

# Ambitious or Ambiguous? The Implications of Smart Specialisation for Core-Periphery Relations in Estonia and Slovakia<sup>1</sup>

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**Abstract:** *The article explores the implications of the smart specialisation approach on core-periphery relations in Estonia and Slovakia. Despite accounting for one-third of the entire EU budget, Cohesion Policy has produced only modest results in achieving its goal of territorial cohesion between centres and peripheries. This raises the question of the role of Cohesion Policy's current approach—smart specialisation. By applying the analytical concept of peripheralisation, the article examines how the formulation and implementation of smart specialisation is governed in Estonia and Slovakia, both of which are characterised by large territorial disparities between the capital region and the rest of the country in terms of socio-economic development and participation in decision-making. Specifically, the article explores how the smart specialisation approach is interpreted domestically in terms of strategy formulation, priority-setting and spatial targeting of measures, and whether the particular domestic interpretation of smart specialisation acknowledges the unequal economic and research and innovation potential as well as different institutional capacities of central and peripheral regions. Drawing on extensive document analysis and 20 expert interviews with policy-makers and stakeholders in Estonia and Slovakia, it is argued that while ambitiously promoting an approach of 'inclusive growth' for the benefit of all regions, the influence of smart specialisation on core-periphery relations shows to be ambiguous. Fuzzy priority-*

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*setting, a lack of strategic and administrative capacities at the regional level and inhibiting policy-making routines discourage and, at times, prevent such a demanding approach. The article concludes that smart specialisation in its current form does not benefit central and peripheral regions equally. Rather, its demands in terms of formulation and implementation are likely to reinforce the disparities between those regions with capacities to handle such an ambitious approach and those regions without such capacities.*

**Keywords:** *core-periphery relations, Estonia, EU Cohesion Policy, peripheralisation, RIS3, Slovakia, smart specialisation*

## 1. Introduction

In recent years, EU Cohesion Policy has been strongly promoting research and innovation as a means to enhance growth and productivity among EU regions through ‘Research and Innovation Strategies for Smart Specialisation’ (RIS3). As the gap in productivity and welfare has been growing across EU regions, the question has emerged how to spur growth in a way that also fosters territorial cohesion between regions (Iammarino *et al.*, 2017). In response, RIS3 has come to the forefront as a place-based concept (Barca, 2009). It promotes the specialisation of regions according to their unique strengths and previous development trajectories by following a process of entrepreneurial discovery to find economic opportunity. Academically as well as in policy terms, RIS3 is a topical concept for closer study as it strategically guides EU Cohesion Policy investments for research and innovation in the amount of 40 billion euros (65 billion euros including national co-funding) (Berkowitz, 2018). In the upcoming EU programming period 2021-2027, the formulation of a RIS3 will continue to be a pre-condition for accessing research and innovation (R&I) funds from Cohesion Policy (European Commission, 2018b).

However, various studies point out that recent approaches in EU Cohesion Policy have not achieved one of its main goals of improving territorial cohesion (e.g., Lang & Görmar, 2019; Meliciani, 2015). Instead, disparities between central<sup>2</sup> (often capital) and peripheral regions remained or even increased. Especially in Central and Eastern Europe (CEE), EU Cohesion Policy did not lead to a more balanced spatial development on subnational level, but is argued to even have contributed to the persisting regional disparities (Farágó & Varro, 2016).

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<sup>2</sup> The terms ‘centre’ and ‘core’ are used synonymously throughout the text.

While constituting 20.3% of the EU population, CEE countries are eligible for 50.4% of the total Cohesion Policy budget in the 2014–2020 programming period (Medve-Balint & Bohle, 2016). While it is still too early to assess the longer-term effects of RIS3 in the Member States, conceptually as well as practically it puts forward ambitious but, as the article argues, also ambiguous demands on EU Member States concerning the design and implementation of RIS3. This poses a particular challenge in view of the relation between centres and peripheries. Against this background and due to the relative importance of EU Cohesion Policy for CEE countries, studying the implications and challenges of RIS3 for core-periphery relations in two CEE countries appears topical.

The article consists of the following parts: In the next section the research aim is formulated, previous studies considered and the analytical framework presented. In the third section, it is examined how RIS3 has been adopted and implemented in Estonia and Slovakia since its inception in the 2014–2020 programming period. In the fourth section, the findings are comparatively discussed and conclusions drawn in view of the theoretical starting point.

## **2. Research aim and conceptual approach**

In the last decade, the RIS3 concept has been gaining considerable attention in both policy circles and academia. Research and Innovation Strategies for Smart Specialisation are “integrated, place-based economic transformation agendas” (Foray *et al.*, 2012, p. 8). The rationale of RIS3 is to identify areas in the economy in which the potential for growth and added value is above average, i.e., where a country or region possesses features and resources with a competitive advantage which can be promoted and exploited by investing in research and innovation. Its place-based notion means that it is based on the bottom-up vision of local and regional entrepreneurs who take into account the particularities of a ‘place’ such as territorial and institutional specifics. Thereby, for example, it would avoid proposing regions with low-tech industries and no excellence base to focus on research and development-intensive (R&D) activities. At minimum, RIS3 can enable less developed regions to turn into good “followers” (Foray *et al.*, 2009).

