

# An Exploration of Recent Changes in European Regional Policy

Kumulative Habilitationsschrift

zur Erlangung der *venia legendi*

für das Fachgebiet

*Geographie*

an der Naturwissenschaftlichen Fakultät  
der Gottfried Wilhelm Leibniz Universität Hannover

vorgelegt im Februar 2018

von Dr. rer. nat. Henning Kroll

# *An Exploration of Recent Changes in European Regional Policy*

*cumulative habilitation dissertation*

*to obtain authorisation to teach*

*in the field of*

*Geography*

*at the Faculty of Natural Sciences*

*of the Gottfried Wilhelm Leibniz Universität Hannover*

*submitted in February 2018*

*by Dr. rer. nat. Henning Kroll*

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## 1. Introduction

Just like actors from the business sector, public research organisations or civil society, policy makers play a significant role in shaping the institutional and relational fabric of regions through individual and collective action (Cooke, 2004, Cooke, 2012; Smits, Kuhlmann, & Shapira, 2010). Like most other socio-economic processes that constitute institutions and shape social interaction, regional governance, policy and politics are multi-actor processes and subject to diverse influences and impulses from multiple, spatially referenced echelons of government (Asheim & Coenen, 2006; Koschatzky & Kroll, 2007, Koschatzky & Kroll, 2009).

Building on this premise, the following compilation of papers and book chapters develops a geographical perspective on recent events in European regional policy. More precisely, it outlines and reflects on the conceptual substance, practical implications and political repercussions of the European Commission's policy agenda for 'smart specialisation' (Foray et al., 2012).

Developed as a general framework of thought by Prof. Foray and others (Foray, David, & Hall, 2009) the notion of 'smart specialisation' is particular in that it met with close to immediate resonance in European policy circles, prompting an unusually brisk translation of nascent ideas into a policy agenda with far-reaching impact (Capello, 2014; Foray, David, & Hall, 2011). Before its conceptual substance was fully developed, 'smart specialisation' began to provide impulses to many regions' policy mixes and innovation systems (Foray, 2015; Kroll, 2015; McCann & Ortega-Argilés, 2016).

Against this background, this synopsis elaborates on recent changes in the overall system of European regional policy. Taking account of these changes' practical effects and implications from a conceptual perspective, it presents a contribution to the geographical literature at three levels.

*First*, by demonstrating that policy and policy making are central but often understudied components of the socio-economic fabric of regions (Cooke, 2004; Koschatzky & Kroll, 2007; Landabaso, 1997; Moodysson, Trippl, & Zukauskaite, 2016). At and from different spatial levels, policy enables, guides and restricts agency in the economy, the public sector and within civil society (Asheim, Boschma, & Cooke, 2011; Cooke, 2004; Tödtling & Trippl, 2005; Uyarra, 2007). Hence, no process of socioeconomic development in a particular locality can be understood without taking into account – among other aspects – the shaping force of policy (and politics) (Asheim, Coenen, Moodysson, & Vang, 2007; Camagni, Capello, & Lenzi, 2014; Capello, 2014; Cooke & Morgan, 1998; Kroll & Stahlecker, 2015).

*Second*, by illustrating that policy is in itself a relevant subject of geographic study as it is determined by spatial factors. Policy makers answer to constituencies within spatially delimited areas that feature particular endowments in terms of natural, social, financial, institutional and relational capital (Amin & Thrift, 1995; Bathelt & Glückler, 2011; Farole et al., 2010, Farole, Rodríguez-Pose, & Storper, 2010; Hassink, 2010; Isaksen, 2014, 2014; Isaksen & Jakobsen, 2016; Isaksen & Trippl, 2016; Martin & Sunley, 2006; Rodríguez-Pose, 2013). To no small extent, these endowments determine the available scope of policy actions or at least the benefit that local policy makers will draw from taking certain decisions (Barca, 2009; Landabaso, 2012, Landabaso, 2014; Martin & Trippl, 2014; Morgan, 2017).

*Third*, by analysing how smart specialisation efforts materialise in the existing fabric of multi-level governance (McCann & Ortega-Argilés, 2014), impacted by the benefits and challenges of organising policy processes on certain geographical scales (Uyarra, 2007). Beyond a mere study of policy itself, such analyses require reflections on the virtues of proximity, cross-regional relatedness and the possible beneficial effects of their combination. In short, they contribute to the existing debate on how economic development can best be furthered by interfacing physical and non-physical proximity (Asheim et al., 2007; Bathelt, Feldman, & Kogler, 2011; Bathelt, Malmberg, & Maskell, 2004; Boschma, 2005; Coenen, Moodysson, & Martin, 2015; Crescenzi & Rodríguez-Pose, 2011; Crevoisier & Jeannerat, 2009; Thissen, van Oort, Diodato, & Ruijs, 2013, Thissen, van Oort, Diodato, & Ruijs, 2014).

The remainder of this synopsis will begin with an outline of its overall conceptual ambition, adding further geographical references to those already cited in the individual contributions. As a foundation, it will introduce the *smart specialisation concept* by reflecting on its initial, motivating assumptions and, in the following, outline its practical repercussions in the policy domain. Subsequently, it will demonstrate how empirical insights from the implementation of the political *smart specialisation agenda* can be leveraged for the development of additional insights and conceptual advances in geographical study.

In the following, the ambitions and contributions of the compiled papers and book chapters will be outlined sequentially, providing a brief recapitulation of their content and, at the same time, positioning them in the overall framework of analysis developed above. After a concise outline of each contribution's distinctive message, each summary will therefore conclude with an elaboration on how the respective paper or book chapter contributes to the overall compilation.

Thus, this introductory synopsis will not merely provide a summary of content but at the same time prepare the ground for the overarching summary and conclusions presented at its end.

## 2. Conceptual Framework of Reference

### A Brief History of Smart Specialisation

The European Commission's policy agenda of 'smart specialisation' is at the same time a rare case of the direct transfer of academic thought into policy making and – from the perspective of geography – an example of "concept following policy".

Initially, the key notion of smart specialisation was conceived with a view to the global competitiveness of continents and nations. Seeking responses to the productivity gap between Europe and the United States, the 'Knowledge for Growth' expert group emphasised the need to depart from the practice of focusing on certain high-tech sectors and instead start to invest in the broad-based adaptation of productivity enhancing 'general purpose technologies' across various industries (Foray et al., 2009). Thus, the idea of 'application domains' at the intersection of sectors and technologies was conceived as the anchor notion of a new, alternative approach to industrial policy (Radošević, Curaj, Gheorghiu, Andreescu, & Wade, 2017). Moreover, the expert group argued that Europe's future growth would depend on its ability to (geographically) concentrate resources to develop 'general purpose technologies' while, in parallel, ensuring their (geographically) broad-based uptake across the European continent. The suitable positioning of specific locations in this overall framework, they argued, should not be imposed top-down, but explored and decided in local 'entrepreneurial discovery processes' within industry and beyond – as they can without external trigger be observed in economically successful regions (Foray et al., 2009; Foray, 2015).

