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The development of local government financial vehicles in China: A case study of Jiaxing Chengtou

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ABSTRACT

Financial intermediaries have been widely used in urban development. Since the global financial crisis, it has been an urgent task to understand their operation and implications for financial risks. This paper examines emerging local government financial vehicles (LGFVs) in China. We review their history, current status and underlying financial mechanisms. Confronting the global financial crisis, China has taken a stimulus plan to invest four-trillion Yuan in urban development to stimulate the economy. The plan has been largely fulfilled by the LGFVs. This paper investigates the case of Jiaxing City Construction Investment Corporation (Jiaxing Chengtou), which plays a role of LGFVs. We find that it mainly uses bank loans and bonds to finance land and infrastructure development. To borrow from the capital market, Jiaxing Chengtou collateralizes allocated state-owned land and enhances credits by build and transfer protocols with the city government. However, the enterprise did not manage to pay back its loans, which has led to further borrowing. Due to the central government's control, Jiaxing Chengtou has been nominally detached from the municipal government since 2012, but it maintains a financial role. It has been re-packaged with other LGFVs to access foreign bond markets. The paper reveals how LGFVs act as financial conduits to connect local governments with the financial market in China.

1. Introduction

Financialisation has attracted extensive attention since the global financial crisis (GFC) in 2008 (Christophers, 2019; Lapavitsas, 2013). Generally defined as 'finance expansion' (Aalbers, 2015; Arrighi, 1994), financialisation has been shown to have penetrated various sectors, including housing (Aalbers, 2017), infrastructure (Ashton et al., 2016; Kirkpatrick and Smith, 2011), firms (Orhangazi, 2008) and households (Fields, 2017). In urban studies, urban projects are naturally capital intensive; therefore, various financial strategies have been adopted at various administrative levels, such as JESSICA (Joint European Support for Sustainable Investment in City Areas) (Anguelov et al., 2018), TIF (Tax Incremental Finance) (Weber, 2010), REITs (Sanfelici and Halbert, 2018) and asset-leasing (Ashton et al., 2016). Recently, because of the unprecedented depression and austerity induced by the GFC, urban governance has been radically reshaped to rely on financial logics and technocratic practices (Peck and Whiteside, 2016). This research will focus on this issue in China by examining local government financial vehicles (*difang rongzi pingtai*, LGFVs hereafter).

China has seen a trend in using financial intermediaries to finance urban development since the GFC. To counteract the impacts of the GFC, China took a proactive strategy with extensive urbanization and

infrastructure construction to absorb surplus workers (Harvey, 2018). The strategy was centred on the four-trillion stimulus package, which aimed to invest four trillion Yuan in urban infrastructure shortly after the crisis. To implement the national strategy, the central government promised to provide 1.8 trillion Yuan, and it devolved the rest 2.2 trillion Yuan as tasks to local governments (Bai et al., 2016). As local governments were not eligible to borrow externally according to the Budget Law before 2014, they were encouraged by the People's Bank of China (PBC) to use LGFVs to seek external finance (PBC, 2009). LGFVs are 'entities established by the local governments through injection of land, equity and other types of capital and undertake financing functions for governmental investment projects' (State Council, 2010). Moreover, 'the local governments undertake the joint responsibilities for repayment' (CBRC, 2011). Encouraged by the central government, China has witnessed a boom of LGFVs.

A growing body of literature has focused on LGFVs and government borrowing problems since the implementation of the stimulus package (Fan and Lv, 2012; Feng, 2014). Some scholars have estimated the number of local government debts (Fan and Lv, 2012) and explained the importance of LGFVs in local development (Li and Chiu, 2018). Liao (2014) illustrates that the local governments support LGFVs by providing a guarantee. Nevertheless, research about how a LGFV performs

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and its financial mechanism is scant. To fill this gap, this paper aims to provide a concrete analysis of LGFVs in China.

LGFVs include state-owned enterprises and government institutions specialized in financing massive urban development projects (CBRC, 2011). The state-owned enterprises specialized in urban development are Urban development and investment corporations (*Chengshi touzi kaifa gongsi*, Chengtougou hereafter). Chengtougou constitute the majority of LGFVs. They are established by local governments from various administrative ranks (Wang et al., 2011). The functions of Chengtougou vary from mega-event projects, infrastructure to ordinary land development (Jiang and Waley, 2018; Su, 2015). Nevertheless, research on their financial flows is inadequate. In the post-crisis era, many Chengtougou play the role of LGFVs to explore financial instruments. Some qualified LGFVs can even access the bond market to issue urban investment bonds (Chengtougou bonds), which leads to an extensive Chengtougou bond market (Pan et al., 2017). Therefore, we examine Chengtougou in their role as LGFVs and focus on the financial functions.

We use a case to investigate the operations of LGFVs. The selected LGFV is a municipal level Chengtougou called Jiaxing City Construction Investment Co. Ltd Corporation (Jiaxing Chengtougou hereafter). Jiaxing Chengtougou can be a useful case to understand LGFVs for two reasons. First, Jiaxing Chengtougou is experienced in financing activities, as it was one of the earliest LGFVs to issue Chengtougou bonds after the endorsement of the central government in 2008. The financial performance of Jiaxing Chengtougou has been recorded in its regular reports, including its bond reports and audit reports. Based on these data, this paper traces how Jiaxing Chengtougou has performed its financial mechanisms. Second, Jiaxing Chengtougou is also representative in terms of current transformations. It regroups with other LGFVs to form Jiaxing Urban Development and Investment Group Co., Ltd (Jiaxing Chengtougou Group hereafter). Jiaxing Chengtougou Group is not a LGFV, because it claims to be financially independent rather than relying on the city government for repayment. The Jiaxing Chengtougou and Jiaxing Chengtougou Group illustrate the latest transformations of LGFVs.

This paper is organized as follows. The next section will first review the general literature of financial activities in urban development. We will also describe financing urban development in China based on land and review the latest studies on LGFVs. Third, the methodology section will introduce the data and method. Fourth, we will introduce a brief history of LGFVs in China. In the fifth section, the Jiaxing case will be investigated to show how a LGFV operates. The final section will discuss all the findings.

2. Literature review

2.1. Financing urban development

Since the GFC, the main objective of governments has shifted from 'wealth creation' (Jessop, 1999) to combating the crisis and surviving in austerity (Peck, 2017, 2012). Although an extensive literature has studied governance tools and market methods in urban development, this issue has regained increasing attention recently that 'a prevailing pattern of urban governance increasingly predicated on financialized logics and technocratic practices' (Peck and Whiteside, 2016, p. 237).

Urban development is naturally costly, and governments strive to provide public goods and pursue entrepreneurial growth (Kirkpatrick, 2016). To make large achievements with a limited budget, various financial tools have been invented and normalized since the 1980s (Salamon, 2002). The US pioneered in the innovation of financial strategies in urban development, as local governments have faced severe competition and pressures from voters (Sbragia, 1996). Thus, municipalities have been trying to circumvent the law and find external solutions like revenue bonds. Apart from generic funding, there have been vigorous practices in district-based redevelopment financial instruments like TIF (Weber, 2010). Another representative tactic is to form specialized institutions and enterprises. For instance, Urban

development corporations (UDCs) in the UK are the example of governance predicated on entrepreneurial activities (Imrie and Thomas, 1999). Initiated by the national government, UDCs were responsible for specific urban regeneration projects with streamlined bureaucracy (Deas and Ward, 1999). Besides, the overwhelming entrepreneurial practices have also been understood with the process of state-rescaling (Brenner, 2004). For example, the establishment of UDCs aimed to minimise the role of local governments in urban development, which further redefined the role of the local authorities in the state (Imrie and Thomas, 1999).

