Local government financialisation: a mixed-methods and interdisciplinary approach

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Declaration

I declare that this thesis is entirely my own work and no part of it has been submitted for any other degree of qualification.

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Abstract

This thesis makes a series of conceptual and empirical contributions to our understanding of local government financialisation in Europe, focusing on its nature, drivers, and implications. Adopting an interdisciplinary and mixed-methods approach, it integrates insights from economic geography, political economy, and heterodox economics, using a range of qualitative and quantitative research methods. This approach aims to provide a novel perspective to the existing literature on local government financialisation by developing a comprehensive and critical understanding of the subject.

The thesis comprises three self-contained chapters that present original research on three interrelated research questions. The first empirical chapter, based on a systematic literature review and the comparative analysis of official statistics, clarifies definitional issues by exploring what is meant by 'local government financialisation'. The second empirical chapter examines financialisation as a response to the structural context in which local governments operate. It reveals that economic, financial, and institutional factors shape local government financialisation in a panel of 22 European countries from 2000 to 2019. The third empirical chapter combines a difference-in-differences analysis of data on over 2.2 million commercial properties, insights from 16 semi-structured interviews and email communications with key stakeholders, and freedom of information requests to 12 local and central government bodies. Although the policy has limited success in its own terms — namely, in raising commercial property values — I find that it reflects a broader shift towards market orientation in English local governance.

Collectively, these empirical research chapters clarify the forms that local government financialisation takes across European countries and how structural conditions and developments at the national and global scale, largely beyond the control of individual local governments shape its extent and outcomes. The multi-scalar approach challenges the notion of financialisation as a beneficial tool for cash-strapped local governments. When examined in relation to the institutional and economic context in which it takes place, financial, distributional, and democratic concerns arise regarding how local government financialisation may reshape public provision. Ultimately, a deeper understanding of local government financialisation is crucial for preventing and mitigating its negative consequences. This thesis contributes to fostering such an understanding.

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1. Introduction

Walking the streets of London, Vienna, Budapest, or Barcelona, I find it hard not to notice a certain disconnect between the oftentimes progressive aims of local politicians, and the realities around me. For example, local politicians in European cities and towns often speak about ambitious plans to tackle housing crises, yet the only new construction in my area seems to be upmarket residential buildings. Public facilities like swimming pools or libraries face neglect, and low-cost local markets are replaced by luxury offices. Meanwhile, it seems that local governments are increasingly turning to financial markets in an effort to generate revenue to fund essential services. However, these strategies do not always pan out as planned, sometimes leading to severe financial problems, and even bankruptcy, threatening the very services they intended to protect.

This thesis emerges from a sense of profound change in the way our cities operate and serve their residents. These changes are not always for the better, especially for the most vulnerable residents, like people on low incomes, or single mothers, who disproportionately rely on local services and infrastructure. Though these changes seem so prevalent and pervasive, it is hard to pin down what exactly is happening. This is what this thesis sets out to do, by exploring the evolving relationship between local governance, finance, and financialisation.

Local governments in Europe play a crucial role in providing services such as housing, transport, social care, and education, which are essential to our daily lives. However, since the 1970s, local governance of these services has undergone significant changes. Faced with increasing market pressures, local governments across Europe have shifted towards more 'entrepreneurial' and market-oriented governance strategies (Harvey, 1989; Peck, 2014). This shift has recently been characterised by a growing reliance on financial tools and markets in local governance, leading to an expanding body of research on what can be termed 'local government financialisation' (Beswick & Penny, 2018; Peck & Whiteside, 2016; Weber, 2010). As this thesis will explore, this concept encompasses both "internal" and "enabled" aspects. That is, local government financialisation is both "orchestrated through the [local] state's own property, purchases, and debt offerings, or where state institutions are reconfigured along financialized lines; and/or enabled by state regulatory and budgetary changes that open fiscal space and legal possibilities for financialization broadly" (Whiteside, 2023, p. 237).

Financialisation can enable local governments to mobilise funds for the development of essential infrastructure like housing, particularly in light of the substantial turn towards austerity seen across Europe after the 2007/8 financial crisis (Beswick & Penny, 2018; Dagdeviren & Karwowski, 2022; Peck & Whiteside, 2016). From the viewpoint of local government officials and constituents, financialisation may therefore be perceived as a beneficial and pragmatic way of navigating changing and challenging conditions of governance, such as increased budgetary and competitive pressures from financialisation

and increasingly mobile investment (Findeisen, 2020; Lagna, 2015). However, this reliance on financialisation, while relatively new, may indicate a deeper and more sustained shift in the nature of local governance. Such a transformation brings with it a host of concerns, introducing new financial risks, potential distributional inequalities, and challenges to democratic processes (Bloom, 2023; Pike, 2023). These risks associated with financialisation underscore the need to critically assess and understand these processes within local governments to avert and mitigate their negative implications.

This thesis offers conceptual, empirical, and methodological insights into local government financialisation, setting out to explore a series of questions in three empirical chapters. Chapter 2 clarifies definitional issues by exploring what exactly we mean when we talk about 'local government financialisation', focussing on the European context. Chapter 3 acknowledges that local governments do not financialise in a vacuum; rather, financialisation can be understood as a response to the structural context in which they operate. It finds that economic, financial, and institutional factors shape local government financialisation across European countries. Chapter 4 investigates a specific 'financialised' urban development policy (Strickland, 2013; Weber, 2010), focusing on the implications of using Tax Increment Financing (TIF) in English local authorities. While the policy has only limited success on its own terms – in raising commercial property values – I find that it is symptomatic of a broader shift towards market-orientation in English local governance. Collectively, these contributions enhance our understanding of the nature, underlying causes, and effects of local government financialisation.

The next section of this introductory chapter outlines the conceptual approach used in this thesis, integrating literature from economic and financial geography with insights from political economy scholarship and heterodox economics. Following this, I present the methodological approach of the thesis, emphasising the importance of drawing on diverse qualitative and quantitative research methods to develop a comprehensive understanding of local government financialisation. The final section of the introduction briefly summarises the main contributions of the three original research chapters included in this thesis.

Theoretical framework: developing an interdisciplinary approach to study local government financialisation

This thesis combines geographical research on entrepreneurial and financialised local governance with recent work in international and comparative political economy on state financialisation, along with insights on the variegated and structurally uneven nature of financialisation, broadly located in heterodox economics. In developing an interdisciplinary approach, I seek to integrate, rather than merely juxtapose, concepts and insights from these disciplines to develop a "more holistic understanding" of local government financialisation (Klein, 2017, p. 25)[1]. This section sets out the conceptual building blocks of

[1] The thesis takes an interdisciplinary, rather than multi- or trans-disciplinary approach. While the boundaries between these terms are contested (Frodeman, 2017), they can broadly be understood as follows.

this interdisciplinary approach, seeking to embed the actions of local state actors in their political-economic context. I then discuss how I operationalise the interdisciplinary approach – philosophically, through the ontological foundation of critical realism, and conceptually, by mobilising the geographical concept of 'scale' as an integrating device for insights from different literatures.

From urban entrepreneurialism to financialised local governance

Researchers in economic and urban geography have long studied the role of the local state in capitalist development, and more recently financialisation. A key figure in this area is David Harvey, whose seminal 1989 work highlights an "entrepreneurial" shift in local governance in advanced capitalist economies since the 1970s. This shift involves a move away from traditional managerial practices focused on providing local services and facilities to a broad constituency, towards a model that seeks to "foster and encourage local development and employment growth" (Harvey, 1989, p. 3). This entrepreneurial approach is characterised by increased reliance on external funding sources like public-private partnerships; a speculative governance style with public actors assuming more development risks; and a focus on creating "places" (like entertainment centres or industrial parks) rather than on broader territorial economic projects (such as housing or education), that are "designed primarily to improve conditions of living or working within a particular jurisdiction" (Harvey, 1989, p. 7). Harvey highlights four specific strategies used in entrepreneurial urban governance: enhancing a city's competitive advantage in goods or services production; focusing on elite consumption through urban regeneration, events, and other attractions; seeking to attract "key control and command functions in high finance, government, or information gathering and processing" (Harvey, 1989, p. 9); and securing central government and supranational funds through increasingly competitive bids. From these four strategies, it becomes clear that urban entrepreneurialism implies "some level of inter-urban competition" (Harvey, 1989, p. 10). Harvey argues this competition will increasingly "operate as an 'external coercive power' over individual cities to bring them closer into line with the discipline and logic of capitalist development" (1989, p. 10).

Beyond describing the characteristics of entrepreneurial urbanism, Harvey (1989, p. 3) and others after him, understand this shift as "both product and condition of ongoing social processes of transformation in the most recent phase of capitalist development". Entrepreneurialism is understood in the context of interrelated processes of deindustrialisation, rising unemployment in the 1970s and 1980s, and the spread of neoliberal ideology which encouraged privatisation, deregulation, and market rationality in

Multidisciplinary research retains the separations between disciplines but seeks to develop "wider scope of knowledge, information and methods", by "juxtaposing", or "sequencing" different insights on the same topic or question (Klein, 2017, p. 24). Interdisciplinarity goes a step further, trying to "integrate" knowledge and theories from different disciplines in order to gain a more complex, "holistic" understanding of a research topic (Klein, 2017, p. 25). Transdisciplinary research presents the most radical break with established disciplines, seeking to transcend "the scope of disciplinary worldviews through and overarching synthesis" and attempt at "systematic integration of knowledge" (Klein, 2017, p. 30).

public provision (Brenner & Theodore, 2002; Harvey, 1989). Another significant factor is globalisation, in trade as well as financial flows. Various authors argue that this decreased national governments' power over international flows of money, resulting in a situation where investment is increasingly negotiated between international companies and financial actors on the one hand, and local state actors on the other (Brenner & Theodore, 2002; Gough, 2002; Harvey, 1989). However, urban entrepreneurialism is not just a product of these changes but also contributes to and sustains these structural transformations. Specifically, the increasing responsibility of local governments for economic development and the focus on creating globally competitive cities supports new forms of capital mobility by mobilising urban space for investment and creating opportunities for elite consumption (Brenner, 1999; Brenner & Theodore, 2002). This decentralisation and shift to entrepreneurial urban governance align with neoliberal ideology, fostering policy competition and compelling governments to adopt more market-oriented policies to attract investment (Harmes, 2014).

Harvey's seminal paper thus provides two crucial insights into urban entrepreneurialism. First, he outlines its practical manifestations, discussing specific entrepreneurial strategies at the city level and contrasting them with former managerial approaches. Second, and crucially, he emphasises the "competitive conditions of existence within which (…) entrepreneurial urban strategies have been formulated" (Peck, 2014, p. 399), thereby extending the discussion beyond city-level phenomena to underscore broader structural and historical social transformations.

In the wake of the 2007/8 financial crisis, scholarly focus has increasingly shifted towards the role of finance in local government entrepreneurialism, resulting in an expanding body of scholarship. This literature has documented the increasing use of "financially mediated means" (Peck & Whiteside, 2016, p. 239) in local governance across various regions, including Europe (Guironnet, 2019; Savini & Aalbers, 2016), North America (Peck & Whiteside, 2016; Rutland, 2010; Weber, 2010), and Asia (Anguelov, 2023; Pan et al., 2017; Wu, 2021). Using mostly single-city case studies, these authors offer rich empirical detail on how local governments enable financial investment into local public assets and services, such as housing (Beswick & Penny, 2018; Fields & Uffer, 2016), infrastructure (Allen & Pryke, 2013; Anguelov, 2023; Deruytter & Derudder, 2019), and social care (Bayliss & Gideon, 2020; Hall & Stephens, 2020; Horton, 2021), and increasingly use financial instruments in their borrowing and investment practices (Dagdeviren & Karwowski, 2022; Mertens et al., 2021; Weber, 2010). Despite the proliferation of studies on what can be termed 'local government financialisation', it is not always clear what this means. Authors differ in their interpretations of the phenomenon, the specific sphere of financialisation to be studied, and the actors involved.

What is 'financialised' in local government financialisation?

More generally, the scholarship on financialisation has been criticised for its lack of a shared understanding or definition (Christophers, 2015; Michell & Toporowski, 2013). Financialisation has become a fertile research topic across the social sciences, and is variously understood as "the emergence of a new regime of accumulation, the ascendency of shareholder value orientation and the financialization of everyday life" (van der Zwan, 2014, p. 99). The first research strand, as identified by Van der Zwan (2014), explores the transition from a Fordist regime, suffering from declining productivity, to a 'finance-led' regime in which the expansion of credit supports flailing demand (Boyer, 2000). Empirically, this is evidenced by a rise in the significance of financial revenue in non-financial corporations, surpassing their core business revenue (Krippner, 2005; Stockhammer, 2004). The second strand identifies a movement towards shareholder value orientation in modern corporations. Researchers have noted how shareholder interests are increasingly prioritised over those of other stakeholders, including workers and local communities. This trend is visible in actions like corporate restructuring and in linking manager salaries to share prices (Froud et al., 2000; Lazonick, 2010; Lazonick & O'Sullivan, 2000). The third strand focuses on the financialisation of everyday life. This research points to the 'democratisation of finance', whereby individuals become increasingly reliant on financial markets for social welfare. Examples include the shift towards funded pension schemes and the rise in household debt, such as home mortgages (Erturk et al., 2007; Martin, 2002; Montgomerie, 2009).

While its analytical diversity is sometimes seen as a key strength of this literature (Aalbers, 2015), others have argued that the lack of a clear definition of financialisation limits its utility. Concerns arise particularly about the way in which financialisation is employed in research articles without adequately explaining what is meant by it (Michell & Toporowski, 2013). This vagueness risks "raising more questions than it answers" (Christophers, 2015, p. 196) and obscures the concept's contribution. Chapter 2 of this thesis aims to address this critique within the context of local government financialisation, and clarify the role of local governments in financialisation. To do this, I draw from an emerging strand of research on state financialisation, broadly located in international and comparative political economy.

This recent strand of financialisation literature notes that transformative changes brought about by the rise of finance necessitate changes within the state (Karwowski, 2019; Wang, 2015). This literature explores how financialisation has been enabled by the state, and how state actors have themselves become financialised. Recognising the challenges state actors face in a globalised, capitalist economy, Krippner (2011) and Copley (2022) demonstrate how financialisation of the economy was often unintentionally facilitated by policy responses to pressing political issues. For instance, the liberalisation of the mortgage market aimed to expand access to housing through homeownership but inadvertently spurred speculative dynamics, contributing to the current housing crisis in the UK. Other work examines the state's more proactive role in financialisation, investigating how states have become "financial market players" (Karwowski, 2019, p. 1002). These studies investigate central

governments' debt management, such as increasing government borrowing through bonds ('marketable debt'), use of derivative instruments, like interest rate swaps, and investment in financial markets (Lagna, 2016; Livne & Yonay, 2016; Munoz Martinez, 2016; Wang, 2015). In this thesis, I use the political economy literature on the enabling and unintentional, and proactive roles of the state in financialisation to develop a framework through which to understand the multitude of ways in which local governments have engaged with financialisation, as documented in the growing body of economic and financial geography highlighted above. This framework is further detailed in Chapter 2 of the thesis.

Many of these studies also identify quantitative measures of state financialisation to examine and compare it across countries (Babic et al., 2020; Fastenrath et al., 2017; Schwan et al., 2020). However, country-comparative approaches, are largely absent in the literature on local government financialisation which often limits its focus to single case studies. This thesis adopts a broader perspective, using a 'bird's eye' view to study financialisation in local governments. Specifically, Chapters 2 and 3 draw on comparative political economy literature to identify indicators of the proactive aspects of local government financialisation and examine its prevalence across countries. This approach also contributes to the financialisation of the state literature by analysing these processes at the subnational level.

How do structural conditions shape local government financialisation?

Studies on local government financialisation often explain the shift in local governance through broader macroeconomic and global-scale developments and changes in national policies. Specifically, the adoption of financial instruments by local governments is interpreted as an adaptation of entrepreneurial governance strategies to the era of financialisation (Mertens et al., 2021; Savini & Aalbers, 2016). National-level austerity is another key factor frequently highlighted, seen as a major catalyst driving financialisation in local governments. Many authors argue that austerity policies at the national level have strained local budgets, forcing local governments to seek alternative revenue sources to sustain services, maintain public infrastructure, and manage payroll expenses. In recent years, this has often led to an increased reliance of local governments on financial markets to compensate for reduced transfers from central government (Beswick & Penny, 2018; Dagdeviren & Karwowski, 2021; Lagna, 2015; Omstedt, 2020; Peck & Whiteside, 2016). In addition, by giving local governments more responsibility for the provision of and payment for public services, devolutionary efforts have arguably enabled them to use financial instruments and markets, thus engaging in financialisation (Mertens et al., 2021).

While many academic articles mention the driving factors of local government financialisation, these are most often noted in passing and descriptively rather than used as analytical tools (Christophers, 2019; Peck, 2017). In other words, the literature on financialised local governance or entrepreneurialism tends to focus on its practical manifestations and strategies, while somewhat neglecting the "competitive conditions of existence" under which those strategies are developed – the second crucial contribution of

Harvey's work on entrepreneurial urbanism (Peck, 2014, p. 399). To support our understanding of why local government financialisation occurs in some places rather than others, and in different ways, Chapter 3 explicitly addresses the shaping role of such broader conditions, at the national and global scale. In addition to the factors cited above, I consider financial subordination – a body of work broadly based in heterodox economics - to understand local government financialisation within the context of global hierarchies.

The literature on financialisation, predominantly originating from the Western and North American context, increasingly recognises its different and variegated nature in other regions, particularly developing and emerging economies (DEE) (Alves et al., 2022; Bonizzi, 2013; Bonizzi & Karwowski, 2023; Karwowski & Stockhammer, 2017; Kohler et al., 2023). The concept of 'financial subordination' enables a structural and historical understanding of such empirical variation. Countries on the periphery of global financial networks are integrated in a subordinate or dependent manner. Alami et al. (2022) synthesise different ways of theorising financial subordination. Approaches based in dependency theory suggest that financial subordination is rooted in colonial core-periphery relations and perpetuated by capitalism's structural, competitive dynamics (Koddenbrock et al., 2022). Post-Keynesian approaches often view it as monetary subordination, with currencies at the bottom of the hierarchy (most often those of DEEs) limited in performing money functions on an international scale, i.e., to act as a store of value, unit of account, and means of payment in an international setting (Bonizzi & Kaltenbrunner, 2019; Bortz & Kaltenbrunner, 2018; De Conti & Daniela, 2018; Kaltenbrunner & Painceira, 2018). Financial subordination not only limits these countries' potential to benefit from financialisation but also exposes them to increased volatility and risk. This vulnerability is evident in macroeconomic instability triggered by abrupt shifts in investor demand, influenced more by core financial conditions and international liquidity preferences than by domestic economic factors (Bonizzi & Kaltenbrunner, 2019; Bortz & Kaltenbrunner, 2018). Furthermore, financial subordination narrows policy choices, necessitating higher interest rates to attract investors and the accumulation of foreign reserves, potentially at the expense of social or developmental objectives (Bonizzi et al., 2022; Kaltenbrunner & Painceira, 2018). This subordination also perpetuates uneven development, transferring value from the periphery to the core through dividends, profits, and high interest payments on peripheral debt (Bonizzi et al., 2022; Pataccini, 2022), and impacts the operations of domestic non-financial corporations in terms of investment and access to finance (Itaman & Wolf, 2022).

The concept of financial subordination has recently been applied in geographical research, particularly in studies focusing on the financialisation of housing and commercial real estate in semi-peripheral regions. These studies argue that the subordinate nature of such financialisation means investment in housing, including through mortgages, relies on liquidity conditions in countries in the core (Büdenbender & Aalbers, 2019; Fernandez & Aalbers, 2016). Another aspect of subordinate housing financialisation is preference for high-value projects over affordable ones to compensate for perceived higher risks of

investing in those countries, leading to uneven urban development in cities of the periphery. Additionally, the transformation of housing into a financial asset and the growing role of foreign and institutional investors result in the transfer of value from peripheral to core countries (Fernandez & Aalbers, 2016; Lima, 2023). However, the role of the (local) state in these dynamics has been underexplored in geographical studies and the state has only recently been discussed explicitly in literature on financial subordination (Santos, 2023).

Moreover, these geographical studies primarily focus on the dependence on foreign investment, while overlooking the role of money and currency hierarchies in financial subordination. Recent research provides insights into how these dynamics vary between central and subnational state levels. Eichacker (2023) demonstrates that during the 2007/8 crisis, US municipalities experienced a withdrawal of private funds as investors preferred the perceived safety of more 'money-like' national Treasuries. In other words, while technically using the same currency, bonds issued by local governments are perceived as lower down the currency hierarchy, and less liquid compared to federal bonds. Additionally, perceptions of national credit risk tend to be magnified at the subnational scale, leading to higher borrowing costs for local governments (Bellot et al., 2017).

While these are significant contributions, a comprehensive examination of how financial subordination impacts local government financialisation is still lacking in the literature. A more detailed examination of monetary dynamics in geographical studies of financialisation, including those on local government financialisation, could provide a more nuanced understanding of the variations in financialisation experiences and how they are shaped by structural dynamics and national- and global-scale developments (Christophers, 2015; Kaltenbrunner & Painceira, 2018). Furthermore, despite acknowledging that "space and geography evidently seem to matter" in understanding financial subordination, current literature has yet to fully explain how "geographical processes and spatial relations" underpin and sustain it (Alami et al., 2022, p. 1377; Bonizzi & Kaltenbrunner, 2019).

The implications of local government financialisation for public services and local governance

It has sometimes been argued that financialisation, though a "problematic means", can be used for "positive socioeconomic ends" (Christophers, 2019, p. 572). This perspective suggests that financialisation enables local governments to generate revenue for essential public services, such as housing or infrastructure development (Beswick & Penny, 2018; Peck & Whiteside, 2016), and to fill budget gaps (Dagdeviren & Karwowski, 2022). Consequently, financialisation can appear sensible and even desirable from the perspective of individual local governments and their constituents, particularly when it supports services that would otherwise not be provided.

In general, however, the literature on local government financialisation adopts a critical stance. Motivated by its potentially adverse effects, authors highlight financial, distributional, and democratic risks associated with local government financialisation (Pike,

2023). Financial concerns include the risk of losses from local governments' use of financial instruments, which may lead to reductions in local services or stopping or postponing investment (Hendrikse & Sidaway, 2014; Weber, 2010). Distributional concerns emerge from integrating financial market logics into public provision, which can reorient services towards more affluent populations, increase prices, or prioritise profit extraction at the expense of social needs (Allen & Pryke, 2013; Fields & Uffer, 2016; Horton, 2021; O'Brien et al., 2019). Financialisation can also exacerbate inequalities between places, as the ability to benefit from financial innovation varies, leaving some places behind (Karwowski, 2019, p. 1013). Additionally, concerns about democratic accountability arise. For instance, local governments may alter their planning processes and governance to suit investors' needs, potentially at the expense of local populations (Bradley, 2021; Guironnet, 2019). As local governments increasingly engage with financial investors, such as on debt markets, creditors may become a "second constituency", with repayment priorities potentially superseding public service funding (Peck & Whiteside, 2016, p. 245). Therefore, while financialisation may look like an attractive strategy from the perspective of individual local governments, it introduces new risks and implications for public provision which local governments now have to consider and manage (Farmer, 2014).

Despite these concerns, there are still few studies that specifically investigate the outcomes of local government financialisation, either in terms of risks or in relation to the stated aims of such strategies. Chapter 4 of this thesis aims to contribute to our understanding of the implications of local government financialisation by examining the use of tax increment financing in English local authorities.

Critical realism and geographical 'scale': operationalising the interdisciplinary approach

As stated at the start of this section, integrating insights from various disciplines can help us develop a more comprehensive and "holistic" (Klein, 2017, p. 25) understanding of local government financialisation. Such a comprehensive understanding aims to work towards embedding this process in the complex, real-world context in which it takes place. In this thesis, this means the attempt to understand local government financialisation and the actions of local state actors in relation to the broader conditions shaping this process, such as macroeconomic developments and national-scale policy changes. This need has been recognised in previous studies. Notably, Peck and Whiteside (2016, p. 242) argued that "city governments have become 'active agents' in the process of municipal financialization (…), although hardly under circumstances of their own choosing".

Critical realism provides the ontological foundations to explore the relationship between financialisation within local governments, driven by actors within the local state, and the broader circumstances and processes that shape it. Critical realists hold that the world consists not only of empirical surface phenomena – such as the occurrence or extent of local government financialisation - "but also of underlying structures", such as such as

competitive pressures, and "causal mechanisms" – (Barnes & Christophers, 2018; Lee, 2012, p. 9; Sayer, 1982). The underlying structures shape actual empirical events, working jointly with the causal mechanism to produce them, which are triggered by agency (Lawson, 2006; Lee, 2012). Neither causal mechanism nor agency can be understood as separated from the structural constraints and social relations in which they are embedded: "Subjects (…) can only act with pregiven structural powers and constraints" (Lee, 2012; Sayer, 1982, p. 81).

Integrating different strands of literature can help us develop a more holistic understanding of the phenomenon of interest, in line with critical realism. But attempts to do so have often come under criticism for (1) combining schools of thought with incompatible philosophical foundations (Sayer, 1982), or for (2) eclecticism and a purported lack of intellectual rigour (Barnes & Christophers, 2018; Stockhammer, 2021). On the first point, if not always explicitly committed to, it has been argued that economic geography, political economy, and heterodox economics all are compatible with the ontology of critical realism - see, e.g., Barnes and Christophers (2018) and Sayer (1982) for economic geography, Jäger et al. (2016) and Wigger (2022) for political economy, and Lawson (2006) and Lee (2012) for heterodox economics.

On the second point, I propose to use the geographical concept of 'scale' to operationalise the interdisciplinary approach of the thesis. Following Barnes and Christophers (2018, p. 38), scale is understood as "spatial extent"[2]. Local developments are intertwined with social, economic, and political processes that operate at overlapping spatial levels (i.e., scales) – "local, regional, national, international, or global" (Barnes & Christophers, 2018, p. 38; Brenner, 1999, 2001), with processes at different geographical levels influencing each other. For example, Harvey's (1989) seminal essay illustrates this by connecting "local economic-development politics" to the broader "macroeconomics of interurban competition" (Peck, 2014, p. 397). Similarly, local government financialisation is shaped by developments on different spatial scales.

Local government financialisation happens in specific places and locations (Barnes and Christophers, 2018). It takes a myriad of different forms, depending on local context and the specific actions taken by agents within the local state, as detailed in the growing body of literature in economic and financial geography discussed above. However, the form financialisation takes, and the local strategies that lead to it, are shaped by the wider context within which it takes place. This includes actions taken at the scale of the national state, such as the implementation of austerity policies, and local strategies to adapt to, navigate,

[2] It is important to note that this is one of many ways of understanding 'scale' and space in geographical literature. An ongoing and unsettled debate in geography seeks to clarify the conceptualisation of space. Understandings based on spatial scale and 'territory' have come under criticism for being essentialising, fixed, and hierarchical. Opponents argue for more networked, 'relational', and horizontal (rather than vertical-hierarchical) understandings of space (see e.g., Amin, 2002; 2004). These are important debates at the heart of the discipline of human geography. However, these debates are outside the scope of this thesis, which employs an arguably narrow definition of scale in order to operationalise the interdisciplinary approach. For a helpful overview of these debates, I would like to refer readers to Cox (2013).

or circumvent those policies (Dagdeviren and Karwowski, 2022; Lagna, 2015). It also includes competitive pressures inherent to global capitalism, which shape state action at different levels of the state, as highlighted by literature in political economy (Copley, 2022; Krippner, 2011) and some of the geographical literature on local entrepreneurialism, inspired by Harvey (e.g., Peck and Whiteside, 2016). Competitive pressures are felt in different ways across world regions, states, and local areas, depending on factors such as structural hierarchies inherent to the global financial system as detailed in literature inspired by heterodox economics (Alami et al., 2022; Bonizzi and Kaltenbrunner, 2019; Eichacker, 2023). Specifically, Chapter 3 of this thesis analyses local government financialisation across Europe in relation to its structuring conditions at the national (austerity policies, national financial development, decentralisation of a country's governance system) and global scales (financial subordination). Chapter 4 analyses the adoption of a financialised local development policy across English cities as the outcome of decisions taken at the local and national scales, conditioned by a national-scale policy shift towards austerity and devolution, which increased competition between cities. The chapter also highlights the impact of Covid-19, a global-scale development, on the effectiveness of the policy.

