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# A Note on The Empirics of Regional Financialisation

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with 2 figures in the text

## Contents



## *Summary*

*During recent years, financialisation has emerged as a buzzword and widely used concept across disciplinary boundaries. Despite the increased interest, financialisation has hardly been investigated in a regional perspective yet. Consequently, also frameworks for an appropriate empirical analysis are rather scarce. The present article addresses this shortcoming and presents an overview of the current and future empirics of regional financialisation. In doing so, the core part of the analysis focuses on three questions: what, where, and when do we measure? First, an examination of quantitative indicators and variables used in the current financialisation literature and their suitability for analysing regional financialization is given. Second, an evaluation of the effects of measuring financialisation on different spatial levels is presented. Third, considerations on the implications of measuring financialisation at different points in and across time are outlined. Overall, the analysis demonstrates that investigating regional financialisation in a quantitative setting is anything but straightforward and requires a trade-off between data availability and explanatory power of the used data. Thus, improved data availability on the subnational*

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*level would enhance the possibilities of future research to analyse the complex issues and questions tied to regional financialisation.*

*Keywords: Regional financialisation, empirics, quantitative economic geography*

## *Zusammenfassung*

### Eine Anmerkung zur Empirie regionaler Finanzialisierung

*In den vergangenen Jahren hat sich Finanzialisierung als Schlagwort und vielgenütztes Konzept über disziplinäre Grenzen hinweg etabliert. Trotz des gestiegenen Interesses ist Finanzialisierung jedoch bisher kaum in regionaler Perspektive untersucht worden. Folglich sind auch Anhalts- und Anknüpfungspunkte für eine angemessene empirische Analyse rar gesät. Der vorliegende Beitrag adressiert diese Lücke in der Forschungsliteratur und präsentiert einen Überblick über die aktuelle und zukünftige Empirie regionaler Finanzialisierung. Dabei konzentriert sich der Hauptteil der Analyse auf drei Fragen: Was, wo und wann messen wir? Zuerst werden die in der aktuellen Finanzialisierungsliteratur verwendeten quantitativen Indikatoren und Variablen auf ihre Eignung für die Analyse regionaler Finanzialisierung hin untersucht. Anschließend wird eine Evaluierung der Auswirkungen einer Messung von Finanzialisierung auf verschiedenen räumlichen Ebenen vorgenommen. Letztlich werden Überlegungen zu den Implikationen der Messung von Finanzialisierung zu verschiedenen Zeitpunkten und im Zeitverlauf skizziert. Insgesamt zeigt dieser Artikel, dass die Untersuchung regionaler Finanzialisierung in einem quantitativen Rahmen mit Schwierigkeiten behaftet ist und gegenwärtig einen Kompromiss zwischen Datenverfügbarkeit und Erklärungskraft der verwendeten Daten erfordert. Eine verbesserte Datenverfügbarkeit auf regionaler Ebene würde daher die Möglichkeiten künftiger Forschung, die komplexen Themen und Fragestellungen, die mit regionaler Finanzialisierung verknüpft sind, zu analysieren, wesentlich erweitern.*

*Schlagwörter: regionale Finanzialisierung, Empirie, quantitative Wirtschaftsgeographie*

## 1 Introduction

The past financial and economic crisis has been subject to a wide variety of scientific studies. In attempts of explaining causes and consequences of this crisis, the concept of 'financialisation' has seen a remarkable surge across disciplinary boundaries, from (heterodox) economics to political sciences and beyond (Pike and Pollard 2010). In Figure 1, this increase is illustrated by the annual numbers of scientific contributions carrying 'financialisation' respectively 'financialization' in the title.

As Mader et al. (2020, p. 7)[1)], among others, have shown, the emergence of financialisation as a buzzword across disciplines has been accompanied by a wide range of defini-

[1)] For readers interested in a general overview of the complex financialisation literature and the corresponding wide range of existing definitions, chapter 1 ("Financialization: An Introduction") in the book of Mader et al. (2020) offers a suitable starting point.

