GRINCOH Report Summary

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Final Report Summary - GRINCOH (Growth-Innovation-Competitiveness: Fostering Cohesion in Central and Eastern Europe)

Executive Summary:
The countries of Central and Eastern European (CEECs) have become members of the European Union after a difficult process of post-socialist transformation. It is still debated if this transformation has been completed. The success of this unprecedented political, social, institutional and economic transformation and restructuring has allowed them to become part of the world’s largest common market and to become actors in the development of the European Union’s manifold policies, to improve standards of living, and to open their societies to the outside world.

In spite of unquestionable successes in economic growth, social advancement, and political and institutional reforms, post-socialist transformation and the early years of EU membership did not allow the CEECs to overcome several critical weaknesses in their overall socio-economic and institutional structures. The global financial crisis 2008/2009 hit most of the CEECs especially hard. It brought to light starkly the disjuncture between fast productivity growth and a rather poor performance in developing innovative capacities to support longer-term sustainable growth and assure their competitive positions. Also, the processes of territorial development have led to an increase in regional differences which has not been alleviated by Cohesion policy whose benefits have been enjoyed by the CEECs.

Multidisciplinary research performed in the framework of the project has addressed these issues and confirmed initial hypotheses. The research has also dealt with social and institutional issues which – on the one hand - create the basis for economic processes, and, on the other hand, are strongly influenced by economic performance. Several deficiencies of the social security systems and institutions of the labour markets in the CEECs have been identified. In spite of institutional convergence and the absence of serious political instability, the institutional systems of the CEECs still need to be improved and appear to be one of the serious barriers to successful development in the future.

Policy suggestions are not straightforward, since the countries under study create a rather heterogeneous group. However, scenario building has led to the conclusion that the two parts of European Union – the western and the eastern - are closely mutually interconnected, and the strategies of the one part are inter-related with the performance of the other. This has new implications for Cohesion policy which should be formulated for the whole territory of the EU.

This interrelationship arguably renders the traditional division of the EU into “old” and “new” Member States obsolete, due to two phenomena: completion of the post-socialist transformation process, and diversified reactions of particular European countries to the financial crisis which have not followed a clear east-west division but were also revealed north-south differences. Thus the typologies of the EU Member States have become more complex, making the interrelationships within the EU also more complicated.

Project Context and Objectives:
The main objectives of the GRINCOH project is to deal with two major challenges facing the CEECs that are central to the goals of cohesion: they need to embark on a more innovation-driven process of development to secure long-term competitive and sustainable growth; and, at the same time, they need to create conditions for their citizens that allow them to enjoy more equal opportunities and to mobilise their full potential for economic and social development. The specific objectives of the project are: (a) to establish development scenarios for the CEECs for the period up to 2020 under different assumptions of
political frameworks, institutional conditions and development strategies; (b) to identify the implications for sustainable growth – based on innovation and the development of technological capabilities – and greater economic, social and territorial cohesion in the CEECs; and (c) to advise on future policy options for the CEECs, and in particular for EU Cohesion policy. The countries of Central and Eastern European (CEECs) became members of the European Union after a difficult process of post-socialist transformation. The success of this unprecedented political, social, institutional and economic transformation and restructuring has allowed them to become part of the world’s largest common market and to become actors in the development of the European Union’s manifold policies, to improve standards of living, and to open their societies to the outside world.

The structural changes in the CEECs can be summarised as a transition from a relatively diversified industrial economy (accompanied by a strong position of agriculture in some countries and regions) to a service economy based on a modern business services sector – although the significance of the latter sector in the CEE economies still lags behind the best-developed countries of the EU-15.

The absolute real convergence between the CEECs and the remaining EU countries has continued, on average, without interruption both before and during the crisis, albeit at a reduced speed in the latter period. The economic growth in the CEECs was to a large degree related to improvements in structural, supply-side factors than was the case in EU-17 (EU-15 plus Cyprus and Malta) economies. At the same time, the CEECs have mobilised considerable external resources in their catching-up process. The CEEC economies attracted more FDI and more foreign savings as a percentage of GDP than the EU-17 economies and enjoyed higher fixed investment shares of GDP. However, the technological activities of foreign subsidiaries in the CEECs are often implemented without significant linkages to various actors in the domestic innovation system.

After the ‘transition recession’ during the 1990s, the R&D systems in CEE started to recover during the 2000s. GERD/GDP ratios for CEECs increased from below 0.8% until 2006 to 1.20% in 2012, and mostly after 2008 when GDP fell in many CEECs. This anti-cyclical trend is presumably largely due to EU support for R&D and innovation through the Structural Funds. Despite this increase, however, the level of financing of R&D is still low and mainly by the public sector. The pressure on public funding has recently led to more private-public partnerships in implementing research and innovation programmes. Also, the innovative potential of the CEECs still lags behind the more developed countries of the EU-15. For example, CEE seems to have reduced its patenting activities drastically in absolute and per capita terms after 1990 and now maintains a stable level below the performance of the EU-15. Thus, the disappearance of the former advantage enjoyed by the CEECs in low-cost types of production has not been replace by the generation of new sources of competitive advantage.

Among the development challenges facing the CEECs, the demographic situation appears to be the most serious. The CEECs have a concentration of the most severe demographic challenges in the EU. They are hampered by a demographic crisis stemming from the decline in the number of births resulting in a negative natural increase in most countries. A continuous fall of fertility rates could be observed during the 1990s in all CEECs. In the Czech Republic, it reached a record low of 1.13 children/woman in 1999, and in several other CEECs this rate has been in the range of 1.2-1.4. CEE is not yet attractive as a permanent location for migrants from other parts of the world. Due to net outmigration, which accelerated after EU accession, the population is declining in most CEECs. These processes result in constant ageing faster than in other EU countries. The dependency ratio is also increasing due to growing numbers of older people, much faster than in the EU-15.

The situation on the labour market in certain CEECs is differentiated and volatile, and strongly depends on both the performance of the national economies and migration trends. There was a marked drop in employment during the transitional recession in the 1990s in all countries. In relative terms, female employment tended to decline in most CEECs compared to the EU-15. In the course of the crisis, the poorly educated were hit hardest by the economic downturn. During 2004-2012, expenditure in the CEECs on active labour market policies as a percent of GDP were below the EU-15 level which has not allowed for a rapid improvement of the situation on the labour markets of the CEECs.

The quality of human capital may still be improved. International student achievement data indicate weaker basic skills in most CEECs compared to Western and Northern European countries. In some countries (Poland, Latvia) student performance improved in all skill categories, but in others it deteriorated significantly (Czech Republic, Hungary, Slovenia). Basic education seems to bring better results if it is conducted by strong local governments, where teachers have high social standing and where there is relatively late profiling of education.

There is a strong relationship between economic (GDP per capita) and social (household income per capita) convergence, but
economic convergence influences social convergence more than vice versa. Apart from absolute levels of wealth, the internal differentiation of income and access to public services are also important dimensions of standards of living. Income inequality (measured by the Gini index) is quite low in most Central European and Scandinavian countries, and it is highest in some East European Member States (Latvia, Lithuania and Bulgaria), as well as in South European countries and the United Kingdom. Inequality in other measured dimensions, like the health status of households and housing, showed above-average levels in the CEECs (except for Slovakia, Slovenia and the Czech Republic in the case of the housing indicator). With respect to household educational attainment levels, inequality is quite low in Central European and Scandinavian countries, but also in the Baltic States. In general, the differences and similarities among the CEECs in the variety and intensity of social problems are partly due to their historic heritage, but some divergence among them can be related to their different policy responses to the multiple social challenges they faced during the past 25 years.

In general, several deficiencies of social security systems and labour market institutions in the CEECs have been identified, calling for necessary improvements in this field.

The processes of territorial development have led to an increase in regional differences within the CEECs which has not been alleviated by Cohesion policy, although due to a process of national convergence the overall regional differences diminished across the regions of CEE. Metropolisation has been the main factor in this process: the highest developed regions grew the fastest, especially those which had adequate human capital and where entrepreneurship was on the rise, thus increasing intra-national regional differentiation. The disparities between non-capital regions of particular countries have been narrowing, which could suggest the existence of club convergence, a process whereby the income levels of areas with similar structural characteristics tend to become equalised.

Regional economic growth in the CEECs was strongly correlated with improvements in productivity. However, when regional growth was related to national averages it appeared that the increase in the number of new jobs proved to be more important. This means that the flows of workers from poorer to more affluent regions had a greater impact on regional differentiation within countries than the differences in improving the external competitiveness of regions stemming from increased productivity.

The research proved that in transport infrastructure in the CEECs (and infrastructure in general) is not a sufficient, but a necessary condition of development. There was no statistical dependence between the level of investment outlays and changes in regional GDP (in relation to national averages of GDP growth). A weak negative correlation was observed between absolute changes in regional and investment outlays which was due to the fact that most investment outlays were made in the regions which already had the highest levels of development (metropolitan and western regions).

The past 25 years have brought about significant progress in the development of environmental protection in the CEECs, and action has been taken to extend the areas where nature and biodiversity are protected. However, while progress has been significant, it is still insufficient. Environmental quality in CEE is improving rather slowly as new threats have appeared with the increase of massive consumption on an unprecedented scale, resulting in more transportation, constant urbanisation and inefficient waste management in particular. For various reasons, the elements of a green economy are being introduced slowly.

Along with the processes of economic and social convergence, the institutional framework of the CEECs has also converged with the EU system, to different extents. It can be even argued that institutional convergence partly preceded – or even conditioned – the economic and social convergence. However, since 2003 – when the external pressure related to the accession process eased down - the convergence process slowed down in all countries, and there is a tendency of stagnation in institutional convergence in relative terms. Furthermore, the countries are trapped in regional clubs (clusters), and there are few signs of changes between clusters. Also, apart from the first years of transition, when growth in the region was still sluggish as a consequence of the deep transition recession, there is a little evidence that institutional convergence towards EU norms was a driving force of growth and cohesion in the CEECs.

The results of multivariate analyses provide weak support for the hypothesis that ‘rightist’ or ‘right-leaning’ governments in the longer run contribute to GDP growth and that they tend to neglect the unemployment issue. On the other hand, ‘leftist’ or ‘left-leaning’ governments contribute, though weakly, to a GDP decline and their activities have no effect on the unemployment rate. However, these regularities are rather weak. In spite of institutional convergence and the absence of
serious political instability, the institutional systems of the CEECs still need to be improved and appear to be one of the serious barriers to successful development in the future.

The CEECs have been the greatest recipient of funds from Cohesion policy. Comparing the 2014-2020 allocations with 2007-2013 reveals marked shifts for specific Member States, including some from CEE. Three of them (Slovakia, Poland and Romania) noted high increases of their allocations for 2001-2020 in comparison with the previous financial perspective.

EU Cohesion policy is of special importance to the CEECs since it finances a large part of their spending on public investment. It has played an important role during and since the crisis through a strong demand-side effect. However, long lasting supply-side effects are still to be seen, though some manifestations of them can be already noticed, like increases in R&D spending and improvements to infrastructure and the natural environment etc.

There is a danger that the scope and direction of regional development activities may be dictated less by strategic considerations than by the need to administer programmes quickly in order to absorb EU funds. In this respect, the experience of CEECs reflects that of the ‘old cohesion countries’ in the EU-15 where the need to spend EU funding quickly prompted investments in large-scale physical infrastructure, environmental improvements and local business and innovation infrastructure which provided short-term demand effects and sometimes lacked a long-term and systemic strategy for growth. Similarly, Cohesion policy funding in the CEECs has often been spent according to short-term considerations, either responding to the most pressing issues or political considerations rather than long-term strategic development.

The scenario approach revealed that a strategy of modernisation of the CEECs economies leads to a more expansionary scenario; this strategy pays the most for Eastern countries if Western countries also move towards an industrial strategy. This choice is also associated with lower increases in regional disparities. Even if the future trajectories of the CEECs strongly depend on what happens in the Western countries, a modernising strategy is the most expansionary one for the Eastern countries. If Western countries also move towards an industrial strategy, a modernising strategy pays off the most for both groups of countries. This choice is associated with lower increases in regional disparities, whatever the choice made by Western countries, thanks to the spillovers and positive effects that modernisation generates in all sectors and regions that drive towards higher GDP growth rates in Eastern countries, and a relatively lower inter-national disparity level. This last result definitely strengthens the main message of the whole GRINCOH project, highlighting the importance for the CEECs to move towards an endogenous growth pattern.

Policy suggestions are not straightforward, since the countries under study comprise a rather heterogeneous group. General suggestions may be recapitulated in the following points:

- For the CEECs, it would pay off fully to modernise their economies; they should move towards a new and different stage of development, relying less on FDI and more on endogenous investments, taking advantage of technological multipliers and technological spillovers from multinational companies into the local fabric.
- National and EU R&D and innovation policies should be strengthened and should be much more country-specific and should recognise differences in the compensatory effects of EU Structural and Investment Funds. Also, this would require much better understanding of the different roles of RDI in different regions.
- An integrated system of social policies should be established that would create a policy mix in different fields of social protection (in family policies, rehabilitation policies, labour market inclusion and activation, childcare, etc.
- Labour market policies should be oriented to focus on the issue where CEECs collectively fail - the problem of massive numbers of unskilled workers. Along with improvements to the educational system, more life-long learning should be developed. A higher capacity, better selected, better trained and better motivated civil service can be expected to contribute to improving policy-making in the field of labour market policy.
- Institutional harmonisation has to be adapted to the institutional framework of each country. In some of them, limiting rent-seeking behaviour by stakeholders and fighting corruption appear to be basic requirements. There is a need to improve national and local government activity in the promotion, financing and management of regional development projects.
- There is a necessity to enlarge development areas beyond the small group of core areas (metropolises, capital regions), towards second (and third)-rank cities. The second-order cities should develop their metropolitan functions, thus supplementing the capital cities that have already reached relatively high levels of development. Such a territorial pattern could slow down the growth of regional differentiation and would allow for better accessibility of high-order services.
• Regional development policies should act through integrated territorial projects and “territorial platforms”, keeping in mind the multi-dimensional nature of development and the necessity to focus on the specificities and potentials of territories.
• For the CEECs, post-2020 funding from the Cohesion policy will almost certainly be smaller and there is a need to consider the following issues:
  - a shift in psychological attitude: away from the assumption that the effort of developing the public sphere is externally financed, and towards a readiness to apply own financing - which should be promoted already during the current (2014-20) financial perspective;
  - more stress should be put on the creation of innovative economic structures and entities at the expense of funding infrastructure, also in the R&D sphere - infrastructure should be created only where and when its underdevelopment is a barrier for economic efficiency and social cohesion, and not where and when it satisfies the ambitions of the national, regional and local elites;
  - more engagement in interregional cooperation should be encouraged in the spheres co-financed by Cohesion policy, especially in areas such as R&D and innovation creation and dissemination where networking is critical;
  - evaluation should become more strategic and substantial and less formal, more objective and integrated in order to overcome the fragmentation of Cohesion policy into several Directorates General within the European Commission (and its separation from another important policy of the EU: the Common Agricultural Policy).

Project Results:

1. Economic Development and Structural Change

1.1 Convergence

The Central and Eastern European countries demonstrated diversified trajectories of economic performance after 1990. However, even in spite of this differentiation, all of them performed better than most Western European countries after entering the EU. The catching-up process was interrupted by the financial crisis 2008-2009, but the growth recovered afterwards.