At the same time, the European Commission's Directorate-General for Regional and Urban Policy had to acknowledge that the then strategic orientation of its policies was not delivering impact as planned (Mohl & Hagen, 2010). In general, it upheld that the 2007 shift in emphasis from infrastructure investment towards investments in regional innovation had been adequate and future oriented. At the same time, it was becoming obvious that too many supposedly 'innovation-oriented' interventions lacked a clear definition of purpose, strategic orientation or at least a relevant embedding in their regional context. As a result, their efficacy and socio-economic impact was suffering and, more and more commonly, the adequate allocation of structural funding was called into question (Reid, Komninos, Sanchez, & Tsanakas, 2012; Technopolis, Fraunhofer ISI, & UNU-MERIT, 2012). Seeking for new means to improve accountability while at the same time increasing policy impact, European policy makers established contact with the 'Knowledge for Growth' expert group (Foray et al., 2011), although, initially, this group's members had not even primarily developed their recommendations from a regional policy oriented perspective (Kroll, 2015).

Subsequently, a tight time schedule and the absence of suitable alternatives induced swift decisions to include basic principles of smart specialisation as criteria for budgetary allocations in regional policy. (Capello, 2014; Foray et al., 2011). More precisely, the Directorate-General for Regional and Urban Policy decided to compulsorily require all regions to develop ‘smart specialisation strategies’ in which they define a limited number of ‘techno-economic domains’ for future structural fund investment, based on localised ‘entrepreneurial discovery processes’. By means of an ‘ex-ante conditionality’, the disbursement of any structural funding was made conditional on regional governments’ engagement with the smart specialisation concept and their finding suitable ways to develop strategy document deemed acceptable by the European Commission (European Union, 2013).

Initially, neither the notion of ‘technological domains’ nor that of ‘entrepreneurial discovery processes’ were clearly defined in comprehensible, practically applicable terms. As long as they credibly followed a ‘bottom-up approach’ to priority definition, regions had a high degree of freedom in developing their own, place-based smart specialisation efforts. Despite the swift development of generic guidance documents (Foray et al., 2012) the drafting of smart specialisation strategies remained more often than not a process of experimentation and learning by doing that met with no small number of structural and situational obstacles at various levels (Iacobucci, 2014; Kroll, 2015).

Against this background, the coming years saw an increasing engagement of human geographers and regional economists including not least those who had worked on closely related issues in the past. From the 1990s onwards, a number of, partially quite advanced, approaches had been put forward (Asheim et al., 2007; Asheim et al., 2011) but – until 2013 – never been comprehensively taken up by regional policy or legislation. Hence, many researchers felt that the smart specialisation concept should be reconciled and integrated with existing approaches rather than to become yet another stand-alone theory (McCann & Ortega-Argilés, 2014; Morgan, 2015; Radošević et al., 2017).

Aware of this need for reflection, the European Commission’s launched internal and external efforts of conceptual reflection, resulting in practically oriented peer reviews on the ‘S3 Platform’ as well as an FP7 project bringing together various key actors from academia (Morgan et al., 2016).

### Main Tenets and Weaknesses of Smart Specialisation

In the following, it will be essential to differentiate between smart specialisation as an academic concept and smart specialisation as an established reality of policy making. To avoid confusion, this synopsis as much as most contributions of the compilation will tend to distinguish between the terms *smart specialisation concept* for the former and *smart specialisation agenda* for the latter.

Academically, a consistent regionalised concept of smart specialisation remains under development. That notwithstanding, the smart specialisation agenda and the ensuing development of regional smart specialisation strategies and related interventions have been a reality for more than five years. While the concept thus “follows policy”, its initial propositions have proven sound and fruitful enough to merit further investigation and conceptual improvement. Against that background, this compilation seeks to contribute to the smart specialisation concept by studying the smart specialisation agenda.

To do so, it appears worthwhile to revisit the main tenets of the initial smart specialisation concept, as proposed by the Knowledge for Growth expert group (Foray et al., 2009; Foray, 2015).

First, it maintains that investments in ‘general purpose technologies’ or their uptake are more relevant for the socioeconomic development of nations than selective support for high-tech sectors.

Second, it suggests that countries and supranational integration areas need to (geographically) concentrate their resources to build critical mass in developing technological capacity.

Third, it promotes the triggering of ‘entrepreneurial discovery processes’ as an approach to identify ways of matching technologies with suitable production activities in all regions.

While the first point derives from a discussion within economics, the second one largely restates findings long established in economic geography – i.e. the merits of clustering for leveraging creativity and competitive advantage (Bathelt et al., 2004; Crevoisier, 2004; Moulaert & Sekia, 2003; Porter, 1998, Porter, 2000). The last point, finally, is an interesting one, as it postulates that insights from business and innovation research can be translated into a spatial system of reference.

Conceptually, this approach is intriguing as it – consciously or unconsciously – confronts established tenets of economic development policies with more recently established findings from relational economic geography (Bathelt & Glückler, 2011; Boschma, 2005; Cooke, 2012; Crevoisier & Jeannerat, 2009; Yeung, 2005). In principle, it raises the interesting question how new interactions between regional actors can be enabled and triggered in such a way to not only improve the efficacy of regional policy design at the strategic level, but to actually carry political ambitions through into an effective support portfolio that induces more productive and future-oriented economic activities.

In practice, however, the nascent concept of smart specialisation was bound to fail in mastering this ambitious challenge up front, for the following reasons:

First, its lack of explicit consideration for the incompleteness and lack of technological capacity in many (if not the majority of) regional innovation systems – i.e. the prevalence of situations in which there are simply no capacities that could be concentrated to develop technologies,

Second, its lack of acknowledgement of the preconditions to trigger broad-based processes of ‘entrepreneurial discovery’ – i.e. the fact that a certain number of actors, relational and institutional thickness are required to allow such processes to happen and to produce a relevant outcome,

Third, its disregard for the multi-level, multi-actor nature of economic interactions as well as governance – i.e. its structural blindness to the challenges that arise from the spatial mismatch of natural processes of entrepreneurial discovery and those that policy would like to trigger,

Fourth, its continued emphasis on technology generation rather than socio-economic challenges. Despite later references to the broader notion of ‘place-based policies’ (Barca, 2009), much of the smart specialisation literature long failed to consider challenge-driven approaches in earnest.

Hence, the following work is based on the premise that the idea of translating and developing the initial smart specialisation concept into a regional one is in principle sound and resonates strongly with established findings in the geographical literature – both with regard to its general objectives and with regard to the approach it proposes for their territorially specific realisation. What it criticises, in contrast, is its lack of complexity and sensitivity to the actual diversity of place-based arrangements of actors, territorial resource endowments, local institutions and relational patterns (Capello & Kroll, 2016; Healy, 2017) – i.e. a lack of awareness that, in many regions, at least some of those relevant conditions are either missing or deficient.

