A new evolutionary perspective on institutional complementarities and regional development

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Abstract

The paper reviews how the concept of institutional complementarities has been approached in the Varieties of Capitalism and Policy Mix literatures. Based on a critical review, we propose instead an evolutionary framework to analyze institutional complementarities that is inspired by the principle of relatedness. We discuss promising future applications in economic geography, such as how complementarities across institutions may promote regional diversification in regions, how this institutional complementarity framework may shed light on the question what is feasible when implementing institutional change in specific territorial contexts, and how it may contribute to understand better how regional innovation policy may become effective in particular institutional contexts.

Keywords: institutions, institutional complementarities, institutional relatedness, institutional change, institutional space, varieties of capitalism, policy mix, policy space, regional diversification, Evolutionary Economic Geography

JEL: B15, B52, 018, 030, 033, P51, R11, R58

1. Introduction

A large body of literature has shed light on the importance of institutions for economic development (North 1990; Acemoglu et al. 2005). Institutions may facilitate (e.g. property rights, rule of law) or not (e.g. corruption, low trust) innovation and economic development. The Innovation System literature (Nelson 1993; Asheim and Coenen 2006) focuses on the nature of interactions between organizations that are coordinated by formal and informal institutions that promote or not innovation. Institutions are also perceived to affect the nature of innovations, in which some institutions provide favorable settings for radical innovations (Hollingsworth 2009; Acemoglu et al. 2014).

A key problem is that many of these contributions treat institutions as if they act in isolation. This has been challenged by scholars who have adopted a systemic approach to institutions. They advocate the idea that the institutional structure consists of elements that might be coherent or not (Streeck and Thelen 2005). Various literatures have described the nature of such institutional systems, such as the regulation theory (Boyer 1988) and the Varieties of Capitalism literature (Hall and Soskice 2001). In those accounts, institutional systems are presented as ideal types that show complementarities between institutions (Amable 2000; Hollingsworth 2000; Crouch 2005; Jessop 2011).

While the concept of institutional complementarities is appealing, it has remained rather underexplored, especially in the field of economic geography. Most of the work on institutional complementarities follows a functional, pre-defined approach to institutional systems, such as the Varieties of Capitalism literature (Hall and Soskice 2001) which has been criticized (Taylor, 2004; Peck and Theodore 2007; Akkermans et al., 2009; Boschma and Capone 2015). Based on this critique, this article proposes an alternative evolutionary view that advocates a revealed relatedness framework to institutional complementarities that is inspired by the product space concept (Hidalgo et al. 2007) and the principle of relatedness (Boschma 2017; Hidalgo et al. 2018). Section 4 explains how the concept of institutional complementarities can be applied in future research in the field of economic geography to explain institutional change in regions, to increase our understanding of how regions develop and diversify over time, and how to build an effective regional innovation policy that is grounded in a dynamic policy mix framework.

The objective of this paper is to propose a concept of institutional complementarities that aims to tackle these shortcomings. Section 2 reviews the Varieties of Capitalism literature as a prime example of a functional approach to institutional complementarities. Section 3 proposes an alternative, evolutionary approach to institutional complementarities, based on revealed combinations of institutions and policies that countries and regions actually make. Section 4 discusses how the concept of institutional complementarities can be applied to key topics in economic geography and how it might shed new light on questions such as how regions implement institutional change, how regions diversify in new activities, and how regions may build effective innovation policy. Section 5 concludes.

2. Varieties of Capitalism

The concept of institutional complementarities suggests that, by definition, institutions within an institutional system are considered complementary. In such a conceptual setting, proximity between institutions is constructed, predefined and determined by theory. A prominent example of such a functional approach to institutional complementarities has been proposed by the Varieties of Capitalism literature (Hall and Soskice 2001; Amable 2003; Hall and Gingerich 2009; Hall and Thelen 2009).

A core claim of this rich body of literature is that countries have remained very different in the way they coordinate their actions, despite strong forces of globalization. The main reason is that countries accumulate a set of institutions that are tightly connected to each other and therefore hard to change. Such a systemic view on institutions argues that institutions may reinforce each other at the national scale, forming a system that includes industrial relations, education and research, finance, and the welfare state. It also implies it might be difficult to implement institutional change, as a change in one institution might imply it becomes incompatible with other institutions in the overarching system.[1]

According to Hall and Soskice (2001), this is embodied in the types of economic activities and innovations that countries specialize in. Other activities and types of innovations that do not fit the institutional system of countries are unlikely to prosper. Institutions in liberal market economies are perceived to promote science-driven industries in which radical innovations are more common. The institutional system of coordinated market economies would, instead, facilitate the development of sectors such as high-quality engineering in which incremental innovations prevail, as their key assets are specific and committed to such an extent that it is almost impossible to put them to alternative uses.