The only country that has not recorded a single year of GDP decline since 1992 was Poland, which made this country the sole leader in GDP growth throughout the entire period of post-socialist transformation and EU membership. All other countries experienced more or less “shaky” growth trends (which pose the question of a possible relationship between political and institutional processes and economic performance - dealt with in section 7.4 of this report). It is important to note that - with the exception of Hungary and Slovenia which until now have not been able to overcome the negative effects of the financial crisis - all CEECs achieved higher overall rates of growth after 2004 (i.e. the moment of EU accession of eight CEECs) than even the fastest growing countries of Western Europe. As a result, during the last 20 years a process of convergence of the CEECs to the EU average has been taking place, and with a high probability that it will continue as a fundamental, long-term economic trend – albeit at a slower speed than before the crisis. However, such a convergence does not promise a rapid catch-up in income-level terms.

The results of the project team’s analysis underline the considerable, sometimes increasing, heterogeneity of growth, pointing more generally to uneven economic convergence within the EU. This concerns not only the lasting differences between the CEECs and ‘old’ west European (EU 17- i.e. EU-15 plus Cyprus and Malta) economies, but also significant dissimilarities between the growth patterns among individual countries within subgroups, e.g. the Visegrád countries (the Czech republic, Hungary, Poland, Slovakia), the Baltics (Lithuania, Latvia, Estonia), southern Europe (Greece, Portugal, Italy, Spain) versus northern Europe (Nordic countries, Germany, the Netherlands), etc. This is clearly evidenced by the considerable within-group variation, which is sometimes growing over time, evidenced by various performance characteristics.

The catching-up process was possible due to growth in productivity, faster in the CEECs than in the EU-15. However, the crisis period introduced increased variation within the CEECs group which has been the main cause of variation in the rates of growth.

The absolute real convergence between the CEECs and the remaining EU countries has continued, on average, without interruption both before and during the crisis, albeit at a reduced speed in the latter period. However, the assessment of
individual growth patterns depends a lot on the selected time period and the particular convergence indicators. There is no unequivocal and straightforward conclusion regarding the convergence of individual CEECs during the transition and EU membership periods. Moreover regional differentiation has also taken place, with several cases of “poverty traps” for poor regions within CEECs in lower income classes.

Convergence also occurred among the CEECs. This was due to a faster growth of less-developed countries than of those more developed.

The catching-up integration model of growth in the CEECs economies prior to the 2009 crisis was not much different from that in the EU-17. CEECs economies were converging with the more developed EU Member States also in many important structural aspects of economic performance such as labour productivity, competitiveness, export performance, etc. In fact, the empirical evidence suggests that economic growth in the CEECs was to a larger degree related to improvements in structural, supply-side factors than was the case in EU-17 economies. At the same time, the CEECs have mobilised considerable external resources in their catching-up process. In relative terms, as a percentage of GDP, CEECs economies attracted more FDI and more foreign savings in general than the EU-17 economies and enjoyed higher fixed investment shares in GDP.

1.2 Structural change

Alongside convergence with the EU-15 in the level of development, a structural convergence has also taken place. The structural changes again varied from country to country, albeit with visibly smaller disparities regarding their present situation. The widest differences are associated with the role of the industrial and ‘simple’ (consumer) services sectors in the economies of the countries concerned (which can also be a consequence of the differences in the scope of the outsourcing of services from industrial enterprises). Some of these countries have managed to maintain or even develop their industrial capacities in comparison with 1995 (mainly Romania, Estonia and Bulgaria), whereas others have initially undergone heavy deindustrialisation processes (e.g. Latvia, Slovakia, Slovenia and Poland). On the other hand, countries such as Lithuania, Poland and Bulgaria have witnessed a robust development of consumer services. By contrast, this sector played only a minor role in Romania, Hungary, Czech Republic and Slovenia. The differences regarding the condition and dynamics of the remaining sectors were not as wide, and notably included:

• a relatively high significance of agriculture in GDP creation in Romania, Bulgaria and, Latvia (although decreasing rapidly, which was observable mainly in the former two countries);
• fast development of the construction sector in Romania, Bulgaria and Slovakia;
• the weakest development of ‘business’ services in Romania, Bulgaria and Slovakia, and the fastest – in Poland and Latvia;
• relatively minor differences regarding the share of the public service sector in GVA, with the exception of Romania and Bulgaria which had a lower share (even though this country recorded the fastest growth in this particular category), while Slovenia and Hungary have a higher share of this sector in GVA than average.

These structural changes typically entail an increased significance of manufacturing goods and higher value-added services, at the expense of the “lower” segment activities. This has been one of the factors of economic growth. These processes could be summarised as a transition from a relatively diversified industrial economy (accompanied by a strong position of agriculture in some countries and regions) to a service economy based on a modern business services sector. It should also be noted that the significance of the latter sector in the CEEC economies still lags behind the best-developed countries (as compared, for example, to its share of approximately 30 per cent in Germany).

At the same time, there is a strong connection between economic (GDP per capita) and social (household income per capita) convergence. In this connection, economic convergence influences social convergence more than the vice versa. The social situation of households and people living in the CEECs strongly (too much?) depends on the income they earn, whether they find employment or not, and whether and to what extent social transfers and pension schemes are available. All these factors are driven by the economy, and the faster it grows the faster will incomes and employment creation will increase and the more funds will be available for redistributive government policies.

Given this primacy of economics, policies focusing on economic growth and convergence are also policies focusing on social convergence. From this, it follows that the role of explicit social policies regarding social convergence is not necessarily a minor one, but they are dependent on the outcome of the economic policies in place. Social policies in this context have more of a supportive character, fostering economic growth where possible and correcting misallocations where necessary. Having
said that, however, the scope for innovative solutions in social policies is wide, and policies that not only distribute wealth but also support its creation should be strongly supported.

Economic growth in the CEECs economies was to a large degree related to improvements in structural supply-side factors such as productivity, innovation and competitiveness. At the same time, most of the CEECs (with the exception of Poland which was spared undergoing a recession) were hit disproportionately hard by the global financial crisis, although most of them demonstrated high ability to overcome these disruptions of growth, mostly due to wide social approval of sometimes drastic austerity measures. Whatever progress was made in the CEECs, it was achieved at a high cost in terms of unemployment, rising income and social polarization – the opposite of cohesion.

1.3 The impact of the crisis and future prospects

It appears that the year 2008 – marking the emergence of the financial crisis - signifies a shift in a pattern of growth, with convergence now taking place at a significantly reduced rate. This calls for discussion and analysis of the drivers which can lead to new growth model(s). A shift in the pattern of growth is not only visible in terms of labour productivity but also in terms of GDP growth, significantly lower share of inflows of FDI as well as declining intra-EU trade. This may represent a strong argument for considering social outlays (in their widest approach, from education to activation, from housing to family policies) as a part of new growth pattern in which they become investments, and not “costs”.

With the benefit of hindsight, pre-2008 growth in most of CEECs could be characterised as finance-dependent and debt-intensive growth based on externally financed consumption (consumer durables). The post-2008 challenge is how to shift towards growth driven by investment and improvements in productivity. This concern chimes with the policy shift at EU level towards industrial upgrading and innovation-driven growth through large-scale ‘smart specialization’ investments in R&D and innovation activities. This is a valuable addition to policies in the CEECs which were solely focused on structural reforms.

It cannot be ruled out that the CEECs are now at a serious impasse. The integrative growth model which they have adopted no longer promises any fast/sustainable growth. At best, it promises slow growth based on permanent relying on maintaining the cost-competitiveness of their tradable sectors. But, a slow growth model based on large net exports flooding the markets of other countries is not a good option CEECs whose income and technology levels are still low – and whose labour resources are inadequately employed. A policy approach based on industrial/technology upgrading is needed. As will be seen in the European scenarios developed later in this report, this approach promises the best results for the whole of the EU.

It is not only the CEECs which are at an impasse. So too are the other EU Member States, in fact the EU as a whole. Moreover, one should not lose sight of the fact that even before the outbreak of the financial crisis the EU had been, since the early 1990s, essentially an economically stagnant area characterised by expanding, but long unnoticed or ignored internal imbalances. Arguably, the decade-plus weakness of growth in the EU/euro area has its roots in the basic paradigms of European economic policy-making which needs to improve – not only to deal with the consequences of the past crises, but first of all to activate the whole Union’s dormant growth potential.

2. International economic relations

2.1 New trade patterns

From the beginning of transition in 1989/90, the CEECs switched towards an ‘open economy’ model of economic development. The evolving patterns of trade, industrial specialization and integration into cross-border production networks through foreign direct investment (FDI) have played a crucial role in structural changes and the modernisation processes of CEEC economies. However, the economic crisis and the rise of global competition from other, mainly Asian, emerging economies, challenged the future sustainability of the development model adopted by the CEECs. This also prompts questions about an appropriate policy mix to foster competitiveness via trade and FDI.

The share of exports in the GDP of CEECs increased rapidly until the crisis (2008-2009), and after a temporary setback have started to recover in recent years. The inclusion of CEECs – particularly in Central Europe – in international (mostly European) production networks also implies extensive exports and imports of semi-fabricates. Selected CEECs (the Czech Republic, Estonia, Hungary and Slovakia) are among the most open, most export-based economies in the world. At the same time, their exports are highly concentrated, mostly from engineering (including automotive) industries. This specialisation has obvious
advantages, but it also implies risks, and it may call for the diversification of industrial structures.

The dominant export market of the CEECs is the EU. Taking into consideration that much of this intra-EU export trade consists of products and services, which are built into goods and services produced in the EU-15 and subsequently exported into non-EU countries, we can understand that the dependence of these CEEC exports on EU (final) demand is considerably smaller than at first glance. For example, only about half, rather than two-thirds, of Hungarian exports, and about three-fifths, rather than three-quarters, of Slovak exports go to the EU as their final destination. The respectable export performance of CEECs is increasingly the result of market access factors (geographical distance, etc.), with the contribution of their supply capacity having been modest as compared to other country groups. Specifically, price competitiveness is a serious issue: a too fast price (unit value) increase entails a relative worsening of export performance. Furthermore, we have found that the competition among CEECs shows signs of being based on product quality, but competition with other countries is dominated by cost aspects.

In addition to the quantitative growth in CEEC exports, there is also a qualitative upgrading in exported goods and services, with an upward movement on the technology ladder and increasing unit values. As in other emerging market countries, it can be observed that the wages in the production of exported goods tend to be higher than in the production of goods for the domestic market.

Furthermore, new evidence in explaining the innovation-exporting nexus has been derived in the form of a positive correlation between innovation and exporting status for EU firms, with the quantitatively highest correlation found between exporting status and product innovation. The impact of exporting on innovation for firms in CEECs is significantly smaller than that of non-CEECs. Firm size also has a smaller effect on innovation in case of CEECs firms, while foreign ownership has a significantly larger impact on innovation. This confirms that foreign affiliates are an important driver of innovations and exports in CEECs, although this is not the case in all foreign-owned firms.

2.2 Foreign direct investment

The substantial body of empirical literature on spillovers from inward FDI has produced mixed empirical results. Research undertaken for this project revealed that horizontal (or intra-industry) spillovers have become increasingly important over the last decade and might become even more important than vertical (inter-industry) spillovers. Firms’ heterogeneity in terms of absorptive capacity, size, productivity and technology level significantly affect productivity effects of inward FDI. Both direct effects from foreign ownership as well as the spillovers from foreign firms do substantially depend on the absorptive capacity and productivity level of individual firms.

At the end of 2009, services accounted for 67.5% of total inward FDI stock in the 10 CEECs, business activities having the highest share at 19.4%, followed by finance with 18.8%, trade 13.1%, transport, storage and communications 6.8%, electricity, gas and water 5.8%, construction 2.5%, and all other services with a 1.1% share.

The impact of FDI in services in the CEECs is an important issue since services dominate inward FDI in general and in the CEECs in particular. FDI in services could increase manufacturing sector productivity through lower prices, higher quality and variety of services, but also via increasing competition and horizontal knowledge spillovers to local service firms. A positive and significant impact of service FDI on domestically owned firms’ productivity in CEECs was found. Disaggregation by sector shows that a foreign presence in the energy sector drives the positive effect of the aggregate service linkage. CEECs also increasingly engaged in outward FDI (OFDI) until the start of the economic crisis. EU accession prompted an increase of OFDI from CEECs and a reorientation from CEECs to EU-15 destination countries. Location choice analysis indicates that market-seeking constitutes the dominant investment motive, and efficiency-seeking does not play a major role. OFDI from CEECs after EU accession can only, to a limited extent, be associated with technology-related location factors in host locations. This seems to apply especially in the case of direct OFDI i.e. FDI undertaken by fully domestically owned firms from CEECs. Thus, the nexus between OFDI and technological catching-up is weak for CEECs, which is in contrast to previous findings for other, mainly Asian, emerging markets. However, no robust evidence of an effect of OFDI on productivity growth in the case of CEECs firms has been recorded. Although the firms with foreign subsidiaries experience significantly higher productivity growth than either firms with no subsidiaries or those with domestic subsidiaries, this effect seems only to be relevant in two countries (Czech Republic, Romania) and does not appear to be long lasting.

In the CEECs, the technological activities of foreign subsidiaries are often implemented without considerable linkages to
various actors in the domestic innovation system. Survey evidence revealed that about 30% of foreign subsidiaries entertain R&D co-operation with domestic network partners with significant differences across host countries and sectors. Public research institutions are more frequently selected as partners for R&D cooperation than local suppliers or customers. The R&D mandate of the foreign subsidiary, its technological capability as well as technological embeddedness with the parent company are positively associated with the incidence of R&D cooperation. It was found that the regional knowledge stock is positively associated with the probability of R&D co-operation. This result corroborates other research conducted, for example, under ESPON (the Knowledge-Innovation-Territory project).

3. Research, Innovativeness and technological advancement

3.1 Sources of innovation
A conventional policy model of technology upgrading assumes that R&D is the major source of growth. This model is the basis of new (endogenous) growth theory. Endogenous growth models assume that R&D is essentially a probabilistic process which has a partly public nature and thus leads to technology spillovers which, in turn, lead to increasing returns to scale. In these models, technology is reduced to ideas which have no rival and thus, by definition, lead to increasing returns and imperfect competition. The advantage of these models is that they are sensitive to policy decisions relating (for example) to the number of researchers, utilization of new ideas and public subsidy for R&D.

One can develop a stylized policy model of technology upgrading which is implicitly based on these ideas. R&D leads to growth which in turn leads, through spillovers and imperfect competition, to innovation which in turn improves competitiveness of firms and countries which in turn generate growth and (hopefully) employment. This reflects a generally accepted view that R&D and innovation are among the main drivers of sustained economic growth and which are seen as central concern of public policy.

However, this stylization is a simplification of reality. Productivity depends not only on R&D but also on absorptive capacity, diffusion and demand. The innovation literature does not actually support such a narrow approach to the relationship between innovation and growth.