Recent studies have been conducted on the theoretical assumptions and underlying rationale of RIS3 (Foray *et al.*, 2009), as well as first studies on its practical application (e.g., Foray *et al.*, 2012; McCann & Ortega-Argiles, 2016) and in different regional settings, e.g., old industrial regions (Pugh, 2017). Kroll (2015) points to the key influence that institutional arrangements and

administrative capacities exert on RIS3 formulation and implementation which is crucial for CEE regions. Likewise, Muscio *et al.* (2015) confirm that growth through supporting innovation critically depends on governance capacities. Moreover, a growing number of studies has been exploring RIS3 specifically in the context of CEE (Prause, 2014; Tiits *et al.*, 2014; Karo & Kattel, 2015; Radosevic & Ciampi Stancova, 2018).

The article combines recent studies on RIS3 and the emerging body of literature on peripheralisation to shed light on the implications of RIS3 on core-periphery relations. The factors affecting core-periphery relations and the causes of uneven development between them have long been the focus of academic debate in political science, development studies and related fields, focusing, for example, on power relations in decision-making (Friedmann, 1973), economic polarisation (Krugman, 1991) and internal and external dimensions of the political economy of the EU (recently, e.g., Magone *et al.*, 2016). Peripheralisation departs from the observation that the growing disparities between the core and the periphery are not caused by economic processes and structural deficiencies alone. They are also produced by political and economic dependencies and limited power in decision-making. For example, peripheries depend on the centre in policy formulation and implementation, which tries to exert its influence in setting and implementing a particular policy agenda (Ehrlich *et al.*, 2012). In effect, disadvantaged regions can become peripheralised vis-à-vis centres. The associated political and economic processes manifest especially between metropolitan (often capital) and peripheral regions in CEE (Lang, 2011; Ehrlich *et al.*, 2012; Smetkowski, 2018). Peripheralisation as a conceptual lens adds to the literature by putting the focus on the *processes* leading to the emergence of centres and peripheries through looking at the “dynamics of the rise and fall of spaces instead of static locations of remoteness” (Kühn, 2014, p. 8). The relation between core and periphery is less of a spatial fact than a “social configuration of unequal power relations” (Kühn, 2014, p. 9). Therefore, conceptually, policies can reinforce peripheralisation processes such as attracting labour, concentrating economic and research activities as well as growing political control and decision-making power in the national centres. If we accept this notion, it is possible to trace processes of centralisation and peripheralisation at play in the domestic translation of the RIS3 concept. For this, it is necessary to establish that R&D and innovation tend to concentrate in agglomerations, often the national centre, rather than in the periphery, as centres promise higher returns and a more favourable growth trajectory (Rodriguez-Pose, 2014). In the scope of this article, we discuss the relations between centre and peripheries in terms of their differences in economic and R&I activities and potential as well as the power

to participate in priority-setting and the availability of capacities and resources to implement the RIS3 approach. Along these lines, the article addresses three questions concerning the implications of the RIS3 approach on core-periphery relations: (1) What is the status of socio-economic and R&I disparities between centre and periphery in Estonia and Slovakia? (2) How is RIS3 formulation and implementation governed in the domestic context? And (3) To what extent does this indicate processes of centralisation and peripheralisation?

Building on the outlined conceptual framework, the analysis examines how the RIS3 approach is governed and executed domestically in terms of strategy formulation, priority-setting and spatial targeting of measures, and how the domestic interpretation of RIS3 acknowledges the unequal economic and R&I potential of central versus peripheral regions. Different practices of interpreting and applying RIS3 in the domestic setting are highlighted, showing challenges and ambiguities in Estonia and Slovakia in a comparative way.

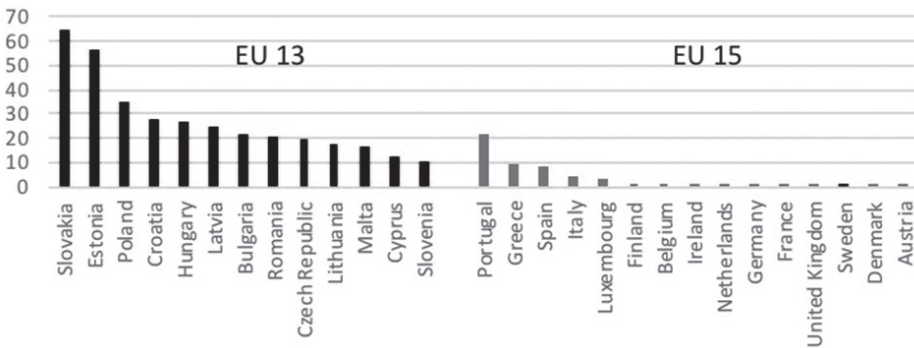
The cases of Estonia and Slovakia are selected for several reasons: firstly, both countries are small economies (Estonia's population is 1.3 million, Slovakia's—5.4 million) and joined the EU in 2004. Before and since then, the two countries have been characterised by a particularly strong polarisation between the capital region and most other regions (OECD, 2018). Secondly, among the EU-28 countries, Slovakia and Estonia rank first and second in view of the share of R&I investments coming from EU Cohesion Policy in relation to total domestic R&I funding; also, both countries have the highest aid intensity per capita in the EU-28 (European Commission, 2018a). Thirdly, variations in the institutional quality at regional level provide a different context for RIS3 formulation and implementation: Estonia, as a single NUTS2 region<sup>3</sup>, ranks 90th out of 202 EU regions, while the four Slovak NUTS2 regions are situated between ranks 145–162 (Charron & Lapuente, 2018). The article draws on extensive desk research (literature review, policy document analysis, official reports) and 20 semi-structured expert interviews with policy-makers and stakeholders in Estonia and Slovakia conducted between 2015 and 2017. Thematic priorities and funding decisions can be researched in the official RIS3 and Cohesion Policy documents to the extent they are formalised. This is complemented by expert interviews and grey literature which provide insights into the adoption of RIS3 in the domestic context and allow to identify processes as well as perceived challenges, contradictions and deficiencies in RIS3 formulation and implementation.

