

How Evolving Institutions Shaped China's Economic Geography*

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Abstract

This article reviews how evolving institutions shaped China's economic geography since the reform era. The review covers three areas. First, we examine reductions in spatial frictions through hukou reform and transportation expansion, and their effects on migration, productivity, welfare, and spatial inequality. Second, we review urban and rural land reforms, housing reform, land-based public finance, and the promotion tournament, which improved allocation but distorted land use, infrastructure, and local debt. Third, we discuss place-based policies and agglomeration, including special economic zones as bundled institutions combining economic incentives with political support. We highlight China's contribution to core questions in economic geography.

Keywords: China, economic geography, urbanization, agglomeration, land markets, migration, hukou, transportation infrastructure, place-based policy

JEL Codes: R10, R12, R14, R23, R31, R42, O18, O53

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1 Introduction

The past half-century has witnessed one of the most astonishing episodes of economic development in history taking place in China. After decades of political turmoil and failed economic policies, the post-Mao Chinese government changed course by reintroducing property rights and markets, opening to the outside world for trade and investment, and undertaking large-scale infrastructure development. Between 1980 and 2024, real GDP per capita grew from 3,028 RMB to 91,011 RMB—a 30-fold increase representing an average annual growth rate of 8%.¹ Consequently, China emerged as the “world factory,” with its share of global manufacturing value-added rising from 6% in 2000 to nearly 30% in 2024.²

Underlying this rapid economic growth were massive transformations in economic geography. Between 1980 and 2024, China’s urbanization rate surged from 19% to 67%, absorbing more than 700 million new urban residents in the largest migration in human history.³ Between 2000 and 2024, the high-speed rail network grew from zero to more than 48,000 kilometers, exceeding the rest of the world combined; the expressway network expanded from 16,000 to over 190,000 kilometers; and urban built-up land more than tripled.⁴

A prominent feature of China’s economic geography is its scale. We argue that three forms of scale economies stand out in this development process. The first is firm-level scale economies, particularly in the manufacturing sector. With access to the global market, the expansion of firms’ production scale was supported by the influx of rural-urban migrants. Second, agglomeration economies, which bind firms together and enhance their performance, were facilitated by an ample supply of land and various place-based policies. The third is institutional scale economies: when institutional reforms are deployed across numerous jurisdictions, their aggregate benefits can be enormous if correctly oriented. Moreover, the first two forms of scale economies are reinforced when centralized policy directives are paired with localized implementation and political competition for promotion.

Motivated by these observations, this article reviews three main areas of spatial economic change in China and the underlying institutional reforms that supported them. In Section 2, we review the scale, scope, and effects of reductions in spatial frictions that enabled freer flows of people and goods. Specifically, we examine the gradual reforms to the *hukou* system and the massive expansion of transportation infrastructure. Section 3 reviews land and

¹Data source: *World Bank’s World Development Indicators*, GDP per capita (Constant LCU).

²Data source: *United Nations Industrial Development Organization (UNIDO) Database*.

³Data source: *China Statistical Yearbook (2025)*. The Chinese government defines “urban areas” as residence or village committees—the smallest administrative units—whose administrative buildings are connected to the associated county government building via a continuous built-up area ([State Council, 2008](#)).

⁴Data source: *China State Railway Group’s annual report (2024)*, *Statistical Bulletin of the Transport Industry (2024)*, and *China Urban Construction Statistical Yearbook*.

housing market reforms, which significantly improved allocative efficiency relative to the prior planned economy. This section further explores the unique Chinese political economy: how land-based public finance and the local “promotion tournament” combined to accelerate infrastructure construction and the proliferation of place-based policies. In Section 4, we review China’s place-based policies in detail and discuss how they relate to agglomeration economies that are central to regional economic development.

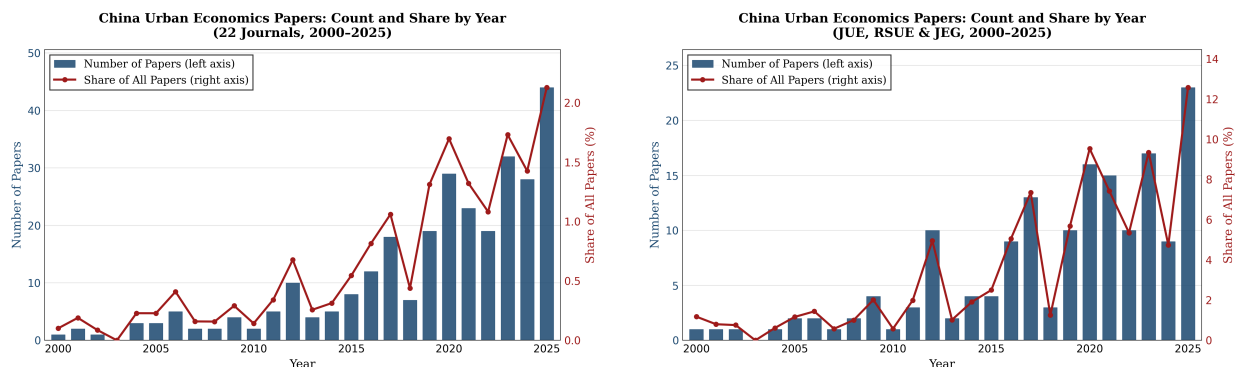


Figure 1: China-related papers on economic geography (2000-2025)

Notes: Bars show the number of papers (left axis); the line shows the share among all articles (right axis). The left panel covers all 22 economics journals; the right panel covers the three urban and regional journals.