R&D can boost productivity, either directly via the stream of innovation it produces, or more indirectly via the adoption of imported technologies. This latter source is actually a major source of productivity improvements in countries behind the technology frontier such as the CEECs. This is not to deny the importance of R&D for growth in countries at the technology frontier, and it does not deny the role played by R&D in countries behind the technology frontier, but this role is as a driver of absorptive, not innovation, capability.

The middle-income economies tend to grow more through imitation activities, while the transition towards the high-income group requires a shift towards technology-frontier activities. This has been recognised by the WEF Global Competitiveness Reports which classify CEECs in terms of the driving factors of growth: efficiency driven (BG/RO); in transition (other CEECs), and innovation driven (SI, EE). Prior to the 2008 crisis, growth in CEE was driven by total factor productivity which suggests improvements in efficiency including R&D. However, growth was driven by production, and not by R&D and technology. In CEECs, technology transfer activities are more important drivers of innovation along with non-R&D-based innovation activities. The importance of R&D embodied in imported inputs and equipment and of production capability in CEECs puts the role of trade, subcontracting and FDI in the forefront as closely related drivers of growth. Indeed, the role of international industrial networks in Central Europe has been recognised as one of the important drivers of different path of growth in CE when compared to the rest of CEECs. The German-Central European Supply Chain not only provided vital funding but led to technology transfers which then led to ‘durable longer-term growth more generally’.

Shares of turnover from innovation or the percentage of innovative sales in new and old MS did not differ significantly in 2006, and in both parts of the EU are around 12-13%. One may assume that nowadays these proportions are similar.

However, similar innovation dynamics may hide quite different modes of innovation. The lower the labour productivity (GDP per capita) the lower is the share of R&D or the higher is the share of embodied investments. In short, innovation behind the frontier is about acquisition of machinery, not about intangibles like R&D.

However, after the ‘transition recession’ during the 1990s, the R&D systems in CEE started to recover during the 2000s. GERD/GDP ratios for EU_CEECs increased from below 0.8% until 2006 to 1.20% in 2012 or by 0.4 percentage points of GDP. It
is important to recognise that, on average, GERD/GDP did not increase during the period of economic growth or before 2008 but only after 2008 when GDP fell in many CEECs. This surprising anti-cyclical trend still warrants in-depth explanation. We presume that increases in CEE after 2008 are largely due to EU support for R&D and innovation through Structural Funds. In that respect, EU funds have been playing a very important counter-cyclical role in preventing a further decline of GDP.

3.2 Structural underpinnings of innovation

Central Europe has become part of the newly established German industrial system. Other CEECs and West European regions are largely outside this supply chain or have not further ‘globalised’. The global market share of Germany and Austria declined between 1995 and 2001, but their share of EU-27 exports has increased significantly while the share of CEE-5 economies (Visegrád countries and Slovenia) increased both in global markets and in EU-27 exports.

As other pieces of research conducted under the GRINCOH project proved, in order to embark on a ‘high road’ of growth and development, CEECs will need to upgrade technologically, both as knowledge generators and knowledge users, as well as technology adaptors. The knowledge base for this step forward is either very sparse, or the policy discourse is dominated by EU-wide policy discourses that do not take the specificities of the CEECs into account.

However, there is an inherent contradiction in the trade-off of EU RDI policy from a cohesion perspective – the trade-off between European excellence and local relevance. Innovation follows a natural pattern of concentration, and, if competing globally implies excellence, then it would be important to reward excellence at the European level, whatever the geographic origin of the activity. On the other hand, lagging regions may argue that playing the ‘excellence game’ is unfair, because the playing field is not level. This policy dispute requires a much better understanding of this trade-off in order to improve policy-making in this area.

Increases of GERD/GDP in Estonia, Slovenia and Czech Republic have been quite dramatic or well above the regional average increase of 0.4 percentage points. In these three countries, increases have been 1.3 1.5 and 0.7 percentage points of GDP. In other CEECs, these increases were around 0.2 percentage points.

The changes in CEE are within the EU-28 range. The biggest improvements in R&D intensity among the EU-28 have taken place in Estonia, Slovenia, Portugal and Austria. Other CEECs are scattered across EU-28 spectrum including countries with relative declines in R&D intensity (Croatia, with Sweden and the United Kingdom) or marginal increases (Romania and France). However, generally despite the 2008 crisis investments in R&D in CEE have increased. These increases in CEE after 2008 are largely due to EU support for R&D and innovation through Structural Funds. In that respect, EU funds are playing a very important counter-cyclical role in preventing further decline of GDP. It is interesting to note that the magnitude of spending on R&D does not necessarily translates itself into the GRDP growth and general economic performance – among the countries which note improvements in R&D we find both the ones that are in an economic decline, and also those which perform very well.

3.3 Scientific production

A thorough analysis of scientific production measured by publications recorded in the Web of Science (WoS) indicates that the countries from Central and Eastern Europe, despite showing fairly consistent convergence trends, achieve noticeably weaker results than Western Europe in terms of R&D and scientific activity. The distance separating CEECs from the Western European average is lesser or greater depending on which indicators are analysed. Moreover, EU-10 countries also differ considerably from each other. However, none of them exceeds the EU-15 average in all analysed contexts. Generally speaking, the best runners-up behind Western Europe are Estonia, Slovenia, the Czech Republic and Hungary. The first two are relatively small economies which, in recent years, took a comprehensive, knowledge-based approach to economic growth. Meanwhile, the Czech Republic and Hungary possess a strong scientific tradition, which they have been able to maintain and even develop in recent years. The middle of the Central European league table for science and R&D is taken by Lithuania, Latvia, Poland and Slovakia. The weakest results are shown by Romania and Bulgaria. There is quite a clear relationship between the level of economic growth of a country (measured by GDP per capita, for example), or the wider level of socio-economic development (assessed using the Human Development Index created by UNDP, for instance), and indicators of R&D development. However, this relationship is two-way. It is true to say that development of the science sector influences socio-economic development, but the fact is that wealthier countries invest more in the R&D sector.
Traditional measures of research and development activity – expenditure on R&D relative to GDP as well as employment in R&D as a percentage of the population – show that, in 2013, the EU-10 averages were 57% and 56% of the EU-15 average respectively. In terms of the number of articles listed in WoS per inhabitant, this distance is somewhat greater: the EU-10 attained a level of 48% of the EU-15 average. However, if we set the number of publications against the number of researchers, it turns out that the EU-10 average is equal with the EU-15 average. Thus, we can assume that further growth in the number of publications in the EU-10 is unlikely without an increase in human resources in science. Scientists from Central and Eastern Europe have similar levels of output to their Western European colleagues, but there are proportionately fewer of them (relative to population potential). They have decidedly less funding at their disposal with which to finance research. This is also the reason why the relationship between R&D expenditure and the number of articles and citations differs to such an extent between the EU-10 and EU-15. In the EU-10, this amounts to 34% (expenditure per article) and 53% (expenditure per citation) of the EU-15 average. In very simplified terms, we can say that Central European articles are relatively ‘cheaper’ than those from Western Europe, which can certainly be attributed to the fact that less costly research areas are involved, but also to the fact that remuneration for research in CEECs is significantly less.

3.4 Innovation policies in the CEECs

R&D policies have been greatly impacted by the reduction in public funding. Although research and innovation policies were protected between 2008 and 2010, maintaining funding levels has become difficult in recent years. Over the period 2008-2009/2010, only Romania and Latvia recorded a decrease in R&D budgets of more than 10% but this changed when looking at the 2011-2012/2013 period when a negative trend also became apparent in Bulgaria, Hungary, Latvia and Slovenia. Slovenia, although cited as a positive example, has similarly been affected by the financial crisis and expects more pressure on its research and innovation policies in consequence.

One consequence of the changes in national public research and innovation funding was that the importance of other sources has increased. The pressure on public funding led to more private-public partnerships in implementing research and innovation programmes. The emphasis therefore shifted towards the Structural Funds or other EU and international funding as more stable sources of financing.

The strategies and setting of policy priorities during the crisis period do not appear to have resulted from a recession-driven perspective, rather there is an attempt to address the weaknesses of research and innovation systems as understood during of the programming of EU and domestic funding stages before the crisis. So, the crisis did not change substantially the national research and innovation policy mixes.

Overall, RDI policies are unable to contribute to convergence across the EU but will be factor of further divergence. CEE has been divided in this respect, with some countries (Czech Republic and Poland) using RDI policies as a countercyclical mechanism for improving competitiveness while in the rest of the CEE this effect is most likely to be insufficient. The implication is that EU responses should be much more country-specific and recognise differences in the compensatory effects of EU Structural Funds. Also, this would require much better understanding of the different roles of RDI in different regions.

In spite of increases in GERD, the indicators at the national level suggest (except for a few economies) a rather weak development in the technological activities of CEE economies in 2000-2009 compared with the period 1980-1989. Among the traditional leaders of the period 1980-1990 in terms of patent intensity, only Hungary is able to maintain a leading position at half of its socialist patent intensity, behind Slovenia which has become the economy with increasing levels of patent intensity and an almost constant positive growth rate throughout the 2000-09 period. During the post-socialist period, the patent intensity of the CEECs (except Slovenia) has fallen further behind. So, economic recovery and catching-up during the 2000-09 period has not been followed by increasing patent intensity. CEE seems to have reduced its patenting activities drastically in absolute and per capita terms after 1990 and now maintains a stable level below the performance of the EU-15 and the former USSR.

Low patent activity can - to some extent - be explained by the fact that important differences exist between CEE-Convergence and non-CEE regions with respect to the role of localized knowledge flows and Framework Programme network learning in patenting. Knowledge transferred from FP networks positively influences the impact of FP research on regional innovation in CEE-Convergence regions. However, networks are not significant inputs to patenting in regions of the EU-15 Member States. With respect to the relevance of extra-regional localized knowledge flows (measured via FP research networks by the index of Ego Network Quality), localized learning is strongly important for the non-CEE regions. However, only weak evidence for such
impact exists for the Convergence regions located in Central and Eastern Europe. The interregional knowledge networks can substitute for the critical mass of localized resources for innovation in lagging regions. Strengthening research excellence and international scientific networking in lagging regions in CEECs could be a viable option to increase their regional innovativeness. Thus, furthering interregional knowledge network linkages in combination with other policies could form a base for a systematic support of regional development as suggested by the principles of the EU’s reformed Cohesion policy. Innovation policies should become an even stronger part of Cohesion policy. They should reflect the national/regional specificities. However, as the GRINCOH study reveals, the CEECs innovation policies reflect much more ‘the best practice’, not their specific technological positions and constraints. More specifically, the ‘science–collaboration’ policy-mix model can be found in the whole CEE group, based on the IUS criteria. It is the most common model followed by countries of very different technological levels. An unexpectedly high homogeneity of policy mixes was found, despite the relatively big differences between countries in technological and economic development and the differences with respect to the role of knowledge generation vs. knowledge absorption in their growth. The exclusive focus on policy transfer and the diffusion of ‘best practice’ de facto precludes a critical understanding of the factors that influence a country’s technology upgrading.

4. Demography, labour market, skills and social dynamics

4.1 General demographic trends
Central and Eastern Europe seems to be in the gravest demographic situation in the EU. It is hampered by a demographic crisis stemming from the decline in the number of births resulting in a negative natural increase in most countries. Only in Slovenia and Slovakia is the natural increase above zero, although there was a period of time when it was zero. A further important demographic factor is labour mobility. On the one hand, the EU shows much lower mobility than the US. On the other hand there are worries - but also positive expectations - about the extent and impact of cross-country mobility, i.e. of migration flows. The CEECs are an important region of origin of migrant workers, while the EU-15 is an important region of destination. Massive outmigration has had varied effects on the CEECs. It eased the situation on the labour market, since those who left would have faced difficulties in finding jobs within their countries. However, the loss of well-trained specialists appears to be one of obstacles to accelerating growth. Moreover, since the vast majority of the migrants seeking jobs in the EU-15 are a reproductive age, their disappearance puts even more stress on the unfavourable age structure of the CEECs. CEE is not yet attractive as a permanent location for migrants from other parts of the world. Due to net outmigration, which accelerated after EU accession, the population is declining in most of the CEECs. These processes result in constant ageing, faster than in other EU countries. The dependency ratio is also increasing due to growing numbers of older people, much faster that in the EU-15. As a result, the CEE have a concentration of the most severe demographic challenges in the EU.

4.2 Declining fertility
Demographic processes depend strongly on the readiness of women to have children. While in the Czech part of Czechoslovakia and in Hungary total fertility rates (TFR) had started from a relatively low level in 1989 (1.87 and 1.78 respectively), they were above 2 per cent in Slovakian part of Czechoslovakia and Poland (2.08 and 2.05 respectively). A continuous fall of TFR could be observed during the 1990s in all CEECs. TFR in the Czech Republic reached the record low of 1.13 children /woman in 1999, from when it slowly started to climb back reaching around 1.4-1.5 by the end of the decade. An especially sharp drop was experienced in Hungary between 1995 and 1997 (from 1.57 to 1.37). This is the only country with no considerable development of fertility rates in the whole period: after a modest rise between 2003 and 2006, the total fertility rate fell to a new low of 1.23 in 2011. An especially steep decline marked the development of fertility rates in Poland where TFR reached its lowest point in 2003 (1.22) alarming politicians about population concerns for the first time in Polish history.

The reasons of these processes are manifold. The feeling of insecurity and costs of transformation no doubt prevented young families from having children larger numbers of children (three or more). Delayed marriage age and the age of woman of having a first child also had an effect on decreased fertility. The instability of the labour market might also have had an influence on the more acute competition between professional carries of a woman and giving birth to a child. Family policies and the promotion of female labour force participation might have played a role in reversing the negative trend, at least temporarily. However, mass emigration of young people and their families from the country contributes to the
still very low TFR in Poland (1.3 in 2011). A similar trend can be traced in Slovakia with the lowest rate of 1.20 in 2000 and 2001, since when there has been a steady increase to 1.45 children/women born in 2011. Fertility rates of all four Visegrád-countries have deviated from the EU trend in the early and mid-2000s, and remained below the EU average (1.57 in 2011) throughout the period. Slovakia and the Czech Republic have, however, converged to the EU in recent years.

4.3 Labour market

Human capital is one of the keys to competitive advantage as a major determinant of both productivity and wages and macro-level outcomes like economic growth and employment. Labour markets and education might facilitate social inclusion playing a vital role in the development processes of countries and regions; they also reveal important aspects of social differentiation, social exclusion and barriers in exploiting the regional and country-wide development potential that needs to be addressed by policy.

Aggregate labour demand as well as the demand structure changed during the economic transition in the CEECs. Before the transition, CEECs were characterised by high overall employment and a small male-female employment gap. There was a marked drop in employment during the transitional recession in the 1990s in all countries; later on, there was large variation in the recovery of the labour market. Female employment dropped as a result of the transitional shock in most CEECs, and the recovery proved to be slow. As a result, despite a steady rise over the past 15 years, in relative terms female employment tended to decline in most CEECs compared to the EU-15.

After the outbreak of the economic and financial crisis, relative employment rates of men dropped between 2008 and 2010 in almost all countries (with the exception of the Czech Republic and Poland), and female employment rates also dropped (with the exception of Poland). The relative employment rates of men remained below the EU-15 average in nearly all CEECs. The exception was the Czech Republic where the employment rate of men was higher than the EU-15 average during the whole period.

