

**Searching for exits from the Great Recession: Coordination of fiscal consolidation and growth enhancing innovation policies in Central and Eastern Europe**

**Abstract:** For overcoming the Great Recession, the EU has opted for a strategy that combines austerity-driven fiscal and experimental ‘growth enhancing’ research, development and innovation (RDI) policies supported by different policy coordination mechanisms. We analyse the experiences of four Central and Eastern European economies – Czech Republic, Estonia, Poland, Slovenia – in implementing this strategy. Given the weak policy capacities both in the EU institutions and CEE economies to draft and coordinate such novel and experimental RDI policies, we find that the implementation of this strategy is more complicated under the current EU fiscal and economic policy coordination system than assumed by the EU.

**Keywords:** Great Recession; fiscal policy; innovation policy; Estonia; Czech Republic; Estonia; Poland; Slovenia

## Introduction

The Great Recession has laid bare the major institutional deficiencies of the EU: a monetary union without a fiscal and full political union. The search for short-term and long-term institutional solutions to these deficiencies – from European Financial Stability Facility (EFSF) and European Stability Mechanism (ESM) to Two and Six Packs – have set in motion deeper political and economic integration of the EU and a policy choice to pursue austerity as the key exit strategy (Mody 2015) supported by related structural reforms in e.g. labour markets and pension systems. Given the less-than-expected success of this strategy, the EU (EC 2014a) has sought to balance austerity with ‘growth enhancing’ strategies by recommending member states also to ‘*sustain and where possible promote growth enhancing expenditures within overall fiscal consolidation efforts*’ (p. 2), and to regard research and development and innovation (RDI) investments as sources of renewed growth, and to coordinate fiscal and economic policies accordingly. At the same time, Veugelers (2014) has shown that since the Great Recession, innovation-lagging and fiscally weak countries have cut their public RDI funding while innovation-leading and fiscally stronger economies have increased expenditures. In other words, shorter-term fiscal policy concerns have dominated and also influenced longer-term RDI policy choices.

In this paper, we are interested in how the proposed growth enhancing strategy has evolved in the newer member states from Central and Eastern Europe (CEE) since the EU’s increased attempts at policy coordination. Reinert and Kattel (2014; also Pula 2014) argue that the logic of CEE integration to the EU has from the beginning suffered from structural contradictions leading to *integrative yet asymmetrical integration* (i.e. attempts to integrate countries at different levels of economic

development into a welfare state), or even to *welfare colonialism* whereby de-industrialisation and erosion of productive factors in the peripheral economies has been paralleled by increasing welfare transfers via the EU cohesion policy funds and remittances. The accession obligation to adopt Euro and the growing dependence on the European Structural and Investment Funds (ESIF) for financing economic restructuring policies have meant that CEE economies have acted as *rule takers* (Bruszt and McDermott 2012) even after the formal accession. In this context, pressures for policy convergence around specific European ‘best practices’, regardless of domestic situations and needs, have been present both in fiscal policy (through the Maastricht criteria, Stability and Growth Pact) and in RDI policies. The extensive convergence in the content and governance of RDI policies has been driven by the softer Lisbon Agenda based open method of coordination and the conditionalities of cohesion policies (Karo and Kattel 2010; Suurna and Kattel 2010; Izsak et al. 2014). In most analyses, these potential pressures towards de-contextualised convergence remain hidden as the EU – as a *transnational integration regime* (Bruszt and McDermott 2012) – formally prioritises (ever since the Werner report in 1969) institutional and capacity building and contextual adaptation of EU-wide rules as prerequisites for integration.

We argue that, given its institutional imperfections, the EU’s initiatives for improved fiscal and RDI policy have not provided a new impetus for overcoming such tendencies for de-contextualised convergence. On the one hand, based on the lessons from the Lisbon Agenda based RDI policies, it has been generally agreed that more effective RDI policies require a shift from providing generic ‘framework conditions’ for innovation (through general funding of RDI and supporting networking between

businesses and academia) towards more focused, contextualised and in many cases also regionalised RDI policy approaches by allowing greater policy experimentation by member states and regions. In the EU, this approach has been labelled as ‘smart specialisation’ (Foray 2014), but the operationalisation of this concept is still ongoing (Foray et al. 2011; McCann and Ortega-Argiles 2015). On the other hand, austerity driven fiscal consolidation strategies seem to lead towards centralisation of fiscal policies and as a result also general policy coordination both in member states (Raudla et al. 2015) and in the EU institutions (Goetz and Patz 2016). As a result, the institutional arenas of RDI policy are becoming more complex as both the EU and member state level institutions of fiscal and economic policy coordination become more interested and involved in RDI policies. Coordination across policy domains seems highly challenging in a context where specific RDI policy rationales and related policy and country-specific competencies to guide different economies are only emergent both in the EU institutions of economic and fiscal policy coordination (Savage and Verdun 2016) and in member states most affected by such coordination initiatives (Karo and Kattel 2015; Karo et al. 2016). We conjecture that as these characteristics are making RDI policy arenas more complex and uncertain, the more straightforward fiscal rules and existing policy and administrative routines of RDI policies inherited from the Lisbon Agenda era continue to drive policy processes and limit policy space for contextual and experimental RDI policy making.

In the next section we provide a brief overview of the evolution fiscal and RDI policy coordination in the EU. Thereafter, we analyse how four CEE economies have responded to the Great Recession and the EU initiatives to coordinate fiscal and RDI policies in a growth enhancing manner. We focus on four relatively successful CEE

countries – the Czech Republic, Estonia, Poland, Slovenia – that formally prioritise RDI-based economic development, but represent different traditions of capitalism. The sources of data for our analysis included .... The concluding section summarises and discusses the broader implications of our analysis.

**Commented [RR1]:** Siia peaks panama nt mitu intervjuud igast riigist, kellega, mis tüüpe policy documendid jne.

### **Fiscal and RDI policy coordination in the EU**

Without going into the details about the flaws in the architecture of the EU and the Eurozone, the last 10 years of economic and fiscal policy coordination in the EU show significant inconsistencies. Overall, this process has been characterised by growing integration while resisting further supranationalism (Bickerton et al. 2014) leading to what Habermas (2012) has labelled *executive federalism*, i.e. integration taken further by intergovernmental agreements and institutional solutions. Savage and Verdun (2016) show that through the search for institutional solutions to the Great Recession and for improved fiscal and economic policy coordination, the European Commission (EC) has found a new role of pro-active policy coordination. For such a role, the creation of new policy capacities and adjusting existing organisational and coordination routines are pivotal preconditions.

#### ***The pre-crisis period***

In hindsight, we can see that during the years preceding the crisis, the EU was almost giving up – due to lax enforcement – on its earlier agreements on fiscal policy coordination. In 2005 the EU revised the *Stability and Growth Pact* to provide more flexibility for interpreting the deficit and debt rules. As a result, fiscal governance became relatively flexible and countries could deploy their established fiscal policy

approaches to finance (via deficit financing, or other means) their policies and strategies. (Hallerberg 2011)

For CEE, the pre-crisis period overlapped with the accession to the EU (in 2004) and the obligation to work towards Eurozone accession. While in the 1990s CEE economic policies concentrated on macro-economic stabilisation, monetary, liberalisation, privatisation, taxation, and labour market policies with significant varieties in specific approaches (see Lane and Myant 2007), by mid-2000s most of these policies became either integrated into common European approaches or (e.g. financial liberalisation policy), or lost their relative importance (e.g. privatisation was largely completed). This limited the scope of policy tools that could be employed for specific domestic development challenges. Thus, *innovation policy* in the broad sense (including industrial, R&D, educational policies both at the national and regional level) became one of the key policies through which the government could in theory try to differentiate economic policies and tackle their unique growth and development challenges.