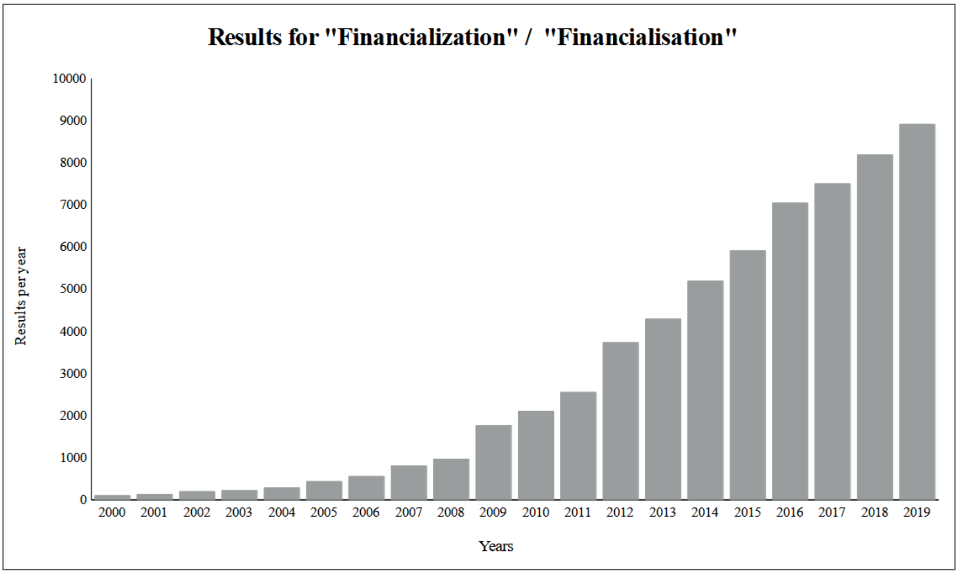


Figure 1: Results for financialization/financialisation as listed on Google Scholar by March 2, 2021. Own illustration.

tions. This large span is also exemplified by those two that have particularly gained grounds in the heterogeneous literature: On one hand, financialisation as "pattern of accumulation in which profits accrue primarily through financial channels" (Krippner 2005, p. 174), on the other hand, financialisation as the "increasing role of financial motives, financial markets, financial actors and financial institutions" (Epstein 2005, p. 3). Given the bandwidth inherent to the definitions in the literature and its corresponding diverse avenues of research, the concept has been subject to various criticism (following Mader et al. 2020, p. 6f): being an example of 'conceptual stretching' (see, in particular, Engelen 2008); concerning the very nature of financialisation, that is, treating it "sometimes as *explanandum* (what is to be explained), sometimes as *explanans* (the explanation) and sometimes as intervening mechanism between cause and effect" (Mader et al. 2020, p. 6; emphasis in original); and regarding its contextualisation given the strong focus on the Anglo-American sphere.

As a consequence of the wide spectrum in financialisation research, also the role of space has been treated quite differently. French et al. (2011, p. 814) noted at the beginning of the past decade that the literature is "focused on processes and effects at three particular spatial scales: the nation state; the firm or corporation; and the household and individual […] [and] has been insufficiently attentive of other spaces, such as the region and the international financial system, and of geographical registers other than scale".

But the rise of the financialisation debate and the onset of the financial crisis, with its deeply geographic causes and consequences, led to a debate within geography as well. Do geographers 'miss' the financial crisis and financialisation, just like they 'missed' globalisation? (Engelen and Faulconbridge 2009, p. 588) What are reasonable scopes and scales to approach financialisation? Little more than ten years ago, these questions were still rather new.[2] While in the runup to the financial crisis, geographic work on what is now discussed as 'financialisation' remained an exception, similar to the general trend across disciplinary boundaries, as illustrated in Figure 1, over time, a rise in the number of geographical publications on financialisation was observable (AALBERS 2015).

Examples, among others, are the 2009 special issue on 'financial geographies' by the Journal of Economic Geography or the more recently published Handbook on the Geographies of Money and Finance (2017).[3] Geographical approaches to financialisation now encompass housing issues (e.g., AALBERS 2017), infrastructure (e.g., ALLEN and PRYKE 2013), or migrants' remittances (e.g., DATTA 2017), among numerous others, filling many of the 'geographical gaps' in the literature in the past years. A recent discussion on 'geography and financialisation' is given by AALBERS (2019).

