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Financialization and Resilience in a Regional Perspective*

Since the upheavals and distortions of the financial and economic crisis at the end of the 2010s, the concepts of financialization and (regional) resilience have gained considerable importance. While different studies deal with these concepts separately, a systematic reconciliation of financialization and resilience in a regional perspective is still missing. The present paper addresses this research gap. Based on a comprehensive review of the relevant geographical and economic literature, this article develops a regional perspective on financialization and evaluates its significance for the resilience of regions. The analysis shows, that regional financialization is characterized as the region-specific interaction of different financialized structures. Based upon this, the reconciliation of both concepts delivers substantial implications for our understanding of regional economic dynamics and calls for a central role of regional financialization in the future research agenda.

Keywords: **regional financialization, regional resilience, regional economic development**

1 Introduction

In August 2007, the interbank market was disrupted by a sharp rise in interest rates. Those days are commonly known as the beginning of what was to become a global economic crisis (Illing 2013: 25). Although already more than a decade ago, these events and their consequences are still present in both the public and academic debate. In particular, the broad reception of regular warnings of an imminent recession reflects the continuing lingering effects of the upheavals of that time.

While there is usually talk of a global economic crisis, which is undoubtedly a proper observation, it must not be overlooked that the crisis clearly has seen *regional* differences in both causes and effects. This observation is particularly pertinent in the context of the convergence objective and the more abstract goal of 'territorial cohesion' put forward by the European Union as well as it is on the national level, as in the case of 'Gleichwertigkeit der Lebensverhältnisse', roughly translated as 'equal living conditions', present in debates in Germany (Chilla et al. 2016: 92, 163, 172f.). All of them had already been formulated before the crisis, but certainly gained importance once again in the light of the occurred distortions. The economic crisis can thus be understood not only as a global but also ultimately as a *geographical* crisis (French et al. 2009: 287).

So far, uneven regional development, respectively before, during, and after the economic crisis, has been subject to a multitude of analyses. Here, the concept of 'regional resilience' has found widespread application (e.g. Davies 2011; Neufeld 2017; among others). In a more general perspective, the concept of 'financialization' has gained remarkable momentum in explaining causes and consequences, as the global economic crisis is also often referred to as a *financial* crisis due to the severe distortions that swept off the global financial system (Ioannou/Wójcik 2019: 264). A wide range of scholars from sociology and the political sciences to economic geography and economics concede considerable importance to questions and issues of financialization (Pike/Pollard 2010: 32), inevitably leading to a co-existence of fairly diverse approaches and understandings.

However, despite the emerging variety of definitions, there are hardly any attempts that conceptualize financialization beyond 'national containers' (French et al. 2011: 808), as "the financialization literature generally struggles with defining how processes of financialization are processed in [...] local or national contexts" (Wijburg/Aalbers 2017: 969). Put differently, even though economic geographers have emphasized that "financialization is manifesting itself differentially on a subnational – regional or urban – level" (Engelen et al. 2010: 69), there are hardly efforts to address *regional* financialization and its role in the development of regions.

The present paper tackles exactly this research gap. It focuses on possible ways in which financialization can be perceived and conceptualized in a regional perspective and, at the same time, bridges the gap to the more familiar concept of regional resilience. In other words, it outlines to what extent a combination

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of financialization and resilience in a regional perspective can provide new and meaningful explanations and insights, especially in the context of the recent financial and economic crisis. Therefore, the second and third section are concerned with conceptual foundations. First, the rather new but nevertheless multifaceted approaches to financialization will be discussed, ultimately striving to derive *three dimensions of regional financialization.* Then, the cornerstones of the more familiar regional resilience concept will be presented briefly. The fourth section will synthesize the preceding outlines and derive *four extensions of the regional resilience debate* brought by the dimensions of regional financialization. The fifth section will shortly explore the possibilities and limitations of empirical operationalizations.

2 Towards the Regional in Financialization

Debates and discussions on financialization were undoubtedly reinforced by the financial crisis and have been on the rise for more than two decades now. In the course of their emergence, two central questions have arisen: What is financialization, and what is the very nature of the relation between financialization and the financial crisis? Put differently: Can the financial crisis be seen as the outcome of an ongoing financialization? This question is not as trivial as it seems at first glance. A wide range of scholars and publications – from (heterodox) economics to sociology, political sciences, or economic geography – are concerned with this complex issue (Pike / Pollard 2010: 32). This multitude of approaches is accompanied by different understandings of financialization. A driving force of the definitional diversity is the versatile nature of financialization which, "as a multifaceted phenomenon, [...] highlights the need for interdisciplinary research" right from the outset (Ioannou / Wójcik 2019: 266).

2.1 Scopes and Scales of Financialization

Despite this diversity, certain overarching argumentation patterns among scholars of various disciplines can still be identified. To be more precise, at least two different yet dominating approaches to financialization can be found. First, financialization has been used to refer to "a wider transformation in economy and society, whereby the financial sector and financial markets come to occupy a dominant or quasi-dominant position [...]" (French et al. 2011: 799). In this context, Krippner's (2005: 174) definition of financialization as a "pattern of accumulation in which profits accrue primarily through financial channels" gained far-reaching significance. Second, financialization has been used to refer to the growing influence of "financial values and technologies on corporations, individuals and households" (French et al. 2011: 799). In this respect, the definition of financialization as the "increasing role of financial motives, financial markets, financial actors and financial institutions" put forward by Epstein (2005: 3) – can be considered as pioneering (Ioannou / Wójcik 2019: 263). In practice, both definitions are mostly applied as the rising shares of financial and insurance activities in GDP (e.g. Lapavitsas / Powell 2013: 365ff.; Schwan 2017: 664; and others). This can be understood an interpretation of financialization 'in narrow terms' (Aalbers 2019: 6).

The widespread denial of geographies in the emergence and effects of the financial crisis (see Martin 2011) contrasts the recurring reminders of economic geographers in recent years (among others: Aalbers 2009: 34 or Martin 2011: 589). In comparison, questions of scales and geographies have played a crucial role in the debates on financialization ever since. The central argumentation line is that of 'glocalization': "On the one hand, globalisation has 'delocalised' local financial circuits, connecting local financial transactions and assets into global financial market networks [...]. But at the same time, this very process has 'localised' the global, in the sense that global financial transactions and markets [...] have become inextricably connected to and dependent on [...] the conditions and processes at work in local financial circuits in particular places" (Martin 2011: 591).

Building a bridge between the local and global unavoidably leads to a multitude of scales in the analysis of financialization. The scalar complexity is reflected by different theoretical schools which are corresponding to the two dominating 'readings' of financialization introduced by Krippner (2005: 174) and Epstein (2005: 3). Following French et al. (2011: 800f.), these, mainly three, theoretical schools, which were distinctly important for the rise of the concept of financialization, can be named as 'regulation theory', 'critical social accountancy', and several 'sociocultural approaches' (French et al. 2011: 800f.). Corresponding to this division into three 'schools', the approaches focus on different perspectives – on the macro, meso, and micro level.

