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Translating in practice: On the role of translation in entrepreneurial discovery processes in Norway

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ABSTRACT

The article examines a key component of regional smart specialisation strategy, namely the entrepreneurial discovery process (EDP) and how it unfolds in three regions in Norway. The authors seek to understand the interpretation and operationalisation of the EDP by conducting a constructivist thematic analysis of regional strategy documents and associated material in Rogaland, Vestland, and Nordland. They find that while similarities exist in the use of the EDP, the regions differ markedly across several key dimensions, most notably the interpretation of the EDP and its implementation across the regions. To have a better understanding of these differences in a region's EDP, they propose the integration of translation theory with more conventional theoretical approaches on understanding regional policy differences. The authors shed light on the diffuse understandings of the EDP in practice across regions, thereby providing richer evidence of how the interpretations can differ considerably even within one country, and they conclude that this indicates the relevance of translation theory for future regional comparative studies of smart specialisation.

Introduction

Smart specialisation has received substantial scholarly attention in recent years and has been highlighted as a key tool in European regional innovation and cohesion policy. At its core, smart specialisation is a place-based approach to economic development policy, characterised by the identification of strategic areas for intervention and based on analysis of the strengths and potential of a regional economy. A central component of a region's smart specialisation strategy is the entrepreneurial discovery process (EDP). The EDP relies heavily on the broader concept of entrepreneurial knowledge, which Foray (2014) defines as a combination of a region's vision and its ability to integrate multiple segments of knowledge from participating stakeholders. Such knowledge is not just technological and science-based but is also concerned with what is needed when

creating a new product or activity, identifying emerging competition, and adapting to changing markets (Foray 2014). Asheim (2019) provides further clarity on the EDP by highlighting it as a set of processes leading to discoveries undertaken by the stakeholders of a given innovation system. In line with this, Esparza-Masana (2022, 636) provides an insight into what is expected to stem from an EDP, namely that an 'EDP must lead to the identification of the competitive advantages of a territory, as well as its challenges and priorities, all to be tackled throughout the implementation of the S3 (Smart Specialisation Strategy)'.

Smart specialisation is one of the primary ways in which the European Union (EU) has sought to structure and utilise resources effectively to stimulate regional innovation activity across Europe. At the same time, it seeks to avoid the wasteful overlapping of activities

and the poor identification and selection of domains in which resources are deployed (Foray et al. 2011). Thus, we view smart specialisation as a place-based approach to economic development policy, characterised by the identification of strategic areas for intervention and based on an analysis of the potential and strengths of a regional economy (Tödtling & Trippl 2005; Foray et al. 2011; Balland et al. 2019; Deegan et al. 2021).

As the goal of creating and implementing a smart specialisation strategy is to increase a region's productivity and more broadly to stimulate economic growth, considerable resources are made available to regions across the EU. The creation and provision of a smart specialisation strategy was made an ex-ante conditionality for access to EU structural and cohesion funds, which serves to underline both the importance placed on the approach at the EU level, and the centrality of participation of a diverse pool of stakeholders with regional authorities (Foray et al. 2011). The EU push described above seeks to leverage smart specialisation to address long-standing regional imbalances, as well as to stimulate creativity in strategy generation away from the more traditional 'never change a winning team' mentality (Foray et al. 2011). These circumstances present in the EU is, moreover, an opportunity to evaluate how regions in countries outside the EU, such as Norway, engage with a central component of smart specialisation, namely the EDP. The relevance of exploring the operationalisation of smart specialisation in a non-EU state is particularly illustrative for three key reasons. First, Norway frequently ranks highly in global measures of government quality and institutional capacity (Teorell et al. 2021), indicating that the adoption and integration of such a framework is likely to be highly effective. Second, given that Norway is outside the EU, it does not benefit from the ex-ante conditionality framework for access to the European Regional Development Fund (ERDF). As such, its engagement in this process is unlikely to be solely related to accessing funding, as such conditionality appears to exhibit an influence in regions that are within the EU (Barbero et al. 2022). Third, while it is likely that there will be regional differences in the approaches to the EDP, the interpretation of what has been termed a 'smart specialisation logic' is unlikely to differ across regions. Instead, one could expect the rationale for intervention and the tools deployed to identify the areas for intervention to be generally similar (Gianelle et al. 2020).

In this article, we take advantage of the findings from a comparative case study design (Yin 2011) in aiming at disentangling how the EDP unfolds in three different regions in Norway, namely Rogaland, Vestland, and Nordland. We seek to understand how the practical implementation of smart specialisation strategies aligns with or differs from the theoretical underpinnings upon which EDP is based. In particular, we focus on the translation of the EDP in practice. Accordingly, our research question is: *To what extent do the Norwegian regions under study differ in their approaches to the EDP?*

To address the research question, we structure the remainder of the article as follows. The next section provides an insight to the literature on regional innovation policy, smart specialisation, and entrepreneurial discovery, and is followed by an overview of recent advances in translation theory, including in relation to smart specialisation. We then present our empirical data and methods. The penultimate section presents and discusses the results, and it is followed by concluding remarks.

Regional innovation policy

Innovation policy can be seen as the result of an aggregate understanding of economic development alongside the role that innovation plays in sustaining and boosting economic development and growth (Borrás & Edquist 2019; González-López et al. 2019). In recent decades, there has been an increased interest in the relationship between innovation, economics, and geography. The field of evolutionary economic geography (EEG) has grown quickly in response, providing the basis for a deeper investigation of regions as the unit of analysis. In many of the models stemming from the earlier endogenous growth literature of the 1980s (Romer 1986), innovation did not have an explicit role in growth models, which usually included and focused more on research and development (R&D), education, and technology on a national level, and built on the neoclassical understanding of economic development to explain the provision of new products and services (Nelson & Winter 1982). Nelson & Winter (1982) argued that innovation was not just an outcome of micro-level interactions and learning within firms, but also that meso-level interactions between firms and various stakeholders and institutions were an important part of the innovation process. That early rethinking of innovation took a systemic approach and had evolved from one that was focused on the national level to one that could be extended from the national to the regional level (Asheim & Isaksen 2002), thereby providing an impetus to explore the regional level as one of the primary levels in which to stimulate economic activity through a focus on innovation. The identification of system failures within what was termed a regional innovation system (RIS) provided a new paradigm on which regional policy could be focused. The general

view was that attention should focus on identifying and solving issues within the RIS (Asheim & Isaksen 2002).