In contemporary practices, governance technologies have evolved from the previous tools to more speculative financial strategies (Kirkpatrick, 2016; Peck and Whiteside, 2016). Facing severe austerity after the GFC, new approaches were invented to finance urban development. One of the remarkable cases is JESSICA in Europe, which aims to provide financial assistance to sustainable urban projects (Dąbrowski, 2015). Furthermore, previous municipal institutions have been reshaped to become new financial vehicles. For instance, Belgium has developed its autonomous municipal corporations (*Autonome Gemeentebesturen*, AGs) to become more speculative land developers (Van Loon et al., 2018). With the increasing sales revenue of AGs, municipalities as the sole shareholders of these AGs manage to cope with austerity.

Moreover, the heated financialisation discourse has activated research on the financial nature of urban development instruments. Scholars have thus found a new angle to explore some lasting urban instruments, such as TIF which is designed to finance urban redevelopment programmes. First, an area is designated for TIF. Municipalities then securitize the expected increase in tax revenue after improvement to investors (Weber, 2010). Currently, scholars find another potential to explain the usage of TIF with the financialisation concern. Weber (2010) indicates that TIF relies on speculation regarding further urban growth and is basically a financialized policy instrument. Echoing Weber's work, a growing body of literature has stressed the rampant practices and approaching threats of using financial institutions, instruments and intermediaries to finance urban development (Kirkpatrick and Smith, 2011; Peck and Whiteside, 2016).

2.2. Financing urban development in China

In China, financing urban development based on land has been discussed both in terms of funding sources and financing mechanisms (Lin and Yi, 2011; Theurillat et al., 2016). Land-based finance in China indicates the contribution of land both as a cash contributor and collateral for further funding (Tsui, 2011; Wu, 2010). The cash contributor is that 'land sales' directly contribute to local revenue (Lin and Ho, 2005; Tao et al., 2010). The local governments can transfer the land-user rights of the state-owned land, from which they can receive substantial land conveyance fees (LCFs) (Cao et al., 2008). Based on the commodification and monopoly on the state-owned land, local governments have successfully obtained a large amount of extra-budgetary revenue (Ding and Lichtenberg, 2011; Shin, 2014; Wu, 2002). Besides, the land is also pivotal in the local financial system. As the most valuable assets owned by governments, land used to be collateralized to get bank loans for infrastructure and preliminary land development (Liao, 2014; Tsui, 2011). Some scholars even argue that land-backed finance is even more important to the local governments compared with the direct cash contribution (Wong, 2013).

Government agencies have been used in the land-based financing process. Local governments were not eligible to borrow by themselves according to the Budget Law before 2014. Therefore, they used to establish Chengtougou to borrow money and conduct urban development projects. Chengtougou take various forms and are usually responsible for specific projects. For instance, Su (2015) introduces a Chengtougou set up to conduct urban redevelopment in a heritage district. Li and Chiu (2018) illustrate a Chengtougou established to develop and manage a new

town in Shanghai. As for operation, Chengtou heavily rely on the state-owned land as assets. For instance, [Jiang and Waley \(2018\)](#) describe how the Shanghai municipal government managed to conduct the Hongqiao Hub Project via establishing Shenhong Corporation (a Chengtou). Shenhong used state-owned land first as collateral, then it prepared the land for leasing and finally it received the profit from the LCFs. Therefore, a Chengtou is both an agent for the state and an active actor in the market.

Due to the GFC and the ensuing stimulus plan in China, local governments were encouraged to use LGFVs to seek funding ([PBC, 2009](#)). Many Chengtou are recognized as LGFVs because they undertake the financing responsibilities for the local governments. Borrowing via LGFVs has left extensive local borrowing problems, which has attracted much attention from officials, scholars as well as the media ([Fan and Lv, 2012](#)). [Liao \(2014\)](#) explains that the local governments are the guarantors for LGFVs to borrow. Besides, [Chen et al. \(2017\)](#) find an increase in shadow banking activities including entrusted loans and wealth management products. [Bai et al. \(2016\)](#) emphasise that the stimulus package has left enormous off-balance sheet local government debts, which may lead to a further decline in the economic growth in China. The International Monetary Fund also stresses the severe debt issue in China, especially the corporate debt issue ([Lipton, 2016](#)). The National Audit Office (NAO) of China audited the local governments and 7170 LGFVs in 2013. It recognized nearly 18 trillion Yuan of local debts, which was about 40% of GDP in 2013. Therefore, understanding the financial risks of LGFVs, especially their connection with the local governments has become an urgent task.

To deal with the problems of local borrowing, the central government required a detachment between LGFVs and the local governments in 2014. The State Council requires that LGFVs should not undertake financing functions for the local governments after 2014 ([State Council, 2014](#)). LGFVs should inevitably transform. However, it remains unknown the responses of LGFVs to the central regulations. To sum up, scant literature on LGFVs has focused on their financial operations and current responses to central regulations. We aim to fill this gap by examining LGFVs systematically and economically.

3. Methodology

Understanding LGFVs as financial intermediaries in urban development, this paper studies their history and financial mechanisms. To trace the evolving path, we used various data sources at the national level. First, we analyse policy documents and regulations promulgated by the State Council, PBC, the Ministry of Finance (MOF), and the China Banking Regulatory Commission (CBRC). We also access the Wind¹ database to depict the financial activities of LGFVs.

The paper then draws upon Jiaxing Chengtou as an example to further examine the financial mechanisms. This case is chosen for the significant position it has in municipal finance, bond issuance, and current transformations. First, the city is located in the Zhejiang province, which has the largest number of LGFVs in China (more information in Section 4.2). Cities in Zhejiang are adept at using LGFVs to finance urban development, compared to cities in other provinces. Second, Jiaxing Chengtou is one of the earliest LGFVs to issue bonds after the GFC. In 2008, the National Development and Reform Commission (NDRC) loosened restrictions in issuing corporate bonds to conduct fixed-assets investment projects ([NDRC, 2008](#)). Jiaxing Chengtou seized the opportunity and issued 1.7 billion Yuan of Chengtou bonds. Due to its entry into the bond market, it has had to release financial data from 2005 to 2017 to the bond market. These

¹ Wind is a financial institution to provide economic data for financial professionals in mainland China. It collects data of LGFVs with bond issuance. Users could access the data via its software. This research accessed the Wind database in 2019.

data include credit reports, financial reports, audit reports and institutional financial analysis compiled by the Wind database and Chinabond website. These statistics are sources for this empirical study. Third, Jiaxing Chengtou is a typical case to examine the current status of LGFVs. The central government has taken a series of measures to monitor and regulate LGFVs since 2010. Jiaxing Chengtou successfully exited from the central monitor list in 2012 (more information in Section 5). Because of these three features, Jiaxing Chengtou can be regarded as a typical instance for us to observe the development of LGFVs.

4. A brief history of LGFVs

Although government-related agencies took financial functions for the local governments in China before the GFC, they were not called LGFVs. LGFVs are officially acknowledged by the central government to support the stimulus package in the post-crisis era. Therefore, we review the history of LGFVs from its emergence after the GFC ([Table 1](#)).

4.1. The emergence and boom of LGFVs: 2008 – 2013

Confronting the GFC, the Chinese government proactively invested in infrastructure to stimulate the economy and absorb surplus labour in 2008. To achieve this goal, the PBC encouraged local governments to borrow via LGFVs and expand financial instruments including bonds ([PBC, 2009](#)).