Within 'regulation theory', shifts and changes in modes of production and social regulation as well as the recurring emergence of crisis-prone developments are traditionally at the core of interest (Bathelt / Glückler 2012: 406; Kulke 2017: 115). Therefore, regulation theorists address the role of the financial system in creating such transformations (French et al. 2011: 802). In other words, within

regulation theory tradition, "financialization [is interpreted] as a macroeconomic phenomenon, representing a systemic shift in capitalism and marking the emergence of a new finance-driven regime of accumulation" (Pike/Pollard 2010: 32; author's own insertions in brackets). The general interest in money and finance can be explained with the relative proximity of regulation theory ideas to Marxist approaches (French et al. 2011: 801). Among others, the article of Aglietta and Breton (2001) is an example of publications in this context. They note that "financial liberalization has profoundly changed the connections between finance and the rest of the economy and, as a consequence, the economy is vulnerable to nineteenth-century-like investment booms and busts" (Aglietta/Breton 2001: 434). To underpin this macro-economic argument, Aglietta and Breton provide micro-economic reasoning, focusing mostly on shareholder and firm behavior in the era of 'financial liberalization' and comparing it to the preceding era of 'bank finance'. A more recent approach, drawing on both ideas from Marxians as well as regulation theorists, can be found in the article by Lapavitsas and Powell (2013: 359ff.). Financialization in the light of regulatory changes is investigated by economic geographers aside from decidedly Marxist takes as well. "Motivated by fuelling the dialogue between geography and regulation", Dörry (2017: 429) addresses several 'regulatory spaces' across various scales. Thereby, she argues that the national level diminishes slowly and "new virtual, supranational and extra-regulatory spaces appear". Young (2011: 12), as another geographic example, analyzes the subprime crisis and the financialization of the 'global accumulation regime' against the background of a systemic shift in the United States towards "privatized Keynesianism". Further macroeconomic approaches to financialization can be found at heterodox economists like Palley (2007: 3; author's own insertion in brackets), who defines the "principal impacts [of financialization as] [...] the [elevated] significance of the financial sector to the real sector, [...] transfer [of] income from the real sector to the financial sector, and [...] increased income inequality and wage stagnation". Stockhammer (2012: 39), like Palley an advocate of the broad post-Keynesian strands, argues that "financialization has given rise to a finance-dominated regime of accumulation [...]". Likewise, considerations and debates on 'varieties of capitalism', sometimes referred to as 'varieties of financialized capitalism', are part of the debates (Aalbers 2019: 11).

These analyses at the national or supranational to global level commonly address institutional aspects, as already indicated above by reference to Dörry (2017). In the context of financialization debates, the collapse of the Bretton-Woods system at the beginning of the 1970s is perceived as the main point at issue (Aalbers 2015: 301; French et al. 2011: 810). Subsequently, different approaches investigate, for example, countries "of bankbased and market-based finance" (Lapavitsas/Powell 2013: 376). The bottom line is that the (national) institutional setting is of central importance for the structuring of financialization processes and their consequences. Despite scholars' attention to the macro level, the scopes deployed are very different. This continues to emerge on the meso and micro level as well. These levels are investigated by the second theoretical 'school' introduced above, subsumed as approaches of 'critical social accountancy' (CSA) (Pike/Pollard 2010: 32). Erturk et al. (2007: 556), for example, define financialization as "the growing influence of capital markets (their products, actor and processes) on firm and household behaviours [...]". Thereby, financialization itself is in a partially self-enforcing manner strongly pushed "by middle-class savers to minimize risk and seek long-term financial security through investments and pensions" (French et al. 2011: 803f.). Hence, CSA approaches assume that "the engine of financialization is more prosaic and mundane" (French et al. 2011: 803) than rather traditional perspectives have argued. Erturk et al. (2007: 554) call this the "democratization of finance". Another well-known example among CSA approaches is the article of Froud et al. (2000). In their work, they distinguish two types of capitalism: the 'productionist type' and the so-called 'coupon pool type'[1] (Froud et al. 2000: 85). In the former, the stock market is "an unproblematic intermediary" (Froud et al. 2000: 85). In the latter, the stock market "becomes increasingly important as a regulator of firm and household behavior. Firms must now respond to the financial logic of capital market requirements and households are influenced by results" (Froud et al. 2000: 86). Following this argumentation pattern, the changes caused by financialization are more of qualitative than quantitative nature (French et al. 2011: 807).

While CSA work is concerned with the micro and meso level as well as their interdependencies, 'sociocultural approaches' focus explicitly on the impact of financialization on everyday life (French et al. 2011: 804). In this vein, Martin (2002: 76, cited in Pike/Pollard 2010: 32) depicts financialization as "commercially inspired selfhood". He refers to the growing entanglement of individuals with the world of finance, which takes place in pension funds, a variety of insurances, and other financial dimensions (Pike/Pollard 2010: 32). Despite the explicit focus on the micro level, Martin (2002) explains the financialization of everyday life with "the retreat of the Keynesian welfare state and its various systems of social support" (cf. French et al. 2011: 804) and the

emergence of private, market-dependent successors. It is hardly deniable that this is a macro level perspective, which shows that, even though one tries to categorize accounts on financialization with respect to the specific scale(s) of their foci, ultimately, financialization proves to be not only a 'multifaceted', but also inherently a multilevel phenomenon.

2.2 Three Dimensions of Regional Financialization

This paper, however, is interested in a *regional* perspective in the context of financialization and the financial crisis. How, then, can such a regional perspective be approached appropriately? In their recent paper, Gemzik-Salwach and Perz (2019: 60) underline that there are lots of definitions and approaches as presented above, but none "refers to the problem of regional financialization, all of which shows and measures this phenomenon at the level of the country as a whole". Clearly, there are investigations of developments and processes associated with financialization on the regional level. Wijburg and Aalbers (2017), as an example, are concerned with German housing financialization in a regional perspective. Arestis et al. (2017: 143) refer to "spatial financialisation, in terms of uneven regional financial sector development and accumulation" in Italy. But indeed, a *definition* of regional financialization has not yet been subject in the discussion, at least to the author's best knowledge.

This absence justifiably raises the question of the fundamental possibility and usefulness of such a formulation. The argumentation here, however, starts from the observation that certain characteristics that are discussed in the context of financialization among various scholars *differ regionally*. At the same time, European regions were affected differently by the crisis (for many Neufeld 2017: 76). This raises the question of the role of financialization in these regionally varying patterns. Thereby, regional is understood to be a level below the national, without imposing any other restrictions. However, financialization as developments, effects, entanglements, and dependencies across scales and geographies cannot be captured exclusively on a regional basis. There is no case for a regional financialization in the sense of 'regionally downsized' or 'cut-out' financialization, since financialization is inherently multiscalar. Rather, only structures that exist regionally and are expressions or results of financialization can be identified and analyzed according to their role in the path of a region. Therefore, this article follows a broad understanding of the concept of financialization, acknowledging the literature and debates on the concept across disciplines, without adapting a single 'general' definition. Rather, an interpretation is pursued that strives to understand processes and developments as differing regionally and that are associated with financialization in the literature. Following Mader et al. (2019 [2020]: 10), financialization is therefore understood as *explanans* of regionally varying characteristics or *regional financialized structures*. Without what is perceived and discussed as financialization, no regional financialized structures would emerge. Out of these considerations, the justified question arises what financialized structures are, and, consequently, what is understood as non-financialized structures, or as Ioannou and Wójcik (2019: 266) put it: "Given that financialization is usually taken as a divergence from something, it is vital to be clear on what this something is". Other than financialized structures, non-financialized structures subsume regionally important characteristics, most of which are discussed in the context of regional resilience, as well as financialized structures before they became so. In this respect, it seems appropriate to first determine regional financialized structures more precisely and evaluate possible interdependencies and interactions with non-financialized structures later on.

