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Economic development and evolving state capacities in Central and Eastern Europe: can “smart specialization” make a difference?

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We position “smart specialization” (SS) as the third external and conditionality-based reform of economic policy rationales – after Washington Consensus and Europeanization – in Central and Eastern Europe (CEE). We discuss what kind of state, policy, and administrative capacities, or routines, SS presumes. We show that over the years CEE economies have built very different routines, especially for policy coordination and public–private interactions. Design and implementation of functional SS strategies requires critical attention and development of these routines through contextual policy experimentation in all CEE regions. We provide some general guidelines for this.

Keywords: smart specialization; state capacity; policy implementation; Central and Eastern Europe

JEL codes: L52, O25, O38, P20

1. Introduction

“Smart specialization” (SS) is the third external and conditionality-based reform of economic policy rationales in the Central and Eastern Europe (CEE¹) during the past two decades. The previous rounds of external policy conditionalities – the “Washington Consensus” influenced macroeconomic stabilization reforms in the 1990s and the “Europeanization” of research, development, and innovation (RDI) policies and governance systems in the 2000s with a notable high-tech bias – have created specific capacities of policy making and implementation in CEE. These capacities have created specific industrial and RDI policy mixes and pathways for the governments to intervene in the real economy.

SS is one of the EU’s answers to the structural and institutional deficiencies laid bare by the 2008+ crisis (see Kattel 2010; Myant and Drahekoupil 2012; Reinert and Kattel 2014) that has many similarities with the “new structural economics” (Lin 2012). SS seeks to alter some characteristics of existing policy mixes, such as the tendency to support similar broad sectors of economy via supply side policy measures (European Commission 2010a). The flexibility of the SS concept and policy rationale should allow for context-specific application across the different regions of the EU (Foray, David, and Hall 2009; McCann and Ortega-Argiles 2013). Yet, SS debates in the EU and CEE have not paid much attention to the issues of policy making and implementation capacities; except for emphasizing their pre-conditional importance for

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the concept to work (Rodriguez-Pose, di Cataldo, and Rainoldi 2014), and the need for contextual design of policy and administrative systems that should be the task of national and local policy makers (Foray et al. 2012; McCann and Ortega-Argiles 2013; OECD 2013). This article seeks to fill this gap in the SS debates and research.

In the next section, we build an analytical toolbox that looks at state, policy, and administrative capacities through the lens of “routines” to emphasize the context-specific differences in how these capacities evolve and in turn affect the translation and adoption of different policy rationales (Karo and Kattel 2014). Section three links the concept of SS with our analytical framework and discusses the expectations and challenges SS poses on state institutions and policy routines in CEE. We show that SS presumes different policy coordination and also public–private coordination routines during both policy design and implementation than usually found in CEE. Section four analyzes how different CEE economies have used the policy concept and rationales of SS. We show that some of the key policy making principles transforming the SS policy rationale into concrete policy actions – “entrepreneurial discovery” processes to design policies that support revealed regional specializations – tend to be interpreted by policy makers so that they fit with existing policy making and implementation routines. As both public and private sectors lack experiences in supporting the emergence of new types of routines, policy makers need to initiate institutional reforms and experiment with context-fitting policy design and implementation solutions. We provide some general guidelines for these policy and administrative experiments.

2. Unpacking state capacity: from institutional blueprints to contextual routines

Many debates on industrial and innovation policy of the last decade – from growth diagnostics (Hausman, Rodrik, and Velasco 2005), evolutionary targeting (Avnimelech and Teubal 2008), systems of innovation (Edquist 2011), new structural economics (Lin 2012) to SS (Foray, David, and Hall 2009; OECD 2013) – search for more accurate and better informed policy rationales for what is the *appropriate role* for government in economic development.

These debates often neglect a more detailed question: what is needed from governments for actually *implementing* these ever-complex rationales, and whether existing governance structures are equipped to apply specific methods and derive and implement proper policy choices based on them (for explicit criticism, see Pack and Saggi 2006; Te Velde et al. 2011). Instead, these questions tend to be generalized into generic concepts such as institutional “capacities,” or “quality” (such as in EBRD analysis of transition economies – Besley, Dewatripont, and Guriev 2010; EBRD 2009), or limited to historical examples of successful government actions and institutional solutions (see in Lin and Monga 2012). Thus, capacities tend to be operationalized via *outcomes* and not via institutional *processes* in terms of what is done and how by policy makers and the bureaucracy to deliver particular outcomes. Therefore, the contextual differences in policy making and implementation processes remain unnoticed, though, they are extremely important for how specific policy rationale is understood and implemented.