At the same time, it became increasingly evident at the EU level that the expectations set on the *Lisbon Agenda* for supporting growth and competitiveness were not being fulfilled (Rodrigues 2009). The flexible open method of coordination type mechanisms and high-technology biased innovation policy approaches led to convergence on policies supporting commercialisation, collaboration and networking between innovation system actors (Dosi et al. 2006). Yet, this has not been the main structural problem in CEE where developing basic public and private RDI capabilities should be a bigger concern (Karo and Kattel 2010; Izsak et al. 2014). This recognition

resulted in the gradual search for alternative logics of competitiveness and innovation policies already in mid-2000s and in a growing emphasis on more targeted and customised policy mixes (see EC 2004; 2005).

### ***Responses to the Great Recession***

The Great Recession brought about a policy shift in the fiscal policy coordination in the EU (see Bickerton et al. 2014; Hallerberg 2011; Verdun 2015). After a short period of fiscal stimulus, the EU and especially Eurozone shifted to austerity as the key policy response (see Mody 2015). Institutionally, this shift started with the initiation of the *European Semester* as a coordination mechanism in 2010. It was followed by the reinforcement of the *Stability and Growth Pact* via the reforms of the secondary legislation in 2011 (*Six Pack*) that combined fiscal and economic policy supervision under the European Semester. This was followed in 2013 by stricter surveillance mechanisms (e.g. European assessment of draft budgets, the creation of fiscal councils, graduated monitoring for countries under the *Excessive Deficit Procedure*) for the Eurozone members via the *Two Pack* and the *Fiscal Compact* (i.e. the *Treaty on Stability, Coordination and Governance in the Economic and Monetary Union*).

These shifts in economic and fiscal policy coordination overlapped with the development of a new approach to competitiveness and innovation through the Europe 2020 strategy. The EU RDI policies have taken, for the 2014-2020 period, an explicit focus on the EU-wide grand or societal challenges. Especially for CEE and other lagging regions, this shift has overlapped with new and more RDI-centred approach to regional and cohesion policy. *Smart specialisation* as an *ex ante*

conditionality of ESIF in 2014-2020 requires member states and regions to draft smart specialisation strategies through the process of 'entrepreneurial discovery', i.e. through more experimental and co-productive approach to policy making that bridges policy makers with academic and private sector actors to search for novel and country/region specific economic specialisations and draft relevant strategies and experimental policy instruments (Foray 2014; McCann and Ortega-Argiles 2015).

These parallel shifts in policy focuses and coordination practices have also brought about institutional readjustments of fiscal and economic and RDI policy governance. At the EU level, the content and direction of its RDI policies has become the domain of not only Directorate General (DG) for Research and Innovation but is also influenced by DG for Regional and Urban Policy (DG Region). In addition, the European Semester has extended the monitoring and coordination of fiscal and economic policies (by the Secretariat General and DG for Economic and Financial Affairs) to cover RDI policies as they influence competitiveness, employment and functioning of the EMU (Savage and Verdun 2016). At the national level, ministries of finance and cabinet offices have become more involved in RDI policies through more centralised budgetary processes (see Raudla et al. 2015) and also through ESIF Partnership Agreement negotiations and the European Semester monitoring system.

In sum, the EU seeks to increasingly coordinate fiscal, RDI and other economic policies through different instruments from European Semester monitoring, Excessive Deficit Procedure and Country Specific Recommendations to smart specialisation conditionality monitoring and policy learning initiatives (see the smart specialisation



platform<sup>1</sup>). Yet, Veugelers (2014, pp. 7-9) has claimed that at least early Country Specific Recommendations (CSR) on RDI policies were as ‘*patchy*’ and ‘*ad hoc*’ as during the Lisbon Agenda period. Furthermore, the specific rationales of novel RDI policies from societal challenges to smart specialisation are only emergent and lack coherent operationalisation (see Foray et al. 2011; Karo and Kattel 2015; Karo and Lember 2016). While fiscal rules are relatively fixed and straightforward in the EU fiscal and economic policy coordination system and understandable to most policy actors (Savage and Verdun 2016), the content of RDI related policy recommendations and rules (ESIF conditionalities) is more ambiguous in the current EU policy coordination context and depends on the capabilities of both the EU and member state level bureaucracies. While the experiences of more developed regions with new RDI concepts such as smart specialisation seem relatively positive, the CEE economies seem to face their particular challenges (see Kroll 2015).

## **The Great Recession and policy responses in CEE**

### *Capitalist varieties and convergence in CEE*

CEE economies are often treated as a homogeneous group (especially the eight countries that joined the EU in 2004), but detailed within-group comparisons have often emphasised their differences. Bohle and Greskovits (2012) distinguish between the *neoliberal* Baltic States, the *embedded neoliberal* Visegrad and the *neo-corporatist* Slovenia. These categories reflect not only dominant ideological positions but characterise also the forms of *state-market-society relations*, from the dominance of free market imperative in the neoliberal countries towards more embedded tri-

---

<sup>1</sup> RIS3 platform, available at: <http://s3platform.jrc.ec.europa.eu/s3pguide>, accessed May 1 2016.

partite relationships in other countries. Myant and Drahokoupil (2012) argue that the political-economy explanations of the CEE developments – especially after the Great Recession – should also take into account the varieties in the *modes of international economic integration*. These CEE economies can be divided into *exporters of complex manufacturing goods* (historically more West-integrated and FDI-driven Visegrad countries and less FDI-driven Slovenia) and *financialised economies* (historically more peripheral and technologically lagging Baltic States). These modes of integration have also been mirrored by different economic policy approaches: from less interventionist macro-economic and innovation policies in the Baltic States to gradually more active industrial and FDI policies in the embedded neoliberal and neo-corporatist economies.

These categorisations are also quite well supported by data on economic performance in terms of knowledge-based or innovation-related competitiveness. Figure 1 depicts the evolution of *knowledge intensity* (measured as charges for the use of IP rights) and *industrial productivity* (value added per capita) in selected regions and economies. Plotting these two measures should illustrate a virtual development ‘ladder’, or trajectory: as economies get more knowledge intensive (measured here by the charges on IP rights<sup>2</sup>), we expect them to also exhibit higher industrial productivity.

**-- Insert Figure 1 about here --**

---

<sup>2</sup> We are aware that this is an imperfect measure as it measures mostly the use of codified knowledge while especially transition economies may be more reliant and specialised into tacit knowledge use and production; but the latter is close to impossible to capture by similar indicators.

The Baltic States, Slovenia and Visegrad seem to form three different patterns. While for most CEE economies, the vicinity to the core European exporting economies (Scandinavia and Germany respectively) has gradually brought about increasingly complex production (especially in Visegrad countries where a lot of the growth in knowledge intensity has taken place in Hungary and Czech Republic to where multinational companies have relocated (or maintained) their local production enclaves, e.g. Drahoukoupil et al., 2016). Yet, this has not in all cases been reflected in increasing productivity.

In addition, Bohle and Greskovits (2012) have noted (see also Stanojevic 2014) that both Slovenia and the Visegrad countries have been pressured to converge towards the neoliberal end of the spectrum by Europeanisation, financialisation and responses to the Great Recession. In addition, several studies of innovation and RDI policies (Török 2007; Karo and Kattel 2010; 2015; Suurna and Kattel 2010; also Izsak et al. 2014) have argued that after the differences in crisis management approaches in the early 1990s, by mid-2000s all CEE economies were converging on rather similar horizontal innovation policy approaches with limited attempts by the state to steer the direction of economic development.