Methodological approach

While critical realism is rigid in its ontology, it is pluralist concerning methods, recognising the importance of qualitative and quantitative techniques (Barnes & Christophers, 2018; Lawson, 2006; Lee, 2012; Mukumbang, 2023). Qualitative data and methods are necessary to explore the underlying structures and causal mechanisms that mediate and condition agency, and shape empirical outcomes. Quantitative methods, including econometrics, can "identify, quantify, and compare the potential empirical surface phenomena of these underlying processes and structures" (Kaltenbrunner, 2018, p. 2). They help us gain additional insights into phenomena. Considering that financialisation encompasses not just a quantitative growth in financial flows and instruments but also a qualitative shift in how various actors engage with financial markets (Bortz and Kaltenbrunner, 2018), using multiple research methods seems necessary for a thorough understanding of this process.

However, when using econometrics, careful consideration must be given to how results are interpreted. Critical realists advocate an 'open system' approach which acknowledges that empirical events can be the result of "interactions of numerous, unanticipated, often counteracting structures and contingently related causal mechanisms" (Lee, 2012, p. 9). Hence, the same causal mechanism may produce variegated empirical events: 'demi-regularities' rather than the same outcomes always and everywhere. However, econometrics typically assumes a (temporarily) closed system, which contrasts with the open systems ontology of critical realism and its recognition that multiple structural factors and causal mechanisms may operate concurrently (Lawson, 2006; Lee, 2012). But even within an open system, there could be "underlying forces which maintain or restore order" (Kaltenbrunner, 2018, p. 5), like the monetary hierarchies I explore in Chapter 3, which can produce some stability over the short term. These can be suitable to descriptive and econometric analysis.

The results of econometric tests, then, allow us to argue more strongly for the existence of a demi-regularity if the test is successful. Conversely, a failed test indicates that such a demi-regularity is less likely (Lee, 2012).

Most existing studies on local government financialisation employ either qualitative or quantitative techniques, with the former being more prevalent. In this thesis, I argue that combining qualitative and quantitative methods allows us to develop a more holistic understanding of the phenomena we are interested in. In practice, there are multiple ways of and reasons to integrate methods (see e.g., Clark et al., 2021; Johnson et al., 2007; Mukumbang, 2023), and the chapters included in this thesis do so in different ways.

While existing studies typically focus on individual cities or occasionally single countries, Chapter 2 of this thesis broadens the scope. It reviews studies on local government financialisation in Europe, synthesising qualitative information from multiple cases to develop insights into the phenomenon beyond local peculiarities. I combine this literature review with the descriptive analysis of official statistics on indicators of local government financialisation at the country level. This approach allows me to *illustrate and compare* the extent of financialisation across countries, combining data at the local and national scales to paint a *fuller picture* of the phenomenon than would have been possible using only the literature review, or the statistical data alone.

Guided by considerations of critical realist ontology, Chapter 3 aims to explore local government financialisation in relation to the broader conditions that shape it. In the chapter, I statistically test a series of hypotheses identified from (mostly) qualitative case studies on local government financialisation. While the chapter is purely quantitative, it closely engages with and aims to *further explore* and *cross-validate* the findings of existing qualitative studies. However, as discussed above, the critical realist ontology demands careful interpretation of econometric results. Consequently, the results of the panel econometric study in Chapter 3 are interpreted as conditional correlations rather than as direct causal effects, and the need for further qualitative, country-comparative research is highlighted.

Chapter 4 engages with the idea of combining quantitative and qualitative research methods to explore causality. Specifically, the chapter explores the impact of a financialised development policy on local outcomes in England. In the chapter, I use semi-structured interviews and the review of freedom of information requests to *enhance the econometric research design*, which forms the core of the chapter. It is impossible to be certain that the study indeed identified a causal effect of the policy, as causality is fundamentally unobservable (e.g., Huntington-Klein, 2021; Johnson et al., 2019; Mukumbang, 2023). However, the mixed-methods approach allows me to reduce some of the uncertainty surrounding the potential causal effect of the policy, in its specific settings – and I would argue more so compared to similar, purely quantitative studies. Moreover, I use interview data to *interpret unexpected quantitative results,* whereas purely quantitative studies have struggled to explain such “surprising” results (Blackmond Larnell & Downey, 2019; Kane &

Weber, 2016). In other words, Chapter 4 uses qualitative techniques to shed light on the causes behind the statistical associations revealed by the study.

Three contributions on local government financialisation

The collection of empirical chapters presented in this thesis aims to explore three interconnected questions. Chapter 2 explores what constitutes local government financialisation, and how it can be understood within the European context. Chapter 3 delves into the structural factors that shape, enable, and constrain local government financialisation. Chapter 4 focuses specifically on the use of a 'financialised' urban development policy, Tax Increment Financing (TIF), in England. It examines the implications of using this tool in English local authorities. Taken together, these chapters contribute to a deeper understanding of the nature, underlying causes, and effects of local government financialisation.

Chapter 2: What is local government financialisation? Four empirical channels to clarify the roles of local government

As discussed above, recent literature at the nexus of geography and political economy notes that local governments are becoming financialised. But it is not always clear what this means. Specifically, what is being financialised? And what is the role of local governments in this process? This chapter seeks to clarify the role of local governments in financialisation.

Whiteside (2023, p. 237) defines (local) state-led financialisation as "1) internal, which is to say orchestrated through the state's own property, purchases, and debt offerings, or where state institutions are reconfigured along financialized lines; and/or 2) enabled by state regulatory and budgetary changes that open fiscal space and legal possibilities for financialization broadly". Building on this definition, I systematically survey and integrate geography and political economy-inspired research with the comparative analysis of country-level statistics to identify four channels through which local government financialisation unfolds empirically.

First, local governments (unintentionally) enable the financialisation of public assets and services by privatising and outsourcing them and by applying financial rationales to land use planning and development. While this does not have to result in financialisation, it enables private investors to restructure public assets to extract capital and other financial gains and use them as collateral for borrowing. Second, local governments actively use financial instruments when they borrow against their own assets. They do this to strengthen their control over local development but transform public into financial assets in the process. Third, local governments use financial instruments in their debt management, such as bonds and derivatives, to better manage risks and costs of their borrowing. Fourth, local governments invest in financial assets to generate additional revenue. Thus, in addition to enabling the financialisation of public assets and services, some local governments apply

financial rationales to their internal management, thereby reconfiguring local state institutions "along financialised lines" (Whiteside, 2023, p. 237).

An article based on this chapter has been published in the 'Debates' section of *Urban Studies* (Hasenberger, 2024a). Debates papers, analysing the state of existing or emerging academic debates, are also encouraged to explore ways of pushing these debates further. Building on the findings of the paper, I highlight two avenues for further research. First, internationally comparative research can explore how the context in which local governments operate shapes their financialisation. I take up this challenge in Chapter 3 of this thesis, which is summarised below. Second, critical research into the tension between objectives and risks of local government financialisation adds nuance to current debates. Chapter 4 of this thesis seeks to contribute to this research avenue by assessing the implications of the use of a financialised local development policy in English local governments.

Chapter 3: The structuring conditions of local government financialisation in Europe: a comparative perspective

This chapter focuses on the internal dimension of local government financialisation, specifically on debt management and financial investment. Analysing country-level data from Eurostat and the Office for National Statistics, the chapter notes that on average, since the 2007/8 financial crisis, local governments have increasingly borrowed through "marketable debt" (Fastenrath et al., 2017), i.e., bonds, and used derivatives, supported by a decade of historically low interest rates. The degree to which local governments use these financial tools, however, varies widely among countries. While local governments have increasingly used financial instruments and markets in their governance, they do so under conditions largely beyond their control and influence. Peck (2017) refers to these as the 'structuring conditions' of local government financialisation. Although the literature on local government financialisation offers rich empirical detail on the processes through which this unfolds, it is sometimes criticised for lacking a systematic understanding of the broader, structural conditions, processes at different geographical scales, that shape how it occurs and why it takes different forms across places (Christophers, 2019).

The chapter seeks to address this gap by exploring the empirical relevance of economic, institutional, and financial conditions in shaping local government financialisation across European countries. It uses a pooled Generalised Least Squares approach with a correction for autocorrelation within panels to examine annual, country level data from 22 countries across Western, Southern, and Eastern Europe. I find that local government financialisation is shaped by economic, financial, and institutional conditions, as well as financial subordination. Specifically, financialisation tends to be higher in more decentralised countries, and where the financial sector is more developed. The study also finds limited support for the relevance of austerity, with higher austerity being correlated with lower use of marketable debt. However, this association is not statistically significant, and I find no

relationship with the other indicators of local government financialisation. Finally, financialisation is consistently lower in local governments in Southern and Eastern Europe, reflecting their peripheral status in the global economy and financial system. These results are robust to a series of robustness tests, using different estimators (pooled Ordinary Least Squares, inclusion of year-fixed effects), estimating the relationship between financialisation and structuring conditions for the pre- and post-2008 periods separately, and using alternative measures for the main dependent and independent variables.

The country-comparative approach contributes to the expanding body of literature that analyses local government financialisation through single-country or -city case studies. By examining a sample of countries across Western, Southern, and Eastern Europe, the study also broadens the geographical scope of this literature, which has mostly analysed local government financialisation in the UK and Germany. Moreover, the inclusion of peripheral countries in the sample enables an analysis of structuring conditions that have been largely overlooked in the literature, in particular financial subordination.

A research article based on this chapter has been published in *Environment and Planning A* (Hasenberger, 2024b).

Chapter 4: A mixed-methods study to evaluate Tax Increment Financing in England

In Chapter 2, I highlighted Tax Increment Financing (TIF) as an example of local governments' actively using financial instrument, with the effect of financialising public assets and services, as well as the application of financial rationales to their internal management. Chapter 4 zooms in on TIF, which has received significant attention in the US context, as a financialised development tool (Peck & Whiteside, 2016; Weber, 2010).

Following the 2007/8 financial crisis, TIF was introduced in seven local authorities across England as a tool to promote local development (O'Brien & Pike, 2019). TIF allows local authorities to access a new revenue stream: the increase in commercial property taxes within designated areas. Local authorities can then borrow against this anticipated revenue to fund area regeneration. In theory, regeneration raises property values, leading to increased taxes and thus enabling the project to pay for itself (Baker et al., 2016; Pacewicz, 2013, 2013). However, this outcome hinges on the actual increase in property values. Should property values fail to increase to the extent anticipated, then local authorities may struggle to repay their debts (Strickland, 2013; Weber, 2010).

This chapter examines whether TIF has raised commercial property values, using both quantitative and qualitative evidence. I use advanced panel econometrics, specifically a difference-in-differences approach, to analyse a dataset of over 2.2 million commercial properties across three time periods: 2008, 2015, and 2021. To enhance the study's design, I incorporate insights from 15 semi-structured interviews and one email communication with council officers, local elected officials, civil servants, and senior professionals in the property and consultancy sectors, as well as information from 12 freedom of information requests to

local authorities and central government bodies. Moreover, I also use interviews to interpret the econometric results.

The findings indicate that TIF's impact on property values is limited, with an observed increase attributable to the policy only in London's retail property values. In contrast, office properties in London's TIF areas experienced a slower increase in value compared to offices outside TIF areas. These results also relate to the critical realist idea of empirical 'demi-regularities'. The same (hypothesised) causal mechanism - from borrowing to invest to increases in property values - does not yield the same empirical outcomes in all cases. The econometric findings are robust to a series of tests, such as accounting for potential anticipation of the policy and confounding policies.

While these findings may come as a surprise to proponents of TIF, interview data indicates that the Covid-19 pandemic and associated lockdowns have disrupted the office market, with a particularly disruptive effect on office space in London's TIF zones, which are not yet considered established offices. This suggests that TIF might have been more effective had Covid-19 not happened. Furthermore, interviews suggest that TIF is symptomatic of a broader shift in local governance towards revenue-generating development. This shift is the result of local authorities seeking to navigate macroeconomic uncertainties, and uncertainty inherent in local development tools such as TIF, that depend on largely unpredictable future revenue streams.

This chapter extends the geographic scope of the US-centric literature on TIF's effect on property values. Moreover, the first study to take an explicitly mixed methods approach, it presents a deeper analysis of the processes at play which influence both the effectiveness of TIF and its broader implications for local governance.

2. What is local government financialisation? Four empirical channels to clarify the roles of local government

Recent literature at the nexus of geography and political economy notes that local governments are becoming financialised. But it is not always clear what this means. Specifically, what is being financialised? And what is the role of local governments in this process? Building on Whiteside's (2023) definition of local state-led financialisation as enabled and internal, this chapter combines a systematic literature review with the comparative analysis of country-level statistics to clarify this process further. It identifies four channels through which local government financialisation unfolds empirically. First, local governments enable the financialisation of public assets and services through privatisation, outsourcing, and by applying financial principles to land use planning. Second, they borrow against their own assets. Third, local governments use bonds and derivatives to manage risks and costs of their borrowing. Fourth, they invest to generate financial income. Focussing on high-income countries in Western Europe, the chapter extends the geographical remit of the US- and UK-centric literature. Building on its findings, the chapter highlights two avenues for further research. First, internationally comparative research can explore how the structural context in which local governments operate shapes their financialisation. Second, critical research into the tension between objectives and risks of local government financialisation adds nuance to current debates.

Introduction

It is increasingly acknowledged that essential local public assets and services, such as housing, infrastructure, or social care, are becoming financialised (Aalbers, 2019; Lindgren, 2011; O'Neill, 2019). Yet it would be hard to imagine such a development without a "change in policy and behaviour of public institutions reflecting this financialisation" (Karwowski, 2019: 1002). Specifically, we would expect a change at the local state level. Indeed, changes in local governance have sparked a debate about how local governments use 'financially mediated means' (Peck & Whiteside, 2016) to manage their assets and services (Beswick & Penny, 2018; Guironnet, 2019) and in the ways they borrow and invest (Dagdeviren & Karwowski, 2022; Mertens et al., 2021; Weber, 2010). Local government provides vital services to many people, but especially the most vulnerable. It is crucial to understand how service provision and governance changes with financialisation.

We can summarise this debate under the label of 'local government financialisation'. But while a growing number of academic studies highlight cases of local government financialisation, it is not always clear what that means. Authors focus on different objects of financialisation and diverge in the role they attribute to local governments in this process.

The reason could be a disciplinary divide: while geographers tend to focus on the financialisation of urban development, political economists often research changes in local governments' financial management practices.

This chapter integrates research in geography and political economy to enable a comprehensive understanding of local government financialisation. Starting from Whiteside's (2023) definition of local state-led financialisation as both internal and enabled, I systematically survey the literature and analyse country-level statistics to further clarify the process in Western Europe. I identify four channels through which local government financialisation unfolds empirically. First, local governments enable the financialisation of public assets and services through privatisation, outsourcing, and applying financial principles to land use planning. Second, they actively use financial instruments to borrow against assets, transforming public assets into financial ones. Third, local governments use bonds and derivatives to manage risks and costs of their borrowing. Fourth, they seek to generate income from financial investment. Where local governments actively use financial instruments, they reconfigure internal processes "along financialised lines" (Whiteside, 2023, p. 237).

While there is a rich empirical literature on the financialisation of local assets and services, such as housing and urban development (Beswick & Penny, 2018; Guironnet, 2019; Savini & Aalbers, 2016), much less has been written about local governments' active use of financial instruments for debt management and investment. Borrowing, including through bonds, is a longstanding practice in local government. However, this chapter shows that the scale of borrowing has exploded from 2007 onwards, also coinciding with an increasing uptake of derivatives to manage borrowing risks. This indicates a shift in local governance towards financialisation, which is only starting to reverse recently following the Covid-19 pandemic.

The literature on active financialisation largely focuses on the UK (Dagdeviren & Karwowski, 2022; Mertens et al., 2021; Pike, 2023), with some attention to continental Europe, especially Germany (Hendrikse & Sidaway, 2014; Trampusch & Spies, 2015). Outside of Europe, the literature has mostly focused on North America, particularly the USA, where local government financialisation is more continuous and long-standing (Jenkins, 2021; Weber, 2010). Recent literature has also explored the phenomenon in emerging market economies, notably China (Wu, 2021). This chapter broadens the geographical focus of research on local government financialisation by analysing data on financial investment and debt management of local governments in high-income countries in Western Europe. I find substantial variation over time and between countries in the use of financial instruments for local governance. Moreover, in an international comparison, active financialisation is surprisingly low in British local governments, in contrast to the UK's prominence in the literature. Instead, the chapter highlights the relatively higher financialisation of local governments in places like Scandinavia, the Netherlands, or Austria, which have received far less attention.

Methodologically, the literature I survey, and hence the empirical channels I derive from it, is biased towards extreme cases of financialisation (C. Ward, 2022). However, research in England and elsewhere shows that the extent of financialisation varies significantly across local governments (Dagdeviren and Karwowski, 2022; Pérignon and Vallée, 2017; Trampusch and Spies, 2015). For example, Pike (2023) identifies a minority of 'vanguards' and a 'long tail' of local authorities that do not use financial instruments. This means the conclusions of this chapter are likely only reflective of some but not all local governments. Despite this caveat, the focus on extreme cases helps us draw out and "emphasise the main features" (Savini & Aalbers, 2016, p. 890) to develop a better understanding of local government financialisation. The use of country-level statistics, while further obscuring variegation within countries, enables us to consider institutional and macro-scale contexts of local government financialisation. For example, the study indicates that national-scale factors such as the degree of decentralisation, or global-scale structural differences in financial market access between countries may be important in shaping financialisation, despite having been neglected in the existing literature.

The next section develops the conceptual framework for this study. The following two sections discuss how local governments have enabled financialisation and actively used financial instruments in their debt management and financial investment activities. The last section summarises and discusses the findings and highlights two pathways for further research. First, internationally comparative research is needed to explore the drivers of variegated financialisation at different spatial scales. Second, the chapter draws attention to the tension between objectives and risks of local government financialisation. A critical evaluation of this inherent contradiction can add nuance to debates on the scope and limitations of local government financialisation.

Conceptualising local government financialisation

Over the last decade, financialisation has gained traction across academic disciplines, including various strands of political economy and heterodox economics. Geographers add that financialisation has a 'profoundly spatial' character, as it is often underpinned by spatially fixed assets (French et al., 2011). Indeed, a prolific literature demonstrates how local assets, such as housing and infrastructure, have been engineered into financial assets (Allen & Pryke, 2013; Beswick & Penny, 2018). Despite the diversity of approaches, a common thread in the scholarship on financialisation is the assertion that finance has become more prevalent across various spheres of life, facilitated and propelled by the financialisation of the state (Karwowski, 2019).

Research in political economy highlights two roles that states, at large, play concerning financialisation: an enabling and a more active role (Karwowski, 2019; Schwan et al., 2021). First, states enable financialisation of the economy through policy and regulation, such as financial liberalisation. In this case, some authors argue that financialisation is the unintended result of governments' reactions to challenging structural circumstances and

global competitive pressures – e.g., capital control liberalisation in Britain may have been intended to boost export competitiveness but ended up facilitating the current financialised housing crisis (Copley, 2022). This idea of government strategies responding to globalised capitalism's competitive pressures is reflected in economic geography literature on 'urban entrepreneurialism' (Peck, 2012) and more recently, 'financialised urban entrepreneurialism' (Beswick & Penny, 2018; Peck & Whiteside, 2016).

In addition to enabling financialisation of the economy, the state financialisation literature notes that governments have actively invested in financial markets (Schwan et al., 2021; Wang, 2015) and borrowed by issuing bonds (Fastenrath et al., 2017; Preunkert, 2017). Babic et al. (2020) argue that states pursue two broad motives through their investments: control and returns. States invest in strategic sectors, such as transport or energy infrastructure, to strengthen their control over key industries. Additionally, states make portfolio investments, where they are more interested in receiving financial returns than acquiring control of a company or sector (Babic et al., 2020). States use financial instruments in their debt management, for example to create markets for their bonds, hoping to reduce interest rates by selling their debt to a larger pool of investors (Fastenrath et al., 2017; Vetter et al., 2014).

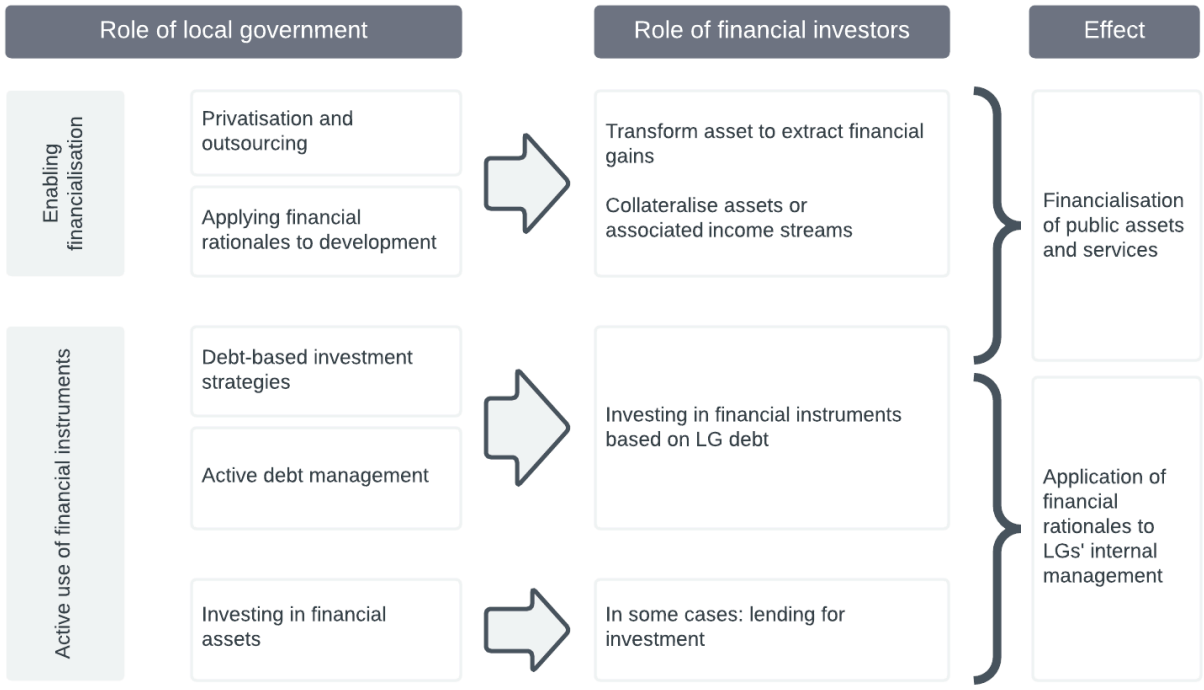
This literature tends to focus on the national state. While important, this obscures nuance relating to processes in the subnational state, and tensions between state actors at different scales. Despite following similar motives of generating additional revenue and increasing control over development in the face of structural constraints, these constraints may play out differently locally. For example, austerity is often highlighted as a pivotal driver of financialisation of the local state (Beswick & Penny, 2018; Dagdeviren & Karwowski, 2022; Deruytter & Bassens, 2021). Yet, local strategies to navigate austerity, such as through innovative tactics to increase their borrowing, are at odds with national objectives of reducing government debt (Lagna, 2015). A rich empirical literature, discussed in detail in the sections below, highlights financialisation in various areas of urban governance, e.g., land and housing (Guironnet, 2019), infrastructure (Strickland, 2013), social provision (Lindgren, 2011), and financial management (Mertens et al., 2021). Varied methodologies include examining individual regeneration projects (Savini & Aalbers, 2016) and strategies (Beswick & Penny, 2018; Hendrikse & Sidaway, 2014) in specific context and timeframes, or comparing financialised practices within countries (Dagdeviren and Karwowski, 2022; Pérignon and Vallée, 2017; Pike, 2023).

Although both address local government financialisation, the literatures on urban development financialisation and local government financial management remain notably disconnected. This fragmentation may result from disciplinary differences; geographers predominantly explore urban development financialisation, while political and heterodox economists tend to focus on financial management practices. That these literatures do not always speak to each other complicates our understanding of the nature of local government financialisation. Specifically, they present different views on what exactly is being financialised, and the role of local governments in this process.

Whiteside (2023: 237) proposes a synthesising definition of local state-led financialisation as being "*1) internal*, which is to say orchestrated through the [local] state's own property, purchases, and debt offerings, or where state institutions are reconfigured along financialized lines; and/or 2) *enabled* by state regulatory and budgetary changes that open fiscal space and legal possibilities for financialization broadly". While this is an essential step towards better understanding local government financialisation, the definition remains somewhat vague.

This chapter seeks to clarify further the role of local governments in financialisation. Building on Whiteside's (2023) definition, I systematically survey and integrate geography and political economy-inspired research with the comparative analysis of country-level statistics to identify four channels through which local government financialisation unfolds empirically. First, local governments (unintentionally) enable the financialisation of public assets and services by privatising and outsourcing them and by applying financial rationales to land use planning and development. While this does not have to result in financialisation, it enables private investors to restructure public assets to extract capital and other financial gains and use them as collateral for borrowing. Second, local governments actively use financial instruments when they borrow against their own assets. They do this to strengthen their control over local development but transform public into financial assets in the process. Third, local governments use financial instruments in their debt management, such as bonds and derivatives, to better manage risks and costs of their borrowing. Fourth, local governments invest in financial assets to generate additional revenue. Thus, in addition to enabling the financialisation of public assets and services, some local governments apply financial rationales to their internal management, thereby reconfiguring local state institutions "along financialised lines" (Whiteside, 2023, p. 237). Figure 2-1 summarises this argument, which is discussed in more detail in the following two sections.

Figure 2 - 1 – Conceptualising local government financialisation



Source: author's elaboration

Local governments as enablers of financialisation

This section argues that local governments enable the financialisation of public assets and services when they privatise or outsource them, or when they adapt planning systems to encourage private investment in local development, thereby adopting financialised logics of urban planning. In these cases, financialisation is enabled by local government strategies but done by the actors in the private sector. Financialisation unfolds through two channels: when privatised assets and outsourced services are restructured to extract financial gains, or when they are used as collateral for borrowing.

Drawing from Copley (2022), financialisation can be seen as an unintended consequence of local governments navigating structural constraints. Existing research emphasises two key influences that shape and constrain the local government operations. First, neoliberal reforms from the 1970s onwards transferred public assets and services to the private sector. National-level cutbacks were often pushed onto subnational governments, impacting social provision at the local level (Gray and Barford, 2018). This 'devolved austerity' (Peck, 2012) intensifies fiscal pressure for local governments. The second factor involves the financialisation of the global economy, specifically, growing interest in profitable yet safe investment opportunities in real estate and critical public services (Beswick et al., 2016; Peck, 2012). These dynamics create an environment where financial investors seek local assets. At the same time, local governments grow increasingly dependent on investment, for which they compete with their peers (Savini and Aalbers, 2016).

One response to fiscal and competitive pressure is for local governments to privatise formerly public assets and outsource services. This is often mandated by national governments (Adisson & Artioli, 2020; Christophers & Whiteside, 2021). But local governments have also been more proactive and taken the initiative to market public assets to investors. These strategies at both national and local level have sought to increase private sector participation in the provision and management of local public services. But how can those strategies result in financialisation?

Outsourced and privatised local public services and assets, including social and physical infrastructure and housing, can be financialised through two main channels. Privatisation does not inevitably lead to financialisation. But when assets are transferred to financial investors like private equity or hedge funds, alterations often occur to raise shareholder value or realise capital gains upon resale (Aalbers, 2019; O'Neill, 2019). Such changes often prioritise dividends or 'asset stripping', undermining investment in maintenance and service quality. This diverges from other privatisation forms such as procurement or non-financial public-private partnerships, which tend to emphasise long-term operation and public sector control (Froud et al., 2017). Where privatisation occurs to financial investors, the focus is often on shorter-term financial gains, leading the asset to become “as much a financial asset as a physical asset for the production of urban services” (O’Neill, 2019: 1311).

Throughout Europe, outsourced local public services are undergoing reconfiguration to extract financial gains. Initial outsourcing of education, social care (Lindgren, 2011), childcare (Hall and Stephens, 2020), and care homes (Horton, 2021) involved small local businesses. However, consolidation emerged as a trend, with major financial investors like private equity funds and real estate investment trusts (REITs) entering the social care sector, acquiring smaller entities. These investors tend to prioritise profit generation over the long-term viability of social care services (Horton, 2021). For instance, REITs reshaped care homes for higher shareholder pay-outs by cutting labour and maintenance costs or increasing fees (Horton, 2021). Private equity firms often acquire public service providers with a view to later selling them at a profit, potentially compromising social provision (Lindgren, 2011). Similarly, 'global corporate landlords' like Blackstone replicate this approach in the housing sector, capitalising on public and social rented housing privatisation (Aalbers, 2019; Fields and Uffer, 2016).