China’s economic geography provides a remarkably rich field of study. This is not only because of the scale or speed of the country’s transformation, but also because the numerous policy reforms often serve as quasi-natural experiments. Unsurprisingly, this unique laboratory has generated a sizable academic literature. To document this growing body of research, we collected and classified all China-related papers regarding economic geography, urban and regional economics, and spatial economics published between 2000 and 2025 across 22 leading economics journals, spanning both general-interest outlets and top field journals.⁵ As Figure 1 shows, annual output has risen from merely one or two papers per year to over 40. In the three urban and regional journals (*Journal of Urban Economics*, *Regional Science and Urban Economics*, and the *Journal of Economic Geography*), China’s share of publications approached 13% by the end of 2025 (Figure 1, right panel). What was once a niche empirical context has clearly evolved into one of the most active areas of economic research.

Because these papers span a vast array of topics, a fully comprehensive review within

⁵The 22 journals are: *American Economic Review*, *Journal of Political Economy*, *Quarterly Journal of Economics*, *Econometrica*, *Review of Economic Studies*, *AER: Insights*, *AEJ: Applied Economics*, *AEJ: Economic Policy*, *AEJ: Macroeconomics*, *AEJ: Microeconomics*, *Review of Economics and Statistics*, *Economic Journal*, *Journal of the European Economic Association*, *International Economic Review*, *Quantitative Economics*, *Journal of Development Economics*, *Journal of International Economics*, *Journal of Labor Economics*, *Journal of Public Economics*, *Journal of Urban Economics*, *Regional Science and Urban Economics*, and the *Journal of Economic Geography*.

a single article is impractical. We therefore organize our discussion around the tripartite framework introduced above. The first category concerns spatial linkages and the reallocation of people and resources, and thus covers labor, migration, and transportation. The second concerns land, housing, land-based public finance, and the promotion tournament. The third concerns place-based policies and agglomeration more generally, as well as urban spatial structure. Figure 2 classifies the 288 papers we identified along these dimensions: 35.1% (101 papers) fall under labor, migration, and transportation; 33.3% (96 papers) under land, housing, and land-based public finance; 23.6% (68 papers) under place-based policies and agglomeration; and a residual 8.0% (23 papers) cover topics that do not fit cleanly into the first three categories. We next discuss the literature in each broad category in turn.

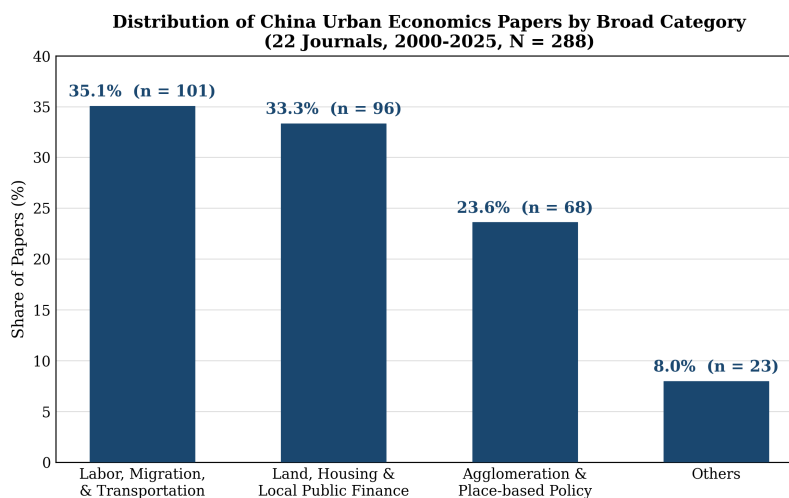


Figure 2: Distribution by broad category (2000-2025)

Notes: Each paper is assigned to exactly one category at our discretion based on its primary topic, JEL codes, title, and keywords.

2 Spatial Linkages

Over the past several decades, spatial linkages in China have undergone profound transformation, driven jointly by changes in underlying *institutional forces* and the rapid expansion of *physical linkages* embodied in transportation networks. In this section, we review the evolution of the spatial linkages and examine their impacts on China’s economic geography; we will turn to the political economy behind the infrastructure buildup in the next section.