SS debates in the EU and CEE have followed similar patterns. Rodriguez-Pose, di Cataldo, and Rainoldi (2014) confirm the importance of institutional capacities as a precondition for SS using similar broad indicators of government capacity (World Bank Governance Indicator) that are often criticized by public policy and management scholars for lacking context-awareness (van de Walle 2006). SS policy guidelines (European Commission 2010b; Foray et al. 2012; OECD 2013) mostly list what policy

ideas and instruments (reforming business environments, financial engineering instruments, and procurement practices) need to be rethought and redesigned for SS. These documents do not discuss *how* these instruments and changes within them should be designed and implemented in specific contexts; rather, only seemingly working best practices are highlighted.

Our approach combines the “what” and “how” perspectives on state capacities. We distinguish between three layers of state, policy and administrative capacity and treat capacity not as universal and constant, but as evolutionary and expressed in different processes of policy making and implementation (Karo and Kattel 2014). These processes can be also understood as persistent “routines” characterizing specific policy domains, or organizations (term as used by Nelson and Winter 1982, 14).

In economic policy research, state capacity is usually defined in broad outcome-oriented terms, for example “the ability of policy making authorities to pursue domestic adjustment strategies that, in cooperation with organized economic groups, upgrade or transform the industrial economy” (Weiss 1998, 5). It is dependent both on external politico-economic and other constraints and internal processes and capacities of particular states. In the context of economic development and less developed economies, state capacity can be operationalized as “transformative capacity” (and its varieties in different economies), that is the “ability of a state to adapt to external shocks and pressures by generating ever-new means of governing the processes of industrial change” (Weiss 1998, 4).

What helps to differentiate between the performances of different industrial societies (given the external constraints) are the concepts of “policy capacity” and “administrative capacity.” Policy capacity (or “coordinating capacity”) is the “ability to mobilize and coordinate society’s resources in such a way as to augment the overall investment surplus (and ultimately raise living standards)” (Weiss and Hobson 1995, 4), or “the ability to take decisions on the basis of a knowledgeable assessment of a comprehensive range of information, and through a process which brings together the various agencies of government that are involved in the area” (Polidano 2000, 8). Administrative capacity denotes effective resource management (Painter and Pierre 2005, 2) and the “the internal operations of the public sector and the quality of the services it provides to the public” (Polidano 2000, 8). Both of these capacities tend to be both country and policy domain specific and evolutionary because countries have different and changing external constraints and are settings of diverse “political crystallizations” as opposed to static and monolithic entities (Weiss 1998).

Thus, we can say that countries “learn” over time and “routinize” the feasible policy and administrative approaches while taking into account both external and internal needs and constraints. We can argue that from a more evolutionary perspective:

- *State capacity* is the overall capacity of the government to implement theoretically sound or ideal-type development strategies. It is embedded in the political and economic legitimacy (determined by external and internal constraints) of government – or “policy space” – to intervene through specific means (e.g., regulatory vs. horizontal vs. targeted policies) in the private sector activities and real economy.
- *Policy capacity* is the ability of the political system to compromise – via policy debate and interest coordination routines – on the best possible and realistic approach to technological and economic development. It is embedded in types of interactions and coordination mechanisms both within the politico-administrative

system (how is it structured, regulated, steered) and in state-market interactions (what types of interactions are predominant and accepted).

- *Administrative capacity* is the ability of the political and administrative system to implement and carry out strategic policy choices as intended. It is embedded in the organizational routines of the bureaucracy (organizational, personnel, motivation, and performance management routines) and in the kinds of skills these practices create (generalist/managerial vs. technology-specific skills).

3. State capacities for SS in CEE

3.1. SS and state capacities

SS is based on market-based determination of economic and technological development trajectories and it rationalizes proactive government policies in very specific conditions (Foray, David, and Hall 2011). SS has been developed for tackling the challenges faced by relatively developed economies (productivity gap between the US and Europe, R&D specialization in Europe – Foray, David, and Hall 2009, 2011; OECD 2013). At the same time, as an *ex-ante* conditionality for the EU regional and cohesion policy, SS has also become explicitly directed at less developed regions.

