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# Historical Legacies and Urbanization: Evidence from Chinese Concessions

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#### Abstract

Can colonialism affect today's urban outcomes? This paper examines the long-run impact of Concessions - foreign-run enclaves established in the late nineteenth century inside Chinese cities by European settlers for residence and investment purposes. They soon became the new economic hubs of their hosting cities. By using a unique dataset of geo-referenced apartment transactions and by employing a spatial regression discontinuity approach to identify the causality, we find that apartments located inside historical Concession areas command a price premium of 17% compared to similar homes just outside of the Concession boundaries. We show that the long-run economic effect of Concessions may be explained by better access to urban facilities in these areas.

Keywords: Colonialism, Housing price, Urbanization, Persistence, China

JEL Codes: N95, O18, O43, P48, R5

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... Whenever we pass from the Concessions into Chinese territory we feel that we are crossing into a different world -the former is upper and the latter is the under-world, for nothing in the Chinese territory -roads, buildings, or public health -can be compared with the Concessions...

— Sun Chuanfang, in 1926 (H. G. W. Woodhead, China Year Book 1926-27, p. 1012)

# 1 Introduction

What drives long-term urban growth? A large body of literature suggests that cities that emerged in locations with favorable geographic conditions grow faster (Bosker and Buringh, 2017; Davis and Weinstein, 2002; Bakker et al., 2020; Miguel and Roland, 2011). However, characteristics shaped over time by human activity and the built environment - a city's second nature - may also play a crucial role. Recent research finds that a temporary exogenous shock in history can permanently alter the spatial distribution of local economic activities and hence the path of urbanization, suggesting that urban development is not solely determined by locational fundamentals (Bleakley and Lin, 2012; Kline and Moretti, 2014; Redding et al., 2011). This paper identifies such an urbanization process by examining the long-run effect of Concessions - foreign enclaves established in Chinese cities during the late nineteenth and early twentieth century.

Following the First Opium War (c.a. 1840-1842) and the signing of the Nanking Treaty, China was forced to establish treaty ports where foreigners were permitted to trade and reside. This led to the creation of foreign settlement areas within Chinese cities, commonly referred to as "Concessions". Despite their disadvantageous locations - which were usually uninhabited and away from the Chinese population, Concessions underwent rapid modernization within a few decades and surpassed their Chinese neighboring areas in population and economic prosperity. Perhaps the most remarkable example is the Concessions in Shanghai, which became an iconic metropolis in Asia at the time. From this vantage point, our analysis examines whether the establishment of Concessions in history has had a long-lasting impact on urban outcomes until the present day.

We draw on a unique data set of over 20,000 geo-referenced apartment transactions recorded between 2012 and 2020 in five Chinese cities where Concessions were established. To accurately delineate the boundaries of Concession areas, we rely on historical city maps and contemporary studies on Concessions. By using fine-grained spatial data, and by examining only cities where Concessions were established, our within-city approach can

adequately address the selection bias issues that are commonly seen in similar studies using country- or region-level observations. In addition, we demonstrate through a range of historical data that the establishment of Concessions inside treaty ports was not associated with better geographic and socioeconomic conditions. This finding is consistent with a large body of qualitative evidence that describes the establishment of Concessions, which often took place in the remote and unfavorable parts of the city (CMC) [1904] [Fei] [1991] [Nield] [2015].

We employ a geographic regression discontinuity design (RDD) to precisely measure the effect of Concessions on housing prices at the boundary of Concession areas. To reliably control for unobserved heterogeneities associated with the style and design of apartments, we also adopt a matching strategy to compare apartments on both sides of Concessions borders sold by the same developer firm. Our analysis finds a genuine Concession price premium of 17%, which is robust to the inclusion of a large set of apartment and community-level controls and a variety of sensitivity analyses, such as using alternative RDD specifications and different bandwidths.

We then identify channels through which Concession areas command a price premium on the housing market today. By matching the apartment data set with an extensive collection of geo-referenced urban facilities and firms, we find that Concession areas attract today's home buyers by their better provision of urban facilities rather than exhibiting a strong agglomeration of businesses: apartments in historical Concession areas are on average closer to key primary schools, hospitals, shopping centers, and, to a lesser extent, churches; these facilities further account for 5% to 18% of Concession's price premium. In contrast, we do not find a significant difference in firm distribution on both sides of Concession boundaries. Supported by ample historical evidence, we claim that the persistence of urban facilities in Concession areas is important to explain why these areas are continuously attractive to home buyers. In addition, we show that the residences of historical figures are more densely distributed in Concession areas than in other places. These renowned and wealthier individuals were more likely to reside in Concessions for their better services and amenities.

Our paper contributes to a large body of literature on the long-term economic effect

<sup>&</sup>lt;sup>1</sup>For example, Jia (2014) shows that treaty ports were usually established along the Yangtze River and the Coast. Iyer (2010) finds that the British annexed Indian areas with better agricultural potential. Nunn (2008) reveals that the historical population density of an African country is positively associated with its selection into slave trade in the colonial period.

of historical institutions with a specific focus on the colonial system (Acemoglu et al., 2001; La Porta et al., 1997; Engerman and Sokoloff, 1997). In particular, colonial history can not only explain cross-country variation in wealth (Acemoglu et al., 2002; Easterly and Levine, 2016; Feyrer and Sacerdote, 2009; Jones, 2013) but also regional development within countries (Banerjee and Iyer, 2005; Dell, 2010; Nunn, 2008; Alvarez-Villa and Guardado, 2020, among others).

