

The governance dilemmas of urban shrinkage: Evidence from Northeast China

Zixuan Han^a (<https://orcid.org/0000-0001-5629-7606>), Vlad Mykhnenko^{b,c} (<https://orcid.org/0000-0001-8944-0608>; LinkedIn: www.linkedin.com/in/vlad-mykhnenko-1b29ba91; Twitter: @3s_recipe),

Kangjun Peng^{a*} (<https://orcid.org/0000-0002-4874-6288>), and

Jianing Mi^a

^a*School of Management, Harbin Institute of Technology, Harbin, China;*^b*Oxford University Department for Continuing Education, University of Oxford, Oxford, United Kingdom;* ^c*St. Peter's College, Oxford, United Kingdom*

*Corresponding author: Kangjun Peng; E-mail: pengkangjun1994@163.com;
Corresponding address: School of Management, Harbin Institute of Technology, 92 Xidazhi Street, Nangang District, Harbin 150001, Heilongjiang Province, China

While existing research has deepened our understanding of global urban shrinkage, studies on the governance of urban shrinkage in China remain deficient. Based on extensive field research in Suihua, in Northeast China, and applying an institutionalist perspective, this study explored two critical challenges faced by Chinese political institutions concerning their governance of urban shrinkage. First, the absence of well-articulated opinions and clearly defined policies of the central government render the governance of shrinking cities uncertain and over-dependent on the personal position of the shrinking city's immediate superior. Second, the local economic development path of China's shrinking cities often depends on land transactions and pollution-intensive industries, which appear not only to be the main cause of the

worsening urban shrinkage, but also the biggest source of locally-generated income. As a result, re-industrialization as the apparently ideal strategy for local development in Northeast China undermines the local government's attempts to counter urban shrinkage.

Keywords: urban shrinkage; governance; China; political regime; policies; local government

Funding

This work was supported by the China Scholarship Council #1 under Grant number 202006120309 and the National Social Science Foundation of China #2 under Grant number 17ZDA030.

Declaration of interest

No potential conflict of interest was reported by the authors.

The governance dilemmas of urban shrinkage: Evidence from Northeast China

While existing research has deepened our understanding of global urban shrinkage, studies on the governance of urban shrinkage in China remain deficient. Based on extensive field research in Suihua, in Northeast China, and applying an institutionalist perspective, this study explored two critical challenges faced by Chinese political institutions concerning their governance of urban shrinkage. First, the absence of well-articulated opinions and clearly defined policies of the central government render the governance of shrinking cities uncertain and over-dependent on the personal position of the shrinking city's immediate superior. Second, the local economic development path of China's shrinking cities often depends on land transactions and pollution-intensive industries, which appear not only to be the main cause of the worsening urban shrinkage, but also the biggest source of locally-generated income. As a result, re-industrialization as the apparently ideal strategy for local development in Northeast China undermines the local government's attempts to counter urban shrinkage.

Keywords: urban shrinkage; governance; China; political regime; policies; local government

Introduction

Urban shrinkage is a structural problem in the collaborative process of globalization and local evolution and was initially found in advanced capitalist countries, including the United States and European countries (Haase et al., 2014; Wiechmann & Pallagst, 2012). Caused by demographic change, economic decline, and natural and political disruption (Großmann et al., 2013; Martinez-Fernandez et al., 2016), urban shrinkage can have negative consequences such as economic decline, loss of labor,

unemployment, and environmental degradation (Dubeaux & Sabot, 2018; Hartt, 2018; Hattori et al., 2017). Accordingly, place-based policy and planning approaches are necessary for achieving urban economic revitalization. These approaches have been followed by a few cities, such as Leipzig, in Germany, and Youngstown and Cleveland, in the United States, by adopting “right-sizing” and embracing resilience, both of which underlie a planning switch that focuses on the remaining people and on upgrading their quality of life (Eraydin & Özatağan, 2021; Hollander & Németh, 2011; Pallagst, 2010). Moreover, a few studies have noted the governance practice in the Western context, where multiple actors and institutions collaboratively dedicate themselves to counteract urban shrinkage, promoting an exchange of experience between countries that share development paths under the same or a similar regime (Haase et al., 2014). Given the characteristic problems of shrinking cities with regards to inferior capacity, development burdens, and reliance on external support, Western models of urban shrinkage governance typically focus on the respective prominent roles of the private sector, civil society, central governments, and regional or international organizations (such as the European Union) in the process of governance shrinking cities (Krzysztofik et al., 2012; Laze, 2009; Rink et al., 2014; Ročak, 2019).

Based on previous research on advanced capitalist economies, Haase et al. (2014) have developed a heuristic model comprising the current research agenda of urban shrinkage (see Figure 1). The model has been fine-tuned and extended by numerous studies in different national and regional contexts, spontaneously triggering a research interest in the model’s adaptability to countries with different political structures, such as China. In the late 2010s, scholarly attention focused firmly on the

unfolding of urban shrinkage in China, with a growing number of Anglophone and Chinese studies identifying the drivers and developing typologies of China's shrinking cities (Li & Mykhnenko, 2018; Long et al., 2015). However, in the context of a communist one ruling-party state, what remains unclear is how urban shrinkage is governed in China and what the main features and mechanisms of the governing regime operating in shrinking cities are across the country. The often-reported tension between the top-down nature of the political system and bottom-up social and economic development remains a particularly challenging puzzle for Western academics (Qian, & Weingast, 1997; Zhang, 2009). This may mean that governance practices in the Western world may not be all too relevant to the Chinese context.

[Please insert Figure 1 near here]

To fill the knowledge gap about the governance mechanism of urban shrinkage in China, we have conducted in-depth interviews, intensive participant observation, and a review of archives of news coverage, state documents, and committee meeting minutes in Suihua, a shrinking city in Northeast China. Our main aim was to investigate what kind of dilemmas local governments in China would have to confront when they attempt to manage the negative consequences of urban shrinkage under a political regime that comprises an all-powerful central government and local governments that exhibit entrepreneurship at all levels (Xing et al., 2018).

To answer these questions, the study not only listed the actors and arrangements involved in the governance of China's urban shrinkage, but also deployed an institutionalist theoretical perspective and used the heuristic model of Haase et al. (2014) to observe the critical governance behaviors and interactions between the various

actors. This has enabled us to reveal the logic that explains the challenges of urban shrinkage that are generated by a set of factors in China's governance mechanism.

In the remainder of this section, we briefly discuss the theoretical underpinning of this paper, before introducing the governance mechanism of China to provide background on the institutional context within which the cases in this study occur. This is followed by an explanation of our methodology. Subsequently, we illustrate the cases in Northeast China and then discuss the implied governance challenges presented by China's urban shrinkage along with the underlying institutional logic. We conclude by highlighting the theoretical and policy implications of our findings and recommending future research directions.

A new institutionalist perspective

This paper applies the new institutionalist perspective, in particular, that of new institutional economics (NIE), regarding institutions and their role as a key enabler *of* or hindrance *to* economic growth and development (North, 1990). We acknowledge the strength of neo-classical growth theory, which – by stressing capital accumulation, population growth, and technical progress – helps one's understanding of certain important elements in urban and regional economic growth and decline (Hahn, 2008; McCann, 2013: Chapter 7). However, it is contended that the neoclassical framework has been necessarily and strongly augmented by the NIE scholarship since the 1980s, offering a new insight into the causes of long-term economic performance. In particular, we find the following definition of institutions by North (1993) to be especially useful: “Institutions are the humanly devised constraints that structure human interaction. They

are made up of formal constraints (rules, laws, constitutions), informal constraints (norms of behavior, conventions, and self-imposed codes of conduct), and their enforcement characteristics. Together they define the incentive structure of societies and specifically economies.”

Across the new institutionalism literature that aims at bridging the disciplinary divides across social sciences, institutions refer to a series of structural constraints that influence individual behaviors, and the stability and regularity of individual behavior formed under structural constraints. In this context, institutions set significant conditions for the stability of people’s interactions in uncertain societies; they also provide a specific framework upon which various economic, social, and political organizations are formed. Moreover, within the NIE framework *per se*, institutions determine economic performance, whilst (in turn) economic performance determines institutions (Alston, 2008; North, 1990; Bates et al., 2014). This NIE dictum has proved to be widely debatable within the economics profession itself (see Glaeser et al., 2004; Svensson, 2005; cf. Alesina and Guiliano, 2015; Tabellini, 2010). Nevertheless, by focusing on the interplay between the mass public, political entrepreneurs and policy brokers (i.e., agents within the political structure), and political opportunity structures at large, the new institutionalist literature zeros in on the forces that account for poor economic performance (Christopoulos, 2006; Christopoulos & Ingold, 2015; De Vries, 2021; Kaufmann et al., 2005). Thus, the new institutionalism reorients one’s research agenda towards the promotion of good governance for the common good for, as argued by North (2005: 159), “poorly performing economies have an institutional matrix that does not provide incentives for productivity-improving activities.”