Over the period 2001-2011, female employment increased in Europe until the global recession began, at which point it stagnated at around 65-66 % between 2008 and 2011. The expansion of women’s employment in the years between 2001 and 2007 was much more marked in the EU-15 than in the CEECs (6 percentage point as opposed to a 1.5 percentage point), so that the former advantage (of 3 percentage points) of CEECs turned into a slight disadvantage by the end of the period.

Female and male employment were affected differently by the crisis; women were more affected by cuts in their wages, whereas men by lay-offs.

Large differences can be observed in relative employment rates by educational attainment. The employment rate of those whose highest educational attainment is tertiary education was similar in the CEECs to the average employment rate of the EU-15. Employment rates of those who have upper secondary education was slightly lower, while there was a very large and persistent lag in the employment rates of the undereducated (less than upper secondary education).

Unemployment rates were generally falling across the EU until 2008. In the following two years, the labour market situation of all EU regions worsened remarkably, and unemployment rates for the total working age population increased. Among the CEECs, male unemployment rates declined in all countries compared to the EU-15 up to 2007/08. The largest improvements were observed in Poland, Slovenia and Estonia, which had registered double-digit unemployment rates until 2005. Relative unemployment rates of women also improved up to the onset of the crisis with the exception of Estonia. Over the entire period 1997-2011, unemployment was higher for women than for men in the Czech Republic and Poland, and with some exceptions in Slovenia and Slovakia. In all other CEECs, females were less affected by unemployment than men. The gaps became particularly large in the three Baltic States in the past couple of years due to the huge job losses during the crisis.

However, also in Bulgaria and Romania, the incidence of unemployment was higher for men than for women.

The problem of massive unskilled unemployment is a common and distinctive feature of the CEE labour markets. The gap between high and low educated people in terms of job prospects is nowhere as wide within the EU and the OECD as in the post-socialist countries of Central and Eastern Europe. The East-West mean differential in the unskilled employment to population ratios is significantly larger than the within-region variance.

Youth unemployment in the CEECs was, on average, about twice as high as the national average rates up to 2008, but the gap widened thereafter (particularly in the Czech Republic and in Slovakia). Romania was an exception with a youth
unemployment rate three times higher than the overall rate from 2007 onwards, whereas the ratio was the lowest in Latvia. Slovenia managed to reduce its high youth unemployment that prevailed in the late 1990s through a strong rise in temporary employment, and high enrolment rates in tertiary education.

Since the outbreak of the economic and financial crisis, the gap has remained almost unchanged in most CEECs, except in the Czech Republic and Slovakia where it increased, and in Lithuania where there was a narrowing of the gap. The share of youngsters ‘Not in employment or education/training (NEET)’ in the total population of that age cohort, declined gradually due to higher participation in education in the years before 2008, but increased considerably in many of the EU regions during the crisis. In Bulgaria and Romania, about 23% of the population aged 15-29 years were without a job or training in 2013. However, youth unemployment in the CEEC - high as it is - is by far less dramatic than in the countries of Southern Europe.

A severe constraint on the efficient use of labour resource in most of the CEECs is the low level of labour supply. Activity rates of men are well below the EU-15 average in all CEECs, and the activity rates of women are above EU-15 average, with the exception Romania, Hungary and after 2010 Poland.

Before the crisis, some of the CEECs showed an increasingly efficient job matching process. Subsequently, in some of the CEECs the unemployment rates and job vacancy rates both increased, a worsening of labour market matching occurred, and growing structural unemployment could be observed. A group of CEECs (Czech Republic, Poland, Latvia, and Slovakia) experienced no shift in unemployment and job vacancies, a fact consistent with their early economic recovery. In other countries, where this relationship worsened, it converged around a low level of job vacancy rates and a high level of unemployment, and an increase in job vacancies was accompanied by a weak decrease or even increase in unemployment (Bulgaria, Hungary and Slovenia). The possible causes of this are, on the one hand, growing mismatches in skills/educational qualifications required for jobs, growing regional mismatches and on the other hand increasing activity rates.

During the crisis (2008-2010), the structure of labour market transitions changed remarkably. Unemployment not only rose due to an increase of inflows from employment to unemployment but particularly due to strongly declining outflow into employment. At the same time, transition rates from employment to inactivity declined and rose only slightly from unemployment to inactivity, which made the situation of jobseekers even more difficult. Thus, long-term unemployment (increasing unemployment to unemployment transitions) became more widespread. In the short upswing period 2010-2011 for which data are available, there were no remarkable changes to the structure of labour market transitions.

For young age cohorts (aged 15-29), job stability (employment to employment transitions) is in general lower compared to older age cohorts but it declined even more in the crisis. The chance to find a job fell considerably for the unemployed as well as for those finishing education. One reaction to the tense labour market situation of youngsters was to stay longer in education or move back to training.

In the course of the crisis, the poorly educated were hit hardest by the economic downturn reflected in a substantial drop in employment stability, increased flows into unemployment and reduced probability of finding a job again if unemployed. The probability of moving from education to employment dropped most for this group, and the persistence of unemployment rose for this group more strongly than for the medium-educated. In general, young persons with tertiary education were still in a more favourable position in the labour market compared to those with secondary education. However, their relative position deteriorated somewhat vis-à-vis medium-educated persons.

An increase in employment to unemployment transitions took place in Poland and South Europe, and the persistence of unemployment increased in Bulgaria, Romania and South Europe. For the highly educated, employment stability decreased only in Bulgaria, Romania and South Europe. and transitions from employment to unemployment increased only in Bulgaria, Romania and the Baltic States. The persistence of unemployment increased for this population group only in South Europe. For the highly educated, employment stability decreased only in Bulgaria, Romania and South Europe, and transitions from employment to unemployment increased only in Bulgaria, Romania and the Baltic States. The persistence of unemployment increased for this population group only in South Europe.

The employment rate of people with disabilities was found to be markedly lower in the CEECs as compared to the EU-15, and the gap remained practically unchanged between 2002 and 2011. Employment was somewhat higher for men, younger age groups and those with higher educational attainment in both parts of Europe, pointing to a considerable incidence of multiple labour market disadvantages. The decomposition revealed a mixture of opposing, but mainly age-related effects behind the seemingly stable difference between disabled employment rates in the two regions. The CEECs were rather slow to improve
policies that support the labour market integration of disabled people.

4.4 Policies of the labour market
The CEECs had introduced similar institutions as the EU-15 Member States, with some differences between countries. In the CEECs, both passive and active labour market policy measures relative to the GDP have been below the EU-15 level. In 2010, expenditures varied between 0.58% in Bulgaria and 1.34% in Hungary, while the respective value in the EU-15 was exceeding the 2% mark. After 2010 the expenditures on labour market policies decreased in all CEECs, but Bulgaria. In 2012, the latest year for which data are available, expenditures on labour market policies (ALMP) as a percent of GDP was the lowest in Romania (0.29%) and the highest in Hungary (1.14%) among CEECs. The EU-15 average was 2% in the same year. Unemployment benefits schemes in the CEECs are characterised by high initial replacement rates (dropping remarkably in the first year of entitlement), limitations in terms of their benefits level and duration, low coverage and restricted access. Moreover, the role of Public Employment Services (PES) and the range of available services are not very developed, with limited monitoring or obligations to participate in activation strategies. While unemployment assistance is very uncommon in the CEECs – with the exception of Estonia, Latvia and Hungary - the unemployed can draw on substantial means-tested income support provided by housing and social benefits. The CEECs tend to spend on PES services less than half of what EU-15 countries do. It also appears that those EU-15 countries that enacted stricter job search monitoring rules tend to spend more on PES services than those with relatively lenient rules. No similar pattern is found in CEECs. It is also worth noting that, while quite naturally countries with higher registration rates tend to spend more on PES services, this does not apply to stricter EU-15 countries.

Throughout the past decade, there have been numerous changes in the unemployment insurance schemes in the CEECs. In Bulgaria, the Czech Republic and Romania, four or more changes have occurred in the period 2001-2012. The revisions of the unemployment schemes, especially the tightening of the eligibility criteria, but also active labour market policy measures contributed to a reduction in the share of unemployment benefits recipients in most CEECs in the past two decades. In Poland and Hungary, about 80% and 60% respectively of registered unemployed were entitled to unemployment benefits in 1990, while in 2011 the respective shares shrank to 16.5% and 19%; in the Czech Republic, Hungary and Romania, the shares were cut by half while it increased somewhat in Slovenia. In 2011 the shares of unemployment benefits recipients among all unemployed varied between 10% in Slovakia and 40% in Romania. During 2004-2012 in the CEECs, (with the exception of Poland in 2010) expenditures on active labour market policies (ALMPs) as a percent of GDP were below the EU-15 level. With the exception of Bulgaria and Romania, all countries of the region reported rising expenditures on ALMPs after the outbreak of the economic and financial crisis. In 2012, the last year for which data are available, the share of ALMP expenditures in GDP varied between 0.03% in Romania and 0.61% of GDP in Hungary. During the crisis in some countries major shifts were observed from active to passive measures, with the most dramatic in relative and absolute terms recorded in Bulgaria, where rising expenditures for unemployment benefits have largely crowded out spending on active measures. Remarkable shifts were also reported in Lithuania and Slovakia. Over that period, the CEECs used mainly EU funds for financing ALMPs, the European Social Fund in particular. The priorities of ALMPs differ from country to country; while in the Czech Republic and Poland they supported employment and rehabilitation, Hungary focused on employment incentives and Slovakia on direct job creation.

Activation policies are targeted at people of working age who are not in work, but who could potentially work and are in unemployment benefit or sometimes on social assistance or disability benefit. Policymakers in the CEECs have taken varied approaches to the activation of non-employed persons, and while there has been a move towards stricter eligibility criteria and a larger emphasis on jobseekers’ obligations since the year 2000, large differences in policies persist. In broad terms, the behavioural conditions of unemployment benefits follow Western European standards in all CEECs, but with considerable variation in the details of activation rules and most probably in the implementation as well. Statistical analysis by the project team concluded that a combination of high spending on Public Employment Services and strict monitoring of job search yield high search intensity, irrespective of the coverage of registration requirements. This is an effective strategy, to the extent that high search intensity yields high reemployment rates. At the other extreme, limited registration requirements and low spending on PES yield low search activity, even if job search monitoring is strict. In-between activation approaches appear to yield mixed results.
The overall evaluation of labour market policies provides the following ranking of CEECs according to the quality and effectiveness of these policies: Poland, Czech Republic, Estonia, Slovenia, Latvia, Slovakia, Lithuania, Hungary, Bulgaria and Romania. The results also show that there is no good labour market policy without public administration in general being effective. Differences in whether left-wing or right-wing parties ruled governments, and whether the country is more or less open to trade, do not seem to matter that much in the CEE region (the role of political denomination on economic growth will be also discussed in chapter 7). It is likely that a serious social challenge in the shape of serious long-term unemployment is necessary to provoke the response that is decent quality labour market policy.

4.5 Education and skills

As discussed earlier, weak basic skills might contribute to low employment probabilities of certain groups in the CEECs. International student achievement data indicate weaker basic skills in most of the CEECs compared to Western and Northern European countries. Nevertheless, there are marked differences across CEECs concerning changes in student performance. While in some CEECs (Poland, Latvia) student performance improved in all skill categories - literacy, numeracy, science - in others student performance deteriorated significantly (Czech Republic, Hungary, Slovenia). The deterioration in the latter group could be observed not only with respect to average results; on the one hand, there is a growing share of students whose skills are insufficient and on the other hand a decreasing share of students whose achievement is above average. It seems feasible that these differences are – at least partly – due to different education policies the countries adopted.

All CEECs provide a mix of tracks in their secondary schooling: general secondary schools; a higher level of vocational secondary schools (technical schools or vocational secondary schools); and a lower level of vocational schools including apprenticeship programmes. General secondary schools and higher level vocational schools give students the right to follow their studies in any form of higher education. The vocational path used to dominate over general secondary education at the beginning of the 1990s in all CEECs with the exception of Estonia and Lithuania. Although enrolment in the lower level of vocational education decreased substantially in the subsequent decade in all countries, 15-20% of an age cohort is still enrolled in the lower level of vocational education. The lower level vocational tracks without any follow-up courses normally gives students access solely to the labour market, so the effectiveness of training is of considerable interest.

A study of the educational systems of the Czech Republic, Slovakia, Hungary and Poland revealed that the fragmentation of municipalities and schools may cause difficulties in effective school management, and this might be one of the reasons for declining student performance in the Czech Republic. Also, a restrictive approach to tracking and late profiling of further educations seem to be a better choice than relaxed and early tracking. Moreover, student performance strongly depends on teaching quality. Among CEECs, relative teacher wages are more attractive in Slovenia and Poland than in other CEECs. All these factors explain the success of Polish students in PISA performance tests.

A specific feature of the transition in CEEC education systems was the dynamic increase of demand for university education. The proportion of the population attaining tertiary education qualifications has increased considerably in the young age cohorts although there were some differences between particular countries. Among the CEECs, higher educational attainment has increased the most in Poland and the Baltic states while, in Romania, the Czech Republic, Slovakia and Hungary the increase was moderate and in the latter group the share of higher educated is still below the EU average. Growing demand for higher education was a consequence of increasing returns both in terms of wages and in terms of relative employment probabilities. There have been net private returns to tertiary education in all CEECs, but Estonia is above the EU average. However, it has to be remembered that the quality of higher education, especially at the level of graduate studies, is weaker than in the European top universities. The number of Ph.D. graduates in STEM disciplines also remains insufficient for building up modern science-intensive industry in the CEEC economies.

During the transition period in the CEECs, employers withdrew from the provision of training opportunities. The loss of the links between employers and the training system has led to alteration of the basic curricula, and the divergence of taught material and up-to-date requirements of the workplace, and it has meant that obtaining workplace-based practical training for students has become a challenge. Poland is the only country with a sizeable and distinct apprenticeship sector. Smaller apprenticeship arrangements are present in Latvia and Slovenia, organized through craft chambers, and half of the relatively low number of Hungarian basic vocational school students have individual contracts with employers for their work experience. A number of countries (Estonia, Lithuania and Romania) have recently introduced regulations to recognize apprenticeship as
Participation in adult training and educational activities in the CEECs lags behind that in Western and Northern European countries, with a few exceptions. The east-west differences are present for the employed, the unemployed and the inactive population. The most notable differences in training participation are related to educational attainment. More education goes together with more training. This is in line with standard human capital theory: more able people invest more in education, and they are expected to do so beyond the age of schooling, as well. However, the relative differences are strikingly high in the CEEC group. In this group, training participation of those with a higher education degree is on average ten times of that of the low skilled, and three times higher compared to those with a middle level education. There is substantial variation within the CEECs. In the Czech Republic, Estonia and especially Slovenia training is on the Western European level. At the other extreme, it is almost negligible in Romania and Bulgaria. The mean in the East and South group is below the half of that in the West.

4.6 Ethnic minorities
With the exception of the Roma population, the CEECs do not have severe ethnic tensions. However, large ethnic disparities are among the most severe impediments to social cohesion. In Central and Eastern Europe, the most disadvantaged ethnic minority are the Roma.