However, Wijburg et al. (2018) highlight a shift in the financialisation of housing, which they refer to as "financialisation 2.0". Focusing on Germany's privatised rental housing, they note changes in actors and practices post the 2007/8 great financial crisis (GFC). Listed real estate companies like REITs now play a crucial role instead of private equity and hedge funds. The shift is from speculative practices to more long-term investment strategies, prioritising stable cash-flows. On the surface, "financialisation 2.0" may seem less predatory than "financialisation 1.0". But the authors caution it may still lead to negative consequences like gentrification and further housing commodification, arguing that listed companies are driven

to boost the market value of their portfolios to maximise shareholder value, and this objective remains their primary concern.

The second mechanism involves leveraging spatially fixed assets like land or housing as collateral for borrowing. Physical asset value and revenue streams tied to privatised assets and outsourcing contracts can be borrowed against. For example, rental streams or user fees can be used to raise funds on capital markets (O'Brien and Pike, 2019; O'Neill, 2019). Similarly, outsourced service providers can borrow against their goodwill, an accounting technique based on anticipated income streams, such as in the case of the now defunct construction company Carillion (Leaver, 2018). The state's backstopping of outsourcing contracts supports those practices by effectively guaranteeing revenues to private service providers (Froud et al., 2017). A widely-researched example is the Australian investor Macquarie Group, which has conducted a range of leveraged buyouts of infrastructure in Europe, such as Brussels Airport (Deruytter & Derudder, 2019) and Thames Water in the UK (Allen & Pryke, 2013). Macquarie used assets of those companies for further borrowing while elevating dividends and curtailing infrastructure upkeep (Allen and Pryke, 2013).

In addition to the top-down pressure for privatisation and outsourcing, local governments have embraced financial rationales, particularly in the realm of urban planning (C. Ward, 2022). To attract investment into urban development, planning reforms have been implemented to "de-risk" projects (Gabor, 2021). For instance, local governments have streamlined planning regulations, aiming to make context-heavy projects more standardised and attractive to international investors (Rutland, 2010), and have institutionalised developers' rights to profits through the 'viability assessment' (Bradley, 2021). In England, these reforms unintentionally led to the creation of a market in which planning permissions are traded and used as collateral, but without increasing the number of homes being built. The privatisation of urban development, land, and housing – which in turn enables its financialisation - is also promoted by local governments' proactive efforts to market development projects to private investors, for example by exhibiting at international property fairs (Guironnet, 2019).

In summary, amidst 'devolved austerity' (Peck, 2012) and increasingly mobile global investment, local governments privatise assets, outsource services, and seek private finance for urban development. What these strategies have in common is that financialisation is enabled by local government but done by private companies at the other end of the equation. Although not deterministically financialising, these strategies enable investors to restructure and leverage assets for profit and use them as collateral. From the perspective of local governments, this is a pragmatic way of navigating a constrained operating environment and continue providing critical services. But it transforms the nature of these services, as they become more exposed to financial markets and rationales.

This raises concerns about the distributional consequences of financialisation and democratic accountability in local public service provision. Firstly, investors' profit motives may affect outsourced public services' affordability, quality, and availability, as seen in

education, childcare, and water infrastructure cases (Allen and Pryke, 2013; Hall and Stephens, 2020; Lindgren, 2011). Housing being treated as financial investment rather than a social good profoundly affects affordability (Fields & Uffer, 2016). Financialisation also changes the quality of outsourced services, evident in cost-cutting designs for elder care (Horton, 2021). Investors tend to prioritise profitability, and target projects at more affluent populations (Guironnet, 2019), potentially sidelining socially beneficial but less profitable projects like social housing (Adisson and Artioli, 2020). Finally, financialised accounting techniques, such as in the outsourced construction company Carillion whose borrowing against goodwill led to collapse, may affect jobs and services (Leaver, 2018).

Secondly, financialisation also raises questions about whom local governments are accountable to – citizens or investors. When it comes to development planning, local governments may bend over backwards to accommodate - even anticipate – investors' needs (Guironnet et al., 2016; Rutland, 2010), possibly disadvantaging more vulnerable populations. In England, the 'presumption in favour of sustainable development' in planning regulation offers a way for developers to bypass local planning regulations and aims (Bradley, 2021).

Local governments' active use of financial instruments

Besides enabling private investors to use financial instruments, local governments also use these instruments themselves: in debt-based investment strategies, the active management of risks and costs of their borrowing, and when they seek to generate income from financial investment.

Debt-based investment strategies

In order to raise funds for urban development, some local governments have borrowed against their assets and associated revenue streams through mechanisms like Special Purpose Vehicles (SPVs) and Tax Increment Financing (TIF). As above, public assets are exposed to developments on financial markets when they are used as collateral. Except here, local governments actively initiate this process rather than merely enabling it. It also signals a shift in local governance towards consideration of financial rationales, in addition to public provision.

Local governments in Europe have used SPVs to achieve development objectives by circumventing borrowing restrictions. SPVs are arms-length entities with a specific and narrow purpose, such as building or renovating housing, providing and managing utilities, and health or telecommunication services (Christophers, 2019; Deruytter & Bassens, 2021). While owned by local governments, SPVs' debts do not show up on local balance sheets. In the mid-2010s, up to a third of local governments in Britain were using SPVs (Barnes, 2016, cited in Beswick & Penny, 2018), including to borrow against their assets or (anticipated) rental revenue and user fees from road tolls (O'Brien & Pike, 2019). SPVs also allow local governments to take a more 'interventionist' (Beswick & Penny, 2018) role and strengthen their control over local development processes.

An example is Lambeth Council in London, which uses an SPV to borrow against anticipated rental revenue from council-led housing development. This structure allows the council to access the necessary funds to start the project's construction without bringing in a private development partner. Not only does this give the local government more control over the shape of the project – such as the inclusion of social housing – but it also allows them to recoup revenue from development projects which would otherwise have gone to a private company (Beswick & Penny, 2018).

Tax Increment Financing (TIF) is another way local governments can borrow against their assets to pursue developmental objectives. It gives local governments access to the increase in taxes resulting from development in a designated area. Local governments can use the 'tax increment' to pay for crucial infrastructure in the TIF area, such as to provide or upgrade transport or broadband infrastructure to make the area viable for investment. In addition, they can use TIF to borrow against (future) tax revenue streams. This means that local governments can use the tax increment to make initial investments in the TIF area, designed to attract further private investment, using credit secured against increases in property values in that same area (Strickland, 2013; Weber, 2010).

While TIF is well-established in the US, where local governments have used it since the 1960s, it is only just being introduced in the European context, and rather sparsely. It is in the UK that the policy was most enthusiastically received (Baker et al., 2016), although its implementation remains limited. Over the last decade, a form of TIF based on commercial property taxes has been used across a handful of areas across the UK to raise money for infrastructure and urban development (Findeisen, 2022; O'Brien and Pike, 2019).

Using SPVs and TIF allows local governments to (re)gain control over development processes and take a more active role in driving local development after decades of neoliberal restructuring. But when local governments develop (debt-based) financial instruments based on public assets, they actively promote the latter's financialisation. This also entails some financial risks and can have the unintended side effect of uneven development.

Firstly, borrowing against future revenue using mechanisms like TIF and SPVs is a gamble on an uncertain future. However, future revenue may not materialise to the extent anticipated or hoped for (Strickland, 2013; Weber, 2010). In such a case, local governments "might have to use [their] general funds to pay down the debts incurred in making the initial investment" (Baker et al., 2016: 463). They also risk losing public assets, such as land and housing, which often serve as the ultimate collateral for borrowing (Beswick & Penny, 2018). Arguably, this risk is magnified in the case of TIF, where it is the local government itself which borrows, and this activity remains on their own balance sheets rather than in the books of a separate company.

Secondly, local governments' engagement with finance can intensify structural inequalities between and within localities, as not all local governments are equally able to use innovative financial instruments to their benefit. Strickland (2013) highlights that wealthier cities will

find it easier than poorer ones to attract investment into their TIF areas. This is problematic because private investment is needed to enable property values to appreciate and realise the tax increment on which the strategy is predicated. Additionally, authors have argued that gentrification is built into the design of TIF, as the tax increment is realised through increases in land and property values (Baker et al., 2016; Weber, 2010).

Active debt management

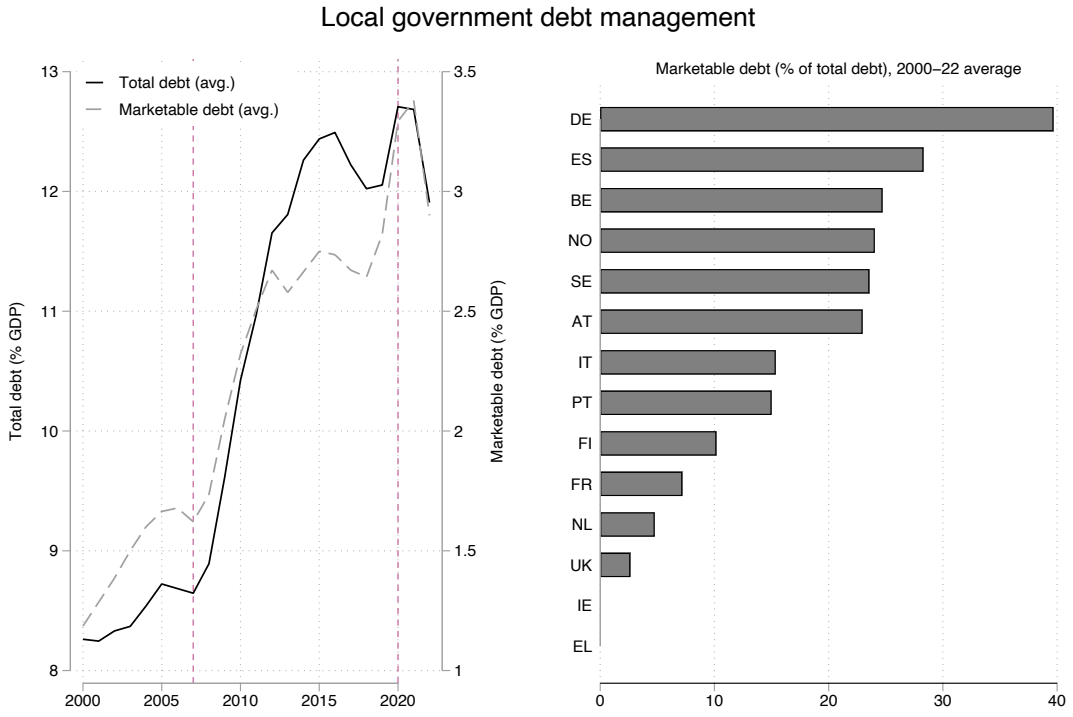
In addition to debt-based investment strategies, local governments are using new instruments for debt management. European local governments traditionally accessed loans from public lenders or local banks (Petzold, 2014), but now increasingly issue bonds which can be traded on secondary markets (including in relation to investment strategies, as discussed above). They have also used a variety of derivative instruments. This indicates a shift in local government finances from the mere administration to a more active form of public debt management, whereby local governments seek to optimise borrowing costs and risks (Deruytter and Möller, 2020; Petzold, 2014; Vetter et al., 2014).

Similar to national governments, European local governments adopt marketable debt instruments, a more recent trend compared to the established US municipal bonds market (Deruytter and Möller, 2020; Jenkins, 2021; Vetter et al., 2014). The left-hand panel of Figure 2 shows the increasing use of marketable debt among European local governments, which has risen in tandem with total local government debt after the GFC, and only slowed down recently, in the wake of the Covid-19 pandemic.

Sweden pioneered this movement in Europe; in 1986, it launched Kommuninvest, a municipal finance agency, to develop and deepen local government debt markets. France, Germany, and the UK have since emulated this model, establishing similar agencies. These are expected to enhance local governments' access to capital markets by making local government bonds more legible to investors, and reducing default risk (Vetter et al., 2014). The right-hand panel of Figure 2-2 shows the significant role bonds play in local government borrowing strategies, especially in more decentralised countries. Germany stands out, with about 40 percent of local government borrowing over the 2000-2022 period taking the form of marketable debt[3].

[3] For more detail on construction of the statistical measures used in this chapter, please refer to Appendix 3.

Figure 2 - 2 - Local governments' use of marketable debt (bonds) in their debt management



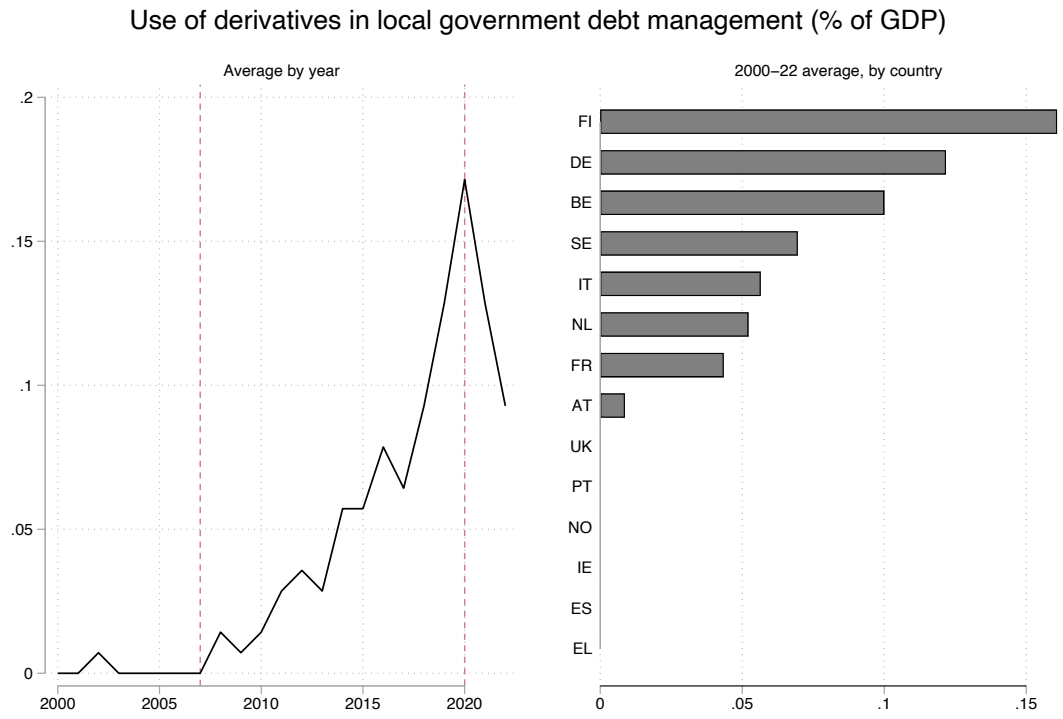
Source: Eurostat

In addition, local governments across Europe have used derivatives, particularly interest rate swaps, to hedge against risks and lower the cost of their borrowing. This was often done prudently, by exchanging variable rates on loans for fixed rates. However, in the low-interest rate environment in the early 2000s, and after the GFC, derivatives were sometimes used to swap fixed with variable interest rate payments. This involved local governments contracting banks to pay fixed rates, while they paid variable rates tied to indices such as the London interbank offered rate (LIBOR). Assumptions about future rate movements guided these swaps, lowering costs when variables remained below fixed rates (Dodd, 2010; Trampusch and Spies, 2015). In the UK (Mertens et al., 2021) and France (Pérignon and Vallée, 2017), this often occurred via structured loans embedding derivatives into long-term loan contracts.

Besides standard interest rate swaps, local governments have used more complex and speculative derivative instruments. For example, Constant Maturity Swaps, where the interest rate paid by local governments is calculated based on the spread between a long-term and a short-term index (Hendrikse & Sidaway, 2014), or 'snowballs', where interest rate payments in one period cannot be lower than the payment in the preceding period (Dodd, 2010). In contrast to standard swaps, it was argued that these more adventurous derivative instruments were often used "not to hedge risk but to generate higher income by taking on more risk" (Dodd, 2010: 34).

Despite post-GFC concerns (Dodd, 2010; Hendrikse & Sidaway, 2014), Figure 2-3 shows that derivatives are increasingly used in European local governments only after the crisis. While local governments in Finland and Germany seem particularly active in this respect, about half of the sample report limited or no derivative use over 2000-2022– though this might hide derivatives within structured loans.

Figure 2 - 3 - Local governments' use of derivatives in their debt management



Source: Eurostat

Local governments, arguably driven by fiscal pressure, turned to marketable debt and derivatives to manage their finances (Mertens et al., 2021; Trampusch and Spies, 2015). This shift was bolstered by financial investors' interest in local government debt (Deruytter and Möller, 2020). While derivatives helped lower borrowing risks and costs, some high-profile cases highlighted the risks of this strategy. Firstly, post-GFC turbulence disrupted trends that underpinned contracts, causing unexpected high borrowing costs for some local governments (Dodd, 2010; Hendrikse and Sidaway, 2014). For some local governments in France, these were in the order of one year of tax revenue (Pérignon & Vallée, 2017). Reacting to losses from derivative contracts, Pforzheim, Germany, implemented severe local austerity measures, such as spending cuts to services, investment programmes, and public pensions (Hendrikse & Sidaway, 2014). Ultimately, it may be citizens who get to bear the brunt of financialisation gone awry (Peck & Whiteside, 2016).

Second, the complexity of financial instruments complicates democratic oversight and accountability of local governments, exemplified by public outrage over derivative-related losses of taxpayer money (Mertens et al., 2021). Arguably, this issue is particularly salient in

local governments' debt management. Peck and Whiteside (2016: 245) contend that "creditors have effectively become a second constituency" of local governments, potentially conflicting with citizens' interests. This conflict of interest plays out as local governments seek to align their policy explicitly with the interests of investors (Petzold, 2014). To increase the success of their bond issuance, local governments may signal openness to markets across policy areas including housing and infrastructure planning (Omstedt, 2020), with evidence of markets penalising sovereign borrowers for things like higher welfare spending (Johnston and Barta, 2023). Clearly, this is not always in the population's best interest, who might prioritise affordable housing, transport, and other public goods and services. The conflict magnifies when investors' interest in being reimbursed takes precedence over local spending needs (Hendrikse & Sidaway, 2014; Jenkins, 2021).

Finally, authors note that local governments' engagement with finance can intensify structural inequalities between and within localities. Not all local governments are equally able to use innovative financial instruments to their benefit. When it comes to debt management, stronger local economies have preferential access to municipal credit markets, due to higher perceived creditworthiness (Peck & Whiteside, 2016; Vetter et al., 2014). Local governments in 'core' capitalist countries may find it easier to use marketable debt instruments to lower their borrowing cost than local governments in peripheral countries, whose bonds are perceived as riskier (Massó, 2016).

Investing in financial assets

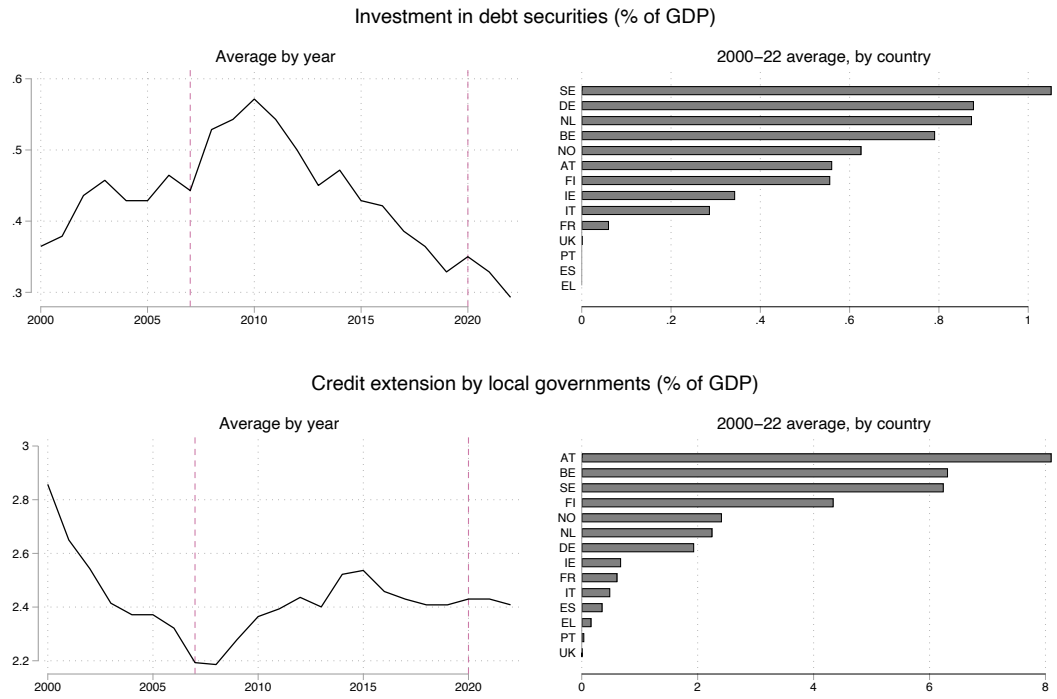
Moreover, some local governments are investing in financial assets. Mirroring processes in the national state, these local governments are turning into "financial market player[s], seeking returns from financial assets" (Karwowski, 2019: 1002). For example, some local governments in Britain have sought to generate additional income by moving away from "traditional treasury management methods of holding liquid assets in cash and deposits" to more high-yielding investments elsewhere (Dagdeviren & Karwowski, 2022, p. 702). Local governments have invested in a diverse range of assets, including solar farms, shopping centres, supermarkets, and money market funds (Christophers, 2019; Dagdeviren & Karwowski, 2022; Davies & Boutaud, 2020). In Belgium, local governments have become increasingly reliant on inter-municipal utility dividends to offset budget gaps from reduced central transfers (Deruytter and Bassens, 2021).

Some local governments also lend money to private and public borrowers. To cope with budget pressure, councils in Britain have created a new market for inter-council borrowing and lending – at market rates (Dagdeviren & Karwowski, 2022). They also offer loans to private companies., including to support local development, for example, to facilitate the creation of jobs for their constituency. But another goal is the generation of additional revenue, which is particularly evident when loans are extended to extra-local actors and riskier ventures (Eley, 2021).

The (limited) literature on European local government financial investments largely centres on Britain. Nevertheless, Figure 2-4 below shows that local governments in decentralised countries in Northern Europe tend to be particularly active investors in financial instruments. On the other hand, there is not much evidence of financial investment among local governments in southern European countries, nor in the UK. Countries like Greece, Portugal, and the UK not only faced the most intense budget pressure in the aftermath of the GFC and Eurocrisis, but they are also among the most centralised countries in Western Europe. This implies the extent to which local governments can take advantage of financialisation may hinge not just on budget pressure but also local government autonomy. Overall, though, the figure suggests local government financial investment stagnated or declined in the past decade.

Especially during inflation, not investing excess cash might be seen as "irresponsible handling of taxpayers' money" (Deruytter and Möller, 2020: 406). Lending to local companies can create local jobs, though the extent to which this can be achieved likely varies with the capacity of the local government to impose and enforce conditionalities on their loans. Riskier investments could yield higher returns, but potential losses of public funds may arise if such investments fail, particularly when local governments borrow for investment (Davies & Boutaud, 2020) (Davies and Boutaud, 2020).

Figure 2 - 4 - Financial investment of local governments in Western Europe



Source: Eurostat

Concluding discussion and further research avenues

This chapter integrates research in geography and political economy to develop a comprehensive understanding of local government financialisation, starting from Whiteside's (2023) definition around the enabling and internal aspects of it. The study combined the systematic review of geographical and political economy-inspired research with the comparative analysis of country-level statistics to further clarify the process in Western Europe. The chapter identifies four channels through which local government financialisation unfolds empirically.

First, local governments enable the financialisation of public assets and services by privatising and outsourcing them. Moreover, local governments apply financial rationales to planning reforms and proactively market development projects to attract financial investors into urban development. While this does not have to result in financialisation, it enables private investors to restructure public assets to extract capital and other financial gains and use them as collateral for borrowing. In these cases, financialisation can be understood as an unintended outcome of local governments' reactions to structural constraints on their operations, such as austerity and financialisation of the economy (Copley, 2022). Indeed, financialisation might not even be on the radar of local governments. However, second, local governments actively use financial instruments when they borrow against their assets or associated revenue streams. As above, if public assets are used as collateral for borrowing, they get exposed to financial markets and rationales, making the assets' future contingent on the borrowers' ability to repay their debt (O'Neill, 2019). The difference is that now, the local government instigates financialisation rather than merely enabling it.

When local governments actively use financial instruments, they apply financial rationales to their internal management. The third channel relates to local governments' active debt management. In the decade following the GFC, local government borrowing, including through bonds, has exploded alongside an increasing use of derivatives to manage borrowing risks and costs. At times, derivatives were also used to make a speculative profit. Fourth, some local governments have invested in financial assets, such as debt or equity of private companies, or extended credit to private and public borrowers.

Local governments pursue debt-based investment in development and financial investment both to gain control over local development processes, and to generate financial returns. Loans to or investments in extra-local private companies ostensibly fall on the return on investment-led end of the spectrum identified by Babic et al. (2020). Local governments' intention for using TIF or SPVs, on the other hand, is not limited to raising additional revenue in the face of budget pressure - although, to be sure, they are also used for that (Deruytter & Bassens, 2021). But work by Beswick and Penny (2018) and Strickland (2013) makes it clear that local governments embrace the opportunity to use asset-backed debt instruments offered by SPVs and TIF to increase control over development processes and social provision.

Building on the insights developed throughout the chapter, the remainder of this section highlights two pathways for further research. First, comparative research is needed to explore the structural and conjunctural drivers of variegated financialisation, especially on the international scale. Second, critical investigations into the tensions between objectives and risks of local government financialisation would contribute nuance to current debates.

Comparative research to explore the drivers of variegated financialisation

Evidence presented in this chapter on local governments' active use of financial instruments confirms the variegated and uneven nature of local government financialisation (Pike, 2023). Considerable variation is highlighted in instrument intensity and trends over time as well as variation between countries.

Intensity. Overall, more conventional instruments are more popular among Western European local governments, with more innovative and exotic instruments having minor roles in local governance. On average, local governments more extensively employ marketable debt and credit extension than derivatives and investment in debt securities. In terms of debt management, marketable debt peaked at 3.4 percent of GDP, and the use of derivatives at 0.17 percent in 2020 (Figures 2-2 and 2-3). Regarding financial investment, credit extension ranged between 2.2 percent and 2.6 percent of GDP, and debt securities investment remained below 0.6 percent over the 2000-2022 period (Figure 2-4).

Temporal variation. The GFC marks a pivotal moment, impacting debt management and financial investment differently. Debt securities investment dropped post-GFC, while credit extension stagnated. Conversely, active debt management surged post-GFC, as marketable debt use increased from 1.4 percent of GDP in 2007 to 3.4 percent in 2020. Derivatives usage also grew rapidly during this period (Figures 2-2 and 2-3). However, the onset of the Covid-19 crisis abruptly reversed the upward trend in active debt management, possibly due to higher uncertainty and a brief period of increased government spending. Although active financialisation declines at the onset of Covid-19, enabling financialisation might become more prevalent, as the perceived contraction of fiscal space is used to justify greater reliance on private finance for development ambitions (Gabor, 2021). Moreover, inflation increases the urgency of prudent cash management for those with resources, emphasising the need for investment rather than retaining reserves (Deruytter & Möller, 2020). While this is not yet reflected in the data, concern for inflation-related losses could prompt a resurgence in local government financial investment.

Spatial variation. Characteristics of individual local governments clearly impact variegation in their financialisation within countries, including differing risk appetites and expertise (Pike, 2023), indebtedness (Pérignon & Vallée, 2017; Trampusch & Spies, 2015), and the strength of local budgets (Dagdeviren & Karwowski, 2022; Pike, 2023). However, the evidence presented in this chapter underscores the significance of macro-level and institutional aspects in shaping the extent of financialisation in local governments. Decentralisation and potential structural constraints in accessing financial markets across

countries emerge as crucial factors, largely overlooked in existing literature on local government financialisation. Notably, local governments in decentralised Northern European countries exhibit greater use of financial instruments. This contrasts with local governments in Southern Europe (Spain, Italy, Portugal, Greece), which experienced severe austerity following the GFC and Eurocrisis but show lower financialisation, especially in financial investment. However, more decentralised Spain and Italy actively use marketable debt. These findings add nuance to the austerity-driven financialisation thesis, often based on research in Britain (Beswick and Penny, 2018; Dagdeviren and Karwowski, 2022). The evidence presented indicates the effect of austerity may be mediated through the extent of centralisation and differential access to financial markets of local governments across countries (Massó, 2016). Moreover, the UK's prominence in the literature contrasts British local governments' modest financial instrument usage compared to other European countries.