In 2009, the PBC mentioned LGFVs in its official document ([PBC, 2009](#)). This was the first time that Chengtou and other kinds of governmental institutions (like land reserve centres) were officially identified by the central government as financial vehicles. Authorized by local governments and acquiesced in by the central government, LGFVs unprecedentedly expanded their financial capabilities in mobilizing capital. The new financial approach was issuing Chengtou bonds. These bonds belong to the category of enterprise bonds, but they are raised for urban development projects. The Chengtou bond market sharply increased by 85% per year from 2008 to 2014 ([Ang et al., 2015](#)).

To issue Chengtou bonds, qualified LGFVs received two types of support from the local government. First, they received state-owned assets as fixed capital. To issue corporate bonds, LGFVs are required to provide qualified balance sheets. Bond-rating companies check their performance until redemption. To reduce the liability-asset ratio of LGFVs, local governments used to inject state-owned land and capital into LGFVs to expand companies' assets ([Tsui, 2011](#)). Second, local governments usually provided a guarantee to promote credits for Chengtou bonds. An example of a guarantee is the commitment letter which is provided by the local governments to banks ([Liao, 2014](#)).

The central government realized the latent problems with LGFVs after 2009; hence, it has tried to control the debts caused by LGFVs. This was first marked by the request of the State Council to strengthen the management of LGFVs in 2010 ([State Council, 2010](#)). To control the scale of local debts, the central government adopted a series of policies to regulate LGFVs and create other financial approaches for local governments. Nevertheless, local behaviours seemed to diverge from the intention of the central government, as borrowing through LGFVs continued to increase at this stage.

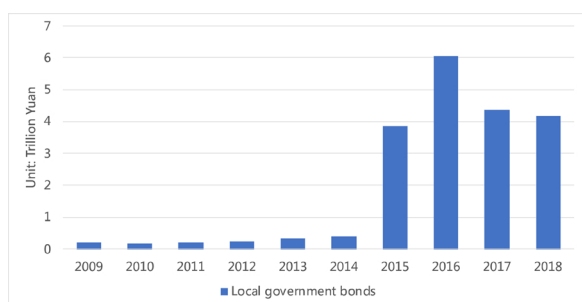
4.2. Transformations of LGFVs: 2014 - present

Finally, the central government takes a tough stance to detach LGFVs from local governments. It prohibited any kind of local borrowing except via issuing local government bonds in 2014. On the one hand, the State Council stipulated that the debts of LGFVs should not rise in principle, and it required LGFVs to detach from local governments ([State Council, 2014](#)). On the other hand, the central government has conducted a series of experiments with local government bonds since 2009. After three-year pilot practices, the budget law was revised

Table 1

Regulations by the central government on local borrowing and LGFVs. Source: central government documents of China.

Year	Document	Stipulations on local borrowing and LGFVs	Impacts
2008	NDRC No. 7 document on promoting corporate bond market and simplifying the issuance approval process	Simplify procedures to stimulate the corporate bond market; For fixed-asset investment projects, bond issuance shall not exceed 60% of the project	Facilitate Chengtuo to enter the bond market
2009	PBC No.92 guidelines on further restructuring of credit system and promoting steady and rapid economic development	Support local governments to set up LGFVs, issue corporate bonds, medium-term notes and other financial instruments	The rise of LGFVs
2010	State Council No. 19 document on strengthening management on local government financial vehicles	Categorise debts of LGFVs; Transform LGFVs to detach financial functions; Prohibit local governments from providing illegal guarantees to LGFVs	Gradually strengthen control on LGFVs
2011	CBRC No. 91 document on supervision of local government financing vehicles	CBRC monitors LGFVs based on a list of LGFVs; LGFVs on the list are not allowed to borrow new loans in principle	
2014	The Budget Law (2014)	Provinces, autonomous regions and municipalities under the central government's jurisdiction approved by the State Council can issue local government bonds within a limit stipulated by the State Council	Detach financing functions of LGFVs
2014	State Council No. 43 document on strengthening the management of local government debts	Qualified provincial-level governments can issue local government bonds on behalf of the municipal and county governments; Detach the financial function of LGFVs for local governments, LGFVs should not increase government debts	
2015	MOF No. 225 document on implementing quota administration of local government debts	Promote market-oriented transformation and restructuring of LGFVs; Replace local government debts borrowed from non-government bonds by local government bonds within three years	Encourage LGFVs to transform
2015	State Council No. 42 document on forwarding the guidelines of the MOF, the NDRC and the PBC on promoting PPP in public service fields	LGFVs after reforms to detach financial functions and become independent enterprises can be the private sector in PPP projects	

**Fig. 1.** Local government bonds issuance (2009–2018).Data source: <https://www.chinabond.com.cn>.

in 2014 to legally allow provinces, autonomous regions and municipalities under the central government's jurisdiction to issue local government bonds on behalf of lower-level local governments. After 2014, local government bonds boomed (Fig. 1). However, it should be stressed that local government bonds are not issued by municipal governments but by provincial-level governments, and the amount of bond issuance should also be approved by the State Council. Therefore, the central government has strengthened management on local debts by delegitimising local borrowing via LGFVs, as well as adopting a top-down quota system on local government bonds.

LGFVs have been required to become enterprises that follow market rules, rather than depending on the local governments for debts repayment (State Council, 2014). Because of these requirements, many LGFVs have to transform from state-based financial subsidiaries to independent enterprises. However, whether they have really become independent entities remains unclear.

The MOF has authorized the CBRC to regulate LGFVs since 2011. The CBRC monitors LGFVs whose debt responsibilities are partly shouldered by local governments (CBRC, 2011), regardless of their financial purposes. CBRC monitors LGFVs based on a national list of LGFVs. According to CBRC, there are 11,736 LGFVs (September 2018) in China. Zhejiang province ranks first of 31 provinces (or the municipalities under the central government's jurisdiction) with 1571 LGFVs.

There are two categories in the CBRC list, existing LGFVs (*zaiguan pingtai*) and exit LGFVs (*tuichu pingtai*). As for the existing type, banks

should not give new loans to these LGFVs in principle²; while exit LGFVs are regarded as normal independent enterprises. The CBRC updates the list quarterly and encourages existing LGFVs to become exit ones. LGFVs can exit from the list as long as they fulfil the requirements to become independent enterprises. These requirements include a leverage ratio of less than 70% and that cash flow can cover all liabilities. Therefore, many LGFVs have drastically reshaped to become exit LGFVs. There are 2667 LGFVs in the exit category of the CBRC list (September 2018). Although they promise not to undertake financial responsibilities for local governments, they still connect with local governments in two aspects. First, rating institutions still consider the historical connection between exit LGFVs and their local governments. Second, LGFVs after transformations are allowed to join PPP projects (State Council, 2015). LGFVs used to cooperate with local governments in conducting urban projects. They are familiar with the regulations and procedures, which makes them competitive in the market. Thus, LGFVs after transformations can still maintain their functions in supporting local development.

5. A case study of Jiaxing and its municipal LGFV

This section aims to illustrate how a LGFV performs based on a case in Jiaxing. In 2000, the Jiaxing city government established Jiaxing Chengtuo to conduct infrastructure construction and land preparation. Although its ownership has changed several times, its actual owner has always been the State-owned Assets Supervision and Administration Commission (SASAC) of Jiaxing city government. Jiaxing Chengtuo has been the only authorized company to conduct preliminary land development for the city government since 2000. But its financial reports were not accessible until 2008 when it issued a Chengtuo bond. This was the first Chengtuo bond for Jiaxing city, and also a prologue to the boom in Chengtuo bonds in China after the GFC. Jiaxing Chengtuo was included in the monitor list of LGFVs in 2010. Two years later, Jiaxing Chengtuo successfully exited from the monitor list³. This means that the Jiaxing government has not shouldered any joint responsibility for

² Exceptions can be made only if the new loans can be approved by the CBRC. See more information in CBRC No.191 Notice in 2011 on Supervision of Local Government Financing Vehicles.