However, *regional* financialisation has hardly found attention yet. ARESTIS et al. (2017) perceive financialisation among Italian regions as the dominance of the financial sector. GEMZIK-SALWACH and PERZ (2019, p. 60) define regional financialisation as "the growing influence of financial markets, financial actors and financial institutions on the economy" among Polish regions. Similarly, SCHWAN (2017) analyses the regional shares of financial and insurance activities in total GDP across large parts of the European Union. Beyond these examples, the literature has hardly drawn attention to regional financialisation.

Thus, given the briefly outlined state of research, this article relies upon the following considerations: A broad reception of *regional*[4] financialisation may be viewed as a logical extension of the existing financialisation literature. The frequent reliance of geographical approaches on a regional perspective to analyse the variation of economic issues across space indicates a likewise 'regional lens' on financialisation as well (for further discussion on the significance of financialisation for uneven regional development see CLARK 2017 or SOKOL 2017).

This point is also substantiated by the fact that in the context of the past financial and economic crisis, for which financialisation is attributed a key role (e.g., HEIN and MUNDT 2013), various geographical differences were observable in both causes and effects (among others: CRESCENZI et al. 2016; DAVIES 2011; FRENCH et al. 2009; MARTIN 2011), but the region calls for particular attention (MARTIN et al. 2016). Moreover, from a rather methodical perspective and with respect to appropriate research settings, exploiting the regional variation in causes and consequences may also unfold as a fruitful way to statistically identify effects, thus likely to contribute to our general understanding of financialisation. In either case, the empirical analysis of regional financialisation requires a suitable meth-

[2] Notably, as MARTIN and POLLARD (2017) point out, geographical approaches to what is now discussed as financialisation are not necessarily new (e.g., HARVEY 1982 or LEYSHON and THRIFT 1997). Still, there has been a strong underrepresentation in the years prior to the past financial and economic crisis.

[3] Handbook on the Geographies of Money and Finance. Edited by R. MARTIN and J. POLLARD. Cheltenham, Northampton: Edward Elgar Publishing. 2017.

[4] This article draws on an understanding of 'region' in the spirit of a relational economic geography (e.g., BATHELT and GLÜCKLER 2003; BATHELT and GLÜCKLER 2012), i.e., using space as a perspective or 'lens'. Hence, 'regional financialisation' as used in this paper could also be labeled, synonymously, as 'financialisation in a regional perspective'.

odological approach: what, where, and when do we measure? Focusing on these *empirics of regional financialisation*, the present article addresses a hitherto scarcely discussed issue and, in doing so, strives to offer a suitable starting point for future research.

The remainder of the paper is structured as follows. In section 2, regional financialisation is briefly discussed along three dimensions. Based upon these heuristic categories, section 3 exemplary evaluates the mentioned central questions in the course of searching for appropriate quantitative indicators. Section 4 concludes.

## 2 Toward regional financialisation

An examination of the empirics of regional financialisation requires a solid outline of the same upon which further considerations can be based. Following Mader et al. (2020, p. 8), a definition of (regional) financialisation must be "delimited", "mechanism-oriented", and "contextual". Notably, this article does not strive to find or offer a distinct definition of regional financialisation as indicated by the introduction but acknowledges the co-existence of various approaches in the literature. Nevertheless, in order to address the need of a clear delineation of regional financialisation, this chapter proposes an outline upon which empirics may be discussed. This outline is of a rather illustrative type and is best described as a heuristic of three dimensions, themselves a result of an extensive literature review (presented in Hellwagner 2022) to render the task of evaluating corresponding empirics manageable at all: regional housing, regional financial intermediation, and regional debt. Notably, these categories are not mutually exclusive but certainly address similar or overlapping issues and questions, likely dependent on how financialisation is approached, that is, as *explanans*, *explanandum*, or as intervening mechanism. Below, these dimensions are briefly outlined by referring to selected examples from the literature.

### *Regional housing*

First, housing, as the "key object" according to Aalbers (2017, p. 542), may be tied to financialisation differently across regions, for example, as the result of mortgaged home ownership, most prominently during the 'subprime crisis' in the United States but also elsewhere. Notably, *within* countries, such models of mortgaged homeownership and, connectedly, mortgage bubbles did not materialise uniformly and thus regions have not seen the same fallout in terms of, e.g., foreclosures, as shown by Martin (2011). Additionally, there are also differences *between* countries. Wijburg and Aalbers (2017) argue that the housing sector in Germany has seen "waves of financialisation", somewhat different from the U.S. experience: While the first wave in the 1980s has increased mortgages in the housing sector as well, the second wave from the late 1990s to the financial crisis has rather been characterised by a process of 'financialised privatisation', that is, the privatisation of social housing units by private equity firms or hedge funds. Thus, housing and its relation to financialisation is likely to vary across space and time, giving rise to questions of regionally varying economic causes and consequences.