The estimated Roma population in CEECs amounts to slightly over 4 million, with the shares in particular courtiers as follows: close to 10% in Bulgaria and Slovakia, between 4-7% in Hungary, Macedonia, Romania and Serbia, and around 2% in the Czech Republic. The Roma constitute one of the largest and poorest ethnic minorities in Europe. The employment rate among the Roma aged 20-64 was only between 20 and 30% in most East Central European countries. While labour market discrimination is likely to play a role, it is unlikely to explain such low levels, and the role of skills in the ethnic employment gap is also significant.

According to the results, 15-85% per cent of the educational achievement gap is explained by lower incomes among the Roma, and 35-100% is explained by lower incomes and lower parental education. 50% or more of the achievement gap is explained by the income measure in Bulgaria, the Czech Republic, Slovakia and Hungary, around 30% is explained in Romania.

Also, disadvantages in the home environment that play a key role in the school performance gap are largely explained by social differences. Ethnicity plays no additional role in the significant cognitive disadvantages associated with the parenting of Roma families; these disadvantages are fully or almost fully explained by parents' lack of education, poverty, and residential disadvantages.

It cannot be foreseen that in a short run the Roma population will be integrated with the respective societies in the countries where they live. However, Cohesion policy should be helpful in providing more education and assistance on the labour market for this disadvantaged ethnic group.

5. Social Cohesion and Social Policies

5.1 Inequalities
Social cohesion is one of the most important goals of European integration. It creates the conditions for smooth economic development, welfare improvements for countries and households and for well-being of the societies in the Member States. The goal of greater social cohesion was an inherent element of the Lisbon agenda and dropping it has weakened Lisbon targets such as the knowledge-based society and more and better jobs. Social protection was especially important in times of economic downturn when it could defend people against poverty and could maintain social integration important for a proper use of human resources for the sake of economic recovery.

The research revealed that in a European context income inequality (measured by the Gini index) is quite low in most Central European and Scandinavian countries, and it is highest in some East European Member States (Latvia, Lithuania and Bulgaria), as well as in South European countries (Portugal, Spain and Greece) and the United Kingdom. Inequality in other measured dimensions, like the health status of households and housing, showed above-average levels in the CEECs (except for Slovakia, Slovenia and the Czech Republic in the case of the housing indicator). With respect to household educational attainment levels, inequality is quite low in Central European and Scandinavian countries, but also in the Baltic States, and the differences
are much more pronounced in the South European countries.

Regarding income inequality, the CEECs comprise different subgroups, the first consisting of the Czech Republic, Slovenia, Slovakia and Hungary, which very much resemble the features of Scandinavian/Central European countries. Relatively low income differences between households are mostly driven by disparities in labour market participation. However, in these CEECs differences between rural and urban regions are an additional driver of income inequality. The highest levels of income inequality in the EU are to be found in Latvia, Lithuania and Bulgaria, while Estonia, Poland and Romania also have levels above the EU-27 average. This group of CEECs resembles features comparable to the South European countries. Their higher levels of income inequality are, apart from differences in labour market participation, driven by variations in educational attainment. Furthermore, rural households have on average lower income levels compared to those in the urban areas. The analysis of poverty levels and their decomposition did not deliver additional insights.

With respect to income and multidimensional inequality, the CEECs comprise at least two distinct groups of countries. The first consists of the Czech Republic, Slovakia and Slovenia which feature low levels of inequality in all attributes (except for our constructed indicator of conditional health status) when compared with the rest of the EU. The second group comprises Bulgaria, Romania, Poland, Latvia and Lithuania and has, according to all attributes (except for educational attainment levels), inequality levels at the upper end of the ranking of EU countries. The two countries in-between are Hungary and Estonia, the first featuring low levels of income inequality, but quite high levels of inequality in indicators of health and housing. Estonia, although having a high level of inequality under the housing indicator and a level of income inequality resembling the EU average, features a low level of inequality according to educational attainment of households.

The household employment rate has proved to be the most important driver of income inequality in the whole of the EU. The second most influential factor are differences in the educational attainment rate of the head of the household; in the CEECs they are particularly high in Bulgaria, Latvia, Poland and Romania. In all European countries, the combined effect of gender and age explains just a small part of overall inequality levels. The same is the case for differences between urban and rural areas in most of the EU countries. However, in Poland, Bulgaria and Romania, the regional differences are the remarkable additional drivers of the level of income inequality.

The indices of income inequality conditional on GDP per capita showed significant correlations with a number of social indicators. Higher inequality tends to lead to a worsening of social outcome variables, like life expectancy at birth (still lower by several years in the CEECs than in the Western Member States), infant mortality rates, death rates for assault and heart attack, homicide rates, robbery rates, rates of domestic burglary, rates of youngsters (age 15-24) not in employment, education or training (NEET) and rates of early leavers from education.

The results often differ in magnitude for the CEECs regions and other Member State regions, i.e. higher inequality levels have a stronger impact on social outcomes in the CEECs regions compared to the EU-15 regions. However, the relationship between inequality and social outcomes is, as expected, almost always a negative one. For the CEEC regions, we obtained one counter-intuitive result for theft rates of motor vehicles, which correlated negatively with poverty rates.

Conditional significant correlations with satisfactorily high explanatory power for at least two of the three inequality indices (Gini index, poverty rate and income quintile share ratio) were found for the CEECs for life expectancy and homicide rates, for NEET rates and early leavers from education. These findings again underline the importance of better social cohesion for the development of the CEECs. They clearly indicate that the lack of social cohesion (defined here as inequality and poverty) is weakening - beside several other social qualities - labour market participation - one of the outstanding social potentials of growth.

It may be concluded that during and following the crisis, inequalities decreased in Poland, Latvia, Romania and the Czech Republic while they grew in Hungary, Estonia and slightly in Slovenia, Lithuania and Croatia. This means that in some of the CEECs with relatively higher inequalities, like Poland, Latvia, Romania and Bulgaria, these inequalities decreased during and after the crisis, while countries with relatively lower inequalities, like Hungary, Slovenia and Slovakia had seen growing inequalities during and immediately after the crisis. In the post-crisis period, inequalities continued to grow in Lithuania and Estonia, already representing higher inequality levels among CEECs.

5.2 Social services and policies
There are several dimensions of social cohesion besides the income level of households. These dimensions relate both to the
state of different features of population and to the level of development of social services, as well as to social policies. Redistributive policies aimed at reducing income inequality might lead to several improvements in the sphere of social cohesion: bettering of population health; general positive spill-over effects in the form of lower crime rates; and increased activity and participation rates of youngsters in education. Although the effect of GDP per capita is mostly stronger for the CEECs than in the case of the EU-15, the slopes of the conditional correlations of the inequality indicators also tend to be steeper. This suggests that for the CEECs it is not only the absolute growth of GDP levels that should be expected leads to better outcomes in population health and other social phenomena. More redistributive policies would most probably lead to improvements particularly in those countries. Concerning population health this is no surprise since total health expenditures as a share of GDP are on average lower in the CEECs compared to the EU-15. Thus, it is even more important in the CEECs how scarce resources are distributed. However, this dramatic situation in health should not be simplified only to the issue of funding - it is a more complex structural problem due to earlier forms of industrialisation, to the lack of developed services, and to a high share of the hidden economy with lasting impact on social and human resources.

In a situation of declining population and low propensity for having children, policies aiming at supporting families deciding to procreate are an important element of social policy. The “child penalty”, described here as the difference between the labour force participation of mothers and he childless, is especially big in the Czech Republic, Slovakia and Hungary where maternal employment was 27-28% in 2012, which is just half of that of female employment (around 56% in the Visegrád states). The Czech Republic, with relatively high female employment and (despite a considerable increase recently) still the lowest maternal employment rate, exhibits the greatest difference between employment rates of women and mothers with children below the age of four (35% in 2012). Poland, on the other hand (alongside with Romania) has the highest rate of maternal employment (50% of all mothers) - a rate similar to the employment rates of Spain and the UK. However, in Poland and Romania this is mostly due to relatively high employment in agriculture. The child penalty is much smaller in this country with a mere five per cent difference between female and maternal employment rates in 2012. In all four Visegrád countries (Czech Republic, Hungary, Poland, Slovakia), there was continuous volatility and thus unpredictability of family policy systems during the 2000s. At the same time, there were important shifts towards increased flexibility in leave systems as well as child-care services. However, such changes often happened only at the level of legislation with limited implementation and thus a lack of plausible positive development in the actual outcomes. In the Czech Republic and Slovakia, the intended effects of the proposed changes were blocked by the scarcity of child-care services for children under the age of three. The research found that, in Poland, developments have become less hectic and more carefully planned since the mid-2000s, recent reform steps providing a positive example of a gradual shift in the direction of “optional familialism” and thus increasing the choice of parent to care for small children. However, despite massive development, nursery attendance has remained rather low (below four per cent in 2013). Paternal involvement is still minor. Hungary has been found to be less open to experiment with new solutions concerning care for small children showing a “frozen” system of family policies with the highest (and slowly increasing) share of children below the age of three attending child-care services (around 13%).

In general, the differences and similarities among the CEECs in the variety and intensity of social problems are partially due to their historic heritage (path-dependency), but some divergence among them can be related to their different policy responses to the multiple social challenges (path creation) they faced during the past 25 years. Such gradual divergence on certain social protection fields was found in frame of the GRINCOH project concerning labour market policy interventions, activation measures, family and gender policies, and in reforms of employment rehabilitation services especially following the 2008 crisis.

Most of the comparative literature indicates, as a specific feature, that despite the survival of the principles of more comprehensive social protection until the 2008 crisis, the “post-communist welfare state” remained rather weak due to low social benefit levels, low minimum salaries and the low share of GDP spent on social protection. As limitations to applying better policy solutions, the relatively high level of the shadow economy is often cited in the literature as limiting public resources for benefits and services while countering also the scope to reduce poverty by activation policy means. The project findings indicate that the implementation of social welfare reforms often revealed a lack administrative and organisational skills of public policy-makers who were unable to set up and support cooperative institutions of independent actors – of NGOs for example - to deliver services in frame of the planned reforms.
Social policy mixes in different fields of social protection (in family policies, rehabilitation policies, labour market inclusion and activation, childcare, etc.) are composed of transfers to combat the immediate effects of poverty and of complex services that help people not only to solve their individual problems, but to become integrated members of more cohesive and developing societies. As for transfers (benefits, allowances, assistance), the CEECs are getting less generous partly due to fiscal pressures, and partly with the intention of stimulating more employment participation. However, the still weak capacities of the different social services and their unequal accessibility and quality—from employment services to childcare, from rehabilitation services to education and training—make complex policy mixes incomplete and inefficient in the CEECs.

6. Regional transformations and spatial patterns

6.1 Convergence-divergence interplay. Metropolisation
Along with a process of convergence of the CEECs with the EU-15 Member States, a weak regional convergence in GDP per capita could be observed across the macroregion. In 2008, it was reversed due to diversified trajectories that shaped the reactions of particular CEECs to the financial crisis. However, regional convergence came back after the crisis was overcome. The overall regional convergence across the CEECs should not, however, mislead. When we look inside particular countries we find that— as in the case of the regions of the EU more generally—the general regional convergence was driven by country convergence which appeared to be a stronger process than within-country regional divergence. This process of internal regional divergence has been, to a great extent, spurred by metropolisation: the highest developed regions grew the fastest, thus increasing intra-national regional differentiation. The disparities between non-capital regions of particular countries were narrowing, which could suggest the existence of club convergence, a process whereby the income levels with similar structural characteristics tend to become equalised.

Most countries demonstrated some tendency for regional polarisation of development processes, although the situation in that regard in the smaller countries was rather stable. In addition to the capital city regions, the regions of other large cities represented a robustly developing group of regions, a feature that was particularly visible in the countries with polycentric settlement structures such as Poland and Romania, which can point to the considerable role of metropolisation processes in regional development. There were also some problematic areas, characterised by low rates of growth or even economic stagnation in some cases. As a rule, these were rural regions, most of them located near the outer, eastern external border of the macroregion as well as internal borders which were difficult to penetrate owing to the existing physical barriers (e.g. the areas at the Romanian-Bulgarian border along the Danube). This is manifested by the typology comprising the level of development (regional GDP per capita in 2000) and growth of regional GDP in the period 2000-2008 of the CEECs regions (NUTS3).

As a result, the difference in the level of development (measured by GDP/capita) between the metropolitan region (NUTS3) and its immediate hinterland is growing in most CEECs, especially fast in those relatively less developed (Bulgaria and Romania), and the slowest in the highest developed Slovenia. However, in some cases the growth of inequalities was halted (and even decreased in the Warsaw macroregion in recent years) which indicates that the spatial scale of the diffusion processes has increased. The process of increasing disparities slowed down after 2004 in all macroregions which can, among other factors, be explained by direct and indirect effects of the EU membership.

6.2 The crisis and regional development
The capital city regions were the least severely affected, whereas other types of regions were characterised by patchy economic decline and recovery. As an ESPON study conducted for the whole European space at the level of NUTS2 reveals, until 2011 in CEE only Polish regions have displayed either resilience to the crisis or recovery after some decline (or rather slowdown of growth), while all other CEE regions, in spite of an upturn in economic performance, have not fully recovered from the recession (although some Czech regions are in a better situation). It can be assumed that in the countries that noted fast growth after 2011 the regional situation should be currently better, although several regions in lower income classes will not be able to get out of a “poverty trap” in which they have been stuck for decades, if not centuries.

Based on analysis of resilience in the face of the crisis for all European regions we can clearly see that the general picture is a joint product of both national and regional resilience to the crisis, and the national patterns seems to be the more influential of
these two dimensions.

6.3 Sources of regional development
The analysis of the sources of regional economic growth in the CEECs reveals that it was strongly correlated with improvements in productivity. However, when regional growth was related to national averages it appeared that the increase in the number of new jobs proved to be more important. This means that the flows of workforce from poorer to more affluent regions had a greater impact on regional differentiation within countries than the differences in improving the external competitiveness of regions stemming from increased productivity. The flows of workforce within the CEECs are yet another factor of increased regional polarisation, since the main urban centres gain from both higher productivity and more people of productive age.

The attractiveness of metropolitan regions for inward capital was of crucial importance for high growth. This could suggest that the scale of internationalisation of a metropolitan economy and its inclusion into a global space of flows was the key development factor. Such a process was taking place in the conditions of good multimodal transport accessibility, the presence of R&D potential and well-developed stock of human capital. This was accompanied by structural transformation (deindustrialisation and tertiarisation of advanced business services).

The success of regions in the period of economic prosperity were mainly visible in those metropolitan regions which had adequate human capital and where entrepreneurship was on the rise. In the period of the financial crisis, however, the role of foreign capital was more visible, together with – paradoxically perhaps - an increased role of the construction sector, possibly a consequence of the increased volume of public investment projects, including those co-financed from the EU, which created temporary demand-side effects for the local economy (supply-side effects are yet to be seen).