On the one hand, prior research found that even as such well-conceived approaches to trigger economic development and transformation can only then become effective if certain minimum criteria are met with respect to the abovementioned dimensions (Amin & Thrift, 1995; Clark, Gertler, & Feldman, 2003; Cooke, 2007; Isaksen, 2014; Kristensen, Dubois, & Teräs, forthcoming; Kroll, 2015). On the other hand, no region is a precedence-free “terra nulla” in policy terms in which a generic strategy process could simply be started and become effective on demand (Landabaso, 1997; Tödtling & Trippel, 2005; Uyarra, 2007). To the contrary, it will meet with localised political “path dependencies” reflected in established habits, conventions and even institutions (Valdaliso et al., 2014; Coenen et al., 2015; Isaksen & Jakobsen, 2016; Isaksen & Trippel, 2016; Koschatzky, Kroll, Schnabl, & Stahlecker, 2017; Kroll, 2016; Moodysson et al., 2016; Morgan, 2017; Muller et al., 2017).

Different from much of the literature, therefore, the following contributions emphasise that a clear distinction needs to be made between the decision to adopt a conceptual notion for policy making and its actual taking shape in terms of new mixes of policy interventions – leave alone its becoming effective in terms of structural change to the socio-economic fabric of regions.

In this light, the following papers and book chapters explore the mutual interdependency of agency in the domains of regional policy, society, and industry – demonstrating that regional policy cannot adequately be described by a simplistic “policy cycle” of idea-strategy-implementation-evaluation (Lasswell, 1956). Instead, the author provides evidence how various factors intervene at different stages of the process, triggering deviations, feedback loops and setbacks. Furthermore, he outlines that many of these factors are either intrinsically spatial, come to play due to localised endowments or are moderated by matches and mismatches in the spatial anchoring of policy processes.

In short, the following papers seek to provide a summary of central lessons learned from the experience of transforming a conceptually nascent general idea into a rigorous policy prescription while – at the same time – requiring it to forcefully take a geographical turn.

Hence, key avenues of inquiry can be outlined as follows, reflecting five implicit hypotheses:

First, most regional economic systems are subject to strong path-dependencies (Coenen et al., 2015; Isaksen & Jakobsen, 2016; Isaksen & Trippel, 2016). The institutional and relational fabric within them has developed over a long period of time and will therefore not readily change in response to any new policy agenda, smart specialisation or not.

Second, the element through which the original smart specialisation agenda sought to effect change, technological development, is only one element in the complex socio-economic fabric of regions (Coenen et al., 2015; Cooke, 2004; Cooke & Morgan, 1998; Moulaert & Sekia, 2003). Hence, further aspects will have to be considered to trigger socio-economic transformation.

Third, regional policy itself is a complex, multi-level, path-dependent system (Uyarra, 2007; Valdaiso et al., 2014; Morgan, 2017). Hence, it is unlikely to automatically translate ideas or requirements imposed from higher levels into local action. Inevitably, perception biases, limits in administrative capacity and adverse political opportunities will play an inhibiting or at least moderating role (Kroll, 2016; Moodysson et al., 2016; Muscio et al., 2015, Muscio, Reid, & Rivera Leon, 2015).

Fourth, different regions naturally require different set-ups for smart specialisation processes to become effective. The consequences of known differences in actor, institutional and relational configuration in regions (Cooke, 2007; Landabaso, 1997; Tödtling & Trippel, 2005) have remained underexplored as the original smart specialisation agenda did not address them.

Finally, setting-up new ‘entrepreneurial discovery processes’ between policy, industry and society is a challenging task of reshaping local interactions (Iacobucci, 2014). Due to the complexity of factors triggering these exchanges, few governments found a simple solutions to handling such processes before the smart specialisation agenda – which will likely remain so (Kroll, 2015; Morgan, 2017).

Against this background, the work presented in the following focuses on exploring diverse regional governments’ dealings with smart specialisation related challenges. In doing so, observable effects of the smart specialisation agenda are taken as a field of learning to contribute towards clarifying and further developing the original concept. Importantly, this work does not attempt to judge the adequacy of either form or timeline of the political uptake of the concept which – at least at this point in time – has to be largely considered a *fait accompli*. Instead, it will compile insights from different efforts to summarise learnings and conclude by suggesting relevant elements of a more spatially conscious smart specialisation concept, insofar conceivable today.

### 3. Main Avenues of Analysis

In brief, each of the following contributions addresses a particular aspect or perspective of the implementation of smart specialisation policies and, in doing so, contributes to the overall findings summarised and consolidated in the concluding chapter.

The first contribution outlines the genesis of both the concept and the policy agenda of smart specialisation and positions the latter as a separate object of analysis.

**Kroll, H. (2015): Efforts to Implement Smart Specialisation in Practice - Leading Unlike Horses to the Water, *European Planning Studies*, 23, 10, 2079-2098. DOI: 10.1080/09654313.2014.1003036.**

*an abridged version of this analysis has subsequently been re-published as*

Kroll, H. (2017): The policy challenge in smart specialisation, A common approach meets European diversity.

In: Bachtler, J./Berkowitz, P./Hardy, S./Muravska, T. (eds.): EU Cohesion Policy.

Reassessing performance and direction. Abingdon: Routledge, 115-126.

This paper builds on the premise that, even if directly triggered by new academic concepts, changes in policy cannot be conceived as simple translations of academic thought into practice. Instead, their implementation remains highly contingent on Europe's diverse geographies of innovation and governance. Against this background, it analyses the following research questions:

“[T]o prepare the ground, it seeks to confirm whether there is indeed a persistent failure in achieving the RIS3 agenda's formally proclaimed objectives by (a) corroborating that the final RIS3 strategies, in particular for weaker regions, indeed still lack focus in terms of the number of stated priorities, (b) exploring to what extent the RIS3 agenda's main conceptual tenets have been understood in different places and thus stand a chance of being implemented.”

Secondly, it analyses where policy-makers come to a positive cost-benefit assessment of bottom-up RIS3 processes and which the motivating factors are for this appraisal”

As summarised in the paper, it “seeks to enrich the conceptual smart specialisation debate [and strengthen its] linkage to the increasing body of contributions on the practical RIS3 policy process”, by “introducing a governance-based approach to the interpretation of RIS3 outcomes.”

Methodologically, it draws on a quantitative analysis of survey data, complemented by insights from various interviews and in-depth discussions. Since 2013, the author conducted a Europe-wide survey of policy makers engaged with the smart specialisation agenda. Overall, this survey collected feedback from approximately half of all relevant strategic actors across the continent ( $n \approx 100$ ) and provides a recurring point of reference in this compilation. At the time of writing of this first paper, data from the first two survey cycles in 2013 and 2014 were ready for analysis.

