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‘Deal or no deal?’ Governing urban infrastructure funding and financing in the UK City Deals

Forthcoming in Urban Studies

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Abstract

How urban infrastructure is funded, financed, and governed is a central issue for states at the national, city-regional and city scales. Urban infrastructure is being financialised by financial and state actors and transformed into an asset in the international investment landscape. Local governments are being compelled by national states and financial institutions to be more entrepreneurial in their infrastructure funding and financing and to reorganise their governance arrangements. This paper explains the socially and spatially uneven unfolding and implications of urban infrastructure financialisation and local government attempts to implement more entrepreneurial practices and governance forms. The empirical focus is the City Deals in the UK: a new form of urban governance and infrastructure investment based upon negotiated central-local government agreements on decentralised powers, responsibilities and resources. The continued authority of the highly centralised UK national state, its managerialist institutions, and conservative/risk-averse administrative culture have constrained urban infrastructure financialisation and entrepreneurial urban governance in the UK City Deals. Situated in their particular spatial, temporal, political-economic and institutional settings, financialisation is understood as a socially and spatially variegated process and urban governance is interpreted as the articulation and mixing of new entrepreneurial *and* enduring managerialist forms.

1. Introduction

Governing the funding and financing of urban infrastructure is a central concern for states across the world at the national, city-regional and city scales. Mounting pressures have been constructed by national and local state and financial actors to renew and develop urban infrastructures. These stresses include: ageing and physical deterioration of existing assets and systems; increasing public and private demands for higher levels of more integrated, sophisticated and sustainable services; and, growing expectations of urban infrastructure to enhance national economic productivity and competitiveness (OECD 2014, Picot *et al.* 2015). Estimates of infrastructure investment required to enable economic growth globally are huge and urban-focused, in some analyses increasing from \$2.6 trillion in 2013 to \$4.8 trillion by 2030 (McKinsey & Co. 2013). Following the global financial crisis and Great Recession, the potential contributions of urban infrastructure to economic recovery have been rediscovered alongside state actor efforts to reduce expenditure and indebtedness under austerity and fiscal consolidation (Schäfer and Streeck 2013).

Simultaneously, urban infrastructure has become embroiled in the current episode of financialisation (O'Neill 2013). It is being unevenly transformed by financial and state actors from a public good into an asset within the international investment landscape (Inderst 2010). Existing and new private and/or state actors – including pension, private equity and sovereign wealth funds – are incorporating urban infrastructure into their investment portfolios (Thrower 2017). Instability, volatility, uncertainty, and low interest and growth rates mark the international economy following the 2008-09 crisis (IMF 2017). Financial actors have been attracted by

infrastructure's particular economic and investment characteristics: fixed assets providing essential collective services with long-term, relatively predictable and stable revenue streams capable of supporting high levels of debt, and yielding attractive and less volatile returns insulated from swings in business cycles and markets (Brown and Robertson 2014). New and reformed existing instruments and governance arrangements have proliferated and been adapted by financial and state actors to configure and govern the funding and financing of urban infrastructures (see, for example, Peck and Whiteside 2016, Strickland 2016, Ward 2013, Weber 2010). In the often monopolistic provision of critical services such as energy, transport and water, national and local states play multiple roles as customers, guarantors, (co-)investors, partners, and/or regulators for investors in urban infrastructure (O'Neill 2017). Local governments especially are being drawn into novel, often untried and uncertain, long-term relationships and arrangements with financial institutions in the current period of financialisation and under conditions of national austerity (see, for example, Ashton *et al.* 2014, Farmer 2014). The substance, pace and ramifications of such changes are revealing gaps in our understanding and knowledge. This paper aims to explain the socially and spatially uneven unfolding and implications of urban infrastructure financialisation and local state attempts to implement more entrepreneurial governance forms.

The empirical focus is the City Deals in the UK. City Deals are a new form of urban governance involving infrastructure investments based upon negotiated agreements between central and local governments on decentralised powers, responsibilities and resources. City Deals were introduced in the UK from 2011 by the Conservative and Liberal Democrat coalition government. They were formulated in the aftermath of the 2008 crisis and shaped by the UK national government's public finance deficit reduction priority and ambition for enhanced decentralisation to enable cities to boost economic growth and recovery. City Deals involve national government in negotiated agreements with over 30 – and rising – city-regional groups of

local governments in England, Scotland, Wales, and, in due course, Northern Ireland. UK national government actors have used City Deals to incentivise coalitions of local state actors at the city-regional scale to develop visions, strategies, and priorities – especially for funding and financing urban infrastructure – and reform governance structures to “unlock” city-regional growth (Cabinet Office 2011: 1). In the UK and internationally, City Deals are a novel and experimental kind of central-local government relation, public policy-making, and urban governance. Further, the City Deal concept has been promoted (e.g. Clark and Clark 2014), sold (e.g. KPMG 2012), and attracted international interest in Australia, the Netherlands, and the US (see, for example, Burton 2016, Katz 2016, KPMG 2014, Prinssen 2016). This first national comparative study of the UK City Deals provides a critical case to explain how, why, where, when, and for whom the governance of urban infrastructure funding and financing is transforming, and to interpret its wider conceptual and theoretical ramifications. The argument is that the continued authority of the highly centralised UK national state, its managerialist institutions and conservative/risk-averse administrative culture have constrained urban infrastructure financialisation and entrepreneurial urban governance in the UK City Deals.

The next section engages critically research on urban infrastructure financialisation and governance. It distinguishes funding from financing, identifies characteristics of infrastructure financialisation, and introduces a framework to understand the articulation and overlapping of existing and established managerialist *and* new and emergent entrepreneurialist practices and techniques governing urban infrastructure funding and financing at the city and city-region scale. The following section introduces the City Deals and traces the co-existence and inter-relations of entrepreneurial *and* managerial governance in their origins, anatomy and roll-out across the UK since 2011. The next section examines the funding, financing and governance of urban infrastructure in the City Deals. It demonstrates the uneven extension and nature of infrastructure financialisation and the articulation and overlapping of governance forms with

both managerialist *and* entrepreneurial characteristics. The conclusions summarise the empirical findings and draw out their wider conceptual and theoretical contributions. Situated in particular geographical and temporal contexts and political-economic and institutional settings, financialisation is understood as a socially and spatially variegated process: designed, negotiated and managed by multiple actors. Urban governance is conceptualised as the uneven and overlapping articulation of emergent entrepreneurial *and* enduring managerialist forms.

2. Financialising urban infrastructure and the articulation of entrepreneurial *and* managerialist urban governance

Urban infrastructure is a growing focus for financial and local state actors in the contemporary period of financialisation (O'Neill 2013). While a contested concept, financialisation refers to the “the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies” (Epstein 2005: 3).

Recent conceptualisations of financialisation have moved on from somewhat all-encompassing initial formulations (Thrift and Leyshon 2008). Current thinking works with more measured, nuanced conceptions that recognise its social, spatial and institutional constitution, unevenness, implications, and limits (Aalbers 2015, Christophers 2015, Keenan 2017, Sawyer 2016).

Conceptualising a process of financialising urban infrastructure provides a way to grasp the uneven and variegated ways in which financialisation unfolds. Financialisation is designed, negotiated and managed by multiple financial and state actors in geographical and temporal contexts and political-economic and institutional settings (Sawyer 2016, Strickland 2016).