The institutional complementarity view of the Varieties of Capitalism literature has been criticized. Hall and Soskice (2001) proposed two ideal-types of institutional systems (i.e. liberal and coordinated market economies) to which only a very limited number of

[1] Another influential school of thinking on institutional complementarities has been initiated by Hofstede ([1980]2001) on cultural proximity. Hofstede identified groups of countries that share similar cultural work-related values on multiple dimensions. Individualism vs. collectivism refers to the degree to which societies are integrated into groups. Uncertainty avoidance concerns how societies are dealing with unknown situations and uncertainty. Long-term orientation refers to how society views its time horizon. Masculinity-femininity is associated with how a society values traditional sex roles. Power distance indicates whether inequality, ranks, authority and power are tolerated. Kaasa et al. (2014) adopted Hofstede's theory to identify cultural features of NUTS-2 regions.

countries like the US, the UK and Germany could be assigned (Geffen and Kenyon 2006; Bathelt and Gertler 2009). However, many countries might represent very different institutional models, such as emerging economies (Schedelik et al. 2021). Institutional varieties have also been observed between countries in Europe, Asia and Latin America (Bizberg 2014; Hall 2018; Johnston and Regan 2018; Riedel and Anusik 2024).

Another critique concerns its prime focus on methodological nationalism that overlooked regional varieties inside the same institutional system (Asheim and Coenen 2006; Peck and Theodore 2007; Gertler 2010). Moreover, there was a tendency to adopt a functionalist approach that aims to identify institutional complementarities, while downplaying the possibility of inefficiencies and tensions within institutional systems (Crouch 2005; Hancké et al. 2007; Peck and Theodore 2007; Jessop 2011). This also implied a prime focus on institutional stability and path dependency, rather than institutional change and transformation (Deeg and Jackson, 2007; Jackson and Deeg 2008; Schneider and Panescu 2012; Amable and Palombarini 2009; Morgan 2005; Hay 2020).

Studies found also mixed support for some of the claims of the Varieties of Capitalism literature concerning the type of economic specializations and innovations that would prevail in each institutional system (Taylor, 2004; Allen et al., 2006; Kenworthy 2006; Akkermans et al., 2009; Meelen, 2013). Boschma and Capone (2015) did not find a systematic pattern of economic specializations in each of the institutional systems, but showed instead that coordinated market economies stay closer to their own industrial structure when diversifying in new industries, in contrast to liberal market economies whose institutions give them more freedom to make jumps in their industrial evolution.

There is also an implicit implication in the Varieties of Capitalism literature that policies should reflect the institutional complementarities in a country. The policy mix literature (Howlett and Rayner 2007; OECD 2010; Uyarra 2010; Flanagan et al. 2011; Howlett et al. 2017; Bessa and Gouveia 2022) claims that policies are not developed in isolation but in a context of pre-existing policies. Research on policy mixes has adopted case study approaches, which implies there is little comparative work to date. There is also a tendency to follow a functional, normative approach in which the 'right' set of policies are predefined, instead of following an approach in which revealed policy mixes made in practice are being examined. Finally, the nexus between institutions and policies in terms of complementarities between the two is still rather underdeveloped.

3. Towards an institutional relatedness approach to institutions

One way to address these critiques on the Varieties of Capitalism literature is to adopt a data-driven approach to institutional complementarities that enables a comparison of all countries and regions in the world. This would mean that the research focus shifts to what territories do in practice, rather than what we expect them to do, based on theoretical assumptions. This approach enables to address research questions, like which territories make similar combinations, do territories in the same institutional group perform in a similar way, do territories that make rare combinations reflect tensions/inefficiencies in their institutional structures, and does that make them underperform economically.

We propose a rather data-driven approach to institutional complementarities that follows the methodology of the product space (Hidalgo et al. 2007). The product space concept has been developed to explain in which new export products countries specialize. The core claim is that countries specialize in new export products that build on their own capabilities, as represented by their existing set of export products. Countries cannot just specialize in any new product, but they are constrained by their existing set of capabilities. This requires a uniform method to determine which export products require similar capabilities. The product space concept makes use of co-occurrence analysis of export products in export portfolios of countries. It calculates how often countries have a comparative advantage (CA) in two export products simultaneously. A country has a CA when the share of a product in its exports is larger than the share of that product in world exports. If two export products co-occur frequently in the export portfolios of many countries, the two export products are assumed to demand similar capability requirements. In Hidalgo et al. (2007), the product space is used to predict in which new export products a country is more likely to diversify and build a comparative advantage.