<sup>3</sup> Nomenclature of territorial units for statistics, subdividing the economic units of the EU.

### 3. The implications of RIS3 for core and peripheral regions in Central and Eastern Europe

In the context of Central and Eastern European EU Member States, the application of the RIS3 concept faces a number of specific economic policy and governance challenges. Prior to EU accession, economic growth was largely based on factors such as foreign direct investment (FDI) and the adoption of existing technology. Around the time CEE countries joined the EU, the finance sector, domestic consumption and real estate spurred economic development rather than industrial R&D and science-driven innovation (Tiits *et al.*, 2014). Therefore, transitioning into a growth-oriented strategy based on endogenous capacities and improvements in productivity through R&D and innovation (Radosevic & Ciampi Stancova, 2018) poses a challenge against the background of post-Soviet legacies, particular economic trajectories, modest outward linkages and limited institutional capacities (Karo & Kattel, 2015).

Figure 1. Share of ERDF funds for R&I as % of total domestic R&I expenditure



Source: European Commission, 2018a, p. 11

Knowledge-intensive sectors, R&D and innovation tend to concentrate in metropolitan (‘core’) regions in CEE, often the national capital, rather than in the periphery (Rodriguez-Pose, 2014) and promise higher returns and a more favourable growth trajectory. At the same time, peripheries tend to be characterised by structural deficiencies such as limited institutional capacities. RIS3 proposes a place-based, i.e., territorially sensitive, approach which critically depends on existing strategic and administrative capabilities in the domestic context to translate the concept into actual practices. Established policy and administrative routines of policy-makers in CEE strongly affect the way RIS3 is understood and acted out, e.g., regarding the division of tasks between



ministries and agencies (Karo & Kattel, 2015, p. 184). In Member States which already have devolved competences to the lower administrative levels and are familiar with implementing partnerships, adjusting national priorities with local development needs is likely to be more effective (Avdikos & Chardas, 2016). However, most CEE countries lack a tradition in decentralisation and collaborative policy-making and sub-national actors have limited capacities (Dabrowski, 2014).

After a brief outline of the socio-economic and governance profile of Estonia and Slovakia, the adoption of RIS3 in each domestic context will be examined and its implications on peripheralisation processes explored with regard to policy formulation and policy implementation.

### **3.1 Estonia**

The capital region of Tallinn accounts for 44.7% of Estonia's population and 64% of the national GDP (European Commission, 2019a). In spite of Estonia's small size, it is characterised by vast disparities in socio-economic development at sub-national level. By way of comparison, the region of northeast Estonia has a GDP per capita of only 56% the national average, whereas north Estonia (including the Tallinn metropolitan area) scores 145% (OECD, 2018). Particularly the southern (except Tartu) and north-eastern regions are affected by de-industrialisation and still host the main share of national primary sector activities. As Figure 1 illustrates, more than 55% of public expenditure for R&I in Estonia comes from EU Cohesion Policy. The economy mainly consists of SMEs in traditional sectors with limited needs for R&D. Investment in R&D is concentrated in a few large companies, both domestic (e.g., Eesti Energia) and multinational, which account for the export of high-tech equipment in ICT and electronics. In terms of R&D capacities, the participation in the EU Framework Programme for Research and Innovation (currently Horizon 2020) mirrors the high spatial concentration of research institutions and private R&D activities. The overwhelming majority of beneficiaries is located in Tallinn (52%) and Tartu (43%), showing an almost complete concentration of R&I activities in only two cities (CORDIS, 2018). The same pattern exists in the main innovation promotion programme NUTIKAS, which supports companies in strengthening collaborations with R&D institutions. Over 90% of beneficiaries are situated in the Tallinn and Tartu regions (European Commission, 2019a). Domestic innovation policy in Estonia, like in other CEE countries, focuses on promoting high-tech, e.g., the commercialisation of cutting-edge R&D results, incubators and technology parks. Innovation activities and the industrial structure

demonstrate a high degree of fragmentation, as a number of industries show a low productivity growth and many activities have a lack of demand for R&D, i.e., there is a detachment between innovation and the industrial structure. In terms of innovation policy governance, actors such as universities, companies, and government agencies are fragmented and weakly aligned (Suurna & Kattel, 2010, p. 20).