Urban infrastructure is being financialised by financial *and* state actors for several connected reasons. Infrastructure has particular attributes aligned with the demands of financial institutions: essential service provision to people and organisations (e.g. physical flows such as broadband,

energy and transport and public goods such as education and healthcare); long-term time horizons; high capital intensity; stable cash flows and ability to support high debt levels; less volatile returns; state involvement either as direct clients (e.g. via fixed-term concessions) or proximate to transactions (e.g. via regulatory agencies); natural monopolies (e.g. via network characteristics, capital intensity or public policy); and, generally low technological risk (Inderst 2010). Low growth and interest rates coupled with uncertainty in the wider international economy have improved infrastructure's relative position for investors compared to other assets such as bonds, commodities and equities. National and local governments have been searching for new ways of funding and financing infrastructure, often involving the private sector, while trying to reduce public expenditure and debt. For some, financialisation is transforming urban infrastructure from a public good into an alternative asset class for financial actors and states in the international investment landscape (Inderst 2010). Others are more cautious because of infrastructure's heterogeneity across different sectors with varying risk, return and maturity profiles (Thrower 2017).

Work on urban infrastructure financialisation has revealed the changing long-term ownership and control of assets and revenue streams, the shifting relations and dependencies between national and local states and private actors, and the ramifications for urban planning and service provision (see, for example, Allen and Pryke 2013, Ashton *et al.* 2014, Farmer 2014). But research has only begun explaining how the financialisation of urban infrastructure is unfolding in particular national and local contexts, and how it is relating to changes in the governance of infrastructure funding and financing (see, for example, Guironnet and Halbert 2014, Halbert and Attuyer 2016, O'Neill 2013, Strickland 2016, Weber 2010).

Two contributions are made to this endeavour that respond to calls not to "black box" finance in engaging financialisation (Christophers 2015: 191). An important distinction is between the

funding and financing of infrastructure. Funding is where the money comes from to pay for the infrastructure over time. Funding provides the revenue streams that repay the costs of financing (e.g. interest on debt, dividends to equity holders) and meet the up-front costs of infrastructure construction (Maxwell-Jackson 2013). Funding is typically from taxes (e.g. general taxation), user fees (e.g. tolls on bridges) or other charges (e.g. payments for utility services). Financing is how the capital is assembled and structured to enable the investment to proceed; the packaging up of infrastructure projects by actors with risk, return and maturity profiles to attract financial institutions to provide investment capital (Allen and Pryke 2017). The contemporary problem for urban infrastructure is funding and the provision of relatively stable, secure and predictable annual cash flows to pay for the costs of financing infrastructure projects (Maxwell-Jackson 2013). While there exists a surplus of investment capital globally in an era of low interest rates, stagnant growth, and uncertainty, financial institutions still seek infrastructure projects structured to deliver their desired returns, risks and maturities. Reducing public expenditure and debt under austerity, national and local governments are keenly searching for and open to ways to secure private sector capital to fill their infrastructure gaps. Reflecting and reproducing infrastructure financialisation, such conditions have stimulated innovation in new alongside the persistence and adaptation of old funding and financing practices. These range from existing and established ‘tried-and-tested’ techniques to emergent and newer, innovative practices (Table 1).

< insert Table 1 about here >

As the process of urban infrastructure financialisation unfolds and extends in geographically and temporally differentiated ways across cities internationally, analysis risks getting disoriented in its diversity. To assist interpretation for broader understanding and explanation, it is helpful to

outline generalizable characteristics to help identify infrastructure financialisation (Table 2). They are not a fixed template or rigid check list to enable empirical analysis to conclude whether or not certain urban infrastructures are financialised in a cut and dried manner. Given the understanding here of financialisation as a variegated and unevenly unfolding process shaped by multiple actors, the characteristics provide a heuristic to help discern and explain the extent and nature of financialisation in particular empirical cases.

< insert Table 2 about here >

Urban infrastructure holds a central and longstanding position in urban governance research. This is because the local state plays a key role, alongside other actors, in the provision of collective consumption goods and infrastructural services to enable economic and social activities in urban areas (Hackworth 2002, Jonas *et al.* 2010). The state retains this integral role in infrastructure to underpin capital accumulation due to its large scale, capital investment requirements, long-term time horizon, monopoly and competition issues, externalities and other market failures – all of which call “for some combination of finance capital and state engagements” (Harvey 2012: 12). Urban infrastructure financialisation consequently has profound implications for urban governance. Yet, work is only beginning to explain how local governments are being drawn into new or changed and long-term relationships with financial institutions in urban infrastructure funding and financing, and identifying their implications for urban development, governance, and planning (see, for example, Ashton *et al.* 2014, Farmer 2013, Weber 2010).

An enduringly influential framework connecting the funding, financing, and governance of urban infrastructure is Harvey's (1989) conception of urban governance transformation from managerialism to entrepreneurialism. Innovations and experiments propagated by actors in contemporary infrastructure financialisation closely intersect notions of entrepreneurial local states. Building upon earlier 'entrepreneurial cities' ideas (Judd and Ready 1986, Kirlin and Marshall 1988), urban entrepreneurialism was defined as a changing governance form distinct from the preceding urban managerialism. It was more enterprising, innovative and "speculative in execution and design" in its focus upon economic growth and competitiveness (Harvey 1989: 7). Urban entrepreneurialism was characterised by coalitions and partnerships of public, private and civic actors, efforts to secure increased shares of surpluses redistributed from national governments, and – significantly given contemporary financialisation – risk absorption and speculation by the local state. Urban infrastructure was central to such entrepreneurial governance. Land and property were treated as financial assets in this earlier period of financialisation. Common consumption-oriented development strategies were pursued (cultural, entertainment and retail hubs; convention centres; major event bids; waterfront redevelopment). City actors sought to construct distinctive and competitive urban locations and built environments attractive to globally mobile businesses and people as well as public sector functions.

As the situation from which urban governance was transforming in the post-war period, urban managerialism was characterised by the "rationally planned and co-ordinated" provision of urban facilities and services (Harvey 1989: 7). Local state agency was primarily engaged in delivery and management, and focused upon addressing social need and collective consumption rather than economic growth and competitiveness. Urban managerialism was led and orchestrated by the state at especially the national as well as the local level, following Keynesian fiscal strategies and guided by socially and spatially redistributive principles (O'Neill 2016). Urban infrastructure

played an integral role in managerial governance. It provided the physical assets and public goods for urban populations such as transport and utilities, and the public capital stock underpinning economic activities. Portrayed as the counterpoint to entrepreneurial governance, urban managerialism was deemed by implication less enterprising, innovative and speculative. Deindustrialisation, tertiarisation, economic crisis, internationalisation, suburbanisation, erosion of the urban economic and fiscal base, and rising indebtedness were interpreted as undermining urban managerialism. Persistent and recurrent since the early 1970s, transformation towards urban entrepreneurialism was generated and accelerated by capital accumulation, circulation and intensified inter-urban competition.

While not as pervasive and regularly revisited as urban regime theory (Lauria 1996, Jonas and Wilson 1999, Pierre 2014), Harvey's (1989) "prophetic" (Paddison 2009: 1) thesis endured and informed influential work in several areas (McCann 2017). These strands included: the urban political economy of neoliberalism and state rescaling (e.g. Brenner 2003, 2004; Hackworth 2002, Peck *et al.* 2013, Raco and Gilliam 2012, Ward 2011); the rise of the 'entrepreneurial city' marked by speculative economic renewal and heightened socio-spatial inequalities (e.g. Boyle and Hughes 1994, Jessop 1997, Leitner 1990, MacLeod 2002); and, recently, the emergence of austerity, financialised and speculative urbanisms (e.g. Peck 2012, Peck and Whiteside 2016, Davidson and Ward 2014, Ward 2013).

What few critiques emerged pointed to urban entrepreneurialism's use as a "preface" rather than a comprehensive analytical, methodological and explanatory framework (Wood 1998: 120, Hall and Hubbard 1996, MacLeod 2002). Voices cautioned against its conception as a template or binary transition model between identifiable forms rather than a historical and contradictory process with less clear-cut and separable changes (Peck 2014). Critics questioned the underplaying of the role and agency of local state actors and the overstating of the capacity of

business interests (Valler 1996), and its limiting conceptions of institutional forms centred on the local state and/or public-private partnerships (Wood 1998). Challenges were articulated too against the idea that over time and space entrepreneurial would eventually eradicate managerial governance (Hall and Hubbard 1996).