Recently, a small but growing body of literature has advanced this field by examining the colonial legacy inside cities. For example, Baruah et al. (2017) show that Francophone and Anglophone cities in Subsaharan African countries have vastly different levels of compactness. Baldomero-Quintana et al. (2023) study Mexican cities and find that colonial segregation policy had a long-lasting impact on the spatial distribution of urban population. In this light, our paper is the first to reveal a colonial urban legacy in the housing market. Furthermore, we add to the analysis of the emergence and persistence of a spatial equilibrium stemming from colonialism. For example, Jedwab et al. (2017) show that Kenyan cities connected by colonial railways are better developed today due to sunk colonial investment and the coordination of spatial investment across cities. In a similar vein, our analysis focuses on a finer-level data set and shows that access to urban facilities plays a crucial role in the spatial structure of economy within cities.

On a broader scale, our paper contributes to the current debate over the fundamental drivers of city growth. Evidence on the rapid recovery of urban growth after wars and conflicts suggests that locational fundamentals play a key role in determining the spatial pattern of economic prosperity, and thus the long-run city size is robust to large temporary shocks (Cuberes and González-Val, 2017; Davis and Weinstein, 2002; Glaeser and Shapiro, 2002; Miguel and Roland, 2011). This line of thought is further supported by studies that highlight the predominant role of geography in urbanization (Bosker and Buringh, 2017; Fernihough and O'Rourke, 2021; Bakker et al., 2020; Michaels and Rauch, 2018). In parallel, a growing body of studies has identified the history dependence of city size (Bakker et al., 2020; Bleakley and Lin, 2012; Hanlon, 2017; Jedwab et al., 2017) and industrial development (Kline and Moretti, 2014; Redding et al., 2011). This strand of literature emphasizes the role of facilities and agglomeration in determining urban development, which is precisely what our paper demonstrates as well. We show that Concessions permanently

<sup>&</sup>lt;sup>2</sup>Lin and Rauch (2022) and Hanlon and Heblich (2022) provide the most recent overviews on this topic.

<sup>3</sup>Further studies show that diseases (Jedwab et al., 2019) and natural disasters (Xu and Wang 2019) have very limited long-run effect on urban size.

changed the spatial pattern of residence inside treaty port cities. This new equilibrium is highly stable despite the vast institutional change after the foundation of the People's Republic of China (PRC) in 1949. These findings shed additional light on the role of historical shocks and path dependency in shaping urban development and economic growth.

Finally, our study speaks to the literature on the economic impact of treaty ports and the Western presence in historical China (Jia) 2014; Bai and Kung, 2015; Keller et al., 2017; Long et al., 2019; Jin, 2023; Jin and Schulze, 2024). Specifically, Jia (2014) shows that regions where treaty ports were opened grew faster not only historically (during 1840-1949) but also after 1978. Jin (2023) further shows that the trade institution in treaty ports generated a long-run economic effect through transmitting a cultural norm of lawfulness and honesty. This paper explores the long-run economic effects of institutions governing urban development in treaty port cities, hence enriching our understanding of the treaty port system as well as the deep historical roots of China's rapid economic growth since the reform and opening-up in the 1980s (Brandt et al., 2014; Keller et al., 2011) Chen et al., 2022).

The remainder of the paper is organized as follows: section 2 introduces the historical background. Section 3 describes the data. Section 4 discusses the identification strategy. Section 5 explains the empirical setup and provides baseline results. Section 6 reports robustness checks and extensions. Section 7 presents the mechanism. The last section concludes.

# 2 Historical Background

#### 2.1 From Settlements to Concessions

From 1757 to 1840, the Qing government of China maintained a strict "Sea Ban" policy that prohibited foreigners from residing in any Chinese cities except for Guangzhou (Morsel 1910). However, after China's defeat in the First Opium War (1839-1842), the country was forced to open treaty ports for foreign trade and settlements. Among the first five treaty ports were Guangzhou, Xiamen, Fuzhou, Ningbo, and Shanghai, with Shanghai becoming the first city where foreigners settled in large numbers.

In 1842, a strip of land of 900 meters long along the riverfront north of Shanghai city was designated as a settlement area for the British. In 1845, a set of land regulations was issued by the Chinese government and the British consul, who formalized the procedures

of land leases in the settlement. In particular, only the British and other foreign nationals could rent land in the settlement area, which was processed through the British consul, while existing Chinese landowners in the area were prohibited from renting land to other Chinese. Through these regulations, the foreign population was effectively segregated from the Chinese population in Shanghai. In 1846, France obtained a settlement area in the north of the city as well.

During the Taiping rebellion (1851-1864), Shanghai was once occupied by the rebel group Xiao Dao Hui, resulting in the collapse of local governance and the inflow of about 300,000 Chinese refugees. To address the new situation, foreign consuls in Shanghai drafted a new land regulation, under which the municipal council was elected to raise revenue and provide services in the settlements. Meanwhile, the Chinese were allowed to buy or rent land in foreign settlement areas for the first time. Since then, the settlements were formally called "Concessions," with the British Concession in Shanghai more commonly known as the International Settlement.