### *Regional financial intermediation*

Second, closely connected, different aspects of financial intermediation may be investigated through a 'regional lens'. In general, this refers to disappearing, transforming, and newly emerging financing and investment practices in conjunction with the corresponding structural changes (Hellwagner 2022). For illustrative purposes, this category is discussed with respect to 'banks' and 'non-banks'.

On one hand, for example, we can observe a decreasing importance of more 'traditional' financial institutions: regionally varying drawbacks of local banks may become relevant since corresponding regional 'financing deserts' for firms can emerge (Appleyard 2013; Clark 2017). Other approaches emphasise differences in practices of small compared to large banks, with the latter being particularly concentrated in large financial centres, or address differences in centralised and decentralised banking systems (Flögel and Gärtner 2018; Jackowicz et al. 2020). Notably, similar to regional housing outlined above, the spatial financial intermediation structure might not only differ within a country due to developments such as regional drawbacks of banks or concentration of financial and business services in large centres (e.g., Hashimoto and Wójcik 2021), but also between countries as a consequence of, for example, national institutional differences or specialisations of financial centres and industries (see, among others, Dörry 2021; Flögel and Gärtner 2018; Gärtner and Flögel 2015; Klagge et al. 2017).

On the other hand, as Aalbers (2019) notes, there has been an increase in the importance of "other financial actors and activities with the explosion of nonbanking financial institutions, ranging from pension funds and mortgage companies […] to private equity and hedge funds". A spatial perspective on practices and structural impacts of non-banks may, exemplary, encompass issues such as the (regionally varying) 'assetisation' of goods like public land (e.g., Christophers 2017) or the mentioned (regionally varying) privatisation of social housing units (e.g., Wijburg and Aalbers 2017). Also differences in the well-documented increasing importance of financial-market-based pillars of retirement schemes (van der Zwan 2017), or similar developments, may give rise to analyses investigating possibly uneven regional effects, in particular across national borders.

Hence, financial intermediation, of which these selected examples above only offer an illustrative and thus incomplete picture, may be approached from different 'regional angles': with respect to financial intermediaries and their practices; regarding the importance for firms with its connected labour market effects; in terms of varying involvement of households in financial markets; or possibly from a completely different perspective.

### *Regional debt*

Third, the rise and increase of different forms of debt, frequently interpreted as expression of a "debt-economy" (Guttmann 2017, p. 879), may also be perceived as an issue closely linked to financialisation (e.g., Stockhammer 2012; Sokol 2017), some even argue it to be located at the "epicentre of the [past] crisis" (Sokol 2013, p. 505; author's own insertions in brackets). However, there may be different forms of regional debt being related differently to financialisation, but all of which are also likely to vary across space and thus regions, as suggested by the literature: Deruytter and Möller (2020) analyse how attitudes towards and dealing with debt by local public policy makers and institutions have changed over time, altering their overall financial market involvement patterns. Walks (2013, p. 180; author's own insertion in brackets) investigates the geography of household debt in Canadian cities, describing the emergence of a so-called "urban debtscape […] [as] reflecting an essential element of the geography of risk and financialization". In a broader but explicitly regional approach, Schwan (2017, p. 663) investigates the roles of sovereign, corporate, and household debt for the extent of regional financialisation based upon the consideration that these various forms of indebtedness are "lying at the core of the financialization process and are thus (now) its main driving force".

The overlapping scopes and linkages of regional debt with the previously outlined dimensions are obvious, for example, in the case of household mortgage debt. As noted in the beginning, the presented categories are not intended to be clearly delineated, fundamental dimensions or components of a definition of regional financialisation but should rather be understood as impulses to discuss possible empirics in the subsequent chapter.