Further shortfalls in the framework are evident since the 1980s, warranting critical re-engagement in the current episode of urban infrastructure financialisation. The original thesis recognised early on aspects of financialisation that have since accelerated and extended. These include the centrality of funding and financing, the risks of the “quagmire of indebtedness”, the utilisation of land and property as financial assets, intensified inter-urban competition, and the focus upon activities with “the strongest *localised* capacity to enhance property values, the tax base, the local circulation of revenues, and...employment growth” (Harvey 1989: 13, emphasis in original). But only in Harvey’s (2015: 177, 178) later work appears recognition of the current “special” episode of “global financialisation” and the enhanced “pressure asserted by finance”. Important characteristics are identified but not elaborated with clear bearings upon infrastructure financialisation and urban governance including: the distinctive character of the “exponential growth” (2015: 100) of finance’s sectoral and spatial reach and extension; the “phenomenal acceleration” (2015: 178) in the speed of capital circulation and turnover; and, the emergence of novel institutional actors, instruments and practices. Contemporary financialisation is interpreted as accelerating and deepening the process whereby the use values of fixed capital locked in place in urban infrastructure are being transformed into exchange values and rendered liquid and mobile by “capitalization” (Harvey 2012: 11). Urban infrastructures are increasingly being categorised as financial assets with revenue streams transacted as instruments of speculation by financial institutions *and* local states. This paper addresses the gap by connecting the current episode of financialisation to its implications for urban infrastructure funding and financing and entrepreneurial *and* managerial governance forms. Work has begun on this task such as Peck’s

(2014: 400) conception of “‘defensive’ entrepreneurialism” arising because “under conditions of entrenched financialization, governmental incapacitation, and normalized austerity, a pattern of selective risk taking has given way to one of systemic exposure to risk”.

A further shortfall concerns whatever happened to urban managerialism in the wake of this governance transformation? Recently, Harvey (2015: 144, 18) emphasised the persistence of “increasingly entrepreneurial local state or regional metropolitan apparatuses” and their involvement in myriad new and evolving ways to facilitate urban fixed capital formation in financialisation especially in austerity where the “fiscal capacities of the state are put to the test”. Urban managerialism, though, appears somewhat lost from the picture in recent decades. This raises the possibility that it has been eradicated by more entrepreneurial forms (Hall and Hubbard 1996). Managerialism seems often consigned to a Keynesian-Fordist past (O’Neill 2016). Or just used as the situation from which urban governance has transformed as studies became pre-occupied with changes over continuities. Research appears dominated by comprehending the open-ended and evolving dimensions of urban entrepreneurialism and its expansive and varied role for the local state with other actors (see, for example, Clark and Gaile 1998). Yet, in holding this specific focus for an extended period, the persistence, evolution, and mutation of forms of managerialist urban governance have been largely overlooked. The potential co-existence, articulation and overlap of both managerialist *and* entrepreneurial governance forms have been relatively neglected.

In the current episode of financialisation, relationships between national and local state and financial actors have not only or simply positioned business as dominant and left governments as hollowed-out and passive dupes in thrall to financial interests. Indeed, Harvey (1989) acknowledged the transformation was contradictory, partial and uneven across a range of geographical scales, and marked by risk and uncertainty as local governments speculated on

urban investments amidst economic volatility. Gaps are, however, evident in two areas. The conception of urban managerialism in Harvey's (1989) original account is somewhat under-specified and narrow. It was missing important national and local aspects of the "modern infrastructural ideal" (Graham and Marvin 2001: 43) including: direct mostly national government roles in planning, funding, financing and delivering infrastructure; the construction of centralised, monopolised, standardised and equalised national infrastructure systems; and, the demonstration of national state power and geographical widening of social access to services, employment, modernisation and societal progress (Graham and Marvin 2001, Helm 2013). Much of the research on urban governance transformation has been undertaken in decentralised states (e.g. the US, Canada and Australia) (Hackworth 2002, Ward 2011). Mature, centralised states such as the UK with established governance systems, central-local relations and public finance arrangements require more attention to examine transformations or their absence in the current period. Such states provide appropriate experiences for the examination of the relations between innovative, experimental entrepreneurialism *and* customary, traditional managerialism in funding, financing, and governing urban infrastructure at the national and local levels.

Urban infrastructure financialisation provides a timely opportunity to investigate its socially and spatially uneven unfolding and implications, and to examine local state efforts to implement more entrepreneurial practices and governance forms amidst enduring and mutating managerialism. Differentiated by the variegations of national political economies and capitalisms internationally (Peck and Theodore 2007) and their roles in shaping pathways of financialisation (Lai and Daniels 2016), national governments retain pivotal roles in governing urban infrastructure funding and financing. Their agency is evident in their relations with local governments, and authority over licensing, planning, taxation rights, and the purposes, levels, timescales and investments in collective infrastructure provision (Jonas *et al.* 2010, O'Neill 2013). A new framework is proposed to help understand the evolution of urban infrastructure funding,

financing, and governance. Existing and established approaches are distinguished from emergent and newer ones across key dimensions (Table 3). The framework is offered as an entry point to identify and explain characteristic dimensions and how they might be articulating, overlapping and hybridising. It is not meant only to provide a means to document a simple, binary and clear-cut transformation from existing/established managerialism to emergent/new entrepreneurialism.

< insert Table 3 about here >

Researching the UK City Deals

This first national comparative study of thirty-one of the City Deals agreed to date in England, Scotland and Wales provides a theoretically-informed assessment of financialisation and national and local state actors in funding and financing urban infrastructure. It builds upon existing studies of particular City Deals (e.g. Waite *et al.* 2013, KPMG 2014, Strickland 2016) and specific infrastructure funding and financing instruments and practices (e.g. Ward 2011, Strickland 2013, Whiteside 2013). The continued agreement of further City Deals in the UK into 2017 presented a research challenge to keep up with this policy-in-motion. The methodology, research design and empirical data collection strategy was informed by the “distended case approach” (Peck and Theodore 2012: 24). This method tries to move beyond the discrete, individual and isolated case study. It seeks to understand and explain what is going on over time within *and* between the multiple cases by relating them to each other and situating them within their political-economic and institutional contexts. The research activity comprised three connected elements: i) ongoing review of secondary sources to supplement and corroborate the primary data (e.g. City Deal

proposals and agreements; local government, central government, think-tank, and interest group documents; specialist press coverage); ii) a rolling programme of 35 semi-structured in-depth interviews with key actors representing different public and private institutional interests at specific spatial levels started in January 2014 (e.g. elected members and officers in local government in cities and city regions; civil servants and advisers from central and devolved government, government agencies, interest groups and think-tanks; executives in private sector consultancies); and, iii) authors' participation in public policy consultations, debates and fora (e.g. engagement with the UK National Infrastructure Commission; meetings with financial institutions; responding to Scottish Parliament and Welsh Assembly Committee City Deal enquiries). Challenges with this approach included situating the City Deals amidst national and local political change (e.g. UK General Elections in 2015 and 2017), obtaining details of infrastructure funding and financing arrangements, and being unable to undertake evaluation of City Deals given their recent introduction and long-term timescales.