³ It is still on the CBRC list of LGFVs today, but in the category of exit LGFVs.

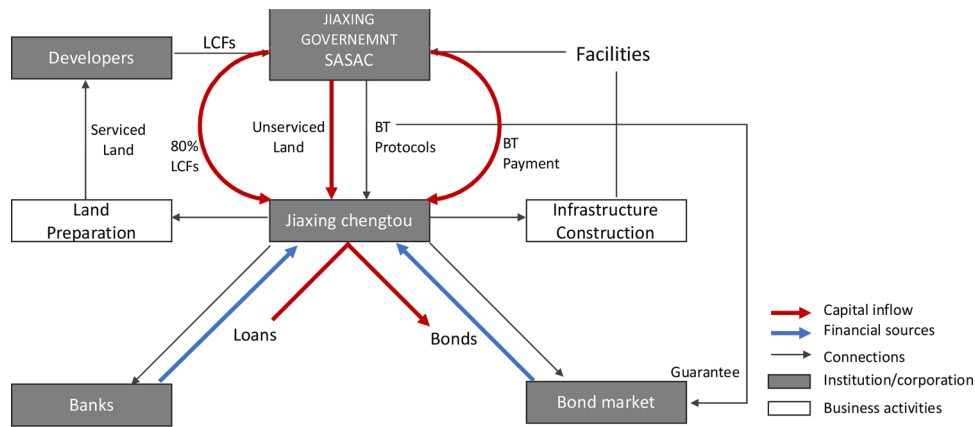


Fig. 2. The financial mechanism of Jiaying Chengtou.

Jiaying Chengtou since 2012. But Jiaying Chengtou is still closely connected with the Jiaying government for its ownership and business connections with the city government. Moreover, their connection is also reflected in staffing. The manager of Jiaying Chengtou has been appointed by the Jiaying city government.

Focusing on Jiaying Chengtou and its capital flows, this section explains its financing mechanisms in three aspects (Fig. 2). First, we trace the different financial resources used by Jiaying Chengtou to show how it became more adventurous in the exploration of financial resources. It started with loans, extended to bonds, and repaid the loans by further borrowing. Second, we examine to what extent Jiaying Chengtou relies on land leverage. As indicated in previous studies, LGFVs seek finance based on state-owned land. The Jiaying case provides evidence and new insights for this argument. Finally, we find that Jiaying Chengtou has regrouped with several LGFVs in Jiaying to maintain their financial function under the restrictions from the central government.

5.1. Financial channels: from loans to bonds to rolling debts

In terms of financial channels, Jiaying Chengtou gradually took risky approaches to get funds from bank loans to bonds, and it ended up with rolling debts before 2015. Based on the changes in financial resources, this section will portray how Jiaying Chengtou seeks funding.

Even before the external financial crisis, Jiaying Chengtou was a debt-ridden corporation. In terms of its businesses, Jiaying Chengtou has long been a government agency in the urban development of Jiaying city. Jiaying Chengtou has to conduct and seek finance for two principal duties, to develop under-serviced land and infrastructure. As for land expropriation and preparation, the land is sold by the local government after the initial development. Then, a large portion of the LCFs is paid back to Jiaying Chengtou (more details in Section 5.2). Another business is infrastructure. Jiaying Chengtou usually signs Build and Transfer (BT) protocols with the Jiaying city government. According to these contracts, Jiaying Chengtou is supposed to receive money back from the Jiaying city government after completion. As the city government only pays after the project is finished, Jiaying Chengtou has to get funding first. The most used funding source is bank loans. In 2005, the asset-liability ratio reached 78.98% (Fig. 3). Such a high debt ratio demonstrates how desperately the leverage was used in an LGFV even before the external crisis.

In 2008, the central government lifted the constraints on LGFVs to issue enterprise bonds. Confronted with insufficient funding, Jiaying Chengtou seized this chance and issued a bond. It issued a seven-year Chengtou bond of 1.7 billion Yuan in 2008. It should be stressed that this Chengtou bond in 2008 was not only for further infrastructure construction but also to pay back previous debts. There are three pieces of evidence. First, based on the bond issuing document, the bond was



Fig. 3. Asset-liability ratio of Jiaying Chengtou (2005–2017). Data source: Wind dataset.

issued for four urban projects, including sewage system, water provision, urban replacement and infrastructure projects. But all the projects had started before 2007, and two of them had even received approval in 2005. Another piece of evidence comes from the credit rating report of 2009. The report indicates that Jiaying Chengtou had spent 1.3 billion Yuan of the total 1.7 billion Yuan bond before the end of 2008, and 0.7 billion Yuan was directly used to pay back previous bank loans (China Lianhe Credit Rating Corporation, 2009). Meanwhile, the cash flow statement showed that Jiaying Chengtou repaid 2.2 billion Yuan of debts in 2008, which was the highest level from 2005 to 2017. These facts imply that Jiaying Chengtou issued the bond to repay its mounting debts. Thus, issuing a bond for Jiaying Chengtou in 2008 was a trial in borrowing from the bond market, but it was not the beginning of rolling debts. Jiaying Chengtou was experienced in financial activities.

To issue this bond, Jiaying Chengtou received support from the Jiaying city government, including capital injection and credit enhancement. First, Jiaying Chengtou was not eligible to issue bonds with such a high leverage ratio in 2005. As a normal practice, the Jiaying government instantly injected undeveloped land to Jiaying Chengtou, which was reflected in the inventory category. As a result, Jiaying Chengtou witnessed a significant jump in assets and a decline in leverage ratio from 2005 to 2007, and the inventory contributed 44.6% of the total assets. Apart from asset injection, the Jiaying government also enhanced credit for the Chengtou bond. In the guarantee issue for Jiaying Chengtou, both the rating company and the underwriters put more emphasis on the governmental guarantee. The vital guarantee was the BT protocols that Jiaying Chengtou signed with the Jiaying city government in 2008. The contracts stipulated that the Jiaying government promised to repay the infrastructure projects conducted by Jiaying Chengtou within 5 years after completion of the projects. According to the bond issuance document in 2008, Jiaying government

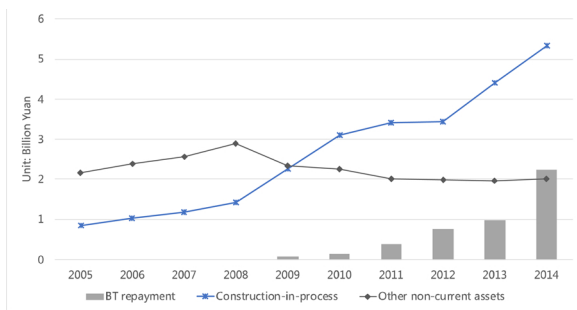


Fig. 4. Construction costs and repayment received of Jiaxing Chengtuo (2005–2014).

Data source: credit rating reports (2009–2015) and audit reports (2008–2014) of Jiaxing Chengtuo.

would pay 3.368 billion Yuan to Jiaxing Chengtuo from 2009 to 2015. ‘This would be nearly twice the amount of the bond, so the bond repayment could be protected’ (Jiaxing Chengtuo, 2008, p. 47). Because of these clauses, Jiaxing Chengtuo finally accessed the bond market with the support of the Jiaxing government.

