

Chapter 6

The role of EU funds in enhancing the development potential of CEE economies

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1. Introduction

The starting point for this chapter¹ is the disjuncture between fast productivity growth in Central and East European (CEE) economies and poor performance in developing innovative capacities for longer-term sustainable growth and development. The implicit ‘development model’ of the CEE economies in the past two decades has been based on institutional, trade/FDI and financial integration with Western Europe. Until the global financial crisis of 2008/2009 this model was considered a success. More recent assessments (see e.g. Becker and Jäger 2010) show that this model (particularly its strong reliance on external finance) is unsustainable. There is an argument that, as levels of FDI fall, the CEE Member States need to embark on a ‘high road’ of development based on ‘competitive advantage’, since the ‘comparative advantage’ stemming from low production costs cannot provide a foundation for long-term development. However, CEE economies are low performers in the development of indigenous technological capabilities, as demonstrated by stagnant or even falling research and development (R&D) expenditures, low propensity for innovation and limited patenting activities. According to the European Union (EU) Innovation Scoreboard, most CEE countries are ‘moderate’ innovators, performing below the EU average for different measurements, particularly for open, excellent and attractive research systems and linkages between research and entrepreneurship (European Commission 2016a).

Potentially, EU cohesion policy (CP) has a significant part to play in addressing this challenge in the CEE. CP is the EU’s main investment policy tool. Composed of different funding streams,² for the 2007-2013 period the policy had a total budget of €454 billion, with around €175 billion going to CEE Member States.³ Over the past decade, there has been a clear thrust in CP towards objectives that foster competitiveness and entrepreneurship and support innovation, in line with the priorities set out in the EU’s Lisbon Agenda for Growth and Jobs (Bache 2008) and, subsequently, the Europe 2020 agenda. This chapter assesses the extent to which CP has addressed this development challenge in the CEE during the 2007-2013 period: what has it achieved in strengthening innovative capacities and development potentials in these countries and how can its performance be explained? The chapter is structured in four sections. The following section describes the different means by which CP can support innovation.

1. The content of this chapter is based on work carried out as part of the FP7 research project, GRINCOH: Growth – Innovation – Competitiveness: Fostering Cohesion in Central and Eastern Europe. See <http://www.grincoh.eu>
2. The European Regional Development Fund (ERDF), the European Social Fund (ESF) and the Cohesion Fund (CF).
3. For the purposes of this chapter these are: Bulgaria, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

An assessment of the achievements of EU innovation support in the CEE in 2007-2013 then follows, arguing that up to now CP has not efficiently supported transition to innovation-based growth in the CEE. The subsequent section details two of the key factors that can explain this weak performance: the focus of “innovation” spending and institutional weakness. The final section draws some key conclusions and highlights issues for CEE Member States as they seek to make optimum use of CP support in the coming years.

2. How cohesion policy can support innovation

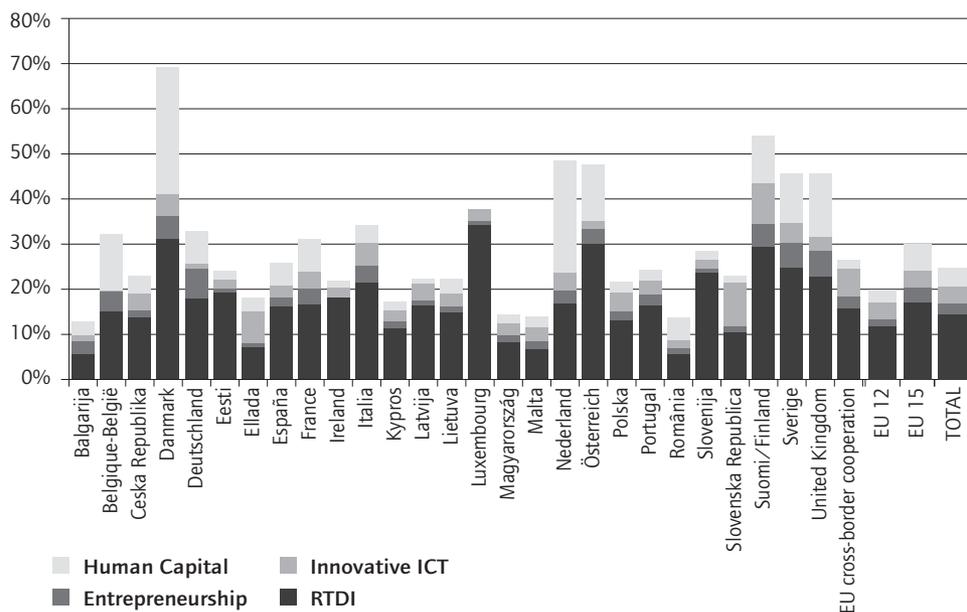
Cohesion policy supports innovation under different headings. The Community Strategic Guidelines on Cohesion Policy (2007-2013) adopted by the European Council stress that to promote sustainable development and strengthen competitiveness it is essential to concentrate resources on research and innovation (RTDI), entrepreneurship, information society and training and adaptability of workers. The policy offers different programmes, schemes, projects, grants and financial instruments that can be used to support innovation. These include sectoral Operational Programmes (OPs) that give priority to economy-oriented research projects and joint undertakings of science and business. In some countries, there are regional programmes that include a focus on these themes alongside other priorities. There are also macro-regional, transnational or cross-border programmes that can cover these headings. Within programmes, policy instruments have up to now been based mainly on non-repayable grants, although the use of financial instruments is growing (e.g. Innovation Loan Funds etc.) (Weresa 2015). Direct support schemes target enterprises, including investment grants for the development of new or improved products and services, for company modernisation, for conducting (or buying) R&D and implementing the results; for the purchase of the equipment necessary to carry out research and development; investment grants in fixed and intangible assets related to creating new companies, diversifying production in existing enterprises by introducing additional new products, or fundamentally changing the overall production process of an existing enterprise; grants for expansion to foreign markets etc.; grants to SMEs for technology transfer and for creating collaboration networks, etc. Indirect support schemes target R&D organisations. These include investment grants related to the construction and modernisation of scientific laboratories; grants provided to universities for establishing spinoff companies; grants for the development of entrepreneurship initiatives at universities. Indirect support schemes also target institutions in the business environment, providing grants for creating technology transfer platforms; grants related to the development of technology parks, business incubators, technology transfer offices and innovation centres; grants related to the development of consultancy agencies and their services for SMEs; co-financing the establishment and expansion of regional clusters; providing capital for loan funds and loan guarantees operating on local and regional markets.