McCann and Ortega-Argiles (2013) argue that shifting SS from a spatial sectoral to place-based regional policy approach requires SS to be re-conceptualized from the “entrepreneurial search” in “relevant size domains” characterized by “connectedness” toward more policy-initiated entrepreneurial discovery in regionally “connected” activities/sectors/industries characterized by “technological relatedness,” or potential for “specialized diversification.” This shift transforms entrepreneurial search/discovery from a mostly self-, or market-organizing into a policy-initiated process and brings to policy focus regional differences. SS should provide mid-term policy rationales given the specific economic capabilities of “knowledge regions” vs. “industrial production zones” vs. “non-science and technology driven regions” (see OECD 2011). Thus, not all regions should act as knowledge regions and emphasize high-tech RDI strategies and policies.

By looking at state capacities as routines in the context of economic and cohesion policies in CEE, we can add further implications. On the level of *state capacity* SS as a EU conditionality simplifies the political legitimization of a more targeted, or new industrial policy type approach. The significance of the EU’s regional and cohesion funds for the CEE economies and the Europe 2020 rhetoric as a whole create “policy space” for these new routines, even if domestic politics would predict different approaches. Yet, as SS is strongly legitimized through the EU innovation rhetoric that over-emphasizes the high-tech and RDI elements, how different economies and regions understand innovation also affects how broad is the exact policy space and whether the high-tech biased and innovation-driven understanding of SS is in fact suitable for particular region or country.

OECD regional policy analyses (OECD 2011), the *EU Innovation Scoreboard* and the *EU Regional Innovation Scoreboard* show that there are only few regions in CEE that are similar to developed or “knowledge regions.” Most CEE regions and countries are either “modest” or “moderate” innovators (Estonia and Slovenia as single national entities are “innovation followers”) with predominantly “de-industrializing” or “primary-sector intensive” regions (the Czech Republic is here an outlier as it has strong capital region categorized as “knowledge-intensive region”).

According to McCann and Ortiga-Argiles (2013), middle-level regions (“industrial production zones” or “manufacturing regions”) could benefit the most from SS strategies through more targeted education and training programs, and also through better designed applied research policies and technological adoption and diffusion activities (especially adopting ICT in manufacturing sector). At the same time, these regions have often developed through specific strategies of foreign-owned companies and the leading companies and sectors often form detached enclaves that are difficult to link-up with other actors (Myant and Drahoukoupil 2012; Reinert and Kattel 2014). In most lagging or “isolated” regions, SS would probably have little impact due to the limited size and scale effects (McCann and Ortiga-Argiles 2013) and initiating entrepreneurial discovery and other SS processes from scratch would require complex policy experimentation for which most SS guidelines inevitably offer little advice.

On the levels of *policy and administrative capacities*, we can see that industrial and RDI policy routines have been traditionally relatively centralized in CEE and there has been little regional and sectoral focus (Technopolis 2006; Charles, Gross, and Bachtler 2012). Further, while in some countries (Poland, Czech Republic, Hungary, Slovakia), the EU regional and cohesion policies have at least formally clear regional focus (existence of more than one NUTS2 region), in other countries (the Baltic States and to some extent also in Slovenia), these policies are both determined and implemented through national planning. If these policy routines persist, applying the regional specialization logic on the national level may pose both theoretical and political challenges in finding a balance between two policy logics: leveraging current comparative advantages and anticipating the future developments as part of long-term national strategies (see also Lin and Chang 2009).

We can phrase a tentative *capacity paradox*: while in developed regions, SS and entrepreneurial discovery function as self-organizing feedback mechanisms for improving development strategies, in most CEE regions, these feedback processes could be even more informative, but they may have to be initiated by policy makers. This increases the likelihood of SS being carried out through existing policy making and implementation routines, which are rather specific in CEE.

3.2. *Legacies of state capacities in CEE*

Over the last two decades, all CEE economies have lived through two narratives of economic policy thinking that formed into broad policy rhetoric, explicit conditionalities for joining international organizations (WTO, EU), and resulted in specific domestic policy and administrative routines dependent on how different economies accepted these narratives.

First, Washington Consensus reforms emphasized macroeconomic reforms and in particular FDI-led restructuring that was supposed to also upgrade RDI systems. Second, Europeanization often meant bias toward high-tech oriented RDI policies with specific policy and administrative routines. At the same time, CEE economies departed in the 1990s from different political, economic and industrial contexts and deviated from the general narratives in terms of how much these ideas were explicitly followed and implemented.