To apply it to institutions and policies, we propose co-occurrence analysis of country portfolios of institutions and policies. This will reveal which institutions and which policies are more often combined, and will measure the complementarity between institutions and between policies based on the co-occurrence of institutions in the institutional profiles of countries, and the co-occurrence of policies in the policy profiles of countries. Such a continuous variable of institutional and policy complementarities measures the degree of relatedness between any pair of institutions and between any pair of policies. Doing so, we can derive a network measure of institutional and policy complementarity that represents an ‘institutional space’ and a ‘policy space’ respectively, in which each node stands for an institution/policy, and each link between two nodes signals the degree of institutional and policy complementarity. To the best of my knowledge, there is only one working paper to date that adopted the product space framework along these lines and applied it to climate policies of countries (Mealy et al. 2025). The next step is to interpret the observed patterns of this data-driven approach: do the combined institutions in the institutional space make sense, and do they represent a system that is interpretable?

Such a revealed institutional and policy complementarity indicator would enable us to tackle systematically a number of key research questions: (1) which institutions and which policies are complementary to each other; (2) which territories make similar institutional combinations and similar policy combinations; (3) what is the opportunity set of each territory in terms of institutional and policy change. This framework may be instrumental to determine for each territory the range of options a territory has to implement institutional and policy change. We follow the principle of relatedness (Boschma 2017; Hidalgo et al. 2018) and argue that the more related an institution or policy is to the existing set of institutions or policy mix in a territory, the more likely this (new) institution or (new) policy is likely to emerge and become successful; (4) how coherent is the set of institutions and policy mixes that territories make in practice. This degree of coherence in a territory is based on how common these combinations are, as inspired by studies on the cohesion of technological portfolio's inside firms or territories (Teece et al. 1994; Fleming 2001; Antonelli et al. 2010); and (5) does a coherent set of institutions and policy mixes in territories affect innovation, economic development and environmental sustainability.

4. Fields of application in economic geography

This section explores how the notion of institutional complementarities can be applied to three key topics in the field of economic geography. Section 4.1 discusses how regional diversification can be facilitated by institutional relatedness. Section 4.2 discusses how institutional change that is needed for structural change is facilitated or hindered by existing institutions in a region. Section 4.3 explores the role of policy mixes to enable structural change and to make regional innovation policy more effective.

4.1 Institutions and regional diversification

The literature on regional diversification has developed new insights in how territories diversify into new activities and develop new growth paths (Boschma 2017). A key claim is that territories are likely to develop new activities that require capabilities that are related to capabilities of existing activities (Hidalgo et al. 2007, 2018; Neffke et al. 2011a). In other words, the local economic structure makes the emergence of some but not all activities more feasible, depending on whether they are related to other local industries.

Many types of capabilities can affect the diversification process, such as specific knowledge, skills and institutions. Most often, studies refer to capabilities in technologies, industries and occupations in terms of knowledge and skills (Neffke et al. 2011a; Boschma et al. 2015). What is often missing is a full account of the role of institutions for regional diversification. In recent years, scholars (e.g. Boschma and Capone 2015; Cortinovis et al. 2017; Menzel and Kammer 2019) have made a first step to address this issue. Boschma and Capone (2015) tested whether (formal) institutions do matter for the type of diversification that prevails in countries. Inspired by Hall and Soskice (2001), they found institutions that regulate less tightly labor, capital and product markets give countries more freedom to diversify in less related activities. Cortinovis et al. (2017) found that bonding social capital and low quality of government turned out to have a negative impact on diversification in European regions.

However, what these studies did not investigate is whether different activities require similar institutions, and if so, whether this may explain diversification. While institutions may be sector-specific in which each sector is embedded in a particular set of institutions (Malerba 2002), sectors might also have institutions in common with other sectors. This implies that a sector is more likely to be developed if it shares similar institutional requirements with other sectors that are already present in the region.