It is contended that the insights gained from the new institutionalism should help us to unpack the complex governance of shrinking cities in a non-market-based political economy like China's. In particular, the institutionalist theory allows us to investigate the change and status of structural constraints composed of institutional provisions, state structures, the political-administrative system, and resource conditions from the macro level of the national scale. The theory also can illuminate how these structural constraints affect the choice of governmental behavior and how they restrict the efficiency of governance at the meso level of the provincial government scale. At the same time, this perspective highlights the micro level of the local political scale by trying to reveal how officials manipulate their power through the use of institutions, whilst purportedly attempting to make urban development happen and specific local problems resolved.

The governance mechanism of China

China's administrative divisions: the place of Suihua

Under the supervision of the central government of China, there are four levels of administrative division, namely (from high to low), provincial, prefecture, county, and township levels. Below this, there are also villages and communities, but in constitutional terms, these are not levels of administrative division (The People's Republic of China, 2019). As for the administrative divisions that will be mentioned later in this paper, Heilongjiang Province, in Northeast China, is at the provincial level. Suihua is a subordinated city of Heilongjiang Province at the prefecture level, while

Beilin and Anda are, respectively, a district- and a county-level city that both belong to the county level under the jurisdiction of Suihua (district- and county-level cities are generally larger in land area and population scale than counties). Hence, when this paper mentions “city,” it could mean any of the four administrative divisions.

Each administrative division of mainland China has a local government that incorporates a local Chinese Communist Party (CCP) committee, headed by a secretary, and a local People’s Government, headed by a governor (Burns, 1999). CCP secretaries are the highest-ranking official of the local government. They implement the top-down instructions from the central CCP and hold the greatest responsibility for overall local development and stability. Meanwhile, the governor ranks second highest and serves as one of the deputy secretaries of the local CCP committee (Rochlitz et al., 2015).

Although the important issues are usually discussed in the standing committees of local CCP committees, which consist of several members, there is a growing body of literature that reveals the *greater* power possessed by the secretary of a local CCP committee in managing local issues, including the executive affairs that are nominally taken charge by the governors (Xia, 2000; Gao et al., 2015). At the same time, local power struggles have often been known to develop between the secretary and the governor, and this is widely seen as an intentional institutional way of preventing either from becoming unduly dominant (Suli, 2007).

The administrative subcontract and political tournaments: a way of governing

In academia, contrary to the popular discourse, China has been found not to be an absolutely centralized country in its governance structure, because fiscal and administrative decentralization to local governments coexists with the all-powerful

central government (Xu, 2011; Zhou, 2016). Since 1980, the central government has authorized China's provincial governments to take charge of their economic resources. Administrative authority and the use of surplus public funds after remitting to higher-level governments, as well as the responsibilities of local development, are further decentralized to lower-level governments (Caldeira, 2012). However, the downwards transfer of various discretions to local governments not only provides a certain autonomous space for local governments to be creative and to adjust policy implementation to local conditions, but also generates information asymmetry, which in turn could affect the implementation effect of assigned policies and political duties (Guo & Wang, 2021; Zhou & Lian, 2020). Hence, on the one hand, local governments in China have discretion in implementing policies and political missions assigned by higher-level governments. On the other hand, higher-level governments, with certain powers that enable them to ensure results in accordance with expected political targets, including personnel promotion, approval, and intervention, are responsible for overseeing the work carried out by lower-level governments and measuring multiple key performance indicators (KPIs) in a set of domains (Caldeira, 2012).

Overall, China's state-local interactive structure of governance has been labeled as *administrative subcontract* – “a hybrid governance structure between bureaucracy in the Weberian sense and a ‘pure’ subcontract which occurs among independent entities having no hierarchical relationships” (Zhou, 2016: 34). In essence, it triggers a competitive game between officials (particularly, party secretaries and governors of local governments) at the same level of government, namely “political tournaments,” in which they compete for opportunities for re-appointment and promotion (Li & Zhou,

2005). Although indicators that measure local performance change over time as national development continues to evolve, those officials who achieve higher growth and more economic development gains hold stronger positions in the tournaments (Xu, 2011). This intergovernmental relationship associated with the top-down nature of China's political institution provides vital clues for this study to examine the governance of urban shrinkage in the context of China.

Characteristics of urban shrinkage in China

Against the backdrop of an ongoing national trend of prosperous urbanization, China's urban shrinkage is mainly happening in Northeast China, the Pearl River Delta, the Yangtze River Delta, and county-level cities (Li et al., 2015; Long et al., 2015). The reasons for this have mostly been identified as economic structural problems, including lagging resource-based and manufacturing industries, which have exposed the cities in Northeast China to the worst impacts of urban shrinkage (Ma et al., 2020). The region is sometimes referred to as the "Rust Belt" of China (Leng, 2021; "Rust Belt," 2021). By contrast, in prosperous urban areas such as the Pearl River Delta, economic poles have resulted in the population pouring into the central city of the economic macro-region, leading to shrinkage in the peripheral cities.

Furthermore, the peculiar institutional combination of a market economy and a top-down political regime has driven some Chinese cities into a shrinkage phase since the 1990s (Li & Mykhnenko, 2018). This peculiarity has provided the Chinese governments at multiple scales with the immense capacity for the large-scale resettlement of millions of people in the last decades, mostly in pursuit of land revenues and the construction of infrastructure megaprojects. Moreover, accompanied by the

dispersion of local resources and population, the unduly hasty urban expansion, accelerated by local governments' pursuit of higher GDP and fiscal capacity, is also likely to exacerbate urban shrinkage (Yang et al., 2015). Both of these scenarios, in addition to prolonged one-child fertility control measures, have resulted in intensive urban shrinkage. Other special state-sponsored policies such as the extensive expansion of the high-speed railway network have also been found to aggravate the phenomenon (Deng et al., 2019).

Methodology

This paper is based on a comparative case study of Suihua (Suíhuà Shì / 绥化市; (population 3,756,167 as of 1 November 2020) a prefecture-level city, with Beilin District as its urban center, located in Heilongjiang Province, Northeast China. Suihua adjoins Harbin and Daqing, the two most developed cities in the province, with their urban centers situated in Nangang and Sartu Districts, respectively. Suihua, along with its one urban district, three county-level cities, and five counties, has suffered from severe urban shrinkage: between 2010 and 2020, according to the most recent Chinese population census data, Suihua as a whole lost 1,661,986 residents, declining by a staggering 30.7% over the period (Heilongjiang Bureau of Statistics, 2011, 2021).

[Please insert Figure 2 near here]

To identify major problems with the governance of urban shrinkage in China, we conducted fieldwork in 2020 in Suihua, its affiliated county-level city Anda, and the urban district Beilin through in-depth interviews along with the review of official statistics and documents. All interviewees' responses were anonymized, on their request. We conducted three offline, face-to-face interviews (on June 24 and August 29

and 31, 2020) in a local hotel, and an online interview (on November 15, 2020) with the deputy governor of Suihua, referred to as A1, who has been in charge of the local industrial and urban development since 2019, and was the secretary of the Anda CCP committee from 2015 to 2017. This interviewee was the one who proposed and advanced a cooperative project between Anda and Daqing in 2015 aimed at tackling the structural problems in Anda's local development caused by population loss and economic downturn (more details below). The key goal of this interview was to obtain a clear understanding of the local developmental *logic*, the details of the cooperative measures undertaken between Anda and Daqing, as well as the personal and political motives behind it from the point of view of the deputy governor. In addition, we talked to a well-known property developer (referred to as interviewee B1) on August 29, 2020, who was born in Suihua but worked overseas, to understand the logic behind this interviewee's decision to develop properties and build new homes in the shrinking city of Suihua.

On June 22, 2020, we also interviewed, in the same hotel, two officers (referred to as interviewees A2 and A3), working for the Development and Reform Commission of Suihua – a local branch of China's central planning agency – which plays a leading role in introducing firms to the prefecture. In this interview, we investigated both endogenous and exogenous factors affecting the officers' work on attracting new industrial firms into the city-region. These interviewees also provided us with a list of firms 'introduced', i.e., attracted by the Suihua government from 2007 to 2021 and took us to visit some of these firms as a way of learning first-hand about their impact on local industrial development.