### 3.1.1 Policy formulation

The Estonian RIS3 comprises the two national-level strategies ‘Knowledge-based Estonia 2014–2020’ as well as the ‘Entrepreneurship Growth Strategy’, the former being in the responsibility of the Ministry of Education and Research (MER) and the latter of the Ministry of Economic Affairs and Communication (MEAC). RIS3 development and implementation are taken care of by those two ministries. RIS3 management and stakeholder engagement efforts were initially carried out by the Estonian Development Fund, which was shut down in 2016. Therefore, Estonia has applied only fragments of the entrepreneurial discovery process (EDP). Re-initiating the EDP has not taken place as of now. Formally, the members of the Smart Specialisation Steering Committee involved with the Estonian RIS3 were foreseen to have frequent communications with relevant stakeholders, but some experts state that the exchange was in reality rather shallow (Interviews 11, 19). In terms of regional targeting, focussing measures on specific territories are largely absent from the strategy. Such a place-blind approach tends to favour the centres (Avdikos & Chardas, 2015).

In the context of EU Cohesion Policy, Estonia deploys 642 million euros to Thematic Objective 1 (R&I) in the 2014–2020 programming period, i.e., 18.8% of the total ERDF (European Regional Development Fund) allocations. Three main growth areas have been selected in the Estonian RIS3:

- ICT horizontally through the economy
- Health technologies
- Enhancement of resources (biomass, oil shale; materials technologies and biotechnology)

These priority areas are interpreted in a wide way, so that a maximum of sub-themes are captured and room for flexibility is maintained. This makes it difficult to prioritise measures and implement closely monitored progress. At the same time, strong interest groups that fear losing support are opposed to narrowing down priority areas (Interview 19). According to official information, over 200 representatives from the research, business and public sectors delivered input for the preparation of the strategy. For this, the Minister for Education and



Research convened a strategy preparation committee with 23 representatives from the private sector, universities, research institutions, and public authorities (Estonian Ministry of Economics and Communications, 2014). The identified priority areas are fairly linked to old key sectors, such as the food or forest industry. The RIS3 integrates a horizontal focus based on new technologies (ICT such as biotech and materials sciences) in traditional industries. The policy centres on narratives and conceptions developed in IT circles (Interview 19). However, traditional industries located in the peripheral regions are not benefiting from RIS3. Furthermore, the focus on IT creates a clash in the sense that, whether it is the public or private sector, actors do not have experience in applying it (Interview 11), as local governments' competences, e.g., mainly involve organising public transport, garbage collection or the maintenance of schools.

### **3.1.2 Policy implementation**

The pre-EU accession period saw a decentralisation in governance, induced by the regionalisation that came with EU Cohesion Policy. Following the accession, this trend reversed and a stronger centralisation occurred again (Raagmaa *et al.*, 2013). Arguably, this was fostered by the emphasis on the absorption of EU funds and ensuring efficient programme delivery. Due to recent recentralisation processes of governance and ensuing weakened capacities in the local and regional institutions in Estonia (Karo & Kattel, 2015; Loewen, 2018), this shows to be problematic in the light of the bottom-up approach of RIS3. Institutional capacity-building at the local and regional level in order to empower the intermediate and lower tiers of governance has barely occurred. Estonian municipalities depend highly on EU funds and while these funds are available for Estonia, due to weak co-financing and project management capacities these often do not arrive at the local level (Interview 19). A related issue is that the Smart Specialisation Secretariat comprises only one staff member, who holds administrative tasks related to the work of the Smart Specialisation Steering Committee, RIS3 international affairs, reporting on progress to European Commission, as well as monitoring and analytical tasks and building/strengthening relationships domestically and inter-regionally (Interview 12). Still, RIS3 implementation is reported to be on course and in line with the strategic framework (Kattel & Stamenov, 2018). Six support measures have been implemented since 2014 to support the growth of the RIS3 priority areas: technology development centres, clusters, innovative procurement, the Startup Estonia programme, support for applied research, and student scholarships in smart specialisation areas (Interview 12).

## 3.2 Slovakia

Similarly to Estonia, regional disparities in Slovakia are among the highest in the EU. The spatial structure is characterised by a strong east-west gradient of regions. The capital Bratislava and its metropolitan area far exceed the rest of the country in terms of economic performance and innovation activity. Bratislava has a GDP per capita of 239% the Slovak average, which is almost four times higher than in the eastern Prešov region (61%) (OECD, 2018). With a population share of 11%, Bratislava accounts for 28% of the Slovak GDP (OECD, 2018). The Slovak R&D base is concentrated in the Bratislava region in the west, providing 53% of research staff and facilities, while capacities are weakly developed in the central and eastern Slovak regions. This is also reflected in Horizon 2020 participation. Of Horizon 2020 funds, 67% went to beneficiaries in the Bratislava region, 6% each to Košice and Žilina (CORDIS, 2018). Slovakia mainly exports automobiles and telecommunication and electrical products, the vast majority of which is produced by affiliates of multinational companies. Notably, the automotive sector accounts for 44% of Slovakia's industry and is largely foreign-owned. Foreign direct investments (FDI) from multinational companies such as Volkswagen mainly went to the western regions, capitalising on low taxes and labour costs. Between 1990 and 2013, Bratislava received 70% of FDI. Production networks with multinational companies having production sites which are rather detached from the domestic R&D system (Interview 2). Slovak overall R&D expenditure of 0.88% of GDP is rather low (European Commission, 2018c). Therefore, the European Innovation Scoreboard categorises Slovakia as a moderate innovator with a performance below EU average (European Commission, 2018c). Over 60% of total government spending on R&I comes from the ERDF, marking the highest share in the EU-28 (Fig. 1). A high share of basic research (77%) is accompanied by weak support for applied research and the lack of institutions aimed at the transfer of scientific knowledge. Outside Bratislava, there are very few centres with existing specialisation and a critical mass for R&I activities, such as Trnava (energy and nuclear power) and Nitra (agriculture). These specialisations, however, go back to pre-1990s' production linkages (Bohle & Greskovits, 2012). Further relevant R&D activities outside of Bratislava are located in Žilina in the north (transport and logistics) and Košice in the southeast of Slovakia (information technology and telecommunication). Both cities have visible technical universities, successfully acquired Horizon 2020 funds, and are active in international networks in their fields. The two weakest regions, Prešov in the east, and Banská Bystrica in central Slovakia, focus mainly on wood processing (Kah, 2014, p. 3). According to experts, low- and medium-tech sectors are of great importance particularly for areas outside