This paper argues that regional financialization takes place in three dimensions derived from the extensive overview of debates on financialization above: (1) regional housing structure, (2) the structure of regional financial intermediaries, and (3) regional debt structure. As can be seen from the cited literature, all three dimensions have already been examined in a regional perspective in one form or another. However, no attempt has yet been made to *systematically integrate these dimensions in a definition of regional financialization*. These three dimensions or structures should be understood less as strictly separate ontological domains of regional economic systems, but as *heuristic categories* in order to approach the multiple entanglements of regional structures with financialization processes.[2] Given the novel character of this account, no claim is made to the completeness of this compendium.

2.2.1 Regional Housing Structure

The first dimension of regional financialized structures can be broadly defined as *regional housing structure*. The relevance of housing structures has already become apparent in the literature review provided and has been emphasized by different scholars, just recently by Aalbers (2019: 10), who refers to housing as "key object of financialization" (Aalbers 2017: 542). The way in which housing structures are embedded in national or global financial markets and their role in the financial crisis have already been outlined extensively above. Recalling this, Wijburg

and Aalbers (2017: 969) strikingly note that, in the context of housing, "financialization is often operationalized in terms of increasing mortgage debt and the rise in the securitization mortgage debt". However, it should not be understood as a definitional one-way street. Here, Germany can be used as a counterexample, taking a different path than most housing markets in Europe and the United States. Wijburg and Aalbers (2017: 978) characterize the development as 'alternative financialization', whereby "a model of mortgaged homeownership did not materialize in Germany due to the shock of German unification as well as policy choices at the federal level". Instead, social housing units owned by municipalities were increasingly sold with private equity funds or large real estate companies as new owners (Wijburg / Aalbers 2017: 973). Regional housing structures can, therefore, be regarded as 'financialized' in various ways: either within the framework of an increasingly lived 'homeownership' principle built upon (securitized) mortgages or in the sense of 'financialized privatization'. As Aalbers (2019: 10) puts it: "Housing risks are increasingly financial market risks – and vice versa".

2.2.2 The Structure of Regional Financial Intermediaries

Strongly underpinned by the exemplary insights delivered by post-Keynesians on credit and money creation by banks, financial intermediaries in general are admitted a distinct and partially more, partially less influential role in financialized structures than in traditional settings. Due to this importance, the second dimension introduced here is the *structure of regional financial intermediaries*. This dimension should not only be understood in a traditional sense, as exclusively local saving banks or similar, but also generally as financial intermediaries that are of regional influence and importance. Examples have already been mentioned in the first dimension above. Real estate companies symbolize a general trend which reveals distinct regional patterns and is commonly referred to as 'assetization'. In the wake of institutional investors, a range of (public) goods are continuously transformed to assets. This means, for example, that pensions funds start to buy and invest in agricultural land (Aalbers 2019: 8f.). Christophers (2017), as an exemplarily article, vividly outlines the assetization of public land in the United Kingdom. Regional structures are, thus, suddenly integrated into global financial markets, similar to mortgage-financed real estate. These dynamics do not emerge out of thin air. They are driven by new investment strategies of households, firms, and public institutions, and, of course, by regulatory factors (Clark 2017: 230; van Loon / Aalbers 2017: 221). Aalbers (2019: 7f.), for example, describes "the increasing financialization of nonfinancial firms" as "the most widely discussed dimension of financialization". Stockhammer (2010: 4; author's own insertion in brackets) notes that "households have [furthermore] become financialized [...] with respect to the provision of old-age retirement". This can be seen in increased investments in globally active pension funds, which, as outlined above, are themselves of regional importance. Hence, this dimension does not only refer to investments *by* intermediaries, but also the other way around, to investments *in* intermediaries, often mutually dependent. Regional structures can therefore be financialized by intermediaries in two ways: on the one hand, as an 'object', for instance in the case of assetization processes; on the other hand, in the sense of investment and capital structures held by regional actors. These structures can, but do not have to be linked. The emergence of such 'new' intermediaries changes the role of already existing ones (Clark 2017: 231). In a rather 'traditional' sense, as local or regional banks, the task of financial intermediaries is primarily to grant loans (Zademach 2014: 83). But, as Clark (2017: 231) notes, "over the past three decades, these types of financial intermediaries have either withdrawn from local activities in concert with the spatial consolidation of national banking industries, or been eclipsed by other kinds of financial intermediaries that have been more successful in growing national and global financial markets". Put differently, there has been a shift from exclusively locally or regionally focused financial intermediaries to nationally, transnationally, or globally oriented structures. Similarly, the role of financial intermediaries "shifted from a more or less passive [...] towards active financial actors" (Aalbers 2019: 6).

Hence, it is not only a question of whether financial intermediaries have 'regional roots', but also which business model predominates in the respective regions. Put boldly, one question here is whether households invest their money in traditional saving accounts ('Sparbücher') or in pension funds and stocks. Another point in this dimension of regional financialization relates to changes in public institutions, such as local governments. Deruytter and Möller (2019 [2020]: 13) emphasize a shift towards so-called 'New Public Management (NPM)'. This shift depicts a variety of modifications in municipal governments, like changing understandings and practices of how municipalities or regions finance themselves. Thereby, various financial constructs and instruments emerge, such as 'munibonds'. NPM basically "introduced private sector standards of efficiency into public administrations" (Deruytter / Möller 2019 [2020]: 5).

2.2.3 Regional Debt Structure

The emergence of new and distinct forms of debt, mostly for households, has already been addressed in the first dimension. Several authors connect its rise decidedly with growing financialization (Sokol 2013: 505), as "the global rise in financial services and institutions [led them] seeking to expand their market share of consumer credit" (Searle/Köppe 2017: 323; author's own insertions in brackets), or locate it even "at the epicenter of the crisis" (Sokol 2013: 505). In this way, the de-regulation in the last decades of the 20th century has contributed to a rapid rise in the level of household debt, reaching its pike in many countries on the eve of the financial crisis (Searle/Köppe 2017: 323). Given the fact that financialization is often linked to the rise of so-called 'debt-economy' (Guttmann 2017: 870), the *regional debt structure* is outlined as the third important category of regional financialization. There are obvious entanglements and intersections to the previous dimensions. This dimension does not only address the fact that households are integrated into global financial markets through mortgages and new financial intermediaries, but also takes a step further to consider various forms of debt, for example those of public institutions. Here, Deruytter and Möller (2019 [2020]: 5) emphasize changes and shifts in public debt structures. Moreover, they identify two more causes of these alterations besides NPM: processes of state-rescaling and "fiscal retrenchment under austerity regimes".