According to the summary provided in its abstract, the paper “reflects on the implementation of the RIS3 policy agenda [and] underlines that Europe's diverse pattern of institutional arrangements poses locally contingent policy challenges in which regional governance capacities are at least as important an issue as techno-economic potentials. In detail, it demonstrates how Southern Europe profited from novel practices while Eastern Europe had to invest substantially to change existing routines.” Concluding, it argues that the main merit of RIS3 processes may, initially, have laid in their contribution to changing routines and practices of governance even if those, for the time being, remained without measurable direct effects on the pattern of policy interventions.

In the context of the overall compilation, the first paper empirically corroborates two of the main premises put forward above: First, that policy and policy making is a central, yet often understudied component of the socio-economic fabric of regions. Second, that regional policy is an interesting subject of geographic study as, in itself, it is influenced by multiple, spatially contingent factors.

The second contribution, editorial to a special issue that the author co-edited, sums up experiences with the smart specialisation agenda under different regional framework conditions.

Capello, R./Kroll, H. (eds.) (2016): Special Issue: Regional Innovation Strategies 3 (RIS3):  
From Concept to Applications, *European Planning Studies*, 24, 8.

**introductory paper: Capello, R./Kroll, H. (2016):**

**From theory to practice in smart specialisation strategy: emerging limits and possible future trajectories,**  
***European Planning Studies*, 24, 1393-1406. DOI:10.1080/09654313.2016.1156058**

*This special issue has subsequently been selected for re-publication in book format as*

Capello, R./Kroll, H. (eds.) (2018): *Regional Innovation Strategies 3 (RIS3)*. Abingdon: Routledge.

As an introductory paper to a special issue, this contribution builds on the premise that while the smart specialisation agenda has met with a number of challenges the return to a space-blind or purely redistributive approach cannot be an alternative. Against this background, it elaborates on various bottlenecks, emphasising that they do not question the utility of the concept per se.

First, it identifies limits imposed by the “real economy” (Landabaso, 2014), i.e. such related to the absence of any innovative capacity on which the region could specialise, limits to diversification in the face of regional lock-ins and sectoral path dependence, or, to the contrary, limits to specialisation in a situation where diversity has been a source of success in the past or “following technological fashions” has been an established practice for long.

Second, it highlights limits imposed by the set-up policy and governance, i.e. such related to a lack of match between functional and political-administrative regions, a lack of political inclination to permit or support bottom-up, participative processes, a lack of administrative capability to design and implement strategic regional innovation policies and, finally, a lack of capability to engage actively in processes of regional entrepreneurial discovery.

Although not technically an editorial, the paper prepares findings to be detailed in subsequent individual contributions, rather than presenting a self-standing empirical analysis. By and large, these following papers pursue case study approaches informed by in-depth qualitative data collection or, in part, in that sense quasi-ethnographic approaches that they were written by actors continuously involved (yet not directly responsible for) the processes in specific regions or small nations.

According to the summary provided in its abstract, the paper emphasises that “the smart specialisation strategy is now a reality [and] first evaluation studies have been launched with the aim to assess the consistency of the concept, once moving from the design (theory) to the implementation phase (practice). From these first evaluation exercises, strengths and weaknesses emerge in the way the smart specialisation strategy has been conceived that leads to reflections on its possible future adjustment trends. The paper highlights emerging bottlenecks (e.g. the lack of local pre-conditions in the local economy and limits of governance) as well as possible future trajectories to overcome such bottlenecks, like the shift from compulsory to voluntary RIS, and from industry-focused to [genuinely] territorial development strategies.”

In the context of the overall compilation, the second paper outlines the double challenge that the spatial diversity in starting conditions as much as the geographies of innovation and governance themselves pose to the fruitful implementation of smart specialisation strategies. Against this background, it emphasises that while the smart specialisation agenda is “a good starting point”, some rethinking of its design would be welcome in light of the primary policy goals to be achieved through its implementation. Furthermore, it emphasises that future European regional policy should contribute to overcoming long-standing tensions between efficiency and equity or, in policy terms, between competitiveness and cohesion. Without directly stating how, it suggests that adapting the smart specialisation approach to the diversity of geographical realities could have that potential.

The third contribution, as part of the abovementioned special issue, analyses different ways in which the smart specialisation agenda has been received and implemented in German federal states.

**Kroll, H./Böke, I./Schiller, D./Stahlecker, T. (2016): Bringing owls to Athens?  
The transformative potential of RIS3 for innovation policy in Germany's Federal States,  
European Planning Studies, 24, 1459-1477. DOI:10.1080/09654313.2016.1159666**

As a special issue paper, this contribution outlines how not only the absence but also the presence of established institutions, regulation and administrative conventions can have a detrimental effect on the localised implementation of smart specialisation principles.

It points out that the smart specialisation agenda brings four main challenges:

- to establish an administrative process allowing governments to take a proactive role in defining strategies and to involve stakeholders in 'entrepreneurial discovery',
- to identify and involve additional business actors and external experts who can generate visions of regional economic transformation in these processes,
- to turn away from prestige projects in the high-tech field, embrace the concept of 'key enabling technologies', and take an applied, market-oriented perspective,
- to accept risk-taking in support policy and quasi-entrepreneurially take binding decisions that commit resources to some well-justified fields of support.

On that basis, it identifies four main research questions:

- has the administrative process changed in any notable and/or lasting manner?
- is there evidence that the circle of stakeholders consulted has actually been extended?
- to what extent has the thrust of regional policy been re-focused on cross-innovation?
- to what extent have any binding decisions for future support policy been taken

Methodologically, it draws on an in-depth case study approach based on several personal and/or phone interviews complemented by extensive desk research of recent policy documents produced by the three regional governments under study. Furthermore, it incorporates insights from earlier studies on the relevant regions of reference.

According to the summary provided in its abstract the paper "reports on the impact of smart specialisation policies in an economically already well-developed and politically experienced environment. Arguably, German regions were quite experienced with strategic innovation policy long before the ex-ante conditionality was imposed [so that] their first reaction to it was accordingly reserved. Nonetheless, our case studies illustrate that the process related to the development of regional innovation strategies has in many German regions led to advances in methodology as well as improved communication and coordination in polities where information failures constitute a relevant challenge. Accordingly, a number of key challenges remain, in part related to many German regions' understanding of their own mandate within the country's multi-level governance system."

In the context of the overall compilation, this third contribution clarifies and substantiates the notable steps lying between the central definition of requirements, regional strategy definition and actual policy implementation by empirical evidence, thus questioning the simplistic notion of somehow resolving all-in-one by one single 'entrepreneurial process of discovery'. It illustrates how processes of strategy definition can in themselves be deficient and, in any case, do not by themselves guarantee the consequential implementation of new support measures – already pointing toward various intervening factors, which can block the process at various stages.

The fourth contribution explores possible reasons why even leading regions in Germany have only adopted the smart specialisation agenda gradually and at times haltingly.