The arguments for implementing policies specific to individual regions are numerous. However, the local relationships between firms and institutions (Morgan 1997), the relatedness of emerging technologies (Boschma & Iammarino 2009), and the nature of knowledge being generated or acquired can all differ depending on the region (Doloreux & Shearmur 2012). Existing industrial structures, technological paths, and a region's economic and institutional context have made it evident to policymakers that the appropriate level at which to target policy should be at the regional level (Iammarino & McCann 2006). The rationale behind this change in policy approach towards a more regional focus is rooted in that system failures were present at the regional level (as opposed to solely at the national level, for example). This regional level focus on the region as the unit through which innovation policies should be targeted ensures an increased fit and probability of success, given the proximity of decision-making to those impacted by the decisions, and generally aligns with the shift in EU policymaking towards the principle of subsidiarity, which has come to exert a strong pull effect on policy frameworks such as smart specialisation.

System failures became a popular term as policymakers adapted the related RIS term to describe how a region was made up of several stakeholders (e.g. education, industry, finance, knowledge networks, and public institutions) (Tödtling & Trippl 2005). The innovativeness of firms and regions could then be seen because of the economic, institutional, and social factors that would derive from the entire innovation system. As argued by Tödtling & Trippl (2005), these factors can better explain heterogeneity and divergences in innovation performance and productivity growth between EU member states through an analysis on the regional level. Tödtling & Trippl (2005) divide these system failures into three main types: organisational thinness, lock-in, and fragmentation. Organisational thinness is seen in innovation systems lacking key organisations, clusters, institutions, or other system dimensions that are crucial for a well-functioning RIS. Lock-in refers to over-specialisation and investments in mature industries and technology, leading to reduced adaptability in innovation and diversification. Finally, fragmentation is the absence of interactions and flows of knowledge between organisations in the RIS, often related to excessive industrial diversity with few commonalities. Fragmentation is typically found in metropolitan regions, while peripheral regions more often experience organisational thinness (Tödtling & Trippl 2005).

As highlighted above, each of the system failures reduces the capacity of an RIS to function to a high standard. The characteristics of a regional economy that enable system failures can be more accurately addressed with targeted regional innovation policies that serve as a more appropriate method to address such obstacles, which in turn can improve the overall functioning of a region's innovation system. Findings by Wagner & Jonkers (2017) support the European Commission's recent efforts to improve national and regional innovation systems by pinpointing inappropriate governance, lack of openness between stakeholders, and fragmentation in general as the leading causes of system failures in regions within the EU. Changes in the level of analysis and the framework through which innovation system failures could be understood to have provided a key building block in the formation of a more place-sensitive regional innovation policy.

The above-described focus on identifying and addressing system failures leads to a certain amount of reliance on an understanding of a region's existing strengths and available knowledge as the basis for overcoming the challenges that regions face. Focusing on innovation policy at the regional level conforms to the understanding that regional specialisation does not imply that regions should focus on conventionally understood cluster policy in line with a Porterian understanding of clusters (Grillitsch et al. 2018) but instead that regional innovation policy should focus more on diversified specialisation (Hassink & Gong 2019). This understanding of diversified specialisation has increasingly come to be expressed through smart specialisation at the European level.

Smart specialisation

Smart specialisation has its origins in the Barca report (Foray et al. 2009), which sought to provide a better understanding of why Europe was 'lagging behind' the US in terms of competitiveness and R&D intensity. Aiming to understand these differences led to the creation of the 'Knowledge for Growth' group under Dominique Foray (Foray et al. 2009; McCann & Ortega-Argilés 2013; Ranga 2018; Balland et al. 2019) and smart specialisation emerged as the proposed solution to this imbalance. Its goal was to support the emergence of new activities and promote diversification by identifying and prioritising the various strengths, resources, and the potential for development that each region exhibited. As such, smart specialisation constituted a key component in the EU's regional innovation policy response to the disparities observed. A key aspect related to previous strategies for regional innovation not

having included the necessary engagement with stakeholders, such as entrepreneurial agents, in the process of priority setting and implementation of strategies (Foray et al. 2009; 2011; Asheim 2019). A signature of the smart specialisation approach is therefore this bottom-up characteristic, which implies that priority settings and the development of subsequent policy are not dictated by governments and policymakers with perceived innate wisdom or ex-ante knowledge concerning the strengths of a region or future priorities, or, as stated by Radosevic (2017, 9), that 'No single agent has a total overview of the economy.' Instead, smart specialisation is grounded in the rationale that policymakers need to consult and work together with external stakeholders to identify priorities through the EDP, and this interaction is precisely where one could expect differences to arise, given legacies in regional policymaking and stakeholder engagement.

However, to operationalise smart specialisation better and ensure some consistency in approach taken, the European Commission supplied policymakers with guidelines on how to engage with the RIS3 framework[1] (Foray et al. 2012). The European Commission divided the RIS3 design into six steps for policymakers to follow:

1. Analysis of the regional context and potential for innovation
2. Setting up of a sound and inclusive governance structure
3. Production of a shared vision about the future of the region
4. Selection of a limited number of priorities for regional development
5. Establishment of suitable policy mixes
6. Integration of monitoring and evaluation mechanisms.

As noted in the guidelines (Foray et al. 2012), these steps should be seen as somewhat fluid, with each one likely to overlap with others due to new stakeholders entering the process, ongoing projects bearing fruit, unrealised potential being discovered, or new knowledge coming to light. The guidelines modified the fundamental context originally used as the basis for the smart specialisation process in the region (Foray et al. 2012). As such, the steps serve as an indication of a process to be followed, with the actual practice being much less linear in nature. However, what remains clear is that the intention is not to provide a one-size fits all framework (cf. Tödtling & Trippl 2005), but to ensure that what takes places is not a case of 'old wine in new bottles'. The latter would fail to realise the transformative

potential of smart specialisation, as any changes would not be due to smart specialisation but to whatever approach was used previously and repackaged as smart specialisation.

Ensuring that a region had a smart specialisation strategy before it could avail itself of ERDF resources has produced a situation that some authors have referred to as the perfect case of policy running ahead of theory (Foray et al. 2011). Recent analyses, such as one performed by Deegan et al. (2022), who investigated two city-regions in Norway, have provided insights into how the regions' starting point in terms of their industrial structures is likely to influence their EDP. More precisely, the work highlights potential barriers in the EDP stemming from conformity-seeking behaviour and the reinforcing of close-knit networks (e.g. in the case of a region holding traits of being specialised), which could potentially hamper the identification and creation of new ventures, in contrast to a more fragmented innovation system (in an economically diversified region) that could also influence the ability to develop a coherent programme, given the multitude of competing interests. More recent work on regional strategies and their concurrent smart specialisation priorities has also demonstrated that they are influenced by factors not entirely related to an existing regional economic profile and instead are focused on aspects such as the complexity of an activity or rather the quality of government within a region (Deegan et al. 2021; Di Cataldo et al. 2022). Given the importance of smart specialisation, it is important to evaluate what can be learned from the EDP literature published in recent years to provide greater clarity on the operationalisation of a key aspect of smart specialisation.