Underpinned by the conceptual discussion, the empirical data were analysed along three related dimensions. The origins, anatomy and roll-out of the City Deals were established, tracing their entrepreneurial *and* managerialist attributes and evolution. The infrastructure funding and financing practices in the City Deals were identified (Table 1). Their characteristics were then assessed against the framework of infrastructure financialisation (Table 2). The governance forms in the City Deals were determined and related to the funding and financing analysis using the framework of existing/established and new/emergent approaches (Table 3). Drawing upon the preceding critique, the analysis avoided a strong conception of binary transformation between forms of urban infrastructure funding, financing and governance. Instead, underpinned by the central argument, the empirical material interpretation sought to understand and explain the presence *as well as* the articulation, overlap, hybridisation and inter-relations of existing/established managerialist *and* newer/emergent entrepreneurialist approaches. The

overall aim was to provide a plausible explanatory account of the extent, nature and substance of changes in the financialisation and governance of urban infrastructure funding and financing in the UK City Deals.

3. The City Deals in the UK

The City Deals are a new form of negotiated agreement between national and local governments on decentralised powers, responsibilities and resources. City-regions were identified as integral to the UK national government's economic growth and recovery ambitions following the 2008 crisis and recession. The city-region scale was prioritised to foster agglomeration economies, increase productivity and growth, and support institutional co-ordination and policy intervention (Ahrend *et al.* 2014, Cheshire *et al.* 2014). While initially England-focused, City Deals were formulated as a national policy for:

building a more diverse, even and sustainable economy. As major engines of growth, our cities have a crucial role to play. But to unlock their full potential we need a major shift in the powers available to local leaders and businesses to drive economic growth. We want powerful, innovative cities that are able to shape their economic destinies, boost entire regions and get the national economy growing. The aim of these deals is to empower cities to forge their own path, to play to their own strengths and to find creative solutions to local problems (Nick Clegg, then Deputy Prime Minister, Foreword, Cabinet Office 2011: iii).

The city deal-making process involved groups of local governments at the city-region scale being invited by national government to articulate, negotiate and agree 'strategic' and 'transformational' propositions and reforms in powers, resources and savings in various policy areas (Table 4).

Reflecting its potential contributions to economic growth and historical under-investment in the UK, “infrastructure financing was critical to the City Deals. It was consistently top of the priorities that the cities identified” (Official, Core Cities, Authors’ Interview, 2014).

< Table 4 about here >

The origins of the City Deal lie in a Conservative Party critique of New Labour’s ‘top-down’ and ‘command state’ centralism (Clark and Mather 2003), ‘new public management’ and ‘payment by results’ mechanisms (e.g. HM Government 2011), the practices and lexicon of commerce and finance, transactional politics in the US, and then Secretary of State for Cities Greg Clark’s (1992) PhD thesis on incentive payment systems:

The deal-making approach is in the political DNA of Greg Clark and other coalition ministers. It is about offers and making deals...Greg was quite critical of the [New Labour] notion of earned autonomy, and didn’t want formal KPIs [Key Performance Indicators], but the cities had to give something back for a Deal (Civil Servant, Cities and Local Growth Unit, Cabinet Office, Authors’ Interview, 2014).

In addition, the Core Cities – an interest group for the largest urban local governments in England outside London plus Cardiff and Glasgow – had long critiqued the UK’s highly centralised governance and public finance system as out of line with comparable OECD countries (Table 5). Identifying the political opportunity, Core Cities successfully lobbied for an amendment to what became the 2011 Localism Act to enable the designation of ‘Urban Economic Growth Areas’. In tune with the national austerity strategy and devolved city-region

focus, the amendment sought enhanced powers and resources for the largest city-regions to increase growth and employment, and reduce welfare spending. What became City Deals sat within a political-economic context dominated by the UK government's fiscal consolidation priority. Sub-national development was articulated as particular versions of 'decentralisation', 'localism' and 'rebalancing' (Pike *et al.* 2016a). These principles aimed to shift power to local communities and business, enable places to tailor approaches to local circumstances, and provide incentives for local growth across the UK (Department of Business, Innovation and Skills 2010, Cabinet Office 2011).

< Table 5 about here >

The Core Cities amendment in the 2011 Localism Act provided the legislative basis for the 'Wave 1' City Deals in England (Table 6). Each city-regional grouping put together proposals as the basis for bi-lateral negotiations with national government to agree their City Deal. The deal-making was asymmetrical from the outset in terms of information, knowledge and power: local parties did not know what would be accepted in advance; no formal criteria against which to assess the proposals were used; and national government retained the authority to agree the deal or not. The central *quid pro quo* comprised enhanced devolved powers, responsibilities and resources in return for contributing to local growth, public service delivery reforms, and expenditure reductions. Tied to the politics of a new mayoral governance model, Liverpool City Council agreed the first City Deal in February 2011, followed by Liverpool City Region and the rest of Wave 1.

< Table 6 about here >

‘Wave 2’ City Deals followed in 2012 following a national government invitation to twenty of the next largest cities/city-regions. In contrast to Wave 1 and reflecting the formalisation of the deal-making process, Wave 2 City Deals included a ‘core package’ of powers to address common challenges and a ‘bespoke’ element to reflect particular city issues. Of the twenty cities in Wave 2, eighteen agreed City Deals in early 2014. The remaining Bournemouth and Poole and Milton Keynes City Deals were incorporated into Local Growth Deals agreed with their Local Enterprise Partnerships (LEPs) (Pike *et al.* 2015). A more open-ended ‘Wave 3’ involved tripartite agreements between the UK, local and devolved Welsh and Scottish governments (Waite 2016). Wave 3 began amidst the politics of the 2014 Scottish independence referendum with the Glasgow Clyde Valley City Deal. In later instalments, City Deals have been agreed for Cardiff Capital Region, Aberdeen, Inverness/Highlands, Edinburgh and South East Scotland, and Swansea Bay. By 2016, thirty-one City Deals had been signed (Figure 1), covering 51% of the population, 45% of the Gross Value Added (GVA), 51% of the jobs, and 45% of the enterprises in Britain (Figure 2).

< Figures 1 and 2 about here >

Similarities and differences are evident comparing the City Deals. Wave 1 were pilots with more openness to new and previously untested proposals. They were considered more “comprehensive” and “ambitious” because the national Cities Policy Unit was “able to get greater changes out of departments in those early stages” (Local government officer, Wave 2

City Deal, Authors' Interview, 2014). Wave 2 rolled-out a more formalised and conservative approach as “the departments had caught up and were less prone to accept radical change” (Local government officer, Wave 2 City Deal, Authors' Interview, 2014). Wave 3 introduced the new dimension of devolved politics, policy and tripartite negotiations (Waite 2016). Wave 1 deals were uneven in their engagement with LEPs, whereas Wave 2 deals worked more closely. Wave 2 proposals were limited and complicated by Local Growth Deals and LEP policy operating with different geographies (Marlow 2014). The average number of local governments per deal was similar, from 6 in Wave 1, 4 in Wave 2 and just over 5 so far in Wave 3. Wave 1 deals had tightly drawn geographical boundaries whereas Wave 2 and 3 deals encompassed wider geographies. Waves 1 and 2 incorporated competition *and* co-operation between local actors but “the government did operate a lot of competitive process...which in their view improves quality” (Official, Core Cities, Authors' Interview, 2014). Even once agreed and announced, all three Waves of City Deals evolved further as the negotiating loci for local actors shifted from the renamed Cities and Local Growth Unit and HM Treasury to government departments and, in Wave 3, the devolved governments.