In addition, to learn more about issues that occurred during the official cooperation between Anda and Daqing in 2015, with the help of the Suihua government, we were able to arrange an interview with three local retired people (referred to as interviewees C1, C2, and C3), conducted in Anda on June 25, 2020, in the square in front of the City Hall. These three interviewees had previously protested against the cooperation between the two neighboring municipalities, and we tried to understand their motives for doing so. These interviewees' opinions were considered representative, since we learned from the local government that most of the public protesters were local old-age pensioners.

Results

Policy uncertainty from the higher-level CCP committee

While some Western cities have implemented “smart decline” and “right-sizing” to confront urban shrinkage, Anda, a county-level city of Suihua, has struggled to deal with urban shrinkage and has failed to follow the same approach as that of Youngstown and other Western cities. Anda has lost 120,000 people from 2010 to 2020 (Heilongjiang Bureau of Statistics, 2011, 2021). The decline in population has put pressure on the local economy, forcing the local government to find a solution.

Interviewee A1, who was the then secretary of the Anda CCP committee, proposed seeking cooperation with neighboring Daqing in 2014, as he thought that Anda and Daqing could be complementary in their respective advantages. First, Daqing is one of the most affluent cities in Northeast China and has some of the best high schools and hospitals in Heilongjiang Province. Second, despite Daqing having experienced an

economic downturn, its GDP in 2015 was still 90 times the size of Anda's (see Table 1).

Third, the average house price in Anda was half that of Daqing in 2015, and Anda had better air quality since Daqing was highly polluted due to its dependence on the oil-refining and petrochemical industries. In addition, Anda is only 30 km away from Daqing, a city with a high-speed railway connection, while it is more than 200 km to Suihua, and there are no railway links for commuting between the two.

[Please insert Table 1 near here]

Given the absence of clear instructions from the central government on the legitimacy of collaboration across administrative boundaries and levels, A1 first discussed the issue with the Suihua government, specifically the secretary of the municipal party committee, and obtained his approval before talking to the then secretary of the municipal party committee and the then governor of Daqing. After several rounds of negotiations, the two sides reached a cooperative agreement in April 2015, with the main contents indicated in the list below. The co-operative agreement was expected to provide residents of Anda with a better quality of life, covering employment, wages, and public services while staying in Anda, by sacrificing partial economic benefits. Daqing, as a prefecture-level city facing tougher KPI pressures, could economically benefit from a collaboration with Anda without having to use its own land, thus, providing the Daqing government more space for property development and expansion through the neighboring local authority:

- Anda and Daqing agree collectively to establish a Daqing–Anda economic development zone (EDZ), located in Anda and close to the boundary

between the two cities. Anda would be responsible for infrastructure construction and environmental governance.

- Daqing must set up branches of two of its top-rated high schools and one branch of an advanced hospital in the EDZ, and invite some of its outstanding teachers and doctors to work there. Anda, in turn, would provide free accommodation (apartments) and monthly subsidies for the teachers and doctors involved, and introduce a bus service for commuting between Daqing and the EDZ.
- Daqing must introduce its firms to the EDZ, and these firms must give priority to Anda residents when hiring employees. In return, the government of Anda would relinquish the approval authority of enterprise registration to Daqing.
- All the GDP and revenues generated in the EDZ, excluding land transaction fees, are to be counted as Daqing's.

Despite its favorable terms, the citizens of Anda have raised objections to this agreement in the form of public protests at the construction site and letters of complaint sent to the Anda government during the construction phase of the EDZ. Protestors believed that the cooperative way of relinquishing administrative jurisdiction and giving up land and economic benefits was a “betrayal” that seriously damaged Anda's interests (C1, C2, C3, interview, June 25, 2020). Nevertheless, the protests did not cause A1 to change his mind. He insisted on going ahead with the project due to its potential to solve the critical problems of local development. Instead, A1 personally, as well as

through subordinates sent by him, explained to the protesters the positive potential of the agreement:

“As civil servants taking on the responsibilities of local development, we should stand higher and be courageous and strategic to promote measures that have a lasting effect, even though opposition from the public is always inevitable. We need to do something that has long-term positive effects that they [protesters] probably neglect” (A1, interview, June 24, 2020).

Nevertheless, the secretary of the municipal CCP committee, who had previously approved the co-operative project, was later investigated and suspended on charges of bribery and serious violation of the Party discipline by the Heilongjiang Commission for Discipline Inspection in 2016, before being officially arrested by the Heilongjiang procuratorate later in 2017. As soon as the new secretary of the municipal party committee took office, he suspended the cooperative project on the grounds of the protests’ impact on social stability. Yet, after the State Council issued the Outline of the Regional Integration Development Plan of the Yangtze River Delta in 2019 (State Council of PRC, 2019), Interviewee A1, who by then was the deputy governor of Suihua, was appointed by the Suihua government as the officer-in-charge of *restarting* the Anda-Daqing cooperative project.

The duality of lasting land transactions

Land transactions are a special and necessary aspect of China’s local governments, with the market operating under the laws of China, which determine that the land belongs to the state (Yeh, 2005). However, since 1988, the rights of land transfer in urban areas have been devolved from the central government to local governments. Developers

must acquire the right of land use for property construction by paying land transaction fees and other taxes, including the incremental tax on land value and real estate tax (Xiulin & Feizhou, 2014). Since the 1994 reform on fiscal decentralization, land transaction fees, of which around 80% come from property development (China Index Academy, 2020), have become the most critical fiscal source for urban construction for China's local governments (Figure 3), as 75% (changed to 50% after the 2016 reform) of value-added tax (VAT) and 60% of enterprise and personal income taxes (EPIT) of China's local governments have had to be handed over to the central government (State Council of the PRC, 2016; Xiulin & Feizhou, 2014). To pursue high land transaction fees to deal with the increasing pressure of urban development (Xiulin & Feizhou, 2014), many local governments appear obsessed with urban expansion. Indeed, as reported by Bloomberg News (2016), Chinese cities' recent expansion plans could house well over 3.4 billion people. However, the mechanism driving urban expansion in shrinking cities could worsen urban shrinkage (Long et al., 2015). For example, in Suihua, due to the impact of the loss of urban population and the policy of *Renovation of Shantytowns* (a national policy to help citizens living in informal housing to renovate their houses with government compensation), the demand for new land has been decreasing, and subsequently, local government's income from land finance has shrunk, too.

According to the Suihua government, the 2019 land transaction fees generated in Beilin, the urban core of Suihua, have decreased by 50.1% and 68.2%, respectively, compared to 2018 and 2017. Thus, as the most important fiscal source of urban construction, a decrease in land finance could significantly impact local economic

conditions and consequently worsen local shrinkage (Wang et al., 2020). Yet, despite the fact that the policy only leads to further dispersion of population and resources, the Suihua government continues to insist on promoting urban expansion through significant land transactions. Consequently, this would result in vacant housing and abandoned buildings, decaying public infrastructure, and even ghost towns, degrading urban vitality and the quality of life of citizens (Jeon & Kim, 2020). Theoretically, the Suihua government should eliminate its overreliance on land transactions to curb the contraction. Nevertheless, from the perspective of the local government, there are sufficient reasons to proceed with the land transactions' dependence.

[Please insert Figure 3 near here]

Firstly, urban expansion based on land transactions remains imperative for Suihua and other shrinking cities: although the land transaction fees in Suihua have dramatically decreased in recent years, revenues generated through these transactions are still the biggest source of local public finance in the context of fiscal decentralization. According to the 2019 detailed statistics provided by the Suihua government, land transactions directly contributed 163 million yuan to local public finances, consisting of land transaction fees, tax on urban land use, and incremental tax on land value, accounting for 25.17% of the gross local public financial revenue. This percentage share would be even higher after the VAT and EPIT are shared with the central government. For shrinking cities that are unable to compete in attracting high-tech firms and building a knowledge-based economy, it is very difficult to find a locally sourced replacement for the fiscal void left by the absence of continuous land transactions. Moreover, land transactions promote demand for the services of the

construction industry, providing high-wage jobs in architectural design, construction, civil engineering, and real estate sales that employ local people, helping the Suihua government to keep the workforce and the youth in the city.