3 Regional Resilience: A Brief Overview

Considerations on regional resilience are somewhat more widespread, the concept has already been subject of numerous discussions, articles, and books. Therefore, this paper only gives a rough overview of the different approaches. Despite its growing popularity, "there is as yet *no theory* of regional economic resilience as such [...]" (Martin/Sunley 2015: 3; emphasis in original). Swanstrom (2008: 2) adds that "resilience is more than a metaphor but less than a theory. At best it is a conceptual framework that helps us to think about regions in new ways [...]". In general, the different approaches can be grouped or distinguished into three 'readings' of resilience: so-called 'engineering resilience', 'ecological resilience', and 'adaptive' or 'evolutionary resilience' (Martin/Sunley 2015: 4ff.; Neufeld 2017: 68).

First, 'engineering resilience', proposed by Holling (1973) and defined as "*how fast a system that has been displaced from equilibrium by a disturbance or shock returns to that equilibrium*" (cf. Martin/Sunley 2015: 4; emphasis in original), postulates a system in *equilibrium* to which a 'bounce-back' is possible (Martin 2012: 4; Martin/Sunley 2015: 3). It refers to "the *resistance* of a system to disturbances (shocks) and the speed of return to its pre-shock state" (Martin 2012: 4, emphasis in original). Today, this reading has found widespread usage and application in the physical sciences, but also in psychology or economics. Regarding the latter, resilience denotes the self-correcting forces which adjust the state of a region back to its initial equilibrium (Martin 2012: 4). However, compared to the relational approach in economic geography, the conceptual discrepancies may be obvious. Hence, in economic geography, the 'engineering way' of resilience and its equilibrium assumption tend to be rejected, "as it makes no reference to changes in the structure and function of regions" (Boschma 2015: 735).

Second, 'ecological resilience', also first captured by Holling (1973) in his seminal work, refers to events which push "a system beyond its 'elasticity threshold' to a new domain" (Martin 2012: 7). Resilience is understood as "the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity and feedback" (Walker et al. 2006). This 'new domain' depicts a new equilibrium. Ecological resilience equals the engineering approach and its equilibrium assumption in general but suggests the existence of *multiple* equilibria (Boschma 2015: 735; Martin 2012: 7). This reading can again be linked to multiple equilibrium economics which gained ground in recent times (Boschma 2015: 735; Martin/Sunley 2015: 6; Pendall et al. 2010: 74). The concept of 'lock-in', well known in economic geography, is often used in such contexts. In this reading, the lock-in is the result of a path-dependent process and requires a correspondingly strong shock to change this path and move to another equilibrium (Pendall et al. 2010: 75). Such a shock or event with permanent effects on the path or development of an economic system is called 'hysteresis' (Romer 2019: 549). While most discussions refer to negative consequences, Martin (2012: 9f.) emphasizes the positive hysteresis effects and their conceptual applicability in the context of the resilience debate.

Third, equilibrium perspectives may have dominated the work on resilience in the past, nevertheless, the concept of 'adaptive resilience' has gained grounds, especially in economic geography (Boschma 2015: 735; Pendall et al. 2010: 76). Arguing for resilience in an evolutionary framework, as Christopherson et al. (2010: 5) note, bears important consequences, as the "incorporation of path-dependent causes within the concept of regional resilience changes the way resilience is both measured and defined". How, then,

is adaptive resilience defined? There is a clear distinction between engineering resilience and ecological resilience on one side and adaptive resilience on the other. While the first two gather under the banner of a general equilibrium approach, no matter if a single or multiple equilibria are assumed, the latter takes a dynamic and evolutionary stance (Boschma 2015: 735; Pendall et al. 2010: 72). Martin (2012: 10) describes adaptive regional resilience as "the capacity of a regional economy to reconfigure, that is adapt, its structure (firms, industries, technologies and institutions) so as to maintain an acceptable growth path in output, employment and wealth over time". Boschma (2015: 735) urges that an equilibrium approach, on the contrary, does not address important topics such as agency, structural change, or the role of institutions. Pike et al. (2010: 61) add that equilibrist accounts fail to explain geographical differences of regional resilience. Furthermore, both engineering and ecological resilience do not account for regional economic evolution (Simmie / Martin 2010: 30). Put differently, in terms of equilibria, resilience is concerned with "a return to normalcy, [while adaptive] resilience [...] refers to the ability to change or adapt in response to stresses and strains. As such, resilience is a dynamic attribute associated with a process of continual adjustment" (Pendall et al. 2010: 76; author's own insertions in brackets).

Martin (2012: 11f.) suggests four dimensions of (adaptive) regional resilience which incorporate these considerations into a unifying framework: *resistance*, which denotes the vulnerability of a region in the face of shocks or other, commonly negatively perceived, impacts; *recovery*, which refers to the recovery from this shock; *re-orientation*, which focuses on the realignment and adjustments taken place in the region, and understood as the reaction to shocks or disturbances; and *renewal*, which delineates the extent to which a region has changed its path in post-shock compared to pre-shock time.

There is a wide variety of factors which are attributed importance in these four dimensions: firms, their competitiveness, innovation, and interrelatedness; a diversified economic structure, sometimes referred to as 'industrial variety' or also 'diversified specialization' (although slightly different in addressing the issues); the skills and knowledge of the workforce; different regional networks; the institutional setting, broadly defined, incorporating a financial system which provides the required support; a well maintained infrastructure; and many others (Boschma 2015: 736; Christopherson et al. 2010: 6f.; Farhauer / Kröll 2012: 81f.; Hassink 2010: 46; Martin 2012: 13; Wolfe 2010: 140). Of course, these components do not exist independently of each other, but are intertwined in different ways and influence each other (Christopherson et al. 2010: 7). Various studies discuss and investigate those components in indices of regional resilience (e.g. Fingelton et al. 2012; Kahsai et al. 2015; or others).

Martins framework has found widespread usage in the evolutionary economic geography (EEG) community and offers suitable starting points to combine resilience and financialization in a regional perspective.

4 The Financialization-Resilience-Nexus in a Regional Perspective

The past financial crisis has ensured that both concepts are on everyone's lips, especially among academics, but also among policy makers. Martin and Sunley (2015: 27) give an overview of "some determinants of regional economic resilience". Among them is the category of "Financial Arrangements", containing, for instance, the institutional environment of interest rates, regional credit availability, and similar aspects. In an empirical setting, Davies (2011: 379) investigates, next to other components, the significance of employment in the construction as well as financial and insurance sectors for the resilience of selected regions in Europe, which yielded mixed results. Focusing on international financial centers, Walther et al. (2011: 139f.) used the example of Luxemburg to conclude that a high dependency on the financial sector does not necessarily imply worse affectedness in a financial crisis. Rather, the combination of this concentration with innovation processes and regulatory aspects yielded considerable resilience. Moreover, Martin et al. emphasize the long-term importance of financial institutions and systems, compared to their role in "responses to adverse shocks" (Martin et al. 2016: 569). In other words, the recognition that regional financialized structures are or can be a factor of regional resilience has already been considered in parts of the debate but have never been identified as such. Thus, a close and systematic examination of these aspects in the context of regional resilience is still missing. In the affluent of the conceptual synthesis, a simple question arises, especially regarding the research objective as stated in the introduction: what can regional financialization contribute to an understanding of regional resilience that we do not already know? Here, four interrelated points are suggested which, on the one hand, are intended to distinguish regional financialization from previous approaches in resilience debates, and, on the other hand, are aimed at precisely extending these debates: (1) scopes, (2) scales, (3) asymmetry, and (4) heterogeneity. Again, it should be noted that no claim is made towards a comprehensive demonstration of possible intersections between both concepts.