In transition regions, which also include old-industrial regions, restructuring processes in industry played a key role; as a result, the traditional industries lost in significance (which simultaneously was coupled with the outsourcing of some simple services) in favour of modern manufacturing sectors. The scale of success in such regions is, however, relatively small. High costs associated with the management or reclamation of post-industrial sites was one of obstacles to their restructuring. Only some of these regions have been able to maintain or slightly improve their position in relation to the national average. This is due to the burden of their heritage of traditional industries, and also due to the lack of any significant investments in high-tech industries. Reindustrialisation, which brought a relative improvement to some of these regions on a national scale, did not necessarily boost their success internationally. It is predominantly external factors, mostly in the form of high FDI inflows, that play a key role in the development of this particular group of regions. However, FDI was concentrated mostly in medium-tech types of industrial (manufacturing) or service (call-centres, programming) activities. To some extent, the policy of encouraging FDI in less-developed regions might have led new FDI projects and the location of large investment projects to become more decentralized, although this could not change the general discrepancies in per capita GDP.

Accelerated modernisation in the agricultural sector, manifested especially in decreased employment, was found to be the key factor in development of relatively backward and stagnant regions. The location of large urban centres in those regions was a significant positive factor, as these cities supported the development of business services which, in turn, could be viewed as a proof of hierarchical diffusion.

Border regions (no matter what kind of border: EU external, with a CEE or with an EU-15 Member State) were in the relatively worst situation. Their peripherality, viewed not only in a spatial but primarily in economic terms, has increased even further. Their peripherality combines structural backwardness (typically involving a high share of agriculture in the labour market), resulting in the prevalence of low-paid jobs for people with low qualifications, accompanied by the lack of positive agglomeration effects due to the absence of big cities and considerable dispersion of the population. In consequence, their position relative both to the major development centres and to the national averages visibly deteriorated in the analysed period.

In the regions with accumulated social problems - in this group we find regions with high share of agriculture, border regions and some still burdened by traditional industries - short-term programmes implemented with EU financial support played a significant role in easing social stress, facilitating the implementation of regional and national strategies associated with social goals. In particular, they were successful as regards improving access to public services, whereas their impact on the labour market situation was much weaker, with a low effectiveness of training programmes and courses. However, the economic
situation of these regions has not improved.

6.4 Role of transport infrastructure
The role of infrastructure (transport in particular) is a subject of growing dispute. Most researchers nowadays tend to agree that transport infrastructure (and infrastructure in general) is not a sufficient, but necessary condition of development. This thesis has been proved by analyses of the CEECs where:

• most of the investments supported by the EU are related to road infrastructure development, and the EU supported infrastructure concentrated in the western part of the CEECs plus southern Bulgaria, i.e. improving connectivity with the EU-15 MS;
• most financing was used in the 2007-2013 programming period;
• linear infrastructure seems to have a higher impact where development levels are lower.

The advancement of road building is almost complete in the Czech Republic, Slovenia and Hungary, where basic road networks are nearing closure, while in other countries significant large deprived areas remain (part of Romania, north-western Poland, Latvia and Estonia).

Expenditure on rail infrastructure was smaller than on new/improved roads. Large-sale support was allocated to modernisation projects, and the scale of modernisation was highly differentiated territorially. Improvements were observed in particular among the metropolises of the Visegrád Group countries (Czech Republic, Hungary, Poland, Slovakia) and Slovenia. Bulgaria, Romania and the Baltic states remain isolated from the EU modern railway system.

The only new airports constructed with EU support were located in Poland (Modlin and Lublin, where former runways and other infrastructure were used in both places). In larger airports (Warsaw, Budapest, Sofia) the outlays increased the throughput of the runways and the terminals, allowing for the development of new connections and improved service quality. In case of most regional airports, the supported projects were mostly oriented towards low-cost carriers (which are being indirectly supported by regional/national authorities and the airports themselves), whereas the economic profitability of these projects and of the respective facilities remains problematic. EU support for some irrational airport projects was withdrawn, leaving the investor (usually local and regional governments) with straight losses.

In general, there was no statistical dependence between the level of investment outlays and changes in regional GDP (in relation to national averages of GDP growth). A weak negative correlation was observed between absolute changes in regional and investment outlays which was due to the fact that most investment outlays were made in the regions which already had the highest levels of development (metropolitan and western regions).

6.5 The changing state of natural environment
In the 20+ year period, fundamental changes have taken place in the approach towards environmental protection and sustainable development in the CEECs. The political transformation which took place at the end of 1980s and at the beginning of the 1990s as well as the accession to the EU have left their mark thanks to the introduction of the market economy, industrial restructuring, individual efforts of countries as well as the assistance of EU funds. It has also brought about significant progress in the development of environmental protection, and action has been taken to extend the areas where nature and biodiversity are protected. However, progress, even though significant, is still insufficient. The quality of environment is improving rather slowly as new threats have appeared with the increase of massive consumption on an unprecedented scale, resulting in more transportation, constant urbanisation and inefficient waste management in particular.

For various reasons elements of a green economy are being introduced slowly.

The future will be determined by the main megatrends: increased amounts of pollution and change in its characteristic (nanoparticles, endocrine disruptors, persistent organic compounds), urbanization, mining, intensive agriculture, climate change (due to natural or antropo-pressures) and other factors, such as massive tourism or dynamic globalisation. Without higher environmental awareness and “greening” of the economy and consumption in every aspect, the negative results of the megatrends will be neither satisfactorily controlled nor reduced. Extending and improving protection of natural areas is important but not sufficient: the subject of intervention should be the entire environment, including human beings and their behaviours affecting Nature.
7. Dynamics of institutional convergence

7.1 Institutional transformation

Along with the processes of economic and social convergence, the institutional framework of the CEECs has also converged with the system of the EU, to different extents. It can be even argued that institutional convergence partly preceded – or even conditioned – the economic and social convergences.

Institutional convergence of the CEECs began after 1989, when the CEECs started their great transformation (the Baltic Republics had a few years’ delay in commencing this process). It proceeded until 2003, mostly due to the phase of accepting the acquis communautaire along with the association phase. Establishing effective, appropriate, market-supporting institutions has been regarded as the necessary condition for an internal common market and is reflected in European Union law. The research found that since 2003 the convergence process slowed down in all countries. Since then, there is a trend of stagnation in institutional convergence in relative terms. Furthermore, the countries are trapped in regional clubs (clusters), and there are few signs of changes between clusters. Also, apart from the first years of transition, when growth in the region was still sluggish as a consequence of the deep transition recession, there is a little evidence that institutional convergence towards EU norms was a driving force of growth and cohesion in the CEECs.

Ex ante harmonisation of institutions in the CEECs prior to EU accession was a unified procedure during the 1990s that made the accession process on the one hand predictable and on the other not well suited institutionally for all accession states. Taking into account national peculiarities (path dependence), different regional clubs might need different institutional solutions and/or different paces of institutional set-up to progress along the road to growth, prosperity and economic integration. Hence, institutional harmonisation has to be adapted to the institutional framework of the country under consideration. Further, this assumption might also require a strong modification of the prevailing model of economic growth and development. However, there is evidence that the transfer of EU administrative principles has contributed to the creation of a new, more integrated system for the design, delivery and monitoring of regional development interventions.

7.2 Corporate governance

A detailed assessment of corporate governance in CEE-3 (Poland, Hungary and the Czech Republic) revealed that Poland – despite a similar starting point - followed a more market-oriented road, in contrast to the Czech Republic and Hungary. Further, a high inward FDI flow in CEECs (see chapter 2) led to foreign ownership of firms and influenced internal corporate governance in these countries. It was found that the headquarters of multinational enterprises have not (yet) given much decision-making power to their foreign subsidiaries in CEECs at all.

The general quality of the institutional environment in the countries benefiting from Cohesion policy has appeared to be of paramount importance for efficiency, effectiveness and contribution to growth and convergence of this policy. It is not only the institutional and administrative structure of its execution within the Member State and the governance mechanisms and culture within its public sector, but also the ease of doing business, since a large part of funds coming from the Cohesion policy and used by the private sector, also the SMEs.

As in the case of institutional convergence, the role of national peculiarities can be noted, as they strongly influence the economic performance of national enterprises. In particular, when the adopted rules and existing practice do not go hand-in-hand, it might create unexpected restrictions on economic development. The domestic economic policy objectives should particularly take the importance of decision-making power over business functions within the subsidiary into consideration. Thus, economic policy should encourage foreign investors, in the case of foreign acquisitions of local enterprises, to leave decision-making power within the enterprise and, in the case of greenfield investment, to provide the newly established subsidiaries with as much power over corporate governance structures as possible. Beyond that, it can be assumed that the extent of decision-making power - and the associated extent of financial restrictions - also depends on the foreign-owned enterprise’s position in the global value chain of the MNE. Thus, economic policy and economic development promotion should not only consider the quantity but also the structure of incoming FDI. Value-adding FDI should be connected to subsidiaries endowed with more decision-making power over business functions and less financial restriction and thus foster not only further investments in the region of location but also positive knowledge and technology spillovers to the investment site.
7.3 Institutional settings and the EU-wide coordinated policies

The domestic institutional environment and the way it affects effective implementation of EU-wide coordinated policies is especially important in the CEECs given their transition experience, however they have been showing differences since EU accession in this respect.

The institutionalized relation of the EU-wide Cohesion policy and the coordinated policies (Lisbon Strategy, Europe 2020) went through many changes in the past 10-15 years. Expectations in 2005-2006 indicated that the “Lisbonisation of Cohesion Policy” could on the one hand promote the EU-wide fulfilment of comprehensive Lisbon goals, while shifting the focus of Cohesion policy from traditional alleviation of regional disparities to enhancing human resources and the knowledge intensive economic activities in prospective competitive parts of the economy.

Several research results highlight that the effectiveness of EU-wide coordinated policies and their contribution to cohesion largely depends on the general quality of the domestic institutional environment, in which it operates (Chapter 8.2) i.e. the institutional and administrative structure within the Member State, the governance mechanisms and culture within its public sector, but also the ease of doing business (as reflected by complex indices e.g. in World Economic Forum reports) and the general macroeconomic environment, such as openness to trade and investment opportunities. Looking at the CEECs and their implementation of EU-wide coordinated policies, the research revealed that some countries (e.g. Poland, Czech Republic) show a very impressive outcome in terms of economic, territorial and social cohesion while others seem to be captured in regional “traps” (e.g. the Balkan countries). It can be argued that national peculiarities (path dependence) have conditioned the process and that different countries require a more differentiated approach of institutional harmonisation to reduce incongruence between the old and the new institutional environment.

7.4 Political profiles and economic development

Institutional change is a derivate of the ideology underpinning political processes. Although, the CEECs generally experienced political stability (no dramatic political changes occurred and the democratic course has not been challenged), the political coalitions in the CEECs since 1990 have changed frequently and often followed a pendulum pattern – switching from left to right, from liberal to populist ideologies, and from conservative to progressive values. These changes had a strong bearing on the process of institutional and economic reforms.

The results of multivariate analyses provide weak support for the hypothesis that ‘rightist’ or ‘right-leaning’ governments in the longer run contribute to GDP growth and that they tend to neglect the unemployment issue. On the other hand, ‘leftist’ or ‘left-leaning’ governments contribute, though weakly, to a GDP decline and their activities have no effect on the unemployment rate. The problem with these results is that of ‘too small N’ and – more importantly the ontology of the ‘time span’ needed to trace the relationship correctly between the ideological leaning of particular governments and their economic accomplishments. Lastly, the additional problem derives from what we call ‘political-business cycles’ – in CEECs these are particularly short, since only accidentally the incumbents were re-elected to enjoy a second term in government or presidency.

More detailed analyses show however that the countries of the region differ and they differ significantly. The Czech Republic is a single case manifesting strong relationships between Left, Centre and Right and citizens’ policy stances. „National accommodative” socialism countries (Poland, Hungary, Slovenia, even Croatia) unveil much more complicated and vague relationships as far as Left-Right issue content is concerned. The ideological ‘camp’ strength fluctuates and differs by country, but if anything systematic comes through, it is that the RIGHT camp manifests stronger party-electoral institutionalization (definitely so in Estonia, Latvia, Slovakia and to a lesser degree – Slovenia, Hungary and Poland). Again, countries differ: in the Czech Republic either a right-of-centre camp indicates stability, whereas in Hungary and Poland we find weak or no significant relationships between the analysed indicators of political stability.

Thus, the ideological self-identities of voters matter and are effective heuristic device for mass-elite communication. Moreover, individual level analyses are in line with the macro level ones, in that it is the ‘Right’ camp which seems to indicate clearer stability of the mass-elite relationship.

Moreover, it appears that whenever there is a rightist government in power the dominant public opinion mood is also rightist and that the same ‘mirroring’ relationship holds true for the other side of the ideological spectrum, i.e. that when incumbents
are of leftist pedigree the dominant public mood is also leftist. Yet, wherever a high-inflation context emerges, the more likely it is to be accompanied by a right social mood and when higher levels of unemployment exist, it is very likely that a leftist social mood dominates. The latter results point to the importance of the ‘demand-supply’ mechanism behind the macro level of political-economic relationship. Briefly, whenever there is a shortage (or abundance) of these two above-mentioned key economic parameters, the public reaction is aimed at achieving (new) equilibrium.

8. The role of Cohesion policy in development processes of the CEECs

8.1 Changing role of Cohesion Policy
The CEECs have been the greatest recipient of funds from Cohesion policy. Comparing the 2014-2020 allocations with 2007-2013 reveals marked shifts for specific Member States, including some from CEE. Three of them (Slovakia, Poland and Romania) noted high increases of their allocations for 2001-2020 in comparison with the previous financial perspective. Although the overall Cohesion policy budget falls, in six countries there is an increase in funding, with Ireland gaining the most in relative terms with a 16% increase on previous allocations. However, in absolute terms this is rather modest. While in the 2007-13 period, the receipts of Central and Eastern European countries were capped on a sliding scale of up to 3.5 percent of national GDP, for the 2014-20 period the cap was reduced to 2.45-2.59 percent. Faster growth countries (like Slovakia, Bulgaria, Romania and Poland) still benefited from increases because of their higher GDP, but slower growing countries (Hungary, Estonia, Latvia, Lithuania) were penalised – a perverse effect of capping. Also, the aid intensity for Less-Developed Regions was cut, affecting countries not subject to capping (Slovenia). Lastly, the new Transition Region category effectively cut funding from the poorer countries and regions and gave additional funds to countries which were against extra EU spending and (in the case of the United Kingdom) have had a long-standing objection to richer Member States qualifying for Cohesion policy support.

At the other end of the spectrum, there are very significant reductions in expenditure both in absolute and relative terms in a number of countries. These include Spain and Germany which each lose in excess of €9 billion in Cohesion policy receipts, equivalent to well over a quarter of their current allocations. Notable among the Central and Eastern European countries, those that saw funding cuts were Czech Republic, Hungary and Slovenia.

A comparison of thematic shifts in funding from 2007-13 to 2014-20 shows a significant increase in ERDF/CF allocations to Europe 2020 Thematic Objectives 1-4: R&D and innovation, ICT, SMEs and a low-carbon economy, which collectively are projected to see an increase of seven percentage points to 38% of total funding in 2014-20 (see Figure 5). Support for the ESF priorities employment, social inclusion and education and training will see a projected marginal increase (of two percentage points to 32 percent of allocations). These increases are borne by reductions in infrastructure spending on environmental protection, transport and energy. The shifts are apparent in less-developed Member States (including those from CEE) but are more pronounced in more-developed Member States. The Cohesion policy is of special importance to the CEECs since it finances a large part of their spending on public investment.