Török (2007) argues that while initially almost all countries followed the Washington Consensus rhetoric, also industrial policy concerns (maintaining the capacities of old industries given their importance for FDI, employment, and export) emerged in early 1990s almost in all economies, except for the Baltic States. Thus, the contextual

economic and political specificities resulted also in different *actual* policy and administrative routines.

Bohle and Greskovits (2012) show how mostly political drivers established the pure “neoliberal” (Baltic States), “embedded neoliberal” (the Visegrad countries), and “neo-corporatist” (Slovenia) political regimes in CEE. They also show how political and economic integration with the EU and with global production and innovation networks have since the late 1990s gradually reduced systemic differences between these regimes leading to gradual convergence in policy rhetoric and broad strategic orientation (also Myant and Drahokoupil 2012; Stanojevic 2014).

In general, while economic drivers (domestic industrial and financial structure, patterns of integration with global networks) and international political integration may frame the specific policy space for policy options (for example, how much industrial and innovation policy is demanded and allowed for), these drivers do not determine how the implementation of these policies should be organized. Thus, by 2000s, the Baltic States had almost no conscious industrial and innovation policy (other than deregulation) while Slovenia and Visegrad countries had developed some forms of explicit industrial and also active FDI policies (especially the Visegrad countries) (Havlik 2005; Török 2007; Bohle and Greskovits 2012). Yet, Radosevic and Reid (2006) show that even within these broad typologies, the organization of policies (types of priorities, means of implementation) differed quite significantly (also Piech and Radosevic 2006).

Thus, we can somewhat broadly taxonomize the CEE economies within broad converging trends by the end of 2000s as follows: first, the Baltic states show strong signs of “enclave economies” (R&D sector oriented toward international excellence; innovation and in particular production activities specialized into medium tech activities; and both sectors showing very low domestic linkages); second, the Visegrad economies are characterized by production networks that resemble “hub-and-spoke networks” where the hub is played by various German or similar large companies, and the R&D systems are not typically part of these networks; third, Slovenia has had strongest orientation toward domestic actors and the RDI system exhibits strong elements of a “negotiated system” with frailties emerging due the crisis and convergence with the EU policies.

More recent studies show (Karo and Kattel 2010; Karo and Looga 2014; Suurna and Kattel 2010) that the EU has had since the mid-2000s particularly strong converging effects both on the level of policy space and policy choices and also on the institutional aspects of these policies. The accession to the EU brought common rules and regulations regarding industrial policy (state aid, etc.), financial regulation, etc. and the EU started to co-finance important parts of the innovation policy in CEE. Thus, there has been certain convergence on similar policy and administrative routines across CEE:

- Industrial and innovation policy strategies and policy mixes have tended to become increasingly horizontal and (over-)emphasize similar high-technology fields (ICT, bio- and nanotechnologies);
- Financial structures are dominated by foreign-owned banks in many economies; this CEE peculiarity provided for relative stability during the early stages of the recent crisis, but also means that investment into industrial restructuring and RDI system upgrading has become predominantly a public sector task (as companies lack private credit for long-term R&D projects and/or they concentrate more on shorter term experimental development activities);

- Policy making networks have become increasingly international as policy makers need to link regional, national, and international demands into coherent policies (from fiscal governance to RDI); in this context, the domestic state-business ties and public–private interaction have become more fragmented and triple-helix coordination failures are defined as a common challenge across CEE;
- Policy making and implementation routines have evolved though dual specialization further amplifying triple-helix failures: (a) excellence-oriented science policies are being managed through different routines and networks than enterprise-oriented industrial and innovation policies; (b) policy making and implementation have been separated through the creation of generic innovation agencies (for the implementation of the EU policies) that lack technology- and industry-specific policy approaches to gather feedback from the market and inform policy makers; and
- Policy implementation routines have been increasingly organized through managerial principles (recruitment practices, performance management and accountability systems) that incentivize and reward cost-efficiency and absorptive capacity (speed of absorbing the EU funds as a measure of performance) and de-incentivize policy experimentation and risk-taking.

These generic routines inevitably fit differently into specific countries given their patterns of economic and financial integration with global networks. The design and implementation of the CEE SS strategies for 2014–2020 seems to be taking place in a context of externally and politically induced convergence of policy and administrative routines.

4. Design and management of SS policies in CEE

In this section, we analyze how have the CEE economies designed SS strategies (still ongoing in most countries) and what policy and administrative challenges seem to be emerging. We look at three country groups – the Baltic States, Slovenia, the Visegrad countries – that should represent different politico–economic regimes and varieties of state, policy, and administrative routines in CEE. We rely on existing literature, reports by national experts published through Erawatch network, and peer-review reports and data of the *Smart Specialization Platform*.