The entrepreneurial discovery process

The origins of entrepreneurial discovery are often seen as having a basis in Austrian economics and the work of Schumpeter (Kirzner 1997; Bellini et al. 2021). Entrepreneurs are generally considered a class of economic actors who have knowledge and insights into market processes, and that 'discovery is what distinguishes entrepreneurs from other economic actors' (Fiet & Patel 2008, 215). However, in the context of smart specialisation the notion of entrepreneurial discovery relies heavily on the concept of entrepreneurial knowledge, which Foray (2014) defines as the mix of the region's vision, as well as its ability to integrate multiple segments of knowledge from individual stakeholders.

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[1]The European Commission's Research & Innovation Smart Specialisation Strategy (RIS3) was introduced in 2011. It is part of the European Union's vision for Europe's social market economy in the Europe 2020 strategy.

The required knowledge moves beyond technological and scientific knowledge, and it includes knowledge about what is required when creating a new product or activity, including identifying emerging competition and responding to changing market dynamics (Ardichvili et al. 2003). Historically, this development has taken place spontaneously as regions have shifted into new domains, at times disturbing existing structures to make room for new opportunities. Moreover, the EDP is in line with a Schumpeterian understanding of creative destruction, in which entrepreneurial knowledge is seen to exert an influence on the direction and constitution of regional economies and, as such, is considered a dynamic process of change (Perianez Forte & Wilson 2021).

Furthermore, the entrepreneurial discovery, the detection of new knowledge from an inclusive evidence-based stakeholder activity (McCann & Ortega-Argilés 2019; Perianez Forte & Wilson 2021). Entrepreneurial discovery is considered one of the first steps in innovation activity and is the foundational concept on which the EDP is built. In this sense, regional governments choose a smart specialisation strategy as a form of innovation policy, incorporating dynamic themes into a system that is usually run by internal logic and extensive top-down planning. This is considered a radical change of approach (Perianez Forte & Wilson 2021). Entrepreneurial discovery as a feature of smart specialisation is not path-dependent; in other words, it does not pursue a set of priority areas such as strategies or plans, but rather unfolds throughout the EDP (Perianez Forte & Wilson 2021). As such, while it is hard to plan for entrepreneurial discovery, systems can be put in place to encourage its development. As an example, in a region looking to pursue new priority areas, the region may become specialised in drilling for oil. However, in collaboration with local stakeholders, policymakers may recognise that this capability can be extended to drilling for freshwater reserves. This reallocation of resources and capabilities based on broad engagement with local stakeholders forms a stylised illustration of how entrepreneurial discovery can manifest through identifying paths of related diversification. Hence, a view focused only on the existing strengths of the region will only recognise one way in which new paths can emerge from within an existing regional plan and that other approaches to new path development might warrant in-depth investigation. However, this example conceals what is required to operationalise entrepreneurial discovery within a region's broader smart specialisation strategy and leaves open a discussion on how regions come upon such paths, and why other paths are not identified. This in turn opens up the case of how

stakeholders are involved in an EDP. In this respect, we can turn to the work of Aranguren et al. (2019), who show that experience across a number of regions has been dominated by the regional and national authorities, and they call into question whether the theory and practice actually relate, and how knowledge transmission operates in a region. With regard to the latter, we can turn to, for example, the work of Isaksen et al. (2018), who highlight the need for EDPs to be institutionalised by system-level actors in order to unlock regional potential. In particular, the authors refer to the need to focus on knowledge infrastructures for this institutionalisation to take place, how the process of identifying and selection of areas for intervention is operationalised, and how we might explain the difference in the selection of areas for intervention.

A case of translation

There is contrasting tension between having a one-size-fits-all approach to the EDP (which most probably would reduce the overall responsiveness and reflexivity of a bottom-up approach as not adapting to the traits of the regional context) and having a situation in which regions are reticent to break with the past. Such tension became apparent in a recent study of Apulia: Bellini et al. (2021, 422) highlight that 'In Apulia, RIS3 was accepted almost reluctantly, based on the sincere belief that the region had started a virtuous path and had no urgent need to reshuffle it in order to comply to the new catchwords from Brussels.' In such circumstances, it is difficult to see smart specialisation as much else than a case of 'old wine in new bottles'.

We propose that by unpacking regional implementations in smart specialisation through the lens of translation theories will allow us to understand different 'modes' of implementation in the regions. More specifically, doing so will provide a framework of understanding for why the use of the EDP may appear muted in some contexts, and for how to gain a better understanding of not only when regions are translating, but also what they are translating and how. By incorporating recent advances in the theory of translation, a more nuanced view of how policies diffuse in time and space could be applied to future case studies of EDPs. An important point of difference between translation theory and policy diffusion is that when the translation of a policy takes place in a local context, the policy that emerges 'cannot remain unchanged' when it is applied in another context (Suarez & Hwang 2005, 72). Translation theory offers a richer view of how differences in policy operationalisation are coloured by regional experience compared with more quantitative