4.1 Scopes

First and foremost, a systematic reconciliation of regional financialization and regional resilience yields new *scopes*. This entails new topics, new perspectives, new points of departure, but also issues which have already been dealt with and which are now explicitly addressed as regional financialization. With respect to the diversity of both concepts, only selected examples can be illustrated here. In order to accord some structure to the analysis of those examples, the developed dimensions of regional financialized structures offer themselves as a case in point. The first example incorporates the regional housing structure. In general, Meen and Nygaard (2010: 56) note that the housing structure "is likely to contribute to regional disparities". It has already been subject to resilience analyses as well, but mostly with reference to the resilience of the housing markets *itself*, that is, the resilience towards real estate bubbles. In this way, but not always explicitly, processes of financialization can be addressed (e.g. Kholodilin et al. 2014: 4; Squires/White 2019: 172). However, to appropriately investigate the role of housing, the connected regional debt structure must be incorporated as well, since the impact on regional resilience largely stems from the intersection of both dimensions. Findings from econometric studies support this assumption: Price et al. (2019: 27) conclude "that high levels of owner occupied mortgage debt reduce household spending". Keys et al. (2014: 31) find linkages between mortgage rate declines and regional prosperity. Kim (2013: 689), in a more general approach on the interrelations of selected 'financialization variables' such as general household debt and macroeconomic performance, finds a negative relation as well. Similarly, Lombardi et al. (2017: 24) suggest that lower GDP growth in the long-term is associated with higher household debt, at least on the national level. Hence, the rise of household mortgage debt, but also household debt in general, are results of financialization processes and raise justified questions concerning regional resilience, e.g. in terms of output recovery in the aftermath of shocks, but also in terms of regional prosperity or renewal in the long-term. This finding is not new at all but embeds the causes in regional financialized structures.

A second example can be found in the context of the changing structure of regional financial intermediaries. The demise of a 'regionally rooted' banking system is often linked to different patterns of regional vulnerability in times of crisis. As an example, the German banking system, compared to countries such as France or the UK, and its advantages in financing SMEs – themselves often said to be "the backbone of the German economy" (Engelen et al. 2010: 64) – have been identified as a key 'success factor' in the recent crisis (see Klagge et al. 2017: 147ff.; Zademach 2014: 85; and others). For firms, those changes bear an important implication, since so-called 'financing deserts' may emerge. As a consequence, especially SMEs are confronted with financing problems, which reveals itself to be less beneficial for the overall development and prosperity of a region (Clark 2017: 231f.). Appleyard (2013: 869) concludes that the financial crisis has even deepened the financing problems of firms in the UK caused by the drawback of banks. Clearly, these findings point out adverse effects for regional resistance, particularly in the short term, but possibly for a region's economic development in the long term as well. Furthermore, financial intermediaries, mostly in the sense of 'traditional banks', often take further roles in regional economic systems beside their function as financing sources. Zademach (2014: 84), for example, emphasizes their role in regional networks in general. Here, changed regional capacities for re-orientation and renewal may be a result of financialization. But firms are not only confronted with financing difficulties; they also change their investment strategies. Non-financialized firms (NFCs) are increasingly active and invest in financial markets (Aalbers 2019: 7f.). Tori and Onaran (2018: 1411) note that "increasing interrelations between the financial markets and the NFCs are progressively reducing fixed capital accumulations and thus growth". Another example can be found at the crossroads of regional debt structure and the structure of regional financial intermediaries. Articles like the contribution by Deruytter and Möller (2019 [2020]) show the increasing interest in and analysis of local or regional public debt. An obvious interaction with regional resilience arises from the increasing debt or even (potential) insolvency of public institutions associated with increased activity in financial markets, which is, ultimately, argued to be caused by financialization processes such as the aforementioned NPM. Numerous examples can be cited, the most prominent of which are probably the cases of Hammersmith & Fulham in the United Kingdom and Orange County in the United States (Aalbers 2019: 9). In early 1989, the London borough Hammersmith & Fulham "defaulted on payments it owed various banks under its swap agreements" (Kolar 1996: 317). As Tickell (1998: 866) outlines, the financial practices which led to that debacle were adopted only six years before the default without similar activity in the preceding years. Five years later, Orange County declared bankruptcy, resulting from an "improper use of taxpayer funds in the derivative market", ultimately losing 1.7 billion USD (Kolar 1996: 317f.). But there are examples outside Anglo-Saxon countries as well, as the cases of Austria

(Linz) and Germany (Pforzheim) show (Aalbers 2015: 303; Deruytter / Möller 2019 [2020]: 6, 11). In Linz, the local financial representative signed a swap agreement with an Austrian bank in 2007. The possible losses reached nearly half a billion euro, which is about half of the city's annual budget (*OÖN* 2018). The case continues to be subject of legal disputes (*ORF 2021*). Similar stories can be found in Germany, where the common perception is that it "has weathered the financial crisis as a result of a national aversion of financial risk taking" (Aalbers 2015: 303). However, the city of Pforzheim has signed a swap agreement, causing a loss of 57 million euros (Deruytter / Möller 2019 [2020]: 11). In this context, Barbera et al. (2017: 674) explicitly refer to 'financial resilience' of local governments as "their ability to anticipate, absorb and react to shocks affecting their finances". Here, the argument can be put forward that processes of financialization in the form of NPM adversely affect 'financial resilience' of public institutions themselves. Furthermore, the importance of such developments in the context of regional resilience cannot be divided from tasks and responsibilities. In other words, there are differing roles that local or regional public institutions are admitted in national contexts (Slack 2017: 253). Being largely dependent on context and case, this 'local state support' may take a crucial role, also in regional resilience, as highlighted by Martin and Sunley (2015: 27). In this context, Hruza (2014: 150) investigates the dynamics of municipal financial management in the Czech Republic before, during, and after the recent crisis. The results reveal that Czech municipalities drew "on previously accumulated resources, which helped them avoid fatal adverse conditions" (Hruza 2014: 150). Clearly, financial upheavals as outlined in the case of Linz may undermine the ability of municipalities or regions to rely on such financial reserves, and, thus, cope with disturbances, which has adverse effects on regional resilience in several dimensions.

As these first, fairly comprehensive elaborations on *scopes* have already shown, the entanglements of regional financialization and regional resilience are multifaceted and multi-layered. Of course, several limitations could be named at this point. Some arguments put forward rely on case studies focusing on the national level. The question arises whether these relations or, carefully formulated, 'causalities' hold on the regional level as well. Furthermore, perspectives and issues that are already part of the debates on regional resilience have been addressed, but not accorded much importance. Contrarily, topics and issues at the very heart of those discussions were left aside. In a first attempt to describe the multiple interdependencies and interaction, several such trade-offs must be taken into account.