At the outset of the CP programming period 2007-2013, the EU estimated that CP instruments would provide some €86.4 billion across all Member States (almost 25 percent of the total) to R&D and innovation, including the mainstreaming of innovative actions and experimentation (Charles *et al.* 2012). Out of this total, €50.5 billion would

go to R&D and innovation in the narrow sense, €8.3 billion to entrepreneurship, €13.2 billion to innovative information and communication technologies to foster the demand side of ICT, and; €14.5 billion to human capital. These investments represented more than a tripling of absolute financial resources dedicated to innovation and R&D compared to the previous period (2000-2006).

There are considerable disparities across countries in terms of CP funding amounts and targeted themes (see Figure 1). The EU12⁴ earmarked an average of 20% of total CP allocations for innovation (i.e. around €34.7 billion), with Bulgaria earmarking the smallest share (12.8%) of total Structural Funds allocations for innovation, while Slovenia had the largest (28.5%). In the EU15, the average reached 30% of total allocations (i.e. around €48.7 billion), with Denmark's share at 69.2% (European Commission 2010). There were again marked differences in the funding allocated to the four innovation headings between different groups of Member States, with EU15 countries spending an average of 17.2% on RTDI, 3.3% on entrepreneurship, 3.6% on innovative ICT and 5.8% on human capital. The figures for the EU12 were lower (11.8% on RTDI, 1.6 on entrepreneurship and 2.8% on human capital) except for allocations to innovative ICT (3.7%).

Figure 1 Structural Funds allocations to Research and Innovation (ERDF and ESF) in 2007-2013



Source: European Commission (2010)

4. CEE Member States plus Cyprus and Malta.

3. What has EU innovation support achieved in the CEE?

Cohesion policy is one of the most evaluated EU policies. It is implemented according to regulations that require the Commission and Member States to regularly and systematically monitor its implementation. Nevertheless, after more than thirty years of policy intervention, empirical evidence remains mixed and contradictory: no consensus exists on the effectiveness of cohesion policy. Different methodologies have been applied in assessments of different types of CP achievements, each of which has yielded valuable insights without making a completely robust case. A first perspective considers the performance of the policy with respect to its key economic goal of growth in lagging Member States and regions and thus their convergence with EU averages. The reduction of regional disparities in the level of development has mainly been measured as the convergence of regional levels of GDP per capita relative to the EU average and labour market participation/employment/unemployment trends (Begg 2010). One insight emerging from this literature is that convergence has been limited among European regions over the past four decades (Monfort 2008). However, there are several caveats: the results obtained from these studies vary greatly, depending on the specification adopted (period and regions considered, dataset used). A more qualitative approach to assessing CP achievements relates to the concept of ‘added value’. This broadly concerns the administrative learning and spillover effect on domestic systems and the related innovation and efficiency improvements. This can help gauge the impact of cohesion policy in the longer term. Different actors, working within or outside cohesion policy at different levels, have perceived different elements of this added value: financial (referring to the leverage of extra public and private resources for economic development through ‘match funding’ requirements); ‘strategic’ (concerning the diffusion of programme design and strategy development/management processes to domestic contexts); ‘operational’ (e.g. influence on domestic project generation, appraisal and selection processes); ‘accountability’ (through monitoring, reporting, financial management and evaluation requirements); and, ‘democratic’, derived from cohesion policy’s partnership principle). However, research and policy debate have highlighted a range of aspects of ‘detracted value’, notably the perceived complexity and bureaucracy of Structural and Cohesion Funds administration, reflected in the ongoing pressure for ‘simplification’ from national and regional actors in all programming periods (Baumfeld *et al.* 2002).

Summing up, existing research makes a strong case for cohesion policy making a significant contribution to regional development; in regions which have experienced substantial CP investment in basic infrastructure and services, quality of life has improved. However, one common research finding is that this investment only represents steps in a longer development and change process. Generally, CP has struggled to resolve specific development challenges that can have differentiated territorial concentrations, such as those related to demography, poverty, low employment rates, low levels of entrepreneurship etc. Moreover, a major concern is that maintaining the capital investment and institutions established with CP support is a challenge for some regions, and that the economic crisis and fiscal constraints are undoing some gains (Bachtler *et al.* 2016).