### ***The nature of the Great Recession in CEE***

These differences in the *financial and economic integration patterns* affected how the Great Recession unfolded in different CEE economies. Myant et al. (2013, pp. 385; see also Figure 2) have depicted the emergence and the evolution of the crisis through the following steps:

First came a sharp halt to credits that affected most severely those countries that had been dependent on financialised growth, but also led to increased caution from banks in all countries. Next came a fall in demand for exports from those countries exporting products that were sold with the help of credits, meaning motor vehicles and other high-value consumer goods. The reductions in incomes through lower profits and wage payments led to a further reduction in domestic demand and to lower tax revenues and this, in combination with any additional spending undertaken in the context of the crisis, led to deepening state-budget deficits.

--- Insert Figure 2 about here ---

Kattel and Raudla (2013) show that although the *Estonian* economy was highly financialised, no sovereign banking crisis occurred owing to the foreign ownership of the banks (the largest Estonian banks were owned by Swedish banks; at the same time, a single domestically owned bank created a banking crisis in Latvia). However, the impact of financial contraction quickly spread to the real economy as industrial production contracted by 25.8% in 2009. In the face of falling tax revenues, the crisis quickly came to be viewed mostly as a crisis of public finances. *Slovenia* entered into recession in the first part of 2009. Initially, the manufacturing and construction sectors became the ‘hotspots’ of the crisis (see Guardiancich 2012) spreading from 2012 onwards to the banking sector and public finances (Pevcin 2014). *The Czech Republic* had a more internally controlled financial system (conservative lending even by foreign banks, higher saving rates and more loans denominated in domestic currency) and less need for fast crisis responses. Thus, the crisis was initially treated

as a temporary external event. (Śłosarcik 2011) *Poland* was the only EU country to record positive GDP growth in 2009 and overall it has been the least affected CEE economy. This has been explained by different factors and policy choices: rather underdeveloped financial sector with limited impact on the real economy; relatively modest interlinkages with the global economy contained the negative spillovers from the global recession; the positive impact from being the biggest beneficiary from the EU structural funds; fiscal loosening undertaken just before the Great Recession (e.g. reduced rates for corporate and personal income tax, lower social contributions, and additional tax deductions) provided positive stimulus for the economy by increasing private consumption; depreciation of the exchange rate (by about 30% between 2008-09) boosted exports (Krajewski and Krajewska 2011; Jedrzejowicz 2011; Hagemeyer et al. 2011)

#### *Fiscal policy responses*

The concrete responses to the crisis and the roads towards the EU austerity-driven strategy has been strongly determined by the political ‘costs’ of different strategies (Walter 2016). Over the course of the Great Recession, most countries have shifted towards fiscal consolidation with a growing emphasis on expenditure reductions (see Table 1). While in Estonia, this was politically and socially a rather easy and costless process (Raudla and Kattel 2011), in other countries political turmoil and social protests were much more frequent and influenced the speed and direction of the crisis responses.

--- Insert Table 1 about here ---

*Estonia* entered the crisis the earliest (2008) and the government responded with large fiscal consolidation through front-loaded fiscal tightening and a wide range of expenditure cutting measures (including social benefits). But the economic conditions (growth based on relatively small export sector not supported by strengthening domestic demand and credit supply) did not lead to the expected swift and comprehensive exit from the crisis. Since 2010, the government's fiscal consolidation policies centred on the revenue side. Estonia adopted Euro in 2011 and this vindicated the centre-right government's approach to the crisis and austerity-based fiscal governance ('doing more with less') even if public debt has been among lowest in the EU (Raudla and Kattel 2013). Estonia has been a clear supporter of the *Fiscal Compact* and other EU-level initiatives to strengthen the coordination and governance of economic and austerity-based fiscal policies in the EU.

The *Slovenian* government tried from 2008-11 to implement in parallel both fiscal consolidation and stimulation measures as political parties had ambiguous positions regarding proper crisis responses (Pevcin 2014; Mencinger et al. 2014; Maatsch 2014). The *Excessive Deficit Procedure* (EDP) was launched in 2009 (it is projected to end in 2016) and the EU (Council 2009) recommended implementing both fiscal consolidation measures and structural reforms (pension, labour market and economic policies). The *Slovenian Exit Strategy* (2010-13) combined short-term crisis management measures (guarantee schemes for banking and other sectors, job maintenance subsidies, incentives for investment in new job creation) and long-term structural measures (balancing budget via operational austerity measures and not via tax increases; reforming pension systems, labour market). By 2011-12, it was evident

that *Slovenia* faced a more complex crisis than previously thought and the government had to implement more stringent fiscal consolidation than initially planned (cuts also in social transfers). Pevcin (2014) claims that 2012 was the beginning of ‘true’ austerity initiated through the Fiscal Balance Act. This reflected a new and more coordinated approach to fiscal consolidation (a stronger role for the Ministry of Finance, more extensive engagement of social partners) (Pevcin 2014; Guardiancich 2012). By 2012-13, the main focus shifted to the problems in the banking sector. Responses to this crisis increased significantly also the public debt burden. (Mencinger et al. 2014) Since 2013 and despite political instabilities (between 2012-14 there were three governments of different political affiliations), austerity policies have remained in place, eventually including also significant tax increases alongside expenditure cuts. Yet, in adopting the EU-level agreed fiscal rules (i.e. structural deficit rule, fiscal council), Slovenia has been one of the laggards in the Eurozone (see EC 2016a).

*The Czech Republic* adopted from late 2008-09 stimulus measures – tax reductions, temporary reduction in employers’ social security contributions, increased expenditures on RDI – in the scale of 2.2% of GDP over 2009-10 (Myant 2013). The country was under the EDP from 2009-14. By 2010, the pro-austerity but Euro-sceptic government introduced wider austerity measures (cutting public sector wages, tax hikes, reforms in healthcare and pensions) despite public opposition. By 2011, the GDP growth started to slow down again as austerity measures cut domestic demand and output. (Myant 2013) The government maintained the goal to lower the budget deficit further via raising taxes, and reforming pensions, healthcare and public

administration.<sup>3</sup> In 2013, a high-profile scandal led to the resignation of the prime minister and the austerity driven government as a whole. The 2013 elections were won by the Social Democrats promising no further tax hikes, except for ‘big business’.<sup>4</sup> While the prior governments had been rather sceptical of the Eurozone and further integration, the new government formally supported the Fiscal Compact in 2014. But as of 2016, Czech Republic is still not a member of the Eurozone and some key institutional developments (i.e. finalising the ratification of the Fiscal Compact, institutionalising a fiscal council with sufficient powers) are still lagging and the EU considers its fiscal rules framework to be among the weakest in the EU (EC 2016b).

While *Poland* has continued to grow throughout the Great Recession, the effects of the crisis were felt in the form of declining tax revenues and tightening in the fiscal conditions: while in years 2003-2007, the budget deficit had remained below 5% of GDP, in 2009 and 2010, it exceeded 7%. Poland responded to this by fiscal loosening in the local government and social insurance units rather than in the central government budget. This was partly a deliberate decision of the government as it contained bond issuance by the central government, which is very visible to investors. (Jedrzejowicz 2011) In order to counter the soaring deficit, the government undertook

---

<sup>3</sup> Aktualne.cz (2011) ‘Czech govt presses for higher taxes, stronger state’, available at: <http://zpravy.aktualne.cz/czech-govt-presses-for-higher-taxes-stronger-state/r~i:article:697120/>, accessed 1 September 2015.