The Institutional Forces: Hukou. The hukou system, perhaps the most infamous Chinese institution known to urban economists, is a fundamental driving force of the country’s economic geography. The system is best understood as “local citizenship”: it registers every

citizen at a location (usually the place of birth) and associates most civil rights, such as education, healthcare, employment, and property ownership, with that location. Living in a place without a local hukou is akin to being a foreigner, with many public services denied by default. Hukou’s roots predate the People’s Republic, as variants of household registration go back centuries; the modern system, however, became uniquely embedded in Chinese society when it was fused with the planned economy after 1949.

The system was a focal point of the market reforms launched in the 1980s, as economic development called for greater factor mobility. Reforms began with rural-to-township settlement and temporary migration channels (State Council, 1984; Ministry of Public Security, 1985), then loosened access in county-level cities and medium-sized prefectures (State Council, 2001, 2006, 2011). Against this backdrop, State Council (2014a) codified the tiered approach, cementing the removal of barriers to small and medium cities while preserving stringent controls in large cities. The resulting institutional landscape, with substantial spatial and temporal variation in entry barriers, poses a central challenge for empirical economists seeking to measure it.

The literature has converged on two strategies in measuring hukou restrictions. The first approach relies on policy documents to measure the *de jure* restrictions. Fan (2019) and Zhang and Lu (2019) are the early examples: they provide hand-coded panels of hukou-reform datasets across prefectures and years, measuring the restrictions imposed on hukou conversions. Tian (2024) extends the approach by applying NLP-based textual analysis. The second strategy infers the *de facto* frictions from observed migration flows. For example, Tombe and Zhu (2019) estimate between-province migration costs by inverting migration flows in a spatial equilibrium model, establishing a gravity-based method; Zi (2025) and Wu and You (2025) apply similar approaches at the prefecture level.

The two measures are positively correlated (Fan, 2019; Tombe and Zhu, 2019), and both indicate that the hukou system has substantially loosened over the years. For example, Tombe and Zhu (2019) estimate that the average between-province migration cost fell by nearly 40% between 2000 and 2005, while Tian (2024) shows a roughly tenfold increase in the rate of newly enacted pro-migrant policies over the same period. The two measures are also complements: *de jure* measures highlight policy detail but miss local implementation, while *de facto* measures fit observed flows better but are model-dependent and bundle hukou with other mobility costs such as rural pension (Gai et al., 2025), land security (Minale, 2018; Adamopoulos et al., 2024), and cash constraints (Howell, 2023). In this sense, the *de facto* measures are better interpreted as “migration costs” than “hukou barriers”.

The Physical Forces: Transportation Networks. While hukou governs the institutional cost of moving, transport infrastructure determines the physical costs. China’s massive road and rail buildup provides a rich empirical laboratory for studying its consequences. Early publicly available datasets on China’s transportation networks lacked coverage or granularity, motivating a productive academic measurement literature. For example, Egger et al. (2023) digitize road and railway atlases for 2000-2013, producing shortest-path travel times across prefectures, though the road quality is held uniform within each road class. Ma and Tang (2024) relax this assumption with an open-access pixel-level (~ 500 m) panel covering roads from 1994 and railroads from 1881 to 2024 with continued updating, measuring infrastructure quality via “design speed” that varies with rate, engineering-code revision, and terrain. Davis et al. (2025) contribute a county-level database (1993-2020) that records *access points* such as motorway exits and rail stations in addition to routes, a distinction that matters because 44% of counties have an HSR line passing through without a station.

These networks delivered dramatic gains in connectivity. The average prefecture-pair travel time fell by 14% for goods and 16% for people between 2000 and 2013 (Egger et al., 2023); over a longer 1994-2017 window and accounting for quality improvements, the median pairwise road travel time fell by 32%, with rail freight and passenger travel times down 37% and 59%, respectively, on the back of HSR expansion (Ma and Tang, 2024). At the access-point margin, the average distance from a Chinese zip code to the nearest motorway entrance fell from 302 km in 1993 to 15 km in 2020, and the analogous distance to a high-speed rail station fell from 1,254 km in 2003 to 59 km in 2020 (Davis et al., 2025).

The Impacts of Connectivity. Institutional reforms and expansions in transportation infrastructure have fundamentally reshaped the country’s economic geography and welfare.

Several broad consensuses have emerged on the impacts of spatial linkages via *internal migration*.⁶ The first is that the institutional reforms and the expansion of transportation networks increased internal migration along all margins: across provinces (Whalley and Zhang, 2007; Tombe and Zhu, 2019), across prefectures (Bosker et al., 2018; Ma and Tang, 2020), and across the rural-urban divide (Kinnan et al., 2018; Garriga et al., 2023). The second is that the increased mobility delivers sizable *aggregate* gains in labor productivity, output, and welfare (e.g., Au and Henderson, 2006; Hao et al., 2020; Hsu and Ma, 2021). The

⁶The measurement of internal migration hinges on its definition. The official “floating population” definition refers to individuals who have resided in a *prefecture* other than their place of hukou registration for more than six months. Defining “hometown” at the prefecture-level carries institutional weight: “local citizenship,” measured by access to public goods, is typically administered at this level. Cross-province migration is also widely used (e.g., Poncet, 2006; Tombe and Zhu, 2019). At the county level, caution is warranted: in metropolitan areas, cross-county movement often reflects within-city relocation rather than migration.

common mechanism is intuitive: better connectivity allows workers to reallocate to higher-productivity locations and sectors, and the resulting sorting improves aggregate outcomes.