## 3 On the current and future empirics of (regional) financialisation

In doing so, as for every other quantitative approach, the task of finding appropriate statistical indicators and data sources across space and time emerges. Since differences between countries, i.e., the importance of different institutional settings for the unfolding of financialisation processes, are emphasised in the literature, as shown above using selected examples, the analysis below focuses on a comparative perspective across European regions.[5]

In general, three basic questions appear to require attention: what, where, and when do we measure? Just as complex and diverse as regional financialisation unfolds, are possible data sources and indicators. Therefore, the following overview does not strive to discuss every possible variable but rather offers illustrative insights by exemplary evaluating empirical approaches to financialisation in the literature, analysing them in the context of a distinct regional perspective, and supplementing these approaches with new elaborations.

***What do we measure?***

Housing structures have already been discussed in depth in the geographical literature (e.g., Wijburg and Aalbers 2017; Martin 2011; and others). However, attempts to assess developments in housing in a quantitative regional perspective – no matter whether it concerns the number of house purchases, the building permits, the price per square meter,

[5] This article only evaluates possible empirics in the context of *administrative* regions, in particular with regard to the NUTS classification. This decision is of rather pragmatic nature since most available statistics match administrative borders, but, clearly, this also represents a limitation as the discussion does not explicitly pay attention to the complex conceptual debates on 'regions' (see, e.g., Chilla et al. 2015).

or the amount of loans granted for house purchase – will be confronted with a widespread lack of data, in particular in the case of comparative approaches across countries intending to draw on harmonised data sources (see, e.g., OECD 2019). Only for individual countries, like Germany (see BBSR 2021), selected indicators are available.

Likewise, detailed regional data of financial intermediation such as the investment of households in funds or vice versa the assets held by, e.g., pensions funds are hardly available. Articles which focus on such statistics mostly do not use regional but national data and only do so for selected countries (e.g., LAPAVITSAS and POWELL 2013).

Turning to debt structures, regional quantitative assessment is similarly difficult. MBAYE et al. (2018) present an extensive overview of existing debt datasets. Given this list of different sources, the data availability on the national level can be characterised as good in several ways, i.e., private and public, but also firm and even 'subnational government' debt (several databases, among them: Eurostat 2019; IMF 2019; OECD 2019), however, without a distinct spatial dimension. Consequently, subnational government debt is also only available on a national level. 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 2017a). However, focusing only on single countries, for the example of Germany see StÄdBudL (2021), some forms are available for selected regional classifications.

As a solution, empirical approaches frequently draw on so-called "proxies" (term c.f. SCHWAN 2017). GEMZIK-SALWACH and PERZ (2019) use regional gross value added (GVA) and employment shares in the financial sector to build an index of regional financialisation. Similarly, SCHWAN (2017) investigates the effects of different forms of regional debt on regional financialisation. Notably, the operationalisation of the former, as indicated above, relies only on debt data for the national level, while the latter is operationalised using GDP share in finance and insurance activities. However, also approaches on the national level often follow the same procedure and rely on such proxies: BULBARELLI (2016), for example, uses the value added in construction ('sector F') in proportion to the total value added as an expression of the past real estate bubble on the national level in Spain. Similarly, NORRIS and COATES (2014) link the housing boom in Ireland from the mid-1990s until the mid-2000s to the gross value added (GVA) in construction. 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).

Thus, throughout the existing literature, GVA shares in the FIRE (finance, insurance, and real estate) and construction sectors are used as proxies for financialisation, also among examples which take a regional perspective. In particular with regard to the frequently used shares in financial and insurance activities, SPEICH (2003) notes that the calculation of regional GVA statistics assumes that deposits or premiums on both the banking and insurance sector tend to be assigned to higher-level branches and can, therefore, be hardly located regionally. Hence, in the course of future empirical investigations of regional financialisation, the question of whether using sectoral shares as rather 'rough' proxies appropriately serves the research objective is of key importance.