Comparative and conjunctural research is needed to understand how the structural context within which local governments operate influences their financialisation. This would shed light on the reasons behind its occurrence – and, crucially, where it does not occur - and the specific forms it takes (Christophers, 2019). While a substantial literature explores the relation between financialisation and post-GFC austerity, this chapter highlighted other aspects warranting exploration. Notably, the degree of decentralisation and country-level or regional hierarchies in financial market access. Although analyses of financialisation in specific local governments and points in time are helpful (Pike, 2023), a deeper understanding necessitates comparisons across diverse locations and over time. International comparisons of local governments, scarce in current literature (with notable exceptions being Fields and Uffer (2016) and Whiteside (2023)), may be particularly fruitful to explore the role of macro-level factors in shaping local government financialisation.

Exploring the dynamic tensions between objectives and risks of financialisation

Financially active strategies can help local governments under pressure to provide public services and even hold the promise of increasing local state capacity. However, while financialisation may look like an attractive strategy from the perspective of individual local governments, it generates new risks with potential implications for public provision which local governments now have to consider and manage (Bloom, 2023; Farmer, 2014). Risks may be further amplified through interactions between the channels of financialisation.

Risks tied to local government financialisation encompass distributional concerns, financial risks, and democratic deficits (Bloom, 2023; Pike, 2023). The extent of these risks varies by financialisation channel. Distributional concerns arise when local governments enable the financialisation of public assets and services and investors reorient them towards more affluent populations, raise prices (Allen & Pryke, 2013; Fields & Uffer, 2016), or prioritise profit extraction at the expense of social needs (Horton, 2021). Local governments' active

use of financial instruments may exacerbate inequalities between places, as the ability “to utilise financial innovation to their benefit will be uneven”, leaving some places behind (Karwowski, 2019, p. 1013). The risk of financial losses heightens with debt-based investment strategies, especially based on anticipated income streams (Baker et al., 2016) and with the speculative use of derivatives to generate financial income (Hendrikse & Sidaway, 2014). Enabling financialisation through privatisation and outsourcing involves lower financial risks for local governments, as debt sits on the balance sheets of private actors. State financialisation generally raises concerns about democratic accountability and legitimacy (Karwowski, 2019). For example, local governments may adapt their planning processes and governance to the need of investors, potentially at the expense of local populations (Bradley, 2021; Guironnet, 2019). This risk is magnified in active debt management strategies. When creditors become a "second constituency", repayment priorities may override public service funding (Peck and Whiteside, 2016: 245).

Interactions and feedbacks between the different channels of local government financialisation potentially amplify associated risks. For instance, losses from debt-based investment or speculative derivatives might lead to further local austerity measures (Bloom, 2023; Hendrikse and Sidaway, 2014). These measures could trigger privatisation and outsourcing, enabling further financialisation and new distributional (and democratic) risks. Ultimately, while local governments resort to financialisation to navigate challenging structural conditions, financialised strategies perpetuate those conditions and may even undermine service provision and state capacity. Aligning local policy with creditor interests to increase the success of their debt issuance, local governments not only participate in financial markets but contribute to making a market for their debt. When local governments de-risk private investment in public service delivery, they solidify a system whereby local development becomes contingent on financial investors.

Further research is needed to investigate the tensions between potential state capacity gains and risks of local government financialisation. With some exceptions (Beswick & Penny, 2018; Pike, 2023), existing literature tends to either portray financialisation as innovative governance or, more often, strongly criticise it. Additionally, a focus on processes of local government financialisation has meant that problematic implications are often assumed, rather than actively investigated (a notable exception is Farmer, 2014). Critically assessing the contradictions inherent to the process would contribute to a more nuanced debate around what local government financialisation can and cannot be, and what trade-offs it may entail. For example, future research could examine whether and how structural or conjunctural factors interact with risks of financialisation. Prior research often examines extreme instances (Pike, 2023; Ward, 2022), potentially contributing to the UK-centrism in literature on local government financialisation in Europe. However, limited research exists on other countries, like Scandinavia or the Netherlands, where local governments exhibit much higher financial instrument use. This raises several questions: Are financialisation risks heightened by austerity? Conversely, are they attenuated in less austerity-constrained

contexts, e.g., in more decentralised countries where local governments may be less dependent on central transfers? How have risks evolved over time?

3. The structuring conditions of local government financialisation in Europe: a comparative perspective

Local governments across Europe are increasingly engaging in 'local government financialisation', involving the use of bonds, derivatives, and financial assets in their governance. However, the extent to which local governments use financial instruments varies across countries. Moreover, local governments engage in financialisation in the context of 'structuring conditions' (Peck, 2017) that are largely beyond their control. This chapter systematically investigates these political-economic conditions and provides a high-level comparative analysis of their relevance for financialisation in local governments. The study examines data from 22 European countries between 2000 and 2019, finding that economic, financial, and institutional conditions, along with financial subordination, are critical in shaping local government financialisation. Specifically, greater decentralisation, a more developed financial sector, and, to some extent, more intense austerity are associated with higher levels of financialisation. In contrast, financialisation tends to be lower in the Southern and Eastern European peripheries. Through its country-comparative approach, the chapter contributes a new perspective to recent debates on the role of the local state in financialisation, that considers local government financialisation in relation to the national- and global-scale conditions under which it takes place.

Introduction

Recently, accounts across academic literature and the media have drawn attention to what can be termed 'local government financialisation'. Following Santos (2023) and Whiteside (2023), this can be understood as local governments' use and re-purposing of financial instruments and markets in relation to their assets and debt. A growing body of research offers rich empirical insights into the diverse ways in which local governance in European cities and countries has become financialised (e.g., Beswick and Penny, 2018; Dagdeviren and Karwowski, 2022; Deruytter and Bassens, 2021; Hendrikse and Sidaway, 2014). However, the literature is sometimes criticised for lacking a systematic understanding of the broader drivers of this financialisation, or what Peck (2017: 10) refers to as its "structuring conditions". These conditions shape the environment in which local governments operate and against which their financialisation unfolds, but over which they have no direct control. Exploring these conditions is essential for a deeper understanding of local government financialisation, why it occurs, and why it takes different forms across places (Christophers, 2019).

The chapter makes two main contributions to our understanding of local government financialisation. It presents the first systematic overview of the structuring conditions that

shape local government financialisation across countries. Building on and integrating a diverse scholarship across economic geography and political economy, the chapter highlights economic and financial conditions, such as national-level austerity and financial sector development; institutional conditions, namely the level of decentralisation in a country; and dynamics related to global financial subordination. Second, the chapter proposes quantitative measures for these structuring conditions and empirically investigates their relationship with three measures of local government financialisation. To the best of my knowledge, this is the first study of the structuring conditions of local government financialisation taking a country-comparative approach.

The study analyses annual data from 22 European countries over the period from 2000 to 2019 to examine the empirical relevance of different structuring conditions in shaping local government financialisation. The primary focus is on local governments' use of financial instruments in debt management and financial investment, which is measured at the country level using the following variables: (1) borrowing through bonds ('marketable debt'), (2) use of derivative instruments, and (3) investment in debt securities. Using a panel regression approach, specifically, pooled Generalised Least Squares (GLS) with a correction for autocorrelation, the study provides an analysis of local government financialisation across European countries. While these correlations do not establish causation, they offer useful insights into the empirical relevance of different structuring conditions emphasised in the existing literature.

Since the 2007/8 financial crisis, local governments have increasingly turned to marketable debt and derivatives, a trend facilitated by historically low interest rates. Yet, the adoption of these financial tools varies significantly across countries. The panel econometric analysis indicates that local government financialisation is shaped by economic, financial, and institutional conditions, as well as financial subordination. Specifically, financialisation tends to be higher in more decentralised countries, with a more developed financial sector. The study also finds limited support for the relevance of austerity, with higher austerity being correlated with lower use of marketable debt. However, this association is not statistically significant, and I find no relationship between austerity and the other indicators of local government financialisation. Finally, financialisation is consistently lower in local governments in Southern and Eastern Europe, reflecting their peripheral status in the global economy and financial system. The main findings are largely robust to a series of robustness checks, presented in Tables A3-5 in the appendix.

The chapter is structured as follows: the next section reviews the literature on different aspects of local government financialisation and offers a systematic overview of the structuring conditions that shape it. I then detail the data and methodology used, before presenting and discussing the empirical findings. The concluding section notes that although financialisation may seem beneficial from an individual local government's perspective, it introduces financial rationales into local governance, potentially altering social provision and fostering uneven development at different geographical scales. The study underscores the

need for more in-depth and comparative research to understand the causal processes at play. Ultimately, this understanding is crucial for efforts to avert and mitigate the adverse effects of local government financialisation.

Embedding local government financialisation in its structuring conditions

What is local government financialisation?

A growing body of literature in economic geography draws attention to the financialisation of local governance in Europe (Beswick & Penny, 2018; Dagdeviren & Karwowski, 2022; Hendrikse & Sidaway, 2014) and beyond (Pan et al., 2017; Peck & Whiteside, 2016; Weber, 2010). This study focusses on the "internal" financialisation of local government, which Whiteside (2023: 327) defines as "orchestrated through the state's own property, purchases, and debt offerings, or where state institutions are reconfigured along financialized lines". It is in the instances of internal financialisation that the engineering and re-purposing of "financial tools and markets as instruments of statecraft" is clearest, which Santos (2023: 142) puts at the core of (local) state financialisation. The chapter highlights three such instances; first, local governments increasingly mobilise financial markets to borrow at better rates and from a broader range of investors; second, they use financial tools, especially derivatives, to manage the costs and risks associated with their debt; third, some local governments have begun purchasing financial assets to generate additional revenue, thereby introducing a financial rationale in their investment activities.

European local governments increasingly borrow through bonds, a trend that is becoming more prevalent compared to the well-established municipal bonds market in the US (Deruytter & Möller, 2020; Kovács, 2011; Padovani et al., 2018). The development and promotion of the local government bonds market in Europe was actively supported by state actors at various levels. This includes the establishment of municipal bonds agencies in countries such as France, Germany, Sweden, and the United Kingdom (Vetter et al., 2014). This shift in borrowing practices has sometimes been characterised as a move to 'marketable' debt instruments, which can be sold and traded on secondary markets (Fastenrath et al., 2017). These expose local governments to a wider set of financial investors, potentially enabling local governments to borrow at lower interest rates (Vetter et al., 2014). This can be advantageous, especially for financing long-term projects like infrastructure development (Padovani et al., 2018). However, it has also been argued that investors in local government bonds can become a "second constituency" (Peck and Whiteside, 2016: 245), with a potential influence on local policy that may contrast sharply with the interests of particularly the most vulnerable local residents (Omstedt, 2020; Petzold, 2014).

The prevalence of this practice has significantly increased in European local governments, in the period of low interest rates following the 2007/8 financial crisis, as will be discussed below. The literature indicates a rise not only in general obligation bonds but also in revenue bonds within Europe. In the latter case, local authorities are borrowing against assets like

user fees (O'Brien & Pike, 2019), rental income (Beswick & Penny, 2018), and future tax revenue (Findeisen, 2020). Borrowing against the income from public assets reconfigures those assets along financialised lines; besides providing the basis of a public service, these assets now need to generate the revenue necessary to repay debt.

Another aspect of the shift towards financialisation is the use of derivatives by local governments, primarily interest rate swaps, to manage the costs and risks associated with their borrowing. In recent years, local governments have used derivatives in a bid to lower their interest payments, for instance, by exchanging fixed interest rate payments for variable ones (Mertens et al., 2021; Pérignon & Vallée, 2017; Trampusch & Spies, 2015). In addition to standard interest rate swaps, some local governments have reportedly used more complex derivatives like Constant Maturity Swaps or 'snowballs', arguably to generate additional revenue rather than just to lower costs (Dodd, 2010; Hendrikse & Sidaway, 2014). Derivatives can help local governments smooth out cash flow volatility (Khumawala et al., 2016; Lagna, 2015) and reduce borrowing costs, including restructuring interest payments on long-term debt (Luby, 2012). However, this strategy is effective only as long as interest rates behave as local governments anticipate. When interest rate trends were disrupted by the 2007/8 financial crisis, some local governments consequently incurred substantial losses on their derivative contracts (Dodd, 2010; Hendrikse & Sidaway, 2014; Pérignon & Vallée, 2017).

In addition to mobilising financial markets and repurposing financial instruments for their debt management, it has been noted that local governments also invest in various financial assets. For example, local governments in Britain have used cash reserves and deposits to invest in higher-yielding assets such as solar farms, shopping centres, and money market funds. Some of them borrow to pursue these investments (Christophers, 2019; Dagdeviren & Karwowski, 2021; Davies & Boutaud, 2020). In Belgium, local governments use inter-municipal utility companies not just for delivering public services but also to generate additional financial revenue through dividends (Deruytter & Bassens, 2021).

The structuring conditions that shape financialisation in local governments

The literature reviewed above provides detailed insights into how local governments have used and re-engineered financial instruments and markets in their governance. However, this body of work is sometimes criticised for lacking a systematic understanding of the factors that shape, enable, and constrain this financialisation. Peck (2017: 10) refers to these factors as "structuring conditions". These conditions, which relate to developments beyond the local scale and are outside the control of local governments, play a critical role in shaping their operations. Christophers (2019) calls for a more in-depth understanding of the structuring conditions to better understand why financialisation occurs in local governments and why it takes different forms across places. This section builds on the diverse body of

scholarship on local government financialisation to identify the conditions under which it takes place; economic and financial, institutional, and financial subordination.

National scale: Economic and financial conditions

Much of the literature highlights **austerity** as a principal driver of local government financialisation. This literature suggests that austerity policies decided on the national level have caused significant pressure on local budgets. In turn, local governments had to seek alternative sources of revenue to be able to continue providing services, maintaining public infrastructure, and paying their employees. In recent years, it has been argued that this often meant an increased reliance of local governments on financial markets to compensate for reduced transfers from central government (Beswick & Penny, 2018; Dagdeviren & Karwowski, 2021; Lagna, 2015; Omstedt, 2020; Peck & Whiteside, 2016).

Moreover, there is some evidence that higher **financial development** in a country can promote local government financialisation through two main channels. First, in countries with higher levels of financial development, there is greater potential for financial innovation, such as the availability of investment opportunities and debt instruments tailored to the needs of local governments, such as local government bonds. This may also attract a larger pool of investors interested in buying these debt instruments, especially where municipal bond markets are more highly developed and liquid (Cestau et al., 2019; Lemoine, 2017; Vetter et al., 2014). For example, the development of the municipal swap industry in the US and the proximity of banks involved in such activities have facilitated the wider uptake of swaps by local governments (Janssen, 2022). Second, in countries with higher levels of financial expertise, local governments may be influenced to use financial instruments to manage their assets and liabilities by lobbying and revolving-door mechanisms, or simply through higher exposure (Mertens et al., 2021). For example, Janssen (2022) finds that local government officials who are also part of a community of finance professionals tend to use swaps more frequently for municipal finance.

National scale: Institutional conditions

It has been argued that local governments in countries with more **decentralised governance structures** are more likely to use financial instruments (Cox, 2009; Weber, 2010). This is because they have higher decision-making power than their counterparts in centralised countries and can thus engage in various innovative budget management techniques, including financialisation. Empirically, Mertens et al. (2021) note an increase in the use of ‘Lobo’ loans with embedded derivatives by English local governments following devolutionary reforms in the early 2000s. Similarly, municipal policymakers in the US in areas with higher “local control" over factors such as the issuance of debt and local development processes found it easier to access capital markets for borrowing (Weber, 2010: 253). In Europe, this also has a regional aspect. Northern and Western European countries tend to be more decentralised than those in Southern Europe, and

decentralisation is relatively recent in post-Soviet countries of Eastern Europe (Büdenbender & Aalbers, 2019).

Global scale: Financial subordination

On the national level, Santos (2023: 1) argues that states' ability to use financial tools and markets in their governance is shaped by the "differentiated positions countries occupy within the world economy". A crucial aspect of this 'subordinate' state financialisation is the extent to and conditions under which states have access to financial markets to pursue policy objectives. For instance, while wealthy countries in the core of the capitalist system, like the US, UK, Germany, and France, usually have no problem selling their debt to private investors, this is more complicated for peripheral countries and subnational state actors (Eichacker, 2023).

Two (related) aspects determine the subordinate position of state actors. First, their position in the international currency hierarchy relates to the assumption that "national money can be considered an international asset class which stands in competition with other nations' money" (Alami et al., 2022: 8). At the top of the hierarchy sit the currencies of core countries – in particular the US dollar, and to a lesser extent, the euro – with the highest relative ability to "perform international money functions [… i.e.,] to act as a means of payment, store of value, and unit of account" (Alami et al., 2022: 8). Currencies of smaller, peripheral countries sit at the bottom. Countries' position in the global currency hierarchy is also reflected in the systemic importance of assets denominated in their currency in the financial system, e.g., the importance of their sovereign bonds as collateral for borrowing (Eichacker, 2022, 2023). Second, and closely related, is investors' perception of country risk. This means access to financial markets, especially for their debt management, is more costly and less predictable for subordinate state actors, as they are subject to more volatile investor demand and perceptions (Hardie, 2011; Massó, 2016).

The literature on financial subordination almost exclusively focuses on the national scale (Büdenbender & Aalbers, 2019). However, Eichacker (2023) notes that these dynamics may also apply to subnational state actors, which can be understood as subordinate based on the framework above, even in core countries. She discusses how US municipalities experienced a withdrawal of private funds during the 2008 crisis, as investors sought safety in the more 'money-like' national Treasuries. In other words, while using the same currency, bonds issued by local governments are perceived as lower down the hierarchy, and less liquid compared to national bonds. This is an important insight, but an explicit investigation of the relevance of financial subordination for local government financialisation is still missing from the literature.

An empirical strategy to explore the structuring conditions of local government financialisation

This chapter aims to explore the empirical relevance of economic, institutional, and financial conditions in shaping local government financialisation across European countries. By doing

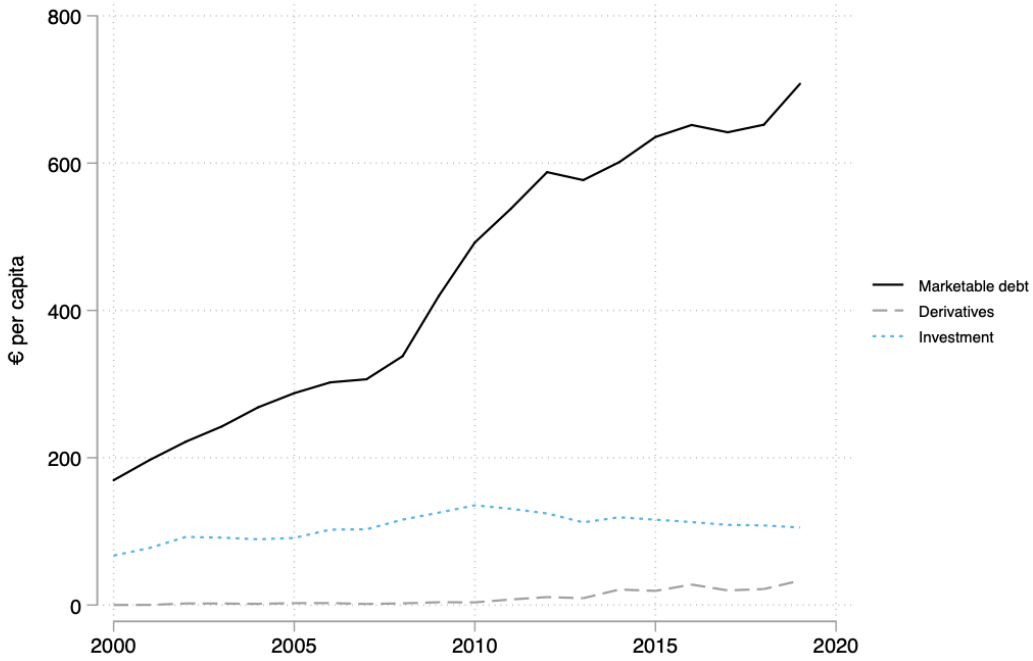
so, it contributes to the expanding body of literature on this phenomenon in Europe, which often focuses on a single country or city. The study uses annual, country-level data for 22 countries across Europe over the 2000-2019 period. The sample includes countries from Northern and Western Europe (Austria, Belgium, Germany, Finland, France, Ireland, the Netherlands, Norway, and the United Kingdom) as well as from the Southern (Greece, Italy, Portugal, Spain, and Sweden) and Eastern European (semi-)peripheries (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Poland, Slovakia, and Slovenia). Thus, the study broadens the geographical scope of the existing literature on local government financialisation in Europe, which has predominantly focused on the UK and Germany (Hendrikse & Sidaway, 2014; Mertens et al., 2021; Trampusch & Spies, 2015). Studies examining this process in Southern or Eastern Europe are limited (Kovács, 2011; Lagna, 2015; Padovani et al., 2018). Moreover, the inclusion of peripheral countries in the sample enables an analysis of structuring conditions that have been largely overlooked in the literature, in particular financial subordination.

The primary variables of interest relate to local governments' use of financial instruments, which serve as proxy measures of local government financialisation[4]. The study uses data from Eurostat and the Office for National Statistics (ONS) to construct three measures of local government financialisation : (1) local government borrowing through debt securities (bonds), referred to as 'marketable debt' (Fastenrath et al., 2017; Schwan et al., 2020), (2) local governments' use of derivatives, and (3) local governments' investment in debt securities[5]. While (1) and (3) are measured as the stock of debt securities on the liabilities and asset side of local governments in a given country and year, derivative use is measured as assets minus liabilities, in line with Eurostat guidance (2017), taking the absolute value to capture intensity rather than success of the strategy. The variables are adjusted for inflation and to population size to make values comparable across countries. Figure 3-1 illustrates the average evolution of these three indicators of local government financialisation over time. It reveals a substantial increase in marketable debt, particularly accelerating after the 2008 financial crisis, as a period of historically low interest rates made borrowing cheaper. On average, local government investment in debt securities has remained stagnant and has even experienced a slight recent decline. In contrast, local governments' use of derivatives has exhibited gradual growth over the past five to ten years, presumably to manage costs and risks of higher borrowing over that period.

[4] Local government is defined as all levels of subnational government, both regional and local. This includes counties, départements, autonomous communities and Länder, municipalities, etc.

[5] Note on data collection: countries were included in the sample if they reported data and sources for the primary variables of interest and time period in the Eurostat (2017) manual for the data. This means the sample size for derivatives is smaller than for the other two variables, as fewer countries reported data sources for the former.

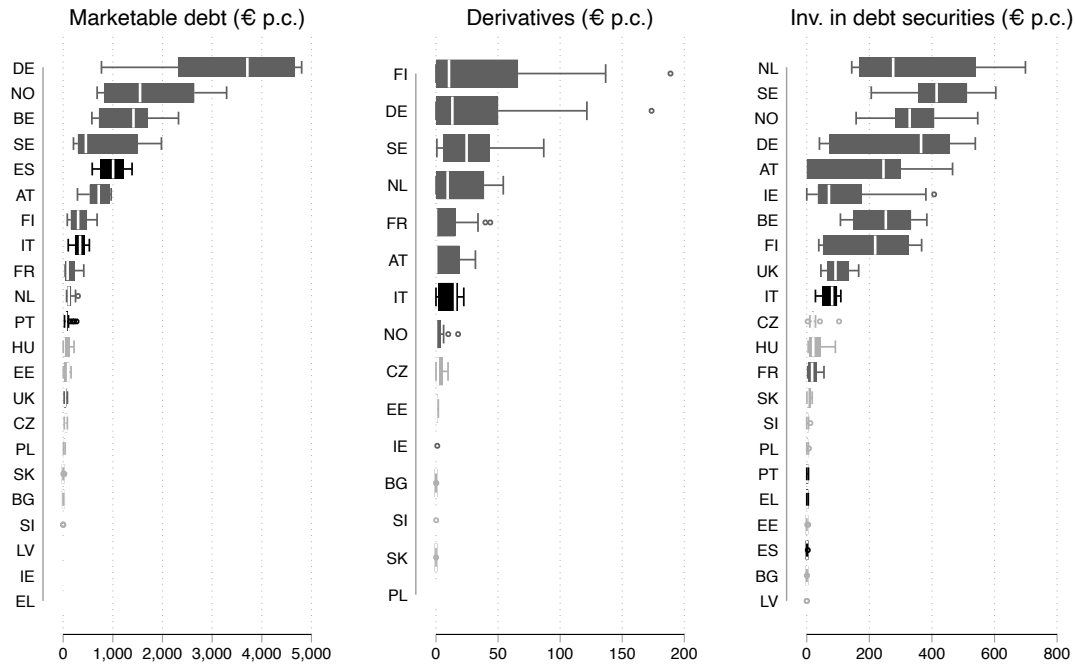
Figure 3 - 1 - Local government financialisation in Europe over time



Source: Eurostat

However, Figure 3-2 shows substantial variation in the three indicators of financialisation between countries. The figure shows that in some countries, often in Western and Northern Europe, local governments' use of financial instruments is both higher and takes on a larger range of values.

Figure 3 - 2 - Local government financialisation by country



Source: Eurostat

This study seeks to explore some of the structuring conditions that shape the variation in local government financialisation between countries. A panel regression approach is used to examine the relationship between the three indicators of local government financialisation and their structuring conditions, measured at the country level. To be sure, these correlations do not establish causality. But they can provide useful insights into the empirical relevance of different factors highlighted in the existing literature. Three separate models were estimated, one by indicator, using the following baseline specification:

$$Fin_{it} = \alpha_i + \beta_1 AUST_{it-1} + \beta_2 FDEV_{it} + \beta_3 DEC_{it} + \beta_4 GDP_{it-1} + e_{it} \quad (1)$$

The outcome variable is the natural logarithm of the financialisation indicators, to which a constant of one has been added to offset zero values in the original variable. AUST is a proxy for austerity, operationalised through the annual change in central government expenditure as a percentage of GDP, using data from Eurostat and the ONS. This measure is inspired by Alesina et al.'s (2019) discussion on the significance of expenditure- versus tax-based austerity[6]. FDEV is the measure of financial development in a given country and year. It is operationalised through the IMF Financial Markets index, a sub-indicator of the fund's Financial Development index (Svirydzenka, 2016) which ranks countries based on measures of the 'depth' of financial markets (e.g., bonds issued by public and private borrowers), 'access' (e.g., the range of credit providers), and 'efficiency' (e.g., stock market turnover). The natural logarithm was taken to facilitate the interpretation of the results. DEC is a measure of decentralisation in a given country and year, operationalised through the share of local government expenditure in total government expenditure, using Eurostat data. GDP is a measure of GDP growth taken from Eurostat, which is included to control for differences in local government financialisation based on differences in the general economic conditions of a country. The measures of austerity and GDP growth are included as one-year lags, considering these may not be immediately reflected in local government actions. For more detail on the construction of the dependent and independent variables, please refer to Appendix 3.

To capture structural inequalities in local governments' access to financial markets, or financial subordination, a second set of regressions includes two dummy variables to indicate whether a country is located in Southern or Eastern Europe:

$$Fin_{it} = \alpha_i + \beta_1 AUST_{it-1} + \beta_2 FDEV_{it} + \beta_3 DEC_{it} + \beta_4 GDP_{it-1} + \beta_5 SOUTH_i + \beta_6 EAST_i + e_{it} \quad (2)$$

[6] While less detailed, the proxy used in this study generally tracks the trajectory of Alesina et al.'s (2019), measure, which captures the annual impact of tax and spending policies on the primary budget as a percentage of GDP. Both approaches reveal that early 2000s European austerity was mild, but substantial measures emerged during the 2008 financial crisis and the 2010-2013 European debt crisis.

This study focuses on cross-country variation, using between-estimators to provide an analysis of local government financialisation across European countries. The regressions were estimated using pooled GLS with a panel-wide AR(1) correction to deal with autocorrelation, which is more efficient than the pooled Ordinary Least Squares (OLS) estimator in settings with a small sample size relative to time periods (Huntington-Klein, 2021, pp. 239–240) and has been used in other country-comparative studies (e.g., Behringer & van Treeck, 2021, who use it to examine growth models).