Secondly, land transactions serve best the interests of local leaders. Establishing sustainable industries and a stable fiscal capacity in a city requires a concerted long-term effort by local officials. This mitigates not only their eagerness to achieve quick political gains with a view to promotion, but also the reality that local officials are frequently transferred and are therefore unable to continue with their original administrative philosophy and initially adopted measures (Chen & Luo, 2012). In this context, land transactions have become the ideal low-stake path for local governments: “land transactions are a once-off and low-risk deal for local governments” (A1 interview, August 29, 2020). Once local governments get paid the land transaction fees, both the right of land use and the risk of poor sales that may be caused by the decline in demand are transferred to property developers.

Finally, despite some property developers being aware of population decline, they intend to ignore the negative factors and are still willing to accept the risk of investing in shrinking cities such as Suihua. This seemingly irrational behavior of property developers is the ability of property developers to hedge potential risks by carrying out business in different cities or even countries: “When some of the estates are unsalable, developers usually mortgage them to get loans from local banks and invest in other businesses to relieve the pressure on cash flow” (B1, interview, August 29, 2020). In Suihua, the enterprise undertaking the development of the largest local housing community possesses property businesses in Hainan Province, PRC, and in

Australia. More importantly, as explained by the interviewees: “due to the local government’s pressure of having to absorb investment, land transactions for property development can also be carried out by agreement instead of by auction, which means that the right of land use can be transferred to property developers at a price that is much lower than the market value, so as to get developers to invest locally in return” (A1 and B1, interview, August 29, 2020). The China Real Estate Chamber of Commerce reports that land transaction fees and relevant taxes account for nearly 49.42% of the cost of real estate development projects (China Real Estate Chamber of Commerce, 2009). Hence, the dramatic cost reduction propels property developers to collaborate with local governments, while the sales risk borne by the developers becomes much lower.

Multiple target satisfaction: Inertia in the introduction of pollution-intensive firms

According to the latest census data, Beilin District, the urban center of Suihua (see Figure 4), lost 179, 089 or 20.4% of its urban population between 2010 and 2020, shrinking to 698,025 residents in total (as of 1 November 2020). Along with population loss, the economy of Suihua’s urban core has been hampered by the outdated and low productivity industries that consist of highly polluting firms (see Figure 5). According to data from the Development and Reform Commission of Suihua, between 2007 and the first quarter of 2021, Suihua had attracted 640 new firms to the city-region; 141 firms out of the total 640, including the three largest investors, have been located in Beilin. The top three, which all undertake highly polluting chemical processing and agricultural staple food processing, have invested a total of around 11 billion yuan

locally and created 4,900 jobs. Even though these three firms alone had accumulated a combined total loss of 837 and 882 million yuan in 2019 and 2020, respectively, Suihua insisted on attracting these types of firms.

[Please insert Figure 4 near here]

[Please insert Figure 5 near here]

The importance of these new-old heavy industries for Suihua can be assessed as follows: the GDP of the prefecture-level city in 2019 and 2020 reached 11.01 and 11.50 billion yuan respectively. The investment by the newly-introduced heavy industries over 2019-2020 grew from 3.28 to 8.59 billion yuan, thus, accounting for 29.8% of Suihua's GDP in 2019, and 74.7% (sic!) in 2020. Most of these heavy industries belong to chemical, power generation, pharmaceutical, and metallurgical sectors, which are typically the largest industrial polluters of air, water, and soil. Hence, the smokestack industries have maintained and, indeed, reinforced their highly critical role in the city's economic development over the period concerned (see also Li & Mykhnenko, 2018). Although the long-term impact of pollution-intensive industries could undoubtedly drag Suihua into the vicious cycle of decline through environmental degradation, economic depression, eventual municipal budget deficits, and accelerating population loss, the "firm introduction inertia" was believed to be "the best [policy] choice according to the current yardstick of local governments' performance" (A1, interview, June 24, 2020).

As a prefecture-level city in Heilongjiang Province, the Suihua government faces continuous political pressure to achieve the KPIs set by the provincial government and updated from time to time. For 2019, Table 2 lists the most challenging and important indicators that Suihua struggled to achieve. The provincial government ranks

the performance of its subordinate cities based on an algorithm that assigns the greatest weight to the six indicators: if a local government at the prefecture level fails to achieve these KPIs or ranks in the bottom three league table positions, the secretaries of their CCP committee and governors do not earn a promotion for the next two years.

[Please insert Table 2 near here]

The most decisive reasons why Suihua continues to introduce pollution-intensive firms are the pressure of having to achieve multiple KPIs, along with limited resources, and the rise in perverse incentives of low productivity and underdevelopment. In China, a less affluent city with a lower production capacity, a poor technological base, and deficient human capital has usually played a critical role in the production of pollution-intensive goods, destined for consumption in rich cities and overseas (Feng et al., 2013). As a result, Suihua faces less pressure in achieving the political mission on carbon emission reduction. Specifically, following the official document offered by the Development and Reform Commission of Suihua, the Development and Reform Commission of Heilongjiang demanded the Suihua government to accomplish 17% reduction of carbon dioxide emissions per unit GDP in the period of 2015-2020. It was the lowest requirement among the cities in Heilongjiang Province, while the province was also one of the least restrictive provincial-level administrative divisions in the whole country (the State Council of the PRC, 2016). The Suihua government completed the mission in 2018 with a 49.06% decrease in carbon dioxide emission per unit GDP compared to that in 2015, by shutting down some unduly lagging firms. The far more overfulfilled accomplishment has allowed Suihua to introduce more industrially polluting firms above the designated size (see Table 2). Moreover, with sparse village

distribution and large suburban areas, Suihua has been able to comply with the State Council regulation mandating the construction of polluting industrial enterprises more than 10 km (6.2 miles) away from populated areas. As a result: “given the dense population and that people are more sensitive about the environment, polluting firms in southern developed cities that face stricter restrictions have to transfer their business gradually to North and Northeast China, providing Suihua with opportunities to introduce firms above the designated size” (A2 and A3, interview, June 22, 2020). As mentioned above, the introduction of these enterprises has contributed tremendously to GDP growth in Suihua, providing many well-paid jobs, and fostering social cohesion in the local area by stabilizing employment. Therefore, despite the potential detrimental consequences in the long run, the introduction of industrially polluting firms was deemed the best strategy available to officials in order to achieve their KPIs and seek promotion.

Discussion

This study has offered three case studies in the Northeastern Chinese city of Suihua and indicated two critical challenges to the governance of urban shrinkage in the country. They all finally point to the peculiarity of China’s governance mechanism, meaning that these dilemmas are likely to be found nationwide.

In the substantial co-operation deal between Daqing and Anda, we have witnessed a governance dilemma in the process of curbing urban shrinkage. It was caused by ambiguous personal decisions of the shrinking city’s immediate superior chief of the CCP committee at the higher level of government, who was unable to make up his mind in the absence of clearly defined instructions from the central government.

Although both of Suihua's consecutive CCP committee secretaries were aware of the potential detriment to the economic situation of Anda and the city-region as a whole, they have made conflicting decisions, leading the co-operative project in different directions: the enthusiastic take-off of the Anda-Daqing co-operation project, approved at first in 2014-2015, was halted by a sudden change of mind, leading to the dismissal of the whole idea in 2016, before a much delayed re-start in 2019. Such policy zigzagging cannot be explained adequately by the general literature about the behavior of Chinese local government officials being necessitated by high administrative pressure from a higher-level government. On the contrary, this case has shown that the authoritative opinion of the superior chief of the local CCP committee at the higher-level government could be more conclusive in this context.

In the other two cases, the embodied duality of the local development path of Suihua confounded the governance of urban shrinkage. Under the current fiscal decentralization system, the reliance on land transactions is not only a driver that worsens the urban shrinkage of Suihua, but more importantly, it also brings one of the greatest benefits to local finance and local employment, thus, achieving the swift economic effect that local promotion-seeking officials are eager to see. Even with local economic and demographic hardship, it is still favorable for property developers to help a local government to proceed with land transactions, leading the city into the vicious cycle of alternating urban expansion, the oversupply of real estate, low demand, and urban shrinkage. Additionally, the industrial pollution-intensive developmental mode that relies on attracting emission-intensive firms not only contributes to the worsening of urban shrinkage in the long run, but is also a significant favorable strategy for the

local government, struggling to achieve multiple KPI targets< which are highly relevant for the future careers of its leading officials.

Normally, according to the Chinese governance literature, local authorities must be dealing with dozens of political missions at the same time, resulting in the top-down institutional endogenous problem of attention allocation (Lian, 2018). Hence, local governments are supposed strategically to distribute their limited attention and resources, and define priorities for achieving the optimal result in light of the superior officials' personal interests, local conditions, and pressures exerted by higher-level governments. The conventional wisdom also has it that Chinese local governments may be troubled by the likely negative consequences of unaccomplished KPIs (Gaojing & Wei, 2018). However, in the case of Suihua, political leadership was able to achieve all of its important KPIs by introducing highly polluting firms, without having its attention being diverted to other matters. Indeed, it is this single-minded determination that has led the Suihua government to become addicted to attracting polluting industries, further impeding the development of alternative solutions to counteract urban shrinkage.