***Where do we measure?***

Moreover, inherent to every empirical analysis in economic geography (e.g., NEUFELD 2017b), the question of *where*, that is, which definition of *region* do we use, requires attention. In the few examples of studies concerned with regional financialisation quoted above, it becomes evident that there is no uniform approach in this respect either. ARESTIS et al. (2017) focus on NUTS-2 regions in Italy, GEMZIK-SALWACH and PERZ (2019) draw on NUTS-2 regions in Poland, and SCHWAN (2017) uses a mixture of NUTS-classifications across Europe. Clearly, this variation is likely driven by data availability. The Eurostat database, for example, does not contain GVA data for individual sectors on all NUTS levels for each country (Eurostat 2021a). Additionally, as in other applications, de-

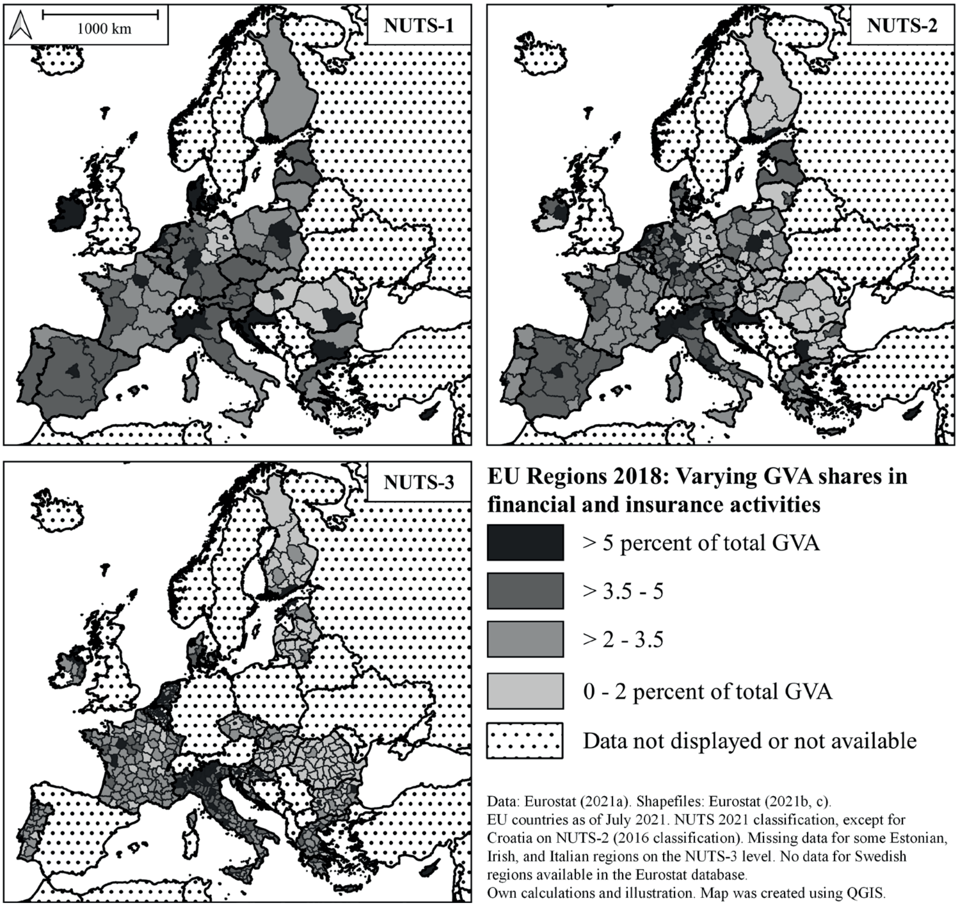


Figure 2: The map compares patterns in regional gross value added (GVA) shares as well as the respective data availability across different NUTS levels for European regions.

ciding for one or the other classifications is not trivial but brings about some implications. Figure 2 shows both, differences in the data availability and the impact of choosing one or the other regional level.

Regarding the latter, the map demonstrates that regional differences vary depending on the underlying classification. For example, Ireland with its well-known established financial sector shows a strong GVA share on the NUTS-1 level. However, when turning to the NUTS-2 level or NUTS-3 level, distinct regional patterns appear, indicating that the overall value of NUTS-1 is presumably strongly driven by the capital, Dublin, while other parts of the country show lower figures. Similar cases can be found in Romania, France, or Germany.

Regarding the former, the figure shows that the data availability quickly dies out when turning to a more fine-grained perspective. While GVA shares are available for both NUTS-1 and NUTS-2 across all current EU member states (see the notes in figure 2 for further remarks), the Eurostat database does not contain NUTS-3 level GVA shares for a series of countries: Austria, Germany, Poland, and Spain.

Clearly, differences depending on the spatial level under consideration are anything but new. However, as Figure 2 underlines, in particular approaches to regional financialisation must take corresponding limitations into account since a coarser classification of regions blurs the regional differences of interest. Additionally, the map demonstrates that even today and also even for supposedly 'rough' indicators, small-scale data availability is still not given throughout Europe.