4.1. SS in the Baltic States

The Baltic States were the strongest followers of the “no industrial policy” rhetoric of the Washington Consensus in the 1990s and this made it also easier to introduce the EU rhetoric of horizontal innovation policy in the 2000s. Within the Baltic States, Estonia is considered the leader of the pack (Karo 2011). The following discussion is based on the case study of Estonia.²

The Estonian RDI policy has been characterized by high-technology bias in policy strategies, mostly horizontal policy measures, and fragmentation of R&D and innovation policy (with clear emphasis on the former). Weak private sector demand for science and applied research has resulted in relatively centralized and state-led R&D and innovation policy where private demand has not been clearly expressed, organized, and linked to policy making. As Estonia is a single EU region, there has been no significant regional industrial or innovation policy.

The Baltic way of managing the recent financial crisis – applying in parallel austerity and stimulating the economy through the EU regional policy and cohesion funds (Kattel and Raudla 2013) – made RDI activities even more state-centric (as most basic and applied research is funded by the state). This further institutionalized existing policy routines that have carried over into the SS strategy for 2014–2020.

First, as SS is strongly linked to innovation in the EU rhetoric and innovation has had a narrow high-tech interpretation in Estonia, the design and implementation of the strategy has become the task for Ministry of Education and Research and Ministry of Economic Affairs and Communications with limited or no substantive participation of other ministries and regional actors. Thus, currently SS strategy covers only small part of the EU RDI funding that these ministries manage. There has been only one regional attempt (Tartu region) to conduct a regional SS analysis. It was led by academia and regional science park, but led to limited policy input due to small size of the region (University of Tartu 2013).

Second, also the process of entrepreneurial discovery has been relatively state-led. Although the ministries delegated the organization and implementation of these processes to the Estonian Development Fund that employs ex-entrepreneurs, it has analyzed national specializations without much emphasis on sectoral differences (in RDI-intensity, integration patterns with global networks, access to finance). As OECD (2013) has shown that Estonian science system is too small to formally estimate specializations that have critical mass in the broader EU, thus Estonian Development Fund (2013) has mostly analyzed private sector expectations for the future. Yet, there is no transparent system for public consultation with industry associations (and these have relatively weak capabilities) and consultations are mostly limited to ex-post legitimization of pre-defined priorities (horizontal application of ICT, health technologies and services, and resource utilization). The task of figuring out how to bring together the academic and private sector capabilities to support SS has been left for the design and implementation of specific policy measures. This will be again constrained by the EU financial rules and designed and implemented by the civil servants in relevant ministries and agencies.

In sum, although the economic crisis shifted the general attitude in Estonia and more selective and targeted policies are more legitimate than before, and also SS seems to have high legitimacy, the main challenges of SS are related to policy and administrative routines inherited from the previous decades: RDI innovation policy is highly fragmented and does not cover all potential ministries and resources; there is very little sectoral analytical intelligence (lack of personnel, resources, and practices) in ministries and RDI agencies; the routines of policy design are too state-led and there are no established arenas for facilitating entrepreneurial discovery and state-business-academia coordination. So far, there have been no conscious structural reforms of policy making and administrative routines that SS seems to presume.

4.2. SS in Slovenia

The neo-corporatist characteristics of Slovenia have implied more negotiated routines of interest coordination among state and market actors for design and implementation of economic policies. The Slovenian RDI system has historically performed much closer to the EU ideal type, being almost opposite to the Baltic model (Myant and Drahokoupil 2012). Slovenian private sector has been historically the most active in CEE in financing and performing especially applied R&D (Karo and Looga 2014).

Bucar and Stare (2002) argue that EU-initiated horizontal and high-tech oriented RDI policy initiatives were relatively unimportant for the industry that had established its own strategic routines. Still, through the EU accession process, the RDI policy has grown increasingly horizontal with strong tendencies to adopt the EU's policy and administrative approaches and the governance system has gone through several reforms that seem to conflict with the neo-corporatist routines (Karo and Looga 2014).