Conclusions

On the basis of extensive field research in Northeast China and from the perspective of new institutionalism, this study has revealed a number of critical challenges for confronting urban shrinkage through governance response. These challenges have not yet gained enough attention but could well become essential in determining the outcomes of any attempted solutions to shrinkage. First, the observed absence of well-articulated opinions and clearly defined policies by the central government renders the governance of shrinking cities uncertain and over-dependent on the position of the

city's immediate superior chief of the CCP committee at the higher level of government. Second, the governance of urban shrinkage in China is further complicated by the contradiction between the local economic path dependence on certain industries, which appear not only to be the main cause of the worsening local urban shrinkage trajectory, but also serve as the biggest source of local income. These industrial legacies and related economic activities tend to have a significant positive effect on the perceived performance of local leadership, operating within the constraints of the promotion tournament model; at the same time, they hinder the local government's attempts to find alternative solutions to urban shrinkage. These challenges appear to be clearly institutional and more so that could be commonly encountered on the national scale, causing urban shrinkage in China to be arguably a more intricate problem to overcome compared to the Western context.

Theoretically, this study found more than meets the eye by revealing the institutional logic – the “rules of the game” in North's (1990) words - of China's governance mechanism with which one can interpret the seemingly unreasonable and chaotic local government behavior. The findings of this study bridge the gap between Western-centric new institutionalist literature and a comparatively unfamiliar world of a strikingly different governance structure, contributing an important piece of knowledge about the international patterns of urban shrinkage and promoting a more holistic understanding of the particular efforts and challenges of counteracting is mounting problems. In particular, this paper has extended the new institutional economics perspective to formal governance issues and informal local practices in shrinking cities operating under the system that is non-market-based, top-down, and developing.

Policy-wise, given the rather rigid relationship between central and local governments, it is not expected that the governance status quo in shrinking cities can be changed dramatically within the political tournament promotion system, since the latter is a vital and effective measure for retaining the delicate balance between decentralization and centralization. However, the focus of the promotion tournament could be adjusted: the connotation of political tournaments is changing over time due to updated demands of national development. and it is possible that the appraisal system over time could become more responsive to public needs concerning the improvement of quality of life. Finally, some of the recently issued strategic spatial planning strategies promote a model of city-regionalism that allows for individual cities to play a specific role based on their comparative advantages in regional cooperation (Han et al., 2020, Li & Wu, 2012). Although the inter-city co-operative spirit still encounters institutional hostility, the efforts towards closer regional integration could transform political tournaments from local- to regional-scale administrative-territorial units. A window of opportunity for China's shrinking cities to conduct a governance paradigm shift may well be opening.

Funding

This work was supported by the China Scholarship Council #1 under Grant number 202006120309 and the National Social Science Foundation of China #2 under Grant number 17ZDA030.

Declaration of interest

No potential conflict of interest was reported by the authors.

References

- Alesina, A. & Giuliano, P. (2015). Culture and institutions. *Journal of Economic Literature*, 53(4): 898-944. DOI: 10.1257/jel.53.4.898
- Alston L. J. (2008). New Institutional Economics. In: S. N. Durlauf & L. E. Blume (Eds.), *The New Palgrave Dictionary of Economics*. Palgrave Macmillan.
- Bates, R. H., Sened, I., & Galiani, S. (2014). The new institutionalism. the work of Douglas North. In: *Institutions, economic growth, and property rights: The legacy of Douglass North*. Cambridge University Press.
- Bloomberg News (2016). Chinese cities' expansion plans could house 3.4 billion people. Bloomberg News, July, 15. Retrieved from <https://www.bloomberg.com/news/articles/2016-07-15/chinese-cities-expansion-plans-could-house-3-4-billion-people>
- Burns, J. P. (1999). The People's Republic of China at 50: National political reform. *The China Quarterly*, 159, 580–594. <https://doi.org/10.1017/S0305741000003349>
- Caldeira, E. (2012). Yardstick competition in a federation: Theory and evidence from China. *China Economic Review*, 23(4), 878–897. <https://doi.org/10.1016/j.chieco.2012.04.011>
- Chen, Y. Y., & Luo, D. L. (2012). 地方官员更替与企业投资 [The transfer of local officials and firm investments]. *Economic Research Journal*, 2, 18–30.
- China Index Academy. (2020). 2019 年 300 城市土地市场交易报告 [2019 Transaction Information of Land Market in 300 Cities of China]. https://pdf.dfcfw.com/pdf/H3_AP202001061373550758_1.pdf?1594907650000.pdf.
- China Real Estate Chamber of Commerce. (2009). 关于我国房地产企业开发费用的调研报告 [Investigation report on the development cost of real estate enterprises in China]. <http://www.crecc.org/index.php?m=content&c=index&a=show&catid=61&id=1>

- Christopoulos, D. C. (2006). Relational attributes of political entrepreneurs: a network perspective. *Journal of European Public Policy*, 13(5), 757-778, DOI: 10.1080/13501760600808964
- Christopoulos, D. & Ingold, K. (2015). Exceptional or just well connected? Political entrepreneurs and brokers in policy making. *European Political Science Review*, 7(3), 475-498. doi:10.1017/S1755773914000277
- Deng, T., Wang, D., Yang, Y., & Yang, H. (2019). Shrinking cities in growing China: Did high speed rail further aggravate urban shrinkage?. *Cities*, 86, 210–219. <https://doi.org/10.1016/j.cities.2018.09.017>
- De Vries, C., Hobolt, S. & Walter, S. (2021). Politicizing international cooperation: The mass public, political entrepreneurs, and political opportunity structures. *International Organization*, 75(2), 306-332. doi:10.1017/S0020818320000491
- Dubeaux, S., & Sabot, E. C. (2018). Maximizing the potential of vacant spaces within shrinking cities, a German approach. *Cities*, 75, 6–11. <https://doi.org/10.1016/j.cities.2017.06.015>
- Eraydin, A., & Özatağan, G. (2021). Pathways to a resilient future: A review of policy agendas and governance practices in shrinking cities. *Cities*, 115, 103226. <https://doi.org/10.1016/j.cities.2021.103226>
- Feng, K., Davis, S. J., Sun, L., Li, X., Guan, D., Liu, W., Liu, Z., & Hubacek, K. (2013). Outsourcing CO₂ within China. *Proceedings of the National Academy of Sciences*, 110(28), 11654–11659. <https://doi.org/10.1073/pnas.1219918110>
- Gao, N., & Liang, P. H. (2015). 高楠,梁平汉.为什么政府机构越来越膨胀?——部门利益分化的视角 [Why does government size grow? An organization interest divergence perspective]. *Economic Research Journal*. 50(09):30-43.
- Gaojing, G., & Wei, M. (2018). 中国(上海)自由贸易试验区政府职能转变的注意力配置研究——基于 83 篇政策文本的加权共词分析 [Study on attention allocation of government function transformation in Shanghai pilot free trade

- zone——based on weighed co-word analysis of 83 policy documents]. *Journal of Intelligence*, 37(2), 63–68.
- Glaeser, E.L., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2004). Do institutions cause growth? *Journal of Economic Growth*, 9, 271–303.
<https://doi.org/10.1023/B:JOEG.0000038933.16398.ed>
- Großmann, K., Bontje, M., Haase, A., & Mykhnenko, V. (2013). Shrinking cities: Notes for the further research agenda. *Cities*, 35, 221–225.
<https://doi.org/10.1016/j.cities.2013.07.007>
- Guo, J. G., & Wang, J. (2021). “调适性联结”：基层政府政策执行力演变的一个解释 [“Adaptive connection”: An explanation of the evolution of the policy execution force of the grassroots government]. *Journal of Public Management*, 2, 140–152+175.
- Haase, A., Rink, D., Grossmann, K., Bernt, M., & Mykhnenko, V. (2014). Conceptualizing urban shrinkage. *Environment and Planning A*, 46(7), 1519–1534. <https://doi.org/10.1068/a46269>
- Han, Z. X., Peng, K. J., Mi, J. N., & Chen, X. (2020). 基于无监督学习方法的收缩城市识别研究——以粤港澳大湾区 9 座地级市为例 [Research on shrinking city identification based on unsupervised learning method——A case study of 9 prefecture-level cities in Guangdong-Hong Kong-Macao Greater Bay Area]. *Journal of Public Administration*, 13(2), 76–93+196.
- Hartt, M. (2018). The diversity of North American shrinking cities. *Urban Studies*, 55(13), 2946–2959. <https://doi.org/10.1177/0042098017730013>
- Hattori, K., Kaido, K., & Matsuyuki, M. (2017). The development of urban shrinkage discourse and policy response in Japan. *Cities*, 69, 124–132.
<https://doi.org/10.1016/j.cities.2017.02.011>
- Heilongjiang Bureau of Statistics. (2011, May 5). 2010 年黑龙江省第六次全国人口普查主要数据公报 [Main data bulletin of the sixth national population census in Heilongjiang in 2010].

http://www.stats.gov.cn/tjsj/tjgb/rkpcgb/dfrkpcgb/201202/t20120228_30390.html

Heilongjiang Bureau of Statistics. (2021, May 27). 2020 年黑龙江省第七次全国人口普查主要数据公报 [Main data bulletin of the seventh national population census in Heilongjiang in 2020].