**Kroll, H. (2017): Smart Specialisation Policy in an Economically Well-Developed, Multi-Level Governance System. In: Radosevic, S./Andreescu, L./Wade, I./Roman, A. (eds.): Advances in the Theory of Smart Specialisation. Elsevier: Amsterdam.**

Building on insights from the third contribution but substantially restructuring and complementing its argument for another publication, this book chapter builds on the premise that whether the suggestions of the smart specialisation agenda are “considered in practice does not only depend on capacities but [also] on political considerations.” Taking note that German regions have not fully taken advantage of smart specialisation, it hypothesises that this is largely because the perceived relation between required effort and expected benefit was not considered favourable. Hence, it explores which socio-economic and political circumstances may have motivated that assessment.

Methodologically, it starts from a conceptual review of earlier literature on regional governance to then turn to an in-depth case study approach based on several personal and/or phone interviews as well as an extensive review of policy documents. Furthermore, it incorporates insights from earlier (yet recent) empirical studies on the particular regions under study.

In light of the above said, the case studies consider economic size and entrepreneurial dynamics, nature and complexity of regional governance and political culture and experience as relevant determinants or moderators of change induced by the smart specialisation agenda.

Against this background, they explore three dimensions of resulting change: temporary changes in the organised exchange between industry, policy and society (‘entrepreneurial discovery processes’); sustainable changes in the regional governance system; and changes in political culture.

According to the “academic and policy highlights” provided as an introduction to the book chapter, this qualitative analysis finds that all three possible determinants or moderating factors considered “matter for the uptake of smart specialisation policies: economic size, multilevel governance framework, and political culture.”

For the further development of the smart specialisation agenda, it therefore concludes that “specificities of [existing] governance frameworks and political cultures need to be taken into account before smart specialisation policies are locally promoted.” while, at the same time, remaining optimistic that “misconceptions can be overcome through active exchanges between agenda promoters and local policy makers to identify feasible options.”

Furthermore, and in line with the above contributions, the chapter underlines that “smart specialisation policies harbour the potential to reorient existing policies in the face of the new challenges confronting Germany’s economy”. Despite having identified a number of possible reasons for German regions’ initial reluctance to engage with the new policy agenda, it therefore maintains that such an engagement should eventually take place.

Among all contributions, this book chapter provides the deepest engagement with the political dimension of the abovementioned bottlenecks in the implementation of the smart specialisation agenda. It explores spatially determined limitations related not only to economic adequacy or administrative capacity but also to political opportunity. In this area, it takes up some earlier findings, improving their theoretical positioning and contextualisation, not least with a view to the spatial dimension. From an overall perspective, it delivers the clear message that the both the geography of constituencies and the relative spatial arrangement of multi-level governance play a central role for the successful implementation of strategies in European regional policy.

The fifth contribution elaborates on the specific challenges that emerge in peripheral, less developed regions with respect to 'entrepreneurial discovery processes' and interregional collaboration.

**Kroll, H. (2017): The Challenge of Smart Specialisation in less favoured Regions  
(= Working Papers Firms and Region Nr. R1/2017). Karlsruhe: Fraunhofer ISI.**

*To be published in adapted form as:*

**Kroll, H. (forthcoming): Smart Specialisation in Economically and Institutionally Less Favoured Regions  
In: Kristensen, I.; Dubois, A.; Teräs, J. (eds.) (forthcoming): 'Strategic Approaches to Regional Development:  
Smart Experimentation in Less-Favoured Regions', Routledge: Oxford.**

As a self-standing contribution, this book chapter starts from the premise that many implicit assumptions taken in the initial smart specialisation approach do not sufficiently hold in many peripheral and less developed regions to readily enable the set-up of effective bottom-up processes of 'entrepreneurial discovery'. While this issue was already touched upon in the second contribution, this book chapter explores it in more detail through the following research questions:

First, whether the perception of the relevance and efficacy of the smart specialisation agenda differs between less favoured and other regions. Second, whether there is any evidence of specific particularities of processes of entrepreneurial discovery in less favoured regions (with a view to application orientation, emphasis on interregional linkages or an entrepreneurial role taken by public research actors). Third, whether policy makers in less favoured regions see different thematic potentials in entrepreneurial processes of discovery than those in others.

Methodologically, it starts from a conceptual review of earlier literature on regional innovation systems to then turn towards a targeted analysis of survey data. With regard to the latter, it draws on more recent rounds (2015 and 2016) of the Europe-wide survey that was already mentioned and described as the empirical basis of the first paper. Except for some minor adaptations to the questionnaire and a regular update of the list of potential respondents, the empirical substance of this policy maker survey had not changed since its first rounds in 2013 and 2014.

According to its summary and conclusions, the paper finds that "all place-based particularities in less favoured regions' programme design should be considered welcome, as long as they help to dynamise socio-economic development in the region and to tackle societal challenges". However, it emphasises that while, in principle, smart specialisation harbours "substantial potential" for less developed regions, this remains to be fully uncovered. For example, the analysis finds that the implementation of new 'entrepreneurial discovery processes' and following intensified interregional collaboration can run "counter to many established and for different reasons by some also appreciated practices". Hence, it suggests that "perseverance and gradual pursuit will be needed to achieve progress" both with regard to interregional collaboration and with regard to ensuring "an involvement of those businesses and representatives of civil society that actually matter for local development." In summary, it concludes that "the key to genuinely smart specialisation strategies for the periphery may thus well lie in strategically involving those that have a limited profile in local politics but good knowledge about local capabilities – and a natural interest in catalysing this knowledge through the involvement of external actors."

In the context of the overall compilation, this book chapter revisits some abovementioned challenges related to path-dependency while elaborating more specifically on the concrete challenge of triggering 'entrepreneurial discovery processes' in regions with fragmented and poorly connected actor bases, limited or skewed resource endowments and/or a biased embeddedness in interregional value chains. At the same time, it emphasises that peripherality or a limited level of economic development need not necessarily compromise the utility of smart specialisation approaches but, to the contrary, offer new avenues of strengthening external linkages.

Moving beyond the direct analysis of regional policy, finally, the sixth contribution focuses on the identification of motivating and contextual factors for the regional engagement of local actors.

**Kroll, H./Dornbusch, F./Schnabl, E. (2015): Universities' Regional Involvement in Germany: How Academics' Objectives and Opportunity Shape Choices of Activity, *Regional Studies*, 50(9), 1595-1610. DOI: 10.1080/00343404.2015.1051016**

Building on the premise that motivating and restraining factors have to be studied at multiple levels to understand individual agency, this paper deepens the analysis of an issue already touched upon in the fifth contribution, the regional engagement and integration of universities. In doing so, it follows two main ambitions. First, it develops a comprehensive classification of regionally oriented activities that integrates the, so far, rather loosely connected strands of literature on universities' relations to regional industry with that of their engagement with broader society. Second, it identifies and assesses the significance of factors assumed to influence academics preferences for specific activities, including personal objectives, disciplinary orientation, organisational characteristics of their employing institution and opportunities for involvement with the regional environment.