Recalling the last example, one can argue that local or regional public representatives "have become 'active agents' in the process of municipal financialization [...] although hardly under circumstances of their own choosing" (Peck / Whiteside 2016: 242). This conclusion indicates two further developments that are central to the financialization-resilience nexus: the influence and importance of superordinated scales and an emerging or reinforcing asymmetry.

4.2 Scales

In the course of financialization, already existing *scales* gain comparably more importance for regional resilience, while, at the same time, further influential scales emerge. By contrast, Martin and Sunley (2015: 26; emphasis added by the author) note in their seminal article on several elaborated factors of regional resilience almost casually: "Importantly, these contextual factors are multi-scale and they include wider conditions and forces, such as national policies and circumstances, and *even international influences*". However, an inclusion and hence acknowledgment of the importance of regional financialization shifts the focus from regional resilience *explicitly* towards embedding regions in transnational and global financial processes and markets. Additionally, "new virtual, supranational and extra-regulatory financial spaces are emerging, superseding regulatory spaces" that are subject to constant re-negotiation and changes (Dörry 2017: 429). Hence, the new scales that emerge are beyond the regional and national ones, but they are also distinctive in their very nature compared to 'already existing' scales. This extension can be applied the other way around as well. Although Martin and Sunley (2015: 27) place 'agency and decision-making' at the very core of their framework, many approaches on regional resilience focus on firms. These attempts are in line with a more general shift in focus towards the firm as the primary 'analysis unit' in an emerging and consolidating relational and evolutionary economic geography (Bathelt / Glückler 2012: 49). The presented arguments of this paper, on the contrary, emphasize once more the importance of incorporating the 'financialization of everyday life', meaning households and individuals, but also regional public institutions.

4.3 Asymmetry

Third, the inherent multiscalarity and the outlined 'importance shifts' between different scales ultimately yield a stronger *asymmetry* in regional financialization than other processes and dynamics discussed in the

context of regional resilience and economic geography in general (Bathelt/Glückler 2003: 127).

In general, the existence of information asymmetries is anything but new. Alessandrini et al. (2003: 28), for example, note that "the very existence of banks is justified by the presence of information asymmetries between savers and investors". Lapavitsas and Mendieta-Munoz (2016) further argue that the "systematic asymmetry in information and power between financial counterparties [...] provides the social foundation of financial expropriation". Klagge et al. (2017: 129, 131) as well as Papi et al. (2017: 157) offer more recent articles, referring to asymmetric information that economic actors – households, firms, or public institutions – are confronted with. However, as both relational economic geography and post-Keynesian approaches indicate, the fundamental uncertainty inherent to information asymmetries even increases due to the processes of more deregulated financial markets (Turbeville 2013: 3, 12) ultimately caused by financialization. As noted by Martin and Sunley (2015: 27, 31f.), emerging financing deserts, as a result of growing information asymmetries, adversely affect regional resilience. This argument is not restricted to firms but can also be applied to households or individuals. This is most apparent when adducing the example of CDOs and other instruments created in the runup to the financial crisis. Investors did not have a complete overview of what they were actually investing in and relied on other instances, especially rating agencies (Gorton 2009: 37; Marandola/Sinclair 2017: 480). This insight is, once more, anything but new and has already been outlined years before the Dotcom-bubble (Arestis et al. 2017: 159). However, during the recent downturn, this asymmetry was partially corrected by the introduction of the ABX index in 2006. Through this change, "information about subprime values and risks was aggregated and revealed", which caused the index to fall in the second half of the same year and subsequently in 2007 (Gorton 2009: 11, 33). In other words, with the newly introduced index, investors got to know the risks of their investments, ultimately leading to withdrawals, and starting, or further intensifying, the downward trend. This asymmetry did not only apply to private households as investors, but also to experts such as municipal financial representatives, which can be seen in the example of Linz, as the news coverage of the court case showed years later (ORF 2013).

Hence, asymmetric power relations further emerge or reinforce in the wake of financialization. Through processes of financialization, households, firms, and public institutions in a region are exposed to such asymmetric power relations, which, in terms of regional resilience, can be linked to rather adverse effects (e.g. in the case of regional housing structure see Squires/White 2019: 172). Dörry (2017: 430) strikingly argues: "The asymmetric power relations [...] between spaces across geographical scales solidify and reinforce patterns of the (prevailing) uneven geographies in international finance".

4.4 Heterogeneity

Fourth, regional financialization differs. Built upon a contextual, evolutionary and contingent understanding of regional (economic) processes and developments, there are neither uniform dynamics nor impacts and effects following the principle: 'the less financialization, the more resilient', or 'the more financialization, the more resilient'. The *principle of heterogeneity,* or *region-specific effects* must always be at the core of regional financialization debates. Again, referring to Mader et al. (2019 [2020]: 10), financialization can be understood as the *explanans* of regional financialized structures, but with different structures unfolding as the *intervening mechanism*. Regional financialization is the region-specific interaction of regional financialized structures.

Similar to the argumentation of Hassink (2010: 55), the bottom line is that regional financialization relates to already known and discussed ideas and factors in debates on regional resilience, but not exclusively. On the one hand, it underlines the importance of these factors, and emphasizes the embeddedness in and relation to comprehensive financialization processes that take place in superordinated, mostly global spaces on the other. Therefore, it also broadens the understanding of 'financial factors' inherent to resilience debates so far. Hence, a reconciliation of regional financialization with regional resilience is not just addressing known issues and topics with a new approach, but decidedly extends these debates and enhances our understanding of regional resilience dynamics. Interestingly, the examples discussed reveal an inherently negative connotation. Bibow (2010: 6; quotation marks in original), for example, notes: "the Post-Keynesian "financialization hypothesis" posits that [...] overall economic efficiencies and performance may [...] be adversely affected". At this point, it should be mentioned that regional financialization does not necessarily imply only worsening effects on dimensions of regional resilience. For instance, Bibow (2010: 80) argues that it is "wrong to conclude that all aspects of financialization are wholly detrimental to economic performance and household well-being". As theory-based assumptions, these elaborations on the financialization-resilience-nexus follow an extensive examination of literature and case studies, but have not yet been applied in empirical investigations.