The coincidence of planning for the new EU financial period and the peak of the economic and banking crisis has further reduced the coherence of the long-term RDI policy planning (next to short-term crisis management). Udovic and Bucar (2013) highlight how both public higher education and R&D funding have been significantly cut and more emphasis has been given to shorter term policy measures (export-support schemes, support for industries in difficulties). They also note significant shifts in the routines of policy making. First, while previously Slovenia followed almost two parallel strategic processes in economic and industrial policy – national strategies of the domestic negotiated system and the EU funding strategies (Karo and Looga 2014) – it is now recognized that Slovenia will have to rely mostly on the EU funding for economic development activities as both public and private sector are exiting the crisis with weaker investment capabilities. Second, while the previous strategies and policy initiatives were designed through neo-corporatists routines – for example, policy analysis was led by non-political Institute for Macroeconomic Analysis and Development with strong formal input from stakeholder associations – Udovic and Bucar (2013) claim that the current national strategies (Slovenian Development Strategy 2014–2020, Slovenian Industrial Policy) were designed within closed policy making processes of ministries and there has been little coordination with the earlier Research and Innovation Strategy for Slovenia 2011–2020. Third, they claim that recent administrative reforms – most importantly shifting technology policy from the ministry in charge of higher education and research to the ministry in charge of economic development, and merger of different recently created RDI agencies (see also Karo and Looga 2014) – have broken the fragile linkages between higher education, science, and industry necessary for policy coordination.

Drafting the SS strategy seems to depart from these newly emerging and crisis-induced routines. Given the importance of managing the economic and banking crisis, the preparation of SS strategy was significantly delayed. In the early 2013, the Slovenian Chamber of Commerce, the Ministry of Economic Development and Technology, and the Ministry of Education, Science, and Sports were leading the SS processes and facilitation of the entrepreneurial discovery (for example, the Slovenian Competence Centers provided bottom-up input to these processes by organizing self-assessments and analysis³). Yet, Udovic and Bucar (2013) claim that many original principles of the SS strategy – to focus on RDI policy as opposed to broader linkages between different policy domains; to rely on existing centers of excellence, competence, and development centers for specialization and prioritization – were made by ministries in closed policy making processes. As of 2014, the Government Office for Development and Cohesion Policy has taken over the coordination, design, and implementation of the SS strategy to give it more political and strategic importance and speedup the process as a whole.⁴ This seems to be an even further centralization and destabilization of traditional public–private coordination routines and, as in Estonia, there has been nation-level bias in these processes.

4.3. SS in the Visegrad countries

The Visegrad countries have had more complex governance arrangements in economic policy as they have formally stronger regional levels of governance (more than one NUTS2 region). At the same time, regional RDI policy has not been an explicit norm. Thus, these countries need to design and implement economic policies by coordinating national and regional strategies and actions plans. This raises several policy and administrative issues affecting RDI policy making.

First, the explicit regional focus of cohesion policies and SS has revealed strong regional disparities not only in terms of economic specialization and capabilities, but also in terms of how different regions have linked-up with global innovation and production networks. These specializations have strong historical legacies pre-dating the 1990s as the socialist industrial capabilities and linkages to Western production networks had to be maintained (for employment, FDI, export performance) through relatively conscious industrial policy efforts (Török 2007). Thus, the Visegrad countries have combined neoliberal rhetoric and “hidden” industrial policy. Myant and Drahekoupil (2012) and Bohle and Greskovitz (2012) show that these legacies have carried over to the present times as well and require explicit strategies for industrial upgrading.

Second, while the regional levels of governance could give better arena for SS and provide space for division of tasks between national and regional policies, they also bring out the differences in policy and administrative routines between different regions (for example, South Moravia is considered as the only region with functioning routines of RDI policy making in the Czech Republic – see Srholec 2013). Thus, RDI policy – especially regarding basic and applied R&D (vs. experimental development) – has always had strong state-led element both in terms of finance and strong role of the state in performing R&D activities. There seem to be weak policy routines for public–private interest coordination related to RDI. By now, in all countries, the main RDI policy challenge is the modernization of the science systems to move from extensive institutional funding and institutes of academies of sciences as the main R&D performers toward more competitive funding and less state-centered structure of research performance (Balaz 2013; Döry and Havas 2013; Klineciewicz 2013; Srholec 2013).