Methodologically, it draws on the at that point most comprehensive survey of professors and decision makers at German universities, enabled through a research project funded by the German Federal Ministry of Education and Research (BMBF). Of Germany's 40,000 full professors, more than 15,000 could be contacted and 1,929 questionnaires were returned with complete entries. Of these, 1,519 stated that they were affiliated with a university while 221 reported to be working at a 'university of applied sciences' (former *Fachhochschule*). As the survey was very predominantly completed by academics engaged in regional activities, the limited number of respondents reporting no regional engagement at all were removed from the sample. Hence, its explanatory power focuses on structure of and preferences for activities rather than on their overall prevalence.

According to the summary provided in its abstract, the paper finds that "universities' patterns of regional involvement can differ widely and have to be considered from a much broader perspective than once suggested [providing] a first comprehensive identification of aspects underlying this diversity. Building on the assumption that much regional engagement rests on individual choices, it draws on a sample of about 1,500 German academics to identify and corroborate the role of key factors influencing these choices in regression models. In line with assumptions, [the] paper finds that choices to engage regionally are strongly contingent on intrinsic motivations. Nonetheless, framework conditions do play a significant role." With particular relevance for geographical studies, it finds that, while "academics' choice to launch formal cooperation with regional partners is often motivated by considerations other than the needs of the regional environment itself", the regional environment still matters. "The findings suggest that outreach activities respond to an antagonistic interplay of regional opportunity in stronger regions and political requirements to engage in weaker areas".

Despite being less directly oriented towards issues concerning the smart specialisation agenda, this paper relates to the overall ambition of this contribution in three main ways. First, it illustrates the complexity of factors driving and influencing local stakeholders' actions – including differences in the logics underlying technologically and socially motivated engagement. Indirectly, it thus illustrates the complexity of initiating a better and at the same time broader 'entrepreneurial discovery process', as required by the smart specialisation agenda. Second, it illustrates the complexity of geographies inherent in this process, emphasising the relevant distinction between activities which are spatially oriented in motivation (of which there are relatively few) and those that are spatially relevant in consequence (of which there are many). Third, its findings that universities' regional engagement is strong in both urban centres and the periphery, but differently so, resonate with the fifth contribution's findings on a need for differentiated approaches to develop productive entrepreneurial processes of discovery, responding to the diverse institutional and relational fabric of regions.

## 4. Summary

Bringing together insights from six separate contributions, this compilation integrates different perspectives on strategic regional policy, based on the recent example of smart specialisation.

Initially, it is important to analytically differentiate two aspects of smart specialisation:

- The originally more or less aspatial **smart specialisation concept**, which was proposed by Foray et al. (2009). This concept emphasises that the productivity of economies depends on focused investments in multi-purpose technologies, which can be applied across various economic sectors. It suggests that areas for such focused investment can be and have been identified through ‘entrepreneurial discovery processes’ (Foray, 2015) but remains relatively silent on how exactly these materialise or could be triggered.
- The political **smart specialisation agenda** refers to the dynamic and forceful uptake of smart specialisation ideas in European regional policy (Capello, 2014; Foray et al., 2011). The compulsory requirement to develop political strategies informed by smart specialisation at regional level created a need to interpret an aspatial concept from a spatial perspective. As a result, different interpretations of smart specialisation have emerged and resulted in a variety of thus labelled practices in different regional settings.

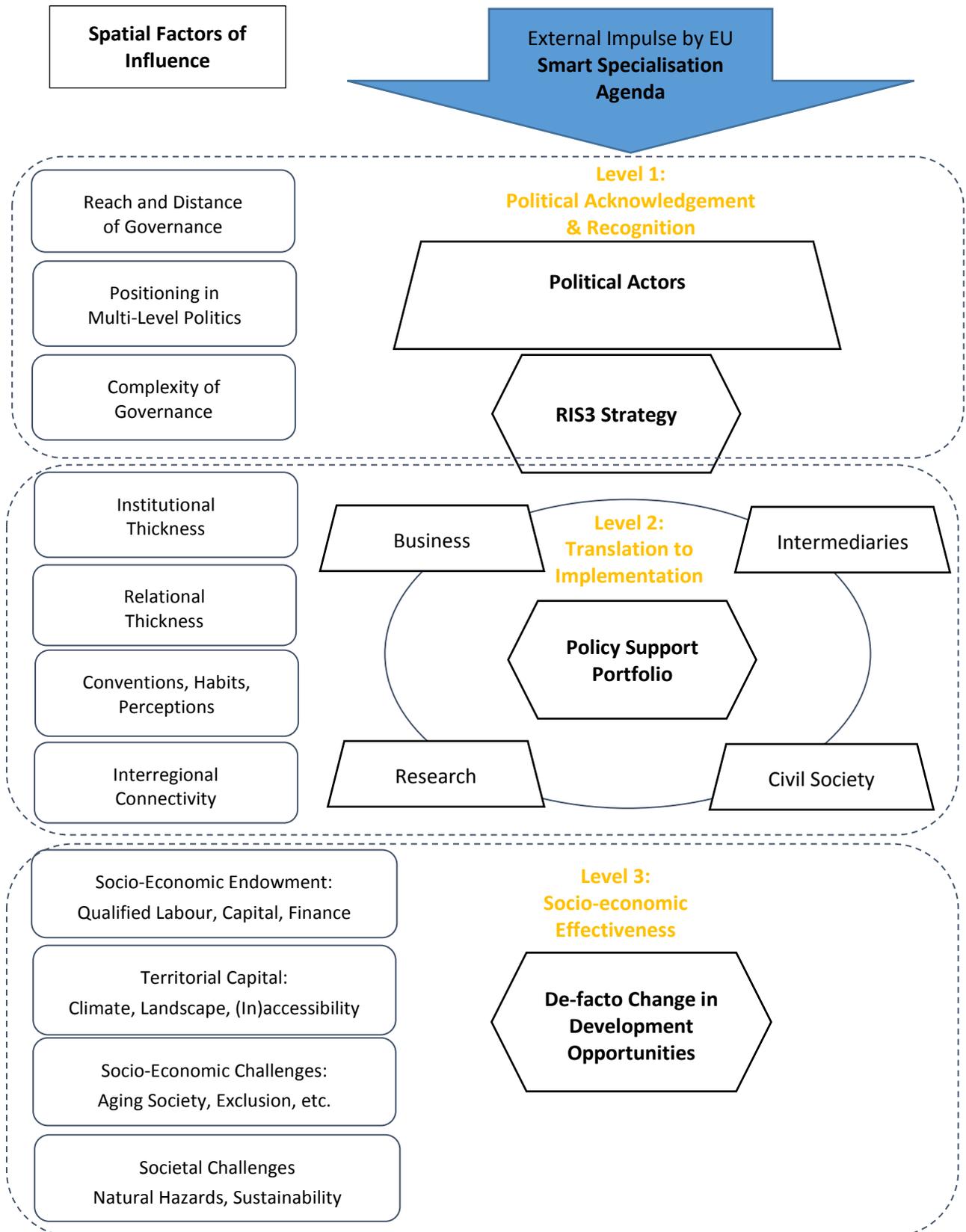
Against this background, this compilation seeks to establish which analytical insights can be derived from these diverse regionalised practices under the label of smart specialisation, in order to develop a *spatially sensitive smart specialisation concept*. In summary, all contributions find that a number of different spatial factors determine if and how the smart specialisation agenda will take root and develop momentum in particular regional settings.

