico fondato sull'identità dei suoi territori (clima, patrimonio culturale e naturale, coste) coniugata con l'innovazione e l'alta tecnologia. Un elemento specifico del boom valenciano è dagli stakeholder comunemente identificato nell' investimento nel settore dell'edilizia, che, seppure dimostratosi in seguito instabile, ha innescato una dinamica positiva di sviluppo degli altri settori economici.

Una crescita smart: innovazione e società della conoscenza

Dallo studio emerge che la valorizzazione del potenziale innovativo rappresenta per tutti le regioni analizzate un *economic driver* fondamentale per la crescita economica. I casi studio, supportati dalla letteratura in materia, dalle interviste e dall'analisi economica generale, fanno emergere come specifiche misure e investimenti da parte del governo regionale nell'economia della conoscenza abbiano generato nelle 4 regioni, seppure con modalità diverse, processi di sviluppo economico:

- In Grecia, nella regione East-Makedonia-Thrace (REMTh), il programma regionale di azioni innovative "*Technogenesis*", per l'attrazione degli investimenti privati in iniziative per la creazione di nuovi prodotti e sistemi innovativi,
- in Polonia, *Gateway* per il miglioramento delle competenze ICT nell'amministrazione pubblica,
- in Campania i Centri di Competenza, organismi di relazione tra ricerca, accademia e sistema imprenditoriale,
- per la Regione Valenciana, la Fondazione Comunità Valenciana, struttura permanente di collegamento tra istituzioni pubbliche, regionali nazionali e comunitarie, e sistema privato regionale. La Fondazione Comunità Valenciana

rappresenta una significante differenza tra le quattro regioni, poiché tende a coprire in modo permanente il gap tra gli stakeholder regionali – pubblici e privati - e l'Europa.

In tutte le regioni la promozione della conoscenza ed il trasferimento tecnologico mediante la formazione e la creazione di centri dedicati è stato un elemento importante della strategia; tuttavia in alcuni casi alcuni ostacoli e punti di debolezza sono emersi: il basso coinvolgimento del tessuto imprenditoriale, la mancanza di formazione e consapevolezza nella pubblica amministrazione, la mancata creazione di strutture permanenti.

Le strategie, hanno comunque creato alcune condizioni favorevoli, delle quali il reale impatto potrà essere verificato soltanto a medio termine.

Per quanto riguarda la **Campania**, il futuro dei Centri di Competenza può essere garantito soltanto dalla loro capacità di autosostenersi economicamente.

Analisi econometrica: verifica e trasferibilità

A verifica dei risultati delle analisi qualitative e con lo scopo di consentire una certa trasferibilità ai risultati, è stata condotta una analisi econometria sul sistema più ampio delle 230 regioni europee . Ovviamente questa generalizzazione ha richiesta una *standardizzazione* dei valori di riferimento, per esempio operando una, prima distinzione tra regioni con il PIL al di sopra della media e quelle con il PIL al di sotto della media e tra regioni della convergenza deboli e quelle più forti e dinamiche.

Lo studio mostra che alcuni fattori come l'**ineguale distribuzione del benessere economico, l'occupazione nel settore primario**, **la tassazione** e la **crescita demografica** hanno lo stesso impatto sulla crescita economica sia per le regioni della convergenza sia per quelle il cui PIL è al di sopra della media.

La quantità di **fondi UE** dedicati alle strategie di sviluppo, sembra, invece, contare di più nello sviluppo delle regioni più ricche, che mostrano una migliore capacità di implementazione, conoscenza ed esperienza nell'attrarre fondi che di quelle più povere.

Al contrario, la **quota di capitale umano investito nel settore scientifico e tecnologico** sembra essere più importante per le regioni della convergenza così come, il livello di **decentramento** delle responsabilità, più importante nelle regioni della convergenza che in quelle che presentano un PIL al di sopra della media.

Quanto al **livello di corruzione**, l'analisi ha mostrato che nelle regioni della convergenza i fondi comunitari creano crescita economica in modo inversamente proporzionale alla presenza di corruzione. Questo risultato supporta empiricamente piuttosto bene la letteratura scientifica teorica sull'efficienza delle istituzioni.

Dell'analisi econometrica emergono delle differenze significative dal confronto tra le regioni della convergenza deboli e gli altri due sottogruppi regionali (le regioni più veloci e quelle con il PIL al di sopra della media).

A differenza delle regioni della convergenza più veloci, sembra che le regioni della convergenza con un PIL pro-capite al di sotto della media e con un tasso di crescita del PIL

basso mancanodi adeguata reattività ai *driving factor* e non sono in grado di trasformare le loro potenzialità in crescita economica. Per convalidare questi risultati sono tuttavia necessarie ulteriori ricerche e indicatori idonei a misurare un'efficiente allocazione delle risorse.

Nel complesso, è stato dimostrato un effetto di chiara convergenza tra le regioni europee: è interessante vedere come le regioni più deboli in termini di PIL pro-capite presentano in media un tasso di crescita più veloce. Ma se questo risultato può essere attribuito alle politiche di coesione è ancora da dimostrare.

Oggi la crisi economica internazionale ha messo in evidenza come la maggiore crescita osservata in molti paesi del Mediterraneo, per es per Valencia, e dell'Est europeo non era basata su un solido fondamento, bensì su insostenibili bolle immobiliari. I dati statistici disponibili, tuttavia, non comprendono invece l'attuale periodo di crisi, che risulta invece più evidente nelle interviste e nelle empiriche valutazioni dei potenziali effetti delle misure di bilancio restrittive adottate nei vari paesi.

Lo studio svolto non tiene conto per mancanza di dati degli effetti della crisi economica. Tuttavia, alcune considerazioni emerse dalle interviste sono riportate nella sezione sulle opzioni di politica di sviluppo.

2 OPZIONI PER LE POLITICHE DI SVILUPPO

Le alternative politiche presentate di seguito sono destinate a fornire indicazioni per la definizione di strategie e strumenti utilizzabili a livello regionale dai policy-maker per migliorare le performance economiche dei loro territori.

Gli effetti della crisi economica e l'instabilità finanziaria che attualmente colpisce i paesi dell'UE non sono, tuttavia, stati considerati nella nostra analisi a seguito della mancanza di dati, anche se alcune considerazioni di carattere generale e di lungo periodo possono essere effettuate.

Normativa nazionale e implementazione dei programmi finanziati dall'UE.

In generale, è essenziale per i policy maker regionali e gli stakeholder comprendere appieno il campo di azione all'interno del quadro normativo nazionale e le modalità di cooperazione con le amministrazioni nazionali.

Dall'analisi della letteratura e dalla ricerca qualitativa emerge che il potere politico e amministrativo che le amministrazioni regionali possono esercitare sui fondi è un importante fattore di successo: ma che **non è soltanto una questione di quantità di risorse, ma soprattutto della capacità di spesa**, che può essere compromessa se attuata senza prendere in considerazione le specificità dei territori all'interno della trama più ampia delle strategie nazionali ed europee. Le amministrazioni regionali dovrebbero, per loro natura, il più possibile tentare di attivare una **cooperazione a monte** (a livello nazionale) e un **coordinamento a valle** (delle amministrazioni locali). Inoltre, è essenziale garantire che alla decentralizzazione amministrativa si accompagni una capacità e competenza nella gestione efficiente dei fondi UE .

L'efficienza è più importante della quantità di fondi assegnati.

Nelle regioni in ritardo di sviluppo è opinione emersa dai questionari e dalle interviste agli stakeholder regionali che l'efficacia e l'efficienza nella spesa - in termini di programmazione - è più importante dell'ammontare dei fondi UE disponibile.

In particolare è essenziale l'efficienza delle amministrazioni regionali e la capacità delle istituzioni nella gestione dei fondi. Sebbene in alcuni casi ciò può essere disciplinato attraverso una concentrazione delle risorse a livello nazionale, è necessario operare anche su altri aspetti ad esempio attraendo o **migliorando le competenze del personale interno,** consentendo adeguati incentivi basati sulle prestazioni, in modo da costruire sistemi burocratici non casuali (ovvero legati allo spoil system), ma sostenibili nel tempo. D'altra parte, considerato che 26 su 27 Stati soffrono di deficit pubblico, il miglioramento e l'efficienza della macchina amministrativa sono una sfida crescente.

Necessità di un quadro regolamentare stabile.

Una condizione preliminare significativa per i decision-makers regionali è la necessità di un **quadro normativo stabile, che garantisca la responsabilità pubblica e la trasparenza dei processi amministrativi.** Queste condizioni spesso determinano un allungamento delle procedure burocratiche senza garantire del controllo efficace, in situazioni specifiche, sui livelli di corruzione e di economia informale collegata all'uso dei fondi pubblici.

L'analisi qualitativa e quella econometrica mostrano chiaramente che l'efficacia dei fondi comunitari è inversamente proporzionale al livello di corruzione. All'interno delle amministrazioni nelle aree particolarmente a rischio, dovrebbero, a tal proposito, essere consolidati i processi di controllo interno sulle procedure di appalti pubblici e il monitoraggio dell'attuazione dei progetti finanziati dall'UE.

3. BENEFICIARE DEGLI ECONOMIC DRIVERS

Promuovere la crescita, riducendo le disparità regionali.

Il primo principio da sottolineare è che, **all'interno di un paese, la disparità economica tra regioni ostacola la crescita** e questo si manifesta in particolare nelle regioni della convergenza. Gli sforzi dovrebbero, pertanto, prevedere di rafforzare la convergenza tra regioni all'interno dei paesi oltre che tra Stati dell'UE.

La crescita economica va di pari passo con la politica demografica/migratoria.

La crescita demografica risulta essere un fattore strategico per lo sviluppo economico. Il rischio reale è che, nel sistema territoriale europeo, i **bassi livelli di reddito determinino una drastica riduzione della popolazione** in molte regioni meno ricche, fenomeno opposto a quello di regioni affette da un crescita costante della popolazione - soprattutto connessa ai fenomeni immigratori - che devono affrontare problemi insediativi e di sviluppo urbano.

Il capitale umano come driver nelle regioni della convergenza.

L'analisi econometrica ha rivelato che il **capitale umano con elevato livello di istruzione**, in particolare nel campo della scienza e della tecnologia, se rappresenta un driver per tutte le regioni è **particolarmente importante per le regioni della convergenza**. Gli stakehoder intervistati nelle 3 regioni della convergenza hanno sottolineato l'incapacità da parte delle politiche locali di sfruttare adeguatamente questo potenziale umano; l'analisi econometrica ha confermato questo risultato, riscontrando che **le regioni più deboli sembrano non essere capaci di avvantaggiarsi del potenziale innovativo rappresentato dal capitale umano disponibile.**

Al contrario, gli stakeholder in Valencia hanno confermato la connessione esistente tra l'alto grado di istruzione del capitale umano (sommato alla presenza di università di alta qualità) e il successo regionale, con le recenti iniziative e gli investimenti in innovazione industriale e in nuove tecnologie.