<sup>4</sup> Aktualne.cz (2013a) ‘2013: The year that shook Czech politics’, available at: <http://zpravy.aktualne.cz/2013-the-year-that-shook-czech-politics/r~i:article:798454/>, accessed 1 September 2015. Aktualne.cz (2013b) ‘New coalition kicks the can down the road on taxes’, available at: <http://zpravy.aktualne.cz/new-coalition-kicks-the-can-down-the-road-on-taxes/r~i:article:796964/>, accessed 1 September 2015.



some ‘anti-crisis’ measures like restraining the wage growth (Krajewska and Krajewski 2011; Nagaj and Szkudlarek 2013), but most fiscal consolidation took place only after the initiation of the EDP by the EC in 2009 (ended in 2015). Following the Council’s recommendations, the Polish government increased taxes (mainly VAT), froze public sector wages and reformed the pension system (Nagaj and Szkudlarek 2013). Overall, Poland has been rather reluctant towards Eurozone accession and the EU fiscal and economic policy coordination mechanism under the Fiscal Compact (as non-Eurozone members are not bound by its fiscal and economic coordination measures) (see EC 2016c).

In sum, despite their historical and economic differences and also differentiated acceptance of the EU fiscal and economic policy monitoring and coordination mechanisms, all countries seem to have gradually and in most cases reluctantly accepted the austerity-based fiscal policy coordination approach of the EU. This trend has been paralleled by relatively significant role of EU fiscal transfers in domestic budgets and economy as a whole (see Figure 3).

--- Insert Figure 3 about here ---

#### *Coordination of RDI policies since the Great Recession*

The Great Recession has also impacted RDI investments across the EU and overall RDI investments (GERD) are pressured by both declining private and public investments (Veugelers 2014). In CEE, especially in the harder hit Estonia and Slovenia, GERD and government financed GERD have fallen since 2011 (see Figure 4). This somewhat delayed decline of government investments is at least partly the

result of the strategy to transfer RDI funding to ESIF (and front-loading the use of these funds), which were ending in 2013 (see Figure 3).

During the early years of the crisis, *Estonia* chose to front-load economic restructuring oriented cohesion funding investments (from support to businesses and universities to active labour market policies) to re-balance cost-cutting activities (Kattel 2010). In addition, the government did not increase the ‘national’ (tax based) funding for RDI between 2008-2014. Many elements of the *Slovenian Exit Strategy* for 2010-13 (guarantee schemes, job maintenance subsidies, incentives for investment in new job creation) were partly financed by the faster utilisation of the EU funds that was seen as a mechanism to offset the drop in tax and other revenues and declining public investments in RDI (see also Udovic and Bucar 2013; Karo and Looga 2014). Srholec (2013) argues that also the *Czech Republic* used between 2008-11 EU funding to finance different activities, including RDI, that would have otherwise been cut. Veugelers (2014) has calculated (based on 2007-13 data) that in many CEE countries cohesion funds more than doubled government RDI funding: in the Czech Republic, cohesion funds allocations for RDI equalled 56% of GBAORD (registered budget items), in Estonia 79%, in Poland 107%, and in Slovenia 59%. Further, especially in smaller CEE economies, the EU’s Framework Programme (FP7) for RDI (not covered in GBAORD data) has accounted for significant additional ‘public’ funds to RDI, i.e. in Estonian and Slovenia FP7 funds equaled (between 2008-12) 14% of GBAORD, in Czech Republic about 5% and in Poland about 6%. We see this trend continuing also during the 2014-2020 period (see Table 2) as the role of RDI-related funding is schedule to proportionally increase in the ESIF in Estonia, Slovenia and especially in Poland where government plans to significantly increased RDI

related ESIF allocations to lift GERD from current level of 0.9% of GDP up to 1,7% by 2020 (EC 2014b).

--- Insert Table 2 about here ---

In this context, both the growing focus on societal challenges in Horizon 2020 and on smart specialisation in cohesion policy can be treated as attempts by the EU to steer national and regional innovation systems towards higher impact RDI activities. Successful implementation of especially smart specialisation based policy approach depends on how member state level and regional actors accept these concepts and transform these into policies and strategies. As mentioned, we conjecture that given the uncertainties related to these new and more experimental RDI policy rationales and only emerging EU level policy capacities to operationalise and coordinate these approaches, the more straightforward austerity driven fiscal consolidation rules and existing RDI policy and administrative routines of member states continue to drive policy processes and limit policy space for such experimental RDI policy making. In the following discussion we will concentrate on smart specialisation as it has had more direct impact on the foci of CEE RDI policies given its ex ante conditionality status in ESIF.<sup>5</sup>

---

<sup>5</sup> Our analysis is based on analysis of secondary literature (national and regional strategies and EU level documents, e.g. Partnership Agreements, CSRs of the European Semester) and interviews with policy makers and local experts from Czech Republic (4 interviews), Poland (4 interviews), Slovenia (2 interviews) carried out between September 2015 and May 2016. In the case of Estonia, we rely on our participant observations carried out as part of the Research and Innovation Policy Monitoring Programme, which allowed us participate in Estonian RDI policy discussions between 2011-15. The interviews are further discussed in Karo et al. (2016).

All CEE governments have faced significant challenges in designing policies and strategies that fulfil the conditionalities of the smart specialisation concept. As confirmed by our interviews and participant observations, in the eyes of the local policy makers, the EU itself has not been able to operationalise and convey the smart specialisation concept and conditionality in a coherent manner as its interpretation and meaning has constantly shifted also within the EU policy communities (see also Foray et al. 2011). The original concept of smart specialisation was developed for traditional sectoral RDI policies, but it was adopted by DG Regio as a conditionality for regional and cohesion policy while many issues regarding the shift from sectoral towards place-based approach were not fully thought through (see McCann and Ortega-Argiles 2015). For many CEE policy makers the concept has seemed as a surprising return to state-led prioritisation and intervention practices, which in some cases (Poland) were explicitly discouraged by the EU in early 2000s. At the same time, the EU rejected the first versions of smart specialisation strategies in all four cases and the adoption of both the smart specialisation strategies and Partnership Agreements for 2014-2020 was delayed until late 2014. Under such conditions of confusion and uncertainty, all governments have adopted relatively vague strategies towards smart specialisation by defining broad priorities to be supported (e.g. smart cities, healthy society, sustainable energy<sup>6</sup>) to accommodate the pressures of most important stakeholders (see Karo et al. 2016; Sörvik and Kleibring 2015).

---

<sup>6</sup> See Eye@RIS3 database managed by the EU that covers the latest information on selected smart specialisation areas by member states and regions, available at <http://s3platform.jrc.ec.europa.eu/eye-ris3>, accessed 1 May 2016.