approaches to understanding policy operationalisation. We focus on the tradition of Scandinavian neo-institutionalism (Sahlin-Andersson et al. 1996; Czarniawska 2012) and actor-network theory (Callon 1986; Latour 1986) wherein the term 'translation' refers to situations in which new ideas and practices are adapted to local contexts as they go through the diffusion process (Ansari et al. 2010). This is particularly relevant in the context of pan-European cohesion policy, given that there is a clear guide to operationalisation. Erlingsdottír & Lindberg (2005, 48) argue that in order for an idea to travel, 'it must be separated from its institutional surroundings (disembedded), and translated into an object such as text, a picture, or a prototype (packaged)', and furthermore, 'such an object then travels through the relevant field of organizations to another time and place, where it is translated into a new context (unpacked)', and that the object is then 'translated locally into a new practice (re-embedded), and with time, the black box of institutions may close itself around the idea'. Although Erlingsdottír & Lindberg (2005) studied the translation on basis of organisations, we argue that it has important bearing in terms of allowing the identification of ways in which the travelling of ideas changes not only the content, but also the surrounding adoption process.
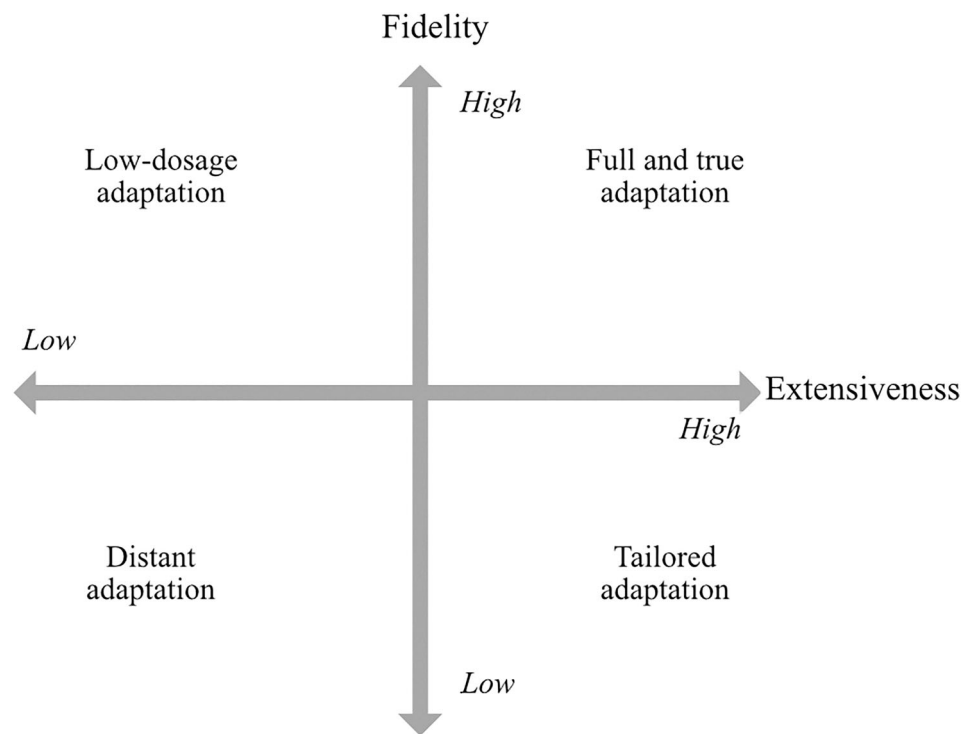
By employing translation in a regional setting and by looking at this through the EDP, we aim to provide clarity regarding ideas of stakeholder involvement and the production of a shared vision of the regions' future before any selection of policy interventions becomes operationalised in a regional context. An example of how practices of translation can differ considerably, potentially undermining a shared understanding of the idea, is shown in Fig, 1.

On the vertical axis in Fig. 1, Ansari et al. (2010) refer to fidelity as meaning whether the adapted practice either resembles or deviates from the pre-transmission practice, and extensiveness on the horizontal axis refers to how extensively the practice has been implemented from the source of its translation. For example, the top right corner Fig. 1 could be understood as representing regions that are committed to conducting an EDP, and do so in a far-reaching way, whereas regions represented in the top left corner are committed to the idea but do not translate the idea into local practice so extensively. The bottom right corner of Fig. 1 represents regions that are not so committed to remaining true to the idea, and instead tailor it to their own requirements, whereas in the bottom left corner the represented regions are perhaps more closely aligned to what can be seen in the context of Apulia in the work of Bellini et al. (2021).

Thus, the final product of a translation process is difficult to foresee, given the effect of local practice and experience (Czarniawska 2012). When a policy is frequently taken from one cultural/historical context and applied in another (Power 2007), it is unlikely that identical results will be achieved in both settings, thus creating considerable scope for implementation challenges (Czarniawska 2012). Furthermore, according to Ansari et al. (2010), the transfer and diffusion of ideas and practices across diverging cultural and social contexts entails processes of translation and co-construction, with the likelihood of considerable divergence and variation in implementation, as expressed in Fig. 1. This implies that the translation of an EDP across different cultural and social contexts may lead to markedly divergent interpretations of what the EDP means in practice, and this moderating impact of translation is an understudied and potentially important aspect in case studies that aim to explain divergent interpretations in practice.

Translation and smart specialisation

The importance of translation is apparent in the recent work of Gianelle et al. (2020), where the authors set out to explore the ways in which smart specialisation interventions are translated into strategic decisions and policy interventions. Nevertheless, while the authors highlight to some extent how regions understand the making of strategic decisions, they do not expressly focus on how differences in decision-making are likely to be due to translation. While previous research (e.g. Gianelle et al. 2020) has delved into policy implementation and operationalisation, a gap has emerged in knowledge about how translation interacts within the smart specialisation process. While not an explicit focus, aspects of learning and incorporation of policy concepts are discussed by Bellini et al. (2021). Their focus is on the outcome of smart specialisation processes in situations where these processes may be limited by issues such as poor long-term commitment to the process (Bellini et al. 2021) and suboptimal selection of priorities (Deegan et al. 2021; Di Cataldo et al. 2022). In encapsulating the problem of legacies, which plagues the development of most forms of regional strategies, we take the point made by Morgan (2017), who argues that 'policy makers are inheritors before being choosers', referring to how the way in which regions translate policy ideas and concepts into their local context often depends on their history. This comprises taking 'better stock' of how ideas and concepts come to be applied in a local context, and the unlikelihood that policy-makers will engage uniformly with relatively ambiguous

Fidelity

High

Low-dosage
adaptation

Full and true
adaptation

Low

Extensiveness

High

Distant
adaptation

Tailored
adaptation

Low

Fig. 1. Dimensions of practice variability and adaptation (reproduced with permission from Ansari et al. 2010, 72)

concepts and will instead opt for a more distant adaptation, such as shown in Fig. 1.

Data and method

Case selection

The three case study regions in Norway selected for our study were Nordland, Rogaland, and Vestland (Fig. 2). Several criteria were used in the selection of cases. The regions were selected based partly on differences in their industrial structure. However, we also sought to remain conscious of the contribution of Njøs & Jakobsen (2018), who through their focus on the Research Council of Norway's programme Regional R&D and Innovation – the VRI programme[2] – highlight that such studies must also pay attention to the ways in which such systems evolve over time.