Necessità di politiche innovative differenziate.

È ovvio che non è possibile identificare una unica strategia di innovazione valida per le politiche regionali in generale, tuttavia è **possibile identificare alcuni indirizzi, nelle priorità europee delle politiche di coesione (strategia 2020)**, in modo da tirare profitto almeno dalla coerenza tra scelte locali e strategie dell'Unione Europea.

Qualunque sia la politica di innovazione adottata, per essere efficace essa richiede comunque una forte cooperazione tra le regioni e gli organi pubblici ai diversi livelli (ministeri, centri di ricerca, etc) e il coinvolgimento degli attori dello sviluppo locale.

Interdipendenza dei fattori chiave.

Una delle implicazioni più importanti è che i fattori chiave dello sviluppo sono interdipendenti e devono essere indirizzati o migliorati in forma integrata: per es. non basta utilizzare i fondi pubblici in modo efficiente, a questo va aggiunto un quadro normativo stabile e coerente e la capacità degli amministratori regionali di prestare attenzione, più che alla corretta assegnazione degli stessi, alla gestione efficace dei fondi (attuazione dei programmi e progetti rispondente ai bisogni dei territori)

Duplice strategia: ottimizzazione delle risorse e assetto istituzionale

L'analisi condotta suggerisce una duplice strategia per la crescita economica:

- da un lato la promozione di alcuni *driver* economici
- dall'altro il miglioramento dei modelli di governance interistituzionali e delle procedure amministrative di gestione e di controllo.

Altri fattori possono ulteriormente essere suggeriti quali elementi di riflessione:

- *l'allocazione* dei fondi (in termini di efficacia ed efficienza) è più importante dell'ammontare della quantità di denaro ricevuto in particolare per le regioni della convergenza;
- la *concentrazione* dei fondi non va interpretata come allocazione su un singolo settore: una strategia fondata sulla attuazione di interventi complementari intorno ad alcune potenzialità regionali primarie (diversificazione) dovrebbe essere considerata il motore di uno sviluppo diffuso e sostenibile;
- per una programmazione economica efficace è essenziale la *collaborazione* tra tutti i livelli della pubblica amministrazione sia nella presa di decisione che nel governo delle azioni (governance);
- gli investimenti in mezzi di *trasporto e infrastrutture* di connessione con le reti transnazionali hanno un notevole impatto sugli sviluppi economici futuri delle regioni europee.

4. NECESSITÀ DI ULTERIORI RICERCHE

Ricerche in materia di efficienza amministrativa e crescita economica.

I risultati dello studio danno spunto a molteplici approfondimenti e stimolano ulteriori ricerche. In particolare risulta interessante - soprattutto per le regioni della convergenza - uno studio su **l'efficienza della macchina amministrativa pubblica (criteri di valutazione e monitoraggio)**.

Altre ricerche andrebbero sviluppate per indagare argomenti finora non sufficientemente approfonditi relativamente all'organizzazione della pubblica amministrazione:

- Quali misure potrebbero aumentare l'efficacia dell'azione pubblica per lo sviluppo regionale?
- E' possibile identificare skill tecnico/amministrativi in grado di valutare questi processi e supportare le scelte politiche in forma adeguata alla crescente *europeizzazione* delle procedure e delle strategie di sviluppo?
- Quali problemi di attuazione e di monitoraggio sono determinati dai modelli e dalle procedure delle politiche europee regionali e settoriali?
- Le strutture amministrative esistenti sono coerenti con questi modelli?
- Come risolvere il problema di un funzionamento più efficace della macchina amministrativa? Gli incentivi e i salari possono aiutare? potrebbe essere misurato il loro effetto?
- Quali meccanismi di monitoraggio e controllo di efficienza sono già in atto?

Ricerca sull'incidenza del livello della qualità di vita sulla crescita regionale.

Un ulteriore campo di indagine importante, soprattutto a livello regionale, è quello sulla qualità della vita: ovvero in che misura i livelli e le caratteristiche della qualità della vita

influenzano le performance economiche regionali e se è possibile individuare un legame tra caratteristiche della qualità della vita e tipologie territoriali regionali.

Ulteriori ricerche sarebbero inoltre necessarie, in particolare per valutare la politica di coesione nelle regioni della convergenza (identificazione di indicatori, valori di output e risultato, modelli di valutazione):

- relazione tra livello di istruzione e di formazione all'interno dell'amministrazione regionale e efficienza dei processi e dei modelli regionali;
- relazione tra modelli organizzativi della pubblica amministrazione e capacità (efficacia e efficienza) nell'attuare le strategie di sviluppo regionale;
- relazione tra livello di decentramento nei settori diversi della PA e effetti sullo sviluppo regionale;
- relazione tra assetto istituzionale e livelli della programmazione nel valorizzare le potenzialità regionali e ridurre le differenze di sviluppo regionale.

Sarebbe infine particolarmente interessante, alla luce della crisi economica attuale e della preoccupazione dei Governi, approfondire i dati sugli effetti della crisi economica sulle economie delle regioni indagate verificando l'evoluzione delle politiche di sviluppo in relazione con il debito pubblico regionale.

Summary Report –Polish

Raport Końcowy przedstawia dokładny obraz rezultatów projektu ESPON nr 2013/2/4 p.t. “Strukturalna analiza danych empirycznych z regionów konwergencji: identyfikacja czynników kluczowych dla skonsolidowanego wzrostu gospodarczego (SEARCH)”.

0. Zrozumienie zróżnicowanego wzrostu regionów konwergencji

Kluczem do sukcesu europejskiej polityki spójności jest zrozumienie dlaczego niektóre z regionów konwergencji są w stanie przyspieszyć swoje tempo rozwoju gdy inne nie potrafią dołączyć do grupy bogatszych Identyfikacja czynników które wpływają na ponadprzeciętny lub niesatysfakcjonujący wzrost i mogących wpłynąć na efektywne zarządzanie funduszami i wydajną administrację będzie pomocna regionalnym decydentom w działaniach na rzecz poprawy funkcjonowania lokalnej gospodarki. Identyfikacja czynników odpowiedzialnych za tempo wzrostu gospodarczego lepsze lub gorsze od średniej i jednocześnie powiązanych z poziomem efektywności wykorzystania zasobów może stanowić dużą pomoc dla decydentów w regionach. Niniejszy Raport Końcowy dokonuje szczegółowej analizy czterech regionów uczestniczących - Kampanii (Włochy), Wschodnia Macedonia i Tracja (Grecja), Podlasie (Polska) i Valencia (Hiszpania) jednak wnioski z niego płynące mogą okazać się przydatne dla wszystkich regionów konwergencji i regionów doganiających gospodarczo średnią Unijną oraz regionów przystępujących dopiero do wsparcia kohezyjnego.

1. Cele

Celami projektu było:

- Po pierwsze, lepsze zrozumienie czynników istotnych z punktu widzenia dynamicznego rozwoju gospodarczego regionów konwergencji, oraz
- Po drugie, zidentyfikować czynniki istotne dla pomyślnego (wydajnego i skutecznego) wdrożenia polityki spójności w regionach konwergencji..

2. Analiza, metody

W celu osiągnięcia tych celów, zastosowano szereg metod: począwszy od przeglądu dostępnej literatury, poprzez badania sondażowe po ustrukturyzowane wywiady przeprowadzone z regionalnymi interesariuszami w celu pozyskania jakościowych danych dotyczących opinii nt. potrzeb regionów. Następnie przeprowadzono analizę ekonometryczną, w której uwzględniono wszystkie istotne czynniki i zmienne. Równolegle do analizy ekonometrycznej w 4 regionach uczestniczących w badaniu przeprowadzono badania pogłębione w obszarze tematycznym „innowacyjność i społeczeństwo informacyjne”, z wykorzystaniem studiów przypadków. Celem analiz jakościowych i ilościowych przeprowadzonych przez zespół badawczy była identyfikacja niedomagań regionalnych systemów gospodarczych regionów konwergencji i podjęcie rozważań nad opcjonalnymi politykami rozwoju.

W odróżnieniu od Raportu Pośredniego w którym skoncentrowano się na kwestiach technicznych i metodologicznych prowadzonych analiz, Raport Końcowy przedstawia w pierwszej kolejności rezultaty tych analiz. Jest to w szczególności prawdziwe w przypadku przeglądu literatury, jakościowych wywiadów i badań sondażowych - opatrzonych dodatkowo streszczeniem rezultatów i skrótowym zestawieniem danych. Uzupełniając treść Raportu Pośredniego, Raport Końcowy zawiera dodatkowe analizy wywiadów przeprowadzonych w każdym z badanych regionów oraz interpretuje regionalne sondaże.

3. Wstępne spojrzenie na końcowe rezultaty

W **przeglądzie literatury** wprowadzono rozróżnienie pomiędzy czynnikami istotnymi dla **ogólnego rozwoju gospodarczego** regionu oraz czynnikami istotnymi z punktu widzenia dobrej polityki spójności. Czynniki z pierwszej kategorii zostały ponadto podzielone na **stymulujące ekonomicznie** oraz **warunkujące rozwój gospodarczy**, gdzie czynniki stymulujące mają bezpośredni wpływ na rozwój, natomiast czynniki warunkujące posiadają bardziej pośredni wpływ, poprzez np. kształtowanie uwarunkowań prawnych. Czynniki stymulujące, które z naukowego punktu widzenia posiadają pozytywny wpływ na rozwój gospodarczy to na przykład potencjał innowacyjny na który składa się wykształcona siła robocza, wysoka pozycja uniwersytetów w uznanych rankingach, prowadzone w regionie badania i rozwój lub liczba udzielonych patentów. Innymi czynnikami stymulującymi są dostępność, powiązania, jakość życia lub struktura regionalnej gospodarki. Dla kontrastu, **czynniki warunkujące** to np. regulacje odnoszące się do rynków produktów i polityka fiskalna wobec firm. W odróżnieniu od czynników stymulujących, są one w pierwszej kolejności kształtowane na poziomie krajowym (choć istnieją wyjątki, których przykładem jest w zakresie podatków Szwajcaria).

Czynniki mające znaczenie przy wdrażaniu polityki spójnościowej, które można było zidentyfikować w wyniku przeglądu literatury, to między innymi poziom wykształcenia przedstawicieli władz regionalnych tudzież urzędników zatrudnionych w administracji regionalnej, warunkujący kompetentne i optymalne wdrożenie polityki spójności. Kolejnym istotnym czynnikiem jest poziom skorumpowania administracji regionalnej oraz stopień decentralizacji.