Given such uncertainty over the RDI policy concepts and the broader fiscal consolidation pressures, a notable development has been the gradual centralisation of RDI policy making on the level of member state governments. Given the criticism from the EU during the preparation of smart specialisation strategies and negotiations phases of the Partnership Agreements, Czech Republic and Slovenia opted to centralise some elements of drafting and coordination of smart specialisation policies from RDI ministries to respective cabinet offices. The Polish government opted to contract some element of the strategy making process to the World Bank to increase domestic and EU-level legitimacy of the processes. The Estonian RDI policy makers took initially a relatively reserved approach and planned to implement policy instruments totalling ca 140 MEUR of ESIF through the smart specialisation strategy (and to use the rest of ESIF for funding basic RDI activities across the board). But in Partnership Agreement negotiations coordinated by the Ministry of Finance, the EC requested the scope of smart specialisation to be extended to additional 660 MEUR of RDI and related instruments. In addition, through the CSRs between 2011-15, the EC repeatedly emphasised the need to focus public RDI support on limited number of smart specialisation areas (similar recommendations were given also to Slovenia in 2014; in the case of Poland and Czech Republic, the focus of CSR has been on more basic issues of RDI system building, e.g. fostering university-industry collaboration, improving funding and evaluation systems).<sup>7</sup> At the same time, the Estonian policy makers have not taken these recommendations very seriously and made only minor adjustments in the RDI policy mix. Some policy makers believed that the CSRs mentioned smart specialisation concerns only because Estonian fiscal and economic

---

<sup>7</sup> The Country Specific Recommendations are available here: [http://ec.europa.eu/europe2020/making-it-happen/country-specific-recommendations/index\\_en.htm](http://ec.europa.eu/europe2020/making-it-happen/country-specific-recommendations/index_en.htm).

policies were in a much better state than in other countries and the EC had to add something to have some more 'content' in the document.

In larger CEE economies, these centralisation tendencies are counter-balanced by the need to develop also regional smart specialisation strategies (14 in Czech Republic and 16 in Poland). Yet, this has created another hurdle in drafting more experimental and contextualized RDI policies. Most CEE economies have traditionally designed and implemented RDI policies on the national level and regional capacities and experiences have been limited. As a result, smart specialisation strategies and policies are considered to be of rather unequal quality between regions even within the same member state. Regions where policy makers have had prior experiences with RDI and interactions with businesses and academia seem to have been better equipped for drafting such strategies. These experiences raise questions whether such smart specialisation conditionality type universal coordination are in fact economically logical and politically feasible across diverse EU member states and regions with diverse politico-economic structures and policy and administrative capabilities (see Karo et al. 2016; Karo and Kattel 2015).

One could expect that once formal negotiations with the EU regarding ESIF are concluded and basic strategic documents accepted, there could be further contextualisation, refinement and experimentation with policy interventions. Yet, policy makers in all four countries have felt strong pressure from domestic stakeholders – especially academia and businesses benefitting from ESIF support in previous periods – to speed-up the negotiation processes, open-up ESIF funding and keep funding already existing organisations and policy instruments. Importantly, the

prior periods of ESIF funding seem to have established specific policy and administrative routines in CEE RDI policies. Thus, policy makers have preferred policy instruments that are based on so called open competitive calls (open to most academic and business organizations to propose their RDI related projects and ideas) without policy-based selections and targeting. The implementation of these instruments is preferably delegated to specialized agencies through formal contracts and regulations that determine *ex ante* relative broad outcome goals, evaluation principles and do not allow much flexibilities for customizing instruments and activities to adjust to different sectoral or regional needs. Procedural accountability by these agencies and overall 'absorption capacity' (the speed of utilising funds) have been the main policy implementation concerns. (Karo and Kattel 2010; 2015; Suurna & Kattel 2010) These routines are not supportive of entrepreneurial discovery and policy experimentation as envisioned under the smart specialisation concept (Foray 2014; Karo et al. 2016). From the secondary data and interviews, we have found that most countries have not yet significantly changed the institutional designs and the structure of policy interventions. Despite the changes in the RDI policy concepts and formal strategy making processes, policy makers still seem to prefer old and tested policy instruments and intervention styles. Still, policy makers and official documents in some countries (Czech Republic, Slovenia and Poland) have mentioned plans to introduce more experimental and locally designed instruments through establishing special funds for policy experimentation in the near future. Yet, given the above-discussed pressures from local stakeholders and reliance on ESIF, policy makers acknowledge that this might be an uphill struggle as it requires the restructuring of planning and budgeting processes (more flexible budget allocations; less strict and ex

ante determined goals and performance targets; general acceptance of risk taking and failures).

In sum, the EU has sought to nudge – through the smart specialisation conditionality and in some cases also explicitly through the European Semester based fiscal and economic policy coordination – member states to change their RDI policies and adopt the novel EU proposed RDI policy models as part of growth-enhancing strategies across the EU. Yet, three critical issues have reduced the expected outcomes of this process. First, the concept of smart specialisation itself is vaguely defined and needs to be first properly conceptualised and coordinated within the EU. While DG for Research and Innovation has developed generic and sectoral RDI policy focuses and organisational capabilities and DG Regio has followed more country-specific focuses, regionally focused and experimental RDI policy is a relatively new and emerging topic for both of them. Thus, second, despite the extended attempts for more centralised coordination of fiscal and RDI policies through the European Semester and related instruments, the EU has also not been able to provide sufficient vision and guidelines for CEE economies on how to change existing policy and administrative routines given both the conflicting expectations of the growth enhancing strategy (to pursue austerity while maintaining/increasing RDI investments) and local pressures for fast utilisation of ESIF funds. Third, the same capability challenges seem to emerge on the member state level as well, especially as most CEE member states have traditionally emulated European ‘best practices’, which seem to be currently missing. Thus, neither regions nor traditional RDI policy actors and also ministries of finance and cabinet offices seem to encompass visions and capabilities for more experimental RDI policy-making. The EU has sought to improve the capabilities of member and



regions through its Smart Specialisation Platform and mutual policy learning exercises, but these activities have focused on the conceptual ideas of smart specialisation and on how to set priorities, rather than on how to design institutional contexts and instruments for more experimental and contextual RDI policies.

## Conclusion

The austerity-driven fiscal consolidation approach adopted by the EU has reduced the policy space for economic restructuring policies. In addition to lacking or limited monetary policy, also fiscal policy space is becoming increasingly constrained and with a shorter-term focus. Analysed CEE case studies indicate that this seems to be increasingly the case even in the Central European countries such as Czech Republic and Poland where prior traditions have favoured close forms of state-society coordination (stronger welfare state policies), state-market coordination (industry-specific industrial and innovation policies) and where the Great Recession has had relatively limited impact. Given this austerity-driven exit strategy, cohesion policy and ESIF have remained as the few sources through which CEE economies can finance new growth oriented RDI strategies and policies. At the same time, the EU is shifting its RDI policies towards shorter-term impact oriented activities: both Horizon 2020 and ESIF focus increasingly on application oriented research as opposed to more basic RDI and capabilities building. This may have unintended long-term negative implications for growth enhancing economic policy coordination as the focus on basic RDI capabilities building – the main RDI challenges for most CEE economies – may become less and less important. In other words, the issues we have raised regarding the feasibility of coordinating fiscal consolidation and growth

oriented RDI policies in CEE are a combined outcome of the EU level search better and novel RDI policy concepts and exit strategies from the Great Recession as well as the CEE responses to the policy constraints and uncertainties created by these search processes.

In contrast to fully federalist systems, the EU's fiscal and economic policy mixes are inherently unstable because they do not allow for significant fiscal transfers (via automatic stabilisers of welfare systems) and movement of labour in order to offset slumps in demand. In addition, these policy mixes are based on rather complex intergovernmental compromises, which makes actual policy coordination between different EU actors (Directorate Generals of the Commission) and between EU and member state policy actors as complicated as generating the initial compromises. This environment seems to strengthen external constraints on domestic politics and policy-making and simultaneously increase instabilities especially in more corporatist and embedded political systems.