Additionally, the appendix (Tables A3-5) includes a range of robustness tests, using different estimators (pooled OLS, year-fixed effects), estimating the relationship between financialisation and structuring conditions for the pre- and post-2008 periods separately, and using alternative measures for the main dependent and independent variables. Above, local government financialisation is measured in per capita values to allow for an intuitive interpretation of the relationships uncovered. To examine whether these hold if financialisation is measured differently, Tables A3-5, columns 5, estimate equation 1 with financialisation measured as a share of GDP. To capture decentralisation, the share of local government expenditure in total government expenditure is most commonly used in country-comparative studies (Rodríguez-Pose & Ezcurra, 2010; Tselios & Rodríguez-Pose, 2020). However, it is widely acknowledged that "no single indicator can adequately capture the real level of fiscal decentralization of a country" (Canare et al., 2020; Rodríguez-Pose & Ezcurra, 2010, p. 627). Therefore, columns 6-8 in Tables A3-5 present results for equation 1 using three alternative measures of decentralisation: a Regional Authority Index (Hooghe et al., 2016), a Spending Autonomy Index (Kantorowicz & Jurriaan van Grieken, 2019), and a dummy for unitary versus federal governance system. Finally, the appendix includes a dummy variable indicating whether a country is part of the eurozone in a given year, to examine whether regional differences in local government financialisation are driven by currency hierarchies, a component of financial subordination (column 9 of Tables A3-5).

Empirical evidence of the structuring conditions of local government financialisation

Table 3-1 presents the empirical results for the first set of regressions on local governments' use of marketable debt, derivatives, and local government investment in debt securities.

Table 3 - 1 - Regression results

	(1) Marketable debt	(2) Derivatives	(3) Investment in debt securities
AUST	-0.005*	-0.002	-0.002
	(0.003)	(0.005)	(0.003)

FDEV	0.573***	0.226*	0.491***
	(0.085)	(0.120)	(0.108)
DEC	0.085***	0.049***	0.027**
	(0.008)	(0.012)	(0.011)
GDP	-0.017**	-0.013	-0.003
	(0.007)	(0.013)	(0.009)
_cons	2.156***	-0.085	2.598***
	(0.300)	(0.442)	(0.388)
N	440	300	440
Wald chi2	183.27	30.83	31.98
Prob > chi2	0.0000	0.0000	0.0000

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

I find a slight correlation between the proxy for austerity and local government borrowing through marketable debt, but not for the other financialisation indicators. Specifically, borrowing through bonds tends to be higher in countries where central government spending is lower. In the sample, a one percentage point decrease in central government spending (measured as a share of GDP), is associated with an average increase in outstanding marketable debt per capita of 0.5%. Although the relationship is not statistically significant at conventional levels, the direction of the coefficient aligns with previous literature. These studies suggest that austerity drives local governments to seek alternative sources of revenue, as evidenced through detailed analysis in specific cities or countries (Beswick & Penny, 2018; Dagdeviren & Karwowski, 2022; Lagna, 2015; Peck & Whiteside, 2016). This result highlights the limitations of the panel econometric design. In the cross-country analysis, other structuring factors, discussed below, emerge as more influential in shaping local government financialisation. However, the intensity of austerity often differs across local governments (Gray & Barford, 2018), and pre-existing differences, such as debt levels before austerity, influence local governments' responses to fiscal tightening (Dagdeviren, 2023). Hence, austerity may still play an important role in promoting borrowing through marketable debt within individual countries and local governments, but the correlation disappears in the average. Conversely, the use of derivatives and investment in debt securities are less conventional activities within local governments requiring teams with specialised knowledge. Local governments affected by austerity might cut back on 'non-essential' teams, thereby losing capabilities required for engaging in such activities, which could explain the absence of a statistically significant correlation in the sample.

The study reveals a clear association between the sophistication of a country's financial markets and local government financialisation. Specifically, in countries with more highly developed financial markets (based on factors like public and private borrowing through

bonds, stock market turnover, and the range of credit providers), we generally see that local governments are more involved in borrowing through and investing in debt securities. In the sample, a 1% increase in the measure of financial development – the natural logarithm of the IMF Financial Market Index – is associated with a 0.57% and 0.49% increase in marketable debt and investment in debt securities respectively. The relationship is positive but not statistically significant at conventional levels for local governments' use of derivatives. This finding aligns with previous literature, from which we can identify two channels through which a more developed financial sector can support greater financialisation in local governments. First, local governments may be subjected to lobbying efforts in countries with a larger financial sector (Janssen, 2022; Mertens et al., 2021). Second, a more developed financial sector may offer greater opportunities for innovation and the development of financial products tailored to the needs of local governments. The empirical finding in this chapter could, therefore, also indicate that local governments actively make use of the greater availability of financial instruments and investors (Lemoine, 2017; Vetter et al., 2014).

Regarding institutional conditions, the study finds a consistent pattern whereby local government financialisation is higher in more decentralised contexts. Specifically, a one percentage point increase in subnational government expenditure (measured as a share of total government expenditure) is associated with an average increase of approximately 8.5% in local governments' use of marketable debt, a 4.9% increase in their use of derivatives, and a 2.7% increase in their investment in debt securities. This trend holds statistically significant at the 1% level for marketable debt and derivatives, and at the 5% level for investment in debt securities. In other words, when comparing two otherwise similar countries, local government financialisation will typically be higher in more decentralised countries. This finding has two implications. On the one hand, it suggests that local governments are constrained in their ability to use financial instruments by the centralisation of governance systems in a country. On the other hand, this indicates that local governments use financial instruments more when they have higher autonomy in their decision-making. In line with previous literature, this suggests that local governments use their power (Lagna, 2015) to seize opportunities to repurpose financial instruments to navigate the often challenging conditions under which they operate (Findeisen, 2020).

Finally, local government financialisation tends to be significantly lower in the Southern and particularly Eastern European periphery, even when accounting for the other conditions that shape financialisation (see Table 3-2). On average, the stock of bonds per capita in Eastern Europe is approximately 88.57% lower than in Western European countries, the stock of derivatives per capita is 59.63% lower, and the per capita stock of investment in debt securities is 96.17% lower[7]. In Southern Europe, local government investment in debt securities is 95.88% lower than in Western Europe, on average. This means when comparing

[7] With a coefficient above >0.10 in a log-linear relationship, the percentage change is calculated as $(e^{\beta} - 1) * 100$

two similar countries, one from Southern Europe and one from Western Europe, local government investment in debt securities in the former is typically around 4.12% of the value in the latter. These findings are also reflected in Figure 3-2 above.

Table 3 - 2 - Regression results including region dummies

	(1) Marketable debt	(2) Derivatives	(3) Investment in debt securities
AUST	-0.004*	-0.002	-0.002
	(0.002)	(0.005)	(0.003)
FDEV	0.269***	-0.017	0.159
	(0.092)	(0.146)	(0.113)
DEC	0.065***	0.043***	-0.006
	(0.009)	(0.012)	(0.011)
GDP	-0.013*	-0.012	-0.000
	(0.007)	(0.013)	(0.008)
SOUTH	-0.631*	0.485	-3.190***
	(0.353)	(0.497)	(0.454)
EAST	-2.169***	-0.907**	-3.262***
	(0.328)	(0.359)	(0.418)
_cons	3.323***	0.144	4.942***
	(0.353)	(0.450)	(0.445)
N	440	300	440
Wald chi2	221.10	47.72	112.75
Prob > chi2	0.0000	0.0000	0.0000

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

These findings may reflect the subordinate position of state actors in the global economy and financial system. This position mediates the extent and conditions under which local governments in subordinate countries can use financial instruments in their governance (Eichacker, 2022; Santos, 2023). Specifically, local governments in peripheral countries, using currencies further from the top of the international hierarchy, typically face higher costs when they seek to use financial markets for governance purposes (Alami et al., 2022). Moreover, their access to private finance is more volatile, as investor perceptions tend to fluctuate more with business cycles and in response to changes in perceived credit risk (Hardie, 2011; Massó, 2016). Recent developments in European sovereign debt markets

make clear that financial subordination is not only about currency hierarchy. In particular, Southern and Eastern European countries, both in and outside the eurozone, faced a sudden withdrawal of investor funds following the 2008 financial crisis (Ban & Bohle, 2021; Gabor, 2010; Massó, 2016). Bellot et al. (2017) show that the perception of national credit risk tends to be amplified at the subnational level, translating into higher borrowing costs for local governments. Taken together, higher costs and volatility exacerbate the risks of financial strategies and may therefore deter local governments in peripheral countries from engaging in financialisation, as suggested by the findings presented above.

Robustness checks

The main findings are largely robust to a series of robustness tests, which are presented in Tables A3-5 in the appendix to this thesis. The robustness checks include the use of different estimators (pooled OLS instead of GLS in columns 1, and year-fixed effects in columns 2 of Tables A3-5); estimating the relationship between financialisation and structuring conditions for the pre- and post-2008 periods separately (columns 3 and 4); and measuring the outcome variables as a share of GDP instead of as euros per capita (columns 5).

I also estimate equation 1 using three alternative measures of decentralisation (columns 6-8 of Tables A3-5). Although the measure of decentralisation used in the main analysis for this chapter, the share of local government expenditure in total government expenditure, is most commonly used in country-comparative studies (Rodríguez-Pose and Ezcurra, 2010; Tselios and Rodríguez-Pose, 2020), it is important to ensure the relationship holds across other measures (Canare et al., 2020; Rodríguez-Pose and Ezcurra, 2010) – especially as government expenditure may be related to the context of austerity in each country. Therefore, columns 6-8 in Tables A3-5 present results for equation 1 using three alternative measures of decentralisation: a Regional Authority Index (Hooghe et al., 2016), a Spending Autonomy Index (Kantorowicz and Jurriaan van Grieken, 2019), and a dummy for unitary versus federal governance system. The relationship between financialisation and decentralisation remains statistically significant, except when using the unitary dummy in the analysis of local governments' use of derivatives (Table A-4, column 8).

Finally, I include an alternative measure of financial subordination, namely a dummy variable indicating whether a country is part of the eurozone in a given year (columns 9 of Tables A3-5). This helps me examine whether regional differences in local government financialisation are driven by currency hierarchies, a component of financial subordination. A notable discrepancy is the finding that local government investment in debt securities tends to be higher in countries not using the euro as a national currency (in column 9 of Table A-5), which is possibly due to the prevalence of public investment bodies in Scandinavian countries. The coefficient is not statistically significant for marketable debt and derivative use, indicating the presence of broader dynamics of financial subordination.

The appendix also offers evidence against the presence of multicollinearity (Table A-1 presents the variance inflation factor (VIF)) and structural breaks (Table A-2). The VIF test

indicates a slight issue with the financial development index, which is negatively correlated with the dummy for Eastern Europe. This is particularly relevant for the model estimating the relationships for local governments' use of derivatives. However, the other results are robust to excluding financial development from the model (see Table A-4, column 10). Moreover, the Levin-Lin-Chiu test fails to reject the null hypothesis of unit roots for the measure of derivatives. When assessing stationarity for the post-2008 period, the null is rejected, and the main results hold for this sub-period (see Table A-4, column 4).

Concluding discussion

This chapter responds to recent calls for a deeper investigation into the structuring conditions of local government financialisation. While financialisation is understood, in this chapter, as local governments' use and repurposing of financial tools and markets in relation to their debt and assets (Santos, 2023; Whiteside, 2023), its structuring conditions refer to the context in which local governments operate, but which are largely outside their control (Christophers, 2019; Peck, 2017). The chapter makes two main contributions. First, building on a diverse scholarship across economic geography and political economy, this chapter provides a systematic overview of the structuring conditions that shape, enable, and constrain local government financialisation. Second, I propose quantitative measures for these structuring conditions and empirically test their relative importance in shaping three measures of local government financialisation across European countries: borrowing through marketable debt, use of derivatives, and investment in financial assets.

Since the 2007/8 financial crisis, local governments have increasingly borrowed through marketable debt and used derivatives, a trend supported by historically low interest rates. However, the degree to which local governments use these financial tools varies widely among countries. Using panel econometric techniques, this study finds that the extent of financialisation across countries is shaped by economic, financial, and institutional conditions, and financial subordination. Specifically, local government financialisation tends to be higher in countries with more decentralised governance structures and a more developed financial sector. The study also finds limited support for the thesis that austerity drives local governments towards higher use of marketable debt in their borrowing strategies (e.g., Dagdeviren and Karwowski, 2022; Peck and Whiteside, 2016), although the correlation is not statistically significant at conventional levels. This contrasts with much of the existing literature, which often highlights austerity as a primary driver of financialisation in local governments (Beswick & Penny, 2018; Dagdeviren & Karwowski, 2021; Lagna, 2015; Peck & Whiteside, 2016). This discrepancy can be attributed to the panel econometric design of the study, which presents average correlations across a sample of countries over time. Yet local governments are exposed to different extents of austerity (Gray & Barford, 2018), and they react differently based on factors such as prior debt levels (Dagdeviren, 2023). Finally, financialisation is found to be consistently lower for local governments in the Southern and particularly Eastern European periphery, which may reflect their subordinate position in the global economy and financial system.

The literature on local government financialisation generally takes a critical view. Studies emphasise that local governments' exposure to financial markets generates financial risks, which may translate into service cuts (Hendrikse & Sidaway, 2014; Peck & Whiteside, 2016; Pérignon & Vallée, 2017). But others argue that financialisation may be a "problematic means" potentially used for "positive socioeconomic ends" (Christophers, 2019: 572). Specifically, financialisation may enable local governments to generate revenue for essential public services, such as pursuing housing or infrastructure development (Beswick & Penny, 2018; Peck & Whiteside, 2016), and fill budget gaps (Dagdeviren & Karwowski, 2022). Thus, financialisation might offer a way for individual local governments to navigate challenging structuring circumstances, enhancing their capacity and power, including vis-à-vis central government (Findeisen, 2020; Lagna, 2015). This means, financialisation can make sense and seem desirable from the perspective of individual local governments and their constituents, especially when it supports services that would otherwise not be provided.

Financialisation appears more problematic when viewed from a macro-level perspective. This chapter presented a systematic analysis of local government financialisation across countries and the structuring conditions conducive to it. But prior literature indicates that a shift towards financialisation in local governments may have negative implications for social provision. Financialisation can reconfigure which actors have a say in decisions on public provision, and consequently, which services are provided, and to whom. Specifically, financialisation introduces new rationales into local governance, as financial motives now coexist with public service objectives. As local governments increasingly rely on capital markets for their debt management and investment activities, the interests of financial investors may conflict with the needs of local residents (Jenkins, 2021; Peck & Whiteside, 2016). This conflict might manifest as local austerity measures to satisfy creditors, such as service reductions and stopping or postponing infrastructure investments (Hendrikse & Sidaway, 2014). But it can also lead to a more sustained transformation in how local governments operate, as they are incentivised to proactively anticipate investor demands, aiming for better credit ratings to access borrowing at better conditions (Omstedt, 2020; Petzold, 2014).

Moreover, the potential benefits of financialisation – in terms of enhancing local governments' capacity to provide public services – as well as its financial risks, are unevenly distributed across geographical scales. Locally, the adoption of financial logics tends to prioritise market-oriented services, such as market over social housing (Beswick & Penny, 2018; Bloom, 2023). At the domestic level, wealthier local governments are typically better placed to leverage financial markets to their advantage (Dagdeviren & Karwowski, 2022; Nukpezah, 2019). Internationally, local governments in different countries have varying ability to access and repurpose financial tools for their governance (Santos, 2023). The findings of this study indicate their capability is contingent on the extent of decentralisation, the development of the national financial sector, and their position within global financial hierarchies. Consequently, a more pronounced shift towards using financial tools in local

service provision could intensify uneven development at multiple scales. During the period analysed, the data suggest such a shift, with financial tools gaining increased significance in local governance. However, it remains to be seen whether this trend will continue in the context of higher interest rates post Covid-19, which might discourage borrowing and derivatives but could render financial investments more appealing (Nukpezah, 2022).

The bird's-eye approach adopted in this study enables the analysis of the structuring conditions shaping local government financialisation across countries. This complements the detailed empirical literature focused on specific cities or countries. While this methodological approach is a key strength of the study, it also presents its main limitation. Specifically, the country-level analysis does not consider subnational variegation in local government financialisation. However, several studies reveal significant variation among local governments within a country (Dagdeviren & Karwowski, 2022; Pérignon & Vallée, 2017; Trampusch & Spies, 2015). For instance, Pike (2023) identifies a minority of 'vanguard' financially active local authorities in England, in contrast to a 'long tail' that do not use financial instruments. In this study's context, the overall level of financialisation in a country and year may result from the activities of a varying proportion of, but likely not all local governments. More generally, the relationships identified in this study should not be seen as uniformly applicable to specific local governments but as average patterns across the period of analysis and sample of countries.

Moreover, and relatedly, the study's design does not, by itself, permit a causal interpretation of the uncovered relationships. Instead, it reveals that specific structuring conditions tend to coincide with higher levels of local government financialisation – namely, greater decentralisation, a more developed financial sector, and to some extent, austerity. Conversely, being in the European periphery is associated with lower financialisation in local governments. Therefore, the chapter provides empirical evidence regarding some theoretical explanations of local government financialisation noted in existing literature and adds a new one: financial subordination.

Further research could delve deeper into the causal dynamics involved. Comparative studies would be particularly useful in examining the impact of structuring conditions on local government financialisation more closely. The conditions analysed in this chapter could inform and provide the dimensions for such comparative research. Future studies might build on this chapter's initial findings to investigate the influence of financial subordination on different forms of local government financialisation, paying close attention to the similarities and differences between local governments in core and periphery. This could extend beyond the financialisation measures proposed here, for example to include initiatives to mobilise private finance for local development and involve financial sector actors more actively in the provision of local services. Ultimately, a deeper understanding of its causes is crucial for efforts to avert and mitigate the adverse effects of local government financialisation.

4. A mixed-methods study to evaluate Tax Increment Financing in England

Following the 2007/8 financial crisis, Tax Increment Financing (TIF) was introduced in seven local authorities across England as a tool to promote local development. TIF allows local authorities to access a new revenue stream: the increase in commercial property taxes within designated areas. Local authorities can then borrow against this anticipated revenue to fund area regeneration. In theory, regeneration raises property values, leading to increased taxes and thus enabling the project to pay for itself. However, this outcome hinges on the actual increase in property values. Without this increase, local authorities may struggle to repay their debts. This chapter examines whether TIF has raised commercial property values, using both quantitative and qualitative evidence. I use advanced panel econometrics, specifically a difference-in-differences approach, to analyse a dataset of over 2.2 million commercial properties in England across three time periods: 2008, 2015, and 2021. To enhance the study's design, I incorporate insights from semi-structured interviews with 16 experts from local and central government and the private sector, as well as information from 12 freedom of information requests to government bodies. The interviews also help interpret the econometric results. The findings indicate that TIF's impact on property values is limited, with an observed increase attributable to the policy only in London's retail property values. In contrast, office properties in London's TIF areas experienced a slower increase in value compared to offices outside TIF areas. This surprising finding is likely related to the Covid-19 pandemic, which disrupted the office market and impacted TIF's effectiveness. Furthermore, interviews suggest that TIF reflects a broader shift in local governance towards revenue-generating development, potentially at the expense of local needs. This study extends the geographic scope of the US-centric literature on TIF's effect on property values. Moreover, the first to take an explicitly mixed methods approach, it presents a deeper analysis of the processes at play which influence both the effectiveness of TIF and its broader implications for local governance.

Introduction

Local governments across Europe and North America increasingly use financial tools and markets in their governance, a phenomenon which has been termed 'local government financialisation' (Beswick & Penny, 2018; Hasenberger, 2024a; Peck & Whiteside, 2016; Strickland, 2013). Tax Increment Financing (TIF) is one such tool. Well-established in American cities, TIF was recently introduced in seven local authorities in England (Baker et al., 2016; O'Brien & Pike, 2019).

The TIF mechanism allows local governments to collect the increase in taxes (the 'tax increment') from a designated area over a set period. These funds, typically collected by higher-level authorities, can be used by local governments for area regeneration, either directly or through borrowing against anticipated tax revenue. Proponents view TIF as a self-financing approach to regeneration. This is because local public investment in regeneration raises property values, leading to higher tax receipts that repay the initial borrowing – in theory, regeneration pays for itself (Baker et al., 2016; Pacewicz, 2013, 2016). However, the success of TIF depends on the increase in property values within the designated area. Should property values fail to increase as expected, local governments risk difficulties in repaying debts. In the worst-case scenario, this could lead to them defaulting on loans, with adverse effects on public services (Peck & Whiteside, 2016; Strickland, 2013; Weber, 2010).

This chapter assesses the impact of TIF on commercial property values in English local authorities. Given that the tax increment in England is based on commercial property taxes, understanding this impact is crucial for evaluating the policy's effectiveness.

The chapter draws on a combination of qualitative and quantitative methods. I combine three primary and secondary data sources: a dataset of over 2.2 million commercial properties in English urban areas in three time periods, 2008, 2015, and 2021; insights from 15 semi-structured interviews and one email communication with council officers, local elected officials, civil servants, and senior professionals in the property and consultancy sectors; and information from 12 freedom of information requests to local authorities and central government bodies. I use qualitative data to inform the design of a difference-in-differences analysis of TIF's effect on property values. Moreover, qualitative evidence helps contextualise and interpret the econometric findings.

I find that the policy's effect on commercial property values varies by location and industry. In London, the introduction of TIF is linked to an increase in retail property values of roughly 17.3 %. However, the increase in office property values in London is lower in TIF areas compared to non-TIF areas – by 20.4%. Outside London, I find no effect of TIF on commercial property values, regardless of industry. The econometric findings are robust to a series of tests, such as accounting for potential anticipation of the policy and confounding policies. While these findings may come as a surprise to proponents of TIF, interview data indicates that the Covid-19 pandemic and associated lockdowns have disrupted the office market. This suggests that TIF might have been more effective had Covid-19 not happened, highlighting how developments at the global scale can affect the success of local strategies.

While largely ineffective in raising property values, interviews reveal that TIF is symptomatic of an internal transformation in local governance. To navigate macroeconomic uncertainties, and uncertainty inherent in local development tools such as TIF, local governments outsource risk management to consultancies, while incorporating market-based rationales at the outset of their development planning. For example, they proactively market investment opportunities at international real estate fairs and shift the focus on development projects

that can be self-sustaining through their revenue-generating potential. This may come at the expense of local needs.

Through its mixed-methods approach, the chapter makes two contributions to the empirical literature on TIF. First, it expands the scope of the US-centric literature evaluating TIF's effect on property values. Second, integrating quantitative and qualitative evidence allows for a deeper analysis of the processes at play, which influence both the effectiveness of the policy and its broader implications for local governance.

The chapter proceeds as follows: the next section reviews the empirical literature on TIF and its effect on property values in the American context and describes how the policy has been adapted in England. The subsequent two section describe the data used and detail the methodological approach of this study. The quantitative and qualitative results are presented in the subsequent three sections, and the last section concludes.

The TIF mechanism and its effects

A financialised instrument of local governance

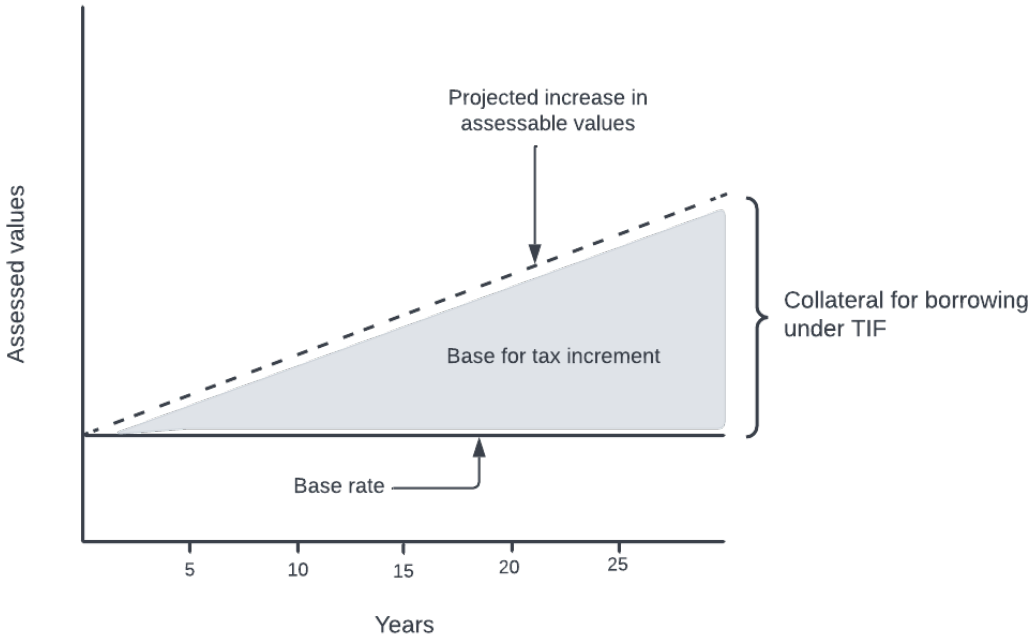
Local governments around the globe increasingly use a range of new financial tools to provide and manage public services and infrastructure (Anguelov, 2023; Guironnet, 2019; O'Brien et al., 2019; Strickland, 2013; Weber, 2010; Wu, 2023). This 'financialisation of local government' is often related to the combination of devolutionary reforms and austerity measures, which leave local governments with more responsibilities for service provision, economic and urban development, but less resources to do so. This ideology was formalised in the teachings of New Public Management, but implemented with renewed force as governments were scrambling to reduce public deficits in the wake of the GFC (Beswick & Penny, 2018; Cox, 2009; Dagdeviren & Karwowski, 2022; Peck, 2017).

TIF has been characterised as a typical instrument of this new form of financialised urban governance (Peck & Whiteside, 2016; Strickland, 2013; Weber, 2010). Originated in California in the 1950s, the policy was devised to help local governments finance economic and infrastructure development in derelict, often former industrial areas (Pacewicz, 2013, 2016). The base mechanism gives local governments authority over the increase in taxes in a designated area, over an agreed period (generally around 25 years). They can use this 'tax increment', which would otherwise have been collected by higher-level authorities, to pay for land acquisition, preparation works, or key infrastructure to attract private investment into the TIF area (Weber, 2010). Importantly, private investment is key for the strategy to work and property values to appreciate, to then translate into an increase in tax receipts (Baker et al., 2016).

Local governments also use TIF to borrow against the anticipated increase in tax revenue (see Figure 4-1 below). This means that they can use the tax increment to make initial investments in the TIF area, securing credit against future increases in property values in that same area (Pacewicz, 2016; Weber, 2010). This second feature has led to the TIF

mechanism being considered 'financialised', as local governments embrace financial markets through a speculative tool, given they cannot know in advance whether investment will happen and property values appreciate (Pacewicz, 2013; Peck & Whiteside, 2016; Strickland, 2013; Weber, 2010).

Figure 4 - 1 - The TIF mechanism



Source: adapted from Pacewicz (2013, 2016) and Baker et al. (2016)

Empirical evidence on the effects of TIF

Property values have to rise for local governments to repay their borrowing. Without such appreciation, local governments could be subject to additional financing costs and may even default on their borrowing, which could have dire implications for public services (Kane & Weber, 2016; Weber, 2010).

The existing empirical literature generally identifies a positive effect of the introduction of TIF on commercial property values in designated areas in the US, even though it does not always seem to work for residential values; Carroll (2008), Merriman et al. (2011) and Smith (2009) demonstrate a positive effect of TIF on commercial property values in Milwaukee, Wisconsin, and Chicago. Other studies caveat these findings, highlighting that it works best for certain types of commercial properties – industrial properties, in the case of Kane & Weber (2016) and Weber et al. (2003) – but not so well for other commercial uses. Additionally, Kane & Weber's (2016) findings highlight the importance of macroeconomic conditions in shaping the impact of TIF on property values. Specifically, they demonstrate that TIF is less effective during economic downturns, when private development markets are weaker, underscoring the policy's pro-cyclical nature.

TIF is found to be particularly effective in derelict areas with predominantly non-White residents (Blackmond Larnell & Downey, 2019; Byrne, 2006). However, the policy's success in fostering property value growth does not always lead to improvements in the quality of life for residents. To the contrary, this growth might even adversely affect them if displacement results from the policy implementation (Kane & Weber, 2016). Similarly, qualitative studies often argue that displacement and gentrification are built into TIF, which they see as a gamble on future increases in land and property values. This means policymakers tend to favour development schemes targeted at an upper-market clientele, sometimes at the expense of local needs (Baker et al., 2016; Findeisen, 2020; Pacewicz, 2016; Weber, 2010).

TIF's translation into the English context

Developed in the United States, policies based around a TIF mechanism have recently been implemented in England (Baker et al., 2016; O'Brien & Pike, 2019). The introduction of TIF in England was the result of a multi-decade exchange between policymakers on both sides of the Atlantic as part of a lobbying process calling for greater devolution and financial autonomy for local authorities (Baker et al., 2016; K. Ward, 2018). While it was the outgoing Labour government that committed to TIF in 2010, the Conservative-led coalition government created the institutional framework for its use in the 2012 Local Government Finance Act (O'Brien & Pike, 2019; K. Ward, 2018). Between 2013 and 2016, five TIF zones became operational in England.