The *distributional* impact of internal migration, on the other hand, is less clear. One disagreement in the structural literature concerns the local impact on the destination. Quantitative spatial models in the Eaton-Kortum tradition imply that inflows dilute per-worker output in destinations and thereby reduce welfare there (Tombe and Zhu, 2019; Hao et al., 2020). By contrast, a Krugman-Melitz framework with endogenous firm entry implies the opposite: inflows *raise* welfare in destination cities, as love-of-variety gains from new-firm entry dominate the negative channels (Ma and Tang, 2020). A related axis runs across skill groups: hukou-induced spatial frictions disproportionately benefit the skilled workers in the migrant-receiving coastal regions (Fan, 2019). Recent reduced-form evidence reconciles these strands by highlighting *within-destination* heterogeneity: skilled natives gain while incumbent migrants and low-skill natives in migrant-intensive sectors face wage compression (Combes et al., 2015; Imbert et al., 2022; An et al., 2024).

The impacts of transportation networks share a similar theme: better roads and railroads lead to aggregate gains, but often at the cost of greater spatial inequality (Banerjee et al., 2020; Faber, 2014; Baum-Snow et al., 2017; Qin, 2017; Lin, 2017; Baum-Snow et al., 2020). For example, Faber (2014) finds that peripheral counties incidentally connected by the National Trunk Highway System lost 18% of their GDP growth over 1997-2006, driven almost entirely by an industrial output decline. Qin (2017) finds that counties bypassed by the 2004 and 2007 HSR upgrades experienced a 3-5% decline in GDP and GDP per capita, mostly due to reduced passenger access. Baum-Snow et al. (2020) study the national highway network and find that “regional primate” prefectures gain in GDP, population, and wages while hinterland prefectures lose, even though average effects are small.⁷

The rapid expansion of Chinese transport infrastructure also created a rare opportunity to understand the broader impacts of connectivity. One strand of literature has examined the link between transport and the environment: highway expansion increases local emissions in connected counties (He et al., 2020), while high-speed rail upgrades have reduced greenhouse gas emissions through modal substitution (Lin et al., 2021). Transport infrastructure also facilitates knowledge spillovers and innovation. Koh et al. (2025b) show that within cities, subway expansion raises collaborative patenting. At the same time, longer commuting time

⁷The core challenge in the transportation literature is identification. The papers discussed above also represent three main identification strategies: hypothetical paths based on terrain and construction costs (Faber, 2014), inconsequential passages (Qin, 2017), or historical paths, (Baum-Snow et al., 2020). More recently, Borusyak and Hull (2023) shows that even when shock placement is random, predetermined geography drives non-random exposure; their recentering correction reduces the impact of HSR on employment elasticity to a level that is statistically insignificant.

reduces college teachers’ labor supply (Fu and Viard, 2019). Across cities, HSR facilitates high-skilled teamwork in academia (Dong et al., 2020), collaborative patenting (Hanley et al., 2022), and informal knowledge diffusion (Tian and Yu, 2023). Outside of cities, roads also reshape the rural economy. Chen et al. (2026) document that HSR raises agricultural total factor productivity through better access to technical training and agribusiness entry. Ma et al. (2026a) show that road expansion enables more productive farmers to expand their businesses, while less productive farmers migrate to cities. In addition, the literature also covers the financing of infrastructure (Zhang et al., 2025), the impact of transportation on firm-level efficiency (Wu et al., 2023; Li and Li, 2013), airport networks (Gibbons and Wu, 2020), fertility (Koh et al., 2026), healthcare (Li and Ma, 2022; Li et al., 2026), and corporate geography (Lin et al., 2023), among many others.

Looking Forward. Despite three decades of research, much less is known about what happens *after* people migrate. Hukou conversion remains rare, and most migrants eventually return home (Zhao, 1999; Minale, 2018; Ma et al., 2026b). These facts raise a question for both research and policy: will the largest internal migration of modern times result in permanent relocation, or will institutional barriers generate a comparably large return wave, locking hundreds of millions of people and their offspring into a recurring life-cycle of temporary migration? How such outcomes shape migrants’ decisions over education, fertility, and labor supply is the question the next decade of research must engage with.

The research frontier on transportation networks could expand in several directions. Existing measurement efforts focus on arterial infrastructure, while the lower-tier roads on which many less developed regions depend remain poorly documented. Even where infrastructure is well measured, usage patterns are not: which segments are over- or under-utilized, and how should the answers inform future network design? Future research along these dimensions will not only deepen our understanding of transportation networks in China but also speak to the broader literature on economic geography.

