Urban Growth, from Manufacturing to Financialization: The Case of China's Contemporary Urban (re)Development

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Abstract: Numerous scholars in urban studies have put land at the center of China's urban growth and of the production of built environment. Based on those that respectively revisited export-base theory and the role of built environment in the era of financialization, this article reexamines China's land-driven growth model to address contemporary urban (re)development from the early 1990 to the present. In a first period from 1990s to the end of 2000s, urban growth was based on manufacturing and induced investment in local real estate based on bank credits, state firms and households' savings. In a second period since 2010, the production of built environment has gone along with the emergence of financialized investment circuits structured by financial investors at a national scale as well as cross-provincial households' investments in residential and non residential real estate. At the same time, the urban growth model has changed, containing post-industrial features: it is still mainly induced by productive activities such as manufacturing and business services, but also increasingly by consumption by capturing extra-local household incomes due to the growing mobility of people as consumers and residents. Thus, the case of China provides a heuristic framework to address ongoing urban development that increasingly relates to extra-local scales and a combination of three stylized models regarding production, consumption and investment in real estate.

Keywords: Urban growth, financialization of urban (re)development, productive and consumption city, financialized city, China

Introduction

This article puts together two separated fields of literature in economic geography to address the connection between the production of urban built environment and urban growth. From urban and regional studies perspectives, urban built environment is a byproduct of urban growth (Camagni, 2017; Scott & Storper, 2015). This view focuses on basic activities related to the exportation, initially, of (simple) manufactured goods and more recently of more knowledge-intensive goods and services traded in global markets as a result of the mobility of traded goods, firms, human capital and knowledge. Being emblematic of contemporary cognitive-cultural capitalism (Scott, 2017 & 2019), these (export) productive activities create basic local revenues that then induce spillovers in consumption and other services activities related to firms and residents as well as further investments in built environment. This view reflects what we name the *productive city model of urban growth*. However, due to the increasing mobility of people as residents and consumers, scholars added more complexity to address today's types of driving activities for urban and regional economic development (Guex & Crevoisier, 2017; Markusen & Schrock, 2009). This later cannot only result from revenues coming from the exportation of goods and advanced tertiary services, but also from the attraction of incomes generated outside the region. As a result, various types of consumption-based activities such as retail, leisure and other personal services which have long been considered as local and induced activities, now tend to become basic activities in numerous cities and regions. In terms of urban revenue, what we name the *consumption city model* extends the (export-based) model of tourism urban development to include the attraction of several types of short and long-term consumers (for retail, leisure, health, education, etc.) and/or residents' expenses and monetary transfers. However, the role real estate in terms of economic development has not been yet addressed by scholars in urban and regional economy.

From an emerging field of literature in financial geography, built environment has played a key role in contemporary urban growth due to the increase of linkages between finance capital and real estate (Aalbers, 2008, 2019; Moreno, 2014; Weber, 2015) that feature what we name the *financialized city model*. The latter emphasizes the disconnection of bank-based and other local investment circuits induced by basic productive activities into real estate. On the one hand, financialized investments circuits directing money at national and international scales to financial centers have been emerging together with the massive transformation of urban property into liquid and mobile financialized assets for institutional investors via securitization and the development of special investment vehicles (SIVs). On the other hand, the assessment of cities by the finance industry located in international financial centers has reinforced the competition amongst cities to be attractive to mobile financialized capital to produce built environment.

Contemporary variegated connections between real estate, financial capital and the city depending on local and national socio-institutional contexts have been so far mostly addressed in a combination between the productive city model and the financialized one. In this perspective, large urban (re)development projects such as central business districts (CBDs), shopping malls and residential estates in inner or suburban areas have been iconic of financialized urban entrepreneurialism. By documenting local financializations (Weber, 2015), scholars have pointed out the role of the state in enabling the rent capture for finance capital actors by connecting land and real estate development to financialized investment circuits. At the same time, the financialization of the city has been mainly viewed from the perspective of an urban growth model induced by knowledge-intensive and advanced productive activities that improve global competitiveness by attracting mobile multinational firms and related qualified or creative human capital (Dörry et al., 2016; Fainstein, 2016; Guironnet et al., 2016; Scott, 2017 & 2019; Theurillat & Crevoisier, 2013, 2014).

However, this paper posits that the financialization of urban (re)development projects in residential and non-residential real estate must be addressed beyond the productive city model and is also related to *the consumption city model.* In this case, the quality of urban built environment and landscape plays a central role for basic consumption-based activities based on external demands. While the development model of the city as a consumption place and living environment has become significant for numerous cities and regions, there is still however a lack of work about the rent capture of the consumption city by finance capital actors.

Framed by these three stylized models developed in the first section, this paper argues that contemporary China's urban growth exemplifies a combination of productive activities in manufacturing and business services, and of consumption activities coupled with the financialization of built environment. The second section of the article revisits the land-driven growth literature used by scholars in urban studies to address the linkages between urban growth and the production of built environment in China since early 1990s (Hsing, 2010; Lin, 2009, 2014; Tao et al., 2010; Wu, 2015). Over the last ten years, urban (re)development has experienced a massive expansion of large productive, housing and consumption-based real estate megaprojects as well as huge investments in urban infrastructures, all of which have been accompanied by the emergence of financialized investment channels at the national scale, next to local bank-based and private investment circuits. Thus, for further research, it is argued that China's ongoing urban growth and production of built environment have been increasingly driven both by the spending of mobile consumers and a rapid financialization based on national investment circuits involving professional large investors and enabling indirect and mobile (portfolio) investment in real estate.

Methodologically, this article results from triangulating multi-sited case studies carried out in China (February 2014-December 2016) that give a multi-scale and multi-actor perspective to address China's urbanization from the standpoint of the real estate development industry and of the financial circuits. First, two case studies were carried out on a local scale, in a medium–sized city (Qujing in Yunnan Province) and a large one (Guangzhou). Data were collected from numerous documents and twenty-five qualitative interviews were conducted with personnel representing real estate companies, public officials (in urban planning) and commercial banks. Second, to document the national dimensions of real estate development and financial circuits, a third case study focused on China's main property companies. In addition to the various quantitative data collected (e.g. annual corporate reports and websites, reports from various real estate advising companies, etc.), thirty interviews were conducted with both private and state-owned large development companies in China (ranked among the top 50 in China). Finally, an additional twenty interviews were conducted with representatives of private property investment companies and real estate advisors for China's real estate market based in Hong Kong.

An analytical framework of contemporary urban growth and of the production of built environment

In this section, an analytical framework is proposed to address the linkages between contemporary urban growth and the production of built environment (Figure 2). It combines three stylized economic models that relate to production, consumption and investment emerging from two distinct fields of literature: the literature on economic geography and regional studies, and the emerging literature on the financialization of built environment in financial geography.