W wyniku przeglądu literatury wyselekcjonowano szereg hipotez do dalszej analizy jakościowej i ilościowej i innych działań, przy założeniu iż czynniki stymulujące ekonomicznie i mające znaczenie przy wdrażaniu polityki spójnościowej powinny zasadniczo odgrywać pozytywny wpływ na rozwój gospodarczy, natomiast czynniki warunkujące (regulacje, polityka fiskalna) powinny pozostawać na niskim poziomie (w znaczeniu niskiego stopnia regulacji obrotu gospodarczego oraz niskich obciążeń podatkowych).

W trakcie **analizy jakościowej**, wnioski przedstawiono osobno dla “słabych” regionów konwergencji (Podlasie, Campania i Wschodnia Macedonia-Tracja) oraz osobno dla regionu „doganiającego średnią UE” - Valencia. W wyniku **badań sondażowych** w słabych regionach konwergencji ustalono iż alokacja funduszy unijnych, a dokładniej - selektywna i dobrze spriorytetyzowana alokacja funduszy strukturalnych idąca w parze z wydajnym mechanizmem wydatkowania tych funduszy jest najważniejszym czynnikiem (1 w skali 1-12). W konsekwencji, podejmowanie się realizacji właściwych działań (efektywność) we

właściwy sposób (wydajność) w odniesieniu do środków unijnych wydaje się być najważniejsze. Natomiast sama kwestia wielkości funduszy jest oceniana jako znacznie mniej istotna (7 w skali 1-12), przynajmniej w regionie Valencia. Również bardzo ważnym dla regionów słabych są takie czynniki stymulujące jak dostępność (np. zasięg sieci szerokopasmowego dostępu do Internetu), wiedza i potencjał innowacyjny (np. wysoka pozycja uniwersytetów w uznanych rankingach, wykwalifikowani pracownicy), dostępność, samorządność i jakość życia.

W wyniku przeprowadzonych **wywiadów** ustalono iż dla słabych regionów konwergencji istnieje szereg czynników które stoją na przeszkodzie wzrostu gospodarczego (np. peryferyjne położenie geograficzne, słabo rozwinięta infrastruktura transportowa, przestępczość zorganizowana, natomiast czynniki stymulujące ekonomicznie są dobrem deficytowym (są wśród nich m. in. jakość życia i potencjał innowacyjny). W przeciwieństwie do słabych regionów Valencia może poszczycić się posiadaniem szeregu czynników wzrostu gospodarczego (wykorzystanie potencjału innowacyjnego, sprawna administracja publiczna, itd.) a jedynie kilkoma obszarami problemowymi (takimi jak ograniczone zasoby finansowe, rozdrobniony sektor rolny, deficyt zasobów wodnych, rozbudowana biurokracja administracji regionalnej). Ponadto zespół badawczy otrzymał dowody świadczące o tym że każdy z regionów posiada pewien potencjał gospodarczy, a różnicę pomiędzy sukcesem a porażką wyznacza mniej lub bardziej efektywne wykorzystanie zasobów. Jednym z wielokrotnie wymienianych w wywiadach powodów dla których istnieją różnice w ich wykorzystaniu jest poziom edukacji i zachęty dla urzędników i decydentów w regionie. Kolejnym powodem różnic w rozwoju jest wykorzystanie szansy jaką stanowi większa inwestycja w nawet jeden sektor (tak jak było to w przypadku sektora budownictwa Valencii). Stanowi ona impuls dla pozostałej części regionalnej gospodarki i poprzez mechanizmy mnożnikowe przyczynia się do utrzymania kapitału w regionie. Pomimo kryzysu w sektorze budownictwa który w przeszłości był uważany za główny czynnik stymulujący gospodarkę, osoby z którymi przeprowadzono wywiady wskazywały na pozostałe czynniki dające przewagę regionowi – zarówno niezależne, takie jak pogoda i krajobraz, jaki wytworzone w wyniku dotychczasowego rozwoju gospodarczego (rozwój nowych technologii poprzez duże inwestycje w badania i rozwój) które konsolidują gospodarczy rozwój Valencii. Według rozmówców, różnica pomiędzy sukcesem gospodarczym a jego brakiem leży w zróżnicowanym sposobie wykorzystania zasobów lub czynników stymulujących. Jednym z powodów sukcesu Valencii było wykorzystanie we właściwy sposób i we właściwym czasie możliwości leżące w sektorze budowniczym.

Analiza ekonometryczna dostarcza dowodów potwierdzających powyższe wnioski. Generalnie daje się zaobserwować wyraźny efekt konwergencji wśród regionów Europy: obszary zapóźnione charakteryzują się w większości przypadków szybszym wzrostem PKB per capita niż obszary wysokorozwinięte, co można częściowo przypisać polityce spójności oraz regulacjom Unijnym. W tym miejscu należy zaznaczyć, iż na potrzeby analizy w pierwszej kolejności dokonano rozróżnienia pomiędzy „regionami konwergencji" i bogatymi „regionami o PKB powyżej średniej UE", a następnie pomiędzy „słabymi regionami konwergencji" i „regionami konwergencji doganiającymi średnią UE" w celu bardziej wiarygodnego odzwierciedlenia różnic dotyczących czynników sukcesu.

Analiza ujawniła między innymi fakt iż **nierówny podział zasobów ma negatywne oddziaływanie na wzrost gospodarczy** zarówno regionów konwergencji i regionów wysoko rozwiniętych. Równie prawdziwe jest stwierdzenie iż przyrost populacji oraz wielkość regionu jest powiązane z dynamiką jego rozwoju (chociaż kwestia pierwotnej przyczyny nie jest zawsze jasna – czy wzrost populacji i nierówny podział zasobów wynikają z niskiego wzrostu gospodarczego czy vice versa?). Jednakże istnieje pewna rozbieżność w efektywności oddziaływania niektórych czynników stymulujących na regiony ponadprzeciętnym PKB i regionów o PKB poniżej średniej UE. Dla przykładu, wielkość otrzymanych środków Unijnych odgrywa istotnie większe znaczenie dla regionów o PKB powyżej średniej UE niż dla biedniejszych regionów – może to wskazywać na kilka kwestii, choć za każdym razem należy dokonać właściwej weryfikacji konkretnego przypadku: po pierwsze, fundusze Unijne mogą być znacznie bardziej wydajnie zagospodarowane w bardziej rozwiniętej gospodarce; wiąże się to z tym że, po drugie, bardziej prosperujące regiony mają większą zdolność, wiedzę i doświadczenie w pozyskiwaniu dodatkowych środków Unijnych i inwestorów prywatnych tworząc w ten sposób samonapędzający się pozytywny cykl. Nie przekreśla to jednak pozytywnego wpływu funduszy Unijnych na regiony konwergencji lecz wskazuje na wyzwania z jakimi borykają się słabsze obszary. W praktycznym ujęciu do przykładów takich czynników należy na przykład poziom dostępu do **Internetu** – wydaje się on oddziaływać na wzrost gospodarczy jedynie w regionach o PKB powyżej średniej UE, ponieważ korzyści płynące z większej dostępności elektronicznej ujawniają się w chwili gdy medium przekazu zapełnia się treścią przedstawiającą faktyczną wartość dla regionu. Kapitał ludzki jest i będzie w przyszłości najważniejszym zasobem w odniesieniu do innowacyjności i wzrostu gospodarczego. Nie jest w związku z tym zaskoczeniem iż jest on wskazywany jako bardzo ważny we wszystkich regionach. Czynniki mające znaczenie przy wdrażaniu polityki spójnościowej, takie jak daleko zakrojona **decentralizacja** mają znaczenie szczególnie w regionach konwergencji. W przypadku rozważań na temat wielkości pomocy finansowej udzielanej poprzez fundusze unijne, należy wziąć pod uwagę widoczny negatywny wpływ na regiony słabe i pozytywny w regionach o PKB powyżej średniej unijnej – można odnieść wrażenie iż efektywny transfer środków do gospodarki jest możliwy jedynie w regionach bogatszych. Powiązanie wielkości środków z funduszy strukturalnych z poziomem korupcji (**określonego przez Indeks Korupcji**), pozwoliło na wykazanie iż środki unijne wpływają korzystnie na wzrost gospodarczy jedynie w regionach konwergencji w których korupcja nie przybrała znaczących rozmiarów. W odróżnieniu od regionów konwergencji doganiających średnią UE, słabe regiony konwergencji charakteryzujące się poziomem PKB per capita i niskim wzrostem gospodarczym nie są w stanie wykorzystać swojego potencjału na rzecz wzrostu gospodarczego, nie korzystają w sposób istotny z żadnych czynników stymulujących i nie reagują na nie.

Studia przypadków, które łączy wspólny temat „innowacyjnego społeczeństwa informacyjnego" ujawniły o wiele więcej korzyści płynących z programów unijnych niż efektów niekorzystnych, Temat studiów przypadków został wybrany na podstawie mocnych dowodów płynących zarówno z literatury naukowej jak i badań sondażowych, pokazujących iż dziedzina ta odgrywa kluczową rolę również w rozwoju regionów konwergencji. Zidentyfikowano szereg słabych stron, niedociągnięć i zagrożeń, których przykładem mogą być: zbytnia centralizacja, niewystarczające zaangażowanie sektora prywatnego, brak

partnerstwa publiczno prywatnego i brak trwałych struktur. Bliższe spojrzenie możliwe dzięki przeprowadzonym studiów przypadku wdrożeń strategii innowacyjności pozwoliło na stworzenie obrazu procesów które mogą zostać wygenerowane dzięki podjęciu konkretnych kroków i inwestycji w gospodarkę opartą na wiedzy. *Technogenesis* we Wschodniej Macedonii i Tracji przyczyniła się do powstania nowych produktów i usług, jednocześnie oferując możliwości inwestycyjne dla zainteresowanych podmiotów. Inwestycje w e-Administrację prowadzone pod wspólnym szyldem "Wrota Podlasia" zwiększyły wykorzystanie technologii informacyjnych i komunikacyjnych oraz kompetencje cyfrowe urzędników władz regionu. Regionalne Centra Kompetencji w Kampanii zostały stworzone w celu działania na zasadzie pośrednictwa pomiędzy światem nauki i biznesu, przekształcając projekty badawcze w odnoszące sukces rynkowy inicjatywy biznesowe. W Valencii, stworzono instytucję której zadaniem jest promowanie widoczności regionu w instytucjach i programach Unijnych.

Istnieje duża różnica pomiędzy podejściem reprezentowanym przez Valencię a pozostałymi 3 regionami: Valencia stworzyła strukturę (FUNDACIÓN COMUNIDAD VALENCIANA-REGIÓN EUROPEA) za pośrednictwem której lokalni gracze mogą przyciągnąć dodatkowe fundusze Unijne w różnych dziedzinach społeczno-gospodarczych.