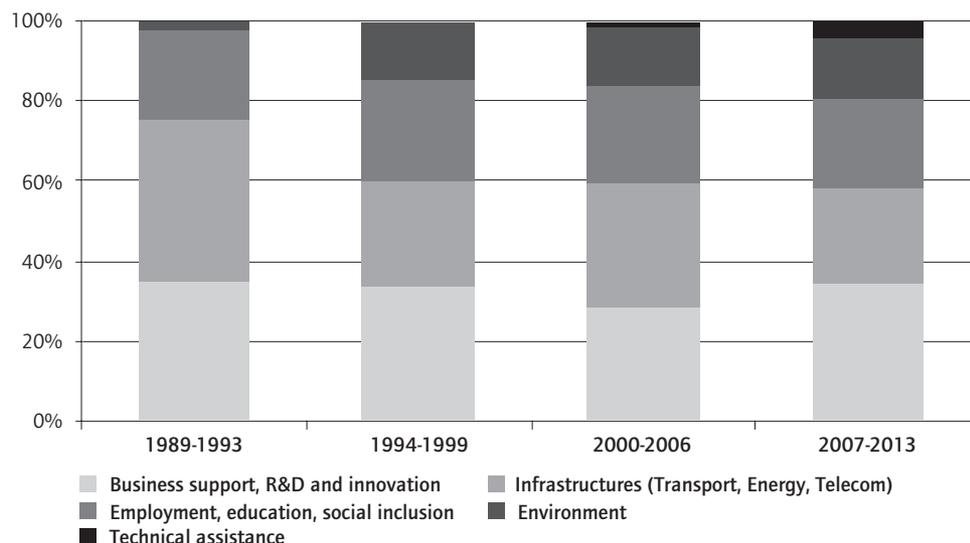
Weak innovation performance can be seen as one of these specific development challenges that CP has struggled to address in the CEE. The European Commission has recently completed an ex post evaluation of CP programmes funded by ERDF and CF in 2007-2013. This has produced some headline figures on innovation support, based on aggregated information contained in Annual Implementation Reports (AIRs) from Member States: an estimated 400,000 projects were implemented by SMEs receiving direct investment aid; 121,400 start-ups were supported, as well as 94,955 research projects and 33,556 co-operation projects; 41,600 new long-term research jobs were created; 8.3 million more EU citizens were covered by broadband connectivity.⁵ Beyond this, there have been many evaluations of specific issues and policy fields, including EU-funded support of innovation. The Commission included a work package dedicated to assessing support provided for increasing research and innovation in SMEs and SME development in its ex post evaluation of 2007-2013, and a range of studies have been carried out across Member States and programme periods. Taken together, these offer important insights into the potential achievements of CP funded innovation support, particularly in less developed regions such as those found in the CEE.

First, the role of CP as an additional source of financial support for innovation activities is crucial where alternative resources are scarce or in those regions that have fewer capabilities to make use of domestic funding (Viljamaa and Halme 2006). There is also some evidence from previous enlargements of the EU that CP funding can be used as a lever to boost business investment in R&D in recently acceded Member States (Fitzpatrick Associates 2003: 61). From a CEE perspective, it is clear that innovation has become an increasingly important theme for CP investment. A 2011 study prepared for DG Research and Innovation compared RTDI expenditure/ allocations in the 2000-06 and 2007-13 programming periods at the level of individual regions, covering ERDF, ESF and EAGGF (European Commission 2011). According to this, EU12 regions increased the share of CP support for innovation headings by 12 percentage points on average between 2000-06 and 2007-13 (EU15 regions saw an increase by 8 percentage points). Figure 2 shows the share of CP devoted to different policy headings by less developed regions, the majority of which are in the CEE, between 1989 and 2013, indicating a shift of investment towards innovation between the periods 2000-2006 and 2007-2013.

Recent analyses have noted increases in Gross Domestic Expenditure on R&D (GERD)/GDP ratios for CEE Member States from below 0.8% in 2006 to 1.2% in 2012 or by 0.4 percentage points of GDP. GERD/GDP did not increase during the period of economic growth before 2008 but did after 2008 when GDP fell in many CEE Member States as a result of the crisis. A potential explanation for this anti-cyclical trend is EU support for R&D and innovation through cohesion policy (Radosevic 2015). The Commission's ex post evaluation has gathered examples where CP support has had this vital impact on levels of innovation investment (European Commission 2016b). In Poland, an evaluation of the OP Innovative Economy found that more than half of recent growth in R&D expenditure as a share of GDP was driven by ERDF support (WYG PSDB 2014).

5. 'Key achievements of cohesion policy', Commission web page accessed October 2016: http://ec.europa.eu/regional_policy/en/policy/what/key-achievements/

Figure 2 Composition of cohesion policy investment in less developed regions, 1989-2013