Model 1: The productive city: urban growth induced by productive activities

From early 1990s up to now, the issue of economic development has been specifically addressed by a dominant field of literature in economic geography and regional studies Scholars have been highlighting a shift from the original context of (Fordist)industrial capitalism to contemporary cognitive-cultural capitalism (Hutton, 2008; Moulier-Boutang, 2008; Scott 2017 & 2019) mainly in the context of advanced capitalist countries characterized by the increasing mobility of knowledge, human capital and firms. Two main perspectives can be emphasized. The first one is focused on regions and views urbanization from innovation and creativity in industries. An extensive literature on Territorial Innovation Models (TIMs) (Moulaert & Sekia, 2003) has highlighted the various ways in which cities and regions were growing as a result of the increasingly competitiveness of global manufacturing and tradable services such as knowledge-intensive business services (KIBS). Some scholars suggest that innovations are part of global value chain that take the form of global production networks (GPN) controlled by multinationals located in core regions and cities (Coe et al. 2008). Another approach emphasized the role of cultural and creative industries (CCIs) for urban growth based on the attraction of 'creative classes' as innovators (Florida, 2005). The second perspective is focused on large cities and views urbanization from business services. It takes the form of 'world city networks' (WCN) (Taylor, 2004). Based on some seminal concepts such as world city (Friedman, 1986), global city (Sassen, 1991) and space of flows (Castells, 1996), the WCN highlights the key role of global cities in the control and governance of the contemporary global economy. In this system based on multinational corporations as key actors, the urban hierarchy is driven by advanced producer services (APS) which include financial services (Taylor et al., 2014).

All of these works related to urban and regional growth are implicitly based on the theory of the economic base (Hoyt, 1939; 1954) which emphasizes revenue and expenditure flows (Vollet, 2007) and urban growth as a two-phase process. First, cities and regions improve their competitiveness by exporting goods and business services (within the spatial division of labor). Increasing returns, within firms and the city/region (such as agglomeration economies), strengthen export capacity and allow for the generation of basic urban revenue. Then, this revenue is redistributed, mainly in the form of wages for workers whose spending, in turn, induces local activities in various sectors such as consumption, local public services as well as investment in real estate. In other words, urban development is related to outside by the global market while local consumption and other related services (retail, health, education, leisure, etc.) and real estate form a coherent local system that is induced from the redistribution of revenue at the local scale. Urban and regional scholars underscore the Keynesian multiplier or spillover effect and Marshall-Jacob urbanization economies when analyzing the urbanization process (Camagni, 2017; Scott & Storper, 2015).

While economic geography and regional studies scholars mainly focused on urban growth from the productive activities perspective, neo-Marxian geographers (Topalov, 1974; Lefebvre, 1974; Harvey, 1978) incorporated the role of real estate in capital accumulation. In seminal works, Harvey (1978 & 1985) introduces, on the one hand, a second circuit of accumulation in the urban built environment which follows a productive circuit of capital accumulation. While the former initially functions as a key element in the production of goods and services (buildings for production/work and network infrastructure), it then attracts surplus capital from the productive sector which is impacted by lower profit rates and a trend towards over-accumulation. In this capital switching, both the State and the financial sector play a key role. On the other hand, Harvey (1982) emphasizes that built environment, as a new spatial-fix providing increasing land rents, will “tend to be treated as a financial asset by landowners”. Thus, Neo-Marxian scholars highlight the monetary flows feeding the accumulation of capital, which originally takes place in the manufacturing sector, will also be achieved downstream in urban real estate.

Model 1 (Figure 1) combines these two distinct fields that have in common to view urban and regional growth from production, which is referred to as the *productive city model*. This latter depends on two interdependent phenomena related to monetary flows or capital circuits. Firstly, the accumulation of productive capital strengthens exports of goods and traded services in a global market characterized by the mobility of firms, labor and knowledge (Crevoisier & Jeannerat, 2009; Theodore et al., 2011). Second, consumption-based activities and urban built environment (residential and non-residential real estate and infrastructures) are the result of spillovers effect from productive activities. On the one hand, the income and expenditure flows of people altogether workers, residents and consumers will fuel local demand for services and real estate. In other words, people are assumed to be immobile in terms of residence and consumption. On the other hand, real estate is viewed as a byproduct of urban growth that simultaneously as an investment attracts local capital, that is to say companies' profits and finance money, which, at the same time, will benefit to landowners as a financial asset. In other words, the financing of real estate development is assumed mainly as dependent on the local productive sector.

FIGURE 1

Model 2: The consumption city: urban growth based on mobile demand

Model 1 of the productive city has been increasingly challenged by scholars in economic geography and regional studies who emphasize the increasing mobility of people not only as workers but consumers as well (Vollet, 2007; Davezies & Talandier, 2014; Shearmur, 2016). Nowadays, consumption spending can no longer be considered as being geographically dependent on the place where wages are earned. Thus, mobile consumers induce a growing geographical disjunction between the places of production generating incomes for workers (or for people who receive a private or public annuity) and the places where these incomes are spent.

Some cities and regions can be highly competitive as productive places, but suffer significantly from "leaks" if their residents spend most of their incomes outside of the region. A first approach, the 'residential economy' concentrates on where people live and supposedly spend most of their incomes. It provides convincing explanation about the growth of many regions in France (Davezies, 2009; Talandier, 2010 & 2016) and in Switzerland (Segessemann & Crevoisier, 2016), which are attractive for commuters, retired people (Williams et al., 2000), students (Drucker & Goldstein, 2007. A second approach, the 'presential economy' (Guex, 2014; Vollet et al., 2014) analyzes how the presence and the expenses of mobile consumers in some places generate economic activities. Today, being more and more mobile, consumers can choose where they spend their money. Tourism has been continuously developing. It encompasses today many forms like leisure, shopping, day-visitors (Vacher & Vye, 2012), secondary residents (Hall & Müller, 2004; Roca, 2016), health services, events and experiences… Fundamentally, mobile consumers are attracted to places where they find more value for their expenses. While originally only tourism resorts were benefiting from extra-regional consumption, nowadays, most places have to improve their attractiveness. As noted by Judd & Fainstein (1999), American cities in the 1980s had already developed their tourism sites, specifically to counteract the effects of deindustrialization and suburbanization. Today, Western societies are a metropolitan economy characterized by competition between agglomerations to capture spending (Cameron, 2003; González, 2011; Markusen, 2007; Markusen & Schrock, 2009).