The Concessions in Shanghai soon became an ideal template for foreign powers to establish settlements in other Chinese treaty ports. In the 1860s, Great Britain and France established Concessions in Tianjin, Hankow (today's Wuhan), and Guangzhou. In the 1890s, Germany and Russia joined the colonial force and established Concessions in the above cities as well. With the signing of the Treaty of Shimonoseki in 1895, Japan established Concessions in these two cities in addition to Hangzhou and Suzhou. Finally, China's defeat in 1900 by the Eight-Nation Alliance resulted in Italy, Belgium, and Austria-Hungary establishing their Concessions in Tianjin.

In total, there were 25 Concessions established in 10 treaty port cities from 1842 to 1902. The list of colonial powers in China and their corresponding Concessions is presented in Table 1.

# [Table 1 about here.]

<sup>&</sup>lt;sup>4</sup>The segregation was preferred by both Chinese and British authorities. While the Chinese government aimed to prevent foreigners from disturbing the Chinese population (Fei, 1991), the British nationals would also prefer to maintain their British lifestyle (Bickers, 1999).

<sup>&</sup>lt;sup>5</sup>The alliance included: Germany, Japan, Russia, Britain, France, the United States, Italy, and Austria-Hungary.

 $<sup>^6</sup>$ This figure includes American Concessions in Shanghai and Tianjin, which were later annexed by British Concessions

# 2.2 Institutions in Concessions

The institutional setup of Concessions in China was largely influenced by the new land regulation drafted by the British in Shanghai in the 1860s. This regulation gave rise to three major features that characterized the Concessions. First and foremost, the Concessions were designed to facilitate public service provision. municipal councils were established to govern the Concessions, and most Councilors were elected non-Chinese residents in Concessions. The right to vote in Concessions was linked to property ownership and the amount of taxes paid. Consequently, members of the municipal councils were often well-respected businessmen and influential leaders of major firms, who were usually highly motivated to promote the local economy and the business environment (Ma, 2008). In contrast, the Chinese local governors were mainly motivated by political promotion, which was based on their ability to collect taxes and maintain public order (Qu, 1969). The complicated and corrupt procedure of obtaining permission for public works also hindered them from taking swift actions and providing public goods (Qu, 1969).

Second, property rights were more secure in Concessions compared to those in Chinese districts. Property and land transactions and ownership in Concessions were secured by laws that prevented any form of appropriation (Fei, 1991; Hudson, 1927; Shang and Liu, 1996). Moreover, the land plots for transactions were precisely measured and clearly labeled on maps by professionals. This system, which was not available in Chinese districts, allowed for transparent and reliable land transactions that provided both buyers and sellers with legal protection. It also became a significant attraction for native Chinese populations: in Shanghai, for example, the native Chinese population flocked to the Concessions "...due to the greater security of person and property" (CMC, 1904). The secured property rights further fostered a thriving land and real estate market in Concessions (Zhao, 1994). In contrast, private lands in Chinese districts were often subject to appropriation by local elites (Ma, 2002). The lack of accurate land measurements and records of ownership also gave rise to unofficial land markets that were prone to disputes and uncertainty.

Third, Concessions had their unique judicial system. Most Concessions established consular courts where foreign consuls handled disputes involving their fellow citizens with

<sup>&</sup>lt;sup>7</sup>Chinese were largely excluded from the politics in Concessions. The first Chinese councilor was elected in 1878 in Tianjin. In Shanghai, Chinese councilors only appeared in the 1930s (Fei, 1991).

<sup>&</sup>lt;sup>8</sup>Only a few wealthier foreign residents had the right to vote. According to Fei (1991), out of 36,471 foreign residents in Shanghai's International Settlement in 1930, only less than 8% of them had the right to vote. In Tianjin's Russian Concession, residents who owned larger assets could cast multiple votes.

proper rules for trials, defense, and judicial judgments. In Shanghai, Hankow, and Xiamen, the increasing inflow of Chinese residents induced the establishment of Mixed Courts (*Huishen Gongxie*), which allowed foreign judges and Chinese officials to jointly handle cases involving both Chinese and foreign plaintiffs and defendants (Hudson, 1927; Stephens, 2017). In contrast, the judicial system in historical Chinese areas granted the plaintiff no chance to defend him or herself, and the trial was usually characterized by coercion and torture (Fei, 1991).

# 2.3 Development in Concessions

Before the establishment of the first British settlement in Shanghai, the British consul and Chinese officials had mutually agreed that foreign settlements should be placed separately and away from the Chinese population. Thus, all Concessions were initially established in sparsely populated areas, some of which were initially uninhabitable. For instance, the British and French Concessions in Tianjin were established in places being described as "foul and noxious swamps, around them, on the dryer grounds, were the numerous graves of many generations of people" (Rasmussen, 1925, p37). The British Concession in Shanghai was sparsely populated and "filled with cotton trees, mulberry bushes and graves" (Nield, 2015, p97). The British army on Gulangyu Island - in which the Xiamen International Settlement was established - reported hundreds of deaths caused by plague during the First Opium War (Fei, 1991).