Przyszłość Regionalnych Centrów Kompetencji w Kampanii natomiast zależy w dużej mierze od ich zdolności do przekształcenia się w obecnym (2007 – 2013) okresie budżetowym w samowystarczalne instytucje.

Studium przypadku obejmujące województwo podlaskie wykazało iż Podlasie nie wykorzystuje synergii pomiędzy lokalnymi i regionalnymi strategiami w zakresie tworzenia infrastruktury i kompetencji cyfrowych, między innymi z tej przyczyny iż na poziomie regionalnym takiej strategii po prostu nie ma. Podlasie jest jednym z niewielu regionów które nie posiadają zdefiniowanej strategii rozwoju społeczeństwa informacyjnego, kontekst planistyczny ogranicza się jedynie do ogólnikowych i krótkich stwierdzeń zawartych w strategii rozwoju regionalnego (Strategia rozwoju województwa podlaskiego do roku 2010). Władze wojewódzkie koncentrują się na własnych projektach flagowych, czego dowodem jest wsparcie dla projektu tworzenia sieci szkieletowej zmniejszającej koszt operatorów „ostatniej mili". Jeżeli chodzi o usługi on-line, władze województwa już w 2003 r. w ramach kontraktu wojewódzkiego z rządem podjęły działania w ramach projekt „Budowa i pilotażowe wdrożenie informatycznego systemu wspomagania zarządzania województwem przez administrację samorządową", natomiast w okresie 2004 – 2007 sfinansowano projekt szkoleniowy „Podniesienie umiejętności osób pracujących województwa podlaskiego w zakresie praktycznego wykorzystywania w pracy nowoczesnych systemów informatycznych i komunikacji elektronicznej". Flagowym projektem infrastrukturalnym z dziedziny społeczeństwa informacyjnego stał się przede wszystkim realizowany w latach 2005 – 2007 projekt „Wdrażanie elektronicznych usług dla ludności w województwie podlaskim", w wyniku którego szereg usług publicznych jest według Urzędu Marszałkowskiego, nominalnie dostępnych on-line. Analizy jednak pokazują iż mieszkańcy Podlasia nie korzystają z tych usług (zgodnie z własnymi danymi statystycznymi Urzędu Marszałkowskiego, do chwili powstania raportu drogą elektroniczną zainicjowano jedynie 160 spraw).

Do chwili obecnej nie podjęto działań mających na celu ustalenie wpływu ww. projektów na gospodarkę regionu, jednakże z punktu widzenia urzędu nie można podważyć potencjału

oszczędności wyrażonych w czasie i środkach finansowych jakie niesie ze sobą chociażby elektroniczny obieg dokumentów. Urząd Marszałkowski informuje iż w rezultacie realizacji ww. projektów, samorządy lokalne otrzymały nowe kanały komunikacji: 25 z nich wykorzystało narzędzie do stworzenia wlasnej strony internetowej, 130 dalszych samorządów ma swoją stronę na Biuletynie Infromacji Publicznej, zintegrowanym w serwisem „Wrota Podlasia". Obraz sukcesu jest jednak zakłócony w momencie oceny oddziaływania projektów władz regionalnych na obywateli. Wykorzystanie usług elektronicznych jest wysoce niezadowalające i liczba 160 zainicjowanych drogą elektroniczną spraw jest nieadekwatna już nawet nie tyle do wielkości budżetu projektu ale nawet do ilości dostępnych formularzy (1914). W przededniu zmian legislacyjnych które mają umożliwić stosowanie zaufanych profili, można mieć jedynie nadzieję iż Urząd ułatwi obywatelom korzystanie z usług elektronicznych a zainteresowanie metodą komunikacji z urzędem przez Internet wzrośnie, w związku z tym oddziaływanie ekonomiczne dotychczas zakończonych projektów być może stanie się bardziej zauważalne.

W ramach obecnej perspektywy finansowej 2007 – 2013 władze województwa planują wsparcie kilku projektów społeczeństwa informacyjnego ze środków Regionalnego Programu Operacyjnego:

- „Wdrażanie elektronicznych usług dla ludności województwa podlaskiego - część II, administracja samorządowa",
- „Wdrażanie elektronicznych usług dla ludności województwa podlaskiego – część II, administracja rządowa",
- „Wdrażanie elektronicznych usług dla ludności województwa podlaskiego - część II, administracja samorządowa – Lokalne teleinformatyczne sieci szerokopasmowe",
- „Podlaski system informacyjny e-Zdrowie".

Należy jednak zauważyć iż władze wojewódzkie zdecydowały się na objęcie pełnej kontroli nad procesem informatyzacji administracji regionu, nie delegując zadań gminom i powiatom i nie organizując otwartych naborów w których mogłyby uczestniczyć jednostki samorządu terytorialnego ze swoimi własnymi projektami społeczeństwa informacyjnego. Obecnie samorządy są zaangażowane w debatę z władzami województwa na temat właściwości tego podejścia i obie strony przedstawiają ważne argumenty. Urząd Marszałkowski wykazuje iż gminy Podlasia charakteryzują się dużym zróżnicowaniem zasobów i potencjału. W konsekwencji kompetencje i zdolność do poprawnego wdrożenia projektu tego typu są w niektórych obszarach niewystarczające, dlatego też podejście zdecentralizowane mogłoby się przełożyć na pogłębienie nierówności, gdyż gminy mniej rozwinięte nie byłyby w stanie konkurować przy składaniu projektów jak równy z równym z miastami takimi jak Suwałki, Białystok lub Łomża. Ponadto, koordynacja centralna realizowana przez Urząd Marszałkowski sprzyja zapewnieniu wspólnych standardów oraz daje administracji regionalnej korzystniejszą – wynikającą chociażby z wielkości zamówienia - pozycję przetargową w rozmowach z podwykonawcami. Jest to niezaprzeczalna korzyść, nie można natomiast zgodzić się ze stwierdzeniem władz regionalnych iż beneficjenci rozwiązania e-Administracji (gminy Podlasia) otrzymają gotowe do zastosowania rozwiązanie, które bez trudu wykorzystają do świadczenia swoich usług obywatelom. Dowodem na problemy z

wykorzystaniem tych rozwiązań są chociażby statystyki dotyczące spraw urzędowych inicjowanych elektronicznie.

Jednocześnie samorządy utrzymują że o ile są one świadome korzyści jakie niosą ze sobą wspólne standardy, mogłyby one być bez większych problemów zapewnione nawet w sytuacji gdy systemy e-Administracji byłyby wdrażane niezależnie, biorąc pod uwagę istniejące ramy interoperacyjności zawarte w Ustawie „o informatyzacji działalności podmiotów realizujących zadania publiczne".

Ponadto, mimo iż nadzór władz wojewódzkich jest w pewnym stopniu uzasadniony w kontekście zapewnienia wspólnych standardów, poszczególne gminy mają specyficzne potrzeby wynikające z uwarunkowań lokalnych, dlatego też powinny istnieć źródła finansowania ich własnych inicjatyw. Oszczędności użytkownika ostatecznego – zdefiniowanego jako pojedyncza gmina lub instytucja publiczna – wynikające z centralnego podejścia są często iluzoryczne, gdyż ostatecznie ponosi je podmiot wdrażający, tak jak miało to miejsce w przypadku nabycia przez Urząd marszałkowski podpisów cyfrowych i późniejsza ich darmowa dystrybucja pomiędzy samorządy.

W chwili obecnej dominuje podejście centralne, czego dowodem jest duży projekt infrastrukturalny - Sieć Szerokopasmowa Polski Wschodniej (SSPW) – z którego ma skorzystać również Podlasie i które służy jako dobry przykład problemów napotykanych przy takim podejściu. Ponieważ SSPW obejmuje swym zasięgiem 5 województw, wiąże się to z nieuniknionymi uogólnieniami i kompromisami, w wyniku których wiele podmiotów składa protesty co do planów zawartych w studium wykonalności. To w konsekwencji powoduje zatrzymanie całego projektu już na etapie dokumentacji.

Inicjatywy badane w ramach polskiego stadium przypadku, mimo znaczących nakładów na ten cel, nie przyczyniły się w sposób znaczący do stworzenia nowych kanałów komunikacji obywatela z urzędem, natomiast dokonano znaczących inwestycji w infrastrukturę urzędów jak i szkolenia kadr tych instytucji. Silną stroną tych projektów są głównie wspólne standardy, natomiast do słabości należy mniejsza wrażliwość na uwarunkowania lokalne. Dużą szansą na wykorzystanie już stworzonego (w świetle statystyk - jak się okazało - nieco na wyrost) potencjału e-Administracji są dokonywane obecnie zmiany legislacyjne umożliwiające tworzenie zaufanych profili w e-Usługach publicznych. Wykorzystanie na powszechną skalę e-Usług skutkować będzie dużymi oszczędnościami za równo po stronie samorządów jak i obywateli.

W badaniu zastosowano odmienne spojrzenie na kwestię rozwoju gospodarczego – w uzupełnieniu analiz jakościowych i ilościowych, dokonano podziału czynników sukcesu na najbardziej bezpośrednio oddziaływujące czynniki stymulujące ekonomicznie, czynniki pośrednio warunkujące rozwój gospodarczy, istniejące zwykle na poziomie krajowym, oraz czynniki mające znaczenie przy wdrażaniu polityki spójnościowej. Wszystkie te trzy kategorie były rozpatrywane osobno na każdym kroku analizy. Ponadto, w trakcie analizy ekonometrycznej, czynniki zawierające się w dwóch kategoriach (stymulujące i mające znaczenie przy wdrażaniu polityki spójnościowej) zostały połączone i w rezultacie takiego działania wykazano iż fundusze unijne nie są wydajnym narzędziem w zetknięciu z wysokim poziomem korupcji.

4. Rekomendacje co do kształtu polityk

W pierwszej kolejności politycy na poziomie regionalnym muszą być świadomi istnienia **różnego rodzaju czynników,** oddziaływujących w sposób zróżnicowany na sytuację gospodarczą regionu. O ile czynniki stymulujące i mające znaczenie przy wdrażaniu polityki spójnościowej mogą być w dużym stopniu kształtowane na szczeblu regionalnym, natomiast czynniki warunkujące rozwój gospodarczy są domeną działań w skali kraju.

Dlatego też regiony powinny skupić się na oddziaływaniu na dwa pierwsze czynniki. To od władz regionalnych zależy aby czynniki takie jak dostępność i potencjał innowacyjności odgrywały coraz większą rolę i aby ich jakość ulegała poprawie. Dla wszystkich regionów konwergencji niezwykle ważna jest stała poprawa tych warunków i stworzenie **stabilnych ram prawnych** będących podstawą rozwoju gospodarczego, pod warunkiem oczywiście zlikwidowania **korupcji** i zapewnienia **przejrzystości procesów administracyjnych**. To drugie jest znacznie łatwiejsze do zapewnienia w przypadku daleko idącej decentralizacji i bliskości urzędów do obywatela. Niski poziom korupcji i wysoki stopień decentralizacji wydają się stanowić klucz do wydajnego gospodarowania funduszami unijnymi.