### *When do we measure?*

Finally, the question of the appropriate time dimension in empirical analyses deserves attention and is applied differently in the existing literature: Arestis et al. (2017) consider the period from 1999 to 2014, Gemzik-Salwach and Perz (2019) draw on data between 2005 and 2015, Schwan (2017) uses information for the years 2011 to 2013.

In general, since the financialisation literature has been boosted by the past financial and economic crisis, the effects of financialisation may be very well studied using developments before, during, and after this crisis, as largely suggested by the cited examples. Notably, even though the mentioned GVA (or employment) shares may not capture exactly the causes, consequences, or intervening mechanisms of regional financialisation and vary with respect to their 'spatial resolution', yet these data have the advantage of being available over several years. Currently, the Eurostat database contains information from 1995 onwards (Eurostat 2021a). In contrast, the (public) availability of more detailed indicators is often restricted to selected years. For example, the share of housing costs in households' disposable income on the regional level (see OECD 2019), as a supposedly more detailed indicator compared to GVA shares in 'sector L' for some research settings, is available for some countries only after the financial crisis, for others in a perennial frequency, and for certain countries, regional data are completely missing. Similarly, also the subnational governmental debt, as discussed previously and if found to be a suitable indicator, is only available for the years 2015 and 2016.

Data availability restricted to a shorter or irregular period of time may have serious implications since possibly crucial dynamics over time are not accessible and analysable for researchers. Thus, data availability of more detailed indicators restricted, for example, to observations in the aftermath of the crisis hampers fruitful empirical research in a regional perspective.

## 4 Summary and conclusion

Financialisation, as a concept and buzzword, has increased remarkably in prominence among a wide range of scholars across disciplinary boundaries. In particular, during and after the financial and economic crisis, a growing strand of the scientific community has drawn attention to financialisation in analysing causes and consequences – and evidently, the crisis had distinct geographical patterns in both. However, yet, regional financialisation has been hardly investigated in the existing literature. Consequently, frameworks for empirical analyses are also rather scarce. The present article aims at this shortcoming by evaluating current and future empirics of regional financialisation.

In general, and in the sense of the argumentation by Mader et al. (2020, p. 8), an approach to (regional) financialisation must be 'delimited', 'mechanism-oriented', and 'contextual'. In addressing these issues, the article draws on a heuristic of three dimensions that are (implicitly) investigated as regional financialisation in the literature and evaluates corresponding empirics. Thereby, the argument is made that an appropriate empirical strategy towards regional financialisation must deal with three central questions: *what, where*, and *when* do we measure?

First, finding and applying appropriate indicators is challenging. Given these difficulties, researchers often draw on 'proxies', that is, gross value added (GVA) or employment shares. This raises concerns such as whether using 'rough' proxies appropriately addresses the issues and questions analysed in the context of regional financialisation. Second, the feasibility of empirically approaching regional financialisation may depend on the spatial level under consideration. As the analysis, exemplary relying on GVA shares, has shown, regional differences and patterns tend to be blurred when drawing on a coarser regional classification. At the same time, data availability across countries is reduced for approaches applying a more fine-grained perspective. Third, the availability of more detailed indicators is often also restricted to a few years, hampering the quantitative assessment at different points in and across time, such as the analysis of regional financialisation before, during, and after the financial and economic crisis.

Thus, given the evaluations presented in this article, empirical approaches to regional financialisation face a challenging task and require a trade-off between data availability and explanatory power of the used data. The general necessity of clearly outlining which aspect or definition of regional financialisation is under consideration must be connected to finding statistical indicators which appropriately mirror this understanding while simultaneously being available on both an appropriate spatial level that allows for distinct regional patterns and across a horizon that permits to investigate dynamics over time. Therefore, future research may draw on the considerations presented in this note in two ways: on one hand, as an illustrative survey to obtain an initial overview of the existing and, on the other hand, as a suitable starting point to develop new empirical research settings that are appropriately addressing regional financialisation using the discussed dimensions (housing, intermediation, debt), questions (what, where, when) as well as data sources. Obviously, improved data availability on the subnational level would enhance the possibilities of future research to analyse the complex issues and questions tied to regional financialisation remarkably.

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