In short, model 2 of the *consumption city* (Figure 2) for urban growth challenges the urbanization process that results from the multiplier effect of productive activities. The increasing separation between the city as a place of production and the city both as a living environment (a place to live) and place of consumption implies that inter-urban competition and urban hierarchy have to be viewed also in terms of consumption-based activities. In other terms, the rising circulation of people incomes and expenses changes the scale of urbanization from the consumption side. Thus model 2 insists on demand viewed independently from basic productive activities such as manufacturing and business services on the supply side. Since more mobile residents and consumers increasingly contribute to the growth of cities and regions, the consumption city highlights the driving role of consumption-based activities (such as retail, leisure, health and wellness, culture, education, etc. as services for people) and of extra-local demand in complement of local one for urban growth. As it will be further discussed, this change of consumption scale has implications for the role of real estate in attracting consumers and residents.

Model 3: the financialized city and the rescaling of investment in urban rent

Following on from Lefebvre's (1974) thoughts regarding the shift from industrial capitalism to a contemporary capitalism in which urban space is central to accumulation, scholars have revisited, although often separately (Christophers, 2011), David Harvey's seminal theory on the urbanization of capital and capital switching (1978, 1985), and the trend to treat land as a financial asset by property owners (1982). The aim has been to address the issue of the rising linkages between real estate, financial markets and cities. The literature on the financialization of real estate (see Aalbers, 2019 for a review) has extended these last ten years especially since the subprime mortgage crisis and global financial crisis, which placed real estate at the center of financialized capitalism (Aalbers, 2017; Fernandez & Aalbers, 2016). While the nexus of real estate and finance has been increasingly integrated in the analyses made by critical-heterodox economists (e.g. Schwarzt & Seabrooke, 2008), geographers, from different poststructuralist perspectives (e.g. Regulation school, social studies of finance, institutionalism), have highlighted the grounded processes in terms of actors, techniques and practices of the financialization of real estate and of its linkages with urban growth. They moreover emphasized the variegations between and within countries due to specific national institutions and the multi-scales of the ongoing financialization of real estate development.

On the one hand, the issue of capital switching, though difficult to empirically demonstrate, has been debated (Haila, 1991; Beauregard, 1994; Charney, 2001, Christophers, 2011; Kutz, 2016). Since the early 1990s, some scholars demonstrated that real estate is a capital circuit on its own. Mainly focused on the key role played by the real estate industry, this scholarship opened the black box of the production of built environment by tackling the relationship between property cycles and urban growth. City builders anticipate property demand in relation to growth prospects and compete to access to finance capital. Thus, in this way, real estate is not fully dependent from a capital switching from the productive circuit due to a trend to over-accumulation as originally assumed by Harvey, but it has its own financial circuits. Mainly based on savings banks and credit unions, these latter have in numerous countries, mainly as a result of homeownership policies (see below), increasingly been fuelling real estate development locally by providing loans to households and credit to property companies (Aalbers, 2015), along with real estate investments made by local corporates, banks and other institutional investors (Theurillat et al., 2015). Simultaneously, numerous scholars have highlighted that built environment has been, these last twenty years, massively attracting money provided by new financial circuits connected to financial markets and actors as a result of the change of the financial system (Aveline-Dubach, 2008; Rutland, 2010; Theurillat et al., 2010). Several processes have been generating liquidities in search for investment opportunities: the growth pension funds in some countries (US, UK, Canada, NL or Switzerland) and of other types of pooled investment funds in other (France, Germany, Italy), trade surpluses and related sovereign funds, surplus money resulting from quantitative easing policies… All of this has created a 'wall' of money (Fernandez & Aalbers, 2016) that pushed for the development of global financialized investment circuits (Aveline-Dubach, 2008; Corpataux et al., 2009 & 2017), circumventing, complementing or boosting existing mainly bank-based local and national financial circuits.

On the other hand, also since the early 1990s scholars have documented the various ways of the capture of urban rent by finance capital actors. For many scholars, homeownership policies implemented in various countries (Eastern Europe or Asia being iconic of contemporary housing privatization) have played a key role in this process (Aalbers & Christophers, 2014; Fernandez & Aalbers, 2016). Viewed as a means to stimulate the economy based on the wealth effect resulting from rising housing prices, homeownership has become the main source of wealth of people and conversely a massive mortgage debt market for banks. In this sense, housing has increasingly become a financial asset both for banks and, in some extent households as property-owners (Forrest & Hiramaya, 2015). However, the connection with the finance industry went a step further based on the securitization of real estate via the creation of various types of special investment vehicles (SIVs). In several countries (US, UK and NL being iconic), housing could be transformed into a liquid asset as a result of the securitization of housing mortgage loans into sophisticated derivatives sold by SIVs mainly to institutional investors, which resulted in the well-known subprime' crisis (Aalbers, 2012; Gotham, 2009). In other contexts, the linkages between real estate and financial markets have resulted from the securitization of buildings' property, and thus of the increase of financial actors as urban landowners. In some countries, waves of privatization of social housing during the 2000s, like in Germany (Berndt et al., 2017), and more recently in the 2008 post-crisis context, like in Ireland (Waldron, 2018), have fuelled the stimulation of financial markets based on the development of rental housing for SIVs, such as funds listed or not on the financial markets. In the rental housing market financial actors can secure their investment in the long run, such as real estate investment trusts (REITs), or sell new or rehabilitated property in short-mid term (such as private property funds: see Fields & Uffer, 2016 regarding US and German contexts) to other investors (such as REITs or pension funds). The rental housing market extends the means to generate money from urban property since in numerous countries investment in buildings were previously limited to commercial property (office and retail), which was extensively used to address the issue of the financialization of (non-residential) real estate (David & Halbert, 2013; Wijburg & Aalbers, 2017).

Model 3 of the *financialized city* (Figure 2) emphasizes the role of built environment that, as the secondary circuit of capital, has gradually been at the center of a contemporary financialized capitalism. It points out the change of scale of the real estate-finance nexus as a result of the increasing connection between local real estate and global financial circuits and, at the same time, underlines the change in real estate investments locally induced by bank-credits as well as profits and savings of local firms and workers. As a variegated ongoing process in time and space, the financialization of real estate is operationally defined here as the construction and exploitation of the mobility of capital due to the massive transformation of tangible, non liquid and immobile assets (such as a building) into intangible, liquid and mobile financialized assets by the finance industry (large banks and SIVs) located in the world's major financial places framing the 'Global City' (Sassen, 1991). As a result, tensions arise between a shareholders' value logic on the financial markets (Boyer, 2000; Lapavitsas, 2013) and the production of urban built environment. On the one hand, real estate has become a financial asset class that enables to diversify the portfolio of investors in accordance with the basics of modern portfolio management theory. In the latter, capital allocation is made on the risks' and returns' indices of real estate in comparison with other sectors' (equities, bonds, currencies, etc.) and spaces' (developed and BRICs countries cities for instance) financial assets. On the other hand, nations and cities have become dependent on the opinions of financial markets. Real estate development has been increasingly influenced by the speculative and systemic fluctuations of global financial markets: financialization can amplify urban real estate cycles as well as submit them to the issue of massive withdrawal of capital in the case of financial and economic downturns (Fernandez&Aalbers, 2016; Waldron & Redmund, 2015)