According to the evidence compiled in the contributions, these spatial factors come to play at (at least) three different levels (cf. Figure 1):

At a first and fundamental level, with respect to **political acknowledgement and recognition** of external policy impulses. As this compilation illustrated, non-binding or generally defined requirements from higher (i.e. European) political levels will only in those cases be transferred into relevant strategies at regional level in which the responsible policy makers consider this favourable in light of the given socioeconomic potentials and framework conditions in the region.

As outlined in the compilation’s contributions there are three spatially defined perspectives that may determine political acknowledgement (in line with Moodysson et al., 2016; Morgan, 2017; Uyarra, 2007). First, the spatial reach of governance (i.e. size of the region) which determines the likely consequences of specialisation on a level of substance. Depending on the spatial echelon of strategy formulation, a specialisation of funding and political risk-taking have different consequences on redistribution and vulnerability. Second, regional politics positioning in multi-level policy systems. Policy makers of large, wealthy and independent regions will find suggestions from higher levels less compelling than those of lagging or peripheral ones whose actions are strongly enabled by funding from superordinate levels. Third, by the complexity of regional and sub-regional governance. This determines the scope of articulate actors with access to the policy process whose ideas a strategy will eventually have to reconcile. Hence, it defines the transaction costs of a strategy process.

**Figure 1: Spatial Elements in Smart Specialisation**



Source: Own figure

At a second level, policy makers have to **translate strategy definition processes' findings into actual support policy**. At this more practical stage, it is important to involve potential beneficiaries to further specify domains as well as to define and execute support measures that are legally viable and practically feasible. Furthermore, the regional strategy process develops a more concrete relevance for possible beneficiaries and thus larger segments of the "real economy" in the region.

As outlined in the compilation's contributions, there are four spatially defined perspectives that may determine the degree and momentum of policy implementation (Asheim et al., 2007; Cooke, 2007; Iacobucci, 2014; in line with Landabaso, 1997; McCann & Ortega-Argilés, 2016; Morgan, 2017; Muscio et al., 2015). First, the degree of regional institutional thickness. In regions where the pre-existing systems of policy support are weak and/or their functional relations ill-defined, it will be more difficult to find persons with a capacity to translate ideas into feasible practice. Second, the degree of regional relational thickness or social capital. Where cognitive and social proximity between different fields of activity are low, actors may muster enough momentum to define joint strategic ideas, but will typically fail to implement them in practice. Third, the flexibility of regional conventions, habits, and perceptions. All institutional and relational thickness will not ascertain the adequate implementation of smart specialisation policy if it is of a conservative, hampering and path-extending type that precludes any genuine 'entrepreneurial discovery'. Fourth, the extent of pre-existing interregional linkages determines whether the conceptually required collaborations to connect critical mass can be developed with ease or whether interregional exchange constitutes a challenging new ambition.

At a third level, the regions' **basic endowments and socio-economic structure** determine to what extent a set of smart-specialisation-inspired policy interventions can be instrumental in triggering 'entrepreneurial discovery' that prompts innovation in new domains and thus helps to transform and develop the regional economy. In short, it depends on the degree of fit between the actual and identified potentials as much as the degree of overlap between those actors involved in the policy process and those that are relevant for the socioeconomic development of the region in question.

With respect to substance, the preceding contributions point towards two main areas of endowments and two main areas of challenges that should be taken up as leverage points in the definition of strategic domains (Coenen et al., 2015; Healy, 2017; Isaksen & Jakobsen, 2016; Isaksen & Trippel, 2016; Kristensen et al., forthcoming; Martin & Trippel, 2014). In line with Tödtling and Trippel (2005), these endowments include socio-economic assets, i.e. qualified labour, capital, and finance but also social, relational and institutional capital other than that already considered as directly relevant for the policy process. Further, it includes territorial endowments like nature, climate or (in)accessibility that do not directly constitute socioeconomic factors but nonetheless influence economic activities. Challenges include socio-economic ones like demographic change or social exclusion but also societal ones like a particular exposition to natural hazards or localised sustainability challenges. While these do not always as such provide a strategic potential, they can in a relevant manner contribute to shaping priority domains inspired by possible, regionally relevant applications. In principle, this notion of considering local challenges to guide the deployment of technologies has been central to the smart specialisation concept from the outset and becomes more so from a place-based perspective.

## 5. Conclusion

While initiated on a different track, the academic concept of smart specialisation resonates strongly with established findings in the geographical literature and should, against this background, be considered sound in approach.

In particular, the core notion of building interregional linkages between those that develop technologies in agglomerations and those that apply and embed them in applications under specific, place-based circumstances in the periphery resonates with long years of theory building in the study of clusters, international production networks and industrial modernisation.

Moreover, central tenets of relational economic geography support the notion of triggering change in the localised fabric of innovation through processes of joint discovery between established and new groupings of local actors. In fact, existing studies on regional path-dependency suggest that such an effort is indispensable to changing regional conventions, habits and institutions.

Hence, the overall idea of turning smart specialisation into a regional approach must be considered justified. Against the background of earlier literature, it is consistent to assume that only the parallel improvement of technology generation and technology adaptation can help attenuate persistent tensions between policies for competitiveness and policies for cohesion.

Unfortunately, however, the “geographical turn” of the concept suffers from a lack of clarity in various respects that give rise to fuzziness, weaken its conceptual rigour and limit its practical relevance. Arguably, however, some of its most critical shortcomings emerge from a simple lack of consideration for insights that are already established in the geographical literature and can therefore, in theory, be swiftly accommodated.

Along these lines, this compilation puts forward five propositions for a more spatially conscious approach to smart specialisation at both the conceptual and the practical level.

First, to define a *suitable spatial echelon* at which smart specialisation is meant to be realised taking into account regional endowments as well as multi-level governance (cf. Tödting & Trippel, 2005; Uyerra, 2007). First, the spatial echelon of intervention defines the desirability of objectives. A stronger focus or specialisation of public investment comes with advantages and disadvantages and the balance of these differs according to the size and scope of the constituency covered by the decision. Second, political entities assume tasks more readily if these are covered by their constitutional remit. Hence, ambitions and options of municipalities will differ from those of federal states. Finally, the spatial echelon of intervention determines policy makers’ physical and cognitive distance to their stakeholders. Most higher-level administrations are further removed from localised networks than e.g. local mayors. This influences their options to become embedded in joint discovery processes.