The bond repayment was largely guaranteed by the BT protocols in 2008. However, even though the Jiaxing government kept injecting capital into Jiaxing Chengtuo, the debt level continued to increase because of the subsequent massive investment in urban projects. The first boom in urban projects occurred after 2008. Due to the central stimulus plan which encouraged more investment in urban infrastructure in 2009, Jiaxing Chengtuo was assigned many tasks by the Jiaxing government. As a result, the category of *construction in process* dramatically increased in 2009 and 2010 (Fig. 4). Another boom happened in 2013 when the State Council again called for more investment in urban infrastructure (State Council, 2013). Therefore, Jiaxing Chengtuo has been essential to fulfil tasks for the city of Jiaxing. It also demonstrates that local governments are responsive to central commands. But such massive investment leaves substantial burdens for the local government. Rating reports show that the Jiaxing government barely performed the BT contracts signed in 2008, which were used to offset the costs under *construction in process*. The Jiaxing government repaid 4.60 billion Yuan to Jiaxing Chengtuo in total from 2009 to 2014, which is more than the amount signed for in 2008. However, the *construction in process* of Jiaxing Chengtuo still increased sharply (Fig. 4). Thus, BT repayment from the Jiaxing government was not enough to cover the increasing accumulated costs in urban projects. In the end, Jiaxing Chengtuo fell short of earnings to repay the bond.

To pay back the bond, Jiaxing Chengtuo turned to further loans. The bond was required to be repaid in 2015, and Jiaxing Chengtuo desperately raised funds mainly through more loans in 2014. Evidence can be found in the liabilities data. *Long-term loans* increased sharply by 1.5 billion Yuan in 2014. Jiaxing Chengtuo was experienced in using reserved land as collateral before this bond term, but it could hardly find enough spare land to be mortgaged (more details in 5.2). Also, because of the new regulations of the central government, the city government could not inject land as capital to LGFVs. Jiaxing Chengtuo had to find other resources. In the end, Jiaxing Chengtuo managed to obtain loans from banks, and the new loans were either pledged by equity or mortgaged by existing buildings. These new debts placed more severe financial burdens on Jiaxing Chengtuo. In 2014, the leverage ratio reached 68.92%.

5.2. Financial mechanism: land leverage and its insufficiency

As for the financial mechanisms of LGFVs, it is widely believed that they make full use of land to seek finance (Tsui, 2011). The land is treated as inventory and collateral. Also, after the transfer of land user rights, land premiums are used to cover the preliminary cost for land

development and infrastructure (Ong, 2014). Nevertheless, we have little knowledge about the capital flows of LGFVs based on land. Drawing upon the economic data of Jiaxing Chengtuo, we provide solid evidence for this argument. Jiaxing Chengtuo also treats land as inventory, collateral and a cash contributor. However, it also shows the bottleneck in land-based finance especially after 2008, which induced further adventurous financial actions.

Jiaxing Chengtuo heavily relies on state-owned land as inventory to enlarge its asset level. As mentioned before, the Jiaxing government injected land into Jiaxing Chengtuo around 2007, which is recorded as reserved land (*chubei tudi*) in the inventory list. According to the audit reports from 2008 to 2014, the reserved land remained relatively stable. Jiaxing Chengtuo owned about 287,500 square metres of land, which was worth 1.74 billion Yuan (China Lianhe Credit Rating Corporation, 2015). The reserved land and the costs of developing land comprised more than 95% of the inventory and accounted for about 30% of the total assets of Jiaxing Chengtuo. Thus, land as inventory greatly enhances the asset level of Jiaxing Chengtuo. However, land shows its insufficiency in the other two aspects, including land as collateral and as a cash contributor.

First, against the argument that land is mortgaged to secure loans for LGFVs (Tsui, 2011), land collateral becomes less important in Jiaxing Chengtuo. As shown in the audit reports (Fig. 5), land owned by Jiaxing Chengtuo used to be the major source of collateral before 2011. Loans mortgaged by land comprised more than 60% of all the long-term loans. But the percentage has dropped to be less than 30% since 2012. The decline is partly due to the regulations of the CBRC. In 2011, it stipulated that ‘the expected income from the land without legal land user rights should not be accepted as a mortgage or pledge’ (CBRC, 2011). Under strict regulation, Jiaxing Chengtuo could only use land with legal user rights as collateral. As shown in reports, the land owned by Jiaxing Chengtuo was insufficient to cater for its demanding loans. In 2011, Jiaxing Chengtuo used more than 260,000 square metres of land as collateral to obtain only 0.9 billion Yuan of loans. Intriguingly, as mentioned above, Jiaxing Chengtuo reserved 287,500 square metres of land in total. That is, Jiaxing Chengtuo mortgaged nearly all its land as collateral to get loans, but this was still insufficient. From then on, Jiaxing Chengtuo sought loans mortgaged by buildings and other types of assets. As a result, the leverage ratio of Jiaxing Chengtuo steadily increased from 2011 to 2014. This, along with the insufficiency of land-backed loans, caused Jiaxing Chengtuo to take riskier financial approaches.

As for land as a cash contributor for LGFVs, LCFs are less important for funding urban projects in Jiaxing Chengtuo; they can only gloss over the business performance. After the transfer of land user rights, the Jiaxing government paid back about 80% of all the LCFs to Jiaxing Chengtuo (China Lianhe Credit Rating Corporation, 2009). The LCFs received by Jiaxing Chengtuo are recorded in two categories: *non-operational income* and *construction in process*. The *non-operational income* is vital for Jiaxing Chengtuo because it contributes nearly 100% of the

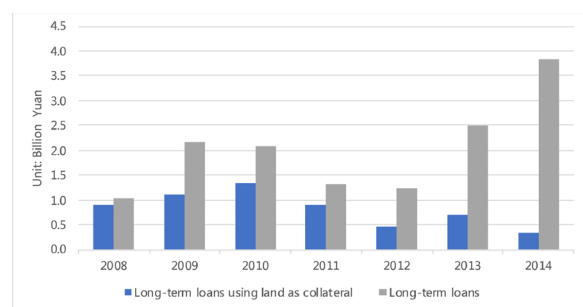


Fig. 5. Long-terms bonds collateralized by land in Jiaxing Chengtuo (2008–2014).

Data source: audit reports (2008–2014) of Jiaxing Chengtuo.

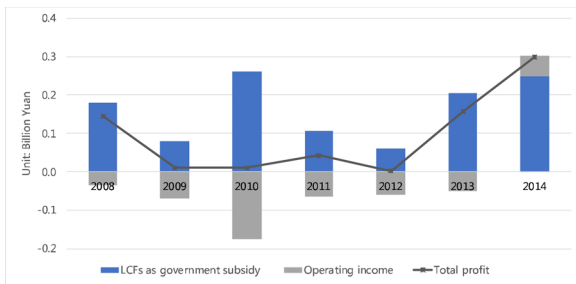


Fig. 6. LCFs received by Jiaxing Chengtuo as profits (2008–2014).
Data sources: credit rating reports (2009–2015) of Jiaxing Chengtuo.