the capital region. Moreover, they argue that the role of export and outward linkages in a small country like Slovakia is crucial (Interviews 2, 3, 16). In terms of private sector R&D capabilities, however, the large multinational companies have their headquarters abroad where they perform the lion's share of research and innovative activities. This largely de-couples those activities from RIS3 measures.

### **3.2.1 Policy formulation**

Slovak R&I governance is highly centralised in Bratislava. All R&I measures are designed and implemented by the national government or its agencies. RIS3 governance is split between the Ministry of Education, Science, Research and Sports (MESRS) and the Ministry of Economy (MoE). Although Slovakia consists of four NUTS2 regions, the RIS3 strategy is addressing the national level. No explicit regional measures have been drafted. This reflects a centralisation trend in national innovation policy more generally, where the eight regional governments came up with their own regional innovation strategies, but do not possess financial resources for implementing own programmes (Balaž *et al.*, 2018). Yet, the notion of maintaining a regionally balanced development is rhetorically acknowledged in the strategy. The planned allocation of R&I funds largely matches existing clusters and therefore also happens to consider regional centres outside Bratislava. Interestingly, the designation criteria of Cohesion Policy exclude Bratislava from much of R&I funding. While the capital region holds the majority of research and innovation capacities, it is only eligible for 15% of ERDF R&I funds (Interview 17). Overall, Slovakia allocates 16.0% of ERDF to the research and innovation objective (1.798 billion euros). The priority areas of the Slovak RIS3 are manufacturing (cars, machinery, and metal products), ICT, agriculture, and health. However, the objectives are formulated in very broad terms and further spread out into numerous sub-priorities. This makes them compatible with a wide range of already existing objectives (Interview 9), but lacks the focus on a limited number of growth areas, as also the European Commission (2018d) critically pointed out. The broadness of areas and lack of prioritisation also implies that there are no targeted measures for peripheral regions, which makes it likely that activities continue to follow their current path of benefitting the centres. RIS3 foresees the cooperation between academia and companies to be key for inclusive growth. In Slovakia, however, this link is only weakly developed. In 2013, Slovakia drafted its strategy as one of the first EU Member States. Strategy formulation took place as an iterative procedure of involving an array of stakeholders in the form of one-time consultations, but also long-term working and expert groups. Officially, more than 120 stakeholders participated, although some experts are sceptical

Table 1. RIS3 in Estonia and Slovakia: Stylised facts

	Estonia	Slovakia
<b>Volume of ERDF allocated to R&amp;I (Share of total ERDF) 2014–2020</b>	642.3 million euros (18.8%)	1,798 million euros (16.0%)
<b>Total R&amp;D expenditure (% of GDP) 2017 (EU average: 2.07%)</b>	1.29% of which private: 0.61%	0.88% of which private: 0.48%
<b>RIS3 governance</b>	Centralised	Centralised
<b>Responsible bodies for RIS3</b>	Smart Specialisation Steering Committee, comprising of seven members: Ministry of Economic Affairs and Communications; Ministry of Education and Research; State Chancellery; universities Estonia; Estonian Chamber of Commerce and Industry; Association of Services Industry	Government Council for Science, Technology and Innovation (managing authority), Ministry of Education, Science, Research and Sports (MESRS) and the Ministry of Economy (MoE).
<b>Territorial focus of measures</b>	No regionalisation of measures (national strategy)	No regionalisation of measures (national strategy)
<b>Identified priority domains</b>	ICT horizontally through the economy Health technologies Enhancement of resources (biomass, oil shale; materials technologies and biotechnology)	Vehicles for the 21st century Industry for the 21st century Health, food and environment Digital Slovakia and creative industry Medical technology
<b>Stakeholders involved in RIS3 formulation</b>	Strategy preparation committee led by Minister for Education and Research with 23 representatives from the private sector, universities, research and state authorities. More than 200 stakeholders from research institutions, entrepreneurs and state authorities included	Coordination group for RIS3 formulation: Government Office, MoE, MESRS. Over 120 experts consulted (Slovak Academy of Sciences, universities, civil society associations and industry)
<b>Entrepreneurial discovery process</b>	Led by Estonian Development Fund (body abolished in late 2016)	"All relevant partners" including representatives of universities, research organizations and entrepreneurs
<b>Innovation performance relative to EU-28 (European Innovation Scoreboard 2018)</b>	'Moderate innovator' (ranks 17th)	Slovakia is a 'moderate innovator' (ranks 23rd), Bratislava region 'strong innovator'

Sources: Own compilation based on Estonian Ministry of Education and Research (2014), European Commission (2018c), Government of the Slovak Republic (2013), Karo & Kattel (2015)

about the extent of the actual involvement. Rather, the priorities were set by the central government and legitimised by stakeholders afterwards (Interviews 9, 18). The strategy foresees a closer cooperation by the two ministries and merging multiple agencies under their responsibilities into two bodies, which has not taken place so far. Due to frequently changing ministers, there was no follow-through in strategy implementation (Interview 18).