Foreign consuls and municipal councils implemented various measures to promote the basic living conditions in Concessions. For instance, the British spent two years building an artificial island for the Concession on Zhujiang River in Guangzhou and almost a decade to level the terrain in Tianjin Concession (Fei] [1991]. The difference between Concessions and Chinese quarters is more remarkably reflected by the investment in infrastructure and facilities (Fei] [1991]; Nield, [2015]; Shang and Liu [1996]). Gas, electricity, and tap water were installed either by municipal councils or private firms. Sanitation, such as toilet and sewer systems, was also greatly improved, providing residents with a clean and healthy living environment. These efforts soon led to significant economic prosperity in Concessions. As one account from Hankow attested, "one saw nothing but paddy fields and squalid Chinese huts a few years ago, there (Russian, French, and German Concessions) are now well-laid roads and imposing Foreign buildings" (CMC) [1904] p293). Also in Tianjin, the Concessions had become the financial and business center of the city with well-built

residences (Pennel, 1934; Sun et al., 2018).

Among all Concessions in China, the International Settlement of Shanghai was not only the most prosperous but also the engine of China's modern economy [Ma] 2008; Nield, 2015]. Its municipal council and mixed courts had strong British roots, which led to the emergence of a robust finance sector and trade business that fostered today's transnational giants such as AIG (American International Group, in 1919) and HSBC (Hongkong and Shanghai Banking Corporation, in 1865). Apart from its dominant role in the Chinese economy, Shanghai was also the epicenter of modern life in Asia. The Shanghai French Concession thrived in retail, fashion, catering, and entertainment sectors, earning itself a reputation as the "Paris of the East." (Begere, 2014; Fei, 1991)

Tianjin, as the second most important treaty port in China, was not only a crucial trading hub in the north but also the host of nine foreign Concessions, which extensively diversified the city's urban landscape. The British Concession, in particular, served as a hub for most business operations and headquarters (Nield, 2015; Fei, 1991), while the French Concession boasted the Quanyechang Mall, the most prosperous town square in Tianjin, featuring numerous shops, restaurants, and cinemas (Fei, 1991; Shang and Liu, 1996). Despite a slow start, the Germans utilized their advanced knowledge in urban construction and ample funding from the Deutsche-Asiatische Bank to develop their Concession into luxury residential districts (Fei, 1991; Nield, 2015). However, other Concessions in Tianjin remained relatively underdeveloped.

Hankow, the westmost treaty port where the Europeans established Concessions, played a pivotal role in China's industrialization (CMC, 1904). The export processing firms owned by the British and Russians were particularly crucial in shaping Hankow's industrial land-scape (Fei, 1991; Nield, 2015). Hankow's strategic location that connects Shanghai and interior China made it a hub for shipping companies, further enhancing its economic significance (Fei, 1991). Finally, the city's potential for industry attracted foreign investment, resulting in the establishment of foreign banks and their branches in the city (Nield, 2015).

Despite the economic prosperity in many of the Concessions in China, crime, opium, and prostitution posed significant challenges for the municipal council. While the British Concessions attempted to maintain strict control over drugs and prostitution, the French Concessions often turned a blind eye to these illicit activities to reap the lucrative income they generated (Fei, 1991; Shang and Liu, 1996). The Japanese Concessions, while underdeveloped, actively engaged in drug trafficking and prostitution.

<sup>&</sup>lt;sup>9</sup>The statistics in the 1920s-1930s show that the Japanese Concession in Tianjin had opened more than

# 2.4 Concessions in Chinese Hands

From 1917 to 1945, several Concessions reverted to Chinese ownership. The Russian, German, and Austro-Hungarian Concessions in Tianjin and Hankow were terminated by the Chinese mandate after the First World War, while British Concessions in Hankow and Jiujiang were reclaimed in 1927 by the Nationalist government. The reverted Concessions were then called "special districts," which were run by a mixed council of elected Chinese and foreign representatives (Quigley, 1928).

During the Second Sino-Japanese War (the Second World War), the Chinese government shortly reclaimed the Japanese Concessions in Hankow, Suzhou, and Hangzhou but soon lost control of them as the Japanese army occupied the three cities. The International Settlement and French Concessions in Shanghai maintained neutral until they were occupied by the Japanese army in 1941. After 1943, the puppet state of Japan in China, the Wang Ching-wei regime, started to reclaim Concessions in China under the arrangement of the Japanese. After the war, the Republic of China reaffirmed the reversion of Concessions during the war through a series of diplomatic actions and thus legally terminated all concessions in China by 1945.

# 3 Data

# 3.1 Samples

Our main data set is based on a collection of second-hand apartment transactions down-loaded from Fang.com (http://www.fang.com) for the period of 2012-2020. [10] Fang.com is the largest Chinese housing transaction platform and online database with its footprints appearing in almost every prefecture. The transaction records include information at the apartment- and community level. [11] allowing us to map the addresses of communities on Chinese city maps by using GIS techniques. The geo-coding of communities also enables us to identify the location of each community vis-à-vis the boundaries of Concessions. As a result, we restrict our analysis to five cities where transactions are identified on both sides

<sup>200</sup> brothels (Shang and Liu, 1996), while 70% of the Japanese residents were involved in the illegal drug trade (Brook and Wakabayashi 2000).

<sup>&</sup>lt;sup>10</sup>The dataset is downloaded from the 29th to the 30th of July 2020.