The processes of SS seem to be following similar routines, as there have been no explicit governance reforms to redefine them. The greatest outlier here is the Czech Republic that has industrially the most advanced and balanced regional setting (OECD 2011). The Czech national SS strategy needs to be complemented by 14 regional strategies and implementation procedures. But, Srholec (2013) argues that only the regions of South Moravia and Prague have followed the bottom-up processes as these regions have had either older routines of regional RDI policies (in South Moravia), or strong industrial partners (Prague) to deploy bottom-up processes. Other regions have been trying to emulate the institutional and administrative initiatives of these two regions, but they lack policy making and public–private coordination routines to create similar bottom-up dynamics. Thus, these attempts have still led to more top-down approaches that do not necessarily contribute to new policy intelligence and feedback, as most regions tend to end-up with similar broad priorities. The Czech Republic experience seems to show how the policy routines for bottom-up entrepreneurial discovery processes co-evolve with private sector capabilities and similar outcomes may not be achieved by institutional copying even between regions within the same country. The case of Poland, the most state-centered RDI system of the Visegrad countries, seems to confirm these patterns as well (see Klineciewicz (2013)).

4.4. *Building capacities for SS policies in CEE*

SS as a EU conditionality-based policy concept provides legitimacy and creates policy space for more focused and targeted policies in CEE. This has happened faster and easier than domestic political processes could achieve in most cases. As the concept has entered the policy arena through relatively strong rhetoric of innovation and with its own budget, but limited guidance for practical policy design and implementation, the concept itself has taken different forms across CEE and deviated from the original concept.

First, SS seems to be interpreted in a much narrower perspective than expected by the EU approach: the legacies of state-led RDI policies with high-tech bias have limited the concept mostly to ministries and agencies in charge of higher education, research, and innovation (supported by planning agencies for the EU regional and cohesion policy). Second, it has become process mostly led by the central governments, even in countries with explicit regional levels of governance. While the concept of SS is about leveraging regionally specific capabilities and advantages that could also take the form of regional industrial policies, the tendency to organize the entrepreneurial discovery initiatives at the national level seems to lead toward more generic innovation policy rhetoric and rationales. This reduces the potential policy feedback effects that SS could offer. Third, as the concept needs to be deployed within the broader context of austerity, planning for the EU 2014–2020 financial period, and combining the Europe 2020 goals and national and regional policy needs (and finances), in most CEE countries SS has been transforming from smart to “fast” specialization. Thus, RDI policies have become even more centralized and state-led as policy makers have short deadlines to experiment with different policy design, coordination, and implementation approaches.

The 2008+ crisis has had different impacts on policy making routines in CEE. In Baltic States, crisis management has reinforced and legitimized even more the existing state-led and centralized policy and administrative routines. In Slovenia, the crisis has destabilized and centralized existing routines. In Visegrad, the crisis seems to have had no discernable impact on also relatively centralized RDI policy routines. Thus, in countries and regions that lack previously established policy and administrative routines for functional public–private coordination, sectoral (and regional) analysis and implementation of RDI policies – factors lacking in most CEE regions – SS processes seem to be shaped into forms fitting existing routines of state-led planning and top-down implementation.

Overall, we see several policy and administrative issues specific to CEE (not necessarily present as challenges in all economies and regions) that need to be tackled as they condition the usefulness of SS in actual policy making and implementation:

- (1) Strengthening the weak linkages within the economy (enhancing triple-helix coordination, linking R&D and industrial production networks, supporting horizontal diffusion of key enabling technologies) through public policies presupposes some sort of sectoral, activities, or value-chain-specific policy and administrative routines (both for developing analytical policy intelligence and for more immediate policy and administrative coordination). This seems to be a common governance weakness in most CEE regions. All-purpose research and innovation funding agencies implementing the EU funds through largely horizontal competitive bidding processes should become either more focused internally, or more specialized as a whole. In most CEE countries, recent reforms of RDI funding have taken a different direction.