Reflecting the asymmetrical nature of the bargains struck between national and local governments, the City Deals are marked by a highly uneven geography of agreed powers, flexibilities and funding allocations. These outcomes reflect the imbalances of power between the national and local parties, the deal-making process, negotiations between the actors, and differentiated local proposals. Given their size and political importance, Wave 1 and 3 City Deals generally contained wider packages of devolved powers, responsibilities and resources compared to Wave 2 – although Cambridge and Preston were markedly larger given their transport infrastructure components. Based on the only publicly available data on funding announced by the actors involved in the City Deals, analysis cannot verify whether or not and to what extent such funding is actually ‘new’ and additional or re-packaged from existing programmes. Working

with this data constraint and with the suspicion that other national programmes in the current period are simply re-presenting existing funding commitments (see, for example, Lee (2017) on the ‘Northern Powerhouse’), a snapshot of the scale and geographical differences in per capita allocations reveals substantial variations. Deals with large infrastructure components in the larger city-regions secured the highest funding levels (Figure 3). Given their modest size, levels of infrastructure funding in the City Deals were effectively only additional to other funding sources. However, the UK government’s fiscal consolidation priority meant: “the net impact of reductions in public sector funding far outweigh the positive impact of positive funding coming into the city through a City Deal” (Local government officer, Wave 1 City Deal, Authors’ Interview, 2014). Transport infrastructure resources agreed in four City Deals have in all but one case been exceeded by reductions in the spending power of participant local governments (Table 7).

< Figure 3 and Table 7 about here >

City Deals demonstrate the articulation and overlap of entrepreneurial *and* managerialist governance. Entrepreneurial dimensions have been intensified as the City Deals have been key elements in the UK government’s ‘spatial liberalism’ (Clark and Cochrane 2013). This approach has emphasised enterprise and a more ‘business-like’ and ‘commercial’ outlook for local government, ‘innovation’, ‘bespoke’ proposals tailored to local conditions, private sector-led growth and engagement (especially via the LEPs), local government funding reduction and reform, and – discussed below – some speculative yet circumscribed experiments in infrastructure funding and financing (Department for Business, Innovation and Skills 2010; Cabinet Office 2011). Inter-urban competition has been promoted amongst places encouraging

use of their “sharp elbows” to secure the most advantageous deals (Local government officers, Authors’ Interviews, 2014).

Yet, the City Deals are not only a manifestation of a wholesale transformation towards entrepreneurialism and local state dominance by business and especially financial interests. City Deals are a centrally-designed and nationally orchestrated policy and governance device used by national government to exert tight control, management, and reform with limited devolved powers and resources. Reflecting a belief that “cities like the deal-making approach. It gives them agency” (Personal communication, Civil Servant, Cities and Local Growth Unit, 2015), national government actors have used deal-making to compel local actors, shaping and channelling their behaviours in centrally orchestrated directions. Local governments have been engaged in trying to construct bespoke strategies and policies tailored to local circumstances, formulating and presenting new ideas as ‘innovations’, taking on wider responsibilities and risks, and signing-up to medium and long-term delivery and reform commitments under austerity. Deals were only secured locally following lengthy and detailed negotiations and when aligned with national priorities, policies and positive assessments of their enhanced and ‘transformative’ contributions to city-region growth and public expenditure reductions.

‘City dealing’ (Waite 2016) introduces something new in mixing and mutating elements of managerialist *and* entrepreneurial practices. City Deals demonstrate the emergence of ‘informal’ governance with decision-making lacking codified protocols and procedures, and the potential of being shaped by social relationships, webs of influence and patronage (Ayres 2015). Such new policy-making practices are characterised by experimentation, ‘fast discourse’, and the relatively rapid brokering of “confidential bargains” (Moran and Williams 2015: 1) between national government and multiple local state actors. They favour and narrow involvement down to those actors willing and able to cope with limited consultation and deliberation, and “compressed time

scales” (Jessop 2008: 194). Such governance differs from the more formalised and structured agreements set within clear constitutional frameworks with demarcated separation of powers characteristic of managerialism and practised between city, state and national tiers in federal systems such as Canada (Donald 2005) and centralised systems such as France (Green and Booth 1996). This UK version of city deal-making has emerged and flourished amidst the administrative bureaucracy, formalised policymaking protocols, institutional constraints and political accountability, and scrutiny characteristic of narrower conceptions of urban managerialism (Leonard 1982).

4. Funding, financing and governing urban infrastructure in the City Deals

Across the City Deals, infrastructure financialisation has been uneven and limited, and both managerialist *and* entrepreneurial governance traits have been articulated and mixed. A range of infrastructure strategies and initiatives are evident with economic, social and environmental purposes, focused upon specific sectors and geographical scales, and involving new, adapted and existing funding and financing strategies, instruments and practices (Table 8). Funding and financing practices demonstrate elements of financialisation, tempered by centralised national control, risk aversion and fiscal consolidation. Some of the larger City Deal groups have engaged new financial actors, especially international consultancies, in economic assessment of the growth and tax base benefits of infrastructure investment. These appraisal, cost-benefit quantification and prioritisation techniques have been used to create ‘objective’ ‘business cases’ to ‘pitch’ to national government in the deal-making negotiations. Local actors have made substantial claims. In their areas, twelve of the largest City Deals are estimated to generate an additional £14.6 billion or 4% of total GVA and over 407,400 jobs or 5.2% of total employment.

< Table 8 about here >

Compelled by national government and funding reductions, local actors have tried to extend and initiate private sector participation in urban infrastructure investment. Private involvement is evident in city centre, property and retail-oriented schemes (e.g. ‘Liverpool One’), pension fund and insurance fund investments (e.g. Legal and General Insurance Fund, Newcastle), bilateral public-private partnerships (e.g. Kier Sheffield LLP), and international investment attraction (e.g. prospectus’ targeting sovereign wealth funds in Birmingham). The scale and reach of such efforts have been uneven and limited, falling far short of a financialised situation of complete alignment, outright control and/or dependence upon private financial actors and markets. This is because of differential capacity, conservative attitudes and legal constraints upon risk management and speculation in local and national government following negative historical experiences with complex financial instruments (Tickell 1998), and the contentious UK histories of privatisation and public-private partnerships (Whitfield 2010, Shaoul *et al.* 2012).

Local actors have proposed new funding and financing instruments involving greater risk and reliance upon enhanced urban economic performance and tax base expansion. Most drew upon international ‘value capture’ practices (Peterson 2009), adapted to the UK’s centralised institutional context. These ‘invest and return’ instruments were based upon: i) prioritising investment projects based upon their positive net impacts upon GVA and employment in specified geographies (e.g. the city-region or smaller sub-city area); and, ii) sharing the benefits of additional growth through locally particular reforms to the central-local fiscal settlement within the national public finance system. The ‘earn-back’ model in Greater Manchester, for example, sought an agreement with central government to create a 30-year revenue stream by retaining locally a share of the additional taxes generated by increased local economic growth. This

revenue stream would then be used to borrow against to provide up-front investment in local infrastructure to facilitate the increase in economic growth. Any further funds yielded from the arrangement would then be ‘recycled’ into further infrastructure investment. Elsewhere, Tax Increment Financing-based schemes were agreed in Newcastle, Sheffield and Nottingham, allowing borrowing up to £150m for infrastructure investment against the retention for 25 years of 100% of business rate income growth above a specified base level. Evident too were securitisation and borrowing against existing assets (e.g. via Special Purpose Vehicles in Greater Birmingham and Solihull) and/or revenue streams (e.g. user charges such as the River Tyne tunnel tolls). Integrated ‘economic and strategic investment funds’ were used to pool and recycle funds from multiple sources. These financial vehicles sought to demonstrate ambition, create scale, and articulate long-term ‘pipelines’ of ‘investable’ infrastructure projects attractive to external public and private investors (e.g. Preston, South Ribble and Lancashire, Leeds City Region). While encouraging innovation and competition in the City Deals, national government actors were cautious and risk averse in agreeing new instruments, however. After lengthy negotiations, several were revised and replaced with more traditional and manageable central to local grant transfers (e.g. Greater Cambridge’s ‘gain-share’) or faced limits on their flexibilities (e.g. Bristol and the West of England’s ‘Growth Incentive’ business rate retention scheme). In Wave 2, new local proposals were even rejected due to their novelty, uncertain risks and precedents (e.g. Sunderland City Council’s bid locally to hypothecate or earmark, recycle and transfer corporation and other business tax revenues from industrial to city centre sites).