<sup>&</sup>lt;sup>11</sup>Community is the most basic residential unit in China. A community can entail from just one building (ca. 20 households) to nearly a hundred buildings (thousands of households). The geographic coordinates of each apartment vary at the community level.

of Concession area boundaries. These cities are Shanghai, Tianjin, Hangzhou, Wuhan, and Suzhou. This procedure excludes cities where Concession areas are fundamentally different from non-Concession areas today, ensuring the balance of the sample and the reliability of the results. [12]

To estimate the causal effect of Concessions on housing prices, we employ a spatial RDD strategy to examine communities close to and on both sides of the boundary of Concession areas. Our baseline analysis restricts communities within 1 km, 750 m, and 500 m to the Concession boundaries. In one robustness check, we use a continuous range of bandwidth from 300 m to 1 km and show that our results are not driven by a particular choice of bandwidth.

Finally, we are aware of the unobserved characteristics related to real estate developers, which may bias our estimates. Developers in China demonstrate a wide variety in size, business models, and geographic scope of operations. For example, some developers specialize in high-end luxury properties, while others focus on affordable housing for lower-income residents. Thus, if developers who are able to initiate construction projects within Concession areas were also larger, more profitable, and had better connections to public officials as compared to other real estate firms, the housing price premium demonstrated by Concession areas would very likely reflect the housing-price effect of better real estate developers.

To address this concern, we apply a developer restriction to our sample: our analysis includes only communities developed by firms who developed at least one community inside a Concession area and at least one community outside a Concession area. Doing so ensures that apartments and communities on both sides of Concession boundaries are highly comparable in their structure and style, which further improves the identification of a causal effect of Concessions on housing price in addition to the application of the spatial RDD approach.

<sup>&</sup>lt;sup>12</sup>Specifically, three out of five excluded cities are not suitable for our analysis: the Concessions in Zhenjiang, Xiamen (Gulangyu Island), and Guangzhou (Shamiandao Island) are developed as tourism sites and hence have almost no residential areas.

<sup>&</sup>lt;sup>13</sup>For example, Chen and Kung (2019) show that from 2004 to 2016, firms linked to top Chinese politicians purchased more land with discounted prices compared to firms without such connections. Real estate firms take more than 36% of total firms in their sample.

<sup>&</sup>lt;sup>14</sup>In particular, we apply the developer restriction *after* determining the bandwidth of the RD analysis. In other words, we re-applicate the developer restriction for every different bandwidth.

# 3.2 Variables

Our data set of apartment transactions allows for the control of characteristics at the apartment and community level. The apartment-level information includes the number of bedrooms and living rooms, apartment size, the orientation (whether the living room faces South), the relative floor position of the apartment (low, middle, or high level), and the total number of floors of the building. We also control for community characteristics such as the age and the size of the community, the share of green areas in a community, and the floor-to-area ratio. The main dependent variable in this analysis is the log of housing price normalized by the area size of the apartment. Using GIS techniques, we additionally control for the distance of each community to the center of historical cities, which captures the long-run spillover effects of initial settlement. The descriptive statistics of the main variables used in this analysis are reported in Table 2.

The boundary of Concessions is drawn on contemporary city maps using GIS techniques. To do so, we study and digitize Concession maps with the rich online collection of historical maps provided by Virtual City Project. Geographicus, and the Barry Lawrence Ruderman Map Collection of Stanford Libraries. Moreover, we resort to historical archives (CMC, 1891, 1904) as well as to Fei (1991) to further ensure that Concession boundaries are properly drawn. We acknowledge that some Concessions had expanded their territory during the late nineteenth and early twentieth century, and therefore, the effect of a Concession may be heterogeneous across space and time. However, given the relatively short period during which Concessions had expanded (mostly during 1900-1915) compared to the time frame of our study, we only digitize the "final" boundary of Concessions - given there was any expansion - on our map. The digitization of Concession boundaries turns out to be unambiguous in most cases because many Concession borders are aligned with today's streets.

# [Figure 1 about here.]

Our analysis also examines the location of historical cities next to which Concessions were established. We digitize the boundary - usually defined by the shape of city walls - of these historical cities on our map by using the same map sources as mentioned above. Figure 1 presents an example of digitizing a historical map of Tianjin using GIS. Specifically,

<sup>&</sup>lt;sup>15</sup>This source provides detailed historical maps for Shanghai, Tianjin, and Wuhan (Hankow).

 $<sup>^{16}\</sup>mathrm{It}$  is accessible at https://exhibits.stanford.edu/ruderman.

we identify one historical city for each of the five cities in our analysis except for Hankow, for which we consider Hanyang and Wuchang in addition to Hankow as historical cities because of their geographic proximity and equally important economic role in the Hubei province historically. [17] In addition to the boundaries of historical towns, we also locate their centroid based one which we calculate the distance from each apartment to historical cities.

[Table 2 about here.]

# 4 Identification

Firstly, we utilize a dataset at the regional level and demonstrate that the selection of Concession areas was unlikely influenced by geographic or historical socioeconomic factors, indicating the exogeneity of the historical "treatment." Secondly, we show that apartment and community characteristics vary smoothly at the boundaries of Concessions areas, thereby ensuring the causal identification of the Concessions' effect through our RDD method.

Our estimates may be biased if Concessions were not randomly distributed within the area of treaty ports. For example, if Concessions were established in places with inherently better living conditions or more favorable socioeconomic conditions (e.g. higher population density, easier access to market, better public goods provision, and so forth), and if those factors had positive effects also on today's housing prices, the estimated effect of Concessions would likely be overestimated.