Fig. 7. LCFs received by Jiaxing Chengtuo to offset construction costs (2008–2014).
Data sources: credit rating reports (2009–2015) of Jiaxing Chengtuo.

total profit. As shown in Fig. 6, almost all the operating income was negative, which means Jiaxing Chengtuo could not make profits from its own business. Nevertheless, Jiaxing Chengtuo managed to get a slight profit each year. This was due to the right injection of *non-operational income*. Thus, LCFs are pivotal to gloss over the business performance of Jiaxing Chengtuo. But for the other part of LCFs, their importance for offsetting construction costs has diminished. Many studies have stressed that LCFs are essential to offset infrastructure costs (Tsui, 2011; Wu, 2010). However, Jiaxing Chengtuo shows a diminishing role for LCFs, because the remaining part of the LCFs received by Jiaxing Chengtuo was used to offset the costs in *construction in process*, but these gradually became negligible (Fig. 7). This is largely due to the central regulations on land reserve and management of LCFs. In 2012, four ministries including the Ministry of Land and Resources (MLR) required local governments to separate the functions of land expropriation and land preparation from Chengtuo (MLR et al., 2012), and the State Council further tightened the management of LCFs in 2014 (State Council, 2014). Facing these restrictions on using LCFs, LCFs became insufficient to clear previous costs. Thus, the debt problem of Jiaxing Chengtuo became more remarkable.

5.3. Current Jiaxing Chengtuo: government bailout and regroup

Despite the risky leverage level, Jiaxing Chengtuo cleared all its debts in 2016 because the Jiaxing government swapped all the debts for a government bond. Intriguingly, Jiaxing Chengtuo exited from the monitor list of LGFVs in 2012. This means that the Jiaxing government has not been responsible for the debts of Jiaxing Chengtuo since 2012. However, the Jiaxing government still cleared all the *construction in process* and *other non-current assets* for Jiaxing Chengtuo in 2016, which were 7.34 billion Yuan in total. The bailout shifted the financial burden from Jiaxing Chengtuo to the Jiaxing government with long-term local government bonds.

Jiaxing Chengtuo has been regrouped for further financing. Jiaxing Chengtuo was incorporated in the Jiaxing Chengtuo Group in 2009. Jiaxing Chengtuo still exists to conduct urban projects, but it has not entered the bond market since 2014. On the contrary, Jiaxing Chengtuo

Group becomes active in the financial market. Jiaxing Chengtuo Group is a state-owned enterprise and claims to be responsible for its profits and losses. As the Jiaxing government does not take joint responsibilities for its liabilities, Jiaxing Chengtuo Group does not fit for the CBRC definition on LGFVs. Thus, Jiaxing Chengtuo Group is never included in the LGFV list. However, it maintains functions in supporting urban development. According to the reports of Jiaxing Chengtuo Group, it still undertakes governmental projects including land preparation, road construction, and urban renewal projects (China Lianhe Credit Rating Corporation, 2018). However, Jiaxing Chengtuo Group does not sign any repayment contracts with the Jiaxing government like Jiaxing Chengtuo previously. The Jiaxing government only repays LCFs annually to offset construction costs, which is largely insufficient (China Lianhe Credit Rating Corporation, 2018). Besides, credit rating reports still emphasise the relationship between Jiaxing Chengtuo Group and the municipal government. Therefore, although as an enterprise with no direct financial responsibility for governments, Jiaxing Chengtuo Group still closely connects with the local government.

Jiaxing Chengtuo Group receives more freedom to access the financial market with enlarged assets level and promoted business performance. According to the audit reports of Jiaxing Chengtuo Group, it had 26 subsidiaries in 2018, which incorporated enterprises in various fields including land development, natural gas supply, real estate and tourism. Its business income heavily relies on natural gas supply and real estate, which contributed 87.17% of the total income in 2018 (China Lianhe Credit Rating Corporation, 2018). Compared to Jiaxing Chengtuo, Jiaxing Chengtuo Group can make profits, which makes it more reliable in the financial market. It issued five Chengtuo bonds to receive 2.17 billion Yuan from 2012 to 2017. Besides, instead of only issuing enterprise bonds, Jiaxing Chengtuo Group has explored other types of bonds including CP (Commercial Paper), SCP (Super & Short-term Commercial Paper), and MTN (Middle Term Note). Moreover, Jiaxing Chengtuo Group issued a 0.3 billion USD bond in the Singapore Exchange Limited in 2018, which was the first overseas Chengtuo bond of Jiaxing. Thus, regrouping is a strategy for LGFVs to transform and enables more freedom to access the financial market.

6. Conclusion

The literature has observed that urban development becomes more entangled with the financial market when using financial strategies (Sanfelici and Halbert, 2018; Theurillat et al., 2014), and extensive use of financial instruments can result in unexpected risks (O'Brien et al., 2018). Nevertheless, financial practices, impacts and risks should be understood in the institutional context (Christophers, 2019; Weber, 2010). The development of LGFVs in China have contributed to this body of literature by providing a contextualized form of financialisation.

China has seen a similar trend of using financial intermediaries to seek enormous funds in the post-crisis era, which is similar to AGs in Belgium (Van Loon et al., 2018). Nevertheless, China has not seen the dominance of financial investors or financial profits (for example, Guironnet et al., 2016; Peck and Whiteside, 2016). The central government still maintains great power on the national financial market. Besides, the development of LGFVs reflects the complexity of the relationship between the local governments and the central government (He and Wu, 2009). On the one hand, LGFVs are applied to support a national strategy, which demonstrates the 'planning centrality' via a top-down bureaucratic system (Wu, 2018). Meanwhile, local governments largely overborrowed and exceeded the four-trillion target set by the central government. And also, LGFVs after transformations have remained active in conducting urban development projects and issuing Chengtuo bonds until now, albeit with central regulations after 2014. The complexity echoes previous studies on Chinese state rescaling that local governments seem to be driven by state-led initiatives; but actually, various states negotiate and compete against each other to pursue

their profits (Li et al., 2014).

Besides, we contribute to the understanding of the financial operations of LGFVs by providing a concrete case study. First, we find the insufficiency of land collateral or land premiums to offset previous cost, especially due to the central regulations after 2014. Therefore, the previous model of 'land-leverage-infrastructure' (Ong, 2014; Tsui, 2011) faces financial challenges in the current situation. Second, we observe recent local responses under the current restrictions of the central government. Jiaxing Chengtou regrouped with other LGFVs to form the Jiaxing Chengtou Group. By doing so, Jiaxing Chengtou Group was enabled to have a better business performance to access the financial market, and it has extensively developed its financial functions. Meanwhile, the operation of Jiaxing Chengtou could avoid supervision by exiting from the monitor list. Moreover, Jiaxing Chengtou Group still undertakes urban projects including land development and infrastructure construction, but it uses self-raised funds to finance these projects. Although the Jiaxing government does not sign any contracts to repay the projects, Jiaxing Chengtou Group and the rating company believe in future repayment (China Lianhe Credit Rating Corporation, 2018). Thus, regrouping contributes to more borrowing through government-related agencies, which may cause further financial risks.

The case of Jiaxing Chengtou also sheds light on the financial relationship between local governments and LGFVs. Jiaxing Chengtou was established as a financial arm for the Jiaxing government to circumvent restrictions and central supervision. As Jiaxing Chengtou became more involved in the financial market, Jiaxing government provided further support to Jiaxing Chengtou, including capital injection and various types of guarantee. As a result, Jiaxing Chengtou became more debt-ridden and accumulated numerous debts. However, in the end, the accumulated debts of Jiaxing Chengtou were cleared by the Jiaxing government bonds in 2016. This demonstrates how financial risks are transferred from local governments to LGFVs, and finally transferred back to governments.