### **3.2.2 Policy implementation**

The implementation of the Slovak RIS3 came with heavy administrative delays, as the Slovak Government attempted to accommodate criticism by the European Commission with regard to key features of the national strategy. In December 2016, the MESRS replaced the original Action Plan submitted to the European Commission by the ‘Strategic document for passing the ex-ante conditionality in thematic objective 1’. Again, the Commission raised concerns about the strategic document, pointing to administrative inefficiencies and lack of transparency in the process of priority selection (European Commission, 2018d). Eventually, the MESRS submitted the ‘Implementation Plan for the RIS3 Strategy’, which was finally approved mid-2017 (Balaž *et al.*, 2018). The slowdown in implementation of the RIS3 and overall administrative deficits have strongly affected spending of funds and calls for proposal were cancelled (European Commission, 2019b). This was due to the lack of strategic substance and an insufficient degree of specialisation (Interviews 9, 16). As a consequence, Slovakia lost 120 million euros of EU funds for R&I and regional development (European Commission, 2019b). Until the end of 2018, only 10% of ERDF allocated to research and innovation were spent, which is half the EU average of 20% (ESI Funds Open Data Platform, 2019).

## **4. Discussion**

The findings from Estonia and Slovakia can be summarised as follows:

Both in Estonia and Slovakia, the central government is the main responsible actor in RIS3 formulation and implementation. Among the administrative departments, RIS3 is being engaged solely by the Ministries for Research and the Ministries for Economic Affairs and their respective sub-agencies, while other ministries are mostly left out. This shows a narrow domestic interpretation of RIS3 along the lines of a ‘generic’ innovation policy instrument. Whereas EU Cohesion Policy at least formally acknowledges the four different NUTS2

regions in Slovakia, the actual involvement of the regional level is weak. In essence, in both cases priority-setting took place in a very top-down manner. Stakeholder involvement at the regional and local level was miniscule and remained a mostly symbolic exercise without much impact.

In Slovakia, an integrated cross-sectoral approach, involving, for example, ministries in charge of industrial or rural development, is largely absent. Thematically and procedurally, RIS3 tends to be interpreted in a very narrow way. In comparison, Estonia took a more holistic approach. Given the country's small size, the coordination and interaction mechanisms between government agencies, business associations, and research institutions is rather complex. At the same time, RIS3 management and monitoring take place centrally at the national level. While Estonia has determined three priority domains, the themes selected in the Slovak strategy are formulated in very wide terms, with a large number of sub-priorities. In both cases, however, the priority areas are designed in a way that allows covering many different sectors and activities. As several experts pointed out, based on the existing assets and capabilities of 'places' in the core and in the periphery, policy measures supporting innovation towards the technological frontier are best suited for more developed regions (i.e., Tallinn and Bratislava). Peripheral regions with less R&D-intensive industries should focus on adoption of existing technology. Without such capabilities, adopting existing technologies from outside poses a huge challenge for peripheral regions, let alone engaging in knowledge-intensive, high-tech activities. However, as the overwhelming majority of higher added-value activities agglomerate in the capital regions, there is the risk of creating a lock-in situation which prevents peripheral regions from transforming their economic base towards higher growth rates.

Both RIS3 strategies target the national level and in neither case there is any regionalisation of measures, and tendencies towards further centralisation persisted. In theory, both national-level strategies leave room for tailoring measures to regional and local needs. However, the conceptual complexity of the RIS3 methodology combined with inherited top-down routines puts regions outside Tallinn and Bratislava lacking administrative and strategic capacities into an unfavourable position. Addressing growth potential outside the capital regions remains only implicit in the domestic strategies and therefore limited.

In Estonia, RIS3 implementation is technically on track; however, the liquidation of the Estonian Development Fund, which performed management and stakeholder engagement tasks, left a vacuum. Slovakia, on the other hand, faces major difficulties. Strategy implementation is still in its infancy and has not



taken off by 2018 due to objections from the European Commission concerning strategy content and severe delays in drafting a viable implementation plan. As a result, Slovakia failed to meet spending deadlines because strategy drafts and implementation plans were repeatedly declined by the Commission, causing the loss of a significant amount of EU funds. This reinforced peripheralisation of the regions outside Bratislava as a substantial amount of R&I funds from Cohesion Policy could not be disbursed to those regions.