Warunkiem wykorzystania potencjału innowacyjnego w regionie jest spójność ram prawnych na poziomie krajowym. Dlatego też dobra współpraca na poziomie regionalnym, krajowym i unijnym jest kluczowa, z tej prostej przyczyny że nie istnieje regionalny system wsparcia innowacyjności który by funkcjonował w oderwaniu od otoczenia.

Regiony konwergencji, z uwagi na rzadkość swoich czynników wzrostu powinny z nich korzystać w możliwie najefektywniejszy sposób. Dlatego też należy zastanowić się nad zasadnością podjęcia ruchów płacowych i wprowadzenia innych zachęt w wyniku których pracownicy administracji regionalnej oraz publicznych instytucji edukacyjnych, badawczych i rozwojowych otrzymają zachętę do pozostania na swoich stanowiskach, zamiast szukać ofert pracy w innych regionach lub w sektorze prywatnym. Innym rozwiązaniem do poddania pod rozwagę jest inwestycja w wybrany, najbardziej obiecujący sektor gospodarczy, którego rozwój daje szansę pozytywnego oddziaływania na pozostałe sektory.

Podlasie powinno szczególnie mocno skoncentrować się na wzmocnieniu ekonomicznych czynników stymulujących (dostępność, poprawa kompetencji i jakości życia) i modernizacji sektora publicznego (postaw i zasad funkcjonowania. Opóźnienia lub zaniechanie inwestycji w lotnisko oraz poprawę infrastruktury kolejowej będą przeszkodą bardzo utrudniającą wykorzystanie istniejącego potencjału. Należy dokonać znaczącej poprawy w strukturze gospodarki jako że region jest ciągle charakteryzowany przez brak znaczących inwestycji i zbytnią zależność od rolnictwa, przy jednoczesnej dużej szarej strefie. Kluczowa dla własności regionu jest właściwa alokacja funduszy i inwestycji kapitałowych. Należy dlatego też zastosować dwutorowe podejście: z jednej strony należy działać na rzecz poprawy jakości kapitału ludzkiego, poprawić dostępność transportową i telekomunikacyjną a także wykorzystywać zasoby naturalne w celu większej dywersyfikacji strukturę gospodarki, z drugiej strony należy znacząco poprawić możliwości i efektywność administracji publicznej przy pomocy szkoleń, modernizacji procedur i stosowanie zachęt. Szczególne obawy wiążą się z niewystarczającymi działaniami na rzecz gospodarki opartej na wiedzy i tworzeniu instytucji służących transferowi technologii. Pomimo faktu iż Podlasie zanotowało w ostatnim okresie wzrost gospodarczy, dalej odstaje od przodujących regionów Polski i tak

pozostanie jeżeli obecnie dostępne, niemałe fundusze Unijne będą źle lokowane i rozdzielane centralnie bez lokalnej delegacji części odpowiedzialności za ten proces.

5. Zakres dalszych badań

O ile obecny raport koncentruje się na czynnikach stymulujących ekonomicznie rozwój regionalny, a mniej na czynnikach mających znaczenie przy wdrażaniu polityki spójnościowej (między innymi z powodu problemów z dostępem do danych), stanowią one interesujący temat dla przyszłych badań. Istotne jest znalezienie odpowiedzi między innymi na pytanie czy w przypadku **regionów konwergencji**

- Pewien poziom edukacji i wykształcenia pracowników administracji regionalnej ma wpływ na wydajność procesów administracyjnych i wyniki gospodarcze regionu,
- Jak różny stopień decentralizacji w różnych obszarach funkcjonowania regionu wpływa na efektywność i wydajność, oraz
- W jaki sposób długookresowe programy i stabilne otoczenie administracyjne wpływa na proces transformacji i wzrost gospodarczy.

Nie było możliwe włączenie danych dotyczących efektów jakie miał na gospodarki regionów konwergencji ostatni kryzys finansowy. Przyszłe analizy efektu Unijnej Polityki Konwergencji powinny dokonać rozróżnienia pomiędzy słabymi regionami konwergencji, regionami notującymi dynamiczny wzrost i cierpiącymi na pogłębiające się opóźnienia w stosunku do średniej Unijnej. Biorąc pod uwagę obecną troskę Rady UE o jakość polityki budżetowej, strukturę długu publicznego i zrównoważonych finansów publicznych, interesujace byłoby porównanie danych dotyczących poziomu deficytu publicznego regionów oraz równowagi budżetowej.

Summary Report –Spanish

Resumen ejecutivo

1 Parte Analítica: mensajes clave y conclusiones

Entender el crecimiento diferenciado de las regiones convergentes.

Entender por qué algunas regiones convergentes siguen rezagadas y otras son capaces de acelerar su su tasa de crecimiento y ponerse al día con la media de la UE es de importancia clave para el éxito de la política de cohesión. La búsqueda de los factores que afectan por encima de la media y por bajo de la media de la tasa de crecimiento y que podría referirse a la eficaz gestión de fondos y a una administración pública eficaz puede ayudar a los legisladores regionales a comprender cómo mejorar el rendimiento económico en regiones atrasadas. Este Informe Final ha analizado en particular las cuatro regiones interesadas de Campania (Italia), Macedonia Oriental-Tracia (Grecia), Podlasie (Polonia) y Valencia (España) pero ha sacado algunas conclusiones que pueden ser útiles para todas las regiones en Convergencia y en fase de adhesión o adheridas, beneficiarias de los fondos de cohesión de la EU.

Tres grupos diferentes de factores han sido derivados de la literatura como base para el proyecto SURE/BÚSQUEDA análisis para comprender mejor los procesos de crecimiento económico en las regiones convergentes:

• **los motores económicos**,

• **capacitadores económicos** los cuales son de importancia para todas las regiones europeas,

• y aquellos **factores relevantes para una eficiente asignación de recursos** (como fondos de la UE), que son los más importante, especialmente para las regiones convergentes.

Mediante el análisis cuantitativo y cualitativo, detallado en el cuadro de abajo, ha sido estudiada la influencia ejercida por los tres grupos de factores sobre el crecimiento económico de las regiones en convergencia y cómo están interrelacionados entre sí. Analizando las diferencias entre las regiones débiles y las que se han puesto al día con media por debajo del PIB, se investiga en qué medida **los factores relevantes para una eficiente asignación de recursos** (como fondos de la UE) son una condición previa para la explotación de motores y precursores económicos.

El proyecto emplea un enfoque global gradual de multinivel para analizar qué factores diferenciales de crecimiento regional han de tenerse en cuenta, centrándose en aspectos institucionales y de calidad de vida, y qué pueden hacer las regiones convergentes para mejorar su prosperidad y rendimiento económico. Análisis cuantitativos y cualitativos de la 4 regiones interesadas se combinan para identificar, analizar, verificar y interpretar por qué algunas regiones convergentes siguen a la zaga y otros no. Tras encuestas y entrevistas en las cuatro regiones interesadas, realizadas a políticos y funcionarios públicos, la comunidad empresarial, profesores universitarios y sociedad civil, se ha puesto de manifiesto un escenario económico y su relación con el sector insititucional. El studio de casos sobre innovacion y crecimiento multinivel generando políticas de medidas y actividades, han revelado cómo los sectores institucional y privado deben trabajar juntos para generar

crecimiento y bienestar sostenido y sostenible. El Análisis FODA identifica las fortalezas, debilidades, oportunidades y los riesgos de las regiones interesadas en sus respectivas vías de desarrollo. Por último, fue llevado a cabo un análisis de regresión para comprobar los resultados relativos al crecimiento económico regional, y si cabe o no y en qué medida puede ser transferido a todas las regiones europeas.

Focalización en los sistemas económicos e institucionales regionales.

En consecuencia, el objetivo de los análisis cuantitativos y cualitativos realizadas por el equipo de investigación fue determinar las deficiencias en los sistemas económicos regionales de regiones convergentes y permitir consideraciones sobre opciones de política. Para lograr esto, diferentes aspectos han sido investigados en la fijación de pasos del análisis como se ilustra en el cuadro a continuación:

Las medidas clave	**Análisis cuantitativo**	**Análisis cualitativo**
Los factores pertinentes para las economías de las regiones convergentes en las 4 regiones	Cuestionario de reconocimiento regional	
Análisis de las **diferencias** entre regiones por encima del promedio del PIB y débiles / alcanzando las regiones de convergencia	Cuestionario de reconocimiento Regional, econométrico	Entrevistas, estudio de casos
Investigar los **procesos** y **mecanismos** de regiones convergentes, evaluar dependencias y las interrelaciones entre diferentes factores		Entrevistas, estudios de caso
Verificar diferencias, dependencias y las interrelaciones con respecto a los factores de éxito económico en la convergencia de regiones	econométricos	

Las condiciones previas para el éxito económico en las regiones de convergencia.
El principal reto para las regiones convergentes débiles es garantizar las condiciones necesarias para un mejor desarrollo económico. El éxito en la ejecución de programas financiados por la UE significa a la vez hacer las cosas correctas (eficacia) y hacer las cosas bien (eficiencia), lo que ha sido confirmado en todos los niveles del análisis cualitativo, siendo de mayor importancia en las regiones convergentes débiles, donde se han identificado deficiencias en la eficiencia de la gestión de fondos y en algunos casos, en la asignación general de recursos y medios. Eficacia y eficiencia sólo pueden alcanzarse si los funcionarios públicos responsables regionales tienen la capacidad y la capacitación

adecuadas: En resumen, la capacidad para la gestión del gasto del dinero debe preceder a la consecución de fondos si las regiones más débiles pretenden crecer consistentemente más rápido para así ponerse al día. La importancia de la eficiencia de la mano de obra pública en lo que respecta a la gestión de fondos está plenamente corroborado por la literatura. Esto debe ir acompañado de una eficaz toma de decisiones para la asignación de fondos y de sistemas eficaces de procedimientos de ejecución, control y evaluación. Por el contrario el principio que concierne ala "puesta al día" de las regiones donde las capacidades han sido ya adquiridas, es la cantidad de fondos disponibles y la eficacia de las decisiones políticas.

Adicionalmente, una excelente coordinación de los diferentes niveles de gobierno (regional, nacional, comunitario) en la asignación y ejecución del desarrollo económico regional es necesario. Un alto nivel de descentralización o de las políticas nacionales orientadas a un desarrollo regional equilibrado se puede ver que es particularmente importante para las regiones de convergencia, en comparación con regiones con un PIB superior a la media. Una condición adicional para el éxito de la política de cohesión es la transparencia y la rendición de cuentas de los procesos, incluidos los bajos niveles de corrupción y un marco regulatorio estable.