3 Land Reforms and Promotion Tournament

Under the communist regime, all urban land is state-owned, whereas all rural land is collectively owned at the village level. This dual ownership structure is why the rural-urban divide has been a defining feature of the regime—it is rooted not only in the hukou system, but also in land ownership. Following the opening-up in 1978, the mechanisms of land and housing allocation gradually transitioned from a planned economy to a more market-oriented system. In the following, we discuss the reforms that have taken place, how they interact with other

evolving institutions to shape the spatial economy, and their welfare implications.

Urban Land Reform and Housing Reform. The first major reform was the 1988 constitutional amendment that separated land-use rights from land ownership, marking an important first step toward a leasehold system. However, because land-use rights were mostly transferred through opaque “negotiated conveyances” (xieyi churang) prior to 2002, a functional leasehold system was not truly established until the 2002-2004 period. During this time, the Ministry of Land and Resources mandated that government land sales be conducted publicly through sealed bidding (zhaobiao), English auctions (paimai), or a two-stage auction known as listing (guapai), with a strict implementation deadline of August 2004 ([Ministry of Land and Resources, 2002](#); [Ministry of Land and Resources and Ministry of Supervision, 2004](#)). Notably, this 2002-2004 reform was limited to residential and commercial land. A subsequent reform in 2006-2007 required all industrial land sales to undergo the same public process ([Ministry of Land and Resources, 2007](#)). [Tian et al. \(2024\)](#) find that this 2007 reform directed industrial land toward firms that best complemented existing local industrial clusters and thereby raised local firm productivity.

In 1998, a major housing reform shifted housing allocation from the danwei system (the network of government-controlled “units”, such as state-owned enterprises, government branches, schools, and hospitals) to a market-based system ([State Council, 1998](#)). Specifically, housing ownership was first transferred from danwei to individuals, who were then permitted to buy and sell properties freely on the open market. This housing reform served as a critical complement to urban land reform; together, they enabled the real estate sector to operate under a price mechanism in which both the output (housing) and the key input (land) were market-priced. As [Wang \(2011\)](#) shows, this housing reform significantly improved allocative efficiency.

Land-based Finance and Promotion Tournament. The significance of the land and housing reforms extends beyond the transition from a planned economy to market-based allocation, as they laid the foundation for China’s land-based finance, political competition, infrastructure expansion, and place-based policies. Land sales revenue emerged as a major source of income for prefectural governments for four reasons. First, prefectural governments were de facto monopolies over land following the 1988 reform;⁸ second, the 1998 housing reform allowed the housing market to function efficiently, thereby generating substantial

⁸More precisely, local governments hold a monopoly over unsold leaseholds, the scope of which expanded substantially as metropolitan areas grew.

demand for land; third, the 2002-2004 reforms limited the scope of corruption;⁹ fourth, other sources of revenue are structurally constrained.¹⁰

Within the political hierarchy of the Communist Party, the key performance indicator in the “promotion tournament” is the GDP growth rate (Li and Zhou, 2005). To stimulate local economic growth, local leaders utilize land sales revenues to finance productive infrastructure, including industrial parks, roads, and metro systems. Simultaneously, because local governments control land uses, they intentionally oversupply industrial land while restricting residential land. This strategy generates the phenomenon of “high-price urbanization, low-price industrialization”—a massive price wedge between residential and industrial land that would not exist in a laissez-faire market (Henderson et al., 2022; Hsu et al., 2026; Lu et al., 2026). Because demand for residential land is relatively inelastic, restricting its supply maximizes overall land sales revenue, while aggressively subsidizing industrial land attracts manufacturing firms.

Henderson et al. (2022) develop a political economy model where local leaders maximize an objective function that weights both local GDP and consumer welfare. They use this model to rationalize the observed premium of residential over industrial land. Their estimates suggest that if local leaders prioritized consumer welfare entirely, residential land supply would increase, raising overall consumer welfare by 13.7%. Lu et al. (2026) evaluate this same phenomenon using a quantitative spatial model with input-output linkages. They conclude that the observed residential premiums are best explained by local governments acting non-cooperatively to maximize manufacturing output rather than real income. However, they also note that even if local governments were strictly benevolent and maximized real income, they would still implement pro-manufacturing land policies due to the positive externalities generated through input-output linkages. In addition to China, Hsu et al. (2026) also estimate the residential land premiums in the U.S. and Taiwan for comparison. Their results show that while the average residential premium in mainland China is approximately 4.5 (aligning with Lu et al., 2026), the same statistic is only 1.2 in the U.S. and 1.5 in Taiwan. In contrast to Lu et al. (2026), Hsu et al. (2026) find that land allocation under a laissez-faire market is close to the first-best outcome, despite the presence of spatial externalities like productivity spillovers and idiosyncratic locational preferences (Donald et al., 2025). Ultimately, the status quo entails significant land-use distortions that cause

⁹Although the primary objective of the 2002–2004 land reform was to curb rent-seeking, corruption was not entirely wiped out; Cai et al. (2013) show that local officials manipulated the two-stage auction system (the *guapai* or listing method) to collude with favored developers.