Equally in Estonia and in Slovakia, there are vast regional differences in the geographical distribution of R&D-intensive industries, administrative capacities, and public research institutes. In Estonia, Tallinn and, to a lesser degree, Tartu are the economic drivers and innovative hubs, and host the largest share of research potential that can take up RIS3 measures. In Slovakia, measures are slightly more widespread across a small number of regional centres with an existing economic base and, mostly public, research institutions. Funds are allocated sectorally and hence disbursed where they are most likely to be absorbed. In Slovakia, this covers the area around Bratislava and, to a much lesser degree, to the regional centres Kosice, Žilina, and Trnava. However, the transformative potential of RIS3 to break this inherited pattern and improve the interplay between the public sector, academia and businesses in a more inclusive and forward-looking way has not yet materialised. Especially Slovakia's strategy is guided by targeting existing R&D capacities, which shows the narrow understanding of RIS3 as a 'generic' innovation policy and less as a holistic economic transforming agenda. Estonia did adopt the entrepreneurial discovery process and attempted bottom-up stakeholder involvement, but this was shallow and without much impact, whereas in Slovakia the process was absent altogether.

## **5. Conclusion**

Linking these findings back to the theoretical point of departure (peripheralisation), within the limited scope of this article, the following conclusions are drawn regarding the implications of RIS3 on core-periphery relations in Estonia and Slovakia. In relation to research question 1 on the status of socio-economic and R&I disparities between centre and periphery, despite being small economies with a population of 1.3 million (Estonia) and 5.4 million (Slovakia), there exists a large core-periphery divide in terms of both private and public R&I capacities and institutional capacities. Slovakia's capital Bratislava by far exceeds the rest of the country in terms of economic performance and innovation activity, with a GDP 2.4 times the country's average and yielding 53% of research capacities.

In Estonia, the capital region of Tallinn has a GDP of almost 1.5 times the national average and accounts for 64% of the national GDP. It is this context, characterised by a high territorial concentration of economic and R&I activity, that RIS3 is encountering.

Regarding question 2 on RIS3 governance, Estonia and Slovakia follow their familiar routines in policy formulation and implementation. The strong dependency of Estonia and Slovakia on Cohesion Policy funds for R&I support exerts pressure to comply with EU rules and procedures, which is a burden especially for sub-national administrations. Due to concerns about absorption of EU funds, the central government is overseeing formulation and implementation. Currently, Estonia and Slovakia follow a heavily centralised approach in formulating and implementing RIS3. This reflects the CEE context at large which is mostly unfamiliar with stakeholder involvement. The research confirms previous findings that stakeholder mobilisation, such as the entrepreneurial discovery process, works better in contexts that are familiar with such a task and have the necessary participatory culture in place, especially at the sub-national level (Karo & Kattel, 2015; Avdikos & Chardas, 2016). Yet, RIS3 implementation brought about some degree of learning in strategy development and stakeholder involvement, such as the structured public consultations held in Estonia. On the other hand, engaging stakeholders tends to occur in a rather shallow and pragmatic way (Dabrowski, 2014), without much actual impact on strategy formulation. As such, symbolically following the RIS3 concept to be eligible for EU funding comes at the expense of identifying and addressing more relevant regional and local needs. Also, time frames for policy formulation are short, so that the steps central to the RIS3 approach, such as the entrepreneurial discovery process, are hardly followed through. Reporting from the last period and preparing for the upcoming one tend to happen simultaneously, which leads to ad-hoc and undermines long-term strategic planning.

Concerning question 3, the analysis considered the material aspects of the uneven distribution of R&I capacities and the political dimension of decision-making power in order to operationalise centralisation and peripheralisation processes (Kühn, 2014). It can be established that in RIS3 formulation and implementation, peripheries in Estonia and Slovakia are strongly dependent on the centre. This reflects the current spatial distribution of R&I capacities and unequal power relations between centre and periphery in policy-making. For a concept currently guiding 19% and 16% of Cohesion Policy funding in Estonia and Slovakia respectively, this is a rather sobering finding when considering Cohesion Policy's aim of reducing disparities between core and periphery. As for the selected thematic priority areas, regional investments are motivated by national sectoral priority areas. Focusing on knowledge-intensive

activities such as ICT and conducting a process of entrepreneurial discovery, which require a high degree of institutional and coordination capacities, appears counterproductive and is likely to exacerbate existing disparities between core and periphery. Attending to areas of perceived economic opportunities is not enough to induce convergence with faster-growing regions focusing on their strengths. Both in Estonia and Slovakia, RIS3 encounters severe structural challenges in regions outside the capital regions, namely the path-dependent sectoral structure inherited from the Soviet period with a low level of economic returns as well as low administrative competences and capacities for strategic planning and implementation at the regional level. Specifically, a challenge is to reconcile the focus on valorising unique endogenous assets and capacities of a place, which can foster differential growth rates in well-performing and less favoured peripheral regions (cf. Ferry & McMaster, 2013). In essence, the space-blindness of RIS3 reinforces the core-periphery divide in Estonia and Slovakia as structural and administrative challenges in the peripheries are only marginally acknowledged in RIS3 formulation and implementation and thereby undermine the 'place-based' approach RIS3 proposes. The economies of peripheral regions suffer from poor R&I infrastructure, both private (missing critical mass of companies) and public (e.g., higher education institutions), while peripheral institutions severely lack strategic capacity and only play a minor role in strategy formulation. Overall, the rationale underlying RIS3 mirrors the increasing orientation of EU Cohesion Policy towards growth and innovation and less towards reducing regional disparities.