Las regiones de convergencia son beneficiarias de fondos importantes, pero solo será capaz de sacar el máximo provecho de ellos para mejorar su rendimiento si las condiciones antes mencionadas se cumplen.

Motores Económicos y facilitadores económicos

En cuanto a los factores económicos (tales como los potenciales de conocimiento y la innovación, conectividad, accesibilidad, calidad de vida, la configuración y la estructura económica, el monto y la asignación de fondos de la UE, la población y aspectos sociales) y de índole económica (fiscalidad, la regulación, la administración del sistema y la gobernabilidad), la investigación se ha centrado en los elementos que pueden ser influenciados por los responsables políticos regionales (en general, los capacitadores como los niveles de las condiciones fiscales o laborales son en su mayor parte decididos a nivel nacional). Los factores de impulso económico que, desde un punto de vista científico, tienen un impacto positivo sobre el crecimiento económico son, por ejemplo, los potenciales de la innovación, tales como mano de obra altamente educada, la calidad de las universidades, la investigación y desarrollo o el número de patentes concedidas en una región. Otros factores de especial consideración son la conectividad, accesibilidad, calidad de vida o la estructura económica de una región. Si bien la presencia de factores de impulso económico (por ejemplo, un rico patrimonio natural y cultural, la calidad de los aspectos de la vida, los potenciales de la innovación o las especificidades de la estructura económica) fue reconocida por los actores de 3 regiones de convergencia, los consideraron insuficientemente explotados. Similares factores de impulso económico identificados en Valencia fueron, por el contrario, considerados suficientemente explotados por los entrevistados. A pesar de la crisis en el sector de la construcción que había sido considerado como el principal controlador económico en el pasado, los actores perciben que la explotación comercial del privilegiado clima y territorio (patrimonio natural y cultural, la costa) las condiciones, y un enfoque sobre los potenciales de la innovación (fomento

nuevas tecnologías mediante la creación de institutos y una gran inversión en I + D) llevaría a consolidar la prosperidad económica de Valencia. Según las entrevistas, la diferencia para lograr el éxito económico, por tanto, parecen estar en las diferentes explotaciones (en términos de eficiencia) de los recursos o factores económicos. Una de las razones para el éxito de Valencia, además de satisfacer los requisitos indicados anteriormente, fue identificado por los actores regionales como la chispa inicial de la inversión en el sector de la construcción, aunque esto ha demostrado ser insostenible. Sin embargo, durante varias décadas esta chispa ha estimulado todos los demás sectores de la economía regional. Los resultados de la respuesta de las regiones interesadas, sugieren que las regiones de convergencia débil se encuentran atrapadas en un círculo negativo de la causalidad, y no puede encontrar una salida, mientras que Valencia ha conseguido abandonar este círculo negativo entrando en una espiral positiva de éxito económico.

Crecimiento Inteligente: Innovación y Sociedad del Conocimiento - Estudios de casos de las partes interesadas de un motor económico clave

La explotación de los potenciales de la innovación ha sido visto como un importante motor económico de todos los actores entrevistados en las regiones y como un enfoque de las políticas necesarias para el futuro desarrollo económico exitoso. Los estudios en profundidad de los casos en las estrategias de innovación que se llevan a cabo, han puesto de manifiesto que los procesos económicos regionales se pueden generar a través de medidas específicas y las inversiones en la economía del conocimiento, como complemento de las conclusiones de la revisión de la literatura, la encuesta y las entrevistas. Por otra parte, los estudios de casos proporcionan algunas ideas y lecciones aprendidas, a un público más amplio de la UE. Technogenesis en REMTH estaba diseñando nuevos productos y servicios por individuos, al tiempo que ofrecía oportunidades de inversión a organismos interesados. El portal de Podlasie aumentó las competencias de las administraciones locales con respecto de las TIC y creaó las condiciones para el acceso en línea a los servicios educativos y administrativos. El Centro Regional de Competencia en Campania se creó para servir de enlace entre los mundos académico y empresarial, transformando proyectos de investigación en éxito de iniciativas empresariales. En Valencia, la creación de una estructura permanente fue diseñada para actuar como un puente entre todas las partes interesadas en la Comunidad Valenciana, dirigidas a la promoción de políticas regionales para las instituciones de la UE, la difusión y la participación de conocimientos y experiencias y la mejora de las redes regionales para ser vinculados con la UE, instituciones y programas.

Hubo una diferencia significativa en el enfoque de Valencia en comparación con las otras tres regiones: Valencia creó una estructura sostenible que permitió a los actores regionales atraer más fondos de la UE en diferentes ámbitos socioeconómicos a través de la Fundación Comunidad Valenciana-Región Europea, que representa "una cara a la UE ", donde el conocimiento se concentra en beneficio de todos los actores regionales. El futuro de los Centros de Competencia Regional de Campania, que reúne a científicos y agentes económicos para transformar los proyectos de investigación en el éxito de las iniciativas empresariales, en cambio, depende en gran medida de su capacidad de transformarse en autosuficiente en el mantenimiento de sus estructuras durante el período

de programación 2007-2013. Las estrategias elegidas de ambas regiones han aprovechado en el uso de sus economías urbanas como incubadoras de innovación, pero la dificultad en la creación de estructuras permanentes en las regiones de convergencia débil puede llegar a ser decisiva. Las regiones rurales se enfrentan a diferentes retos: REMTH se ha concentrado en fomentar y estimular la innovación entre las empresas, sin dar ninguna estructura permanente o seguimiento de un proyecto exitoso. En Podlasie, la elección se hizo para innovar las administraciones y proporcionar acceso a las TIC de servicio público a los ciudadanos, invirtiendo principalmente en mejorar la escasa capacidad administrativa y la prestación de los servicios públicos.

En esencia, algunas ventajas superiores comunes y los puntos fuertes se pueden recuperar, cya que en las estrategias de innovación se pueden mejorar tanto las condiciones previas para una política de cohesión con éxito y reforzar los motores económicos. En general, todas las estrategias fueron exitosas en la mejora regionales / know-how tecnológico y en la creación de agrupaciones de conocimiento a nivel regional. La motivación y los incentivos para participar se puede ver en todas las regiones con la prestación de intercambio de conocimientos organizados entre los diferentes actores regionales (administración, políticos, empresas, sociedad) y la creación de sinergias tanto en la administración y como en los procesos. En todos los casos, hubo promoción de la transferencia de conocimientos y tecnología, ya sea mediante la capacitación, la dedicación al apoyo o la implantación de centros de corredor de tecnología.

Sin embargo, varias deficiencias y debilidades fueron identificadas. En efecto, se detectó la falta de incentivos específicos como resultado de un bajo nivel de iniciativas de negocios privados: se supuso erróneamente que el sector privado iba a llegar a ser más activo, con iniciativas inmediatas, implementación exitosa y sostenibilidad futura de nuevos proyectos. En algunos casos, la falta de formación y la conciencia adecuada (sobre todo en la administración pública) ha impedido el éxito de la estrategia de innovación, así como la falta de estructuras permanentes auto-sostenibles.

Por otra parte, la debilidad intrínseca común y la futura amenaza de cambiar las estrategias y prioridades por cambios en el gobierno regional se mantiene en las cuatro regiones investigadas. Al reflexionar sobre los conocimientos adquiridos de la revisión de la literatura, la encuesta y las entrevistas se puede determinar, que las estrategias de innovación examinado en las diferentes regiones han tratado de abordar la mejor explotación de los recursos y se han introducido mejoras con respecto a los procesos regionales en el ámbito de la innovación, que no forma directa e inmediata consecuencia en el crecimiento económico, pero se puede decir que brinda las condiciones necesarias. Sin embargo, a pesar de algunas mejoras directamente visibles y medibles, la falta de sostenibilidad, de la participación del sector privado y, en algunos casos, del desconocimiento de las necesidades de los actores locales, pueden amenazar su verdadero éxito: sólo el futuro mostrará el impacto real de dichos programas.

El análisis econométrico: la verificación y la transferibilidad

El análisis econométrico complementario se llevó a cabo para verificar los resultados de los análisis anteriores para los diferentes tipos de regiones en un contexto más ampliode la UE. Por lo tanto, 230 regiones europeas se incorporaron en el análisis con el objetivo de una

comprobación general y una cierta transferencia de los resultados. Para alcanzar este objetivo, la simplificación se hizo en relación con la medida del éxito de la producción regional: el crecimiento del PIB se utilizó para probar los diferentes factores con respecto a su importancia y poder explicativo en relación con el éxito económico regional. Por lo tanto, los resultados de las estimaciones econométricas se caracterizan por un alto grado de estandarización y no son aplicables a cada contexto regional específico, pero puede ser visto como complemento científico a los análisis anteriores. En consecuencia, se hizo una distinción entre "las regiones por debajo del promedio del PIB" y "regiones por encima del promedio del PIB" en un primer paso y, dentro de la primera categoría, entre las regiones de convergencia débil y regiones puestas al día (consideradas como regiones con un mayor promedio de tasa de crecimiento del PIB) en un segundo paso.
Los análisis revelaron que ciertos factores favorables, tales como **una distribución desigual de la riqueza económica, empleo en el sector primario, la fiscalidad y el crecimiento** de la población tienen el mismo impacto en el crecimiento económico para la convergencia y para las regiones por encima del promedio del PIB. Sin embargo, varios factores de conducción se diferencian en regiones inferiores a la media y por encima del promedio del PIB. El importe de los fondos comunitarios recibidos, por ejemplo,afecta significativamente a las regiones de superior promedio del PIB y menos para las regiones por debajo de la media. Esto puede indicar varias cosas, aunque aún no se han demostrado. En primer lugar, que los fondos de la UE pueden ser transformados de manera más eficiente en crecimiento económico regional, principalmente en el "más rico", en las regiones con PIB superior al promedio. En segundo lugar, y relacionado con esto, que las regiones más prósperas pueden tener más capacidad, Know-how o experiencia en el aprovechamiento de los fondos adicionales de la UE y la atracción de la inversión privada en un círculo vicioso positivo. Esto no niega el impacto positivo de los fondos de la UE en las regiones de convergencia, pero señala los retos a que se enfrentan las regiones menos desarrolladas y más débiles.

Por el contrario, la **aportación de capital humano en ciencia y tecnología** aparecería como más importante para las regiones de convergencia. Cuando se trata de factores de éxito, existe una asignación de recursos y una política de cohesión eficaz, un alto nivel de los asuntos de **descentralización** en la mayoría de las regiones de convergencia y no tanto en las regiones por encima del promedio del PIB, mientras que la combinación de la cantidad de fondos de la UE con el nivel de **corrupción**, el análisis mostró que los fondos de la UE sólo se suman a un crecimiento económico donde se encuentra la ausencia de corrupción en las regiones de convergencia. Este hallazgo apoya mucho mejor empíricamente la literatura teórica científica y empírica sobre la eficiencia institucional y su impacto en el crecimiento económico.