Thus, the EU needs not only to decide upon its further path of federalisation (or not). But regardless of the former choices, if the EU seeks to improve the coordination of fiscal and growth oriented economic policies, it needs to build in its institutions, and policy approaches, especially regarding ESIF, flexibilities and policy capacities that allow for more context-fitting policy choices and experimental policy approaches considering the different politico-economic legacies and traditions of policy making and coordination in CEE. The current EU's intergovernmentalist integration patterns seem to create policy compromises, conditionalities and coordination practices that are too complex for providing such guidelines in a coherent manner. Our analysis

confirms the earlier claims by Veugelers (2014) that the RDI policy related coordination processes by the EU – from smart specialisation conditionality to country specific recommendations – are still relatively vague and rather ineffective at steering member states towards more growth enhancing RDI strategies. But, as prior periods of Europeanization have turned most CEE economies into policy copiers and emulators, especially regarding RDI policies, without improved EU provided guidance and policy flexibilities, local policy makers seem to lack capabilities and policy space for generating such policy shifts towards more contextualized and experimental approaches on their own.

## References

Bickerton, C.J., Hodson, D. and Puetter, W. (2014) 'The New Intergovernmentalism: European Integration in the Post-Maastricht Era', *Journal of Common Market Studies*, 53(4), pp. 703-722.

Bohle, D. and Greskovits, B. (2012) *Capitalist diversity on Europe's periphery* (Ithaca, Cornell University Press).

Bruszt, L. and McDermott, G.A. (2012) 'Integrating rule takers: Transnational integration regimes shaping institutional change in emerging market democracies', *Review of International Political Economy*, 19(5), pp. 742-778.

Council (2009) 'COUNCIL RECOMMENDATION to Slovenia with a view to bringing an end to the situation of an excessive government deficit', available at:

[http://ec.europa.eu/economy\\_finance/economic\\_governance/sgp/pdf/30\\_edps/104-07\\_council/2009-12-02\\_si\\_126-7\\_council\\_en.pdf](http://ec.europa.eu/economy_finance/economic_governance/sgp/pdf/30_edps/104-07_council/2009-12-02_si_126-7_council_en.pdf), accessed 1 May 2016.

Dosi, G., Llerena, P. and Labini, M.S. (2006) 'The relationships between science, technologies and their industrial exploitation: An illustration through the myths and realities of the so-called 'European Paradox'', *Research policy*, 35(10), pp. 1450-1464.

Drahokoupil, J., Andrijasaevic, R. and Sacchetto, D. (eds) (2016) *Flexible workforces and low profit margins: electronics assembly between Europe and China* (Brussels: European Trade Union Institute).

EC (2004) 'Fostering structural change: an industrial policy for an enlarged Europe', *COM(2004) 274 final*.

EC (2005) 'Implementing the Community Lisbon Programme: A policy framework to strengthen EU manufacturing - towards amore integrated approach for industrial policy', *COM(2005) 474 final*.

EC (2013) 'Cohesion Policy: Strategic Report 2013. Factsheet: Innovation and RTD investments', available at:  
[http://ec.europa.eu/regional\\_policy/how/policy/doc/strategic\\_report/2013/factsheet1\\_inno\\_rd.pdf](http://ec.europa.eu/regional_policy/how/policy/doc/strategic_report/2013/factsheet1_inno_rd.pdf), accessed 1 May 2016.

EC (2014a) 'Research and innovation as sources of renewed growth', *COM(2014) 339 final*.

EC (2014b) 'Summary of the Partnership Agreement for Poland 2014-2020', available at [http://ec.europa.eu/contracts\\_grants/pa/partnership-agreement-poland-summary\\_en.pdf](http://ec.europa.eu/contracts_grants/pa/partnership-agreement-poland-summary_en.pdf), accessed 1 May 2016.

EC (2016a) 'Recommendation for a COUNCIL RECOMMENDATION on the 2016 national reform programme of Slovenia and delivering a Council opinion on the 2016 stability programme of Slovenia', *COM(2016) 344 final*.

EC (2016b) 'Recommendation for a COUNCIL RECOMMENDATION on the 2016 national reform programme of the Czech Republic and delivering a Council opinion on the 2016 convergence programme of the Czech Republic', *COM(2016) 324 final*.

EC (2016c) 'Recommendation for a COUNCIL RECOMMENDATION on the 2016 national reform programme of Poland and delivering a Council opinion on the 2016 convergence programme of Poland', *COM(2016) 341 final*.

Foray, D. (2014) *Smart Specialisation: Opportunities and challenges for regional innovation policy* (Regional Studies Association).

Foray, D., David, P.A. and Hall, B. (2011) 'From academic idea to political instrument, the surprising career of a concept and the difficulties involved in its implementation', *MTEI Working Paper*.

Goetz, K.H., and Patz, R. (2016) 'Pressured budgets and the European Commission: towards a more centralized EU budget administration?', *Journal of European Public Policy*, 23(7), pp. 1038-1056.

Guardiancich, I. (ed) (2012) *Recovering from the crisis through social dialogue in the new EU Member States: the case of Bulgaria, the Czech Republic, Poland and Slovenia* (Hungary: ILO), available at: [http://www.ilo.org/budapest/what-we-do/publications/WCMS\\_203443/lang--en/index.htm](http://www.ilo.org/budapest/what-we-do/publications/WCMS_203443/lang--en/index.htm), accessed 1 May 2016.

Habermas, J. (2012) 'The crisis of the European Union in the light of a constitutionalization of international law', *European Journal of International Law*, 23(2), pp. 335-348.

Hagemejer, J., Jędrzejowicz, T. and Żółkiewski, Z. (2011) 'Fiscal tightening after the crisis. A scenario analysis for Poland', *Bank i Kredyt*, 42(3), pp.33-66.

Hallerberg, M. (2011) 'Fiscal federalism reforms in the European Union and the Greek crisis', *European Union Politics*, 12(1), pp. 127-142.

Izsak, K., Markianidou, P. and Radosevic, S. (2014) 'Convergence of National Innovation Policy Mixes in Europe—Has It Gone Too Far? An Analysis of Research and Innovation Policy Measures in the Period 2004–12', *JCMS: Journal of Common Market Studies*, 53(4), pp. 786-802.

Jędrzejowicz, T. (2011) 'Fiscal Space in CESEE Countries: Lessons from the Crisis with a Special Focus on Poland', *Proceedings of OeNB Workshops*, 17, pp. 78-88.

Karo, E. and Kattel, R. (2010) 'The Copying Paradox: Why Converging Policies but Diverging Capacities for Development in Eastern European Innovation Systems?', *The International Journal of Institutions and Economies*, 2(2), pp. 167 - 206.

Karo, E. and Kattel, R. (2015) 'Economic Development and Evolving State Capacities in Central and Eastern Europe: can 'smart specialization' make a difference?', *Journal of Economic Policy Reform*, 18(2), pp. 172-187.

Karo, E., Kattel, R. and Cepilovs, A. (2016) 'Can smart specialization and entrepreneurial discovery be organized by government? Lessons from Central and Eastern Europe' in Radosevic, S., Curaj, A., Andreescu, L., Gheorgiou, R., and Wade, I. (eds) *Smart Specialization Theory and Practice: Regional Planning and Development* (Elsevier Science Publishers), forthcoming.

Karo, E. and Lember, V. (2016) 'Emergence of societal challenges based innovation policies in market-based innovation systems: lessons from Estonia', *International Journal of Foresight and Innovation Policy*, forthcoming.

Karo, E. and Looga, L. (2014) 'Understanding Institutional Changes in Economic Restructuring and Innovation Policies in Slovenia and Estonia', *Journal of International Relations and Development*, doi: 10.1057/jird.2014.23.

Kattel, R. (2010) 'Financial and Economic Crisis in Eastern Europe', *Journal of Post Keynesian Economics*, 33(1), pp. 41 - 60.

Kattel, R. and Raudla, R. (2013) 'The Baltic Republics and the crisis of 2008–2011', *Europe-Asia Studies*, 65(3), pp. 426-449.