<https://suihua.dbw.cn/system/2021/06/01/058654474.shtml>

Hollander, J. B., & Németh, J. (2011). The bounds of smart decline: A foundational theory for planning shrinking cities. *Housing Policy Debate*, 21(3), 349–367. <https://doi.org/10.1080/10511482.2011.585164>

Jeon, Y., & Kim, S. (2020). Housing abandonment in shrinking cities of East Asia: Case study in Incheon, South Korea. *Urban Studies*, 57(8), 1749–1767. <https://doi.org/10.1177/0042098019852024>

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2005). Governance matters IV: Governance indicators for 1996-2004. *World Bank Policy Research Working Paper Series No. 3630*, <http://dx.doi.org/10.2139/ssrn.718081>

Krzysztofik, R., Runge, J., & Kantor-Pietraga, I. (2012). *An Introduction to Governance of Urban Shrinkage. A Case of Two Polish Cities: Bytom and Sosnowiec*. WNoZ University of Silesia.

Laze, A. (2009). Local government in post-socialist urban governance. In F. Eckhardt & I. Elander (Eds.), *Urban governance in Europe* (pp. 297–314). Berliner Wissenschaftsverlag.

Leng, S. (2021, May 14). China's rust belt population plummeted in last decade, exacerbating regional economic divide. *China Macro Economy*. <https://www.scmp.com/economy/china-economy/article/3133397/chinas-rust-belt-population-plummeted-last-decade>

Li, H., & Mykhnenko, V. (2018). Urban shrinkage with Chinese characteristics. *The Geographical Journal*, 184(4), 398–412. <https://doi.org/10.1111/geoj.12266>

Li, X., Du, Z. W., & Li, X. F. (2015). 珠江三角洲城镇收缩的空间分布与机制 [The spatial distribution and mechanism of city shrinkage in the Pearl River Delta]. *Modern Urban Research*, 9, 36–43.

- Li, Y., & Wu, F. (2012). The transformation of regional governance in China: The rescaling of statehood. *Progress in Planning*, 78(2), 55–99.
<https://doi.org/10.1016/j.progress.2012.03.001>
- Li, H., & Zhou, L. A. (2005). Political turnover and economic performance: The incentive role of personnel control in China. *Journal of Public Economics*, 89(9–10), 1743–1762. <https://doi.org/10.1016/j.jpubeco.2004.06.009>
- Lian, H. (2018). Competition for attention in the Chinese bureaucracy. *The Journal of Chinese Sociology*, 5(1), 1–25. <https://doi.org/10.1186/s40711-018-0071-z>
- Long, Y., Wu, K., & Wang, J. H. (2015). 中国收缩城市及其研究框架 [Shrinking cities in China]. *Modern Urban Research*, 9, 14–19.
- Ma, Z., Li, C., & Zhang, J. (2020). Understanding urban shrinkage from a regional perspective: case study of Northeast China. *Journal of Urban Planning and Development*, 146(4), 05020025. [https://doi.org/10.1061/\(ASCE\)UP.1943-5444.0000621](https://doi.org/10.1061/(ASCE)UP.1943-5444.0000621)
- Martinez-Fernandez, C., Weyman, T., Fol, S., Audirac, I., Cunningham-Sabot, E., Wiechmann, T., & Yahagi, H. (2016). Shrinking cities in Australia, Japan, Europe and the USA: From a global process to local policy responses. *Progress in Planning*, 105, 1–48.
- North, D. C. (1990). *Institutions, institutional change, and economic performance*. New York, Cambridge University Press.
- North, D.C. (2005). *Understanding the process of economic change*. Princeton University Press.
- Pallagst, K. (2010). The planning research agenda: Shrinking cities—A challenge for planning cultures. *The Town Planning Review*, 81(5), i–vi.
- The People's Republic of China. (2019, Nov 20). *Constitution of the People's Republic of China*.
http://english.www.gov.cn/archive/lawsregulations/201911/20/content_WS5ed8856ec6d0b3f0e9499913.html
- Qian, Y., & Weingast, B. R. (1997). Federalism as a commitment to reserving market incentives. *Journal of Economic Perspectives*, 11(4), 83–92.
<https://doi.org/10.1257/jep.11.4.83>

- Rink, D., Couch, C., Haase, A., Krzysztofik, R., Nadolu, B., & Rumpel, P. (2014). The governance of urban shrinkage in cities of post-socialist Europe: Policies, strategies and actors. *Urban Research & Practice*, 7(3), 258–277.
<https://doi.org/10.1080/17535069.2014.966511>
- Ročak, M. (2019). Perspectives of civil society on governance of urban shrinkage: The cases of Heerlen (Netherlands) and Blaenau Gwent (Wales) compared. *European Planning Studies*, 27(4), 699–721.
<https://doi.org/10.1080/09654313.2018.1549208>
- Rochlitz, M., Kulpina, V., Remington, T., & Yakovlev, A. (2015). Performance incentives and economic growth: Regional officials in Russia and China. *Eurasian Geography and Economics*, 56(4), 421–445.
<https://doi.org/10.1080/15387216.2015.1089411>
- Rust Belt. (2021, July 7). In *Wikipedia*. Retrieved 15:17, July 9, 2021, from https://en.wikipedia.org/w/index.php?title=Rust_Belt&oldid=1032363476
- State Council of the PRC. (2016, April 30). 关于国务院引发全面推开营改增试点后调整中央与地方增值税收入划分过渡方案 [Notice on adjusting the transition plan of value-added tax distribution between the central and local government after the pilot project of changing business tax to value-added tax].
http://www.gov.cn/zhengce/content/2016-04/30/content_5069490.htm
- State Council of the PRC. (2016, November 4). 国务院关于印发“十三五”控制温室气体排放工作方案的通知 [Notice on Printing and Distributing the Work Plan for Controlling Greenhouse Gas Emissions during the 13th Five-Year Plan].
http://www.gov.cn/zhengce/content/2016-11/04/content_5128619.htm
- State Council of the PRC. (2019, December 1). 中共中央 国务院印发《长江三角洲区域一体化发展规划纲要》 [Outline of regional integration development plan in the Yangtze River Delta]. http://www.gov.cn/zhengce/2019-12/01/content_5457442.htm
- Svensson, J. (2005). Eight Questions about Corruption. *Journal of Economic Perspectives*, 19(3), 19–42. DOI: 10.1257/089533005774357860
- Suli, Z. (2007). Political parties in China's judiciary. *Duke Journal of Comparative & International Law*, 17(2), 533–560.