Second, to put an emphasis on studying the *place-based potentials for application* that regions offer (Barca, 2009; cf. e.g. Cooke & Morgan, 1998; Storper, 1997). At its core, the smart specialisation concept emphasises the aim and need to reap economic benefit from the deployment – not necessarily the generation – of technologies. Strategies that build on localised technological capacities alone are therefore both conceptually and practically unfit for purpose. Instead, the smart specialisation ambition is realised when investment domains are chosen in such a way that they reflect the societal fabric and needs of a region as much as its industrial potentials. While a matching of technology providers and users may quite commonly be possible at national level, this will only in the most advanced regions be possible within the administrative limits of the constituency. Hence, spatially sensitive smart specialisation strategies must in the majority of cases recognise the need to put an unambiguous and primary focus on applications rather than technology generation.

Third, to more prominently *recognise interregional collaboration* as a necessary condition for matching technology supply with societal or industrial demand (cf. e.g. Crescenzi & Rodríguez-Pose, 2011; Thissen et al., 2014). This follows naturally from and complements the above case made regarding application orientation. As prior research in geography demonstrates, proximity can take multiple, not always physical forms. Consequently, many technology-oriented clusters do not serve physically co-located demands while effective application-oriented projects which benefit local economies more often than not have to source on external technologies. Unless the geographies of support and priority definition are extended beyond their current spatial containers and matched with the actual geographies of collaboration within industry and society, smart specialisation will perform below its potential. This is particularly true with a view to economically less developed regions.

Fourth, to emphasise and enable *real processes of joint discovery*. Irrespective of policy labels, it has to be acknowledged that temporary political processes of strategy definition and bartering are *not* in the original sense transformative ‘processes of entrepreneurial discovery’ (cf. Iacobucci, 2014; McCann & Ortega-Argilés, 2016). To enable genuine joint discovery, established patterns of cognitive, institutional, organisational and social proximity in the regions have to be acknowledged, consciously addressed and gradually changed. These preconditions could not differ more starkly between regions and in many cases not only concern proximity in a metaphorical sense of social and cognitive closeness but also in the very concrete terms of accessibility and spatial spread. Eventually, the question of whether smart specialisation becomes locally effective will be highly contingent on whether local stakeholders develop ownership of the process and actively take it from policy to practice.

Fifth, to acknowledge that *joint discovery must be a locally contingent process* (cf. Healy, 2017; Kristensen et al., forthcoming). In concrete terms, the often still rather general notion of joint entrepreneurial discovery requires a better definition with a view to its composite parts that would enable a *translation* to the particular conditions of specific types of regional environments, including less-favoured ones. Where various fundamental actors in the innovation process are not or only partially present, capacities and endowments remain weak and the relational fabric is sparse, different approaches will have to be taken than in fully developed regional innovation (eco)systems. While many of the original smart specialisation concepts’ basic premises such as its application orientation and focus on bottom-up processes hold across all types of regions, the concrete subjects of discussion and the actors involved in ‘processes of entrepreneurial discovery’ will be different to an extent that has so far not been sufficiently acknowledged.

## Acknowledgements

With respect to project funding, the author acknowledges support from the European Commission's Directorate-General for Regional and Urban Policy which financially supported the analysis of the post 2015 rounds of the policy maker survey. Furthermore, he acknowledges project support from the German Federal Ministry of Research and Education (BMBF), which enabled the university survey forming the empirical basis for the sixth contribution (project line: "New Governance of Science"). Finally, he is grateful for various small occasions of individual support that were provided to him e.g. for the finance of travel efforts and time spent on developing papers and book chapters.

At a conceptual level, the author acknowledges intellectual contributions by the co-authors of those contributions that he did not conceive entirely by himself. On a more general level, he acknowledges daily support, input and inspiration from various colleagues at Fraunhofer ISI, not least referring to the continuous joint effort of acquiring of the third-party funding needed to directly finance or provide leeway for academic efforts in an applied research environment. Particularly, he would in that respect like to thank his head of department, Prof. Dr. Knut Koschatzky. Further, more specific support of particular colleagues is acknowledged directly in the respective contributions. In any case, express acknowledgement shall be made of the great work of our assistants Christine Schädel and Christina Schmedes who smoothed many processes of publication.

Moreover, the author would like to thank his former Ph.D. mentor Prof. Dr. Ingo Liefner for providing him various opportunities to continue with academic teaching across the years and for enabling him to submit this compilation of papers as a *habilitation dissertation* and reconsider existing work through a geographical lens, thus hopefully taking it one step further.

Finally, a large part of this academic journey remains indebted to the many small moments that fuel our imagination, spark new insights and sustain our ability to conceive new ideas along the way. In short, none of the presented work would have ever emerged without input and inspiration from family and friends, most notably my wife Birte and my daughter Lara.

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**Annex I**  
**References to Contributions 1 – 6**

**1: Reviewed Paper**

**Kroll, H. (2015): Efforts to Implement Smart Specialisation in Practice -  
Leading Unlike Horses to the Water  
European Planning Studies, 23, 10, 2079-2098  
DOI: 10.1080/09654313.2014.1003036**

**2: Reviewed Paper**

**Capello, R./Kroll, H. (2016): From theory to practice in smart specialisation strategy:  
emerging limits and possible future trajectories  
European Planning Studies, 24, 1393-1406  
DOI:10.1080/09654313.2016.1156058**

**3: Reviewed Paper**

**Kroll, H./Böke, I./Schiller, D./Stahlecker, T. (2016): Bringing owls to Athens?  
The transformative potential of RIS3 for innovation policy in Germany's Federal States  
European Planning Studies, 24, 1459-1477  
DOI:10.1080/09654313.2016.1159666**

#### **4: Reviewed Book Chapter**

**Kroll, H. (2017): Smart Specialisation Policy in an Economically Well-Developed, Multi-Level Governance System.**

**In: Radosevic, S./Andreescu, L./Wade, I./Roman, A. (eds.):  
Advances in the Theory of Smart Specialisation. Elsevier: Amsterdam**

## **5: Reviewed Book Chapter**

**Kroll, H. (2017): The Challenge of Smart Specialisation in less favoured Regions  
(= Working Papers Firms and Region Nr. R1/2017).  
Karlsruhe: Fraunhofer ISI.**

to be published in adapted form as reviewed chapter in:

Kroll, H. (forthcoming): Smart Specialisation in  
Economically and Institutionally Less Favoured Regions  
In: Kristensen, I.; Dubois, A.; Teräs, J. (eds.) (forthcoming):  
'Strategic Approaches to Regional Development:  
Smart Experimentation in Less-Favoured Regions', Routledge: Oxford.

**6: Reviewed Paper**

**Kroll, H./Dornbusch, F./Schnabl, E. (2015): Universities' Regional Involvement in Germany:  
How Academics' Objectives and Opportunity Shape Choices of Activity**

**Regional Studies, 50(9), 1595-1610**

**DOI: 10.1080/00343404.2015.1051016**