Last, under austerity, reductions in revenue grants from national government, and public finance system reforms, local actors sought to adapt existing and new instruments and practices. Strategies involved utilising assets, leveraging balance sheets and cash reserves, and generating revenue streams to pool investment capital for urban infrastructure. The national Business Rate Retention scheme has been used to aggregate business rate revenues for capital investment in the

City Deals (e.g. Bristol and West of England, Leeds). New sources of revenue and capital funding earmarked for infrastructure include specific proportions of increases in council taxes (e.g. Greater Manchester), new taxes (e.g. the workplace parking levy in Nottingham), bond issuances (e.g. the 'Bristol Bond'), and external finance (e.g. European Investment Bank loans). Public assets have been assessed for sale, leverage, development and/or minimisation of liabilities. Revenue generating assets have been retained and developed rather than sold-off (e.g. Bristol Property Board, Birmingham Public Asset Accelerator, Nottingham District Heating Company, Newcastle and Manchester Airports) (Cumbers 2012, O'Brien and Pike 2016). Increasing local government indebtedness and risk has resulted from close central management of the City Deals. HM Treasury's phased allocation of funding in the City Deals through interim 'gateway reviews' and requirement for balanced annual spending profiles have forced local governments to borrow to invest in infrastructure up-front in the expectation of stimulating future economic growth and tax revenues to repay the borrowing. This centralised administration has displaced the risks of speculative investment and debt repayment from the national to the local state.

National finance ministry HM Treasury utilised its dominant role in UK economic policy and public financial management, negotiating City Deals to deliver economic growth and public expenditure savings. HM Treasury worked closely with the cross-departmental Cities and Local Growth Unit to achieve central control in orchestrating, negotiating and rolling-out the City Deals under austerity and departmental funding and staff reductions. The Unit provides advice to the city-region teams *and* negotiates the City Deals for national government. It is a new institution simultaneously trying to manage centre-local relations, support new 'investment-led' approaches and techniques, and overcome civil service inertia: "one of the big lessons is co-design...you need a cities unit working hand in hand with places. Making policy in Whitehall

terms is complex, and it fuels the temptation of Whitehall to say no” (Official, Cities and Local Growth Unit, Cabinet Office, Authors’ Interview, 2014).

Within the highly centralised UK governance system, central-local and inter-local relations have been rescaled to the city-regional level through the City Deals. National government prioritised the city-regional scale as ‘functional economic areas’ to exploit the economic potential of under-bounded city cores (e.g. Bristol, Glasgow, Newcastle and Nottingham), maximise the economic growth of wider urban areas, and improve policy co-ordination (Department of Business, Innovation and Skills 2010). For national government, the City Deal provided a powerful device compelling local actors to conform to its preferred model of city-region scale Combined Authorities, ideally with directly-elected ‘metro-mayors’ (Tomaney *et al.* 2017), and business involvement through the LEP: “Anybody that doesn’t have a governance structure that will make it work isn’t getting a City Deal” (Official, Cities and Local Growth Unit, Authors’ Interview, 2014).

Demonstrating the limits of this centralised national managerialism, however, the City Deals did not simply enable the top-down imposition of local governance models by national actors. Political and institutional geographies, histories and stages of local co-operation, and the agency of local actors in the informal deal-making negotiations shaped a range of City Deal governance arrangements (Table 9). At the start of Wave 1 and bypassing the need for a referendum, Liverpool City Council agreed the first City Deal with a mayor, Mayoral Development Corporation, and an additional £75m funding for economic development, employment and education projects. Several of the former metropolitan county councils embedded their City Deals within new Combined Authorities, although not always with a directly-elected metro-mayor. Greater Birmingham and Solihull used the existing LEP governance arrangement prior to later formation of a Combined Authority and metro-mayor. Other areas have established an

Economic Board. Effectively pioneering Wave 3, local actors in Glasgow initiated their City Deal negotiations directly with the UK central government and, amidst the politics of the independence referendum campaign, agreed the deal and joint committee structure with the UK and Scottish governments.

< Insert Table 9 about here >

5. Conclusions

This paper aimed to explain the socially and spatially uneven unfolding of the financialisation of urban infrastructure and local state efforts to construct more entrepreneurial governance forms. Through its managerialist institutions and conservative/risk averse administrative culture, the highly centralised UK state has exerted continued authority and constrained urban infrastructure financialisation and entrepreneurial governance in the City Deals. Analysis demonstrates that financial and state actors are extending the financialisation of urban infrastructure and introducing governance forms with entrepreneurial characteristics unevenly. New, financialised and more speculative relations, strategies, instruments, and practices are evident with socially and spatially differentiated and uncertain outcomes. Local government actors are being compelled into new risk-sharing relationships and contractual dependencies with national government and private actors, increased and higher levels of borrowing, and heightened fiscal reliance upon the economic performance and tax base of their city and city-regional economies. Existing and new financial actors, including private capital and sovereign wealth funds, are engaging with local government in the search for investment opportunities and financial returns from the financing and development of urban infrastructure assets and capture of their revenue streams. Wider and growing use of new and adapted financial instruments and practices are evident including:

investment-based, future-oriented and speculative economic growth strategies; the creation of institutional vehicles for larger scale and longer-term investments; and, the securitization and borrowing against assets, (future) tax revenues, and national government grants to create current fiscal capacity for up-front infrastructure investment and longer term debt repayment from expected future growth and financial returns. Local governments have sought to convince national government of the merits of their City Deal proposals. More sophisticated economic analysis, modelling and forecasting approaches and tools have been developed and often purchased by local government from private actors such as international consultancies. These techniques involve *ex ante* appraisals of economic costs (e.g. project finance, debt service for borrowing) and benefits (e.g. employment creation, GVA growth, tax base expansion) to enable prioritisation of long-term urban infrastructure investments. Local government actors then deployed these analyses in ‘business cases’ in attempts to secure additional devolved flexibilities from national government, justify the use of new financial instruments, and articulate their potential ‘value for money’ and outcomes. Such activities are unevenly transforming urban infrastructures from public goods into financial assets, and tying the future fiscal fortunes of cities and city-regions more closely to the performance of their urban economy and tax base.

Examination of the City Deals demonstrate too that the financialisation of urban infrastructure funding and financing and deployment of entrepreneurial kinds of governance are articulating and mixing with established practices and institutional forms. New instruments are being used alongside the continued deployment and adaptation of existing instruments, techniques, and governance arrangements. Neither a wholesale transformation nor unchecked advance of infrastructure financialisation and urban entrepreneurialism are evident. Traditional and tried and tested forms of borrowing, debt and grants from national government remain central, albeit mobilised in longer-term and more ‘investment-led’ approaches sometimes with new financial actors. Local government actors remain constrained and/or reluctant to engage in large-scale

forms of financial innovation, risk-taking and experimentation by their knowledge, capacity and limited devolved powers and responsibilities in the UK's centralised governance system. Why are local states varying in the extent and nature of their involvement in financialising urban infrastructure? Contrasting its more advanced forms in the more decentralised governance system in the US (Peck and Whiteside 2016, Strickland 2016, Ward 2011), infrastructure financialisation in the City Deals has been limited and attenuated by the highly centralised governance and public finance system, managerialist institutions and often conservative/risk averse political and public administrative culture in UK national and local government. National government's fiscal consolidation priority and central control precluded stronger fiscal decentralisation because of fears concerning limited local knowledge and capacity, financial mismanagement and profligacy, unchecked borrowing, and risk taking by local governments. Constraints reinforced by the eroded capacity and expertise in national and local government following public expenditure reductions under austerity (Pike *et al.* 2016b); the number of civil servants (Full-Time Equivalents) in central government being reduced by 26% since 2006 (NAO 2017). Different institutional histories and cultures across and within local government too influenced attitudes to change, innovation and risk.