The three study regions have very different industrial configurations as the foundation for their EDP. Herstad & Sandven (2017) provide a detailed overview of how regional innovation system (RIS) configurations have evolved in 15 different regions in Norway that were VRI-targeted in the period 2004–2012. In so doing, they claim that they make 'a clear distinction between the micro-foundations for RIS construction that is

employment in learning organisations, and the local collaboration networks that define a working RIS and distinguishes it from related network configurations such as regionalised national innovation systems' (Herstad & Sandven 2017, 9). More specifically, among the 15 regions they assess, our three regions (Rogaland, and both Hordaland and Sogn & Fjordane (now Vestland)) and Nordland are discussed in detail. A challenge observed regarding Rogaland is:

> to ensure ideas, information, and knowledge generated within the oil & gas sector spill over into the broader economy and benefits activities beyond those directly associated with oil & gas extraction. This points to the importance of active intervention through RIS construction. (Herstad & Sandven 2017, 123)

The same challenge is observed in a recent contribution by Deegan et al. (2022) in their investigation of the two largest cities, Stavanger and Bergen, in Rogaland and Vestland (in former Hordaland) respectively. They found that the cities faced unique challenges that directly aligned with their respective RIS categorisation. Deegan et al. (2022, 492) argue that Stavanger resembles a specialised type of RIS and the city's strategy stemming from an EDP is to develop new related industries or clusters from one or few existing regional industries, but that the strong networks present could hamper

[2]The VRI programme was introduced in 2007 to stimulate research and innovation at a regional level through cooperation between R&D institutions and industry.
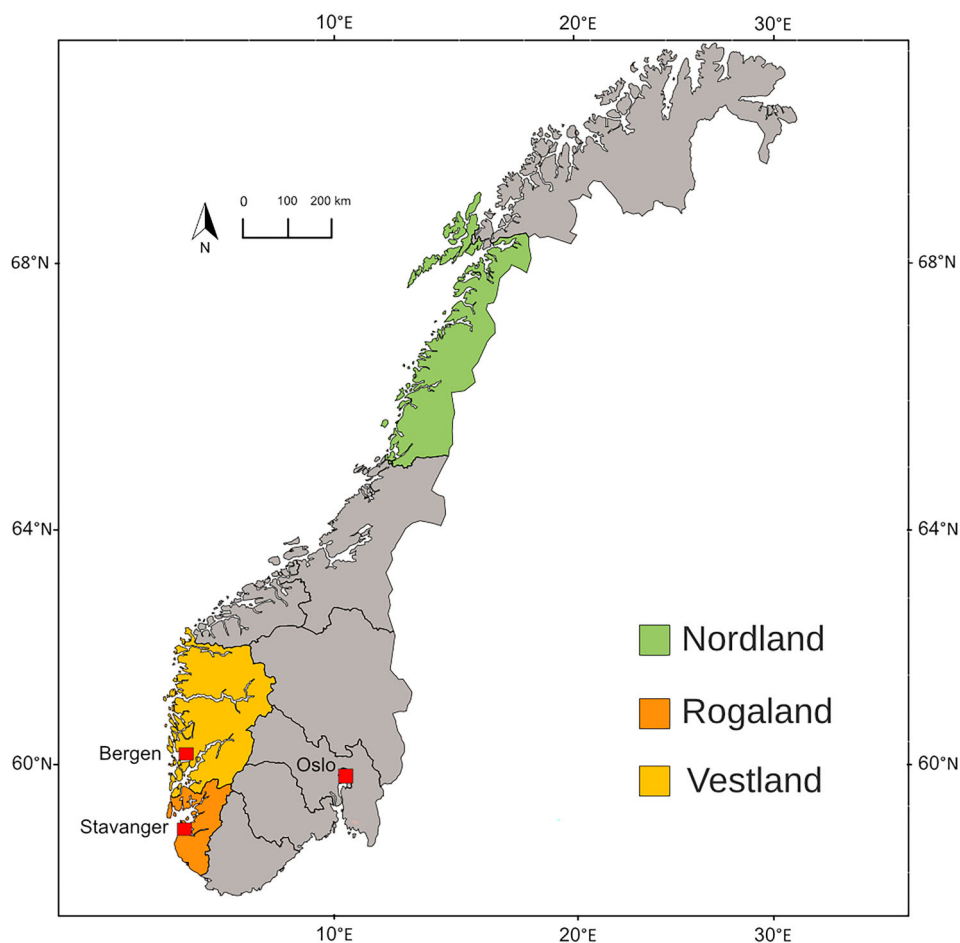
Fig. 2. The three study regions

alternative ideas and act as a typical barrier for the EDP. In the case of Bergen, which the authors coin as a more diversified type of RIS, the EDP strategy type is intended to 'strengthen knowledge exchange between and diversification into emerging industries from existing regional industries', with typical barriers for an EDP being a 'fragmented innovation system, hindering knowledge exchange between actors of RISs' (Deegan et al. 2022, 492).

Deegan et al. (2022) highlight the differences between Bergen (in present-day Vestland) and Stavanger (Rogaland), and that the two cities face different challenges, as Bergen has more 'legs to stand on' and is more diversified than Rogaland, which is heavily invested in the energy industry. However, with regard to Sogn og Fjordane (previously a separate county, but now in present-day Vestland), it is worth noting that the region has an 'over-representation of employment in primary industries, mining & quarrying, transportation and manufacturing industries with medium or low intensity' (Herstad & Sandven 2017, 125).

Nordland exhibits an overrepresentation of employment in public administration and defence, health care, and education, as well as in primary industries (mining and quarrying, construction, infrastructure, and low-tech manufacturing) (Herstad & Sandven 2017). Herstad & Sandven (2017) argue that what merits cautious policy attention is that the performance of Nordland is poor on all RIS indicators.

The above-mentioned traits of the study regions provide some insights into the underlying foundations that shape the 'policy thinking' within the regions. In turn, this enabled us to compare and contrast the EDP in the three different regions.

A further consideration relating to the case design was the availability of high-quality, comparative regional strategies amongst the selected regions within one country. The final consideration was that all three selected regions are outside the EU, with the expectation of different styles of engagement with the EDP given the absence of an ex-ante conditionality on funding. It is important to note that even though Norwegian regions often collaborate with other European regions when it comes to economic development projects, they do not receive funding through the EU's cohesion policy programmes such as the ERDF or the European Social

Fund (ESF) (Norwegian Ministry of Foreign Affairs 2022). As such, Norwegian regions are not subject to the criteria set by the European Union for the design of smart specialisation strategies. We sought to control for this difference by exploring translation within regions in the same country. Such an approach allowed us to hold static assumptions about considerable divergences in the level of autonomy afforded to the regions, and about different institutional arrangements at a higher level of governance and exhibiting an influence on the study regions.

We used a comparative case study design (Yin 2011) to generate further insights into the implementation process of the Norwegian regions and the theoretical conceptualisation of the EDP. The cases selected are all at different stages in the development and implementation of smart specialisation strategies, and thus provide insights into the role that regional economic factors play in the application of an EDP in regional smart specialisation strategies, as well as the role played by the local 'translation' of policy concepts. In this sense, this article challenges the 'one-size-fits-all' policy, by raising the question of whether it is even possible for there to be one size in local practice, given the influence and nature of local translation.