- Tabellini, G. (2010). Culture and Institutions: Economic Development in the Regions of Europe. *Journal of the European Economic Association*, 8(4), 677–716.
<https://doi.org/10.1111/j.1542-4774.2010.tb00537.x>
- Wang, Z., Cao, C., Chen, J., & Wang, H. (2020). Does land finance contraction accelerate urban shrinkage? A study based on 84 key cities in China. *Journal of Urban Planning and Development*, 146(4), 04020038.
[https://doi.org/10.1061/\(ASCE\)UP.1943-5444.0000613](https://doi.org/10.1061/(ASCE)UP.1943-5444.0000613)
- Wiechmann, T., & Pallagst, K. M. (2012). Urban shrinkage in Germany and the USA: A comparison of transformation patterns and local strategies. *International Journal of Urban and Regional Research*, 36(2), 261–280.
<https://doi.org/10.1111/j.1468-2427.2011.01095.x>
- Xia, M. (2000). Political contestation and the emergence of the provincial people's congresses as power players in Chinese politics: a network explanation. *Journal of Contemporary China*, 9(24), 185–214.
- Xing, Y., Liu, Y., & Cooper, S. C. L. (2018). Local government as institutional entrepreneur: Public–private collaborative partnerships in fostering regional entrepreneurship. *British Journal of Management*, 29(4), 670–690.
<https://doi.org/10.1111/1467-8551.12282>
- Xiulin, S., & Feizhou, Z. (2014). Land finance and the tax-sharing system: An empirical interpretation. *Social Sciences in China*, 35(3), 47–64.
<https://doi.org/10.1080/02529203.2014.927094>
- Xu, C. (2011). The fundamental institutions of China's reforms and development. *Journal of Economic Literature*, 49(4), 1076–1151.
<https://doi.org/10.1257/jel.49.4.1076>
- Yang, D. F., Long, Y., Yang, W. S., & Sun, H. (2015). 人口流失与空间扩张：中国快速城市化进程中的城市收缩悖论 [Losing population with expanding space: Paradox of urban shrinkage in China]. *Modern Urban Research*, 9, 20–25.
- Yeh, A. G. O. (2005). Dual land market and internal spatial structure of Chinese cities. In L. J. C. Ma & F. Wu (Eds.), *Restructuring the Chinese city: Changing society, economy and space* (pp. 59–79). Routledge.

- Zhang, X. (2009). Fiscal decentralization and political centralization in China: Implications for growth and inequality. In S. Fan, R. Kanbur, & X. Zhang (Eds.), *Regional Inequality in China: Trends, Explanations and Policy Responses* (pp. 240–257). Routledge.
- Zhou, L-A. The administrative subcontract: Significance, relevance and implications for intergovernmental relations in China. *Chinese Journal of Sociology*, 2(1):34-74.
<https://doi.org/10.1177/2057150X15622376>
- Zhou, X., & Lian, H. (2020). Modes of governance in the Chinese bureaucracy: A “control rights” theory. *The China Journal*, 84(1), 51–75.

Tables

Table 1. Urban population and GDP of Anda and Daqing

	Urban population (thousand)			GDP (million yuan)			
	2000	2010	2020	2000	2010	2015	2018
Anda	225.9	223.5	176.5	3468.2	2002.4	3281.7	2635.6
Daqing	1386.8	1846.9	2016.1	102935.2	290006.4	298345.9	280115.8

Sources: Heilongjiang Statistical Yearbook; Census of Daqing and Suihua.

Table 2. The KPIs of the Suihua government

Main indicator	Description
Annual GDP growth rate	Required to reach 8% in 2019
Annual industrial Gross Value Added (GVA) above designated size	Designated size denotes those firms that achieve annual primary revenues greater than 20 million yuan.
Annual rate of public complaints	Public complaints/appeals indicate that members of the general public express dissatisfaction toward local governments, or appeal for help to the central government. It is an indicator of local social stability.
Unemployment rate	The rate of urban unemployed population accounting for the gross population.
Annual pollutant emissions	Quota that the central government distributes to local governments to restrict local pollutant emissions. Local governments will list firms that need to be focused on and supervised and re-distribute the quotas to them.

Figures

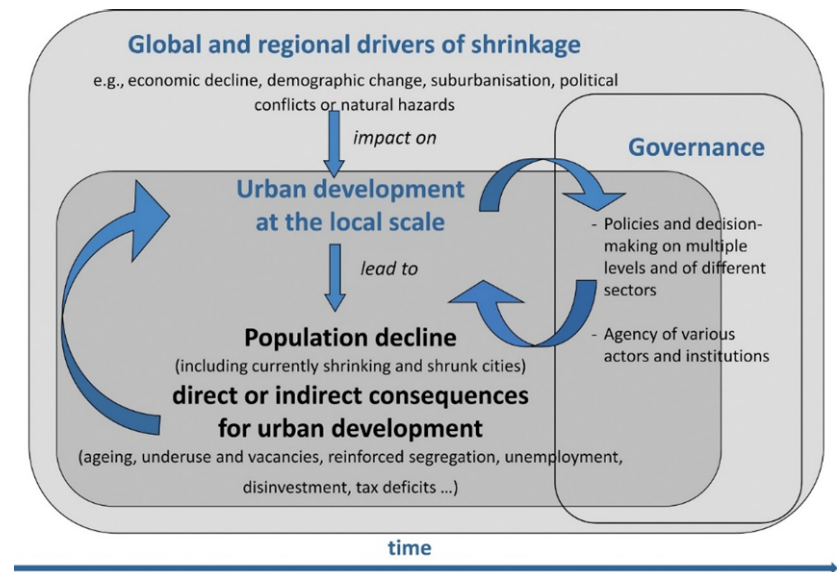


Figure 1. Urban shrinkage: A heuristic model (Source: Haase et al., 2014)

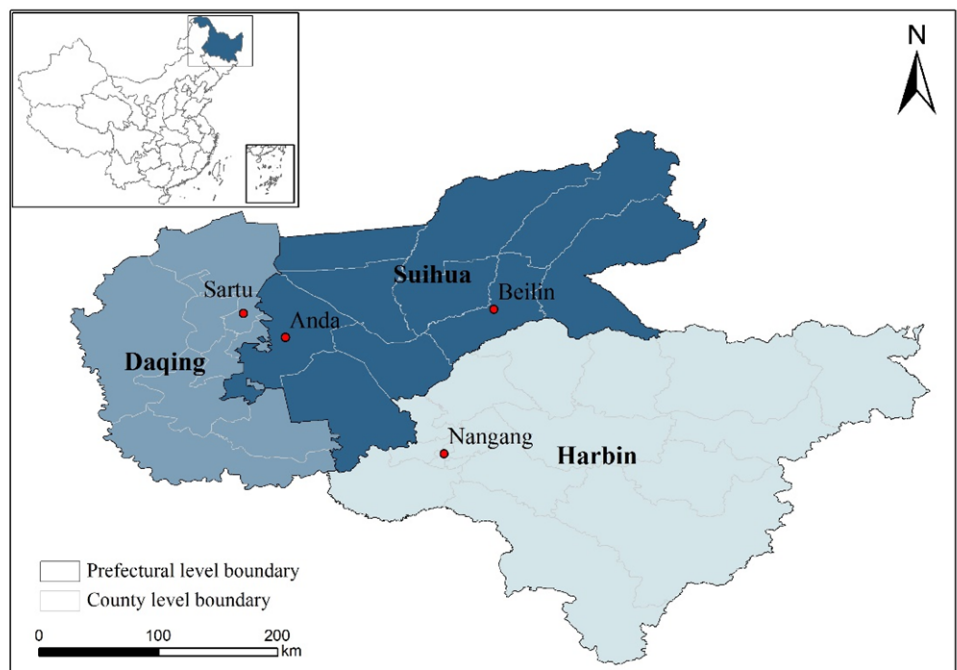


Figure 2. The location of Suihua in Heilongjiang Province, Northeast China

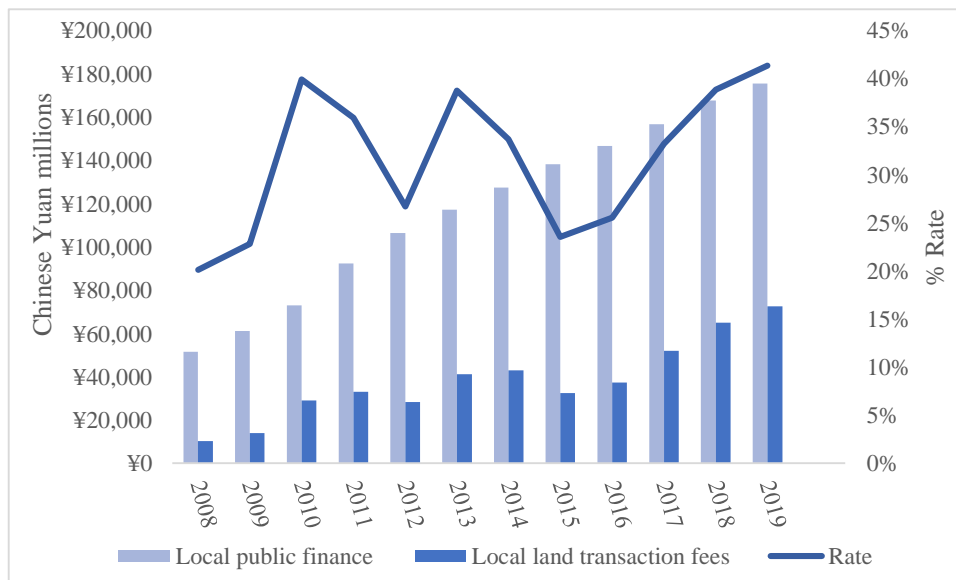


Figure 3. China's local public finance and local land transaction fees during 2008–2019
(Source: The Finance Ministry of China)