Source: European Commission (2014), p. 15

The results of an econometric study indicated that, without the ERDF support, the share of R&D expenditure in GDP would have amounted to 0.7%, instead of the actual 0.89% in 2012. In addition, according to the same study, the recent increase in the share of high-tech (R&D-intensive) products in Polish exports was mainly driven by the ERDF funds. According to the 2013 Annual Implementation Report for the Polish OP Innovative Economy, a total of 7,000 new jobs would have been created in SMEs by the end of 2015 as a result of the OP support. Other analyses have found substantial impacts in CEE countries in terms of direct support for R&D projects. In Lithuania, it was estimated that policy additionality was achieved in about 30-40% of cases of direct CP support for projects. These involved 270 SMEs (ESTEP 2015). In Czechia, a study by the Ministry of Industry and Trade reported that 87% of the projects supported by an instrument promoting the innovative performance of firms would not have been implemented without EU grants. If they had not received grants, most enterprises would have postponed the implementation of their projects for a few years (European Commission 2016b). The ex post evaluation of the Śląskie Regional OP (ROP) for 2007-2013 in Poland included an analysis of the additionality and leverage effects produced by the OP. According to the study, each Polish zloty from the ERDF invested in an ROP project generated PLN 0.31 of additional investment effects. Such a high multiplier effect resulted from high percentage of projects which generated new investments. It found high levels of additionality, with local government units in the region allocating greater means for investment than before the launch of the programme, including under RTDI and entrepreneurship in which the amount of private investment due to ROP intervention was PLN 780 million (PSDB 2012).

However, it is important to look at the focus of this spending on innovation. Evaluation evidence indicates that across the CEE, EU innovation support in the period 2007-

2013 was largely related to “hard” capital investments (the purchase of technology, new machines, new infrastructure etc.) rather than investment in the development of indigenous innovation capacities. For instance, ex post evaluation of the EU-funded Economy Growth OP in Lithuania 2007-2013 found that objectives concerning business-science collaboration and related policy challenges were not transformed into more substantial policy instruments. Instead, large investments were made in public R&D infrastructure (EUR 364 million from the ERDF) (European Commission 2015a). In Czechia, the strongest demand for support from the Operational Programme Enterprise and Innovation 2007-2013 was for the purchase of new technology and equipment. Various support centres for start-ups and innovation-oriented entrepreneurs were created (business incubators, science and technology parks, innovation centres, hubs and clusters, etc.) (European Commission 2015b). In Poland, a World Bank study found that more than 40% of funds from the OP Innovative Economy 2007-2013 went to large companies for technology upgrading through fixed capital investments in plant machinery (Kapil *et al.* 2013). Other evaluations of OPs have indicated that spending under infrastructure-related categories outperformed those related to objectives supporting innovation and R&D activities, noting that the impact on innovation was limited to the purchase of machinery and the creation of supporting infrastructure: funds had not significantly impacted on cooperation between firms with research and development units, which still prioritised investments in fixed assets (PSDB 2012).

Of course, these types of investment have achieved important results. Investment in RTDI infrastructure has a crucial role to play in parts of the CEE where this base is missing or worn down. The World Bank’s Enterprise Innovation Support Review acknowledges the role that EU funding has played in getting Poland’s innovation system ‘off the ground’ (Kapil *et al.* 2013). An evaluation in Slovakia found examples of how the significantly improved Slovak research infrastructure, resulting from the investment of EU funds, managed to attract private funding (TECHsme.sk 2013). The focus on technology absorption through the purchase of technology or machinery is understandable, given the current level of economic development and enterprise needs in many parts of the CEE.

Nevertheless, many of these evaluations have been critical of the strong focus of EU-funded innovation investment on RTDI infrastructure and technology absorption. A number of problems with this approach are highlighted. First, the link between investment in infrastructure and technology absorption and increased productivity growth based on innovation and R&D activities is uncertain. In some cases, this approach has proven weak in leveraging private sector investments in R&I and fostering the commercialisation of state-funded research. Studies of innovation policies in the CEE confirm that one fundamental weakness is the lack of a corporate sector that actively uses links with science to innovate (Veuglers and Schweiger 2016). Infrastructure investments into science “valleys” have not automatically led to the establishment of innovative actions, such as business-academia collaboration (European Commission 2015a). Second, there are questions concerning the sustainability of these effects in the longer term, when funding will have to be found for replacing purchased technology and equipment and maintaining infrastructure (Kapil *et al.* 2013). Concomitantly, the comparatively limited level of direct investment in innovation activities by EU funds in

the CEE has been criticised. Evaluations from other parts of the EU have shown that more ambitious and systemic effects can be developed through CP innovation support, prompting changes in the institutional framework for innovation investment, fostering change dynamics within businesses and R&D centres, promoting openness to new ideas and agents, and encouraging the development of new strategic aims with longer-term time horizons to strengthen durability. According to some studies, the most effective measures to improve innovation performance are those enabling enterprises and R&D institutions to cooperate and combine resources, to create clusters and commercialise innovations. This stresses the role of “soft” support (brokers, consultants, mentors, and acceleration services) (European Commission 2015a).