Method

We conduct a constructivist thematic analysis (cf. Braun and & Clarke 2006) of regional strategy documents and associated material referring to entrepreneurial discovery processes undertaken in the selected regions. The core of the research material was made up of strategy documents detailing each region's preparations and planning for the execution of their smart specialisation process (for details, see Supplementary Appendix 1). These strategy documents vary slightly depending on the region's status and progress made on implementation of the EDP. The use of the regions' preliminary reports for the development of their smart specialisation processes provided a valuable source of information for evaluating each region's knowledge base, activities, and involvement of stakeholders in the selection of priority areas. In line with the thematic analysis, we undertook a process of 'extracting' (Staller 2015), and subsequently constructing 'meaning patterns' from the data material (Solheim & Moss 2021). We analysed the policy documents using NVivo software to allow for categorisation and grouping of various thematic aspects of the processes under investigation using a deductive approach. We particularly aimed to identify aspects related to: (1) the involvement of stakeholder groups during the EDP, and identification of their respective roles;

(2) what instruments (if any) were utilised to engage with stakeholders, and at what point stakeholders were included in the process; and (3) the broader process of EDP facilitation. The approach allowed for documents to be analysed in a comparative fashion, while at the same time allowing us gradually to build an understanding of the approaches used, and to investigate this understanding in the context of what the extant literature on the EDP already identifies as some of the key building blocks of the smart specialisation process. In line with Solheim & Moss (2021), who investigated the mainstreaming of gender policies in the Swedish Ministry of Foreign Affairs, we similarly treated the documents as subjective, but valid accounts. The policy documents that we analysed represent how the involved parties chose to present themselves, which involved selection of what to put forward. We aimed to uncover meaning patterns within the documents as to how the EDP had been/was being operationalised.

Results and discussion

Nordland

Nordland was the first Norwegian region to implement a smart specialisation strategy and has been using smart specialisation in its regional policy mix since 2014 (Finne et al. 2020). Its ongoing EDP process takes place in a much more latent than manifest manner, given the earlier adoption of the process into Nordland's regional policy mix. Nordland's early engagement with smart specialisation came about when officials from the region attended an EU smart specialisation peer-review workshop, where representatives of each region were invited to present their smart specialisation strategies and get feedback from experts (Finne et al. 2020). The initial workshop kick-started the first smart specialisation step for the region and proved to be a catalyst for international coordination and collaboration with other regions. such as Lapland in Finland (Mäenpää & Lundström 2019). The early engagement in international coordination has been a defining aspect of the region's smart specialisation strategy, differentiating it from those of the other two study regions.

The roles of regional stakeholders participating in the smart specialisation process have been established for quite some time, with governmental stakeholders taking on the dual roles of policymakers and facilitators (Finne et al. 2020). There is also a large group of mostly SMEs (small and medium-sized enterprises) involved in the process (Nordland fylkeskommune n.d.), alongside the more tepid inclusion by policymakers of research and higher education institutions (HEIs). Civil society

actors, although mentioned as a potentially beneficial resource in the EU guidelines, are not included as an engaged stakeholder group in the strategy documents. A steering group was established to anchor and validate the input and decisions from stakeholders throughout the process (Nordland fylkeskommune n.d.). The group consisted of representatives from influential public research institutions and from the regional government. As such, it has primarily served a broad moderating role within the smart specialisation process.

The first and second stages of the smart specialisation process are those in which regions typically begin the process of gathering and collating knowledge stemming from the EDP, ensuring participation from the above-mentioned stakeholders. At those early stages, Nordland designed and delivered a survey and held focus group interviews with stakeholders from government, industry, and HEIs. The knowledge collected from those activities was then used as the basis for the development of the region's smart specialisation strategy (step three of the smart specialisation process outlined in the section 'Smart specialisation'). This was further influenced and co-created in parallel with Lapland to generate comparable data and promote transnational learning (Nordland fylkeskommune n.d.). This in turn led to the fourth step, the setting of regional priorities, where the regional administration decided to focus on the seafood industry and experience-based tourism (Nordland fylkeskommune n.d.). The process itself had a relatively inclusive approach with regards to the variety of stakeholders involved, albeit with the notable omission of civil society actors. The internationalisation of the process is particularly noteworthy and unique in the case of Nordland, but it does not feature as prominently in the strategy documents of the other regions under study. During the fifth design step, Nordland created a common knowledge base and a forum for innovation within the region, ensuring a high level of participation, knowledge sharing, and communication among the different stakeholders, and thus enabling a process of continuous innovation (Nordland fylkeskommune n.d.). The regional ecosystem consisted of digital communication platforms, incubators, and early-stage enterprise programmes, which were used to facilitate networking, stimulate innovation, and deliver growth based on the priorities selected. Nordland also relied on a support programme, particularly targeted at providing financial support for entrepreneurs and small businesses conducting innovative activities, rather than solely focusing on entrepreneurs and start-ups coming out of the incubators. The region has presented and verified its smart specialisation strategy in peer-reviewed meetings set up by the European Commission (Mäenpää &

Lundström 2019), which constitutes the sixth (and ongoing) design step in the process listed in the section 'Smart specialisation'. SINTEF concludes that Nordland has had an immensely successful innovation strategy. It is internationally recognised as a success story and stands as an example for many regions that are in earlier stages of smart specialisation (Finne et al. 2020). Also, sector-specific research environments have been established and placed in contact with SMEs, leading to increases in overall employee competence across several sectors.

Vestland

Vestland was formed in 2020 with the merger of the counties of Hordaland and Sogn og Fjordane (EY 2020). As such, it is the newest of the regions analysed. The design of Vestland's Regional Plan for Innovation and Business Development 2020–2024 (RPIB) is based on regional development plans and ongoing projects existing prior to the merger (Vestland fylkeskommune n.d.). As part of this design, smart specialisation has been selected as the tool for priority setting and implementation (EY 2020). The reliance on previous planning and its incorporation into the regional smart specialisation strategy is a relatively clear expression of translation in action in the case of a form of distant translation or perhaps tailored translation as shown in Fig. 1. As such, it does not signal a considerable departure from previous policy, but instead that a similar strategic direction is being pursued. This finding is in line with the work of Bellini et al. undertaken in the context of the EDP in Italian regions, who note that 'the experience inherited from the past did contribute to shaping the process in a significant way' (Bellini et al. 2021, 10). In the case of Vestland, we found that the experience of the merger of Hordaland and Sogn og Fjordane had an ongoing influence on the translation of smart specialisation in practice, in part due to the reliance on strategies and documentation developed before the regions had been merged to form Vestland. This helps to explain a delay observed in the roll-out of the smart specialisation process in Vestland.