Una visión interesante del análisis econométrico es que los factores difieren más entre las regiones de convergencia débil y los otros dos subgrupos regionales (regiones puestas al día y las regiones por encima del promedio del PIB). A diferencia de **las regiones puestas al día, parece que las regiones de convergencia débil**, con una media inferior a la del PIB per cápita y por debajo de la tasa de crecimiento del PIB, no puede transformar su potencial en crecimiento económico, no se ven afectados por la mayoría de los factores que impulsan y que no reaccionan. En resumen, podríamos ver que las regiones puestas al día y las regiones por encima del promedio del PIB son más exitosas en la transformación de

sus potenciales (en base a varios factores) en el crecimiento económico o para permitir una política de cohesión exitosa que las regiones de convergencia débil. Por otra parte, las regiones de convergencia débil parecen no reaccionar suficientemente a ninguno de los factores mencionados. Para validar estos resultados, es necesaria la investigación y la búsqueda de los indicadores sobre una más eficiente asignación de los recursos. En conjunto, un efecto claro de convergencia entre las regiones europeas se ha demostrado: las regiones con menos éxito en términos de PIB per cápita están creciendo más rápido (en promedio) que las regiones más exitosas. Pero el que esto se pueda atribuir a la política de convergencia tiene que ser cuestionado críticamente. Hoy en día, está claro que el fuerte crecimiento observado en muchos países mediterráneos y algunos países de Europa del Este no se basaba en una base sólida, pero en unas burbujas inmobiliarias insostenibles. En consecuencia, estos países ahora sufrirán más. Como un ejemplo, los datos estadísticos disponibles de Valencia no cubren el período de crisis, sin embargo, los entrevistados hicieron ver la necesidad de la identificación de nuevos sectores para la inversión y los problemas en la búsqueda de recursos financieros. Polonia ha capeado la crisis económica mejor: no entrar en recesión, los precios inmobiliarios se han mantenido en un nivel constante y un servicio en auge y las industrias de producción han estimulado la demanda interna. Sin embargo, en el momento de las entrevistas, no se podía tomar en consideración las amenazas más recientes a la estabilidad financiera europea, ni los posibles efectos de las estrictas medidas de consolidación presupuestaria. Es evidente que los hallazgos científicos no pueden tomar en cuenta los efectos de la crisis económica para los que existe una falta de datos. Sin embargo, algunas consideraciones se han hecho en la sección sobre opciones para el desarrollo de políticas, que consideran las cuatro regiones de las partes interesadas, pero, por supuesto, tendrá implicaciones más amplias.

2 Opciones para el desarrollo de políticas

Las opciones políticas se presentan a continuación tienen por objeto proporcionar indicaciones de las estrategias y herramientas que se puedan implementar a nivel regional por los responsables políticos de las regiones de convergencia para mejorar el rendimiento económico de sus territorios.

Los marcos nacionales y la aplicación de los programas financiados por la UE. De acuerdo con la revisión de la literatura, antes de tomar decisiones políticas, es esencial que los responsables políticos regionales y los interesados comprendan la medida en que pueden operar dentro de los marcos nacionales y con las administraciones nacionales. Esto puede variar considerablemente, y obstaculizan la eficacia y la sostenibilidad de la política. El poder político y administrativo que las administraciones regionales pueden ejercer en la asignación de fondos de la UE se ha encontrado en la revisión de la literatura y el análisis cualitativo para ser un factor importante para el éxito. Esto no es simplemente una cuestión de asignación de fondos (lo que financian), sino también sobre la aplicación: el éxito de una política bien orientada puede verse afectada si se aplica sin tener las necesidades de los actores locales en consideración. Las administraciones regionales deben esforzarse en la medida de lo posible hacia el fomento de la cooperación en fases a nivel elevado nacional y mejorar la coordinación a nivel inferior en las administraciones locales en cuanto a la aplicación de los programas de convergencia, así como la agilización de la asignación de fondos nacionales europeos y regionales para lograr la máxima eficacia. En el caso de

Grecia, por ejemplo, los nuevos cambios administrativos en el gobierno regional y local, debe agilizar la toma de decisiones y aumentar la responsabilidad de los actores locales. Además, es esencial para garantizar que, cuando las administraciones regionales se asignan las competencias políticas y administrativas, sean capaces de gestionar los fondos de la UE de manera eficiente, pues según la revisión de la literatura y el análisis econométrico, la descentralización se ha encontrado para ser un factor importante para el éxito de las regiones de convergencia proporcionando retos que implica enfrentarse a la eficacia para la gestión de fondos de la UE.

Las condiciones previas para el uso de fondos de la UE de manera eficiente - retos para las regiones de convergencia

Concienciación como un factor de crecimiento. Los estudios han sacado a la luz los factores pertinentes para una política de cohesión de éxito que son condiciones previas para la mejora de los motores económicos y por lo tanto la clave para mejorar los resultados económicos de las regiones de convergencia en general. En cuanto a la programación regional, los cuestionarios y las entrevistas en las regiones de las partes interesadas han puesto de manifiesto claramente la concienciación en las regiones menos desarrolladas acerca de que la eficacia y la eficiencia de la asignación de fondos de la UE es más importante que la cantidad disponible; de lo contrario, si la planificación no va a suponer el resultado del rendimiento económico previsto, haría que las regiones débiles sufran incluso un mayor atraso, independientemente de la cantidad de dinero disponible.

Eficiencia más importante que los fondos asignados. En primer lugar la eficiencia de la administración regional y la capacidad institucional en la asignación de fondos y la gestión de grandes sumas de dinero es esencial. Aunque hasta cierto punto esto puede ser sometida a nivel nacional, tales como las escalas de sueldos públicos, o marcos burocráticos, las áreas claras de competencia regional pueden ser identificadas. En primer lugar, las regiones necesitan incentivos adecuados basados en el rendimiento y la competitividad para atraer y mantener personal de alta calidad, y proporcionar formación. Las competencias internas deben ser apreciadas y explotadas, lo que lleve a las regiones más débiles a salir de un círculo negativo de la causalidad. Sin embargo, dado que 26 de los 27 países de la UE tienen déficit por excesivos gastos del gobierno, el asegurar las apropiadas recompensas para una administración pública cualificada es una alternativa cada vez mayor. En las regiones de convergencia, la atención debe dirigirse a la administración pública como creadora de capacidades, lo cual supondrá beneficios de que darán sus frutos para la eficacia de la administración pública en el actual período de programación y a la luz de la estrategia de 2020.

Necesidad de marcos regulatorios estables. Una condición previa que es significativa para los tomadores de decisiones regionales, es la necesidad de establecer un marco normativo estable, asegurando la rendición pública de cuentas y la transparencia de los procesos. Una vez más, las condiciones nacionales, a menudo se aplican, y puede dar lugar a demasiados y largos procesos burocráticos, sin embargo, ciertos fenómenos relativos a, por ejemplo, los niveles de corrupción o de la economía informal, presentan situaciones específicas que las administraciones regionales deben circunscribir en la aplicación de los fondos públicos. Además de las percepciones registradas a nivel cualitativo, el análisis econométrico revela claramente que los fondos de la UE sólo se invierten de forma eficaz y

eficiente si hay una ausencia de corrupción, donde el índice de corrupción es alto, la política de convergencia no dará lugar a una mejora en el desempeño económico. El aumento de los controles internos en las zonas de riesgo, el control de los procedimientos de contratación pública y el monitoreo continuo de la ejecución de los proyectos financiados por la UE, deberían consolidarse dentro de las administraciones.

Beneficiándose de los conductores Económico

Generar crecimiento mediante la reducción de las disparidades regionales. El primer principio es hacer hincapié en que la disparidad económica regional (dentro de un país) obstaculiza el crecimiento económico, y esto afecta a las regiones de convergencia, en particular. Por lo que habría que reforzar el efecto de convergencia dentro de los países, así como en la UE.

El crecimiento económico como concomitante de la política de población/migración. El crecimiento demográfico ha demostrado ser altamente positivo y significativo para todas las regiones en la mejora de los resultados económicos. Existe un riesgo real de disminución de la población de muchas regiones menos prósperas, que se caracteriza por niveles relativamente bajos de ingresos, bajas tasas de ocupación laboral y una alta proporción empleada en los sectores económicos en declive. En el otro extremo del espectro, las regiones con el crecimiento constante de la población se enfrentan a retos particulares en materia de desarrollo urbano sostenible.

El capital humano como conductor en las regiones de convergencia. El análisis econométrico revela que la proporción de capital humano bien formado, sobre todo en la ciencia y la tecnología, además de un motor para todas las regiones, es particularmente importante para las regiones de convergencia. 3 partes interesadas como regiones de convergencia destacaron las deficiencias en la capacidad regional para aprovechar adecuadamente este potencial humano, y el análisis econométrico ha apoyado la opinión de que las regiones más débiles parecen incapaces de beneficiarse del capital humano disponible tanto como las otras regiones. Por el contrario, la parte interesada en Valencia hizo hincapié en la disponibilidad de capital humano, las universidades de alta calidad y el reconocimiento de que las iniciativas recientes han tenido éxito mediante la inversión en innovación industrial y las instituciones de nueva tecnología, aunque la inversión en esta dirección fue vista como una oportunidad clave para la mejora del rendimiento económico, también en el contexto de la caída del sector de la construcción. **Necesarias políticas diferenciadas de innovación.** Es evidente que no puede indentificarse "una estrategia de innovación para todos", pero los políticos regionales deben dar prioridad a las opciones y las inversiones para aprovechar el potencial del capital humano por lo que se convierte en un controlador de rendimiento económico, en coherencia con las prioridades de la estrategia de 2020, en particular, sobre la base de las fortalezas y oportunidades de los proyectos de innovación financiados en el programa anterior (como se expresa en los estudios de caso). Las políticas de innovación también debe estar debidamente adaptadas a la estructura de negocios, dado el alto porcentaje de las PYME y las empresas de sectores tradicionales o la política de servicios de innovación. Sea cualfuere la medida que se adopte, un mensaje claro emerge del estudio de los casos: debe ser sostenible y minimizar el riesgo de un cambio político, buscando el mejor modo de lograr una cooperación eficaz con otros organismos públicos (ministerios, centros de

investigación, etc) y la estimulación y la participación de los agentes económicos locales. **La interdependencia de los factores clave.** Una de las implicaciones más importantes para los responsables políticos es que los factores fundamentales son interdependientes y, por tanto, hay que combinar el reconducirlos o mejorarlos. Para poder utilizar el dinero público de manera eficiente, los funcionarios regionales deben se formados de una manera adecuada y debe contratarse además a personal altamente calificado para administrar los fondos. Sólo si el marco regulatorio es estable, coherente y transparente, puede un caldo de cultivo para la creatividad y la voluntariedad de desempeño, establecerse y existirán pues las condiciones necesarias para el mejor desempeño económico. En esencia, el imperativo es hacer las cosas correctas, además de hacerlas bien. Esto contrasta con los puntos de vista prevalente en que se discute si el crecimiento económico se trata de hacer las cosas coorectas (como lo sectores para invertir en) o hacer las cosas bien (mejora de la gestión). En otras palabras, los actores regionales tienen que prestar atención tanto a la asignación de fondos adecuada, como a su correcta aplicación.