Carvalho and Vale (2018) were the first to work with the concept of institutional relatedness across sectors and apply it to the topic of regional diversification. They claimed that "the degree to which institutions associated with certain industries or activities can be transposed to provide resources and legitimacy to new industries may provide new avenues to understand path creation …" (p. 291)[2]. Following Boxenbaum and Battilana (2005), Padgett and McLean (2006) and Padgett and Powell (2012), Carvalho and Vale (2018) built on the concept of institutional transposition in which institutions new to a field are transposed from another field. In this way, institutional relatedness is proposed as an alternative explanation for regional diversification, besides technological or skill-relatedness, in which "….. the transposition of related institutional settings within regions to amplify (or to limit) the search space for new industries" (p. 291) is highlighted. The study explains the development of biotechnology in the Portuguese region of Centro due to the local presence of institutional norms and practices that are associated with a local tradition of commercialization of academic research, knowledge transfer routines between universities and private firms, and a set of informal and relational arrangements.

Other studies applied a similar idea of institutional transposition. A study on institutional relatedness at the regional scale by Skog and Solvell (2020) looked at the transposition of trading institutions in Bordeaux in the 18th and 19th centuries. Skog and Solvell (2020) found that key trading institutions like business practices defining product quality, product classes and how prices were set were quite similar between slave and fine wine trades,

[2] These papers build on the notion of institutional relatedness in management studies that examine diversification in firms (Peng et al. 2005; Dhandapani and Basant 2009). These works argue that besides product relatedness, institutional relatedness might be considered important. Institutional relatedness gets a very specific meaning here, referring to informal linkages an organization has with institutions that confer resources and legitimacy (Peng et al. 2005), as embodied in political ties and the international experience of CEOs (Sun et al. 2017).

which enabled a smooth transposition of institutions between the two fields in Bordeaux and a successful transition of trade from slaves into wine. Punt et al. (2022) also made use of the concept of institutional relatedness to explain the rise of renewable energy cooperatives as a new organizational form in German districts. This organizational innovation emerged because it could build on the organizational knowledge and legitimacy spillovers from cooperatives in other industries in the region. This institutional context, as embodied in the local presence of cooperatives in other industries, lowered resistance as a result. A study by Mäkitie et al. (2019) investigated different forms of relatedness between the oil and gas industry on the one hand and the offshore wind power on the other hand. They found that low institutional relatedness obstructed and challenged the resource redeployment for the Norwegian oil and gas industry to offshore wind power activities.

These case studies have generated new and important insights on the role of institutions in regional diversification. A next step is to adopt a systematic approach on institutions that accounts for the degree of institutional relatedness across all activities and how that affects diversification in regions.

4.2 Institutional complementarities and institutional change

Another promising topic in economic geography is to link the concept of institutional complementarities to the study of institutional change in regions. This topic addresses that new activities can only develop fully when new institutions are created, or existing ones are transformed or abolished (Nelson 1994; Murmann 2003; Boschma and Frenken 2006). Institutions need to be constructed to enable their emergence, as existing institutions are unlikely to match their requirements and may even contest their development (MacKinnon et al. 2009, 2019; Dawley et al. 2015; Evenhuis 2017). This is well understood in the (geography of) transition literature, showing that the institutional logic of an entrenched techno-economic system can block the green transition (Coenen et al. 2010; Smith and Stirling 2010).

Agents of change are considered to play a key role in breaking such path dependency and resistance. This role of agency, or what has been termed bricolage (Garud and Karnøe 2003; Boschma et al. 2017; Carvalho and Vale 2018), to create their own conditions of growth is associated with a mismatch between the needs of new activities and the prevailing cognitive and institutional environment in which new path creation unfolds (Storper and Walker 1989; Boschma 1997). The literature on institutional entrepreneurship (Garud et al. 2002; Maguire et al. 2004; Battilana et al. 2009) focuses attention to how institutional agents engage in collective action to mobilize resources and public opinion, to build legitimacy, and to construct and adapt institutions that support new path creation (Aldrich and Fiol 1994; Strambach 2010; Sotarauta and Pulkkinen 2011; Sotaurata et al. 2012; Dawley et al. 2015; Binz et al. 2016).

However, if agency is deemed crucial to induce institutional change, is this more likely to happen in some regional institutional settings? The possibility of institutional adaptability may be higher in regions that is well-endowed with a wide range of different activities. In such a context, it may be harder for activities or powerful players to monopolize and dominate the design of institutions (Neffke et al., 2011b). Regions with a high diversity may be in a better position to make institutional change to support new path creation, because there is redundant institutional capacity (Grabher 1993) and less opposition from vested players. This has some resemblance to what Hollingsworth (2009) once referred to as a weak institutional environment, which allows for a greater variety across organizations in regions and is more likely to promote the occurrence of radical innovations.