¹⁰The 1994 tax reform shifted a significant share of tax revenues from local governments to the central government. Facing structural revenue shortfalls and legally prohibited from running deficits prior to the 2014 Budget Law amendment, local governments became heavily reliant on land sales revenue.

an aggregate welfare loss of 4.8%.

When the 2008 global financial crisis hit, the central government launched a massive 4 trillion RMB stimulus package: the central government committed 1.18 trillion RMB in new investment, with the remaining funds to be raised by the local governments ([National Development and Reform Commission, 2009](#)). Without relaxing the direct borrowing prohibitions stipulated by the Budget Law, the central government allowed and even encouraged local governments to set up Local Government Financing Vehicles (LGFVs) ([People's Bank of China and China Banking Regulatory Commission, 2009](#)), which can borrow from commercial banks and shadow banking networks, using land as their primary collateral ([Bai et al., 2016](#)). These LGFVs essentially amplified the effects of the land-monopoly-promotion-tournament system and likely led to overexpansion of the transportation infrastructure ([Alder et al., 2023](#)). Moreover, this spending spree fueled a massive housing bubble that eventually deflated around 2018, creating a structural drag that threatens to impede economic growth over the long term ([Rogoff and Yang, 2026](#)).

Rural Land Reform. On the rural side, the first major shift was the implementation of the Household Responsibility System in the early 1980s, which granted rural households use rights and residual income rights over agricultural land. However, because farmland was not privatized and ownership remained vested in the village collective, the rural land system remained inherently rigid and heavily distorted, acting as a severe friction against rural-urban migration. Without formal property rights, land allocation by village leaders frequently prioritized egalitarian distribution over individual agricultural ability ([Adamopoulos et al., 2022](#)) or was driven by local favoritism and rent-seeking ([Deininger and Jin, 2009](#)).

To dismantle these institutional barriers, the Chinese government implemented a series of rural property rights reforms. The cornerstone was the 2003 Rural Land Contract Law (RLCL), which formalized the transfer of land-use rights and legally protected farmers' ability to lease their plots without forfeiting their contractual rights to the collective. In 2013, subsequent reforms explicitly allowed farmers to transfer their land-use rights to larger, commercial agribusinesses ([Central Committee of the Communist Party of China, 2013](#)), and in 2014, the right to mortgage land-use rights was extended to rural households ([State Council, 2014b](#)). The formal physical issuance of these legally recognized land certificates was largely completed by 2021 ([Adamopoulos et al., 2024](#)).

Evaluating the impact of the 2003 RLCL, [Chari et al. \(2021\)](#) find that the formalization of leasing rights facilitated the redistribution of land toward more productive farmers, ultimately increasing agricultural output by 8% and aggregate productivity by 10%. To quantify the extent of the initial distortions, [Adamopoulos et al. \(2022\)](#) use a structural

model to assess the pre-reform period (1993–2002). They demonstrate that the pre-reform system severely constrained high-ability farmers through resource misallocation and negative selection—effectively pushing top talent out of agriculture. They calculate that eliminating these within-village frictions would drive an almost three-fold increase in agricultural labor productivity and a 1.7-fold increase in aggregate agricultural TFP. Building on this, [Adamopoulos et al. \(2024\)](#) find that land insecurity is a major barrier for rural households’ labor mobility. They also find that land insecurity has substantial negative effects on agricultural productivity and structural change, raising the share of rural households operating farms by over 40 percentage points and depressing agricultural productivity by more than 20%.¹¹

Looking Forward. Ultimately, compared to the pre-1978 regime, the housing and land reforms discussed above introduced property rights and price mechanisms, thereby improving allocative efficiency and promoting economic growth. However, the monopoly power held by prefectural governments over urban land, coupled with the incentives of land-based finance and the political promotion tournament, has cultivated inefficient spatial policies. These policies systematically sacrifice consumer welfare in favor of firm output and GDP figures. Furthermore, the proliferation of LGFVs has supercharged this system, leading to a highly leveraged and likely over-expanded infrastructure stock.

Conceptually, the Chinese system—where a state land monopoly harnesses aggregate housing demand to finance public infrastructure—echoes the core intuition of the Henry George Theorem, which posits that at an optimal city size, land rents alone are sufficient to fund local public goods ([Arnott and Stiglitz, 1979](#)). Similar approximations of Georgist ideals exist globally, ranging from transit-oriented development in Japan and Hong Kong to the state leasehold system in Singapore. While the politically driven “promotion tournament” uniquely distorts the Chinese application, analyzing this spatial economy through a formal public finance lens is an important direction for future research.