While inspired by the American experience, the TIF mechanism was modified to suit the English context. The federalist governance system in the United States means that TIF can draw upon a diverse array of local taxes, including on residential properties and value added tax (Baker et al., 2016; Strickland, 2013; K. Ward, 2018). In England, on the other hand, TIF policies rely on commercial property taxes, also known as business rates (Sandford, 2023). These rates are applicable to the majority of non-residential properties, such as offices, factories, shops, and pubs. Moreover, compared to their American counterparts, English local authorities are less reliant on financial markets for their borrowing (Bloom, 2023). Instead, they typically borrow from the Public Works Loan Board, a public lender. However, the key mechanism of TIF remains: the repayment of local government borrowing remains contingent upon increases in property values (Strickland, 2013).

The existing empirical evidence regarding the impact of TIF on property values primarily focuses on the US, especially Chicago, where the policy is extensively used. However, less attention has been given to other regions where TIF has recently been implemented, notably England. This study aims to fill this gap by providing empirical evidence on the relationship between the introduction of TIF in English local authorities and changes in commercial property values in the targeted areas.

Data

This chapter draws on three sources of primary and secondary data: a dataset on commercial property values by the Valuation Office Agency (VOA), 16 interviews with key informants and 12 freedom of information (FOI) requests. This section briefly describes them.

Firstly, I use a dataset compiled by the VOA containing property values for all registered commercial properties in England. Focusing only on urban areas, as all TIFs are located in cities, this dataset provides address-level property value data for over 2.2 million properties over three time periods: 2008, 2015, and 2021. The property values are called 'rateable values' and represent "an assessment of the open market rental value of a property" as of the valuation date (VOA, 2023, p. 8). I calculate the outcome variable of interest, the property value per square meter, by dividing the rateable values of each property by their floor space. Table 4-1 presents descriptive statistics for the outcome variable by treatment group and year.

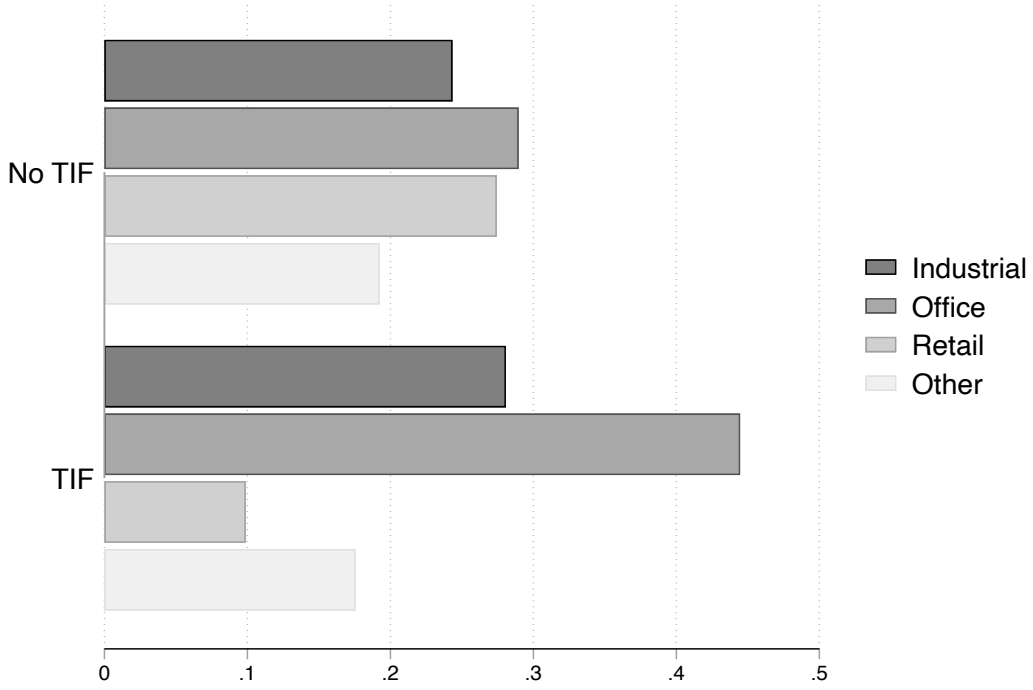
Table 4 - 1 – Commercial property values (£/m^2), by treatment group and year

	No TIF	TIF 2013	TIF 2016
2008			
Observations	890,462	1,738	2,487
Mean	243.16	255.29	216.97
Standard deviation	443.27	379.93	348.76
2015			
Observations	853,305	1,975	2,387
Mean	269.49	235.48	341.52
Standard deviation	437.72	345.14	497.71
2021			
Observations	684,269	1,397	1,803
Mean	273.75	237.64	291.64
Standard deviation	433.78	324.92	294.1
Standard deviation	433.78	324.92	294.1

The dataset also includes information on the type of commercial use for each property: industrial use, office spaces, retail, or 'other'. The 'other' category is primarily made up of parking spots and advertising spaces, such as billboards. But it also includes commercial properties used in the hospitality sector (cafés, pubs, restaurants, nightclubs, etc.) and social and community infrastructure, including health centres. As shown in Figure 4-2, office use is most common in TIF areas, and higher compared to non-TIF areas. Conversely, retail properties are less common in TIF areas compared to those outside of TIF areas.

Secondly, the study incorporates insights from 15 semi-structured interviews and one email communication with key informants, conducted both online and in-person between April and August 2023. Council officers and elected officials provided crucial insights into the rationales and challenges of implementing TIF. Additionally, interviews with central government civil servants, as well as senior professionals from the property industry and consultancy sectors, offered perspectives on the broader context of local policy. This helped mitigate potential biases from local politicians who played a pivotal role in the implementation of TIF and might favour its positive portrayal. Table 4-2 presents the interview codes used throughout this chapter by role of interviewee.

Figure 4 - 2 – Commercial use by area



Source: author's analysis of VOA data

Table 4 - 2 – Interview code by role of interviewee

Role	**Interview codes**
Local government officer	I1, I3, I4, I6, I8, I10, I15
Local elected official	I2, I7, I9
Civil servant at central government	I5, I14
Local policy consultant	I11, I12, I16
Commercial property industry representative	I13

Thirdly, the chapter draws on information obtained through FOI requests submitted to 12 local authorities and other government bodies, with responses received between April and September 2023. The FOIs facilitated access to details about the implementation of TIF, such as the precise locations of TIF areas and other figures not available in planning documents. Table 4-3 categorises FOI codes by the type of government body, with further details provided in the appendix.

Table 4 - 3 – FOI code by type of government body

Government body	**FOI codes**
Local authority	FOI1 – FOI8, FOI12
Central government department	FOI9, FOI10, FOI11

Method

The study draws on a combination of qualitative and quantitative methods to examine the effect of TIF in English local authorities. I use qualitative data both to inform the design of the quantitative study, and to contextualise and explain its findings. In other words, quantitative and qualitative methods complement and enhance each other (Clark et al., 2021) to provide a fuller analysis of the implications of using TIF in English local authorities.

The research proceeds in three stages. First, I use FOIs and planning documents to identify areas where TIF was implemented and to designate treatment and control units for the econometric analysis. Next, interviews help refine the difference-in-differences design to identify TIF's impact on commercial property values. Finally, the interview data enriches the econometric study's findings with deeper insights and context.

Step 1: Identifying the TIF areas and commercial properties within them

A key challenge in examining the effect of TIF on commercial properties relates to identifying the precise location of TIF areas, and the commercial properties within them. To address this, I combine information obtained through FOIs and planning documents with the VOA dataset.

Between 2013 and 2016, five TIF areas became operational in England, located across seven local authority districts: Gateshead, Newcastle, Nottingham, Sheffield, and the London Boroughs of Newham, Lambeth and Wandsworth (see Figure 4-3). The first three TIF initiatives launched as part of the 2012 City Deals in Newcastle and Gateshead, Nottingham, and Sheffield, becoming operational in April 2013 (MHCLG, 2012; O'Brien & Pike, 2019). Another TIF was created in 2013 to regenerate the area in the Royal Docks Enterprise Zone in the London Borough of Newham (GLA, 2022). Furthermore, a TIF mechanism was put in place in 2016 to finance the Northern Line underground extension to Battersea Power Station and Nine Elms and support the broader area's regeneration (Findeisen, 2020; GLA, 2022).

Although their establishment was negotiated between local authorities and national government - a more centralised process compared to the United States - there is no central registry detailing the exact location of TIF areas. I use information from FOIs and planning documents to determine the precise location of the TIF areas, which are typically smaller than the local authority districts. Specifically, I obtain detailed maps of the TIF areas.

The next challenge is to identify which commercial properties in the VOA dataset are located within the TIF areas. I use the Doogal geocoding tool[8] to extract postcodes both within and outside the TIF boundaries, as identified from FOIs and planning documents. In England, postcodes typically cover an average of 15 addresses[9]. The TIF areas delineated using postcodes are expected to correspond very closely, though not perfectly, with the actual TIF areas (FOI1). I then cross-reference these postcodes with individual commercial properties in the VOA dataset[10]. Consequently, my treatment and control groups are defined at the postcode level.

Figure 4 - 3 – English local authorities using TIF

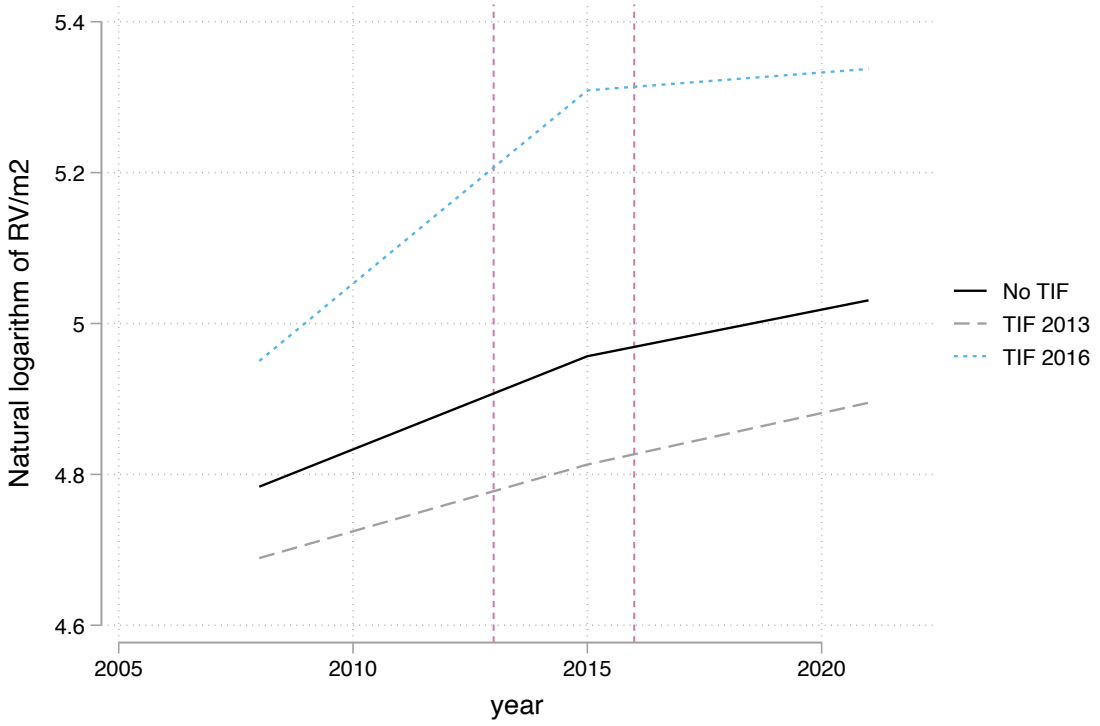
[8] The website, developed and maintained by Chris Bell, offers a mapping tool based on data on active and inactive postcodes from the ONS Postcode Directory. See: https://www.doogal.co.uk/FindPostcode, and for the source data: https://www.ons.gov.uk/methodology/geography/geographicalproducts/postcodeproducts.
[9] https://www.ons.gov.uk/methodology/geography/ukgeographies/postalgeography
[10] In addition, I run all postcodes in the VOA data through the Doogal geocoding tool as a quality check. This allowed me to identify errors in the VOA dataset, most likely due to coding errors. In line with previous studies using this dataset (Macdonald et al., 2022), this led to 28,133 units being dropped out of 7,776,638 units, or 0.36% of total observations.

Source: author's elaboration, using QGIS

Step 2: A difference-in-differences approach to examine the effect of TIF on commercial property values

Figure 4-4 illustrates the average development of commercial property values for three groups of properties: those that were not subject to TIF, and those within TIF areas that became operational in 2013, and 2016. The figure shows that on average, commercial property values have risen over the period of analysis. Post-implementation, the figure suggests that property values within the 2013 TIF scheme have experienced a higher increase compared to non-TIF areas. While still rising, values in the 2016 scheme have grown at a lower rate compared to non-TIF areas after the policy was implemented.

Figure 4 - 4 – Average commercial property values over time, by treatment group



Source: author's analysis of VOA data

The success of the TIF strategy is predicated on rising property values. Rising property values translate into a tax increment for the local authorities, which enables them to repay any borrowing they have taken out against future tax revenue. This means it is important to understand whether the change in property values is attributable to the policy. This study uses a difference-in-differences strategy to examine whether TIF in English local authorities has resulted in higher commercial property values above and beyond what would have happened without the policy. This relationship is specified in the following equation:

$$VAL_{it} = \beta_0 + \beta_1 TIF_i + \beta_2 POST_{it} + \beta_3 TIF_i * POST_{it} + \beta_4 DENS_{it} + \alpha_i + \varepsilon_{it} \quad (1)$$

The dependent variable is the natural logarithm of the rateable value per m^2 of a commercial property *i* at year *t*, in which t = 2008, 2015, 2021. The coefficient of interest is β_3, on the interaction term of TIF and POST, which captures the effect on property values of being in the treatment group after the treatment has been implemented. DENS is the natural logarithm of the number of properties in each postcode to control for different values in high- versus low density areas. The variables TIF and POST are group and time fixed effects, and the model includes local authority fixed effects denoted by α_i.

The interaction term is equal to one for properties in a TIF area and after the year of treatment. For example, for a property located in the Nottingham TIF zone, established in 2013, TREAT equals one in the periods 2015 and 2021. This means that the control group consists of all properties where treatment has not yet taken place. The group fixed effect controls for pre-existing differences in property values between treatment and control group. The time fixed effects capture changes between the period before and after the implementation of TIF, such as macroeconomic conditions, market trends, or nationwide policies, that affect property values regardless of location. The local authority fixed effects control for unobserved differences in property values across local authorities, which may arise from different economic conditions or local policies.

The model is estimated by Ordinary Least Squares (OLS), with standard errors clustered at the postcode level to account for autocorrelation of property values within the same postcode. I exclude the highest and lowest 1% of observations by property values per square meter to ensure that the findings are not driven by extreme values.

The difference-in-differences strategy is based on three key assumptions: no anticipation, no spillover, and parallel trends. Firstly, the assumption that there is no treatment effect in advance of the treatment. In other words, that businesses did not move to the TIF zones before the policy was implemented, in anticipation of infrastructure improvements. In this case, we would potentially see rising property prices before the policy becomes operational. With data being available for three time periods only, it is difficult to assess anticipation of the policy. However, interview data indicates it is unlikely that the policy was anticipated. TIF deals were worked out in a “rushed” manner, over just a few months, according to a civil servant in the Department of Communities and Local Government (DCLG) at the time (I5). TIF having been decided somewhat last minute makes anticipation unlikely.

Given the spatial nature of the data, another important assumption is the stable unit treatment value assumption (SUTVA). It states that the outcome of one unit is not affected by the treatment of another unit. However, with TIF, there could be a ‘spatial spillover’ effect, meaning that property values around the TIF zone might also change as a result of the policy. The direction of the effect can be either positive or negative (Czurylo, 2023; Dye & Merriman, 2000; Merriman et al., 2011). Property values could increase because of

nearby new developments or improvements, making the area more attractive, and resulting increased investor demand driving up prices. Conversely, they might decrease if businesses relocate to the TIF zone, leaving fewer establishments in the surrounding areas, i.e., if TIF leads to "displacement" from other areas (I3; I4; I7; I13). In the presence of spillover effects, the estimate of the treatment effect would be biased up- or downward.

To rule this out, equation 1 is estimated without properties adjacent to TIF areas. Specifically, I exclude properties that share the same 'outward postcode' (for example, E16) but are not located within TIF areas. In other words, I create a buffer zone around the TIF areas. This zone accounts for properties likely to be impacted indirectly by the policy. By excluding this buffer zone from the analysis, I aim to reduce potential bias in the estimated treatment effect.

Lastly, and most importantly, difference-in-differences relies on the assumption of parallel trends, i.e., the assumption that in the absence of TIF, property values in treated areas would have grown at the same rate as in non-treated areas. That is, assuming parallel trends allows us to use non-treated observations as a counterfactual for the change in property values we would have seen in treated observations, in the absence of TIF. Three caveats to this assumption arise from the interviews and document analysis. First, all TIFs are situated in major urban areas, as classified by the Office for National Statistics (ONS)[11]. To ensure TIF areas are compared only with similar areas, the analysis focuses solely on urban observations. Second, commercial property value growth likely differs between locations, with property values in London said to rise faster than in other parts of the country (I2; I4; I13). Third, recent years have brought significant changes to the commercial property landscape, due to Covid-19 and the associated lockdowns as well as a shift towards online shopping (Centre for Cities, 2023; Giles & Thomas, 2020). This is likely reflected in differential growth trajectories of property values across industries (I1; I3; I4; I10).

This means that the parallel trends assumption may only be valid conditional on location and industry. To account for differential growth rates, I re-estimate equation 1 including industry-by-year and region-by-year fixed effects.

Another approach to account for parallel trends is to estimate the treatment effect separately for each industry and region. This method also allows for the consideration that the policy may impact property values differently based on these characteristics. Consequently, I re-estimate equation 1 for eight subsamples of the data. This approach acknowledges that the parallel trends assumption may be contingent on location and business type, and that the policy may have heterogenous effects along those categories.

[11] https://www.gov.uk/government/statistics/2011-rural-urban-classification-of-local-authority-and-other-higher-level-geographies-for-statistical-purposes

Step 3: Interpreting and contextualising the econometric findings through interview data

Data from 15 semi-structured interviews and one email exchange with local government officers and local politicians, civil servants in central government, and private sector experts provide deeper insights and context to the econometric findings. Previous econometric studies on TIF in the American context have sometimes described their findings as "surprising" (Blackmond Larnell & Downey, 2019; Kane & Weber, 2016). Incorporating qualitative evidence can help clarify these findings. This point is also made by Weber et al. (2003), who direct readers to prior qualitative research for interpretation of their results. This study directly incorporates interviews to interpret the econometric results and conducting interviews alongside the econometric analysis enabled direct discussions about the quantitative findings with interviewees. The interviews were coded iteratively to facilitate the emergence of overarching themes and interpretations from the data. The integration of quantitative and qualitative evidence to evaluate and understand the implications of TIF for English local authorities represents a key contribution of this study.

Econometric findings on the relationship between TIF and property values

Main findings

The results presented in Table 4-4 suggest that the introduction of TIF does not have a statistically significant effect on commercial property values within TIF-designated areas. This is evidenced by the non-significant difference-in-differences coefficient (the interaction term between TIF and POST) in both columns.

Table 4 - 4 – The effect of TIF on commercial property values

	(1)	(2)
TIF	0.118	0.187***
	(0.114)	(0.0592)
POST	0.177***	0.113
	(0.00318)	(0.0772)
TIF*POST	0.0604	-0.0596
	(0.0880)	(0.0462)
DENS	0.112***	0.152***
	(0.0133)	(0.00839)
_cons	4.375***	3.332***
	(0.0463)	(0.0204)
Observations	2202996	2202996
Local authority FE	Yes	Yes

Industry-by-year FE	No	Yes
Region-by-year-FE	No	Yes

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The coefficient on the time fixed effect POST in column 1 is statistically significant at the 1% level. This implies that, on average, property values increased by approximately 19.4% after the period corresponding with the implementation of TIF[12]. The time effect becomes statistically insignificant in column 2 when the model is adjusted for differential growth trends across various industries and between London and other regions. In column 2, the statistically significant coefficient on TIF suggests that there were pre-existing differences in property values between TIF and non-TIF areas prior to the implementation of the policy. Specifically, property values in TIF areas were, on average, higher than those in non-TIF areas by approximately 20.6% before the TIF policy was introduced.

Across both model specifications, the coefficient on DENS is statistically significant, indicating a positive association between the number of commercial properties within a postcode (property density) and property values. As both the dependent and independent variables are in logarithmic form, these coefficients imply that a 1% increase in the density of commercial properties is associated with a respective 0.112% and 0.152% increase in commercial property values.

The results presented in Table 4-5 below indicate treatment effect heterogeneity based on location and industry. Columns 1-4 show results for industries within London, while columns 5-8 correspond to urban properties in the rest of the country. Notably, the TIF policy does not have a statistically significant impact on commercial property values outside of London, as shown by the non-significant interaction term coefficients in columns 5-8.

Within London, the introduction of TIF is associated with a statistically significant increase in retail property values, with the interaction term coefficient in column 3 suggesting an increase of approximately 17.3%. For offices within London's TIF areas, the statistically significant negative interaction term coefficient in column 2 implies that the increase in property values post-TIF is 20.4% less than the increase in non-TIF areas. In contrast, the non-significant coefficient for offices outside London (column 6) suggests a directionally positive but not statistically significant impact of TIF.

Table 4 - 5 – Treatment effect by location and commercial use type

	London				Outside London			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Industrial	Offices	Retail	Other	Industrial	Offices	Retail	Other

[12] In the log-level model, coefficients above 0.1 are calculated as $\left(e^{\beta} - 1\right) * 100$ to estimate the percentage change.

TIF	0.0594	-0.0897	-0.0923	0.535***	0.00167	0.101	0.110	0.970***
	(0.0757)	(0.0869)	(0.0827)	(0.138)	(0.134)	(0.0806)	(0.102)	(0.161)
POST	0.402***	0.205***	0.194***	0.00169	0.274***	0.191***	0.147***	0.0184
	(0.00883)	(0.00490)	(0.00429)	(0.00935)	(0.00630)	(0.00401)	(0.00312)	(0.0118)
TIF*POST	0.0330	-0.228***	0.159***	-0.135	-0.0346	0.0678*	-0.00430	-0.246
	(0.0604)	(0.0704)	(0.0494)	(0.0961)	(0.0521)	(0.0382)	(0.127)	(0.169)
DENS	0.0902***	0.0794***	0.129***	0.324***	0.0324***	0.0835***	0.173***	0.258***
	(0.00692)	(0.00610)	(0.0104)	(0.0109)	(0.0120)	(0.00504)	(0.00640)	(0.00998)
_cons	4.147***	5.304***	4.977***	4.957***	3.574***	4.238***	4.049***	4.487***
	(0.0235)	(0.0228)	(0.0343)	(0.0342)	(0.0405)	(0.0186)	(0.0201)	(0.0283)
Obs	103948	259290	165834	107926	437684	377417	443657	307240
LA FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The POST coefficients across all industries, except for the 'other' category, show a statistically significant increase in property values in the post-implementation period, reflecting a general time trend. The coefficient on the group fixed effect TIF in columns 4 and 8 indicates that property values in the 'other' category were significantly different in TIF compared to non-TIF areas before the implementation of the policy. This category includes a wide range of commercial uses, including car parks, advertising spaces, hospitality, and social and health infrastructure. This finding suggests that properties in this category may have different unobserved characteristics, not captured by the model. Lastly, the coefficient on DENS is statistically significant across all specifications, indicating that commercial property values are typically higher in denser areas.

Robustness checks and limitations

A series of robustness checks is presented in the appendix. First, I consider the potential anticipation of the policy in Battersea by excluding the area from the dataset. Although interview data suggest that TIF was not anticipated, the situation in Battersea might differ. Policy discussions about the regeneration of the area and the extension of the Northern Line were taking place several years before TIF was implemented (I2; I9; I15). Given this background, it is possible that businesses and investors, anticipating future improvements, may have relocated to the region prior to the formal introduction of TIF. If this relocation occurred, an increase in commercial property values prior to TIF's implementation might be observed, potentially violating the no anticipation assumption.

The finding of no overall effect remains robust to the exclusion of properties within the Battersea TIF area. The negative association between TIF implementation and office values is now even more pronounced (see columns 1 and 3 of Table A-8). The difference-in-

differences coefficient for retail in London is no longer statistically significant, with the sign now indicating a negative relationship. This change suggests that the previously observed positive effect on retail property values in London, as presented in Table 4-5, was likely driven by increases in the Battersea TIF area.

Second, the treatment effect estimated above might be biased through confounding policies, notably the Enterprise Zones (EZs). Established alongside City Deals in the context of the 2012 Local Government Finance Act, EZs—48 of which are presently active throughout England (M. Ward, 2023) —share the principle of borrowing against retained business rates within a specified locale with TIF (I1; I10; I13; I16). In the case of the Royal Docks TIF in Newham, they overlap geographically. Complicating the matter is the absence of a centralised register of postcodes that fall into EZs (FOI9; FOI10; FOI11).

One way to account for the potentially confounding policy is to exclude all local authority districts that hold EZs. I extract information on the location of EZs from the Ministry of Housing, Communities and Local Government website[13], and manually research the local authorities in which they are located. The overall effect remains robust to this method (see Table A-9)[14].

The findings remain robust when estimated using the full dataset, including data at the 1st and 99th percentiles. The difference-in-differences coefficient becomes negative and statistically significant for 'other' property types in London, suggesting that this result may be influenced by extreme values (Table A-10). In accordance with recent advancements in difference-in-differences literature, I also estimate the treatment effect using the doubly robust estimator proposed by Callaway and Sant'Anna (2021). The estimator combines OLS with inverse probability weighting in settings with staggered treatment timings and heterogenous effects over time and across treatment cohorts. This robustness check further corroborates the finding that the policy does not have an overall effect on commercial property values in TIF-designated areas (Figure A-2).

The econometric analysis presented in this chapter has two principal limitations. First, the treatment effect identified in this study should be interpreted as the effect of a property being included in the TIF area. While the funds borrowed via TIF might differ among locations, suggesting varied treatment intensities relative to the funds allocated, the attempt to obtain detailed data on this (through FOIs) was unsuccessful at the time of writing. A second, and more significant limitation relates to the dataset. This dataset spans the period from 2008 to 2021, meaning that we can account for approximately one-third to one quarter of the 25-year operational period of the TIF schemes. However, it only encompasses data from three distinct time periods. More frequent data collection would be beneficial for

[13] https://enterprisezones.communities.gov.uk/enterprise-zone-finder/

[14] It should be noted that this robustness test is somewhat rudimentary, as it involves the removal of entire local authority areas where an EZ is located, rather than isolating the specific postcodes. This approach significantly reduces the sample size, eliminating approximately one-third of the observations, including nearly half of those within TIF areas. A more granular approach would identify EZs at the postcode level.

assessing whether the policy was anticipated, and for estimating its effects with greater accuracy. Therefore, while the dataset offers granular geographic information, the limited number of time points makes it more difficult to establish a causal effect through econometric analysis alone. Consequently, it is essential to supplement and contextualise the econometric findings with interview data., which provide insights into the underlying mechanisms and real-world events that influence and mediate the outcomes of the policy.

Global-scale developments and macroeconomic uncertainties affect local outcomes

The econometric results indicate that the introduction of TIF is correlated with an increase in retail property values in London, although this effect appears to be primarily driven by rises in the Battersea TIF area. Furthermore, office property values in London's TIF areas have increased less than those in non-TIF areas. These outcomes diverge from earlier research in the American context (Carroll, 2008; Merriman et al., 2011) and might be surprising for advocates of the policy. Qualitative data from interviews can provide insights to make sense of these findings. In particular, interviews suggest that the Covid-19 pandemic has impacted the effectiveness of the policy.