Krajewski, S. and Krajewska, A. (2011) 'Fiscal Policy in Poland in the Times of Crisis-Origins and Consequences', *Comparative Economic Research*, 14(2), pp.79-100.

Kroll, H. (2015) 'Efforts to Implement Smart Specialization in Practice - Leading Unlike Horses to the Water', *European Planning Studies*, 23(10), pp. 2079-2098.

Lane, D. and Myant, M. (eds) (2007) *Varieties of Capitalism in Post-Communist Countries* (Basigstoke, Palgrave Macmillan).

Maatsch, A. (2014) 'Are we all austerians now? An analysis of national parliamentary parties' positioning on anti-crisis measures in the eurozone', *Journal of European Public Policy*, 21(1), pp. 96-115.

McCann, P. and Ortega-Argilés, R. (2015) 'Smart specialization, regional growth and applications to European union cohesion policy', *Regional Studies*, 49(8), 1291-1302.

Mencinger, J., Juuse, E. and Kattel, R. (2014) 'Financial Regulation in Slovenia', *FESSUD Working Paper Series*, 58.



Mody, A. (2015) 'Living (dangerously) without a fiscal union', *Bruegel Working Paper*, 2015/03.

Myant, M. (2013) 'The impact of the economic crisis on collective bargaining in the Czech Republic', *European Review of Labour and Research* 19(2), pp. 185-194.

Myant, M. and Drahokoupil, J. (2012) 'International integration, varieties of capitalism and resilience to crisis in transition economies', *Europe-Asia Studies*, 64(1), pp. 1-33.

Myant, M., Drahokoupil, J. and Lesay, I. (2013) 'The Political Economy of Crisis Management in East-Central European Countries', *Europe-Asia Studies*, 65(3), pp. 383-410.

Nagaj, R. and Szkudlarek, P. (2013) 'Fiscal Stabilisation in the Light of Crisis—the Cases of Lithuania and Poland', *Viešoji politika ir administravimas*, 12(2), pp.171-189.

OECD (2012) 'Restoring Public Finances 2012 update', available at: <http://www.oecd.org/gov/budgeting/restoringpublicfinances-reportoutliningthefiscalconsolidationplansof30oecdcountries.htm>, accessed 1 May 2016.

Pevcin, P. (2014) 'Austerity and Cutback Management in the Public Sector: A Case Study for Slovenia', *Administrative Culture*, 15(1), pp. 80-99.

Pula, B. (2014) 'Effects of the European financial and economic crisis in Kosovo and the Balkans: modes of integration and transmission belts of crisis in the "super-periphery"', *East European Politics*, 30(4), pp. 507-525.

Raudla, R., Douglas, J. W., Randma-Liiv, T. and Savi, R. (2015) 'The Impact of Fiscal Crisis on Decision-Making Processes in European Governments: Dynamics of a Centralization Cascade', *Public Administration Review*, 75(6), pp. 842-852.

Raudla, R. and Kattel, R. (2011) 'Why did Estonia choose fiscal retrenchment after the 2008 crisis?', *Journal of Public Policy*, 31(2), pp. 163-186.

Reinert, E.S. and Kattel, R. (2014) 'Failed and Asymmetrical Integration: The Baltics and the Non-financial Origins of the European Crisis', in Sommers, J. and Woolfson, C. (eds) *The Contradictions of Austerity. The Socio-Economic Costs of the Neoliberal Baltic Model* (New York, Routledge), pp. 64 - 86.

Rodrigues, M. J. (ed) (2009) *Europe, globalization and the Lisbon Agenda* (Cheltenham: Edward Elgar Publishing).

Savage, J.D. and Verdun, A. (2016) 'Strengthening the European Commission's budgetary and economic surveillance capacity since Greece and the euro area crisis: a

study of five Directorates-General', *Journal of European Public Policy*, 23(1), pp.101-118.

*Slovenian Exit Strategy* (2010-2013), available at: [http://www.vlada.si/fileadmin/dokumenti/si/projekti/Protikrizni\\_ukrepi/izhod\\_iz\\_kriz\\_e/SI\\_exit\\_strategy.pdf](http://www.vlada.si/fileadmin/dokumenti/si/projekti/Protikrizni_ukrepi/izhod_iz_kriz_e/SI_exit_strategy.pdf), accessed 1 September 2015.

Šlosarcik, I. (2011) 'The Czech Republic – impacts of and experience with EU membership', *Eastern Journal of European Studies*, 2(2), pp. 21-29.

Stanojević, M. (2014) 'Conditions for a neoliberal turn: The cases of Hungary and Slovenia', *European Journal of Industrial Relations*, 20(2), pp. 97-112.

Srholec, M. (2013) 'EraWatch Country Report 2012: Czech Republic', available at: <https://rio.jrc.ec.europa.eu/en/library/erawatch-country-report-czech-republic-2012>, accessed 1 May 2016.

Suurna, M. and Kattel, R. (2010) 'Europeanization of innovation policy in Central and Eastern Europe', *Science and Public Policy*, 37(9), pp. 646-664.

Sörvik, J. and Kleibrink A. (2015) 'Mapping Innovation Priorities and Specialisation Patterns in Europe', *S3 Working Paper Series*, 8/2015.

Török, Á. (2007) 'Industrial policy in the new member countries of the European Union: a survey of patterns and initiatives since 1990', *Journal of industry*,

*competition and trade*, 7(3-4), pp. 255-271.

Udovic, B. and Bucar, M. (2013) 'EraWatch Country Report 2012: Slovenia', available at:

[https://rio.jrc.ec.europa.eu/sites/default/files/riowatch\\_country\\_report/ERAWATCH%20Country%20Report%20Slovenia%202012.pdf](https://rio.jrc.ec.europa.eu/sites/default/files/riowatch_country_report/ERAWATCH%20Country%20Report%20Slovenia%202012.pdf), accessed 1 May 2016.

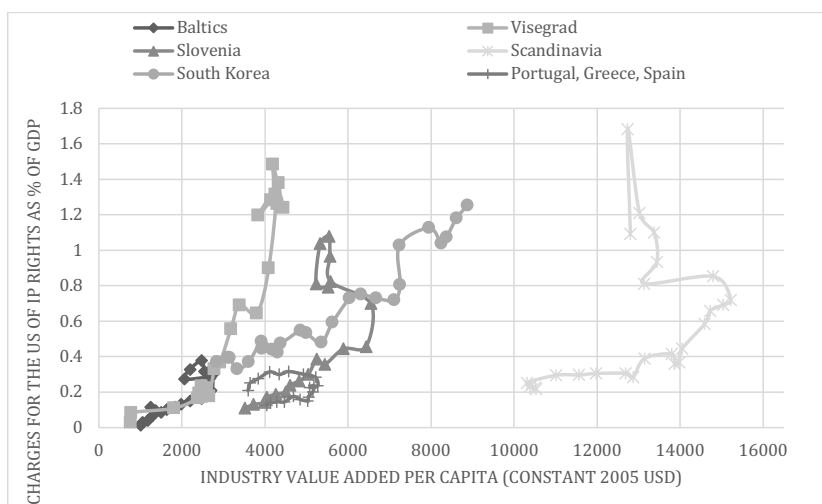
Verdun, A. (2015) 'A historical institutionalist explanation of the EU's responses to the euro area financial crisis', *Journal of European Public Policy*, 22(2), pp. 219-237.

Veugelers, R. (2014) 'Undercutting the future? European research spending in times of fiscal consolidation', *Bruegel Policy Contribution*, 2014/06.