CRedit authorship contribution statement

Yi Feng: Conceptualization, Formal analysis, Data curation, Writing - original draft. **Fulong Wu:** Validation, Writing - review & editing, Supervision. **Fangzhu Zhang:** Supervision, Funding acquisition.

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References

- Aalbers, M.B., 2015. The potential for financialization. *Dialogues Hum. Geogr.* 5, 214–219. <https://doi.org/10.1177/2043820615588158>.
- Aalbers, M.B., 2017. The variegated financialization of housing. *Int. J. Urban Reg. Res.* 41, 542–554. <https://doi.org/10.1111/1468-2427.12522>.
- Ang, A., Bai, J., Zhou, H., 2015. The great wall of debt: the cross section of Chinese local government credit spreads. *SSRN Electron. J.* <https://doi.org/10.2139/ssrn.2603022>.
- Angelou, D., Leitner, H., Sheppard, E., 2018. Engineering the financialization of urban entrepreneurialism: the JESSICA urban development initiative in the European Union. *Int. J. Urban Reg. Res.* 42, 573–593. <https://doi.org/10.1111/1468-2427.12590>.
- Arrighi, G., 1994. The long twentieth century: money, power, and the origins of our times. *The Long Twentieth Century.* <https://doi.org/10.2307/2624872>.
- Ashton, P., Doussard, M., Weber, R., 2016. Reconstituting the state: city powers and exposures in Chicago's infrastructure leases. *Urban Stud.* 53, 1384–1400. <https://doi.org/10.1177/0042098014532962>.
- Bai, C.-E., Hsieh, C.-T., Song, Z.M., 2016. The Long Shadow of a Fiscal Expansion. *Biomass Chem Eng. Cambridge, MA.* <https://doi.org/10.3386/w22801>.
- Brenner, N., 2004. *New State Spaces: Urban Governance and the Rescaling of Statehood.* Oxford University Press, New York. <https://doi.org/10.1093/acprof:oso/9780199270057.001.0001>.
- Cao, G., Feng, C., Tao, R., 2008. Local "land finance" in China's urban expansion: challenges and solutions. *China World Econ.* 16, 19–30. <https://doi.org/10.1111/j.1749-124X.2008.00104.x>.
- CBRC, 2011. CBRC No.91 Document on Supervision of Local Government Financial Vehicles. Available at <http://www.cbrc.gov.cn/chinese/newIndex.html> (Accessed: 3 July 2019).
- Chen, Z., He, Z., Liu, C., 2017. *The Financing of Local Government in China: Stimulus Loan Wanes and Shadow Banking Waxes.* Cambridge, MA. <https://doi.org/10.3386/w23598>.
- China Lianhe Credit Rating Corporation, 2009. *Credit Rating Reports on Jiaxing Chengtou.* Available at Wind dataset (Accessed: 2 June 2019).
- China Lianhe Credit Rating Corporation, 2015. *Credit Rating Reports on Jiaxing Chengtou.* Available at <https://www.chinabond.com.cn/Info/21140763> (Accessed: 3 July 2019).
- China Lianhe Credit Rating Corporation, 2018. *Credit Rating Reports on Jiaxing Chengtou Group.* Available at <https://www.chinabond.com.cn/cb/cn/ywcz/fxyfxfdf/zqzl/zqjp/pjwj/20180725/149734865.shtml> (Accessed: 3 July 2019).
- Christophers, B., 2019. Putting financialisation in its financial context: transformations in local government-led urban development in post-financial crisis England. *Trans. Inst. Br. Geogr.* 571–586. <https://doi.org/10.1111/tran.12305>.
- Dąbrowski, M., 2015. Doing more with less' or 'doing less with less'? Assessing EU cohesion policy's financial instruments for urban development. *Reg. Stud. Reg. Sci.* 2, 73–96. <https://doi.org/10.1080/21681376.2014.999107>.
- Deas, I., Ward, K.G., 1999. The song has ended but the melody lingers. *Local Econ. J. Local Econ. Policy Unit* 14, 114–132. <https://doi.org/10.1080/02690949908726482>.
- Ding, C., Lichtenberg, E., 2011. Land and urban economic growth in China. *J. Reg. Sci.* 51, 299–317. <https://doi.org/10.1111/j.1467-9787.2010.00686.x>.
- Fan, G., Lv, Y., 2012. Fiscal prudence and growth sustainability: an analysis of China's public debts. *Asian Econ. Policy Rev.* 7, 202–220. <https://doi.org/10.1111/j.1748-3131.2012.01234.x>.
- Feng, X., 2014. Local government debt and municipal bonds in China: problems and a framework of rules. *Copenhagen J. Asian Stud.* 31, 23. <https://doi.org/10.22439/cjas.v31i2.4332>.
- Fields, D., 2017. Unwilling subjects of financialization. *Int. J. Urban Reg. Res.* 41, 588–603. <https://doi.org/10.1111/1468-2427.12519>.
- Guironnet, A., Attuyer, K., Halbert, L., 2016. Building cities on financial assets: the financialisation of property markets and its implications for city governments in the Paris city-region. *Urban Stud.* 53, 1442–1464. <https://doi.org/10.1177/0042098015576474>.
- Harvey, D., 2018. Realization crises and the transformation of daily life. *Sp. Cult* 1–16. <https://doi.org/10.1177/1206331218786668>.
- He, S., Wu, F., 2009. China's emerging neoliberal urbanism: perspectives from urban redevelopment. *Antipode* 41, 282–304. <https://doi.org/10.1111/j.1467-8330.2009.00673.x>.
- Imrie, R., Thomas, H. (Eds.), 1999. *British Urban Policy: An Evaluation of the Urban Development Corporations.* SAGE Publications Ltd, London. <https://doi.org/10.4135/9781446218907>.
- Jessop, B., 1999. The changing governance of welfare: recent trends in its primary functions, scale, and modes of coordination. *Soc. Policy Adm.* 33, 348–359. <https://doi.org/10.1111/1467-9515.00157>.
- Jiang, Y., Waley, P., 2018. Shenhong: The anatomy of an urban investment and development company in the context of China's state corporatist urbanism. *J. Contemp. China* 27, 596–610. <https://doi.org/10.1080/10670564.2018.1433580>.
- Jiaxing Chengtou, 2008. *2008 Enterprise Bond Prospectus of Jiaxing Chengtou.* Available at Wind dataset (Accessed: 2 June 2019).
- Kirkpatrick, L.O., 2016. The new urban fiscal crisis: finance, democracy, and municipal debt. *Polit. Soc.* 44, 45–80. <https://doi.org/10.1177/0032329215617464>.
- Kirkpatrick, L.O., Smith, M.P., 2011. The infrastructural limits to growth: rethinking the urban growth machine in times of fiscal crisis. *Int. J. Urban Reg. Res.* 35, 477–503. <https://doi.org/10.1111/j.1468-2427.2011.01058.x>.
- Lapavistas, C., 2013. The Financialization of Capitalism: "Profiting Without Producing." *City.* <https://doi.org/10.1080/13604813.2013.853865>.
- Li, J., Chiu, L.H.R., 2018. Urban investment and development corporations, new town development and China's local state restructuring—the case of Songjiang new town, Shanghai. *Urban Geogr.* 39, 687–705. <https://doi.org/10.1080/02723638.2017.1382308>.
- Li, Z., Xu, J., Yeh, A.G.O., 2014. State rescaling and the making of city-regions in the Pearl River Delta, China. *Environ. Plan. C Gov. Policy* 32, 129–143. <https://doi.org/10.1068/c11328>.
- Liao, F., 2014. Quenching thirst with poison? Local government financing vehicles — past, present, and future. In: Liebman, B.L., Milhaupt, C.J. (Eds.), *Regulating the Visible Hand? Oxford University Press, New York*, pp. 69–84.
- Lin, G.C.S., Ho, S.P.S., 2005. The state, land system, and land development processes in contemporary China. *Ann. Assoc. Am. Geogr.* 95, 411–436. <https://doi.org/10.1111/j.1467-8306.2005.00467.x>.
- Lin, G.C.S., Yi, F., 2011. Urbanization of capital or capitalization on urban land? Land development and local public finance in urbanizing China. *Urban Geogr.* 32, 50–79. <https://doi.org/10.2747/0272-3638.32.1.50>.
- Lipton, D., 2016. *Rebalancing China: International Lessons in Corporate Debt.* Available at <https://www.imf.org/en/News/Articles/2015/09/28/04/53/sp061016> (Accessed: 23 December 2019).
- MLR, MOF, PBC, CBRC, 2012. No. 162 Document on Strengthening Land Reserve and Financing Management. Available at http://www.gov.cn/zwzgk/2012-11/16/content_2267756.htm (Accessed: 23 December 2019).
- NDRC, 2008. NDRC No.7 Document on Promoting Corporate Bond Market and Simplifying the Issuance Approval Process. Available at: http://bgt.ndrc.gov.cn/zcfb/200801/t20080104_498979.html (Accessed: 3 July 2019).
- O'Brien, P., Pike, A., Tomaney, J., 2018. Governing the 'ungovernable'? Financialisation