A combination to address the variegated financialization of urban (re)development and growth issues

Both in advanced capitalist countries and, increasingly in emerging countries (Aveline-Dubach, 2017; Haila, 2016; Mosciaro & Aalbers, 2017; Rouanet & Halbert, 2014; Sanfelici & Halbert, 2018,), scholars have shed light on the various actors, institutions, processes and impacts of financial markets and actors on built environment in relation to the variegated path dependent urban social and institutional context. For numerous scholars, large urban redevelopment projects such as CBDs, shopping malls or those related to leisure and cultural activities as well as the widespread gentrification of inner-city or suburban neighborhoods (Dörry et al., 2016; Guironnet et al., 2016; Scott, 2017 & 2019; Theurillat & Crevoisier, 2013, 2014) have all been emblematic of a combination between the financialized city and the productive city models (Figure 2).

FIGURE 2

On the one side, the capture of urban rent for financiers have been possible thanks to the active contribution of local actors to connect the city with global financialized and mobile capital. In the US, municipal or local governments' agencies issued various products (e.g. Tax Incremental Finance) on financial markets (Ashton et al., 2016; Pacewicz, 2016; Weber, 2010). In other countries, public-private partnerships on large real estate projects established a direct connection with financial markets (Christophers, 2019; Kaika & Ruggiero, 2016; Savini & Aalbers, 2016). In some advanced capitalist countries, the changing planning system and its connection to financial markets has been situated with the current austerity context of cities, which resulted from the 2008 financial crisis (Peck, 2012; Peck & Whiteside, 2016; Guironnet, 2019). On the other side, property-led urban growth policies have been in most cases associated with a growth model based on productive activities. In many countries, the contemporary transformation of urban built environment by property-led urban regeneration has been viewed as a mean to attract mobile firms/multinationals and qualified workers since priority is given to improving the competitiveness of the national metropolises in order to gain a position within the urban hierarchy and globalized economy (Peck et al., 2009). Thus, by addressing the relations between the built environment and urban growth, scholars in the field of the financialization of real estate have been documenting 'local financializations' (Weber, 2015) of how land as a set of social relations and practices is crucial to the loci of power in urban governance regimes and reconfiguration of capital flows which has gone in hand with unpacking of the issue of land rent creation based on its linkages between land use planning, real estate, financial markets and urban (re)development.

However, capitalization in the city in terms of basic activities and investment in built environment has to be viewed beyond the productive city model. Due to the increasing mobility of people as consumers and/or residents, the quality of built environment plays a key role in the commodification and attraction of the city as a consumption place (model 2; Figure 2). New large residential areas, new megaprojects (stadiums, exhibition centers, theme parks, etc.), infrastructures and the rehabilitation of large former manufacturing or transportation estates (i.e. railways, factories and harbors) for cultural activities and consumption-based activities (shopping malls) are all emblematic key components of the production of built environment in order to insert cities into the 'spatial division of consumption' (Harvey, 1989; Jessop & Sum, 2000; Smet, 2016). Urban regeneration and cultural-led development strategies, implemented in various cities in the North-Atlantic zone since 1980s, initially targeting tourists, can today be addressed to various types of mobile consumers, and cities can position themselves as a place for study or for wellness. For Smith and Williams (2013), the extra-local demand for the city is behind the phenomenon of gentrification since people, as both consumers and residents, epitomize the return of capital to the city. While during the nineteen eighties and nineties the production of built environment based on cultural-led strategies accompanied the fast development of business services linked to productive activities and high qualified workers (finance, knowledge intensive business services, etc.), it has been increasingly associated with the development of personal (health, higher education, etc.) and experience services (events, hotels, restaurants, exhibitions, etc.) devoted to both mobile consumers and local inhabitants since early the 2000s (Davezies & Talandier, 2014; Segessemann & Crevoisier, 2016). Thus, consumption activities that bring basic revenues to cities and regions and from which spillovers are expected have put the quality of built environment and of urban landscape at the core of the attractiveness to mobile consumers and residents. Simultaneously, this implies that local real estate development is dependent in first line on extra-local demands both for residential and non-residential real estate (hotels, shopping centers, recreation centers, etc.). In other words, this also implies to view local real estate markets beyond productive activities and the related multiplier effect originating more specifically from the globalization of large firms that creates a demand for the types of office buildings, high-end residential areas and infrastructures required by big businesses, and that induces domestic demand for retail and leisure real estate.

In summary, the consumption city model sheds a new light on the financialization of built environment. The extension of the city into suburban residential zones in the US that went hand in hand with the transformation of housing debt into very liquid assets through securitization (Gotham, 2009) can be a first iconic example of the combination between the consumption city and financialized city models. However, the linkages between urbanization and real estate megaprojects based on tourism and leisure development still needs to be addressed by scholars. Urbanization in Spain would illustrate the development of financialized investment circuits boosting urbanization and real estate development coupled with Northern European countries elderly people that sought a good place to retire (Coq-Vuelta, 2013).

China's contemporary financialized urban development

Since early 1990s, numerous scholars in geography and urban studies have put land at the center of urban growth in China. Based on the three stylized models emphasized above, this section revisits the land-driven growth model to address contemporary financialized urban (re)development by dividing it into two main periods. While the first from early 1990s to end of 2000s is based on manufacturing, the second period since 2010 relates to a post-industrial city. The following argues that this latter is featured by the ongoing change of scale for real estate investments due to the emergence of various professional investors (such as investment trusts and funds) which has deeply modified urban (re)development is increasingly related to a mix of business services and creative industries as well as consumption-based activities (Figure 3).

FIGURE 3

Urban growth based on manufacturing and housing investments at local scale

From the mid-1990s till now, the majority of scholars in urban studies have highlighted the key role of land in China's economic growth and urbanization. This literature on "land-driven growth" (Hsing, 2010; Lin, 2009 and 2014; Tao et al., 2010; Wu, 2015b) initially refers to the land value capture that resulted from the decentralization of power and responsibilities in land management and urban planning, and the recentralization of the fiscal regime that benefits the central government. In China, municipal governments can lease urban land for real estate development and convert collectively owned rural land into urban land. Moreover, this conveyance generates revenue that directly benefits local governments and that compensates for an imbalanced tax regime in which urbanization costs (in urban infrastructures and in social services such as education, health, etc.) fall under the jurisdiction of local governments. On the one hand, market-oriented reforms and the institutional decentralization of land management have been at the core of "urban entrepreneurialism with Chinese characteristics" (Cartier, 2011; He & Wu, 2005, 2009), where local governments play a proactive role in promoting growth. On the other hand, the local economic empowerment corresponds to the recentralization of the political control of urban growth (measured by the gross domestic product (GDP) index) by the central state through the promotion of sub-national government officials (Tao et al., 2010; Chien, 2013), or through the incorporation of state priorities into urban planning (Wu, 2015b). As a result, local municipal governments operate like land development corporations, and the capital accumulation that results from a land finance model which is, according to Wu (2017), the foundation of "state entrepreneurialism" in China.