5 Measuring Regional Financialization: Some Considerations

While the conceptual links between regional financialization and regional resilience are largely clear, the empirical investigation of this nexus turns out to be much more challenging, particularly due to difficulties in quantifying the former. The following overview, therefore, contains some considerations on possible empirical approaches to regional financialization in a comparative European perspective, underpinned with corresponding literature references, but without conducting an in-depth econometric analysis.[3]

The first dimension, regional housing structure, has already been discussed in depth in the economic geographical literature (e.g. Wijburg/Aalbers 2017; Martin 2011; and others). An attempt to assess such developments in regional housing structures – no matter whether it concerns the number of house purchases, the building permits, the price per square meter, or the amount of loans granted for house purchases – will immediately be confronted with an absolute lack of regional data, particularly in a transnational perspective. Hence it is inevitable to use 'proxies' (Schwan 2017: 671). Bulbarelli (2016: 8), for example, uses the value added in construction ('sector F') in proportion to the total value added as a sign for the recent real estate bubble in Spain. Similarly, Norris and Coates (2014: 303ff.) link the housing boom in Ireland from the mid-1990s until the mid-2000s to the gross value added (GVA) in construction. However, real estate bubbles and an inflated housing market in general can be seen not only in the GVA share of construction, but also in the share of real estate activities ('sector L') (e.g. Overbeek 2012: 36). Speculation-driven construction projects are addressed via the GVA share in construction, while, at the same time, increasing real estate or house prices are included by the GVA share in real estate activities. Since housing structures differ greatly from country to country, the inclusion of the GVA share in real estate activities also covers rising housing costs or rents, as outlined by Wijburg and Aalbers (2017: 984) for Germany.

The second dimension, regional debt structure, turns out to be just as difficult to investigate. Mbaye et al. (2016: 7) present an extensive overview of existing debt datasets. Given this list of different sources, the data availability on the national level can be characterized as sufficient in all dimensions, which means private and public, but also firm and even 'subnational government' debt (several databases, among them: Eurostat 2019a; IMF 2019; OECD 2019). To avoid irritation, subnational government debt, although interesting in this context, is presented on a national level as well, and is available for the years 2015 and 2016 only. The missing debt data in the Eurostat database on a regional level can be explained by the fact that the indicators available on a national basis originated primarily in the formation of the European Monetary Union and were, therefore, only geared towards the national level (Neufeld 2017: 44). In the literature, there are attempts to incorporate national aggregate household data into regional analysis. Schwan (2017: 674), for example, found significant influence of regional household debt as aggregated data on the regional GVA share in financial and insurance activities ('sector K').

The third dimension, the structure of regional financial intermediaries, is also confronted with empirical implementation problems. It appears reasonable to assume that GVA shares in K may be a suitable proxy for this dimension as well, because regional statistics on the investment of households in funds, the equity market in general, or vice versa the assets held by e.g. pensions funds, are hardly available. Studies which focus on such statistics do not use regional, but only national data, and only for selected countries (e.g. Lapavitsas/Powell 2013: 365ff.). Gemzik-Salwach and Perz (2019: 60) note that "stock markets capitalization or monetary aggregates […] are not and cannot be calculated for regions". As Speich (2003: 40) argues, the calculation of regional GVA statistics assumes that deposits or premiums in both the banking and insurance sector tend to be assigned to higher-level branches and can, therefore, be hardly located regionally. There are also no other conceivable statistics available – in a comparative European perspective – such as the number of banking, credit, or insurance companies in a region.

Hence, although not undisputed, the literature suggests using GVA shares in selected sectors to serve as proxies for the different dimensions of regional financialization. It is important to note that, just as the dimensions cannot be clearly separated from one another, these proxies cannot be precisely assigned to one of these dimensions. At this point, two questions arise: are GVA shares as proxies, although suggested by and based upon the corresponding literature, sufficient to investigate regional financialization? And more generally: what is an appropriate methodical framework to operationalize and investigate the GVA shares and their role in the resilience of regions during the recent crisis?

Clearly, an empirical investigation should focus on developments before, during, and after the crisis. It should take the regional 'significance' or 'importance' gains and losses of the selected indicators into account to consider both quantitative and qualitative changes. To approach these questions in a rather explorative manner, the recently proposed 'Index of Regional Financialization' by Gemzik-Salwach and Perz

(2019: 61) may offer further insights. It calculates GVA and employment shares of K in total GVA respective total employment for every Polish region.[4] Gemzik-Salwach and Perz (2019: 60f.) explicitly refer to employment, because regional financialization, if understood to take place in the mentioned sectors, does not affect output and employment in the same manner. In other words: the phenomenon of 'jobless growth', or the decoupling of GDP growth and employment, is of particular relevance in the 'FIRE'[5] sectors (Assa 2017: 47).

In figure 1, a modified version of this index is shown for European regions before and after the financial and economic crisis. Compared to the original index by Gemzik-Salwach and Perz, GVA and employment shares contain figures of all discussed economic sectors – construction, real estate, and finance and insurance activities. The index value, i.e. the quantitative dimension, is shown using different colors. The varying overlays symbolize the qualitative dimension by indicating which of the three discussed sectors contributes the most to total regional GVA, hence, 'drives' regional financialization.

First, figure 1 shows different patterns across Europe both in terms of the absolute extent of regional financialization as well as regarding the driving sectors, but neither a clear North-South nor West-East gradient can be identified. Rather, regions within countries can be described as comparatively homogenous or heterogeneous in their financialization. Second, those patterns change over time. The absolute index values, the quantitative dimension, can be characterized as largely stable, but markedly rising in the newer member states of the European Union. Simultaneously, there are qualitative changes, mostly from construction to real estate activities as driving sectors or vice versa. Third, this map may gain interpretive power in conjunction with insights concerning the general impact of the crisis on European regions. To this end, one can draw on existing literature, for example the analysis by