Qualitative historical evidence, however, does not support such a possibility. According to the treaty between China and Great Britain in 1843, the location of Concessions must be mutually agreed upon by the two parties (Fei, 1991). In practice, Chinese governors had indeed rejected proposals put forward by Western consuls regarding the establishment of Concessions in certain areas; this deliberate action aimed to restrict Westerners from contacting the local Chinese population and securing strategically important locations (Fei, 1991). More importantly, as discussed in section 2, Concessions were usually established in underdeveloped areas with harsh geographic conditions such as flooded terrain features and rampant disease environment (Fei, 1991; CMC, 1904). These factors not

<sup>&</sup>lt;sup>17</sup>Hanyang, Hankow, and Wuchng, also known as *The three towns of Wuhan (Wuhan Sanzhen)*., are widely considered the major components of the modern city of Wuhan.

only prevented the emergence of large Chinese settlements but also brought challenges to the initial establishment of Concessions. Thus, the development of Concessions did not rely on advantageous pre-colonial conditions in the area; instead, it developed peripheral and disadvantaged areas and thereby improved local living conditions.

We support the above argument by comparing pre-colonial economic and geographic conditions between Concession areas and their surrounding regions. The treated group includes all Concessions in the five cities, with multiple Concessions in one city merged into a single area. The control group, which represents the surrounding region of each Concession, includes the merged area of all contemporary districts that contain or partly contain Concessions. We then subtract the underlying Concessions area from the merged surrounding areas for each city to create a non-overlapping region for comparison purposes. This exercise thus enables us to examine the differences between the five Concession and five non-Concession areas in geographic and pre-colonial socioeconomic characteristics. Figure 2 gives an example of how the comparison region is generated.

[Figure 2 about here.]

[Table 3 about here.]

The results of the comparison are documented in Table 3. First, we find that the establishment of a Concession is statistically unrelated to the pre-colonial urbanization level, as measured by the density of settlements in 1820 and the distance to the historical city. It is also uncorrelated with rural development, as proxied by the agricultural suitability index. Second, Concessions did not exhibit statistically different climate patterns compared to the surrounding areas, as measured by average precipitation and temperature. Third, the insignificant difference in elevation and terrain ruggedness suggests that geography might not determine where Concessions were located. Finally, we test whether natural amenities play a role in determining the location of Concessions because they contribute to the beauty and attractiveness of the neighborhood and determine the spatial distribution of wealth in the long run, as suggested by Lee and Lin (2018). However, our evidence suggests that Concessions were not renowned for their attractiveness in natural scenery: Concessions were not significantly closer to mountain peaks, rivers, lakes, and the coastal line compared to other candidate areas. These findings indicate that favorable natural and pre-colonial socioeconomic conditions are unlikely to be a major confounding factor in our analysis.

We next examine the smoothness of control variables at the Concession boundary at the apartment level, which is important for identifying a causal effect using RDD. Presented in Table A1, we find that apartment and community level characteristics in general do not demonstrate a discontinuous difference at the Concession boundaries. Some previously significant differences (e.g., community age and number of households) become smaller in size and statistically insignificant as we narrow down the bandwidth. The only exception here is Dis\_his city: apartments in Concession areas are located further away from historical cities than apartments in other places, but the difference is relatively small in economic significance (only about 17% of the sample mean). This difference was to be expected as Concessions were established in more remote, less advantaged locations, as described in section 2. Moreover, in one of our estimations in section 6, we show that taking into account the potential effect of historical Chinese cities does not affect our baseline findings.

# 5 Baseline Estimations and Results

We estimate the effect of Concessions on housing price with an RDD setup and the developer restriction as discussed in section 3. The regression equation is as follows:

$$Y_{ijdkab} = \beta_0 + \beta_1 Concession_j + \mathbf{X}_i \gamma_1 + \mathbf{X}_j \gamma_2 + f(geography) + \delta_a + \delta_b + \theta_{da} + \sigma_{ka} + \epsilon_{ijdkab}$$
(1)

Subscripts i, j, d, and k stand for an apartment, a community, a developer, and a district, while subscripts a, and b represent a year and a month, respectively. Y is the price of the apartment per square meter in log form.  $Concession_i$  equals one, if an apartment is located inside a Concession area. The RDD polynomial f(geography) controls for smooth functions according to the location of the community. In the baseline analysis, it stands for third-order terms of the shortest distance to the Concession border; in the robustness checks, we test the robustness of our results to other forms of the smooth function.  $\mathbf{X}_i$  and  $\mathbf{X}_j$  include housing- and community-level control variables as reported in Table 2  $\delta_a$  represents year fixed effects, and  $\delta_b$  represents month fixed effects that capture the seasonality of the housing market with certain months of a year seeing higher or lower demand for homes.  $\theta_{da}$  and  $\sigma_{ka}$  represent developer-year fixed effects and district-year fixed effects, respectively.  $\epsilon$  is the error term.

The results presented in Table 4 demonstrate that historical Concession areas command

a substantial price premium in the current housing market. In column (1), where the geographic restriction of an RDD analysis is not yet applied, apartments located in historical Concession areas sold for a higher price than similar properties in non-Concession areas by approximately 9%. To make the estimates more accurate, I restrict the sample reported in columns (2)-(4) to apartments closer to Concession boundaries by progressively reducing the buffer areas to 1 km, 750 m, and 500 m to Concession boundaries, respectively. Surprisingly, narrowing the buffer area only enlarges the difference in average housing prices between Concession and non-Concession areas: the coefficient of Concession increases from 0.13 in column (2) to 0.169 in column (4) and remains highly significant, implying a Concession premium of about 17%.