One the one hand, the land-driven growth model has first gone hand in hand with the use of land as a mortgage for bank loans and with urbanization around manufacturing industries since the early 1990s (Cartier, 2002). To cope with the structural mismatch between fiscal revenue and expenditure, and while being not allowed to directly borrow money from state banks until 2015 (1), local municipal governments mainly used local government investment vehicles (LGIVs), such as local state-owned utilities and real estate companies or investment companies (urban investment and development corporations) to finance infrastructures (see Theurillat et al., 2016 for details). These LGIVs were able to obtain loans from state banks by mortgaging land injected by local governments and provided serviced land to the land (lease) market. Low-priced and subsidized land together with cheap labor based on rural migrants from inner provinces was originally used to attract foreign investment when the first economic and technological development zones were established in coastal areas (e.g. Guangdong, Shanghai and Jiangsu provinces). It then continued to other areas further inland (such as Chongqing, Sichuan and Hubei) and eventually turned into an inter-city competition to attract foreign and domestic firms. Within a decade, China had become the world's factory, exporting cheap goods (clothes, electronics, etc.) primarily to Western countries. By increasing the overall local GDP for local governments, industrial development raises the land value of the city, which in turn enables local municipal governments and related LGIVs to sell land (use rights), via auctions, for commercial and residential real estate projects. By selling land, LGIVs could repay the loans with local banks. Ultimately, the expansion of the city's territory by grabbing rural land at a lower value and converting it into serviced land so as to raise its value and attract investment has played a key role in generating revenues to cope with the costs of urbanization for local governments (Wong, 2013; Lin, 2014).

On the other hand, land-driven accumulation and real estate development in the context of manufacturing became possible thanks to both capital switching from the primary capital circuit and to the transformation of housing into a financial asset during the 2000s (Aveline-Dubach, 2017; Hu, 2013; Wu, 2015a). This resulted from changes to the state housing allocation system for homeownership (although based on lease rights limited to 70 years) and market allocation since 1998. First, households massively speculated on urban rent by multi-property purchases, motivated by both long-term (retirement) and short-term (surplus value) strategies. Second, housing rapidly became a growing investment for the state banking system. Loans to real estate companies and especially mortgages to households, including for individuals purchasing their second or third home (and beyond), has responded to the trend of viewing housing as a financial asset. In addition to the formal state banking system, local funds that collect industry profits and household savings on a local–regional scale and which are part of local shadow banking, have also played an important role in fuelling housing development (Theurillat, 2017). Third, many manufacturing local state-owned firms created real estate branches or companies to make profits out of real estate development. Thus, housing investment in the 2000s became a key driving force behind China's rapid urbanization and accumulation.

The current geographies of urban growth in the post-industrial Chinese economy

The initial land-driven growth model based on industry was recently revisited by scholars who highlighted a second phase of economic growth and urbanization since early 2010s (Hsing, 2010; Wu, 2017) in China where real estate megaprojects and mega-events have played a key role for urban growth.

First, the urban model gradually shifted "from industrialism to urbanism" (Hsing, 2010) since local governments used the former to drive urban growth (He & Wu, 2005; Qian, 2011; Ren, 2013; Wu, 2015b). While the original inter-urban competition was based on attracting firms, it has moved towards attracting developers for building various types of post-industrial megaprojects. Urban renewals and new towns development in suburban areas have been first associated with CBDs (He & Wu, 2005; Qian, 2011), and then with various types of high-tech and science parks, universities, administrative districts as well as cultural districts (Li et al., 2014; Li & Chiu, 2017; Shen & Wu, 2016; Wu, 2018). All of these urban redevelopment forms are iconic of the advanced productive and creative economy (Florida, 2005). For numerous scholars, next to tertiary services, cultural and creative industries (CCIs) have become a key growth strategy for local governments in China since early 2000s (He, 2017; Wang, 2009 & 2012; Zheng, 2010 & 2011). CCIs zones and all sorts of cultural facilities are often used as a branding strategy or place marketing to enhance cities' competitiveness, promote their images and attract qualified workers. While placing new manufacturing zones in suburban areas or other inland cities (Shen & Wu, 2016), local governments have pushed the transformation of old industrial sites in inner city into various types of cultural districts where (some parts of) urban (manufacturing) heritages are intended to cultivate and generate art clustering. In many cases, such state cultural-led urban renewal around cultural heritages of various kind often turn out to be converted into commercial real estate development in close relation to tourism (Keane, 2011; Su, 2015; Zheng, 2016) as well as high-end residential areas (Wu, 2010).

Second, all of this real estate development has gone hand in hand with massive infrastructure investments. In terms of infrastructure-led urbanization (Wu et al., 2016) or of a mega-event urbanization model (Zhao et al., 2017), the linkages between infrastructure, mega-events and large real estate projects have become key elements of urban growth strategies in large cities such as for the 2008 Beijing Olympic Games, the 2010 Shanghai Universal Exhibition, the 2010 Guangzhou Asian Games, or the 2011 Shenzhen Universiade. All of these are based on a growth model characterized by extensive urbanization (suburbanization) and huge infrastructure and real estate investments that could maintain local GDP growth for some time.

Whether called infrastructure, real estate or mega-events-led urbanization, the current “policy of new urbanization” (Wu, 2017) is emblematic of the complexity of China’s urban growth machine that must be viewed as a mix between driving productive and consumption based activities. Contemporary China’s urban redevelopment is characterized with the building of various kinds of urban centralities that host post-manufacturing productive activities such as advanced business services or creative industries as well as consumption-based activities that are expected to further drive economic growth and real estate development. Moreover, the rapid development of consumption places based on the combination of both residential and commercial uses and mega-events that capture household wages relates to the increasing role played by external demand in the production of built environment.