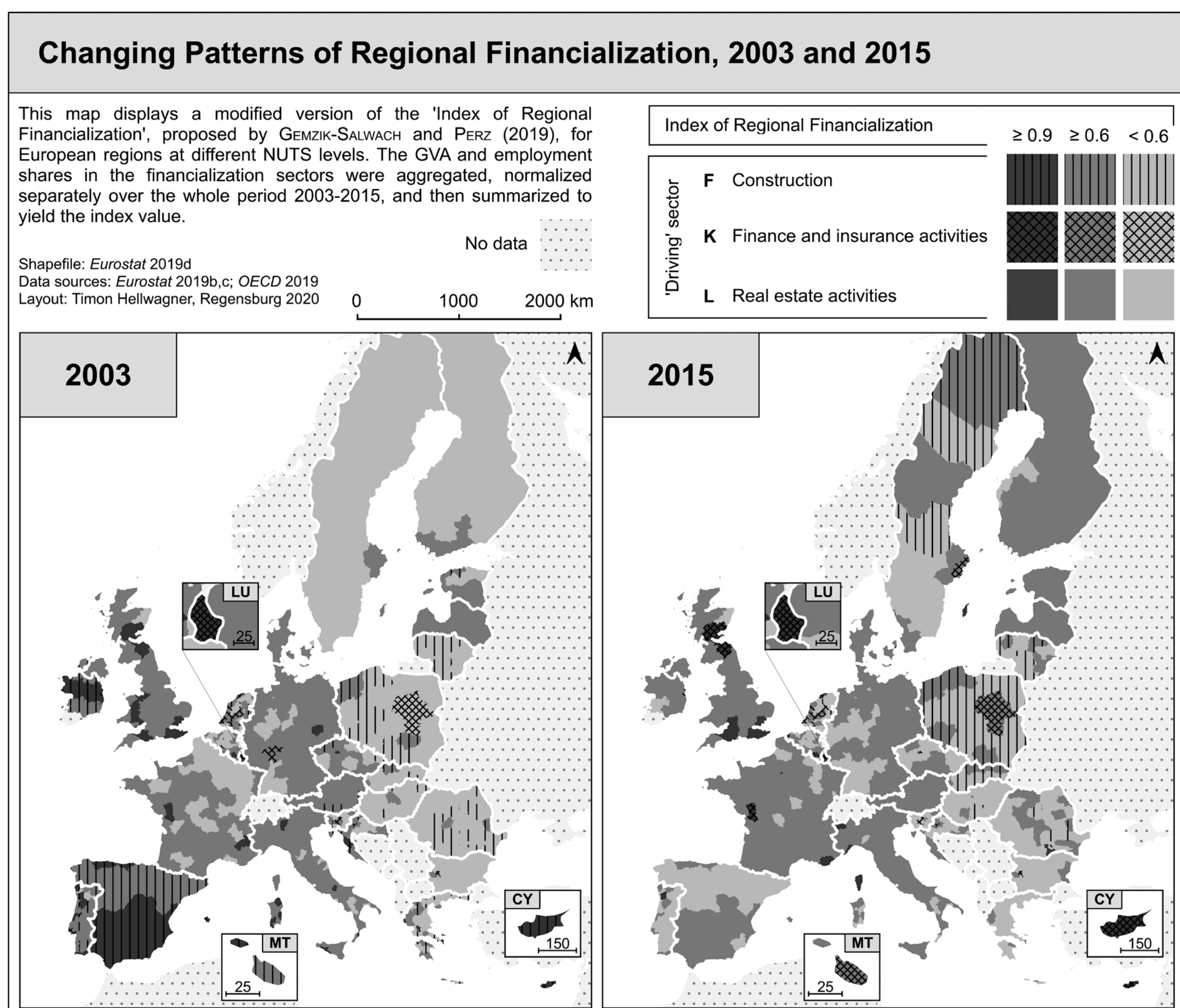

Fig. 1: Index of Regional Financialization for European regions in 2003 and 2015 (Own illustration)

Neufeld (2017: 99ff.). Neufeld investigates both the GDP resistance and recovery in context of the past crisis among European regions. By comparing these findings with the index of regional financialization above, clear connections can neither be established between the quantitative nor the qualitative dimension of regional financialization and the resilience respectively recovery patterns.

Based on this brief analysis, the two questions above can be answered with different clarity. First, the analysis does not disprove the suitability of (regional) GVA and employment shares as proxies of regional financialization, but certainly calls it into question. Second, the exploratory character of the analysis does not deliver satisfactory insights and explanations. This points to the necessity of a more reasoned methodological concept. A wide range of econometric techniques – from more explorative cluster analysis to sophisticated (non-linear) panel models – as well as a variety of qualitative approaches opens up as possible analysis tools, whereby an empirical application, quantitative or qualitative, is left to further research.

6 Conclusion

The turbulences of the financial crisis, which swept across most regions in Europe at the end of the past decade, have led to an increased and still growing interest in the concepts of financialization and resilience – not exclusively, but particularly in evolutionary economic geography. However, neither financialization nor the financialization-resilience nexus have been explicitly conceptualized in a regional perspective or systematically reconciled yet. The purpose of this paper was to tackle these gaps in research.

First, the theoretical and conceptual foundations underlying the broad financialization debates and associated examples have been outlined in detail. Subsequently, a definition of *regional financialization* as the region-specific interaction of different financialized structures was proposed. Thereby, three different dimensions of regional financialized structures were introduced: (1) the regional housing structure, (2) the structure of regional financialized intermediaries, and (3) the regional debt structure. These dimensions should be understood as heuristic categories to approach the complex issue of financialization in a regional perspective rather than clearly delimited entities.

Second, after a detailed elaboration of the similarly broad debates on regional resilience, for which the adaptive resilience framework proposed by Martin (2012) has been adopted, the concepts of financialization and resilience were reconciled in a regional perspective. The argument was put forward that regional financialization expands our understanding of regional resilience in four aspects: (1) new *scopes* arise, while already included topics and issues are systematically founded on regional financialization at the same time; (2) new *scales* gain importance, while the already discussed embeddedness of regions in international or global contexts is underpinned; (3) as a result of these superordinated scales, *asymmetries*, both in information and power, are reinforced or newly emerge; (4) in a contingent understanding of economic geography, regional financialization reveals to be region-specific, meaning that there is no uniformity but *heterogeneity*.

Third, as demonstrated, possible empirical applications are confronted with a lack of data availability or, particularly in a transnational perspective, comparability across regions. Therefore, future (quantitative) research on the financialization-resilience-nexus must address this shortcoming, evaluate other possible data sources, and discuss appropriate econometric models. These developments are, given the relevance of regional financialization for regional resilience as outlined in this paper, crucial for our understanding of regional economic dynamics.

Notes

1) Coupons can be understood as newly issued stocks. Those stocks "can be held directly by households or indirectly by pensions funds and insurance companies pooling household savings" (Froud et al. 2002: 275).
2) Clear terminology is an essential part of good scientific practice. The terms 'dimensions' and 'structures' are used interchangeably in this paper. The objective is rather to think of regional financialization from three points of view than to clearly define and determine the terminology.
3) In this paper, empirical approaches to regional financialization are not further discussed. Applied examples can be found in several publications, among them Martin et al. (2016) and Neufeld (2017).
4) The index is calculated as where refers to the regional GVA or employment share, respectively; and stand for "min and max across all regions and years" (Gemzik-Salwach/Perz 2019: 61); the calculated values for GVA and employment are summarized, which yields the 'Index of Regional Financialization'.
5) The acronym 'FIRE' usually refers to the financial, insurance, and real estate activities in an economy.

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Kurzfassung: Finanzialisierung und Resilienz in regionaler Perspektive

Seit den Turbulenzen, die gegen Ende der 2010er-Jahre zunächst auf den Finanzmärkten aufgetreten waren und danach weite Teile des globalen Wirtschaftssystems erfasst hatten, haben die Konzepte der Finanzialisierung und (regionalen) Resilienz an Bedeutung gewonnen. Während unterschiedliche Studien die beiden Konzepte separat behandeln, steht eine systematische Zusammenführung von Finanzialisierung und Resilienz in regionaler Perspektive noch aus. Der vorliegende Beitrag adressiert diese Forschungslücke. Basierend auf einer umfassenden Analyse der relevanten geographischen und ökonomischen Literatur entwickelt der Beitrag zunächst eine regionale Perspektive auf Finanzialisierung und untersucht anschließend deren Bedeutung für die Resilienz von Regionen. Die Analyse zeigt, dass sich regionale Finanzialisierung als die regionsspezifische Interaktion unterschiedlicher finanzialisierter Strukturen charakterisieren lässt. Darauf aufbauend offenbart die Zusammenführung beider Konzepte substanzielle Erweiterungen unseres Verständnisses regionalökonomischer Dynamiken und fordert eine zentrale Rolle regionaler Finanzialisierung in der künftigen Forschungsagenda ein.

Schlagwörter: **regionale Finanzialisierung, regionale Resilienz, regionale wirtschaftliche Entwicklung**

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