While TIF is notably local in its aim and scope, being about place-based development, the policy is implemented against the backdrop of evolving macroeconomic conditions and global change. These shape and affect the outcome of the policy. Importantly, the Covid-19 pandemic and associated lockdowns have affected the market for office spaces (I1; I4; I10). As a senior local government officer put it:

> "The question is, post Covid-19 pandemic, will people leave offices? (…) So, quite a lot of these commercial properties in urban areas, there is a question about their values." (I3)

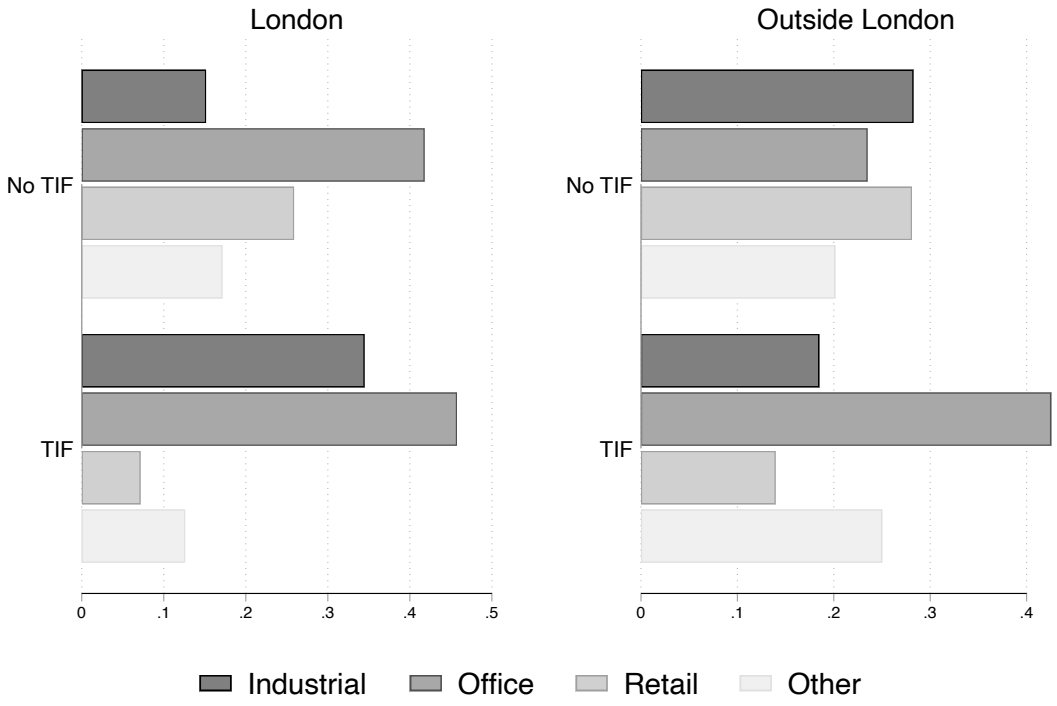
The econometric analysis covers the period from April 2008 to April 2021, which includes the first year of the Covid-19 pandemic. This timeframe helps explain some of the findings discussed above. Specifically, the finding that TIF was ineffective for office properties in London, which have even seen a decline in value compared to properties outside TIF areas, may be related to disruptions from the pandemic. The shift towards remote work during the pandemic has sparked debates about the future of office spaces. This issue is especially salient in city centres, notably in London, where there is a higher concentration of offices (Centre for Cities, 2023; Giles & Thomas, 2020; Quinio, 2021). Additionally, the necessity for making workspaces pandemic-proof means that office landlords suddenly face higher costs (Hammond, 2020). This shift has influenced both investor interest and property valuations (Romei & Burn-Murdoch, 2020).

Figure 4-5 below shows that TIF areas in London have a larger proportion of industrial properties—34.5%, compared to just 15.2% in non-TIF areas within the city. Interviewees described the Battersea area in particular as a "wasteland" (I6) and "derelict" (I2) not too long ago, suggesting that the London TIF areas are not (yet) established office locations. The waning demand for office space may have disproportionately impacted these less

established office locations. Conversely, TIF areas outside London, often situated in city centres, have a smaller proportion of industrial and a larger share of office properties compared to non-TIF areas. These differences could explain the heterogenous effects on office property values between London and other regions.

The pandemic disruption to the effectiveness of TIF aligns with Kane and Weber's (2016) argument that TIF is a pro-cyclical policy tool, less effective during economic downturns. This has two implications for this study. First, the econometric results may represent lower-bound estimates; without Covid-19, TIF might have been associated with larger increases in property values. Second, it highlights the value of the mixed-methods approach used here. The interviews provide insight into how unforeseen events, such as a pandemic, and macroeconomic uncertainties can influence property values, and thus policy outcomes (see Dagdeviren (2023) for a similar argument in the context of local governments' debt sustainability). More recently, another challenge to the success of TIF has emerged. Recent inflation in material costs affects local development goals by making construction and infrastructure projects more expensive. As one local government officer puts it, "we now can do less with the money that we have" (I10).

Figure 4 - 5 – Share of commercial use by area



Source: author's analysis of VOA data

Local governments become risk managers in an uncertain environment

While the effectiveness of TIF in raising commercial property values was limited, the interviews reveal an internal, qualitative shift in local governance. TIF is a prime example of a policy that emerged from the combination of austerity and devolutionary reforms at the

national scale, following the 2007/8 financial crisis. This combination leaves local authorities both more dependent on uncertain revenue streams, and more exposed to macroeconomic uncertainties, such as pandemics or inflation. In response, the role of local governments has evolved towards a more active management of risk and uncertainty, which reconfigures the aim of local development.

From 2010 onwards, the UK's Conservative-led coalition government embarked on a path of austerity. Measures to reduce the government deficit led to budget cuts across various levels of government, from central to local (Gray & Barford, 2018; I10; I14; I7). During this period, the idea that local governments should be "self-sufficient" or "self-funding" gained popularity in policy discussions (I5, I16). Consequently, the local governance system underwent reforms, resulting in a significant reduction in grant funding to local authorities (I1, I5, I7). To compensate, the Local Government Finance Act of 2012 introduced new methods for local authorities to generate revenue.

One such measure was TIF. By enabling local governments to collect tax increases resulting from area regeneration, proponents view TIF as a way to incentivise local councils to foster economic development in their areas (I1, I14). Reducing grant funding at the same time as giving local authorities new tools to stimulate economic development was seen as a way of making them "more accountable for [their] financial health" (I12). This was based in the idea that:

> "local authorities are supposed to be about economic development, about making money, about improving their areas and seeing the benefits financially. So TIF was very much a part of that. The idea was that localities should take investment decisions and they should be rewarded, typically through financial mechanisms." (I16 – senior local policy consultant)

In theory, the TIF mechanism is seen as a self-funding regeneration tool par excellence. Access to a new revenue stream allows local authorities to incur additional debt to invest in regeneration. Investment in regeneration raises property values, leading to higher tax receipts that repay the initial borrowing. Regeneration pays for itself (I1; I7; I13). However, this new income stream is "inherently unpredictable" (I14), and dependent on broader, macroeconomic conditions, as discussed above. While local authorities have no influence over these conditions, the combined impact of devolution and austerity leaves them more reliant on such uncertain revenue streams.

On the flipside of being rewarded for development initiatives, local governments are expected to shoulder responsibility if these go wrong. In the context of TIF, problems arise if property values do not increase as anticipated, leading to slower-than-expected growth in tax revenue. In the worst-case scenario, this could force local governments to default on their loans, with potential subsequent cuts to essential services (I1; I8; I10; I14). To avoid such a situation, managing the 'credit risk' associated with TIF becomes crucial (Weber, 2010). Local authorities underscore the importance of "very careful" and prudent financial planning (I8), preferring not to "borrow everything upfront, but only as needed" (I10).

Interviewees also stress the critical need for thorough forecasting of revenue potential and the development of robust business plans (I2; I7; I8). To navigate the complexity of these tasks, local authorities often turn to external consultants for financial modelling and future business rate forecasting (I2; I10).

Local authorities thus seek assistance from external actors to quantify the fundamental uncertainty under which they operate, converting it into measurable and manageable risk. But this also involves an internal, qualitative shift, as local governments increasingly assume the role of risk managers, which comes to shape policy decisions from the outset. Interviewees in local authorities emphasised that "investment doesn't just come" by itself (I2; I10). This is particularly relevant in former industrial areas like Newcastle, where a senior official observed the lack of "speculative", market-led commercial development due to a perceived lack of "market confidence" in the city's future (I7). To address this, local authorities are taking proactive measures to make TIF-designated areas more appealing to investors. One strategy is to promote their development sites at international investment fairs "that take place around the world, in Cannes, Dubai, China" (I10). With growing competition for investment among cities, this approach is becoming increasingly common in England and other European countries (Guironnet, 2019).

Besides the proactive marketing of development projects, the perception of the projects themselves has changed, suggesting a more significant and potentially lasting shift in local service provision. In this changing environment, local governance seems to be moving away from providing essential services towards focusing on services that can sustain themselves through their revenue-generating potential. In a way, this is inherent to the TIF process: the mechanism strongly incentivises local governments to prioritise projects that are viable, i.e., that can generate increases in property values (Findeisen, 2020; Weber, 2010). As a local government official explained:

> "In a sense it's not just TIF. It's about a way of relooking at decision making for an area. If you're prepared to do that, I think TIF has a great way of helping capital investment, infrastructure investment in an area. [In other words] nobody should ever think that I want a swimming pool because it would be nice to have a swimming pool. You have to say I want a swimming pool because in five years' time it will pay for itself." (I9)

Ultimately, this raises another question: who is local development for?

Conclusion

This chapter has taken a mixed-methods approach to evaluate the impact of TIF on commercial property values in English local authorities. I combine three primary and secondary data sources: a dataset of over 2.2 million commercial properties in English urban areas in three time periods, 2008, 2015, and 2021; insights from 15 semi-structured interviews and one email communication with council officers, local elected officials, civil servants, and senior professionals in the property and consultancy sectors; and information from 12 FOI requests to local authorities and central government bodies. I use evidence

obtained through FOIs and interviews to inform the design of a difference-in-differences analysis of TIF's effect on property values. Moreover, I use expert interviews to contextualise and interpret the econometric findings.

Through its mixed-methods approach, the chapter makes two principal contributions. First, it expands the geographical scope of the US-centric literature, evaluating TIF's effectiveness in raising property values in the English context. Second, integrating quantitative and qualitative evidence allows for a deeper analysis of the processes mediating TIF's effect on property values. This approach helps interpret "surprising" (Blackmond Larnell & Downey, 2019; Kane & Weber, 2016) econometric results, and shed light on TIF's broader implications for local governance.

I find that the policy's effect on commercial property values varies by location and industry. In London, the introduction of TIF is linked to a 17.3% increase in retail property values within TIF-designated areas. This rise appears to be primarily driven by the Battersea TIF. For offices within London's TIF areas, the post-TIF increase in property values is 20.4% less than that in non-TIF areas. Outside of London, I did not find a statistically significant effect of TIF on commercial property values. The econometric findings are robust to a series of tests, such as accounting for potential anticipation of the policy and confounding policies.

Although these findings diverge from previous research in the American context (Carroll, 2008; Merriman et al., 2011), interview data indicates that the Covid-19 pandemic has disrupted the policy's effectiveness. Specifically, the decline in demand for office properties was likely particularly pronounced in industrial, derelict urban areas, such as those in the TIFs in London. This suggests that the econometric findings may represent a lower-bound estimate – TIF might have been more effective had Covid-19 not happened. The finding also supports prior arguments about the inherent pro-cyclicality of this local development tool (Kane & Weber, 2016).

While TIF's effectiveness in raising commercial property values was limited, the interviews suggest an internal, qualitative shift in local governance. TIF emerged from the combination of austerity and devolutionary reforms following the 2007/8 financial crisis. This combination leaves local authorities more dependent on uncertain revenue streams – such as from future tax increases – which makes them more exposed to macroeconomic uncertainties, like pandemics or inflation. Consequently, local governance is evolving to embrace a more proactive stance towards managing risk and uncertainty. In line with prior arguments about the gentrification pressure inherent to TIF (Findeisen, 2020; Weber, 2010), this change shifts the focus local governance onto revenue-generating development, potentially at the expense of local needs.

Thus, largely ineffective in its key mechanism – raising property values to generate tax increments – TIF nevertheless has an effect on local governance. Interviewees emphasised TIF's role in facilitating and accelerating regeneration in designated areas (I7; I9; I10). However, the type of regeneration is sometimes contentious, raising questions about who

local development is for. This contradiction is starkly apparent in Battersea's infamous sky pool and 'poor doors' (Wainwright, 2021). Moreover, the growing complexity of development tools and the uncertainty surrounding local strategies have led local governments to increasingly rely on external actors, like consultants, for guidance. This reliance may introduce further commercial and market-driven thinking into local policy decisions. While beyond the scope of this chapter, future research should explore the democratic implications, in both decision-making processes and outcomes (Nölke, 2020), of TIF and other financialised forms of local governance.

5. Conclusion

This thesis has offered conceptual, empirical, and methodological contributions to the literature on local government financialisation. Chapters 2 - 4 of the thesis analysed three interconnected research questions. Chapter 2 explored what constitutes local government financialisation, and how it can be understood within the European context. It aimed to clarify the role of local governments in this process and support a common understanding of local government financialisation for the varied and diverse literature on the subject. Chapter 3 acknowledged that local governments do not financialise in a vacuum; rather, financialisation can be understood as a response to the structural context in which they operate, including developments at multiple spatial scales that interact with and shape local developments. As such, the chapter investigated the economic, financial, and institutional factors that shape local government financialisation across European countries. Chapter 4 focused on the implications of local government financialisation, investigating a specific 'financialised' urban development policy (Strickland, 2013; Weber, 2010), Tax Increment Financing (TIF), in English local authorities. Collectively, the chapters of this thesis contribute to a deeper understanding of the nature, underlying causes, and effects of local government financialisation.

This concluding chapter briefly reviews the methodological approach of this thesis, before synthesising its conceptual and empirical contributions. The final section of this chapter briefly discusses some limitations of the thesis and sets out avenues for further research.

An interdisciplinary and mixed-methods approach to studying local government financialisation

This thesis adopted an interdisciplinary and mixed-methods approach to offer a novel perspective to the existing literature on local government financialisation. By integrating insights from economic and financial geography literature on local governments' engagement with finance, the political economy literature on state financialisation, and heterodox economic research on financial hierarchies, and drawing from a range of qualitative and quantitative research methods, I aimed to develop a holistic and critical understanding of the subject. The interdisciplinary approach allows me to analyse local government financialisation in the context of processes and developments at national and global scales, that affect it. Overlooking this multi-scalar structural context in which local governments engage in financialisation can lead to somewhat simplistic interpretations of financialisation as merely a "welcome opportunity for cash-strapped communities" (Karwowski, 2019, p. 1003). To avoid this pitfall, the introductory chapter set out a framework that combines insights on entrepreneurial urbanism, state financialisation, and subordinate forms of financialisation for a study of local government financialisation that is attentive to developments at different geographical scales. This approach was applied to the specific research questions examined in chapters 2-4.

While existing research on local government financialisation typically focuses on single case studies in individual cities, this thesis took a different methodological approach. The second chapter in this thesis synthesised information across multiple cases to gain insights into the common threads and dynamics connecting them. The third chapter took a panel econometric approach to understand local government financialisation in relation to the broader conditions that shape it, across a sample of 22 European countries from 2000 through 2019. This approach was inspired by considerations of critical realist ontology, such as Peck and Whiteside's (2016, p. 242) argument that "city governments have become 'active agents' in the process of municipal financialization (…), although hardly under circumstances of their own choosing".

Existing studies predominantly use qualitative or quantitative methods, with the former more common. The fourth chapter of this thesis integrated a difference-in-differences analysis of over 2.2 million commercial properties in England with qualitative evidence to analyse the shift towards financialisation in English local governance. In this chapter, I used semi-structured interviews and the analysis of freedom of information requests both to inform the econometric analysis, and to interpret its results.

However, the critical realist ontology, to which this thesis subscribes, cautions for careful interpretation of econometric results. Consequently, the results of the panel econometric study in Chapter 3 were interpreted as conditional correlations rather than direct causal effects. Chapter 4 used a more explicitly causal econometric design. While I explicitly set out the assumptions and methodological limitations of the chapter, the combination of econometric analysis with qualitative evidence allowed me to shed light on the structural factors that shape the observed, empirical outcomes and associations.

What is local government financialisation?

In the wake of the 2007/8 financial crisis, an expanding literature has documented the increasing use of "financially mediated means" (Peck & Whiteside, 2016, p. 239) in local governance across various regions, including Europe (Guironnet, 2019; Savini & Aalbers, 2016), North America (Peck & Whiteside, 2016; Rutland, 2010; Weber, 2010), and Asia (Anguelov, 2023; Pan et al., 2017; Wu, 2021). These studies offer rich empirical detail on how local governments enable financial investment into local public assets and services, such as housing (Beswick & Penny, 2018; Fields & Uffer, 2016), infrastructure (Allen & Pryke, 2013; Anguelov, 2023; Deruytter & Derudder, 2019), and social care (Bayliss & Gideon, 2020; Hall & Stephens, 2020; Horton, 2021), and how local governments increasingly use financial instruments in their borrowing and investment practices (Dagdeviren & Karwowski, 2022; Mertens et al., 2021; Weber, 2010).

Despite the proliferation of studies on 'local government financialisation', it is not always clear what this means. Authors differ in their interpretations of the phenomenon, the specific sphere of financialisation to be studied, and the actors involved. Specifically, what is being financialised? And what is the role of local governments in this process? The second

chapter of this thesis sought to clarify the role of local governments in financialisation. Building on Whiteside's (2023, p. 237) definition of state-led financialisation as both "enabled" and "internal", I systematically surveyed and integrated geography and political economy-inspired research on instances of local government financialisation with the comparative analysis of country-level statistics to identify four channels through which the process unfolds empirically.

First, local governments enable the financialisation of public assets and services by privatising and outsourcing them. Moreover, they apply financial rationales to planning reforms and proactively market development projects to attract financial investors into urban development. While this does not have to result in financialisation, it enables private investors to restructure public assets to extract capital and other financial gains and use them as collateral for borrowing. In these cases, financialisation can be understood as an unintended outcome of local governments' reactions to structural constraints on their operations, such as austerity and financialisation of the economy (Copley, 2022; Krippner, 2011). Indeed, financialisation might not even be on the radar of local governments. However, second, local governments actively use financial instruments when they borrow against their assets or associated revenue streams. As above, if public assets are used as collateral for borrowing, they get exposed to financial markets and rationales, making the assets' future contingent on the borrowers' ability to repay their debt (O'Neill, 2019). The difference is that now, the local government instigates financialisation rather than merely enabling it. When local governments actively use financial instruments, they apply financial rationales to their internal management. The third channel relates to local governments' active debt management. In the decade following the 2007/8 financial crisis, local government borrowing, including through bonds, has exploded alongside an increasing use of derivatives to manage borrowing risks and costs. At times, derivatives were also used to make a speculative profit. Fourth, some local governments have invested in financial assets, such as debt or equity of private companies, or extended credit to private and public borrowers. Especially during inflation, these investments may be seen as responsible handling of taxpayers' money (Deruytter & Möller, 2020) and can create jobs locally, though the extent to which this can be achieved likely varies with the capacity of the local government to impose and enforce conditionalities on their loans.

This thesis focuses on the financialisation of local governance, distinguishing it from other concepts such as entrepreneurialism, privatisation, and assetisation, which have been highlighted as important drivers of local development in recent years (e.g., Becker et al., 2015; Penny, 2022; Raco, 2012; Ward & Swyngedouw, 2018). In line with other authors, I understand local government financialisation as a continuation of urban entrepreneurialism (Beswick & Penny, 2018; Peck, 2017). This refers to the increasingly competitive conditions under which local governments aim to attract funding. Financialisation is one way entrepreneurialism is operationalised. However, entrepreneurialism relates to a broader shift in local governance, with an increasing orientation towards the needs and rationales of

private markets, shaping local governments' priorities and the types of projects pursued. This shift towards entrepreneurial rationales and market orientation in local governance is particularly evident in Chapter 4 of this thesis. A quote from an elected official exemplifies this shift when he describes TIF as “a way of relooking at decision making for an area (…) nobody should ever think that I want a swimming pool because it would be nice to have a swimming pool. You have to say I want a swimming pool because in five years’ time it will pay for itself”.

The thesis seeks to draw a clear conceptual distinction between financialisation and privatisation, while acknowledging their interrelation. Like financialisation, privatisation is sometimes a slippery and fuzzy concept. Mercille and Murphy (2017, p. 1045) define it as the “myriad ways in which the private for-profit sector displaces the public sector in the provision of goods and services”. In Chapter 2, I argue that privatisation of public assets does not necessarily lead to their financialisation. However, privatisation *can* lead result in financialisation through two channels: first, where privatisation involves financial investors such as private equity or hedge funds, the management of assets and services often changes to maximise income for the new owners, including shareholders. The second mechanism involves leveraging spatially fixed assets like land or housing, and associated income streams, such as rental income, as collateral for borrowing. Therefore, privatisation does not deterministically result in financialisation of public assets and services, and privatisation is not a necessary condition for financialisation, which can also occur through other channels, such as local governments' active use of financial instruments. Nevertheless, the two are related, as explored in Chapter 2.

While the focus of the thesis is on financialisation, the themes and cases discussed are also relevant to the emerging literature on ‘assetisation’. This literature highlights assets as “both a resource and property” (Birch & Ward, 2024, p. 9), with the owner's interest being to own and control the asset to derive continuous income streams - “a durable economic rent” - from it (Birch & Muniesa, 2020, p. 2). Although ‘assetisation’ - “turning things into assets” - is perceived as a narrower process compared to the wide-ranging concept of financialisation (Birch & Muniesa, 2020, p. 5), it has the potential to inform and add further clarity to the financialisation literature (Golka et al., 2024). The discussions in this thesis reflect this argument. In Chapter 2, I highlight debt-based investment strategies as one channel of financialisation, whereby local governments borrow against the asset itself or associated (including anticipated) income streams, such as rental income or tax revenue, in the case of TIF. The income in these cases is generated by an underlying asset, such as housing or land, owned by the local government. ‘Assetisation’, in the cases discussed in the thesis, may refer to this change in purpose of the publicly owned asset, which, besides contributing to a public objective such as providing affordable housing or local economic development, now also serves to generate income. Financialisation occurs when local governments borrow against these revenue streams derived from their assets. This introduces a new financial actor into the mix, with further expectations of the underlying asset. As discussed in Chapter

4, this assetisation-financialisation can reconfigure public priorities in line with entrepreneurial, market-oriented goals.

How do structural conditions shape local government financialisation?

This thesis draws on the critical realist discussion regarding the relationship between structure and agency to explain local government financialisation. This approach is encapsulated in a quote by Peck and Whiteside (2016, p. 242), who argue that "city governments have become 'active agents' in the process of municipal financialization (…), although hardly under circumstances of their own choosing". The critical realist perspective acknowledges that the actions of local state actors are not solely determined by their agency but are also shaped by underlying structural conditions. Critical realism posits that the world is composed of both empirical phenomena, such as the extent of local government financialisation, and deeper underlying structures and causal mechanisms, such as competitive pressures on local governments (Barnes & Christophers, 2018; Lee, 2012; Sayer, 1982). These structures and mechanisms jointly shape empirical events and are triggered by agency (Lawson, 2006; Lee, 2012). In other words, for local government financialisation to occur, actors within local state structures must decide to engage in financialisation—e.g., by borrowing against their assets, using new financial instruments in their debt management, or investing in financial assets (see Chapter 2). The thesis argues that conditions beyond the immediate control of local governments—what Peck (2017, p. 10) called "structuring" conditions—shape the actions that local government actors take, thereby influencing the forms and extent of financialisation that we can empirically observe.

In applying this framework, the thesis highlights significant variation across countries in the extent to which local governments use financial instruments in their debt management and invest in financial assets. Chapter 2 showed that despite the empirical focus on Britain in the literature on local government financialisation, British local governments make only modest use of financial instruments compared to other European countries. Chapter 3 noted that local governments in Southern and Eastern Europe tend to be less involved in 'active' financialisation compared to their counterparts in Western Europe and Scandinavia.

I argue that this variation in the empirical manifestation of local government financialisation can – at least partly – be explained through the conditions in which local governments operate. Existing studies on local government financialisation often explain the shift in local governance through broader macroeconomic developments and changes in national policies. Specifically, the adoption of financial instruments by local governments is interpreted as an adaptation of entrepreneurial governance strategies to the era of financialisation (Mertens et al., 2021; Savini & Aalbers, 2016). National-level austerity is another key factor frequently highlighted, seen as a major catalyst driving financialisation in local governments. Many authors argue that austerity policies at the national scale have strained local budgets, forcing local governments to seek alternative revenue sources to sustain services, maintain public infrastructure, and manage payroll expenses. In recent

years, this has often led to an increased reliance of local governments on financial markets to compensate for reduced transfers from central government (Beswick & Penny, 2018; Dagdeviren & Karwowski, 2021; Lagna, 2015; Omstedt, 2020; Peck & Whiteside, 2016). In addition, by giving local governments more responsibility for the provision of and payment for public services, devolutionary efforts have arguably enabled them to use financial instruments and markets, thus engaging in financialisation (Mertens et al., 2021).

While many academic articles mention the driving factors of local government financialisation, these are often noted in passing rather than being a central focus of analysis (Christophers, 2019; Peck, 2017). Hence, this literature is sometimes criticised for its lack of a systematic understanding of the broader drivers of this financialisation, or its "structuring conditions" (Peck, 2017, p. 10). These conditions shape the environment in which local governments operate and against which their financialisation unfolds, but over which they have no direct control. Exploring these conditions is essential for a deeper understanding of local government financialisation, why it occurs, and why it takes different forms across places (Christophers, 2019).

Chapter 3 of this thesis sought to address this gap by analysing the empirical relevance of economic, institutional, and financial conditions in shaping local government financialisation across European countries. It used a pooled Generalised Least Squares approach with a correction for autocorrelation within panels to examine annual, country level data from 22 countries across Western, Southern, and Eastern Europe between 2000 and 2019. I found that local government financialisation is shaped by economic, financial, and institutional conditions, as well as financial subordination. Specifically, financialisation tends to be higher in more decentralised countries, and where the financial sector is more developed. The chapter also offered limited support for the relevance of austerity, with higher austerity being correlated with lower use of marketable debt. However, this correlation is not statistically significant, and I found no relationship between austerity and the other indicators of local government financialisation. Finally, financialisation is consistently lower in local governments in Southern and Eastern Europe, reflecting their peripheral status in the global economy and financial system. These results are robust to a series of robustness tests, using different estimators (pooled Ordinary Least Squares, inclusion of year-fixed effects), estimating the relationship between financialisation and structuring conditions for the pre- and post-2008 periods separately, and using alternative measures for the main dependent and independent variables.

These structuring conditions not only shape the extent to which financialisation occurs, but they also affect the success of financialised local policies. Chapter 4 zoomed in on such a policy, Tax Increment Financing (TIF). TIF has received significant attention in the US context, as a financialised development tool (Peck & Whiteside, 2016; Weber, 2010). Following the 2007/8 financial crisis, it was introduced in seven local authorities across England as a tool to promote local development. TIF allows local authorities to access a new revenue stream: the increase in commercial property taxes within designated areas. Local authorities can then

borrow against this anticipated revenue to fund area regeneration. In theory, regeneration raises property values, leading to increased taxes and thus enabling the project to pay for itself. However, this outcome hinges on the actual increase in property values.

Chapter 4 examined whether the use of TIF in English local authorities has raised commercial property values. In other words, I assessed whether the financialised policy was successful in its core mechanism. I used advanced panel econometrics, specifically a difference-in-differences approach, to analyse a dataset of over 2.2 million commercial properties across three time periods: 2008, 2015, and 2021. To enhance the study's design, I incorporated insights from 15 semi-structured interviews and one email communication with council officers, local elected officials, civil servants, and senior professionals in the property and consultancy sectors, as well as information from 12 freedom of information requests to local authorities and central government bodies. Moreover, I also used interviews to interpret the econometric results.

The findings of the chapter indicate that the success of the financialised policy was shaped by macroeconomic conditions and uncertainties. I found that the policy's effect on commercial property values varies by location and industry. In London, the introduction of TIF is linked to an increase in retail property values of roughly 17.3 %. However, the increase in office property values in London is lower in TIF areas compared to non-TIF areas – by 20.4%. Outside London, I found no effect of TIF on commercial property values, regardless of industry. The econometric findings are robust to a series of tests, such as accounting for potential anticipation of the policy and confounding policies. These findings may come as a surprise to proponents of TIF. But interview data indicates that the Covid-19 pandemic and associated lockdowns have disrupted the commercial real estate, and especially the office market, affecting property value growth and thus limited the success of TIF.

What are the implications of local government financialisation for public services and local governance?