Peripheralisation as a conceptual point of departure contributes to the literature on core-periphery relations here by putting the focus on the *processes* leading to the emergence of centres and peripheries by looking at RIS3 formulation and implementation practices in Estonia and Slovakia. Going beyond previous more static and fixed descriptions of centrality and peripherality based on structural deficits, it emphasises the dynamic (production of peripheries in a spatial system) and multidimensional (socio-economic, political) aspects of core-periphery relations (Kühn, 2014).

Beside theoretical implications, the findings also yield some policy recommendations. As EU Cohesion Policy has become increasingly innovation-based, and due to its immense relative importance for economic development both in Estonia and Slovakia, the effective translation of RIS3 to the unique domestic context is crucial for achieving the goal of territorial cohesion, especially due to the extremely high share of research and innovation (R&I) investments coming from EU Cohesion Policy. By and large, RIS3 has the potential to support transforming the interplay between the public sector, private companies, research

and higher education institutions through inducing a learning process in strategy and priority-setting and entrepreneurial discovery. This continues to be a weak point in CEE countries, and evidence has only shown modest progress (e.g., Tiits *et al.*, 2014, Radosevic & Ciampi Stancova, 2018). While RIS3 aims for an inclusive bottom-up approach and involves coordinating various stakeholders, it is much more ambiguous in the policy and administrative context of Estonia and Slovakia that is highly centralised and top-down. In order to make RIS3 actually more place-based and sensitive to regional conditions, the EU might incentivise the formulation of explicit regional measures (in Slovakia at NUTS2 level, in Estonia NUTS3), if accompanied by effective institutional capacity-building in peripheries. Arguably, RIS3's aspiration could be overly ambitious for some CEE regions. It has to be kept in mind that RIS3 asks stakeholders to take over complex tasks they have never performed before in a specific, pre-defined procedural way, such as the entrepreneurial discovery process. Targeted initiatives for transregional knowledge exchange and cooperation between peripheral regions may also provide an opportunity for sharing experiences and induce learning in how to address mutual challenges, both EU-driven ones, such as the S3 Platform, but also bilateral initiatives by mobilising other peripheral CEE regions facing similar challenges. Furthermore, peripheries should seek complementarities via interregional networks to create critical mass for companies in peripheries along mutual RIS3 priorities. Eventually, the demands on formulation and implementation stemming from RIS3 are likely to reinforce the current disparities between those regions with capacities to handle such an approach and those regions which do not. Giving peripheral regions more room to devise own strategies that are more attuned to the development needs by imposing less procedural rigidity might be warranted.

The article points to the need for a deeper understanding of the unique policy context for EU Cohesion Policy in CEE in order to identify factors for implementing RIS3 in a way that is sensitive to core-periphery concerns and avoids conceptual misunderstandings. RIS3 will remain to be a pre-condition for eligibility to R&I funding under EU Cohesion Policy (European Commission, 2018b) in the upcoming programming period from 2021. For this purpose, the cases of Estonia and Slovakia can draw attention to the need of tailoring the RIS3 approach to specific domestic contexts. This might for example be to the benefit of current or prospective candidates for EU accession in the Western Balkans, all of which have recently initiated the process of RIS3 formulation (Matusiak & Kleibrink, 2018).

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## Appendix 1: Interview Respondents

<b>Interview</b>	<b>Location</b>	<b>Date</b>	<b>Position</b>
Interview 1	Tallinn, EE	15 September 2015	Academic, University
Interview 2	Bratislava, SK	18 January 2016 (1)	Director, Innovation support agency
Interview 3	Bratislava, SK	18 January 2016 (2)	Public Servant, Ministry of Economy
Interview 4	Bratislava, SK	18 January 2016 (3)	Public Servant, Ministry of Economy
Interview 5	Žilina, SK	15 February 2016 (1)	Public Servant, Žilina Regional Administration
Interview 6	Žilina, SK	15 February 2016 (2)	Public Servant, Žilina Regional Administration
Interview 7	Tallinn, EE	05 May 2016	Academic, University
Interview 8	Tallinn, EE	17 May 2016	Public Servant, Ministry of Finance
Interview 9	Nitra, SK	28 September 2016	Director, Business association
Interview 10	Tartu, EE	11 November 2016 (1)	Director, Innovation support agency
Interview 11	Tartu, EE	11 November 2016 (2)	Project Manager, Innovation support agency
Interview 12	Tallinn, EE	17 November 2016	Public Servant, Ministry of Economic Affairs
Interview 13	Tallinn, EE	29 November 2016	Project manager, Business and regional policy agency
Interview 14	Tartu, EE	06 December 2016	Public Servant, Ministry of Education and Research
Interview 15	Tallinn, EE	08 December 2016	Director, Regional development agency
Interview 16	Bratislava, SK	01 February 2017	Public Servant, Innovation support agency
Interview 17	Bratislava, SK	02 February 2017 (1)	Public Servant, Liaison Office in Brussels
Interview 18	Bratislava, SK	02 February 2017 (2)	Director, NGO
Interview 19	Tallinn, EE	28 February 2017	Academic, University
Interview 20	Tallinn, EE	27 April 2017	Public Servant, Ministry of Finance