Walter, S. (2016) 'Crisis Politics in Europe Why Austerity Is Easier to Implement in Some Countries Than in Others', *Comparative Political Studies*, 49(7), pp. 841-873.

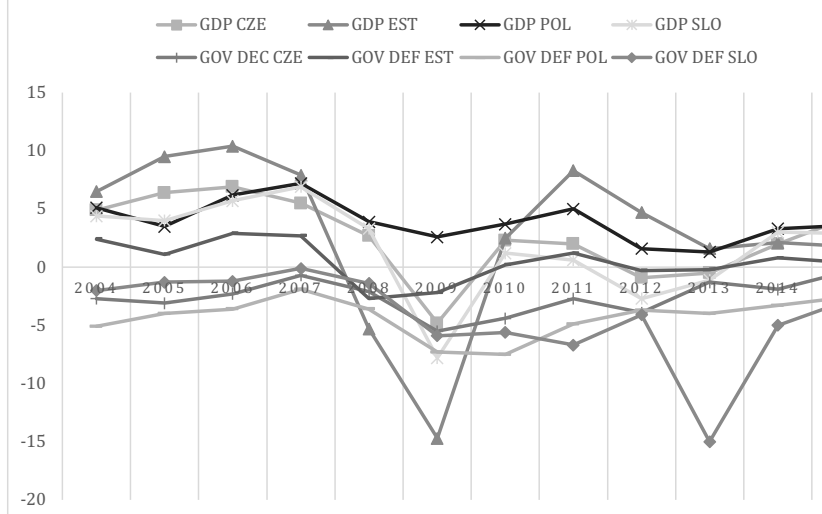
## Tables and Figures

**Figure 1. The trajectories of knowledge-based development 1990-2014**



Source: Calculations by the authors (for regions we use simple averages) based on the World Bank WDI database, available at: <http://data.worldbank.org/data-catalog/world-development-indicators>, accessed May 1 2016.<sup>8</sup>

**Figure 2. GDP growth rate (% change) and government deficit (% of GDP)**



Source: Eurostat database, available at: <http://ec.europa.eu/eurostat>, accessed 1 May 2016.

**Table 1. Fiscal consolidation plans as devised in 2012**

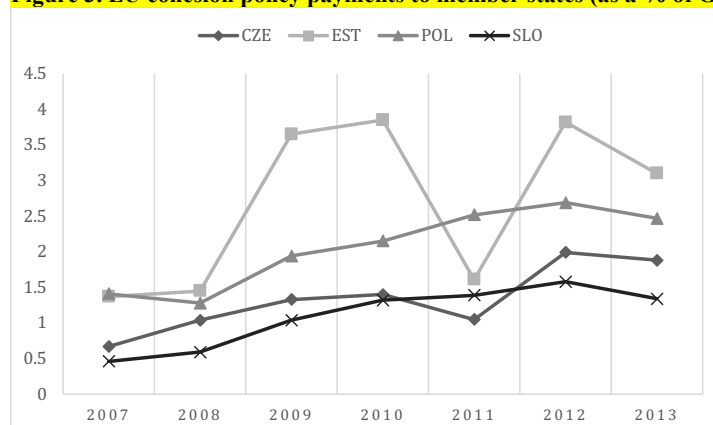
		2009	2010	2011	2012	2013	2014	2015
<i>Czech</i>	Fiscal consolidation (%)		2.7	4.7	5.7	6.3	6.1	

<sup>8</sup> Charges for the use of IP as % of GDP data for Scandinavia includes Sweden, Norway, Denmark (2013-2014 only) and Finland. Data on charges for the use of IP as % of GDP for 1990-2004 are in constant 2000 USD (prior to 2005 as 'royalty and license fees'); for 2005 - 2014 in constant 2005 USD.

Republic	of GDP)							
	Expenditure reductions (%)		36.4	56.6	37.5	43.7	44.3	
<i>Estonia</i>	Fiscal consolidation (% of GDP)	9.2	6.4	3.7	3.1	3.1	3.0	2.6
	Expenditure reductions (%)	67.2	36.4	18.7	0.0	0.0	0.0	0.0
<i>Poland</i>	Fiscal consolidation (% of GDP)		0.3	1.70	3.7	4.5	4.5	4.8
	Expenditure reductions (%)		0.0	19.2	25.6	35.0	44.4	48.2
<i>Slovenia</i>	Fiscal consolidation (% of GDP)		2.6	3.8	4.5	5.3	6.0	
	Expenditure reductions (%)		99.4	99.6	100	100		

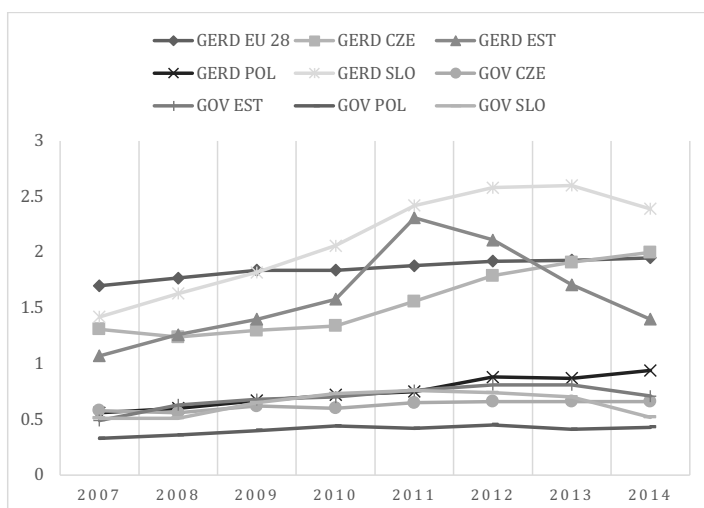
Source: OECD 2012.

**Figure 3. EU cohesion policy payments to member states (as a % of GDP)**



Source: Calculated by Authors based on EC dataset on 'Payments to Member States' (covering European Regional and Development Funds – ERDF, Cohesion Fund – CF, and European Social Fund – ESF), available: [http://ec.europa.eu/regional\\_policy/en/policy/evaluations/data-for-research/](http://ec.europa.eu/regional_policy/en/policy/evaluations/data-for-research/), accessed 1 May 2016.

**Figure 4. GERD and government financed GERD as a % of GDP.**



Source: OECD MSTI database, available at: <http://www.oecd.org/science/msti.htm>, accessed 1 May 2016.

**Table 2. The ratio of RDI-related funds in ESIF**

	<b>Czech Republic</b>	<b>Estonia</b>	<b>Poland</b>	<b>Slovenia</b>
<b>Commitments to RDI 2007-2013 ESIF<sup>9</sup></b>	15.11% (4009.5 MEUR)	20.02% (681.3 MEUR)	13.86 % (9309.8 MEUR)	24.69% (1012.6 MEUR)
<b>Share of RDI related funds in 2014-2020 ESIF<sup>10</sup></b>	15,6% (5005.5 MEUR)	36% (1406.7 MEUR)	21,2% (22200.0 MEUR)	27,3% (1332.3)

Source: Compiled by Authors.

<sup>9</sup> Based on EC (2013) where under RDI investments the following support activities are included: RDI by public and private organisations, RDI infrastructure investments, investments into RDI-relates firms, general support for RDI and entrepreneurship.

<sup>10</sup> Calculated as a % of total planned funding for 2004-2020 based on ESIF database including activities related to research and innovation, ICT deployment, support for SME competitiveness (3 main topics related to economic competitiveness), available at: <https://cohesiondata.ec.europa.eu>, accessed 1 May 2016.