It has sometimes been argued that financialisation, though a "problematic means", can be used for "positive socioeconomic ends" (Christophers, 2019, p. 572). This perspective suggests that financialisation enables local governments to generate revenue for essential public services, such as housing or infrastructure development (Beswick & Penny, 2018; Peck & Whiteside, 2016), and to fill budget gaps (Dagdeviren & Karwowski, 2022). Consequently, financialisation can appear sensible and even desirable from the standpoint of individual local governments and their constituents, particularly when it supports services that would otherwise not be provided.

However, Chapter 2 of this thesis argued that while financialisation may look like an attractive strategy from the perspective of individual local governments, it generates new risks with potential implications for public provision. These risks, or adverse implications of local government financialisation, include financial, distributional, and democratic concerns (Pike, 2023). Financial concerns include the risk of losses from local governments' use of

financial instruments, which may lead to cuts in local services or stopping or postponing investment (Hendrikse & Sidaway, 2014; Weber, 2010). Distributional concerns emerge from integrating financial market logics into public provision, which can reorient services towards more affluent populations, increase prices, or prioritise profit extraction at the expense of social needs (Allen & Pryke, 2013; Fields & Uffer, 2016; Horton, 2021). Financialisation can also exacerbate inequalities between places, as the ability to benefit from financial innovation varies, leaving some places behind (Karwowski, 2019, p. 1013). Additionally, concerns about democratic accountability arise. For instance, local governments may alter their planning processes and governance to suit investors' needs, potentially at the expense of local populations (Bradley, 2021; Guironnet, 2019). As local governments increasingly engage with financial investors, such as on debt markets, creditors may become a "second constituency", with repayment priorities potentially superseding public service funding (Peck & Whiteside, 2016, p. 245). Therefore, while financialisation may look like an attractive strategy from the perspective of individual local governments, it introduces new risks and implications for public provision which local governments now have to consider and manage (Farmer, 2014).

Chapter 4 presents empirical evidence on the implications of local government financialisation, with a specific focus on TIF. The chapter argues that TIF has been largely ineffective in increasing property values in English local authorities, casting doubt on the positive rationale for local government financialisation. TIF exemplifies the combination of austerity and devolutionary reforms following the 2007/8 financial crisis, leaving local authorities more dependent on uncertain revenue streams and more exposed to macroeconomic uncertainties, such as pandemics or inflation. In response to these changing 'structuring' conditions, local governments have taken a more active stance towards managing risks. To manage macroeconomic uncertainties and the inherent unpredictability of tools like TIF, local governments call on private actors, such as consultancies, for risk management and integrate market-based logic from the outset of their development planning. This approach is evident in practices like promoting investment opportunities at international real estate fairs and prioritising revenue-generating development projects, which may sideline more socially oriented objectives. Interviews revealed that local government actors not only adapt to these conditions of austerity and the ideal of "self-sufficiency" but also internalise them, proactively pursuing market-oriented projects and policies. This highlights the interplay between structure and agency, showing how internalising structural conditions can solidify them.

Similarly, Chapter 2 highlights how interactions and feedbacks between the different channels of local government financialisation potentially amplify associated risks. For instance, losses from debt-based investment or speculative derivatives might lead to further local austerity measures (Bloom, 2023; Hendrikse and Sidaway, 2014). These measures could trigger privatisation and outsourcing, enabling further financialisation and new distributional (and democratic) risks. Ultimately, while local governments resort to financialisation to

navigate challenging structural conditions, financialised strategies perpetuate those conditions and may even undermine service provision and state capacity. Aligning local policy with creditor interests to increase the success of their debt issuance, local governments not only participate in financial markets but contribute to making a market for their debt. When local governments de-risk private investment in public service delivery, they solidify a system whereby local development becomes contingent on financial investors.

Limitations and further research

This thesis has sought to contribute a new perspective to the study of local government financialisation, offering novel conceptual and empirical insights through an innovative methodological approach. Existing research typically focuses on case studies of a single aspect of financialisation, often in individual cities. In contrast, Chapters 2 and 3 of this thesis systematically compare different aspects of local government financialisation across countries. In Chapter 2, this allowed me to address definitional issues of the literature on local government financialisation, clarifying how local governments enable, and actively use financialisation in their governance strategies. In Chapter 3, the panel econometric approach allowed me to explore the 'structuring conditions' (Peck, 2017) that shape local government financialisation across European countries. In particular, the chapter points to the relevance of financial subordination, largely overlooked in the existing literature on local government financialisation.

While the 'bird's eye' approach is a key advantage of these chapters and enables new insights by offering a systematic overview, it does so at the expense of empirical detail, including in-depth insights into causal processes. Therefore, further research could delve deeper into the causal processes shaping local government financialisation. Comparative studies, using qualitative, quantitative, and historical methods, would be particularly useful in examining the impact of structuring conditions on local government financialisation more closely. The findings of Chapter 2 can guide the selection of aspects of financialisation to be studied. The structuring conditions analysed in Chapter 3 could inform and define the dimensions for comparative research. Future studies might build on the findings of these chapters to explore how financial subordination affects various forms of local government financialisation, paying close attention to the similarities and differences between local governments in core and periphery.

Moreover, the findings of this thesis indicate that although financialisation may appear as an attractive strategy from the perspective of individual local governments, it generates new risks with potential implications for public provision which local governments now have to consider and manage (Bloom, 2023; Farmer, 2014; Pike, 2023). These risks are of financial, distributional, and democratic nature. As discussed in Chapter 2, risks may be further amplified through interactions between the channels of financialisation. More research is

needed to investigate the tensions between potential state capacity gains and risks of local government financialisation.

Chapter 4 provides some insights into these trade-offs: TIF may support regeneration of urban areas, but this can come at a cost to democratic processes. Specifically, the type of regeneration facilitated by TIF is sometimes controversial, as evidenced by the infamous sky pool and 'poor doors' (Wainwright, 2021) in the regeneration of the Battersea and Nine Elms area in London. Additionally, the growing complexity of development tools like TIF, and the uncertainty surrounding local strategies, have led local governments to increasingly rely on external actors, like consultants, for guidance. This reliance could introduce further commercial and market-driven thinking into local policy decisions. Future research should explore the democratic implications, in both decision-making processes and outcomes (Nölke, 2020), of TIF and other financialised forms of local governance.

If this thesis challenges the positive rationale behind local government financialisation; what are the alternatives? Two emerging research areas may offer interesting insights. Research on patient public finance suggest public banks (Marois, 2022; Mikheeva, 2023) and stronger regulations on local government borrowing (Li et al., 2023) as pathways to foster socially and environmentally sustainable public investment. For example, public development banks could reduce competition for funding among local governments and reduce the pressure on them to align their policy objectives with private creditor expectations. These institutions could also transfer credit risk away from local governments, as centralised public banks are less vulnerable to financial shocks than local governments. A centrally coordinated local government borrowing system, such as the one being implemented in China, could reduce "competition in infrastructure investment among local states" (Li et al., 2023, p. 1169), and by offering lower interest rates, diminish local governments' incentives to "maximize value extraction" from public assets. These proposals do not aim to remove finance from local governance but rather to curb its negative aspects by reducing the competitive pressures local governments face, thereby lessening the necessity to adopt financial logics in governance.

The emerging literature on 'new' and 'radical' municipalism, on the other hand, proposes to contest the competitive conditions of local governance from the ground up, rather than top-down. This literature emphasises the local as the "strategic entry-point" (Roth et al., 2023, p. 2009) for transformative change, highlighting the transformative power of a 'politics of proximity' (Russell, 2019) –intensifying interpersonal relations, as well as connections between people, places, and their environments. To avoid the 'local trap' (Purcell, 2006), the misconception that local scale is inherently progressive and democratic, and to recognise that "[s]ocialism within one city is not (…) a feasible project" (Harvey, 1989, p. 16), radical municipalists advocate for transnational networks of solidarity – taking an approach that embeds the local into the multi-scalar context that shapes it. An example is the reimagining of global supply chains to connect "municipally-coordinated democratically-governed worker-owned" cooperatives worldwide (Thompson, 2021, p. 331).Further research is

needed to explore whether such top-down or bottom-up approaches, or a combination thereof, can offer an alternative to local government financialisation. While addressing the challenges faced by low-income individuals, single mothers, and others in accessing financialised local services, such alternatives could go beyond distributional issues, potentially offering a more fulfilling vision of urban life, reimagining whom cities, and local governance is for.

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Appendix

Appendix 1: Chapter 3

Multicollinearity

Table A - 1 - Variance Inflation Factor

	Models			
	Table 2, columns 1, 3	Table 2, column 2	Table 3, columns 1, 3	Table 3, column 2
AUST	1.20	2.01	1.20	1.29
FDEV	1.65	1.67	4.54	5.26
DEC	1.64	1.67	1.86	1.83
GDP	1.82	1.28	1.86	2.06
SOUTH			1.21	1.10
EAST			4.06	4.69
Mean VIF	1.58	1.66	2.46	2.70

Unit roots

H0: Panel contains unit roots

Ha: Panels are stationary

Table A - 2 - Levin-Lin-Chiu test for the presence of unit roots

Variable	**p-value**
Marketable debt	0.0000
Derivatives	0.1287
Derivatives (only post-2008)	0.0000
Investment in debt securities	0.0052
AUST	0.0000
FDEV	0.0001
DEC	0.0308
GDP	0.0000

Robustness checks

Table A - 3 - Robustness checks: Marketable debt

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	POLS	Year FE	2000-8	2009-19	% GDP	Decent 1	Decent 2	Decent3	Eurozone	No FDEV
AUST	-0.027***	-0.017*	-0.010	-0.004*	-0.003	-0.003	0.000	-0.003	-0.004*	-0.005*
	(0.009)	(0.009)	(0.008)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
FDEV	0.721*	0.700*	0.615***	0.709***	0.203**	0.375***	0.319***	0.498***	0.548***	
	(0.369)	(0.384)	(0.119)	(0.131)	(0.083)	(0.083)	(0.082)	(0.082)	(0.085)	
DEC	0.139***	0.140***	0.096***	0.110***	0.077***				0.081***	0.074***
	(0.023)	(0.024)	(0.012)	(0.011)	(0.008)				(0.008)	(0.009)
GDP	-0.129***	-0.154**	-0.100***	-0.006	-0.017**	-0.009	-0.004	-0.010	-0.016**	-0.012*
	(0.045)	(0.064)	(0.027)	(0.006)	(0.007)	(0.006)	(0.005)	(0.006)	(0.007)	(0.007)
RAI						0.179***				
						(0.016)				
SAI							9.200***			
							(0.646)			
Unitary								3.309***		
								(0.442)		
Eurozone									0.246	
									(0.178)	

N	440	440	198	242	440	420	340	440	440	440
R^2	0.649	0.661								
adj. R^2	0.645	0.643								
Wald chi2			146.08	153.76	113.75	183.96	231.36	105.51	169.68	242.52
Prob > chi2			0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A - 4 - Robustness checks: Derivatives

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	POLS	Year FE	2000-8	2009-19	% GDP	Decent 1	Decent 2	Decent3	Eurozone	No FDEV
AUST	-0.020***	0.001	-0.003	-0.004	-0.000	-0.000	-0.001	-0.000	-0.001	-0.002
	(0.006)	(0.005)	(0.008)	(0.007)	(0.000)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
FDEV	0.236**	0.264**	0.027	0.479***	0.005	0.119	0.339*	0.316**	0.174	
	(0.101)	(0.107)	(0.125)	(0.149)	(0.006)	(0.153)	(0.177)	(0.124)	(0.127)	
DEC	0.060***	0.060***	0.020	0.078***	0.002***				0.047***	0.043***
	(0.012)	(0.010)	(0.013)	(0.014)	(0.001)				(0.013)	(0.012)
GDP	-0.086***	-0.072**	-0.021	-0.004	-0.001	-0.006	-0.013	-0.009	-0.012	-0.012
	(0.029)	(0.031)	(0.026)	(0.017)	(0.001)	(0.014)	(0.014)	(0.013)	(0.012)	(0.013)
RAI						0.066***				
						(0.021)				
SAI							2.941***			

							(0.827)			
Unitary								0.707		
								(0.467)		
Eurozone									0.343	
									(0.250)	
N	300	300	135	165	300	280	240	300	300	300
R^2	0.332	0.537								
adj. R^2	0.323	0.499								
Wald chi2			3.95	78.39	14.67	16.43	21.73	11.11	25.46	47.29
Prob > chi2			0.4124	0.0000	0.0054	0.0025	0.0002	0.0253	0.0001	0.0000

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A - 5 - Robustness checks: Investment in debt securities

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	POLS	Year FE	2000-8	2009-19	% GDP	Decent 1	Decent 2	Decent3	Eurozone	No FDEV
AUST	-0.006	-0.009	-0.007	-0.000	-0.001	-0.002	-0.001	-0.001	-0.002	-0.002
	(0.007)	(0.007)	(0.009)	(0.004)	(0.001)	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)
FDEV	1.158***	1.164***	0.686***	1.132***	0.036	0.280**	0.826***	0.606***	0.521***	
	(0.242)	(0.250)	(0.151)	(0.128)	(0.028)	(0.115)	(0.143)	(0.104)	(0.108)	
DEC	0.048	0.048	0.026*	0.053***	0.003				0.027**	-0.011
	(0.039)	(0.039)	(0.015)	(0.010)	(0.003)				(0.011)	(0.011)

GDP	0.014	0.029	-0.071**	0.003	-0.003	-0.002	-0.002	-0.003	-0.003	0.001
	(0.027)	(0.042)	(0.032)	(0.011)	(0.002)	(0.010)	(0.011)	(0.010)	(0.009)	(0.008)
RAI						0.114***				
						(0.018)				
SAI							3.866***			
							(0.778)			
Unitary								1.831***		
								(0.427)		
Eurozone									-0.481**	
									(0.226)	
N	440	440	198	242	440	420	340	440	440	440
R^2	0.405	0.408								
adj. R^2	0.400	0.375								
Wald chi2			34.46	146.13	5.09	61.21	67.57	60.39	38.21	77.74
Prob > chi2			0.0000	0.0000	0.2782	0.0000	0.0000	0.0000	0.0000	0.0000

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Appendix 2: Chapter 4

Further detail on qualitative and quantitative data

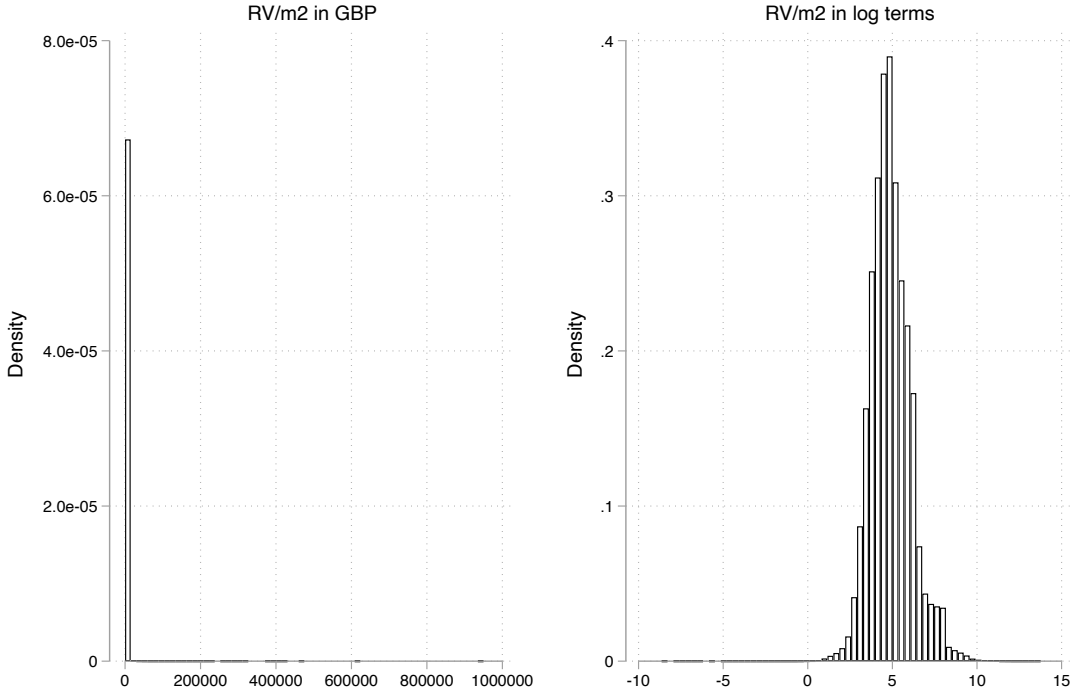
Table A - 6 – Interviews and written communication

Code	Function	Date
I1	Senior local government officer, economic development	16 May 2023
I2	Former council leader / senior elected official	30 May 2023
I3	Senior local government officer, finances	15 June 2023
I4	Local government officer, economic development	13 June 2023
I5	Civil servant, formerly in DCLG	10 July 2023
I6	Former local government official, economic development	21 June 2023
I7	Former council leader / senior elected official	10 July 2023
I8	Senior local government officer, finances	13 June 2023
I9	Former council leader / senior elected official	23 May 2023
I10	Senior local government officer, finances	30 June 2023
I11	Local policy consultant and former civil servant	14 April 2023
I12	Local development consultant	3 May 2023
I13	Senior commercial property industry representative	1 August 2023
I14	Senior local government official, former civil servant, DCLG	4 August 2023
I15	Former senior local government official, economic development (email communication)	August and September 2023
I16	Senior local policy consultant	23 May 2023

Table A - 7 – Freedom of Information requests

Code	Authority	Date
FOI1	Sheffield City Council	21 March 2023
FOI2	Greater London Authority	4 May 2023
FOI3	London Borough of Wandsworth	4 May 2023
FOI4	London Borough of Newham	4 May 2023
FOI5	Nottingham City Council	4 May 2023
FOI6	London Borough of Lambeth	4 May 2023
FOI7	Newcastle City Council	4 May 2023
FOI8	Gateshead Council	13 June 2023
FOI9	UK Debt Management Office	13 June 2023
FOI10	HM Treasury	7 August 2023
FOI11	Department for Levelling Up, Housing and Communities	7 August 2023
FOI12	Royal Docks	20 10 2023

Figure A - 1 – The distribution of rateable values



Robustness checks

Table A - 8 – Robustness check: possible anticipation in the Battersea TIF

		London				Outside London			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Overall	Industrial	Offices	Retail	Other	Industrial	Offices	Retail	Other
TIF	0.353***	-0.211	-0.0361	0.626***	0.352***	0.00167	0.101	0.110	0.970***
	(0.0868)	(0.244)	(0.0506)	(0.176)	(0.128)	(0.134)	(0.0806)	(0.102)	(0.161)
POST	0.00561	0.402***	0.205***	0.194***	0.00168	0.274***	0.191***	0.147***	0.0184
	(0.0271)	(0.00884)	(0.00490)	(0.00428)	(0.00935)	(0.00630)	(0.00401)	(0.00312)	(0.0118)
TIF*POST	-0.112	-0.138	-0.375***	-0.204*	0.0508	-0.0346	0.0678*	-0.00430	-0.246
	(0.0744)	(0.126)	(0.0882)	(0.104)	(0.155)	(0.0521)	(0.0382)	(0.127)	(0.169)
DENS	0.152***	0.0905***	0.0799***	0.130***	0.323***	0.0324***	0.0835***	0.173***	0.258***
	(0.00841)	(0.00701)	(0.00614)	(0.0104)	(0.0110)	(0.0120)	(0.00504)	(0.00640)	(0.00998)
_cons	3.331***	4.146***	5.306***	4.975***	4.964***	3.574***	4.238***	4.049***	4.487***
	(0.0204)	(0.0240)	(0.0229)	(0.0343)	(0.0346)	(0.0405)	(0.0186)	(0.0201)	(0.0283)
Obs	2197226	101910	256811	165371	107136	437684	377417	443657	307240
LA FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Region-year FE	Yes	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A - 9 – Robustness check: confounding policy (Enterprise Zones)

	(1)
TIF	0.125
	(0.0845)
POST	0.385***
	(0.0116)
TIF*POST	-0.0877
	(0.0679)
DENS	0.141***
	(0.0108)
_cons	3.539***
	(0.0258)
Observations	1453756
Local authority FE	Yes
Industry-by-year FE	Yes
Region-by-year-FE	Yes

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

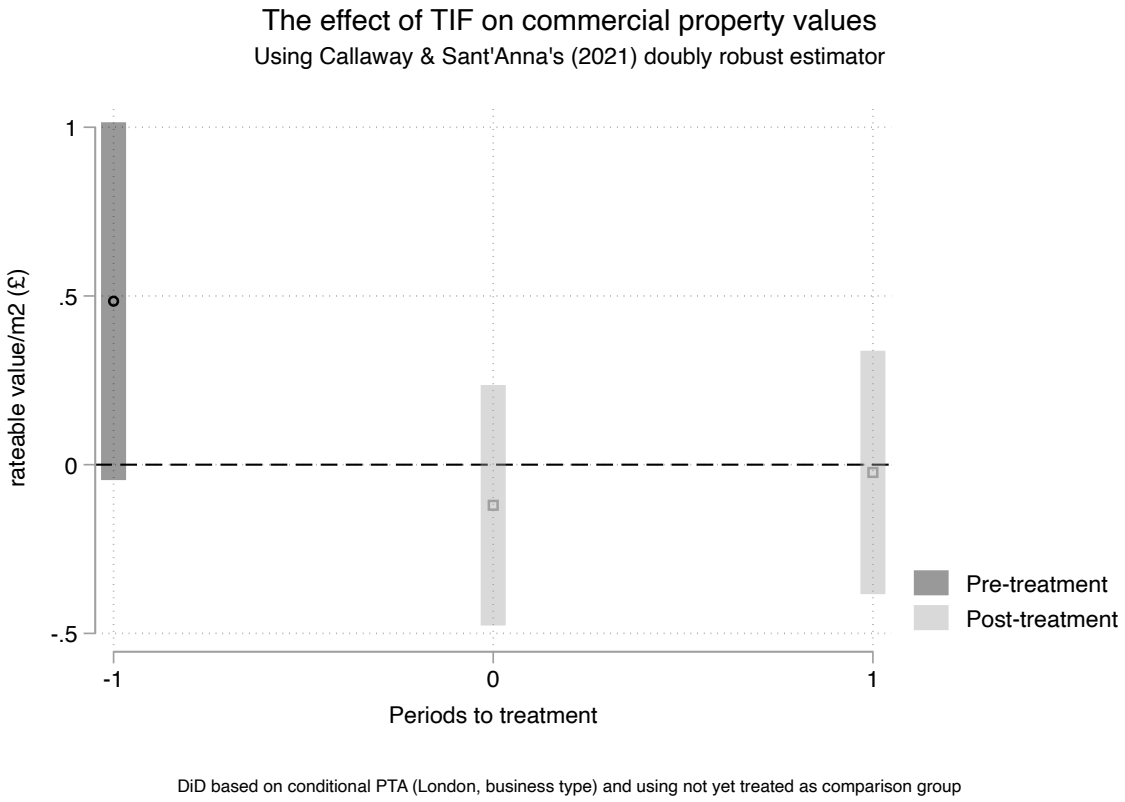
Table A - 10 – Robustness check: full sample

		London				Outside London			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Overall	Industrial	Offices	Retail	Other	Industrial	Offices	Retail	Other
TIF	0.186***	0.0540	-0.0885	-0.0933	0.612***	-0.187	0.0935	0.0716	0.928***
	(0.0542)	(0.0764)	(0.0870)	(0.0831)	(0.107)	(0.126)	(0.0814)	(0.119)	(0.155)
POST	0.0919	0.412***	0.205***	0.194***	-0.0736***	0.314***	0.191***	0.146***	-0.0238**
	(0.0755)	(0.00887)	(0.00491)	(0.00426)	(0.0102)	(0.00551)	(0.00403)	(0.00395)	(0.0121)
TIF*POST	-0.0742*	0.0226	-0.228***	0.161***	-0.226***	0.0453	0.0734*	0.0151	-0.245
	(0.0442)	(0.0598)	(0.0704)	(0.0497)	(0.0699)	(0.0567)	(0.0384)	(0.124)	(0.159)
DENS	0.157***	0.0882***	0.0794***	0.140***	0.316***	0.0519***	0.0837***	0.191***	0.257***
	(0.00788)	(0.00702)	(0.00610)	(0.0125)	(0.0114)	(0.0115)	(0.00507)	(0.00911)	(0.0102)
_cons	3.212***	4.153***	5.304***	4.954***	5.178***	3.374***	4.237***	3.993***	4.594***
	(0.0199)	(0.0241)	(0.0228)	(0.0412)	(0.0360)	(0.0390)	(0.0187)	(0.0288)	(0.0289)
Obs	2264690	104490	259307	166961	115913	468194	377658	445649	326517
LA FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry-year FE	Yes	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a
Region-year FE	Yes	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a

Standard errors in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure A - 2 – Robustness check: using Callaway & Sant'Anna's doubly robust estimator



Appendix 3: Construction of statistical aggregates in Chapters 2 and 3

Chapters 2 and 3 of this thesis use a series of statistical measures of local government financialisation and its potential determinants at the aggregate (national) level. This appendix sets out how each of the measures was constructed, and based on which data.

Construction of measures in Chapter 2

Financial indicators as a share of GDP: data are collated available on the Eurostat website from (table gov_10a_ggfa)[15]. For example, for the measure of total debt as a share of GDP, I used the following specifications to query the data:

- Consolidated [CO]
- Counterpart sector: Total economy and rest of the world [S1_S2]
- Financial position: Liabilities [LIAB]
- National accounts indicator (ESA 2010): Debt securities [F3] + Loans [F4]
- Sector: Local government [S1313]
- Stock or flow: Stock [STK]
- Time frequency: Annual [A]
- Unit of measure: Percentage of gross domestic product (GDP) [PC_GDP]

Local governments' marketable debt as a share of total local government debt: I calculated this measure as $Marketable\ debt = \frac{Debt\ securities\ [F3,LIAB,S1313]}{(Debt\ securities\ [F3,LIAB,S1313]+Loans\ [F4,LIAB,S1313])}$, using data from Eurostat table gov_10a_ggfa.

For the **United Kingdom**, no data on government finances is available from Eurostat. Instead, I used data on local government financial accounts collated by the Office for National Statistics (ONS)[16], following the European System of Accounts (ESA) 2010 methodology (Eurostat, 2013). To construct the financialisation measures used in Chapters 2 and 3 of this thesis, I calculated the sum of stock values of all quarters, following Eurostat methodology (Eurostat, 2013). To construct the measures of financialisation as a share of GDP, I used ONS data on 'Gross Domestic Product at market prices'[17].

Construction of measures in Chapter 3

Financial indicators in euros per capita: To calculate per capita values of local government financialisation, I use total population numbers from Eurostat data on Demography, population stock and balance (table tps00001). The population data is available for the UK for the period of study. However, to calculate the variable of interest, i.e., financialisation

[15] https://ec.europa.eu/eurostat/cache/metadata/en/gov_10q_ggfa_esms.htm

[16] https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicspending/datasets/esatable27quarterlyfinancialaccountsofgeneralgovernment

[17] https://www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/ybha/qna

indicator in euros per capita, I first need to convert the ONS data from GBP to euros. To this end, I use ONS annual GBP-EUR exchange rates[18].

Austerity: this variable is constructed as the annual change in central government expenditure as a percentage of GDP. I use data on 'General government expenditure by function' from Eurostat (table gov_10a_exp)[19] and 'General government main aggregates: ESA Table 2' from the ONS[20] using the variable "total expenditure" for sector S1311 (central government). The change was calculated as $Austerity = \frac{Total\ expenditure_t}{Total\ expenditure_{t-1}}$.

Financial Development: the IMF Financial Markets index, a sub-indicator of the fund's Financial Development index (Svirydzenka, 2016) which ranks countries based on measures of the 'depth' of financial markets (e.g., bonds issued by public and private borrowers), 'access' (e.g., the range of credit providers), and 'efficiency' (e.g., stock market turnover). The natural logarithm was taken to facilitate the interpretation of the results.

Decentralisation: This was calculated as $Decentralisation = \frac{Local\ government\ expenditure\ (S1313)}{Total\ government\ expenditure\ (S13)}$ using data on 'General government expenditure by function' from Eurostat (table gov_10a_exp)[21] and 'General government main aggregates: ESA Table 2' from the ONS[22] using the variable "total expenditure" for sectors S13 (general government) and S1313 (local government).

[18] https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/timeseries/thap/mret
[19] https://ec.europa.eu/eurostat/databrowser/view/gov_10a_exp/default/table?lang=en
[20] https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicspending/datasets/esatable2mainaggregatesofgeneralgovernment
[21] https://ec.europa.eu/eurostat/databrowser/view/gov_10a_exp/default/table?lang=en
[22] https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicspending/datasets/esatable2mainaggregatesofgeneralgovernment