These findings have implications for CP’s impact on long-term sustainable development in the CEE. Research from previous EU enlargements distinguishes between ‘demand-side’ effects and impacts on the ‘supply’ side’ in MS economies (Bradley *et al.* 2007). ‘Demand side’ growth driven by CP spending on infrastructure investment creates higher investment, higher consumption and higher levels of imports. However, its impact can be transitory, lasting only as long as there are significant amounts of CP funding available. There are longer-term costs for maintenance and there is a danger that a dependency culture develops, where in the name of generating ‘structural change’, less developed regions come to rely on transfers and experience convergence in consumption but persistent divergence in productive output and potential (Farole *et al.* 2011). ‘Supply-side’ impacts arise through the gradual accumulation of “stocks” of human capital, innovation and R&D, and the beneficial output and productivity spillovers that will be generated both during and after the CP programmes. This emphasises the need to support a new development model that focuses on innovative economic structures and entities at the expense of infrastructure, including in the RTDI sphere. According to this argument, in the CEE infrastructure should only be supported through CP where and when underdevelopment is a barrier to economic efficiency and social cohesion and the implication is that up to now this has not been the case (Gorzela 2016). Cohesion policy investment in supporting infrastructure for innovation can pay dividends, and building up public infrastructure capacity to support innovation and entrepreneurship is an essential part of the development of an effective regional innovation system, but without parallel effort devoted to encouraging endogenous innovative activities in the public and, especially, the private sector, and building up innovation capacity, there is the risk that any impact will be limited and that higher levels of public investment can only be supported by continued CP subsidies. There is a strong argument that CEE Member States will need to divert EU-funded investment from absorption to innovation to maintain sustainable growth in the long term (Kapil *et al.* 2013).

4. What explains this performance?

Why has CP innovation support in CEE in the period 2007-2013 been used in this way? There are several possible explanatory factors for poor policy effectiveness, related to how instruments are defined, customized and combined into mixes that address the ‘problems’ related to the activities of the innovation system (Borrás and Edquist 2013). Two explanations will be detailed here: how the importance of CP funding relative to

domestic investment in the CEE influences the focus of that support, particularly in the context of the crisis; and, the influence of institutions and administrative capacities.

Cohesion policy is an important source of funding for regional development and also shapes the geographical and thematic allocation of domestic regional policy funding, particularly because it requires countries to co-finance CP programmes over a seven-year period. In poorer EU Member States, CP can account for a significant share of total public capital expenditure and funding for national economic development. Table 3 compares CP annual average allocations in 2007-13 and 2014-20, with all data in 2011 prices and as a percentage of 2011 GDP. The data show that there has been little change in the level of funding to wealthier countries in 2014-20 (as a percentage of GDP in constant prices). Funding allocations to a number of poorer countries are lower in 2014-20 than in 2007-13 (as a percentage of GDP), partly because of increases in these countries' GDP over the past decade, and also because a lower proportion of the total CP package is being allocated to the poorest countries and regions in 2014-20. Nevertheless, the percentage of GDP is substantially higher in CEE Member States than in others.

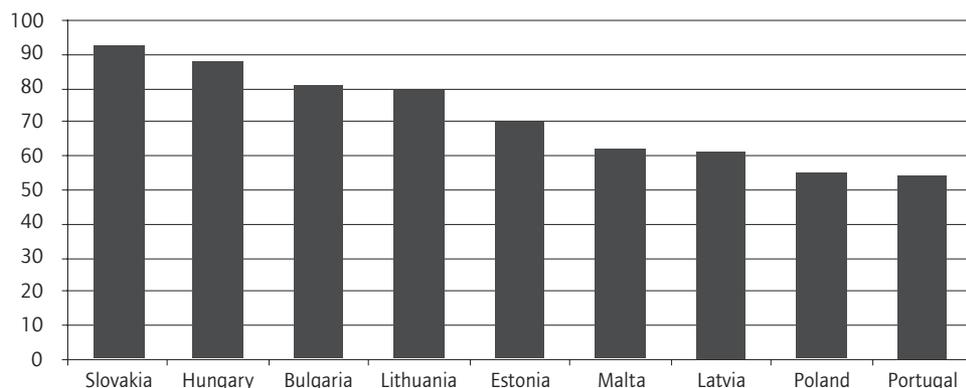
Table 1 Cohesion policy allocations in 2007-13 and 2014-20 (% of GDP)

	2007-13	2014-20
3.5-4.0%	Hungary	
3.0-3.5%	Estonia, Latvia, Lithuania	Latvia
2.5-3.0%	Bulgaria, Poland	Bulgaria, Croatia, Estonia, Hungary, Lithuania, Poland, Slovakia
2.0-2.5%	Czechia, Romania, Slovakia	Romania
1.5-2.0%	Malta, Portugal, Slovenia	Czechia, Portugal
1.0-1.5%	Greece	Greece, Malta, Slovenia
0.5-1.0%	Cyprus	
0.1-0.5%	Finland, France, Germany, Italy, Spain	Cyprus, Finland, France, Italy, Spain
<0.1%	Austria, Belgium, Denmark, Ireland, Luxembourg, Netherlands, Sweden, United Kingdom	Austria, Belgium, Denmark, Germany, Ireland, Luxembourg, Netherlands, Sweden, United Kingdom

Note: Annual average allocations in constant 2011 prices, as a percentage of 2011 GDP, with all data in euros.
Source: EPRC calculations based on European Commission data

Cohesion policy funding has also played a significant role in investment in these countries in the context of the global economic and financial crisis. The crisis has had a profound impact on national and regional budgets, limiting funding availability across all investment areas. In the EU as a whole, public investment declined by 20% in real terms between 2008 and 2013. In the Central and Eastern European countries, where CP funding is particularly significant, public investment (measured as gross fixed capital formation) fell by a third and CP funding came to play a fundamental role (see Figure 3).