8.2 Impact of Cohesion Policy
The inflow of external funds does not necessarily induce sustainable, efficient growth. One should distinguish between short-term demand effects, always positive, and the long-range supply effects which should be the result of increased socio-economic overall efficiency stemming from increased productivity of fixed capital and labour achieved via better infrastructure, modernised technologies and improvement in skills and organisation of economic processes.

Understanding the shifting, sometimes conflicting and contradictory rationale for Cohesion policy is an essential starting-point for any assessment of its role in CEECs. Moreover, the evaluation criteria are complex and sometimes contradictory: the reduction of regional disparities; contribution to growth; impact in specific policy-fields; and added value. A thorough analysis has not allowed for providing clear and unambiguous results. There are several reasons for this: the shifting objectives of Cohesion policy over time, notably the shift toward growth and competitiveness over equity and cohesion; the multi-dimensional character of cohesion, incorporating economic, social and territorial components; the tensions intrinsic to Cohesion policy’s strategic objectives, territorial focus and administrative efficiency; the necessity to account for the exogenous influence (to Cohesion policy) represented by the national context; the need to consider the fundamental role
played by domestic policies towards the achievement (or hindrance) of the goals of Cohesion policy; and the difficulty of obtaining complete, comparable and quality data on programme achievements. Finally, an obstacle difference is the limited timescale of Cohesion policy implementation in CEECs in comparison to the EU-15.

It should be also noted that there are constraints on assessments of Cohesion policy achievements and impact in EU-10 Member States resulting from incomplete data. The difficulty of obtaining quality data on programme achievements is noted across Member States but the EU-10 context is different. Over the past decade, there have been significant efforts to boost the capacity of systems for monitoring and evaluating the implementation and impact of Cohesion policy in CEECs. Nevertheless, these systems have in most cases been developed in a very short period of time and in the absence of domestic equivalents. Poland is a quantitative exception with over 800 evaluation studies! and an exceptional case of significantly expanding evaluation capacity, but as some Polish experts state - more in a quantitative than a qualitative dimension. In spite of some progress, the experience of monitoring and evaluation is still limited - though the very fact that evaluation has been implemented at all should by itself be considered as very positive.

Having all these limitations in mind, and in spite of a considerable positive change in administrative efficiency and effectiveness, a conclusion can be formulated that in the CEECs substantial amounts of EU funding are being spent against a background of traditionally weak policy management and implementation systems and constrained domestic public expenditure. There is a danger that the scope and direction of regional development activities may be dictated less by strategic considerations than by the need to administer programmes quickly in order to absorb EU funds. In this respect, the experience of CEECs reflects that of the ‘old cohesion countries’ in the EU-15 (including Ireland, Greece, Portugal and Spain, as well as some regions of Italy) where the need to spend EU funding quickly prompted investments in large-scale physical infrastructure, environmental improvements and local business and innovation infrastructure which provided short-term demand effects and was lacking the long-term impulse for growth. Cohesion policy funding is often spent according to short-term considerations, either responding to the most pressing issues or political considerations rather than long-term strategic development.

The impact of Cohesion policy in the CEECs, as in all Member States, is mediated by the domestic institutional and budgetary environment. The connection between EU Cohesion policy and domestic regional policy is especially apparent in the evolution of policy instruments in the EU-10. Before their accession, all CEECs conducted their own stronger or weaker regional policies. Beginning in the 2000s, EU Cohesion policy started to influence these in a substantive way. National strategies of regional development were structured according to the principles of EU Cohesion policy, and the financial instruments – as weak as they were at that time – were designed broadly in line with EU assumptions. After accession, and especially during the 2007-13 and 2014-20 financial perspectives, policies have been almost totally subordinated to those agreed with the Commission, and domestic financial resources have been used only to fulfill the additionality principle.

Research results gathered comparative data on Cohesion policy administrative performance and capacity in the CEE in the 2004-2008 period reveal that the most efficient administrative performance (in terms of programming, project selection, financial management, monitoring and evaluation) was found in Estonia, Latvia and Poland. The highest administrative capacity was found in Estonia and Lithuania. Evidence from the GRINCOH case study programmes also indicates variation in terms of efficient Cohesion policy implementation in 2007-2013. On the one hand, financial and physical performance is assessed across all cases to be either strong or significant. Variation in this respect is not found between programmes but between different priorities. Notably, interventions under research, technological development and innovation are among the worst performers. As in the southern countries of the EU-15, although Cohesion policy has proved to be an important source of RTDI investment in less-developed areas with limited critical mass in this field, evaluations indicate that the strongest contributions to innovation come from projects in more-developed areas that build on existing strengths and capacities. One may hope that the expected shift in thematic orientation across programming periods away from improvement of transport and environmental infrastructures towards productive activities (especially among small firms) and increased expenditure on technology and innovation will also happen in the CEECs – as occurred in the ‘cohesion countries’ of the EU-15 – will bring better effects in increasing innovation potentials. This would also require an increase in the tolerance of risk and there has to be a stronger emphasis on risk assessment in innovative projects.

Genuine strategic thinking is a precondition for effective development policies. It has been found, however, that in the CEECs rather than the domestic system subsuming Cohesion policy implementation practices, domestic regional policy systems are
assuming them: domestic regional development activities are supplementing, or have already been supplanted by, EU organisational principles. Inverse institutional integration has taken place in which the national institutional system was conditioned by institutions that were created for receiving and administering EU funds. Moreover, in spite of the fact that strategic quality is evolving and, generally, improving (in terms of evidence base, analysis, strategic focus), the Cohesion policy programmes are often the only strategic economic development documents with substantial associated funding, thus replacing own strategic reflection of the decision centres in the CEECs. In effect, there is often no important domestic framework for Cohesion policy objectives to be transferred to.

These limitations are compounded by weak institutional arrangements to coordinate Cohesion policy strategies and their domestic equivalents which diminishes the impact of strategies prepared for the Cohesion policy. Efforts to transfer EU programming onto domestic institutional systems had detrimental effects: rather than contributing to stronger strategic integration, domestic institutional characteristics and tensions undermined the strategic quality of Cohesion policy programmes.

The ‘silo’ mentality of ministries made it difficult to prioritise strategic goals: Cohesion policy objectives were often divided among ministries and departments according to traditional ministerial portfolios or political bargaining rather than strategic logic. The division between national and regional administrative levels imposed limits on the size and type of projects at sub-national levels, constraining their strategic scope. The process of improving strategic quality through Cohesion policy transfer was also impeded by the fragmentation of funding across a range of interventions, including a plethora of small projects, creating overlaps, administrative burden and scattered results. This reflects the tendency for local elites to compete rather than cooperate in securing EU funding and restrictions to the potential for collective action, due to weak associative capacity (recognised in the literature as an institutional weakness). This constraint on Cohesion policy transfer of strategic quality was strengthened by the use of competitive project calls in programmes.

Strategic documents prepared in CEECs increasingly adopt a pro-Lisbon or pro-Europe 2020 outlook ‘on paper’, referring to the need to modernise the economy, increase competitiveness, etc. However, when specifying the direction of activities (outlined by the allocation of resources for particular tasks), they echo the traditional regional policy paradigm, prioritising investment in infrastructure. Strategies allocate significant amounts for infrastructure rather than for Europe 2020 priorities because this is where the interests of managing authorities and beneficiaries coincide: beneficiaries get support for projects which have immediate, tangible effects; authorities get assurance of substantial, timely expenditure. In the light of the above a focus on financial absorption should not be a surprise.

The process of transferring EU principles to improve strategic quality suffered as programmes were left broad to encourage fast spending. A ‘catch all’ approach dominated in order to access maximum funding. Cohesion policy success was measured mainly by the level of expenditure not strategic quality. This emphasis on absorption, alongside strategic vagueness and the rigidity of control, has produced scattered effects and the overall impact has been diminished at both regional and national levels. Greater effectiveness could be achieved by reversing these emphases: more autonomy and flexibility in implementation should be ensured within a focused and well defined strategic framework.

In making judgments about the degree to which a strategic approach to allocating EU-funded resources is adopted, it is important to recognise the experience of EU-15 Member States - which is that effective strategic planning, integrated management, coordinated implementation and sound project administration are not easy and take time to learn. Eight of the CEECs have only been implementing Cohesion policy for 1.5 programme periods, and two of them for one period (and the 2007-13 period is not yet closed). Many EU-15 countries and regions have been implementing Structural and Cohesion Funds programmes since 1988, and it was often not until the 2000-06 or 2007-13 periods that there were clear signs of a sophisticated and professional approach to Cohesion policy management and implementation in several cases, sometimes only with sustained European Commission pressure and support. Indeed, it could be argued that in some parts of Southern Europe, there are still major problems with managing the Funds. This indicates the importance of the wider quality of government, public administration reform and the development of administrative capacity including commitment to openness and learning.

Potential Impact:
The GRINCOH project has delivered a rich set of research findings in several different fields: interrelated development patterns undertaken by CEECs, the role of trade and FDIs, and innovation and entrepreneurship in such trajectories, the social and territorial dimensions of cohesion processes, the degree of institutional convergence and the main achievements - and shortcomings - of cohesion policies.

Scenarios for Europe
As the CEECs have been going through a rapid transformation, different internal challenges may change the future of their economic growth trajectories according to the way in which these countries grasp these growth opportunities. Moreover, strong external effects are at work in recent years (global economic downturn, increasing competitiveness of emerging countries, increasing globalization trends), that will influence the future of these countries in one way or another according to the ways in which they will develop and countries will react to them.

Doubts emerge on the possible future developments trajectories of Europe, and of the effects that the different trajectories will have on convergence trends within European countries. The GRINCOH project has developed scenario exercises with the aim of investigating possible future outcomes, by building scenarios under certain assumptions on the ways in which critical elements will develop in the future.

A first critical element taken into consideration is the reaction of countries to the present crisis and its structural changes; scenarios are built on the basis of possible alternative growth strategies, differentiated between CEECs and EU-15 countries: while CEECs can choose either a major modernisation strategy or a traditional, even if renewed, industrial growth strategy, the EU-15 countries may instead have reached a high degree of welfare, which can either turn into an economy fully based on advanced services (labeled Post-Industrial EU-15 strategy), or imply a restructuring of manufacturing industries towards higher order functions, even in sectors of traditional specialization for this group of countries (labeled Industrial EU-15 strategy).

Results suggest that a strategy of modernisation of the CEECs economies leads to a more expansionary scenario; this strategy pays the most for Eastern countries if Western countries also move towards an industrial strategy. Interestingly enough, this choice is also associated with lower increases in regional disparities.

More specifically for the CEECs, even if their future trajectories strongly depend on what happens in the Western countries, a modernising strategy is the most expansionary one for the Eastern countries. If Western countries also move towards an industrial strategy, a modernising strategy pays off the most. In terms of regional disparities, a modernising strategy for Eastern countries does not mean, as expected, higher increases in regional disparities. On the contrary, this choice is associated with lower increases in regional disparities, whatever the choice of Western countries is, thanks to the spillovers and positive effects that modernisation generates in all sectors and regions that drive towards higher GDP growth rates in Eastern countries, and a relatively lower inter-national disparity level.

This last result definitely strengthens the main message of the whole GRINCOH project, highlighting the importance for the CEECs to move towards an endogenous growth pattern.

The second element taken into consideration is the way in which the structural changes induced by the crisis in EU economies, and in particular in the CEECs, will develop. A first scenario is defined ‘a place-based competitiveness scenario’, in which the structural changes (limited public financial resources, economic integration processes within the EU, scarcity in R&D investments, geographical reorientation of FDI, reshuffling of industrial specialization) are assumed to be oriented towards a competitiveness aim, through the exploitation of local excellence and untapped local resources. The second alternative scenario is defined a ‘spatial equity’ scenario: this is built around the idea that the main structural changes will be oriented towards the limitation of social costs stemming from the crisis.

Results unexpectedly show that the place-based competitiveness scenario achieves both the highest aggregate GDP growth rates as well as the lowest increase in regional disparities. In other words, and contrary to general beliefs, due to a slower overall growth the spatial equity scenario is less effective than the place-based competitiveness scenario in reducing regional disparities.

This result is even more relevant for CEECs. The tendency of a concentration of resources in large cities and central areas, reinforced during the crisis period with the hope of exiting the crisis by investing in ‘champions’, needs to be avoided, as it generates disparities. However, also the opposite situation of investing in keeping the social costs of the crisis under control, does not seem to be the best reaction strategy. Also for the CEECs, the capacity to invest in dispersed, un-exploited local
excellence, seems to be the best after-crisis scenario for Europe and its territory, (re-)gaining economic growth and enhancing regional convergence trends. This result has an important side-effect on the justification for regional policies. EU regional policies face in fact a major challenge, which cannot be ignored if one wants to analyse the future of the Eastern countries. They in fact need to be better justified in a period of economic downturn, when they may appear less urgent in face of the more fashionable short-term demand policies.

General economic policies in the CEECs
One major message that stems from the research in GRINCOH is that for the CEECs it would pay off fully to modernise their economies. Irrespective of what EU-15 countries (on whose economies of the CEECs still highly depend) would do, the CEECs would benefit from a major process of industrial and institutional restructuring, leading their economies to higher segments, or niches, on international markets. This strategy should ideally be coupled with a thorough process of endogenous development of local markets, since the excessive dependency on international demand slows down long-run growth in such countries. In the macroeconomic sphere, much like western countries, the CEECs face the need to control the decrease in price competitiveness by keeping wage increases in line with productivity growth. The role of product quality in competition also has to be highlighted as a means of increase competitiveness in more and more demanding global markets.

In the CEECs, the creation of innovation cannot be understood or conceptualised within the mainstream model of R&D-based growth or the model which establishes the direct links between R&D, innovation and productivity, i.e. the sequence R&D> Innovation> Productivity which ignores the distinction between production capability and technology capability and ignores production capability as the major source of productivity improvements in CEECs. Although research and innovation public funding was countercyclical in 2008-2010, maintaining funding levels has become difficult since 2011. Securing funding for research and innovation policies has become one of the most relevant challenges. However, the importance of other sources, especially of domestic firms, should increase. Fiscal policies should be oriented towards encouraging this type of financing of R&D activities and the creation of innovations. More private-public partnerships in implementing research and innovation programmes should be promoted. Also, the number of researchers employed by industry needs to increase significantly in cohesion economies to allow them to catch up with more science-intensive economies in Europe.

Since it appears that interregional knowledge networks can substitute for the critical mass of localised resources for innovation in lagging regions, but also that there are significant policy challenges in realizing synergies between local and foreign patenting activities, these networks should be supported both within the scope of innovation policy and regional policy. There is need to avoid the risk of losing a strong potential advantage residing in the present scientific excellence of CEECs in many pure and applied science fields. In the absence of a cooperation tradition with the local production fabric and of a market-oriented organisational capability, the scientific milieu of these countries could easily out-migrate towards Western countries.
Finally, both national and EU R&D and innovation policies should be much more country-specific and should recognise
differences in the compensatory effects of EU Structural and Investment Funds. Also, this would require much better
understanding of the different roles of RDI in different regions.