The industries' driving regional growth in Vestland's larger component, the former region of Hordaland, continues to be in the oil and gas, marine and maritime, tourism, financial, and more general business-related services (Flatval et al. 2018), much the same as other two study regions. The region identifies its primary strengths as (1) its long coastline, which orients the region towards a focus on maritime and marine activities, (2) the presence of world-leading clusters, primarily centred on the largest city in Vestland – Bergen, and

(3) the highly competitive educational institutions (EY 2020). Given the identification of regional strengths rooted largely in clusters and maritime activity, it is perhaps unsurprising to see that the priority areas identified within Vestland's preliminary strategy have focused on renewable energy in general (e.g. carbon capture and storage (CCS), hydrogen- and battery-driven transport, and wind and ocean power), on activities related to the abundance of fjords and mountain within the region (fish farming, agriculture and tourism), and on digital infrastructure (data storage and e-health).

In the development of the Vestland's RPIB, the region involved a large group of both government and HEI agencies, with 11 participating in total. These organisations and agencies were further grouped together to form the administrative steering group, taking on the role of policymakers, and were tasked with aiding the county councillor. Civil society actors were not involved until the selected priorities were introduced through public hearings, with the first public hearing taking place during the formulation of the programme plan, which involved the presentation of the first draft and an indication of recommendations for priority areas. The industries in Vestland mainly comprise SMEs, with the presence of several large clusters, many of which are nationally renowned centres of excellence; for example, the Ocean Technology cluster is certified by Innovation Norway as a global centre of excellence (GCE Ocean Technology). Vestland explicitly states that engaging and maintaining strong collaborations with the SMEs, cluster organisations, and trade organisations in the region is a key aspect of its knowledge-integration activities, and the region has therefore had them take on the role of entrepreneurial agents (EY 2020).

Vestland was, at the time of writing, still in the process of finalising its programme plan for the region, describing the main goals that it aims to achieve, and identifying the themes and topics that should be prioritised, including how to ensure collaboration and participation and how to implement the plan. The initial work on the programme plan has been undertaken by regional policymakers, namely the county councillor, and the other government and HEI actors from the steering group (EY 2020).

To engage firmly with the first stage of the design process laid out, the consultancy firm EY (Ernst & Young) were tasked with the creation of a report that relied on interviews with local SMEs and clusters. Group dialogues and focus groups with educational institutions, public research institutions, and investors to gain a better understanding of the regional context and potential for innovation (Flatval et al. 2018;

EY 2020). In contrast to the case of Nordland, international peer reviews were not performed and work groups were not held as part of the assessment process for the first smart specialisation design step. The reliance on an external organisation differed markedly from what we observed in the case of Nordland, alongside the absence of any real interaction with international partners. This signals a key point of departure between the two regions, and perhaps hints at key differences in the selection of a design approach to the smart specialisation strategy and its subsequent translation into the local context. In the case of Vestland, the difference in translation into local policy has been expressly due to previous experience in the region, and the intention to translate the concept of the EDP into local experience generally, with limited transformative potential in the concept being translated into a local context.

Rogaland

Rogaland bases its regional innovation strategy on its current regional development plan, drawing on the guide to smart specialisation developed by the European Union. It also incorporates the ongoing work relating to the United Nations' Sustainable Development Goals (Rogaland fylkeskommune n.d.,a). The region has identified four priorities for smart specialisation, namely clean energy and maritime futures, food, experienced-based tourism, and 'smart society'. The reliance on the current regional development plan, which exhibits similarities in terms of the areas focused on within the strategy, may indicate the effect of the long running VRI public innovation programme in Norway on how regions are engaging with the concept (for more information about VRI (Virkemidler for regional forskning og innovasjon), see Herstad & Sandven 2017; Njøs & Jakobsen 2018).

In its strategy documents, Rogaland emphasises the importance of including regional stakeholders, and accordingly conducted an open public planning process. From the outset, the region aimed at fostering cooperation among the different stakeholders (Rogaland fylkeskommune n.d.,a). Throughout its EDP, Rogaland has managed to include stakeholders from government, industry, research and educational institutions, clusters, investors, entrepreneurs, and citizens (Rogaland fylkeskommune n.d.,a). However, while the initial signs are promising, it is still quite early in the process, with the implementation of smart specialisation having taken place in December 2019 and the analysis and engagement beginning in early 2020. Given the relative early nature of the process, many of the roles and responsibilities of the various stakeholders is still

very much in flux and evolving. However, the initial signs of Rogaland's wide-reaching engagement are encouraging, as it signals a potentially wider pool of knowledge being included in the creation of the region's smart specialisation strategy. As such, it signals improved opportunities for the process of entrepreneurial discovery and the identification of emergent and potential options within the region. In this sense, while the extensiveness of translation is as yet unclear, we can see a strong degree of fidelity to the concept of translating EDP into practice, and as such Rogaland could be considered a mixed case of low-dosage and full and true adaptation, in line with Ansari et al. (2010).

However, while there are several positives in the early stages of the process of entrepreneurial discovery. For example, while the regional government aims to be a coordinator and driving force of the process (Rogaland fylkeskommune n.d.,a), there are certain areas where it also plans on being an active participant, thus taking on a larger role in some subregions (Rogaland fylkeskommune n.d.,a). Similarly, industrial actors are generally quite engaged in the process and have been participating consistently in workshops throughout the planning process, indicating the particularly prominent role of these actors in the design of the region's EDP.

When setting the priorities for the region, Rogaland held nine workshops, with a total of 177 participants across all the above-mentioned stakeholders (Rogaland fylkeskommune n.d.,a). The workshops were based on research conducted by both NORCE and the University of Stavanger, and they provided an overview of the region in line with what might be expected from step 1 of the design process (see the European Commission's steps listed in the section 'Smart specialisation') (Rogaland fylkeskommune n.d.,a). The region has indicated that it intends to rely on research and HEIs throughout the remainder of the process for its knowledge-gathering process (Rogaland fylkeskommune n.d.,a). The region also created the opportunity for a co-written strategy document, open to all stakeholders to share their input for the strategy. Based on the input, the regional administration decided upon the four priorities (i.e. clean energy and maritime futures, food, experienced-based tourism, and 'smart society').

Two of the open workshops were held during the co-writing period to include potential stakeholders who wanted a physical arena to share their insights, knowledge, and opinions. Within the strategy document itself, it is stated that the strategy was developed in a fluid process that was subject to change as needed. Also, it was collectively decided that the role of governmental stakeholders should primarily be that of a policymaker. In the region's strategy document it is further emphasised that early inclusion communicates priorities early in the EDP, educating stakeholders on smart specialisation, and stimulating collective ownership of the strategy and cooperation among the stakeholders (Rogaland fylkeskommune n.d.,a).