Estrategia de dos frentes: la optimización de los recursos y los marcos institucionales.
El presente estudio hace ungran hincapié para una estrategia de doble vía dirigidas al crecimiento económico, tanto para la promoción de determinados factores económicos, como para proporcionarles mecanismos y controles institucionales eficaces. Varios puntos pueden ser tratados en este sentido:

• En el caso de las regiones de convergencia, la eficacia de la asignación de fondos (en términos de hacer las cosas correctas en el camino correcto) se percibe como más importante que la cantidad real de dinero disponible. En el contexto actual, debería darse prioridad a asegurar que la política esté bien orientada y los fondos se gasten de manera eficiente por los funcionarios públicos, proporcionando las condiciones adecuadas para la explotación de los motores económicos que ya caracterizan el territorio;
• El riesgo de concentración en un solo sector como el motor de rendimiento económico, es evidente, sin embargo, la diversificación debe ser complementaria de los potenciales regionales - una estrategia de innovación, por ejemplo, podrían dirigirse a las zonas donde hay técnicas tradicionales o de nicho, así como los sectores NBIC.
• El aumento de la colaboración entre todos los niveles de la administración pública se percibe como necesaria para hacer funcionar el crecimiento económico;
• La falta de inversión en los principales medios de transporte y proyectos de infraestructura tendrá un impacto significativo sobre el desempeño económico según lo indicado por las entrevistas de los interesados en REMTH y Podlasie: las regiones de convergencia deberían concentrar los fondos en las grandes obras de infraestructura para estimular el crecimiento económico como en Valencia;
• La falta de inversión en capital humano disponible dará lugar a una fuga de cerebros perpetúa a sí misma y un grave obstáculo al crecimiento económico.

3 Necesidad de análisis / investigación

La investigación sobre la eficiencia institucional y el crecimiento económico. Varios caminos específicos para futuras investigaciones, han surgido de este análisis, en primer lugar, la **investigación sobre cómo se puede generar la formula institucional de la**

eficiencia y cómo puede ser medido y monitoreado, lo que sería de gran interés para todas las regiones europeas en general, y las regiones de convergencia, en particular. cuestiones relacionadas con la investigación que son de importancia son:

• ¿Qué **combinación de incentivos** serán los más adecuados y eficaces para abordar los principales aspectos del problema de la ineficiencia?

• ¿Es **adecuada la capacidad de supervisión** disponible? ¿Cómo puede ser generada?

• ¿**Las instituciones corresponden a la necesidad de medidas de eficiencia**?

• ¿Qué problemas de **control y de aplicación** se presentarán?

• ¿Son necesarias **medidas de acuerdos de distribución**, tales como medidas de compensación o salarios más altos? ¿Cómo pueden ser diseñados para ayudar a reducir el problema? ¿Cómo puede medirse su efecto?

• ¿Qué **mecanismos de revisión y seguimiento** de la eficiencia ya están aplicándose?

Investigaciones sobre el impacto de las características de la calidad de vida en el crecimiento regional. Una segunda área importante donde la investigación es necesaria, especialmente a nivel regional, se relaciona con la **calidad de vida**. La investigación conceptual y metódica permitiría a las regiones europeas **centrarse en cómo los aspectos de calidad de vida (incluyendo servicios, salud, educación, medio ambiente, la vivienda, la seguridad y la participación social) afectan el desempeño económico regional, o bien cómo en las tipologías regionales territoriales** pueden ser identificadas las características pertenecientes a estos.

Se hace necesaria la investigación adicional sobre los factores necesarios para una política de cohesión exitosa (el análisis econométrico se ve obstaculizada por problemas de disponibilidad de datos). En este contexto, sería muy interesante, por ejemplo, para investigar en **las regiones de convergencia**:

• si cambia la eficiencia en los procesos y cómo, un cierto nivel de educación y formación en la administración regional en cuanto a las pautas regionales de crecimiento económico y el desarrollo regional diferenciado,

• si afectan a la velocidad y sostenibilidad, y cómo los diferentes modelos de organización de la administración pública para “cerrar las brechas” de desarrollo regional,

• cómo una alteración del nivel de descentralización en diferentes ámbitos de la política puede producir cambios de los procesos de cierre de las diferencias regionales, y

• cómo a largo plazo y mediante el establecimiento de programas y marcos sostenibles (sin cambios significativos, debido al nuevo gobierno o administración) podría transformar el potencial regional en las regiones de convergencia en el crecimiento económico y el bienestar y la forma en que esto puede alterar el desarrollo diferencial de la región.

Como se ha mencionado, no ha sido posible incorporar los datos sobre los efectos de la crisis económica en las economías de convergencia. Cualquier análisis futuro sobre el efecto de convergencia de la política de cohesión de la UE, también debe considerar su impacto en las regiones de convergencia débil, regiones "puestas al día", y regiones "perdiendo terreno". Dada la preocupación actual del Consejo en materia de política presupuestaria, en la evolución de la deuda pública y de la sostenibilidad global, sería interesante analizar los datos regionales sobre los niveles de deuda pública y la sostenibilidad regional.

Appendix II: Indicators and Data sources, list of tables and graphs

1. List of Indicators and Data Sources

N°	Factors	variable & year	Token for estimations	factor category	source
A	right hand variable	GDP average growth 2000 - 2007	gdpg	right hand variable	Oxford Economics Database
B	convergence control	GDP per capita 2000	gdp00	convergence control	Oxford Economics Database
C1	Knowledge and innovation potential	Patent applications EPO per 1 million inhabitants 2000 - 2005	pat	1.1	EUROSTAT
		Shanghai score points 2007	shan	1.2	Shanghai Jiao Tong University
		Human Resources in science and technology 2007 % of working age population	hrsc	1.3	EUROSTAT
		Tertiary Education (% of Pop 2007)	tert	1.4	EUROSTAT
		R&D Expenditures (Euro pc, average 2004 - 2007)	fue	1.5	EUROSTAT
C2	Accessibility	Accessibility multimodal 2001 (Index: 100=EU27 2006)	acc1	2.1	ESPON database
		Accessibility multimodal 2006 (Index: 100=EU27 2006)	acc7	2.1	ESPON database
		Connectivity to commercial airports by car of the capital or centroid representative of the NUTS3	cone	2.2	ESPON database
		Potential accessibility air, ESPON space = 100	air	2.3	ESPON database
		Potential accessibility multimodal, ESPON space = 100	mult	2.4	ESPON database
C3	Connectivity	Share of Internet users 2002 %	inet	3.1	ESPON database
C4	quality of life	Adult mortality rate 2006	mor	4.1	WHO
C5	economic structure	Employment/Population 2005	part	5.1	Oxford Economics Database
		Informal economy % of GDP 1995 - 2005	infec	5.2	International Labour Organisation (ILO)
		Human resources in first sector 2007 in % of working age population	hrag	5.3	EUROSTAT
		Gini coefficient of GDP per capita 2007	gin	5.4	Oxford Economics Database
C6	Regional financial means	EU funds 1994 - 1999	fun94	6.1	European Commission
		EU funds 2000 - 2006	fun00	6.2	European Commission

C7	Population	Population density 2007	popdens	7.1	Oxford Economics Database
		Population growth 2000-2007	popg	7.2	Oxford Economics Database
C8	Region size	area in km2	area	8.1	EUROSTAT
C9	Taxation	Taxation of qualified manpower 2007	taxm	9.1	BAK Basel Database
		Taxation of companies 2007	taxc	9.2	BAK Basel Database
C10	Regulation	Regulation of labour markets 2004	regl	10.1	OECD Database
		Regulation of product markets 2003	regp	10.2	OECD Database
C11	Loyalty of administration and government	(negative) Corruption Index 2007	cor	11.1	Transparency international
C12	decentralisation	Decentralisation vertical	decve	12.1	BAK Basel Decentralisation Index
		Decentralisation indicator	decind	12.2	BAK Basel Decentralisation Index

1. List of Tables and Graphs in Final Report

Graph 1: Research Design SURE – Success for Convergence Regions' Economies
Table 1: Relevant factors of economic growth and their direction of influence
Table 2: Regional and categorical division of respondents
Graph 2: Results of all questions (point = mean; dash = median)
Graph 3: Importance of factors in weak convergence regions
Table 3: Importance of selected growth factors, average of Convergence regions and Phasing-in region
Table 4: Number of interviews, by professional category and stakeholder region
Table 5: SWOT analysis REMTH
Table 6: SWOT analysis Podlasie
Table 7: SWOT analysis – Campania
Table 8: SWOT analysis Valencia
Table 9: Regions under investigation
Table 10: Classification of regions
Graph 4: Convergence effect among European regions
Table 11: Variables for the econometric analysis
Table 12: Main drivers of economic growth for convergence and above average GDP regions
Table 13: Main drivers of economic growth for weak convergence regions and difference to catching up regions

2. List of Tables and Graphs in Scientific Report (Appendix I)

Table A: Potential factors of success for convergence regions
Table B: Relevant factors of economic growth and their direction of influence
Tab. C 1: Summary of interview results of East Macedonia-Thrace and importance of factors
Tab. C 2: Summary of interview results of Podlasie and importance of factors
Tab. C 3: Summary of interview results of Campania and importance of factors
Tab. C 4: Summary of interview results of Valencia and importance of factors
Graph A1: All questions, convergence regions
Graph A2: All questions, East Macedonia-Thrace
Graph A3: All questions, Podlasie
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
Table D1: Simple frequencies of thematic groups per region and professional category in East Macedonia Thrace
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Table D3: Simple frequencies of thematic groups per region and professional category

in Campania
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Tab. E 1: Main drivers of economic growth for convergence regions
Tab. E 2: Main drivers of economic growth for above average GDP regions
Tab. E 3: Difference between economic growth for convergence regions and above average GDP regions
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Tab. E 5: Main drivers of economic growth for catching up convergence regions
Tab. E 6: Difference between economic growth for weak and catching up convergence Regions
Graph E.1: Sensitivity of human resources in different kinds of regions
Graph E.2: Sensitivity of taxation of companies in different kinds of regions

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