Further questioning the “narratives of financialization...as scripts of linear, uninterrupted, ineluctable development” (Christophers 2015: 194), the conceptualisation of financialisation here is not as a monolithic, over-powering and all-consuming juggernaut rolling into town and financialising everything in its path. Financialisation is a socially and spatially variegated process: designed, negotiated, managed and regulated by multiple state and private actors in different geographical and temporal contexts and political-economic and institutional settings (Sawyer 2016, Strickland 2016). Neither urban infrastructure nor the local state have become wholly and simply financialised. Instead, actors are embroiled in a process in which they are actively financialising *and* being financialised in their relations with other actors in socially and spatially

uneven ways. While work has begun (see, for example, Halbert and Attuyer 2016), much further conceptual, theoretical and international comparative empirical research needs to investigate how urban infrastructure and governance are being financialised in the global North and South.

The UK City Deals reveal the roles of the state in governing urban infrastructure funding and financing are not being simply eroded, hollowed-out or undergoing a wholesale transformation towards entrepreneurial governance. Instead, dimensions of both entrepreneurial *and* managerialist governance forms are being articulated by local government actors within the UK's highly centralised governance system. Within national and local governments, finance functions are ascendant and extended. Local actors are proposing, negotiating and agreeing the City Deals, supported by underpinning economic analysis and modelling and the growing but uneven involvement of private financial actors. Central-local and city-regional relations are only to a degree being shaped by rescaling in the City Deals. This is because of constraints imposed by the UK's centralised governance system, despite devolution and localism rhetoric and incremental reforms in England and wider UK devolution. Local government has been afforded highly conditional and limited fiscal powers and flexibilities in raising and deploying tax revenues for infrastructure in the City Deals. It remains largely funded through multiple and fragmented transfers and channels determined and distributed by national government. Horizontal state rescaling is evident in the formation of city-regional governance arrangements between local government actors in the City Deals but these are under national government purview and influence.

Informal deal-making between the centre and the groupings of local governments has been prioritised by national government as the mode of engagement and resource allocation.

Orchestrated and determined by national government actors, this informal governance has required narrow and self-selecting groups of local state officials and politicians to present as

‘entrepreneurial’ and ‘innovative’ to mobilise, articulate propositions and negotiate. But the process and outcomes have been managed and agreed on largely national government terms and timetables. The resulting City Deals have turned central-local state relations into tactical and lop-sided bargains between national and local parties unequally endowed with information, knowledge and power. Socially and spatially uneven and uncertain outcomes have resulted. Negotiated dialogue between national and local governments enables their representation by actors as enhanced local empowerment, innovation, self-help, and reduced reliance on national government through more locally-led funding, financing and risk-bearing. Yet, the nature of the deal-making has meant the deals have proven difficult to cohere and fix as governance arrangements. Local governments have experienced problems including lengthy delays in negotiations and failures to agree local propositions, innovative mechanisms morphing into conventional grants, and national government departments re-negotiating and even reneging on previously agreed Deal elements. Moreover, the closed and opaque character of city deal-making raises fundamental accountability, transparency and scrutiny questions (Pike *et al.* 2016a).

Building upon frameworks articulating transformations between ideal types, the conceptualisation of urban governance here acknowledges their heuristic value. But it conceives of their co-existence and articulation to allow for blurring, overlap and partial evolutions as well as the hybridisation of characteristic forms in particular spatial and temporal settings (Peck 2014). Deterministic narratives explaining linear, singular and discrete transformations from urban managerialism to entrepreneurialism propelled by wholesale financialisation and the emasculation of the local state by private financial interests at the behest of national states are unconvincing. Processes of change are messy, nuanced and subtle as well as difficult, slow and even intractable. The articulation, overlapping and hybridisation of entrepreneurial *and* managerialist governance concepts, strategies, arrangements and practices are the result of attempts by actors to financialise and govern urban infrastructure funding and financing.

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Table 1: Infrastructure funding and financing practices

Temporality	Type	Examples
Established, tried-and-tested	Taxes and fees	Special assessments; user fees and tolls; other taxes
	Grants	Grant programmes (e.g. supranational, national, regional, city/city-region, local)
	Debt finance	General obligation bonds; revenue bonds; conduit bonds; national loans funds (e.g. UK Public Works Loan Board)
	Tax incentives	New market, historic and housing tax credits; tax credit bonds; property tax relief; Enterprise Zones
	Developer fees	Impact fees; infrastructure levies
	Platforms for institutional investors	Pension and insurance infrastructure platforms; state infrastructure banks; regional infrastructure companies; real estate investment trusts; sovereign wealth funds
	Value capture mechanisms	Tax increment financing; special assessment districts; sales tax financing; infrastructure financing districts; community facilities districts; accelerated development zones
	Public-private partnerships	Private finance initiatives; build-(own)-operate-(transfer); build-lease-transfer; design-build-operate-transfer.
	Asset leverage and leasing mechanisms	Asset leasing; Institutional leasing; local asset-backed vehicles
	Revolving infrastructure funds	infrastructure trusts; investment recycling initiatives
Newer, innovative		

Source: Adapted from Strickland (2015: 18)

Table 2: Characteristics of infrastructure financialisation

Growing involvement of financial actors and intermediaries
Increasing exposure of cities to and dependence upon national and international financial markets
Increasing use of new and innovative financial practices (e.g. securitization, value capture mechanisms – see Table 1)
Utilisation of frameworks of local economic assessment and financial calculation to predict, model and speculate against the future
Transformations in the purpose, function, values and objectives of local government and their closer alignment with the interests of financial actors and institutions
Increasing public sector indebtedness and risk taking
Transformations in urban infrastructure from a physical and productive public good in the urban environment into a financial asset defined by risk, return and maturity
Increasing control over infrastructure by yield-seeking financial actors and institutions
Growing orientation of urban infrastructure to enhance productivity, economic growth and competitiveness
Increasing emphasis upon tax base expansion and fiscal reliance upon urban economic performance and prosperity
Increasingly geographically uneven capacity to engage in funding and financing urban infrastructure

Source: Adapted from Strickland (2016: 39) drawing upon Ashton *et al.* (2014), Farmer (2014), Guironnet and Halbert (2014), Halbert and Attuyer (2016), O'Neill (2013), and Weber (2010)

Table 3: Approaches to governing infrastructure funding and financing at the city and city-region scale

Dimension	Existing and established approaches	Emergent and new approaches
Rationale(s)	Economic efficiency Social equity Market failure	Unlocking economic potential (e.g. GVA, employment) Expanding future revenue streams and/or tax base Releasing uplift in land values Market failure
Focus	Individual infrastructure items (e.g. roads, bridges, rail lines)	Infrastructure systems and interdependencies (e.g. connectivity, telecommunications, district heating)
Timescale	Short(er) 5-10 years	Long(er) to 25-30+ years
Geography	Local government administrative area	'Functional Economic Area'/'Travel to Work Area', city-region, multiple local government areas
Scale	Small, targeted	Large, encompassing
Lead	Public sector	Public and/or private sectors
Organisation	Projects	Programmes
Funding	Grant-based (e.g. from taxes, fees and levies)	Investment-led (e.g. from existing assets and revenue streams, grants, borrowing)
Financing	Established and tried and tested instruments and practices (e.g. bonds, borrowing)	Innovative, new and adapted instruments and practices (e.g. value capture, asset leverage and leasing, revolving funds)
Process	Formula-driven allocation, (re)distributive, closed	Negotiated, competition-based, open
Governance	Centralised Top-down National government and single local government-based	(De)centralised Bottom-up and top-down National government and multiple local government-based (e.g. Combined Authorities, Joint Committees)
Management and delivery	Single local government-based, arms-length agencies and bodies	Multiple local government-based, joint ventures and new vehicles