Demographic, labour market and social policies in the CEECs
Declining population due to both low natural increase caused by extremely low fertility rates and high outmigration call for
immediate policies encouraging more children. This requires family support and the entire complex of social services assisting
families (child-care services, nurseries, kindergartens etc., as well as flexible employment schemes for parents taking care of
the children) in having and bringing up children. The exclusion of women from the labour market that creates the ‘child
penalty’ effect should be reduced through family policy support for wider employment participation of young mothers and for
more skill upgrading of older women. This would ease the stress of aging societies and the growing burden on pension
systems. The demographic challenge seems to be one of the greatest problems of the CEECs.

What is crucial is to establish an integrated system of social policies that would create a policy mix in different fields of social
protection (in family policies, rehabilitation policies, labour market inclusion and activation, childcare, etc.) which could combat
the immediate effects poverty and of complex services that help people to solve their problems and become integrated
members of their societies in the long run. The still-weak capacities of the different social services and their unequal
accessibility and quality - from employment services to childcare, from rehabilitation services to education and training - make
complex policy mixes incomplete and inefficient. The NGO sector should be also supported to find its role and share in building
more cohesive societies.

Labour market policies should be oriented to focus on the point where the region’s countries jointly fail. The problem of
massive numbers of unskilled workers needs to be addressed. Better schools, more adult training, deepening civil integration
and efforts to create a feedback loop from work to skills should become the targets of programmes and subsidies which may
help to ease unskilled unemployment. The quality of education is of special importance. Primary and vocational schools should
equip their students with basic competencies that enable them to participate in formal adult training and learn informally after
leaving the school system. Carefully designed and implemented training programmes for the unemployed can have positive
effects both on the employment prospects and social inclusion of the low skilled.

Improvement of disability policies would bring considerable potential gains for employment and economic growth in the
CEECs. Shifting funds from ineffective sheltered workshops towards personalised rehabilitation services should be undertaken.
A combination of subsidies for employers and a tightening of access to benefits could lead to a significant increase in
employment among people with disabilities.

The CEECs need to invest more in the quality of primary and secondary education, which in turn implies that they must also
invest more in tertiary, especially undergraduate, education so as to improve teacher quality and the evaluation and
monitoring of the overall education system. Comprehensive reforms of the educational system and avoiding early student
selection may have a positive impact on students’ performance.

A higher capacity, better selected, better trained, better motivated civil service can be expected to contribute to improving
policy-making in the field of labour market policy.

Governance and institutions in the CEECs
Taking into account national peculiarities (path dependence), different clubs of the CEECs might need different institutional
solutions and/or different pace of institutional set-up to progress along the road to growth, prosperity and economic
integration. Hence, institutional harmonisation has to be adapted to the institutional framework of each country. Further, this
assumption might also require a strong modification of the prevailing model of economic growth and development.

Economic policy should encourage foreign investors in the case of foreign acquisition of local enterprises to leave decision-
making power within the enterprise and in the case of greenfield investment to provide the newly established subsidiaries
with as much power over corporate governance structures as possible.

There is a need to improve national and local government activity in the promotion, financing and management of regional
development projects. This means exploiting untapped local resources through strategic industrial plans, avoiding lock-in
strategies reinforcing existing local monopolies, limiting rent-seeking behavior by local stakeholders, and fighting corruption.
Political stability is a precondition for stable and efficient institutions. Although different political orientations may be forming consecutive governments, a course of reforms should be maintained, and the 'pendulum pattern' in formulating long-term development strategies should be avoided (membership of the EU no doubt plays a clear stabilising role).

Regional policy in the CEECs
There is a necessity to enlarge development areas beyond the small group of core areas (metropolises, capital regions), towards second (and third)-rank cities. This strategy reduces inflationary pressures, enlarges the economic base of countries and allows a better exploitation of existing, diffused territorial capital. The second-order cities should develop their metropolitan functions, thus supplementing the capital cities that have already reached relatively high levels of development. Such a territorial pattern could slow down the growth of regional differentiation and would allow for better accessibility of high-order services.

Also, if sufficient funds can be put behind the investment support schemes, FDI inflow to less-developed regions can be enhanced, although in the recognition that some of the FDI will be transient. This will allow governments to support the catching up process (or slowing down the losing-pace process). They will need to find ways to implement these policies also in line with the horizontal targets of smart specialization. Even beyond macro-economic policies, regional and local projects to improve competitiveness in specific regions (e.g. by clustering and business support) can bring good results. Activating and keeping young people in shrinking regions cannot be achieved when regions become isolated or when local ties are cut. Regional development is dependent on the vitality networks and/or communities. Existing community structures should be reinforced and reshaped into the direction of openness and towards strengthening the local ties.

Regional development policies should act through integrated territorial projects and ‘territorial platforms’, keeping in mind the multi-dimensional nature of development and the necessity to lever on the specificities and potentials of territories. Based on the results of the scenario-building exercise, the most appropriate design for regional policies has been formulated. They should neither focus on championing places and regions in search of the highest efficiency, nor on lagging areas in search for equity; the right policies are those designed to suit each region’s specificities, competitive advantage and needs, since they would be better able to engage all possible assets and widen the scope of local excellence. This pathway would, at the same time, avoid the social and economic costs of a concentrated development and guarantee the highest returns in terms of both competitiveness and cohesion.

A new target for regional policies should thus involve the largest possible mobilisation of existing territorial capital assets, and in particular of local excellence, presently dispersed in almost all regions, though a bottom-up ‘discovery’ process led by local elites and intermediate bodies, tailored to the potentials and specificities of the single places. More specifically, CEECs should deal with their specific macroeconomic competitiveness issues (for instance, controlling the trend of unit labour costs and real effective exchange rates) and with spatial issues (e.g. the necessity to enlarge development areas towards second-rank cities and to control real estate bubbles and land rent). In CEECs, industrial and social issues converge in the necessity to enhance local entrepreneurship and to mobilize better the present excellence in many scientific fields with the goal to enter a new development stage, relying less on foreign investments alone and exploiting all the potential synergies, both economic and cognitive, between foreign investments and local culture.

Cohesion policy in the CEECs
Several changes in application of Cohesion policy in the CEECs - by far the biggest beneficiaries of this policy in the EU - should be introduced in order to increase its pro-development meaning in these countries and securing a stable and smooth development in the future.

First, EU funding needs to put into perspective. Cohesion policy brings direct and easily measurable funds which translate into spending and incomes, and results in visible material effects. Not surprisingly it is widely considered to be the main, if not the only, benefit of EU membership. In public and political discourse, benefits such as political stability and openness, accessibility to the largest market in the world, increased inflow of FDI and new technologies, openness of labour markets across the entire EU, exchange of students and researchers etc. are often, if not usually, missing from public consciousness. A major effort is required by both the academic and policy communities to put the role of the Cohesion policy in its right 'V important but not unique - place among all positive (and sometimes negative) impulses that come from the membership of the CEECs in the
European Union. The alternative is that EU membership is associated exclusively with funding and that, when the budgetary transfers diminish, so does support for the EU (as has occurred in some EU15 countries).

Second, the 2014-20 period may be the last phase of major transfers to the CEECs under Cohesion policy. It is critical for the CEECs to value and for the policy to value that the funding is exploited effectively for sustainable growth and cohesion. The experience of some EU15 countries is that the added value of Structural and Cohesion Funds was highest in the second or third period of funding, once stakeholders were experienced in the management and implementation of the policy and were prepared to use the Funds to promote innovation and change in economic development. For the CEECs, the main requirements is to shift away from the focus on absorption (important though this is to meet the decommitment rule) and concentrate on investing funds in economically and socially viable projects which have been developed through sound project planning and meet the strategic objectives of the programmes and needs of the regions. Genuine own strategic reflection should be strongly encouraged at all levels of governance - national, regional and local - which would create a basis for adapting the EU programmes and projects to the real needs of the recipient subjects.

Third, the EU has agreed ambitious goals for Cohesion policy in the 2014-20 especially in the area of performance and the contribution of the policy to the objectives of the Europe 2020 strategy. Indeed, the volume of funding allocated to the policy in this period is predicated on the policy’s ability to deliver. As the current programming phase demonstrates, the European Commission is demanding that objectives are specified with reference to results, that realistic targets are set, that ex ante conditionalities are in place and that the performance of the programmes is properly monitored. The first review of performance by the Council and Parliament will be in 2017, with a particular focus on Poland and other Member States receiving major shares of funding. This reinforces the need for managing authorities and implementing bodies to allocate funding in line with strategic priorities and to demonstrate the results being achieved.

Looking beyond 2020, the European institutions have already begun to reflect on possible changes. Although an active debate has not yet begun in earnest, the Commission will need to present proposals for reform by 2018. For the CEECs, post-2020 funding will almost certainly be smaller and there is a need to consider the following issues.

- Domestic regional development strategies. CEECs should actively take forward the recent work undertaken to develop national development strategies, in particular the desirable strategic goals of social and economic development and the strategies, means and sources of domestic funding for realising these goals. There is a need to prepare a shift in psychological attitude away from the assumption that the effort of developing the public sphere is externally financed, and towards a readiness to apply own financing, which should be promoted already during the current financial perspective.

- Development models. Part of the strategic assessment and one of the messages of this study is the need to formulate a new development model. More stress should be put on the creation of innovative economic structures and entities at the expense of funding infrastructure, also in the R&D sphere. Infrastructure should be created only where and when its underdevelopment is a barrier for economic efficiency and social cohesion, and not where and when it satisfies the ambitions of the national, regional and local elites.

- Differentiation. One of the major questions for the reform debate is whether the current multi-level governance approach remains appropriate. Differentiation in the regulatory framework has so far been limited and relies on the Commission services and Member States being willing to adapt the regulatory requirements to the needs of individual countries/regions through negotiation. The question is whether a different model of managing the allocation of resources from the EU is required, with alternative division of responsibilities and greater scope for differentiation between Member States depending on their development needs, challenges and strategies and the state of administrative capacity. These are particularly pertinent questions for the CEECs which have tended to resist a differentiated approach in the past.

- External learning. The lessons from other research is that openness to ideas, knowledge exchange and a willingness to adapt are key factors in promoting effective regional development strategies. Consequently, more engagement in interregional cooperation should be encouraged in the spheres co-financed by Cohesion policy, especially in areas such as R&D and innovation creation and dissemination where networking is critical. For example, the regional innovation strategies that follow the RIS3 pattern should be mutually co-ordinated - at least among the regions of a given country - in order to avoid replication of simple patterns of profiling regional R&D structures (as is already being done, in part, by DG Regio through initiatives such as the Smart Specialisation Platform).
• More and better evaluation, and its use. Lastly, evaluation should become more strategic and substantial and less formal. In several countries, Cohesion policy has introduced evaluation as a part of the entire system of public policies - one of the most positive impacts of CEEC membership of the EU "V not least because of the activities of the European Commission. However, evaluation often becomes an activity which does not translate into action directed towards improvement of future actions. Moreover, the fragmentation of Cohesion policy into several Directorates General within the European Commission (and its separation form another important policy of the EU: the Common Agricultural Policy) translates into fragmented evaluation studies conducted in the Member states. An integration of evaluation studies is an important need, as part of wider evaluation strategies, and its implementation would allow for more comprehensive assessment of EU interventions. It should allow for assessment of the combined/cumulative impact of particular EU polices (Cohesion, Agriculture, Innovation etc.) on territories of the CEECs and their regions and localities.

Cohesion Policy’s prospects: a scenario approach

Beyond the specific policy or governance issues, the future of Cohesion policy will be determined significantly by the "grand bargains" struck between the Member States and European institutions on the Multiannual Financial Framework, and the allocation of resources to policy budget headings and countries. With respect to the major scenarios for Cohesion policy that could be anticipated based on previous reform negotiations, each has implications for the Central and Eastern European countries.

• Focusing Cohesion policy mainly/only on poor countries or regions would provide possible short-term gains from funding flowing only to poorer parts of the EU, mainly in Central and Eastern Europe (though also parts of southern and western Europe hit badly by the crisis). However, fast-growing CEE regions could lose out (such as Mazowieckie, Budapest, Prague, etc). Also, the medium-term implications are likely to be negative, given the probability of less funding being committed by Member States overall to the EU budget, and potentially less interest in net payer countries on how the funding is spent. There would also be the possibility of Cohesion policy funds being diverted to other budget headings, which are not pre-allocated.

• Retaining Cohesion policy across all regions, including richer areas (i.e. a variant of the status quo) would ensure that all Member States remain part of the Cohesion policy system with an interest in, and commitment to, the policy. It would avoid Cohesion policy becoming seen as a "welfare policy," and it would maintain a common framework for sharing experience and knowledge exchange on regional development, both of which are important for Central and Eastern European countries. The universality of spatial coverage would ensure that faster-growing CEE regions continue to benefit from the policy even though they no longer qualify for LDR funding. On the other hand, if Cohesion policy continues to account for a sizeable share of the EU budget, there would undoubtedly be pressure for a continued shift of spending away from redistributive and regional development goals to using the policy for the thematic investment objectives of the EU (as has happened with respect to the Lisbon Agenda in 2000-06 and 2007-13, and Europe 2020 in 2014-20) that may not suit CEE interests. In the MFF negotiations, Cohesion policy would continue to play the part of "adjustment variable" with Member States using the allocation formula to improve their net balances. Lastly, the negotiation of the regulations would continue to have an element of the "lowest common denominator" acceptable to all Member States, blocking in particular necessary changes such as greater differentiation and proportionality in the way that the regulations are designed.

• Allocating Cohesion policy funding at national level to countries, whether for all regions or only poorer regions, would represent a significant change for the policy. It would focus policy on convergence between Member States, assuming that national governments are best placed to undertake subnational distribution and achieve regional cohesion. It would provide scope for a stronger link with National Reform Programmes and the European Semester, but would change fundamentally the role of the Commission, which would potentially focus more on setting common objectives, coordination, strengthening national capacity for regional development, peer review and selective intervention, as with the former Community Initiatives. The implications for Central and Eastern European countries are that Cohesion policy would become a more growth/investment focused policy, downgrading regional cohesion objectives "V which might be welcomed by some national governments, but less by the regions which often have limited self-governance in many CEE countries. Such a policy approach would accelerate the thematisation of Cohesion policy or the transfer of Cohesion policy resources to other policy areas. Some would argue that it runs contrary to the Treaty commitments to economic, social and territorial cohesion, and the degree to which sub-national development problems were addressed would depend on the strength of CEE national regional
development strategies.

The nature of Cohesion policy reform, requiring consensus among all Member States, embodies considerable inertia and 
resistance to radical change. The most likely outcome is a variant of the status quo.

However, there are uncertain economic and political times ahead; recovery from the economic crisis is slow, halting and 
variable, especially in the Eurozone (which already includes half of the CEECs). The future of economic governance is being 
debated, and a comprehensive Genuine Economic and Monetary Union could involve creating a new stabilisation mechanism 
that influences the funding or priorities of Cohesion policy. The review of EU competences undertaken in the United Kingdom 
as a prelude to a possible referendum on EU membership has sympathies in several other Member States and could affect how 
Cohesion policy is undertaken. Finally, a critical factor is how well Cohesion policy performs in the 2014-20 ˝V most notably in 
the Central and Eastern European countries which account for over half the funding ˝V and whether it is capable of delivering 
the goals and expectations (especially Europe 2020 goals) that have been set to justify such a large share of the EU budget.

List of Websites:

http://www.grincoh.eu/

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**Reported by**

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**Subjects**

Regional Development

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