Figure 4. Views of Beilin



Figure 5. Views of industries in Beilin

Figure captions

Figure 1. Urban shrinkage: A heuristic model (Source: Haase et al., 2014)

Figure 2. The location of Suihua in Heilongjiang Province, Northeast China

Figure 3. China's local public finance and local land transaction fees during 2008–2019
(Source: The Finance Ministry of China)

Figure 4. Views of Beilin

Figure 5. Views of industries in Beilin

Figures

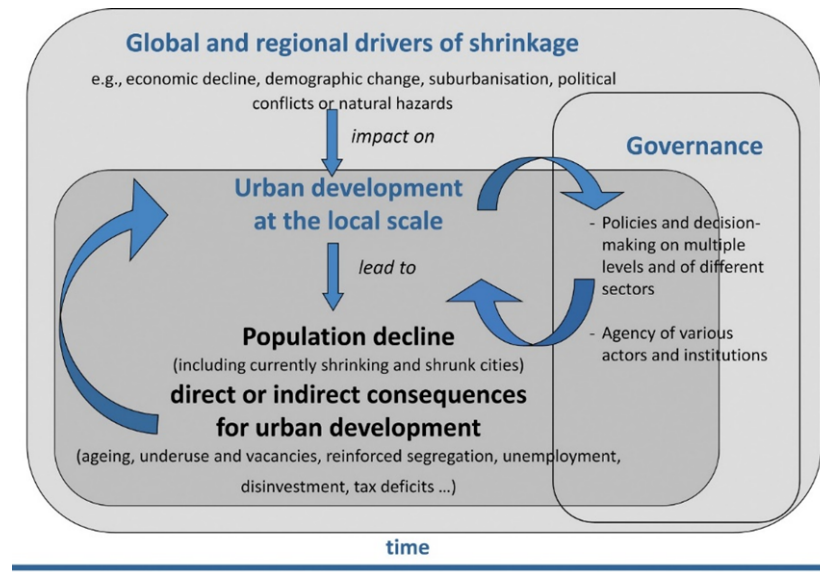


Figure 1. Urban shrinkage: A heuristic model (Source: Haase et al., 2014)

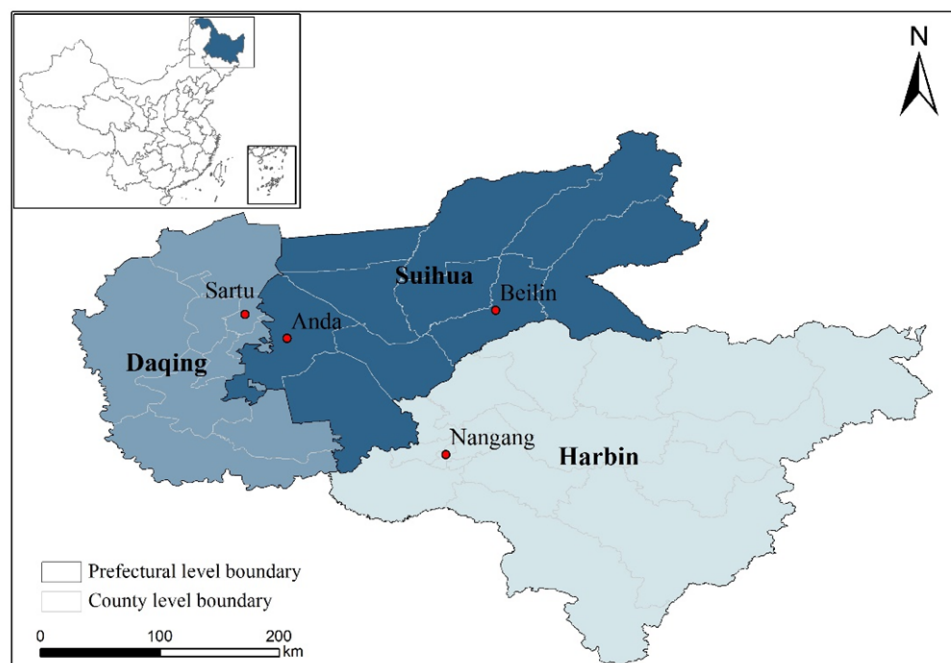


Figure 2. The location of Suihua in Heilongjiang Province, Northeast China

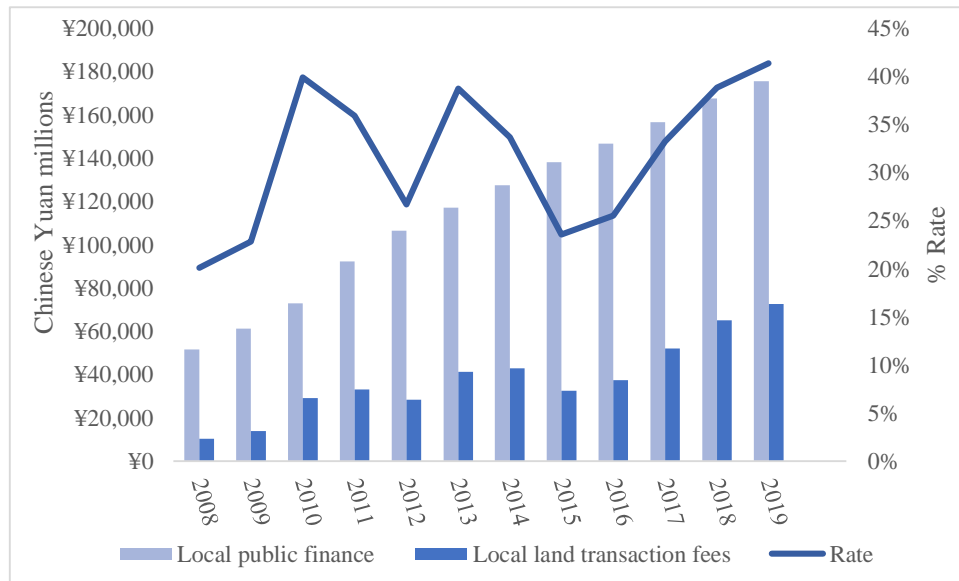


Figure 3. China's local public finance and local land transaction fees during 2008–2019 (Source: The Finance Ministry of China)



Figure 4. Views of Beilin



Figure 5. Views of industries in Beilin

Figure captions

Figure 1. Urban shrinkage: A heuristic model (Source: Haase et al., 2014)

Figure 2. The location of Suihua in Heilongjiang Province, Northeast China

Figure 3. China's local public finance and local land transaction fees during 2008–2019 (Source: The Finance Ministry of China)

Figure 4. Views of Beilin

Figure 5. Views of industries in Beilin

Zixuan Han is a PhD candidate at the School of Management, Harbin Institute of Technology. He is also a visiting PhD student at the University of Oxford. His research interests include urban shrinkage, public policy, and computational social science.

Vlad Mykhnenko (PhD, University of Cambridge, 2005) is Associate Professor of Sustainable Urban Development in the Department for Continuing Education at the University of Oxford. He is also a research fellow at St Peter's College, Oxford. Vlad's writing and teaching is devoted to geographical political economy – a trans-disciplinary study of the spatialities of capitalism and its variegated landscape. In particular, his scholarship focuses on the application of theoretical, conceptual, and methodological dimensions of economic geography and comparative political economy to real-world challenges of urban and regional development, de-development, shrinkage, and resilience across Europe and East Asia. Most recently, Vlad has served as the Consortium Lead and Principal Investigator of the *Smart Shrinkage Solutions – Fostering Resilient Cities in Inner Peripheries of Europe* (3S RECIPE, 2017–2020) research program, funded by the Joint Programming Initiative *Urban Europe* and the UK Research Innovation Economic and Social Research Council. For more details, visit <https://urbanresilience.web.ox.ac.uk>.

Kangjun Peng is a PhD candidate at the School of Management, Harbin Institute of Technology. She is a visiting PhD student at the University of Warwick. Her research interests focus on public policy, governance, and policy evaluation.

Jianing Mi is Professor at the School of Management, Harbin Institute of Technology. He is also the editor-in-chief of the *Journal of Public Management* (in Chinese). His research interests include urban transformation and digital technology development. He mainly works on investigating the impact of emerging technology on the transformation of government and social science.