However, in diversified regions, there may be a lack of institutional cohesion with too many interests that may harm institutional focus, coordination and control. A fragmented institutional structure in a region may be more responsive to experimentation and newcomers, but creative actions might remain unnoticed and isolated, as new institutions have to be built from scratch, and local public support is hard to get when there are many competing local claims. Boschma (2015) proposed the notion of a loosely coherent institutional structure which supports multiple activities and facilitates institutional change to accommodate the development of new activities. In this institution-building process, the new institutions can build on and expand within the overarching institutional set-up, with whom they share similar institutional requirements.

In other words, some activities have complementarities in institutional terms, that is, they have similar, though not identical institutional requirements. Regions with such institutional overlap might be better equipped to make new combinations between activities. The overarching institutional framework is also not fundamentally challenged, but can be exploited to accommodate the institutional demands of new activities. In other words, new institutions are not built from scratch but draw on existing institutions, and there is more likely to be little local resistance to such type of institutional change.

This implies that institutional change unfolds in a context alongside existing structures where history matters. This is not a new idea. In fact, taxonomies of institutional change have been proposed that account for this, such as institutional layering and conversion (Thelen 2003; Streeck and Thelen 2005; Martin 2010; Rocco and Thurston 2014). Although institutions may be replaced by new ones (Mahoney and Thelen 2010), new path creation does not necessarily mean that territories break with their institutional past. Ebbinghaus (2009) defines path departure as a partial renewal of current institutions in which its underlying core principles are not fundamentally challenged. Strambach (2010) proposed the notion of institutional plasticity to underline that an institutional system has a range of options for new path creation within the prevailing institutional framework. This implies that agents can deviate from the established path by creating institutions that support their activities but do not necessarily break with the institutional system (Strambach and Klement 2012). Other studies in economic geography have found similar inspiration in Thelen's framework (2004) and produced new insights on the occurrence of different types of institutional change in particular regional cases (Bathelt and Glückler 2014; Glückler and Lenz 2018; Hu and Yang 2019; Strambach and Pflitsch 2020).

However, this still leaves unanswered the question why some territories can make the required institutional change, while other territories fail to do so. This is a key question that not many studies in economic geography have yet addressed fully. Here, the concept of institutional complementarities might be useful to explain why territories differ in their ability to induce institutional change, and why they might be able to diversify in some activities but not in others. That is, existing institutional legacies may set sharp limits to the type and direction of institutional change (Campbell 2011). This makes the creation of some institutions more feasible, depending on whether they are coherent with existing institutions, while other combinations of institutions might not work (Amable 2000). Regional branching may be facilitated when new industries require institutions similar (but not identical) to those of related industries in the region (Carvalho and Vale 2018). This implies new institutions do not have to build from scratch, and this institution-building is harder to be contested by (local) agents. Such a comprehensive approach on institutional complementarities assesses the effect of institutional change on path creation in regions, comparing many cases simultaneously. This would complement case study research on institutional change in economic geography.

4.3. Institutions and policy mixes

How can policy be integrated in the proposed evolutionary framework on institutional complementarities? Institutional change (though not all of it) might also require policy actions in a wide range of fields. Here, history matters as well: policies do not take place in vacuum but unfold in institutional contexts. Existing institutions affect the ability of countries and regions to implement institutional change and adopt successful policies. Peripheral regions often suffer from institutional weaknesses that limit the effectiveness of policy (Karo and Kattel 2015; McCann and Ortega-Argiles 2015; Rodríguez-Pose and Wilkie 2015; Morgan 2015; Boschma 2023), such as weak administrative capacity, poor collaboration culture, closed networks between vested players, and low quality of government (Rodríguez-Pose and Di Cataldo 2015). This implies policies should adapt to the specific needs of territories and be aligned to the specific institutional context.

But it is not only about aligning policies to the institutional context. It is also about constructing a coherent set of policies or policy mixes that support each other (Gunningham and Sinclair 1999; Crouch 2005; OECD 2010; Flanagan et al. 2011; Jessop 2011). Uyarra (2010) underlined the importance of studying the dynamics of policies in such a policy context as follows: "interactions happen across policy domains, between instruments, across levels of governance and also across time … These interactions are dynamic and path-dependent, for policies are not adopted on a tabula rasa, but in a context of pre-existing policy mixes and institutional frameworks which have been shaped through successive policy changes. Past policy decisions would constrain the range of options available for current decision makers … Thus, while formulating policies, regions need not only take the knowledge and institutional base of the region as starting point, but also consider existing policy mixes and past policy history, for they will enable or constrain new policy goals" (p. 132).