Indeed, large-scale residential estates as well as commercial and mixed-use real estate development that have blossomed in many cities and resorts around China have been increasingly targeting non-local demand for primary or secondary residency (such as retired people purchasing a flat in a province with a more temperate climate) and consumption (tourists) purposes. On the one hand, the construction of new and rapid transportation infrastructures (high-speed train lines, motorways, airports) all over the country and various social infrastructures in cities, such as museums, exhibition halls and sports centers have been key conditions of the increasing mobility of people and of the rapid development of domestic tourism at various levels, in prefectures, provinces and a national scale (Zhang et al., 2011; Su, 2015). On the other hand, a turn to commercial real estate has been widely implemented in Chinese cities (Theurillat et al., 2016b). Next to large-scale residential estates developed all over China by national champions such as Country Garden and Evergrande, many developers have turned to non-residential real estate. New kinds of consumption places have been developed based on retail and leisure activities, such as mix-used complexes (e.g. Wanda Plaza for

Wanda, Xintiandi for Shui On Land, MixC for China Resources Land, etc.), theme parks and new resorts based on entertainment, wellness or "natural" landscapes (e.g. Wanda, Fosun and the purchase of Club Med).

Moreover, the growth of large-scale commercial and leisure facilities across China, as well as the key role of mega-events in urban growth have been accompanied by the financialization of built environment. While banks lending and investments by local funds and urban households in real estate at a local scale have been the major drivers of both the production of built environment and of its transformation into a financial asset, the situation has been gradually turned into a rapid financialization structured by national investment circuits and large professional investors these last ten years.

First, urban built environment has been fuelled by financialized investment circuits that have rapidly developed at a national scale since the end of the 2000s. These circuits have been initially boosted by the 600 billion USD economic stimulus package of 2008–2009 as real estate and infrastructures were the key recipients of these funds. Later on, these circuits benefitted from stricter monetary policy that focused (only) on restricting bank loans since early 2010. In the absence of liquid domestic financial markets and, until 2016, of REITs (2), some Chinese SIVs have emerged as a result. They typically collect funds on a national scale from investment companies, individuals and firms in order to enable indirect investment in various activities, which increasingly is in real estate and infrastructures. This type of securitized loan to real estate firms have taken the form of wealth management products sold at a national level by trust companies, often with the help of banks (bank-trust companies) and various large funds. This indirect and portfolio investment has been recently further developed by introducing new kinds of SIVs based on crowd-investing principles. Large Chinese developers (Country Garden, Greenland, Vanke and Wanda on the forefront) have initiated online investment platforms in the form of open funds (known as quasi-REITs) that collect money directly from investors (mainly households), based on various models which occur on cross-provincial and national scales. In these cases, investors receive a return on their investment as shareholders of a fund that targets either the commercial and mixed-use real estate market or the emerging rental housing market supported by the central government since 2017. Simultaneously, the debt mechanism originally based on banks for financing infrastructures also changed rapidly. On the one hand, by developing large-scale real estate projects or selling land use rights to other real estate developers, LGIV that mushroomed all over China could finance various kinds of basic infrastructure (e.g. utility companies) and of social infrastructures such as exhibition halls, museums and stadiums that relate to mega-event urban development. On the other hand, while LGIVs could mortgage lands injected by local government to obtain bank loans, they increasingly turned to financialized circuits such as the municipal bonds interbank market (where bonds have been sold to households since 2016) and trust companies due to stricter banking regulations since 2010.

Second, residential and commercial property ownership gradually changed. As mentioned earlier, multi-property purchases by urban households have been a key characteristic of both real estate development and of financial investments in China. The development of new towns and of resorts all over China has however witnessed a new phase since non-local residents have increasingly become the main target of developers. While property purchases are still strongly restricted to urban citizens (having the local residency permit: hukou) or just restricted for some period of time in first tier cities in China (China, Shanghai, Guangzhou and Shenzhen), numerous lower tier cities (from 1 to 5 millions inhabitants) have been encouraging housing purchases by non-local residents since 2014 (Rhee & Kramer, 2015). Thus, cross-regional and provincial investment in housing has become a key feature of on-going housing development in China. Moreover, this rescaling of residential investment has gone along with the development of mixed-use and leisure real estate development. While developers used to invest as landlords in retail areas such as supermarkets and shopping centers or hotels, the business model changed for numerous developers. Next to apartments, the sale (of lease rights limited to 40 years for commercial real estate) of retail (shops) and hotel (rooms) areas to households based on guaranteed revenue streams (rental income) by real estate companies from operators have become the norm of non-housing real estate development. In addition, besides households as main investors at a more national scale, some large developers like Wanda and Vanke recently implemented an asset-light strategy for the development of new retail or mixed-use real estate projects, similar to many of their counterparts in Europe and the US, i.e. selling them to large investors. Next to foreign large investors like pension funds and REITs seeking long-term investment in China, this strategy of turning to large investors has gone hand in hand with the emergence of domestic institutional investors, such as Chinese insurance companies, which have been allowed to invest up to 30% of their total assets in real estate since 2010.

To sum up, ongoing urban development in China has been increasingly financialized these last ten years in China. While state banks are still the main provider of loans for the built environment (infrastructure, housing and real estate development), new financialized investment circuits have been emerging. Large wealth management companies such as trusts (which primarily belong to banks, insurance companies and national state-owned companies) and funds (also in the form of crowd-investing funds of large developers) tend to be at the center of China's financialized circuits. Located in the country's three major financial places such as Beijing, Shanghai and Shenzhen (Lai, 2011; Zhao et al., 2013), these latter collect at a national scale existing money, savings of households and investment companies, profits of firms, money from insurance companies and quite similarly to private property funds in other countries enable indirect portfolio investment in real estate and infrastructures. Financialized circuits developed in parallel to the connection to financial markets have so far benefitted from a much less stricter regulation compared to financial markets where listings, issuances and transactions have been strictly controlled by the State. Simultaneously, the initial land growth model associated with bank credits and firms and households' investment in real estate has rapidly been rescaled. Increasingly, households can diversify their portfolio in residential and commercial real estate similarly to large investors such as real estate and insurance companies. The exponential growth of large-scale retail and leisure facilities across China, as well as the key role of mega-events for urban growth has led to a change of urban property due to external investments. This trend has gone beyond housing incorporating non-residential real estate and infrastructures, and has occurred at a national scale depending on the national policy that opens cities' markets to external investments. Thus, China's current urban development contains both industrial and post-productive features: it is still induced mainly by industry and tertiary services, but also increasingly by consumption, and by capturing extra-local household wages spent locally for urban capital accumulation due to the increased mobility of people as consumers.

Discussion and conclusion: a research framework for the financialization of urban (re)development in China and beyond

In China, linkages between urban growth and built environment have been framed by the land-driven growth model in economic geography and urban studies. This paper provides a research framework to address China's ongoing urban development by arguing that it is iconic of a combination of three stylized models: urban growth can be driven by the revenue from productive activities exports (model 1) and also by the spending of mobile consumers (model 2) while built environment has been increasingly a key driver for financialization due to the rapid emergence of national investment circuits structured by professional investors (model 3). As a variegated process over time and space, these linkages take specific forms in China's socio-institutional context, and two phases can be featured from the early 1990 to the present.