Due to differences in the subregional priorities, Rogaland has made plans to implement specialised activities individually for each priority and location. These activities range from the creation of networks involving clusters, establishing education in fields related to priority areas, creating infrastructure such as roads and meeting places accessible to all stakeholders, and ensuring availability of financial resources (Rogaland fylkeskommune n.d.,a). Also, in priority areas with related industries, such as food and tourism, Rogaland aims to create synergies in order to establish stronger cooperation and co-creation across the different sectors (Rogaland fylkeskommune n.d.,b).

Translation in action

Our findings indicate that although the incentive structure in the three study regions differs from the incentive structure in regions within the EU, Norwegian regions in general adhere to the theoretical approach outlined in much of the earlier work on the EDP within smart specialisation, with a role typically outlined for a diverse pool of stakeholders (usually consisting of local policymakers, industry actors, and HEIs). However, while there are similarities regarding stakeholder involvement, and general adherence to the notion of entrepreneurial discovery, there are considerable differences in the interpretation and application of the smart specialisation process, as shown in Table 1. These differences appear across the regions, specifically with regards to the way in which stakeholders are involved in the process, collaboration with other regions mainly within the EU, and the method used to collect and collate entrepreneurial knowledge, and this leads to a conceptualisation of the form of translation being used across the different regions in line with the earlier work of Ansari et al. (2010).

To explain where the deviation in interpretation stems from, we propose that the incorporation of 'translation' theory (Gianelle et al. 2020) into future work exploring the EDP within smart specialisation strategies would offer a more nuanced picture as to how to understand differences across regions. Such incorporation of the literature on translation enables an exploration of the different interpretations of smart specialisation, and it provides a theoretical lens through which to include an understanding of institutional legacies,

Table 1. Comparison of approaches to the entrepreneurial discovery process (EDP) across the three study regions

Core differences	Nordland	Vestland	Rogaland
Level of international engagement	High	Low	Low
Stakeholders involved	Standard: Government, SMEs,* research and higher education; no clear role for civil society	Standard: Government, HEIs,** organizations, and agencies, clusters, and SMEs	Broad: Comprehensive and inclusive stakeholder engagement with 177 participants from government, HEIs, SMEs, and civil society
Method of stakeholder engagement	Survey of stakeholders, followed by focus group interviews with stakeholders, engagement with international partners, and then priority setting and feedback	Selection of priorities by stated by stakeholders listed above, followed by public hearings	Co-writing of documents, nine workshops across the region, emphasis on collective ownership of the strategy and cooperation among the stakeholders
Approach to translation	Full and true adaptation	Distant adaptation	Low-dosage adaptation

*small and medium-sized enterprises; **higher education institution

local preferences, and previous experience. We believe this inclusion shows that translation provides richer insights into how similar theoretical concepts can have considerably divergent interpretations and corresponding implementation processes. As an example, in the case of Vestland, the region has relied for several years (in its previous form as Hordaland and Sogn og Fjordane) on focusing on the continuation of previously selected priorities. By contrast, in Rogaland the process started much later and has been wider reaching and more inclusive. The use of an inclusive process is a notable departure from what is discussed by Deegan et al. (2021) and may signal an awareness that the region requires a more overt focus on regional policymaking and new path creation away from an overreliance on the oil and gas sector in recent decades. In this regard, Rogaland signals an interesting avenue for an incorporation of the translation literature. Rather than relying solely on path dependence, broader concepts such as smart specialisation could be translated into local action to address long-standing issues in a region. However, while the fidelity to the concept remains high, its extensiveness remains unclear and provides an interesting avenue for further research. Translation not only relies on experience, but also on the role of policy concepts such as smart specialisation to address issues such as lock-in. Finally, in the case of Nordland, the process employed was similar in many respects to what we can see as having taken place in the later application of the EDP in Rogaland, with a wide degree of stakeholders involved in the process. However, what is particularly distinct in the case of Nordland is its international component. The integration of international peer review and broad international coordination and collaboration with similar regions such as Lapland, stems from Nordland's early international exposure to the EU's smart specialisation peer-review workshop in which its policymakers were involved.

That process of internationalisation impacted upon the operationalisation of smart specialisation in the region.

Conclusions

This article provides insights into the implementation of smart specialisation in practice, specifically with regards to how non-EU regions engage with what has come to be a central pillar in EU regional innovation policy and its primary operational approach, respectively smart specialisation and the EDP. We have also shed light on the diffuse understandings of the EDP in practice across regions, providing rich evidence of how the interpretations can differ considerably even within one country, and that the roles of stakeholders and broader interregional collaboration are aspects of the EDP that do not remain fixed in their understandings across regions, indicating the relevance of translation theory for future regional comparative studies of smart specialisation. We observed notable differences in the translation and implementation across the three study regions. The differences observed most clearly related to stakeholder involvement, interregional collaboration with the EU, and the relationship to past areas of prioritisation.

Furthermore, we have contributed to an emerging base that seeks to contextualise regional EDPs in a better way, and to provide a theoretical approach to understanding this translation into policy. In particular, we provide further support for the notion advanced by Bellini et al. (2021) regarding how regions learn and develop their EDP, in addition to furthering the work of Gianelle et al. (2020) by explicitly identifying the translation of policy concepts such as the EDP into practice. This in turn provides an insight into the relevance of our research to policymakers, where we focus on the legacy of previous policies in influencing

the translation of either newer or more in vogue policy concepts such as 'smart specialisation' and help to contextualise in a better way policy interventions as often being a case of translation.

Our research for this article has a few limitations, which should be acknowledged and provide scope for future research. First, our strategy limited our ability to compare regions that have completed their EDP and developed their smart specialisation strategy. While we sought to ensure comparability of the documents used in the study, direct or one-to-one comparisons were not possible due to the different stages in which the regions were in in terms of the EDP. Moreover, the strategies studied are non-standardised, meaning heterogeneity exists in how regions formulated and drafted their respective documents. Second, as we focused solely on the documents published by the regions, we would encourage a careful and cautious interpretation, in line with the approach taken by Solheim & Moss (2021). Similar to Solheim & Moss, the documents we analysed constitute the regions' presentation of the results obtained during the EDP. As such, they present each region's own version of the unfolding of the EDP and should therefore be treated with caution when interpreting the implementation. We argue that an analysis of the strategic documents offers valuable insights into the translation and planned execution of the EDP. However, future research should aim to include narratives of how the EDP translated 'on the ground', including whether such narratives align with or deviate from how they are presented and how they were experienced/lived. In this article, we have aimed to focus on how such strategies are conceptualised and codified, rather than purely on what it might mean if and when such strategies are implemented, which could be a promising avenue for future research.

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