[Table 4 about here.]

# 6 Robustness Checks and Extensions

# 6.1 RDD Specifications

We show that our baseline finding is not sensitive to alternative RDD specifications. First, to ensure that our results are not driven by the selection of 1 km, 750 m, and 500 m buffer areas, we resort to a more transparent method of reporting regression coefficients by reestimating Equation 1 with a continuous range of bandwidths. The selected bandwidths range from 300 m to 1 km with an increment of 10 m (a total of 71 regressions). For instance, a bandwidth of 300 m indicates a sample of apartments located no farther than 300 m away from the boundary of a Concession area. In Figure 3 the estimated coefficients of Concession are plotted against the full range of bandwidths, with the 95% confidence interval indicated by the grey area. We find that the estimated coefficients of Concession - as well as their confidence intervals - are well above zero, suggesting a genuine price premium of Concessions. Moreover, the coefficients remain relatively stable across all bandwidths with a mean of 0.155 and a standard deviation of merely 0.013. These findings are very encouraging because they suggest that the selection of bandwidth affects neither the statistical- nor the economic significance of our baseline finding.

[Figure 3 about here.]

<sup>&</sup>lt;sup>18</sup>The estimated coefficients for a full set of control variables are reported in Table A2

Next, we show that our baseline finding is not sensitive to the form of the smooth function. In particular, we test for a linear and a quadratic function of both the distance variable and geographic coordinates (latitude and longitude) of apartments and report the results in Table 5. Specifically, panels A and B report the estimates obtained through controlling for a linear and a quadratic function of the distance variable, respectively. Despite a small decrease in R-squared and Akaike information criteria (AIC), the estimated coefficient of Concession remains highly significant and quantitatively similar to the baseline finding in these panels. The confounding effect from unobserved factors might also be a function of geographic coordinates (Dell, 2010); hence, panels C, D, and E report the estimates using a linear, a second-order, and a third-order polynomial of geographic coordinates, respectively. However, these alternative specifications do not alter our conclusion, as the estimated coefficients remain similar to the baseline result. Finally, the analysis reported in panel F includes third-order polynomials of both the distance variable and coordinates, and the coefficient of Concession remains positive and statistically significant. Summing up, alternative RDD specifications seem to have no influence on our results.

# [Table 5 about here.]

Finally, we conduct a placebo analysis based on hypothetical RDD boundaries, expecting the effect of Concessions on housing prices to vanish when we modify the Concession boundaries. By using GIS techniques, we shift Concessions areas vertically (towards north and south) or horizontally (towards west and east) and then re-estimate Equation 1 with the modified Concession borders. Table A3 reports the results of the above analysis. Specifically, Concession borders are shifted by 1 km in panel A and 2 km in panel B. Additionally, columns (1)-(4) indicate the directions of the move, which are east, south, west, and north, respectively. In the analysis presented in panel C, we apply the placebo exercise based on re-scaled Concession boundaries. The re-scaling is done by increasing (column (1)) or decreasing (column (2)) the size of Concession areas by 25%. To ensure a more accurate comparison, after scaling down Concession areas, we compare apartments within both the original and re-scaled Concession boundaries to those that were but are no longer situated within the original boundaries; by the same token, we compare apartments that were originally located in non-Concession areas but are now within the re-scaled boundaries to those that are excluded by both the original and re-scaled boundaries after enlarging the

<sup>&</sup>lt;sup>19</sup>Multiple Concessions in one city are first merged into one polygon feature before the re-scaling.

Concession boundary. As presented in Table A3, the estimated coefficient of *placebo*, which equals one if an apartment is located in a re-scaled Concession area, is insignificant in all but one estimation, suggesting no discontinuity in housing price at the placebo boundaries.

# 6.2 Housing Advertisements

Using transaction-level data, we reveal the effect of Concessions on the equilibrium housing prices. Alternatively, we try to examine the effect of Concessions on the supply side of the housing market by using apartment listings posted in the advertisement section of Fang.com during the year 2020. The advertisement data set has the same structure as the transaction data set with additional information on the number of bathrooms and an indicator for decoration level (no deco., simple deco., medium deco., good deco., and premium deco.). To examine the effect of Concessions on the listing price of apartments, we re-estimate Equation 1 with the same developer restriction and RDD approach while using the advertisement data set. [20]

Reported in Table 6, we find that the estimated coefficients of *Concessions* are positive and highly significant across all columns, which is consistent with our baseline findings. Specifically, apartments located in Concessions areas are on average listed with a price higher by 8% - 11% than those in other parts of the city, which is slightly lower than the premium we found using the transaction data.

[Table 6 about here.]

# 6.3 Colonial Origins

As presented in section 2, Concessions were administered by municipal councils that represented a particular colonial power. Thus, we relate our analysis to the literature on the long-run economic effects of legal and colonial origins. The seminal study of La Porta et al. (1997), for example, shows that the British common law system is associated with better financial institutions compared to the French civil law system, and they identify the effect by comparing countries with British and French colonial origins. Following this vein, recent studies document the effect of legal origins on foreign direct investment (Long et al., 2019), urban development (Baruah et al., 2017), and the distribution of financial institutes

 $<sup>^{20}</sup>$ We replace year fixed effects with quarter fixed effects because the advertisement data set has only one year available.