During the first period, from 1990 to 2010, urban growth mainly relates to industrial city development coupled with real estate development based on bank credits and (state) firms and household investments. Urbanization mainly resulted from the production of manufactured goods for global markets. The supply of land, although it is still owned by the State since cities can only sell land-lease rights, has functioned first as a trigger to (re)build cities as productive clusters. Then business services, consumption activities and built environment (housing, real estate and infrastructures) for local demand, mainly those of workers and residents are induced. From the outset, the banking system played a key role in the implementation of built environment production. Land assets permitted the creation of local credit by state banks along with LGIVs for infrastructure development and to households and real estate companies for housing and real estate development. Simultaneously, real estate development was boosted by speculation at local scale by households as main urban property owners.

The second period, from the early 2010s to date, relates to a mix of productive and consumption based activities. On the one hand, advanced business services and emerging creative industries have been driving urban growth. On the other hand, this period has also seen the rapid significance of consumption for China's economy. While there is still a debate regarding the significance of domestic consumption for China's growth (Piketty et al., 2017) and the level of purchasing power of Chinese consumers, signs of their increased mobility are more tangible due to the rapid development of transportation means (generalization of private cars, highways, high-speed train lines and domestic flights). Whether or not they are a direct result of these evolutions, changes can be observed in urban growth and in the production of built environment where extra-local scales have become increasingly significant. Chinese cities tend to be both a place of production of manufactured goods, in line with business services and creative industries, and a place of consumption for increasingly extra-provincial and national consumers. Simultaneously, in recent years, cities have become places of direct investment for urban infrastructure, such as exhibition halls and conference or sports centers, as well as urban centralities and new towns connected with consumption and leisure activities, and residential purposes. Such real estate projects have been increasingly disconnected from the local productive export sector (manufacturing, creative industries and business services) and spillovers effect on investments, and consequently connected to external investments that take the form of a combination having the following features. On the one side, the capital switching that took place at a local scale has been mainly rescaled. In numerous cities and new towns across China, housing and real estate development have been possible by targeting investment from extra-local households in the first line and secondarily from national large developers and investors. Thus, urban ownership has been increasingly related to non-local landowners. On the other side, the supply of money to real estate and infrastructure development has been increasingly connected to national financialized and non(less) regulated circuits. While state banks are still the dominant money provider to property buyers (households), developers and local governments, other financial institutions (SIVs) collect money at a national scale which enable households, firms and institutional investors (insurance companies and state funds) to make portfolio investments.

In this way, the combination between both the productive city and consumption city models sheds a new light about the linkages between urban growth and the financialized production of built environment for further research regarding China's contemporary urban development. External investments in residential areas, leisure and consumption-based activities have been a way to extend the land driven growth model beyond urbanization induced by productive activities. At the same time, the consumption city model is useful to address the discrepancies between the role of real estate investment by extra-locals and the absence of local and non-local demand for consumption in the case of ghost cities or over-production characterizing many residential and commercial development in new towns or resorts throughout China.

Moreover, the case of China's ongoing urban development actually exemplifies existing processes of (re)combination between production, consumption and investment in real estate both in advanced capitalist and emerging countries, and within various large to low tier cities. Today, many cities can develop without or re-orientate their economy out of productive activities (which has both positive and negative consequences: see Guex

& Crevoisier, 2017). Conversely, the issue of huge real estate development in numerous cities these last twenty years, combined with rising property prices and gentrification, must also be addressed in relation to the extra-local demand for the city as an investment place based on a more complex combination between the rescaling of capital switching and the financialization of built environment since simultaneously small and increasingly mobile investors such as individuals and large financial actors have become landlords in numerous cities.

Finally, the research framework combining the three stylized models is relevant to conceptually deal with the production of built environment in the era of financialization by addressing the origin of land rent (Ward & Aalbers, 2016) both in relation to urban growth models related to local hybridity between basic productive and consumption-based activities, and the rent capture issue based on local hybridity between local bank-based money and investors and financialized investments circuits (Launius & Kear, 2019). In this perspective, the cross fertilization between two fields of literature in geography is very useful. On the one hand, the economic geography and regional studies literature has been revisiting the productive and export-base model, assuming that captive local workers-consumers is an outdated standpoint to address the creation of urban value only from the perspective of productive activities. On the other hand, the financialization of real estate literature has been revisiting the urbanization of capital. By pooling money from stakeholders and enabling portfolio investments, the finance industry has increasingly connected real estate to financial markets which has amplified its transformation into a more liquid and financialized asset for investors. However, the implications of the increasing mobility of people as consumers and residents regarding the linkages between real estate development, finance and urban growth have been so far under-adressed by scholars.

Notes

1. Since mid 2015, local governments have been allowed to issue bonds in the interbank markets. At the same time, some of the banks credits to local governments were transformed into bonds in the interbank market (loan to bond swap program) that finally took the form of securitization since they could also be purchased by individuals since 2016 (see Theurillat et al., 2016).
2. The first REIT in China was launched on the Shanghai Stock Exchange in October 2017 by the state-owned developer, Poly Real Estate. It is related to the emergence of the national rental housing market. Some Chinese REITs were previously launched on the Hong Kong Stock Exchange with a focus on non-housing rental markets (Aveline-Dubach, 2013).

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Figures

Figure 1: the productive city, induced consumption activities and investment in real estate