4 Place-based Policy as Agglomeration Device

As migration restrictions, transport costs, and land-market frictions have fallen, economic activity in China has become increasingly concentrated since the reform era ([Lu and Tao, 2009](#)). Alongside these channels, an additional institutional force has shaped *where and*

¹¹On the margin between rural and urban land, [Yu \(forthcoming\)](#) evaluates the Farmland Red Line Policy, a national mandate designed to prevent urban sprawl by preserving arable land. She finds causal evidence of the policy’s negative impact on local development and, utilizing a quantitative spatial model, estimates that this rigid land-use regulation costs workers approximately 7% in overall welfare.

to *what extent* the resulting concentration occurred: a sequence of place-based policies, including special economic zones (SEZs) in the early 1980s and the subsequent proliferation of development zones across the country driven in part by the promotion tournament and the pro-manufacturing land use policies discussed in Section 3. The combined force of all these channels is most visible in Shenzhen, once a small fishing town just across the border from Hong Kong. It grew from roughly 30,000 residents in 1979 to a metropolis of more than 17 million today, with a GDP that exceeds Hong Kong’s. More broadly, the Yangtze and Pearl River Deltas together account for roughly a third of China’s national GDP on under 5 percent of the country’s land area.¹²

Place-based Policy as a Widespread, Bundled Institution. Although place-based policies in China take various forms, our discussion focuses on SEZs, which constitute the dominant and best-documented instrument of this kind. The original SEZ designations of 1980 covered Shenzhen, Zhuhai, Shantou, and Xiamen, joined by Hainan in 1988. The subsequent expansion encompassed a hierarchy of national-level zones—Economic and Technological Development Zones, High-Tech Industrial Development Zones, Special Customs Supervision Zones, Border/Cross-border Economic Cooperation Zones, and Other Special Development Zones—alongside sub-national-level industrial parks with differing autonomy and incentive packages. As of 2018, China operated roughly 550 national-level development zones across all categories and nearly 2,000 at the provincial level ([National Development and Reform Commission, 2018](#)). Throughout, we use SEZs or development zones broadly to refer to this entire family of designations ([Wang, 2013](#); [Lu et al., 2019](#); [Lu et al., 2023](#)).

Behind the visible expansion of development zones lies the land-monopoly-promotion-tournament system: how the system operates is closely linked to these place-based policies. In particular, the place-based policies bundle two distinct attractions for firms. The first is a coordinated package of economic incentives that lowers the cost of doing business at chosen locations: reduced corporate income tax rates, customs duty exemptions, subsidized or free industrial land, dedicated infrastructure provision, and preferential access to bank credit ([Wang, 2013](#); [Lu et al., 2019](#); [Alder et al., 2016](#)). The second, less visible attraction is political favor: by locating inside a designated zone, a firm aligns with the host government’s flagship project and acquires a closer working relationship with local officials, preferential treatment in government procurement, faster regulatory approvals, protection from arbitrary inspections, and a credible signal of state support ([Xu, 2011](#); [Bai et al., 2020](#); [Kahn et al., 2021](#)). This implicit support is credible because officials’ careers depend on the success of firms inside their zones, turning what is formally a tax-and-subsidy program into a political-

¹²Data source: China Statistical Yearbook (2024).

economic exchange.

The Empirical Impact of Place-based Policy. A growing body of evidence quantifies how development zone designation has shaped local economies. [Wang \(2013\)](#), in a panel of 321 Chinese prefectures over 1978–2008, finds that establishing a national-level special economic zone raises per-capita FDI by roughly 22 percent, accelerates TFP growth by 1.6 percentage points, and raises workers’ real wages by roughly 3 percent relative to untreated prefectures, without crowding out investment by domestic (i.e., non-foreign) firms. [Lu et al. \(2019\)](#), studying provincial-level SEZs established between 2005 and 2008, find that designation raises within-zone capital investment by 58 percent, employment by 35 percent, and output by 49 percent within two years. The gains come from firm entry rather than incumbent expansion, with limited spillover to surrounding areas. [Zheng et al. \(2017\)](#) examine 110 national- and provincial-level development zones built in eight major Chinese prefectures between 1998 and 2007, finding that roughly 70 percent generate positive TFP spillovers to nearby firms while stimulating housing construction, home prices, and retail openings—creating suburban “edge cities.” Exploiting more than 1,600 national- and provincial-level SEZs designated across China between 1980 and 2009, [Lu et al. \(2023\)](#) document that SEZs raise local high-school enrollment by 11.3 percent.

Four patterns of heterogeneity stand out. By the timing of zone designation, [Wang \(2013\)](#) finds that early development zones create new economic activity while later zones increasingly divert FDI from neighboring prefectures, suggesting that the marginal returns to place-based investment have fallen as designations have proliferated. [Chen et al. \(2025\)](#) show that this first-mover advantage persists for the 35 zones designated before 1992, with long-term gains largely concentrated in the original four SEZs. By site selection, [Kahn et al. \(2021\)](#), in a panel of 1,417 development zones across 276 prefectures over 1987–2008, document that zones placed in politically connected prefectures—those whose top prefectural official (party secretary or mayor) shares a workplace, birthplace, university, or factional tie with a key provincial leader—underperform otherwise comparable zones by 5.2 percent on GDP per capita and 4.8 percent on TFP for their host prefectures. The authors interpret this gap as capital misallocation: provincial leaders place zones in connected prefectures even when those prefectures have weaker economic fundamentals. By the strength of Marshallian synergies with the local economy, [Zheng et al. \(2017\)](#) report that nearly a third of development zones in their eight-prefecture sample generate negative or insignificant TFP spillovers, with under-performing zones characterized by limited input-output linkages, labor-market pooling, and knowledge spillover with the host economy. By zone type, [Lu et al. \(2023\)](#) document that technology-oriented zones increase local educational attainment while export-led

zones reduce it, reflecting differences in the skill composition of jobs each type creates.