Figure 3 Cohesion policy funding and national co-financing as % of total public investment



Source: European Commission (2014), p. 12

Ranked as moderate innovators and severely hit by the crisis, less developed regions in the CEE with longstanding structural difficulties received large volumes of CP funding that were often the only source of funding for industrial policies. In this context, CP was used to complement (or even substitute) national/regional support policies to help firms cope with the effects of the crisis, especially in those regions most severely affected. Cohesion policy performed an anti-cyclical role. Thus, although evaluations have identified some cases where CP innovation investment produced additionality and leverage effects, a basic feature is the inclination of CEE governments to substitute CP investment for national funding sources. This is cited as a key factor in explaining how a high share of CP investment in total public spending on RTDI can be associated with low policy efficiency (Veugelers 2014).

CP programmes were often revised to deal with the effects of the crisis, implementing generic policy instruments aimed at reaching the widest possible number of beneficiaries, enabling businesses to survive or preserve pre-crisis levels of investment and employment. The Commission's ex-post analysis noted a shift of resources away from research and innovation to more generic growth objectives in programmes in response to the crisis (e.g. in Czechia 'Enterprise and Innovation' OP). This reprogramming led to a reinforcement of measures focused on improving competitiveness and employment, seeking to give a more forceful response to the ongoing economic and financial crisis. The consensus in these programmes is that CP support was fundamental in responding to the crisis, but that more resources were allocated to strengthening private productive investment (new machinery, new construction) and stimulating employment (creation or, more often, safeguarding of jobs in the short term), detracting from funding for R&D and more ambitious innovation goals (European Commission 2016b). However, it is important not to exaggerate the role of the crisis in this approach to EU investment in innovation in the CEE. The approach was evident in Poland alongside other CEE countries, despite the fact that it largely avoided the most serious impacts of the crisis. It could be posited that in some parts of the CEE the crisis offered an ex-post justification for an approach that had already been adopted, driven by other factors including institutional conditions. Overall, innovation policies across the transition

region are surprisingly similar, characterised by an excessive focus on the creation of technology, particularly from public-funded research organisations, and by insufficient attention paid to the absorption of technology by the private sector. Innovation policies in transition countries would gain from better governance, more sophisticated public administrations and private-sector involvement. Innovation policies in transition countries: one size fits all?

5. The influence of institutional factors

In explaining this approach to innovation support, it is also important to look at the institutional context in the CEE. Specific institutional endowments, both ‘hard’ or ‘formal’ institutions (laws and regulations, rights etc.) and ‘soft’ or ‘informal’ institutions (norms, traditions, conventions, networks etc.), facilitate policy performance (Streeck 1991). Equally, institutions can have a negative influence on policy performance as a result of e.g. excessive bureaucracy, institutional lock-in etc. (Pike 2013). Research has identified how institutional weaknesses in the CEE determine CP performance (McMaster and Novotný 2005). The weaker a Member State’s institutional capacity, the weaker the CP performance (Bachtler *et al.* 2013; Tosun 2014). A range of weaknesses has been highlighted in studies. Unstable organisational structures and staff turnover are cited as significant institutional factors undermining policy performance. Stability and continuity strengthens a policy’s ability to deliver intended goals, encourages the pursuit of long-term development aims and strengthens administrative efficiency (Milio 2010). Recent research has explored staff turnover in public administration bodies implementing CP in 2007-2013. CEE MS were mainly assessed as moderate or high in terms of staff fluctuation, reflecting institutional factors: relatively low civil service wages (in comparison to the private sector); the politicisation of the civil service (political flux is often tied to changes in staff); and, lack of institutional continuity (Radzyner *et al.* 2014). For instance, in Hungary institutional instability in the innovation and public administration systems was exacerbated following the parliamentary elections in 2010. After the elections, key national and regional organizations involved in managing and implementing innovation support lost status and autonomy. Comprehensive personnel changes involved not only the top management of the previous political cycle but also desk-level officials. The implementation of innovation-related programs was frozen and the high level of institutional instability disrupted previously established linkages and reduced both innovation policy effectiveness and social capital (Szalavetz 2015). In Slovakia, frequent staff fluctuations were related to political change: in the course of the implementation of the Research and Development OP 2007-2013, the minister in charge changed three times and after every political change senior and desk staff positions changed.

The institutional infrastructure supporting innovation systems in CEE Member States suffers from fragmentation, and there are problems with inter-agency coordination. Responsibilities for strategy, financial planning and implementation are often unevenly distributed between different agencies and/or ministries. In countries with regional tiers of administration, the institutional framework is complicated further. For instance, each of Poland’s sixteen regions, or *voivodships*, also has its own

innovation support initiatives. Mapping CP programming to domestic institutional systems had detrimental effects in this respect: rather than contributing to stronger strategic integration, institutional tensions stemming from the establishment of CP management and implementation arrangements in domestic systems undermined the strategic quality of CP programmes. Programme management was often disjointed and the ‘silo’ mentality of ministries made it difficult to prioritise strategic objectives. CP objectives were divided among ministries, departments or administrative tiers according to traditional portfolios or political bargaining rather than strategic logic. This fragmentation poses several obstacles to a comprehensive, integrated and affordable strategy for innovation and R&D. It duplicates objectives, discourages information sharing, disperses responsibility and accumulates administrative costs for the public sector as well as the grant applicants and beneficiaries. This fragmentation has undermined RTDI interventions where emphasis is placed on collaborative links between local authorities, businesses, research centres and academia (Kasza 2009).