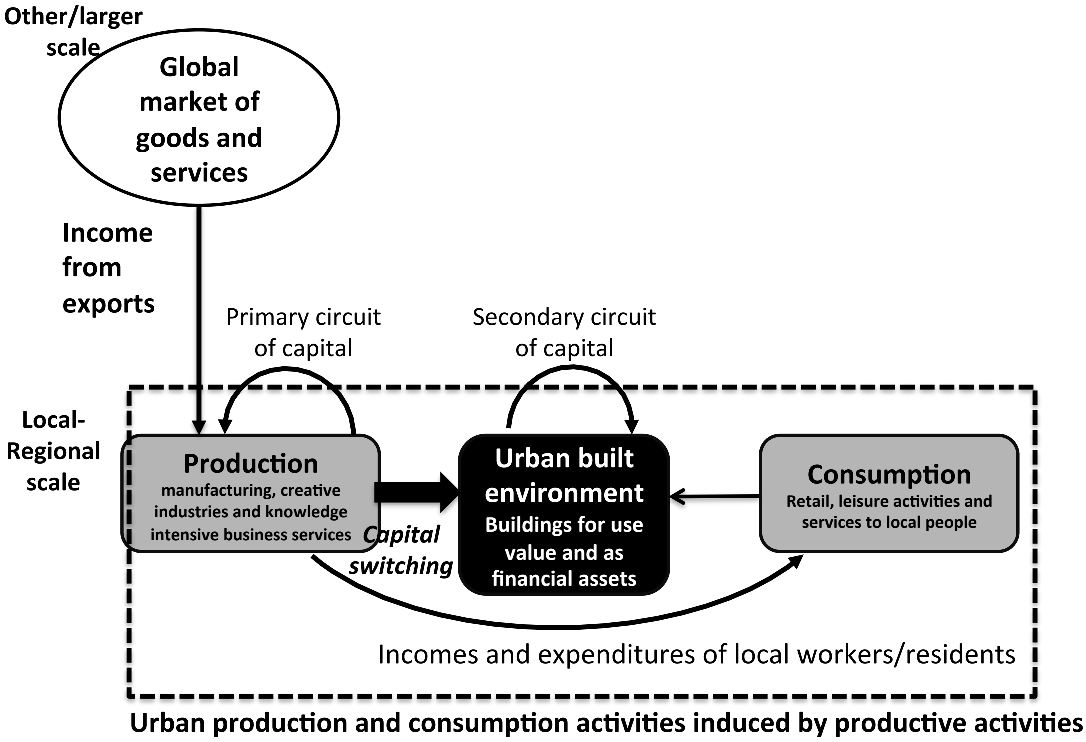


Figure 2: stylized contemporary post-industrial urban growth at the era of financialized urban built environment

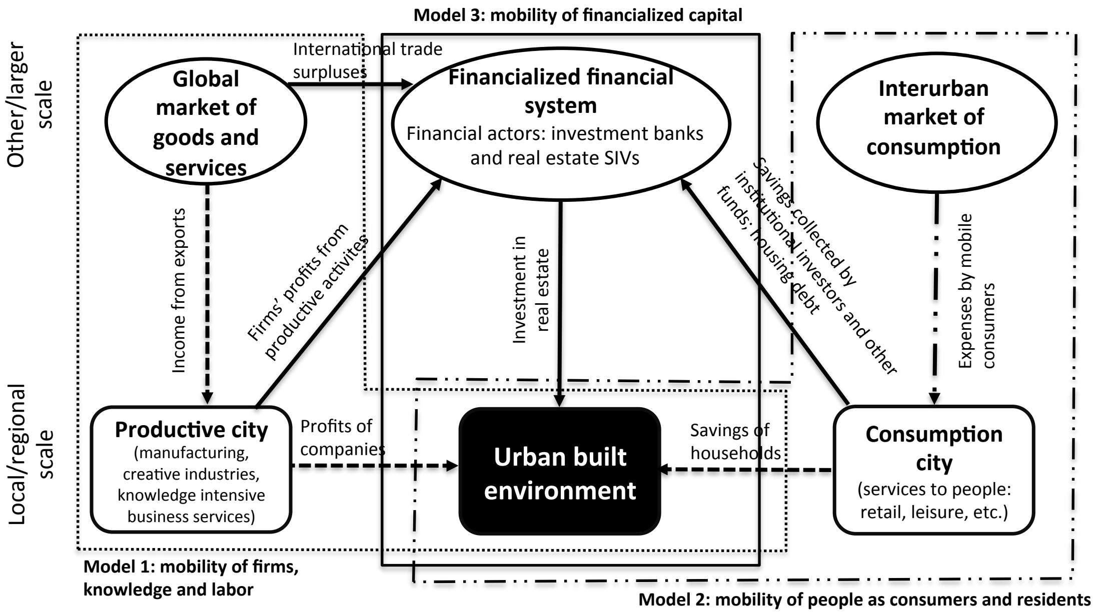
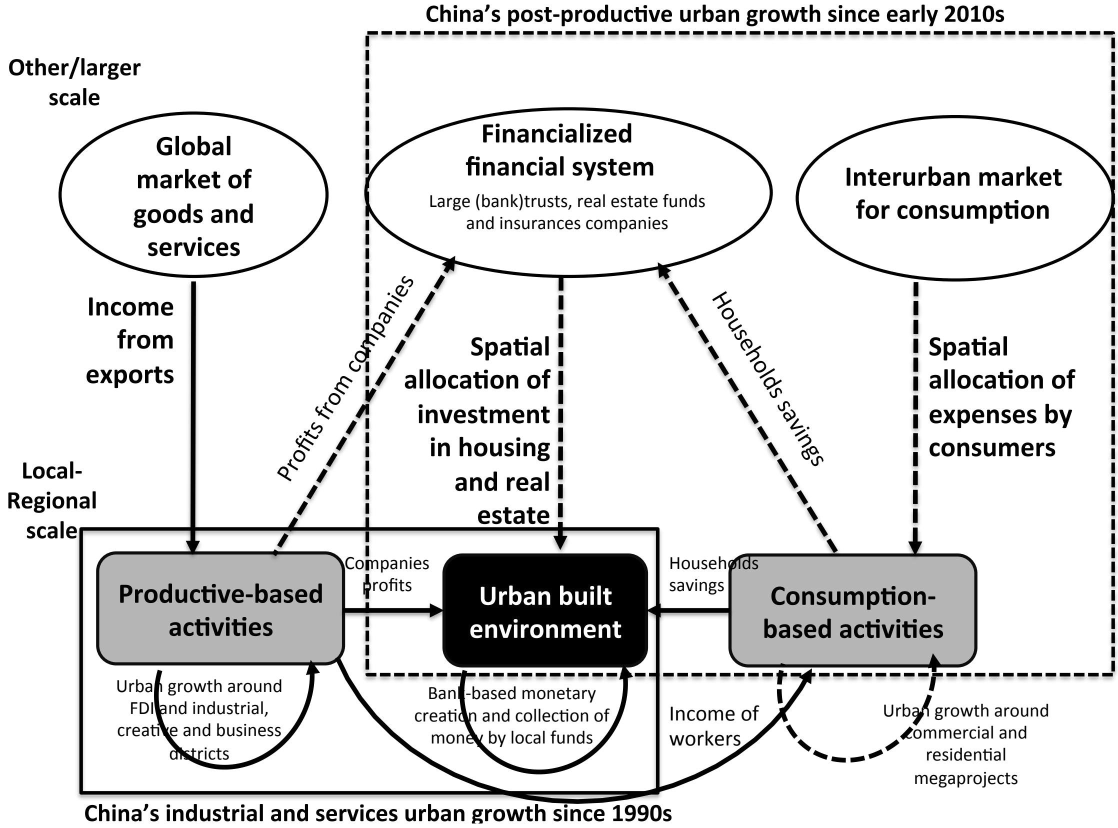


Figure 3: a research framework to address China's ongoing financialized urban development



Sources: Theurillat, Guex and Crevoisier (2019)