Looking Forward. SEZs have been a central policy tool of the Chinese government, and the economic rationale for such policies hinges on agglomeration economies: concentrations of economic activity generate productivity gains and human capital accumulation (Rosenthal and Strange, 2004; Combes and Gobillon, 2015). Because agglomeration economies are positive externalities, decentralized location choices by firms do not achieve the optimal degree of agglomeration. Moreover, there is also a coordination problem over where to locate, even when firms would like to cluster. Place-based policies can, in principle, address both issues and, therefore, are desirable instruments from a welfare perspective.

However, as the empirical evidence suggests, initially socially beneficial place-based policies may have become excessive, as they may be too numerous, too peripheral, and/or too large on average. It is thus a meaningful direction for research to quantitatively evaluate the rates of return for these SEZs or development zones in a way similar to what Alder et al. (2023) do for transport infrastructure. The framework best suited for this purpose remains to be explored, but it should account for the political economy behind this proliferation, including the land-monopoly-promotion-tournament system and others. For example, it is well known that place-based policies in other countries are pursued not only to correct agglomeration externalities and coordination problems, but also to achieve “regional balance” by reducing regional inequality through the use of these policies as catalysts for firm production and employment. In our view, a full evaluation of place-based policies should incorporate all of these considerations.

Finally, we suggest several additional directions for research on place-based policies and agglomeration. First, existing studies typically treat zone designation as binary, but the *intensity* of the policy bundle varies widely in terms of tax reductions, infrastructure provision, governance quality, and political proximity to the host government; disentangling which features of the bundled institution drive which effects remains an underdeveloped frontier. Second, what are optimal city sizes, and how could place-based policies help achieve them? The pioneering work by Au and Henderson (2006) focuses on the role of the hukou system in a model in which city sizes are linked to service-to-manufacturing ratios, but it does not study the role of place-based policies. Third, most existing studies on place-based policies and agglomeration focus on manufacturing sectors, while the role of service industries is largely ignored, and the evidence on consumption-side externalities is thin. As China progresses in its structural transformation toward services and domestic consumption and as metropolitan cities mainly function as hubs of service industries, this neglect is unjustifiable.¹³ To

¹³As Au and Henderson (2006) suggest, the question of optimal city size is closely linked to the role of

achieve an accurate evaluation for this purpose, sensible elasticity estimates for multifaceted agglomeration economies are essential. However, this is still an under-researched area.¹⁴ Fourth, the social impact of place-based policies remains underexplored. [Koh et al. \(2025a\)](#) document that SEZs in China disproportionately attracted more young women than men, pointing to one such frontier: zone-driven industrialization may differentially affect men and women through occupational, marriage-market, and fertility channels.

5 Concluding Remarks

In this article, we have reviewed three main areas of change in China’s economic geography and provided a detailed account of the underlying institutional reforms that drove these changes. As we highlighted in the introduction, what distinguishes China’s development experience is the scale and speed of change. This underscores how inefficient a planned economy can be, evidenced by China’s low starting point; how important property rights and markets can be in improving resource allocation; and how political-economy mechanisms can help bring about these changes through various reforms.

This, however, is not to say that the reforms are complete. In fact, they are far from it. The political economy underlying these reforms and changes can be misaligned with the public interest, as reflected in the over-expansion of public infrastructure and place-based policies, debt problems created by LGFVs, and distorted land-use policies. There are certainly more issues than those we have discussed in this article. For example, how to address widening regional inequality, how cities will respond to demographic slowdown, how the economy can recover from debt problems and housing market deflation, and how cities will be affected by decarbonization. Each of these questions opens a distinct research agenda, and progress on any one of them will likely reshape how we think about the others. The Chinese experience, with its scale, speed, and institutional particularity, will continue to inform how economists think about cities, migration, and regional development well beyond the country itself.

service industries, so a combined study would be desirable.

¹⁴Existing estimates for China are often indirect and concentrated almost entirely in manufacturing industries ([Li and Lu, 2009](#); [Li et al., 2012](#); [Liu, 2014](#); [Li et al., 2022](#)). Two studies centered directly on wages are [Hering and Poncet \(2010\)](#), who estimates wage-density elasticities using a market-access framework, and [Combes et al. \(2020\)](#), who documents heterogeneous urban wage gains by worker type.

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