Finally, it is important to note the emphasis placed by CP management and implementation bodies in the CEE on the efficient absorption of EU funds and compliance with EU regulations, emphasising timely spending, auditing and monitoring in order to ensure fast and appropriate use and legitimate expenditures. Given the amount of funding involved and the relative inexperience of programme authorities in these countries, there is particular pressure from the EU and national authorities on bodies involved in CP implementation in the CEE to maximize their absorption of structural funds (Cartwright and Batory 2012). In terms of financial management, the focus in all case studies was on ‘policing’ systems. The emphasis was on audit and control, constraining risk-taking and innovation in implementation. Although apparent across the EU, this behaviour has been most evident in CEE MS where institutional weaknesses prompted an excessive emphasis on “compliance” in administering the Funds. CP management and implementation systems in CEE Member States were designed to ensure procedural correctness rather than to facilitate access to EU funds by applicants; double and triple sets of checks were required for payment requests, slowing down the disbursement of grants (Oraze 2009). The cost of good absorption and compliance performance is often weak performance in strategic results and impacts (Balás and Kiss 2011).

In this context, it is useful to compare the varied application and impact of two EU conditionalities that were designed to influence CP implementation. The first conditionality was on spending: the decommitment rule which stipulated that any funding committed to a project needed to be paid out within two years (or three years in the case of CEE Member States) or else be lost to the programme. Drawing the evidence together, the decommitment rule was effective in achieving the goal of improving financial absorption. The rule was applied rigidly and consistently to all programmes in line with the regulations, including in the CEE. In comparison, Lisbon ‘earmarking’ can be seen as a conditionality targeting the allocation of spending. Member States were obliged to dedicate a set proportion of their programme allocations to supporting the EU’s Lisbon Agenda objectives of increased competitiveness and job creation. Data on the allocation of funding by expenditure categories at the start of the 2007–2013 period has been used by the Commission to suggest a high level of compliance with the earmarking requirement. The caveat to this is that the Commission’s definition of what constituted

'Lisbon-relevant expenditure' was widened considerably in the regulatory negotiations with the Member States. Although introduced with fixed percentages of expenditure in the regulations, it was varied by type of programme and was voluntary for the EU-12 where Member States were able to negotiate additional expenditure categories to be included in their targets. The potential influence of earmarking was also weakened during the negotiations, principally to give Member States more flexibility in what spending would count as 'earmarked expenditure'. This affected the credibility and criticality of the conditionality, although the targets and reporting mechanisms were retained. Thus, although earmarking has influenced the allocation of spending on strategic objectives in some Member States, including CEE Member States, this has not been to the same extent as the 'n + 2/3' spending conditionality (Bachtler and Ferry 2013).

These institutional issues have had an impact on CP strategic development and implementation. Ex post evaluations have criticised the strategic quality of EU-funded innovation support programmes, noting a reluctance to identify strong strategic priorities (European Commission 2016b). In Hungary, research has indicated that full procedural compliance with EU regulations and requirements for the implementation of CP innovation support has not automatically led to the strengthening of strategic capacities. The façade of procedural compliance masked a pragmatic approach to accessing the funds that were prioritised (Szalavetz 2015).

Across the CEE, administrative staff were trained in the mechanisms of spending CP funding efficiently (e.g. meeting eligibility requirements, regulations and 'decommitment' rules etc.) but often had no knowledge of specific fields or policy areas that would allow them to assess project ideas and monitor progress. This was particularly noticeable for complex, innovative interventions, including those supporting RTDI. At the launch of the programmes, there were very few evaluators able to judge the value and quality of innovation-related projects. This resulted in simplified selection criteria and indicators to assess innovation-related projects (Kozak 2013). Recent research by the European Parliament asked programme managers to assess capacities for different ERDF priorities. Respondents from the CEE described capacity under RTDI as 'less effective' (Metis and EPRC University 2014).

Preference was given to a demand-driven approach, providing beneficiaries with a broad range of support measures from which to draw. Moreover, the common pattern of intervention involved implementing generic policy instruments aimed at reaching the widest possible number of beneficiaries: although the budget allocation for CP instruments was often high, the size of individual projects was small, producing fragmentary results. Interventions designed to generate innovative and adaptive growth tended to be vague, providing a blanket authorisation for spending on a wide range of programmes and projects. Thus, institutional weaknesses conditioned the implementation of CP support for innovation: strategies allocated significant amounts for infrastructure rather than for innovative priorities because this is where the institutional interests of programme authorities and beneficiaries coincide: beneficiaries could pursue investments they had experience in managing and which brought immediate, visible effects; programme authorities, inexperienced in more innovative activities and wary of risking decommitment, received assurance of substantial, timely expenditure.