Source: Authors' research

Table 4: City Deals (Wave 1) programmes

	Skills	Housing	Investment/ Funding	Transport	Low Carbon	IT	Business Support
Greater Birmingham and Solihull	✓	✓	✓		✓		
Bristol and West of England	✓		✓	✓			✓
Greater Manchester	✓	✓	✓	✓	✓		✓
Leeds City Region	✓		✓	✓	✓		
Liverpool City Region	✓		✓	✓	✓		
Nottingham	✓		✓	✓	✓	✓	✓
Newcastle	✓	✓	✓	✓	✓	✓	
Sheffield City Region	✓		✓	✓	✓		

Source: Adapted from NAO (2015: 16)

Table 5: Taxation revenue attributable by government level as % of GDP, 2013

Country	Local	State/regional	Local and state/regional	Central or Federal	Social security	Total
Canada	2.8	12.1	14.9	12.7	2.9	30.5
France	5.8	0.0	5.8	15.1	24.0	45.0
Germany	3.0	8.0	11.0	11.5	13.9	36.5
Italy	7.1	0.0	7.1	23.6	13.1	43.9
Spain	3.2	4.5	7.7	13.8	11.1	32.7
Sweden	15.8	0.0	15.8	21.4	5.5	43.7
UK	1.6	0.0	1.6	24.9	6.2	32.9
USA	3.7	5.1	8.8	10.5	6.1	25.4
OECD total	3.9	4.9	8.8	20.4	8.4	34.2

Source: Calculated from OECD revenue data

Table 6: City Deals Waves 1, 2 and 3

Wave 1	Wave 2	Wave 3
Greater Birmingham and Solihull (GBS) Bristol and West of England (BWE) Greater Manchester (GM) Leeds City Region (LECR) Liverpool City Region (LVCR) Nottingham (NO) Newcastle (NCLG) Sheffield City Region (SCR) Liverpool Mayoral Deal	Black Country (BC) Plymouth (P) Brighton and Hove (BH) Preston, South Ribble and Lancashire (PSRL) Greater Cambridge (GC) Southampton and Portsmouth (SP) Coventry and Warwickshire (CW) Southend (S) Hull and Humber (HH) Stoke and Staffordshire (SS) Greater Ipswich (GI) Leicester and Leicestershire (LL) Sunderland and North East (SST) Greater Norwich (GN) Swindon and Wiltshire (SW) Oxford and Central Oxfordshire (OCO) Tees Valley (TV) Thames Valley Berkshire (TVB)	Glasgow and Clyde Valley (GCV) Aberdeen (AB) Cardiff Capital Region (CCR) Inverness (IV) Edinburgh and South East Scotland (ESE) Swansea Bay (SB)

Source: Own elaboration from Cabinet Office data

Table 7: Transport Board Funding and reductions in local government spending power

Local Transport Board*	Local major transport funding per annum (2015/16 – 2024/25) (£m)	Local government	Reduction in spending power (2014/15 – 2015/16) (£m)
West of England	8.1	Bristol	-11.1
West Yorkshire & York	18.9	Leeds	-15.1
Sheffield City Region	11.3	Sheffield	-21.5
Greater Manchester	20	Manchester	-28

* Local Transport Boards, which are comprised of local councillors and are based on city-region and LEP geographies, were allocated 10-year funding packages as part of the City Deals in their areas.

Source: Own elaboration from Department for Transport and Department for Communities and Local Government data

Table 8: Infrastructure funding and financing in the City Deals

Instrument	Example(s)
Devolved rail and bus commissioning, management and regulation	Greater Manchester; Bristol and West of England; Leeds City Region; Sheffield City Region
‘Earn-Back’ invest and return mechanism*	Greater Manchester
Economic and Strategic Infrastructure Investment Fund	All Wave 1 City Deals; Black Country; Greater Norwich; Preston, South Ribble and Lancashire
Flood defences grant funding	Greater Brighton
Housing and buildings (land/property value capture) and asset use/recycling	Preston, South Ribble and Lancashire; Greater Birmingham and Solihull; Bristol and West of England; Leicester and Leicestershire; Plymouth and South West; Southampton and Portsmouth
Housing, regeneration and buildings integrated investment management	Greater Manchester; Newcastle; Oxford and Oxfordshire; Cardiff Capital Region
Local Transport Major Funding grant	Greater Birmingham and Solihull; Bristol and West of England; Leeds City Region; Sheffield City Region; Preston, South Ribble and Lancashire
Long-term grant funding for transport infrastructure	Greater Cambridge; Glasgow Clyde Valley; Leeds City Region; Cardiff Capital Region
Low Carbon ‘Pioneers’ and Green Energy grant funding	Greater Birmingham and Solihull; Leeds City Region; Liverpool City Region; Greater Manchester; Newcastle; Nottingham; Hull and Humber; Stoke on Trent and Staffordshire; Tees Valley
One-off Transport Project Funding grant	Oxford and Oxfordshire; Aberdeen
‘Superfast’ Broadband and Digital grant funding	Bristol and West of England; Greater Birmingham and Solihull; Greater Manchester; Leeds City Region; Newcastle; Greater Brighton; Cardiff Capital Region; Aberdeen; Inverness
Tax Increment Financing (‘New Development Deals’)	Newcastle; Sheffield City Region; Nottingham

* The original Greater Manchester ‘Earn-back’ mechanism was subsequently replaced by long-term grant funding of the kind agreed by Greater Cambridge and Glasgow Clyde Valley

Source: Own elaboration from City Deals and Marlow (2012)

Table 9: Governance models in the City Deals

Governance model	Example
Elected Mayor	Liverpool City; Bristol City
Combined Authority	North East Combined Authority; West Yorkshire
Elected ‘metro-mayor’ and Combined Authority*	Greater Manchester; Sheffield City Region; Liverpool City Region; Tees Valley; Greater Birmingham and Solihull; West of England
Joint Committee**	Black Country; Coventry and Warwickshire; Hull and Humber; Oxford and Oxfordshire; Plymouth; Thames Valley Berkshire; Glasgow and Clyde Valley; Cardiff Capital Region; Aberdeen; Edinburgh and South East Scotland; Swansea Bay
Single Local Authority	Inverness
LEP or private sector-led	Greater Ipswich; Preston; South Ribble and Lancashire; Swindon and Wiltshire
Economic Board	Nottingham; Greater Brighton; Greater Cambridge; Greater Norwich; Leicester and Leicestershire; Solent; Southend; Stoke-on-Trent and Staffordshire

*Elections for new ‘metro-mayors’ took place in May 2017, with the exception of Sheffield City Region, which is looking to hold elections in 2018.

**Joint Committees established for City Deals in England are created under the 1972 Local Government Act. Joint Committees in Scottish City Region Deals are created under the terms of the Local Government (Scotland) Act 1973. In Wales, the Local Government Act (1972), Local Government (Wales) Act 1994 and the Local Government Act 2000 provide the legislative basis for City Deals in Wales to establish Joint Committees.

Source: Authors’ research

Figure 1: City Deal areas (as of June 2016)*

* See Table 3 for City Deal areas **Source: Own elaboration from Cabinet Office**

Figure 2: Population and economic ‘footprints’ of the 31 City Deals, 2016

Source: Own elaboration from ONS, NOMIS and City Deal documents data

Figure 3: ‘New funding’ (for all projects) by selected City Deal (£ per capita)*

*Based on data of ‘announced funding’ in City Deals made by Cabinet Office and City Deal partnerships and using resident population estimates.

Source: Own elaboration based on Cabinet Office announcements and City Deal agreements