So, the past conditions the range of options available to policy makers (Lambooy and Boschma 2001; Kerr 2002; Wolfe 2010). There are constraints dictated by the institutional context and the mix of policies implemented in the past. As territories accumulate different sets of policies and institutions over time, there will be no room for 'one-size-fits-all' policy. A change in policy can only become effective when it matches the institutional system and the current policy setting. There are limits to policy learning across countries that have little in common in terms of institutions and policy practices. Institutional learning is more feasible and effective when institutional complementarities are shared. Accordingly, 'one-size-fits-all' policies might make sense in territories sharing similar institutional contexts, but not in territories with little institutional proximity.

Current studies have drawn little attention to these challenges. Our framework on institutional complementarities proposed in Section 3 may be instrumental to take up these challenges, as it has the potential to determine the degree of relatedness between different policies (Mealy et al. 2025), and between institutions and policies. In other words, it has the potential to assess systematically whether there is a good or bad fit between policies and the institutional context in which they are implemented, and which policies can be considered complementary and thus may effectively support each other. Applying this to the question of the effectiveness of regional innovation policy might give us a tool to develop a better understanding of how to improve regional innovation policy.

5. Conclusions

This chapter aimed to outline the literature on institutional complementarities that looks at institutions and policies from a system perspective. We critically reviewed the Varieties of Capitalism literature that has been influential in the last decades. This literature generated valuable insights but has also been criticized for its lack of comprehensiveness (limited coverage of countries), its methodological nationalism (how about regional varieties?), its prime focus on functionalism (what about internal tensions?), its predefined nature (what about revealed relatedness?), its focus on descriptive case-studies (what about large-scale systematic comparative studies?), its preoccupation with stability (what about transformations?), and its limited validity concerning economic outcomes. Moreover, few studies exist in economic geography that assess systematically the range of policy options territories have at their disposal, what policy combinations territories make in practice, how one can assess what are good or bad policy mixes, how one can assess whether a policy change might work and become effective in an unifying policy mix framework, and how different combinations or mixes of policies impact regional performance.

We critically discussed a number of applications in economic geography. Following Carvalho and Vale (2018), we argue that institutional relatedness may provide an alternative explanation for regional diversification than other forms of relatedness (knowledge, skills). However, there are no systematic comparative studies yet that assess what the diversification opportunity sets of territories are, given their institutions. The literature on institutional change has strongly argued that structural change requires the creation of new institutions and the restructuring of existing ones. However, there is little understanding of why some territories might be more successful in doing so. The institutional complementarities framework has the potential to shed new light on the question what is possible, and what is not in this respect. Institutional complementarity may be an enabling factor to implement institutional change, also because one expects little local resistance to institutional change in territories where such institutional overlap exists across local activities. The literature on policy mix literatures has signaled the importance of coherent sets of policies across policy domains (Uyarra 2010; Flanagan et al. 2011; Matti et al. 2017). However, there is little systematic knowledge of what is a good or bad fit of policy mixes, what are feasible policy options in specific territories given their existing sets of policies, and what are the limits to institutional learning across territories.

These research avenues require methodology that can assess the revealed complementarity between institutions and between policies, and that can define the opportunity sets of territories to implement institutional change and policy change given their existing sets of institutions and policy mixes. We propose to follow the logic of the product space concept (Hidalgo et al. 2007) and apply it to institutions and policies. Doing co-occurrence analysis of country portfolios of institutions and policies enables us to identify which institutions and policies share similar features, to measure complementarity between institutions and between policies, based on the co-occurrence of institutions in the institutional profiles of countries ('institutional space') and the co-occurrence of policies in the policy profiles of countries ('policy space'), and to assess whether the existing set of institutions and policies (at the national and regional level) in each country ('the institutional-policy space') makes it feasible or not to create new institutions and to design new effective policies.

The execution of this ambitious research agenda on institutional complementarities and institutional change in regional studies is expected to contribute to the further advancement of Evolutionary Economic Geography. Whereas research in EEG on institutional change has relied almost exclusively on qualitative case studies, this research agenda will contribute to the use of quantitative methods on institutional complementarities and institutional change, as comprehensive institutional datasets by regions have become available more recently (e.g. Charron et al., 2014, 2016; Fazekas and Czibik 2021). Such a research agenda in EEG is expected to provide new insights on the role of institutions for regional development and innovation.

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