6. Conclusions

The 2014-2020 period could be the final phase of substantial CP transfers to the CEE, and this programming period has an increased focus on innovation support. A comparison of thematic shifts in funding from 2007-13 to 2014-20 shows a significant increase in CP allocations to R&D and innovation, ICT, SMEs and a low-carbon economy, which collectively will see an increase of 6 percentage points in less developed Member States to 35% of total funding in 2014-20. A second factor that has contributed to raising the profile of innovation within cohesion policy has been the introduction of ex ante conditionality linked to the requirement of approval of Smart Specialisation Strategies (S3) as a strategic basis for the programmes. It is crucial for CEE Member States that funding is used effectively for sustainable growth. The experience of EU15 countries is that the 'added value' of CP was highest in the third phase of funding – once stakeholders were experienced in the management and implementation of the policy, and at the same time well prepared to use the funds to promote innovation and change in economic development. For the CEE, the main requirement is to shift away from a focus on absorption (although this is important to meet decommitment rules) and concentrate funds in economically and socially viable projects based on sound strategic planning, matching the strategic objectives of the programme and the needs of the region (Gorzela 2016). The chapter confirms recent studies that have focused on the role of institutional endowments in enhancing development investment. For instance, Casi and Resmeni (2014) conclude that the impact of FDI in regions is constrained by the variable endowment of regional human and social capital, behavioural modes, values and trust. Fratesi and Perucca (2014) arrive at similar conclusions in their conceptualisation of 'territorial capital' and their empirical analysis of its role in CP impact in the CEE: CP impact depends on the type and amount of territorial capital possessed. Entrepreneurship, innovation and ICT policies are only effective when the region is endowed with human capital, while their impact in regions not endowed is not positive. These findings have implications for CP support for innovation and in turn for long-term sustainable development in CEE Member States. Up to now, 'innovation' has often been defined broadly to allow spending on infrastructure. There is a similar focus on research infrastructure, technology parks, research centres and buildings or fixed assets. This can absorb investment and is beneficial in boosting 'demand side' growth and higher consumption. However, there are sustainability issues, as infrastructure will have to be maintained after CP investment ends. Moreover, this approach means that less emphasis is put on 'supply-side' impacts that arise through the gradual build-up of "stocks" of infrastructure, human capital and R&D. Following the closure of CP programmes and the end of EU investment, only these supply-side effects remain: the systemic, structural change effects induced by CP investments then come into play. Problems with strategic quality and lack of a strategic vision mean that funding has tended to be distributed widely across large numbers of projects, with a particularly detrimental impact on some strategic objectives where emphasis is placed on such effects.

That is not to say that the picture is completely negative and that the prospects for further CP achievements in the CEE in the future are bleak. The significance of cohesion policy for development in CEE Member States is evident and argues for a continued role

for investment in these countries. Given the time pressure and some of their inherited handicaps in administrative culture, these countries have performed remarkably well. Although varying across Member States and regions, progress has been made, especially during the 2007-2013 period: programme design has become more professional, with more analysis, strategic reflection and partner consultation; increased ‘partnership-working’ – greater involvement of regional/ local bodies, economic and social partners – although not usually in funding decisions; investment in project generation – working with applicants to get ‘good projects’; more sophisticated project selection systems – competitive calls, scoring criteria; and greater attention paid to monitoring and development of an evaluation culture. The language of development policy has changed, reflecting the CP emphasis on innovation-related themes. There is awareness of new approaches beyond infrastructure support in strategic thinking. This suggests a potential impact of CP strategies on institutional settings in the longer term. Cohesion policy can simultaneously contribute to strengthening innovation in CEE regions and hence create growth in the short-medium term, but can also be used to strengthen institutional factors (including economic, political, entrepreneurial procedures and norms as well as public policy administration). This enriched endowment will eventually enhance the long-term growth of less developed regions.

However, thus far most progress has been made in strengthening capacity for procedural or operational compliance with Commission regulations and requirements, especially financial management and control. This has not been matched by progress in administrative processes related to strategic development and policy learning. CP funding is often spent according to short-term considerations, either responding to urgent problems or political considerations rather than to long-term strategic development. Thus, CP funding for innovation that in principle supports the development of strategies and instruments based on partnership, the mobilisation of local stakeholders (including private actors), decentralisation and bottom-up approaches, can be subsumed into a system that formally complies with EU regulations and procedures but in reality reflects traditional, hierarchical, redistribution and subsidy allocation. This undermines the development opportunities offered by CP (Szalavetz 2015). Administrative staff are trained in the mechanisms of spending CP funding efficiently (e.g. meeting eligibility requirements, regulations and ‘decommitment’ rules etc.) but often do not possess the knowledge in specific fields or policy areas that would allow them to assess the innovative worth of project ideas. Moreover, the focus has been on areas where authorities have implementation experience and where impacts are immediate and tangible, particularly in the area of infrastructure. Moves to more sophisticated interventions for innovation and entrepreneurship are apparent but authorities have struggled to implement actions in this field.

This highlights issues of strategic quality: the focus on stronger thematic concentration in the 2014-2020 period and the conditionality that Member States and regions should have a detailed Smart Specialisation Strategy to implement the funds should be used to develop clearer thinking under innovation headings. Strategic guidelines for CP programmes should be more concrete and clearly specify objectives, the structure of finances allocated, selection criteria, etc. Clear justification and logic are needed to ensure that a learning process is also taking place; more autonomy and flexibility in

implementation should be ensured within a focused and well defined strategic framework. In terms of implementation, regulations (particularly those governing financial control) need to be simplified and administrative processes for more complex, innovative projects need to become more flexible. Experts are involved in the project selection process but there is insufficient weight given to strategic, innovative aspects. There is very limited risk tolerance and stronger emphasis has to be put on risk assessment in innovative projects. This requires more training for staff in bodies involved in implementing OPs. Thus, a key challenge in optimising the benefits CP support for innovation offers to the CEE is ensuring sufficient investment in capacity. This applies to administrative capacity building for programme managers and stakeholders, particularly at sub-national levels. However, it also applies to the European Commission, which needs to make CP support more ‘user-friendly’ and context-specific and to provide incentives to mobilise stakeholders in a more meaningful and strategic way, overcoming the ‘distance’ between the Commission and those developing innovation strategies and instruments in Member States.

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