- (2) SS processes – public–private coordination of entrepreneurial discovery – to inform above-discussed policies require *meso level* institutional thickness in the form of active industry, labor, and similar associations. This has not been the norm in more neoliberal CEE economies, and also in new and emerging technological domains. Consequently, such organizations or networks and their internal development should be actively supported and nurtured as part of SS strategies. Governments could fund analytical and strategic work by these organizations (procure specific analyses, etc.), initiate joint strategic work between associations of converging industries, and/or give them gradually more direct roles in policy design processes (for example, delegating-out parts of policy design processes, or granting them certain veto powers regarding policy planning and evaluation; but only once these networks seem to be developing sufficient skills).
- (3) In particular, smaller CEE economies and regions suffer from small domestic markets with foreign finance dominating most key sectors. This creates relatively strong enclaves and often prevents domestic value-chain expansion and upgrading. To remedy this asymmetry for domestic producers, demand-side policies should be considered as part of SS policies (as envisioned also by SS policy guidelines). Given the existing legacies, this will require active development of policy and administrative routines via training, setting-up new coordination practices and experimental pilot exercises that help to build analytical competencies for understanding what types of instruments (procurement vs. standards) may work given the RDI characteristics in specific regions or economies.
- (4) The Europeanization of RDI policy has led in many CEE economies to large numbers of relatively small and overlapping policy instruments managed by different RDI agencies. This logic is particularly well suited for administrative routines based on performance management rewarding absorption capacity and administrative efficiency. SS policies should be managed through more flexible policy and administrative routines that allow for policy and administrative experimentation (and failures) and flexible public–private interactions (via more flexible budgets and financial regulations, and also via relatively broad outcome targets).

As SS is currently narrowed to RDI policy in CEE, there is a longer-term challenge to increase the policy space of SS and its potential impact on economic development. Within existing policy space and routines, CEE economies could gradually move from the high-tech bias toward broader view of innovation by building policy legitimacy and intelligence on so-called societal challenges based view of innovation (Weber and Rohrer 2012). This could help policy makers to integrate more finances and sectoral and activities-based intelligence into RDI policy.

5. Conclusions

SS is a EU policy concept that has established its own particular legitimacy and policy space in CEE. Yet, it presumes that governments and policies in these economies function quite similarly to more developed economies, or their capacities can be easily developed via institutional emulation. In this article, we have looked at state capacities as state, policy, and administrative routines: context-dependent processes with strong legacies that are difficult to successfully transform with outside ideas and solutions.

While SS as a policy approach argues for supporting and coordinating entrepreneurial discovery and bottom-up public–private coordination, we argue that if these routines are missing in specific regions and countries, it will take long time and require explicit domestic experimentation and learning for these routines to emerge. While the SS debates partly discuss how these routines are evolving in most developed countries and regions, it may be debatable whether these are the best and only benchmarks for CEE.

The new structural economics may offer a useful conceptual alternative as it concentrates on less developed economies and highlights how also more state-led processes could successfully inform policy making. New structural economics (Lin 2012) argues that economies, which are at lower stages of development, can and should target and emulate economies (their economic and industrial structure) somewhat, but not too far, ahead of their development stage. This seems to be inevitably a more top-down policy approach than found in SS discourse. The most recent East Asian success stories of structural transformation through well-targeted industrial policy seem to confirm this (Lin and Monga 2012). Yet, more recent analysis of East Asian innovation policy, especially in support of biotechnology (Wong 2011), shows these economies tend to use their old state, policy, and administrative routines also for advancing in new emerging industries where one would expect different logics of policy intervention.

Thus, country-specific routines tend to persist over decades and levels of development and cannot be radically changed in short time frames. Rather, development of state, policy, and administrative routines has to be driven by local experimentation in terms of what works or not. Thus, the analysis of policy and administrative routines should be endogenized into debates on SS (and other similar approaches) as these provide the imminent context where policy rationales are translated into concrete practices. Existing policy and administrative routines determine, at least partly, how policy makers in CEE understand SS and how it is translated into concrete implementation mechanisms (policy measures, legal documents, division of labor between and within ministries, agencies). In this article, we provided some tentative guidelines for gradually improving policy and administrative routines in support of SS in CEE.

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Notes

1. In this article, we limit our discussion to the CEE economies that entered the EU in 2004: Estonia, Latvia, Lithuania, Poland, Hungary, Czech Republic, Slovakia, and Slovenia.
2. The analysis is based on participant observations carried out in the framework of Innovation Policy Monitoring Programme of the Estonian Ministry of Education and Research (See: www.tips.ut.ee).
3. See article “Slovenian Competence Centers: A Tool for the Implementation of Smart Specialization Strategy.” Accessed May 15 2014. <http://www.sure.si/en/obvestila/item/153-kompetecni-centro-orodje-za-izvajanje-pametne-specializacije>.
4. See article “Smart Specialisation Strategy – platform for a new chapter for innovativeness, entrepreneurship, development, research and innovation development.” Accessed May 15 2014. http://www.svrk.gov.si/nc/en/media_room/news/article/1328/5730/. Also, see the EU peer-review process of Slovenian SS strategy. Accessed May 15 2014. <http://s3platform.jrc.ec.europa.eu/portoroz-may-2014>.

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