- and the governance of transport infrastructure in the London 'global city-region'. *Prog. Plann.* 0–1. <https://doi.org/10.1016/j.progress.2018.02.001>.
- Ong, L.H., 2014. State-led urbanization in China: skyscrapers, land revenue and concentrated villages. *China Q.* 162–179. <https://doi.org/10.1017/S0305741014000010>.
- Orhangazi, O., 2008. Financialisation and capital accumulation in the non-financial corporate sector: a theoretical and empirical investigation on the US economy: 1973–2003. *Cambridge J. Econ.* 32, 863–886. <https://doi.org/10.1093/cje/ben009>.
- Pan, F., Zhang, F., Zhu, S., Wójcik, D., 2017. Developing by borrowing? Inter-jurisdictional competition, land finance and local debt accumulation in China. *Urban Stud.* 54, 897–916. <https://doi.org/10.1177/0042098015624838>.
- PBC, 2009. PBC No.92 Guidelines on Further Restructuring of Credit System and Promoting Steady and Rapid Economic Development. Available at: http://www.gov.cn/gongbao/content/2009/content_1336375.htm (Accessed: 3 July 2019).
- Peck, J., 2012. Austerity urbanism. *City* 16, 626–655. <https://doi.org/10.1080/13604813.2012.734071>.
- Peck, J., 2017. Transatlantic city, part 1: conjunctural urbanism. *Urban Stud.* 54, 4–30. <https://doi.org/10.1177/0042098016679355>.
- Peck, J., Whiteside, H., 2016. Financializing Detroit. *Econ. Geogr.* 92, 235–268. <https://doi.org/10.1080/00130095.2015.1116369>.
- Salamon, L.M., 2002. *The new governance and the tools of public action. An introduction.* In: Salamon, L.M. (Ed.), *The Tools of Government. A Guide to New Governance.* Oxford University Press, Oxford, pp. 1–47.
- Sanfelici, D., Halbert, L., 2018. Financial market actors as urban policy-makers: the case of real estate investment trusts in Brazil. *Urban Geogr.* 1–21. <https://doi.org/10.1080/02723638.2018.1500246>.
- Sbragia, A.M., 1996. *Debt Wish: Entrepreneurial Cities, US Federalism, and Economic Development.* University of Pittsburgh Press, Pittsburgh. <https://doi.org/10.2307/j.ctt6wrcgn>.
- Shin, H.B., 2014. Contesting speculative urbanisation and strategising discontents. *City* 18, 509–516. <https://doi.org/10.1080/13604813.2014.939471>.
- State Council, 2010. State Council No.19 Document on Strengthening Management on Local Government Financing Vehicles. Available at: http://www.gov.cn/zw/gk/2010-06/13/content_1627195.htm (Accessed: 3 July 2019).
- State Council, 2013. State Council No.36 Document on Promoting Urban Infrastructure Construction. Available at: http://www.gov.cn/zw/gk/2013-09/16/content_2489070.htm (Accessed: 3 July 2019).
- State Council, 2014. State Council No.43 Document on Strengthening the Management of Local Government Debts. Available at: http://www.gov.cn/zhengce/content/2014-10/02/content_9111.htm (Accessed: 3 July 2019).
- State Council, 2015. State Council No. 42 Document on Forwarding the Guidelines of the MOF, the NDRC and the PBC on Promoting PPP in Public Service Fields. Available at http://www.gov.cn/zhengce/content/2015-05/22/content_9797.htm (Accessed: 25 December 2019).
- Su, X., 2015. Urban entrepreneurialism and the commodification of heritage in China. *Urban Stud.* 52, 2874–2889. <https://doi.org/10.1177/0042098014528998>.
- Tao, R., Su, F., Liu, M., Cao, G., 2010. Land leasing and local public finance in China's regional development: evidence from prefecture-level cities. *Urban Stud.* 47, 2217–2236. <https://doi.org/10.1177/0042098009357961>.
- Theurillat, T., Vera-Büchel, N., Crevoisier, O., 2014. Commentary: From capital landing to urban anchoring: the negotiated city. *Urban Stud.* <https://doi.org/10.1177/0042098016630482>.
- Theurillat, T., Lenzer Jr, J.H., Zhan, H., 2016. The increasing financialization of China's urbanization. *Issues Stud.* 52, 1640002. <https://doi.org/10.1142/S1013251116400026>.
- Tsui, K.Y., 2011. China's infrastructure investment boom and local debt crisis. *Eurasian Geogr. Econ.* 52, 686–711. <https://doi.org/10.2747/1539-7216.52.5.686>.
- Van Loon, J., Oosterlynck, S., Aalbers, M.B., 2018. Governing urban development in the low countries: from managerialism to entrepreneurialism and financialization. *Eur. Urban Reg. Stud.* 1–24. <https://doi.org/10.1177/0969776418798673>.
- Wang, D., Zhang, L., Zhang, Z., Zhao, S.X., 2011. Urban infrastructure financing in reform-era China. *Urban Stud.* 48, 2975–2998. <https://doi.org/10.1177/0042098010392079>.
- Weber, R., 2010. Selling city futures: the financialization of urban redevelopment policy. *Econ. Geogr.* 86, 251–274. <https://doi.org/10.1111/j.1944-8287.2010.01077.x>.
- Wong, C.P.W., 2013. Paying for urbanization in China. In: Bahl, Roy W., Linn, Johannes F., Wetzell, Deborah L. (Eds.), *Financing Metropolitan Governments in Developing Countries.* pp. 273–308.
- Wu, F., 2002. China's changing urban governance in the transition towards a more market-oriented economy. *Urban Stud.* 39, 1071–1093. <https://doi.org/10.1080/00420980220135491>.
- Wu, W., 2010. Urban infrastructure financing and economic performance in China. *Urban Geogr.* 31, 648–667. <https://doi.org/10.2747/0272-3638.31.5.648>.
- Wu, F., 2018. Planning centrality, market instruments: governing Chinese urban transformation under state entrepreneurialism. *Urban Stud.* 55, 1383–1399. <https://doi.org/10.1177/0042098017721828>.