(Levine et al., 2023). We add to this line of argument by examining whether Concessions of different colonial origins exhibit heterogeneous effects on housing prices.

Specifically, we categorize Concessions into British, French, German, Japanese, and other origins. Other origins include Japanese, Italian, Belgian, Russian, and Austro-Hungarian origins. Distinguishing British and French concessions allows us to examine the effect of legal origins on urban outcomes. We also include German Concessions in the analysis for their particular attractiveness as high-quality residential areas in Hankow and Tianjin (Fei, 1991). Japanese settlements thrived in small businesses, but the residents were less integrated into the European lifestyle. Moreover, Japanese Concessions are reported as places with prevalent organized crime and drug trade (Brook and Wakabayashi) 2000; Fei, 1991; Shang and Liu, 1996). These factors may undermine the overall attractiveness of Japanese Concessions and their positive economic effect. To test the heterogeneous effect of Concessions on housing price, we estimate Equation 2, with Origin indicating a specific colonial identity of the Concession.

$$Y_{ijdkab} = \beta_0 + \beta_1 Concession_j + \beta_2 Origin_j + \mathbf{X}_i \gamma_1 + \mathbf{X}_j \gamma_2 + f(geography) + \delta_a + \delta_b + \theta_{da} + \sigma_{ka} + \epsilon_{ijdkab}$$
(2)

The results are presented in Table 7. In each of the four panels, we report the estimated coefficient of Concession, which is the usual dummy as defined in Equation 1. as well as the colonial origin dummy. In this case, the colonial origin dummy is in effect the interaction between Concession and the colonial origin indicator, and the coefficient of a specific colonial origin indicates the effect of a particular Concession area on top of the average effect of Concession areas. Panels A and B test the Anglophone and Francophone legacies on housing prices. Interestingly, we find that the coefficients of UK are slightly negative and statistically insignificant, which indicates that housing prices in British Concessions are not significantly different from the concession average. The coefficients of France, however, are positive and significant. The above finding may not be surprising because the more spacious and residential character demonstrated by French Concessions could have positively affected housing prices today, while the British Concessions were more renowned for their business development.

<sup>&</sup>lt;sup>21</sup>One might worry that most of the transactions could take place in former British Concessions, and hence the British effect is not significantly different from the average effect. However, we show that this is

In panel C, we find that German Concessions demonstrate a housing price premium significantly above the Concession average. This further supports our hypothesis that Concessions with a focus on residential purposes exhibit a stronger premium on housing prices today than other types of Concessions. Finally, the results in panel D suggest that historical Japanese Concessions, if anything, are subject to a lower performance compared to other Concessions. In column (1), we find a "price penalty" of ca. 2% for apartments in Japanese Concessions compared to homes in non-Concession areas; the coefficients of Japan and Concession are jointly significant at the one percent level. In columns (2)-(4), Japanese Concessions still exhibit a higher average housing price compared to homes in non-Concession areas, but the difference is very small (c.a. 2%-7% higher price). This supports the notion that Japanese Concessions might not be as attractive as Concessions of other origins. Finally, we simultaneously include all colonial origins mentioned above in Table A4. The results show that the effects of French and German Concessions remain positive and significant, while Concessions of all other origins lose their effect on housing prices.

[Table 7 about here.]

### 6.4 Duration of Concessions

Next, we examine whether the duration of Concessions matters. As mentioned in section 2 foreign powers established Concessions in waves. Thus, countries that established Concessions earlier - in the mid-nineteenth century - could strategically select better land plots for future urban development, granting them a competitive advantage in attracting settlers and investment. In contrast, the "late-comers," e.g., countries that only established Concessions in the early twentieth century, typically faced less favorable options and had limited access to the most desirable land plots for their Concessions. Moreover, Concessions with a longer duration could be more likely to develop stable institutions, thereby providing public goods more effectively. Following this logic, we would expect the duration of a Concession to be positively related to today's housing price.

In Table 8, we find that the duration of Concessions is only weakly correlated with housing prices. The estimated coefficients show that one more year of Concession history is associated with 0.1% - 0.2% lower housing prices, and none of the estimates are significant

not the case: the number of transactions in former British Concessions only took up 8.4% to 4.2% of the total transactions in Concession areas.

at the 5% level. These results suggest that the duration of Concessions, and plausibly any factor that is associated with the duration, does not explain the housing price premium commanded by Concession areas today.

[Table 8 about here.]

# 6.5 Other Extensions

Historical Cities. Does the long-run effect of Concessions simply reflect the premium of being located in a historical area rather than the historical dependence of early economic activities guided by Western institutional and legal framework? To address this issue, we extend our analysis by studying historical Chinese cities. These places serve as an ideal counterpart of the Concessions because they were direct neighbors of Concessions but have a much longer history. If the reason behind the price premium were simply the fact that the area is historic, we should find a more salient price premium commanded by historical cities compared to concessions. Following the same procedure as outlined in subsection 3.1] we prepare a sample of apartments located on both sides of historical cities. Then, we estimate Equation 3, which is similar to Equation 1 with Concession replaced by His\_City, which equals one if an apartment is located inside an area of a historical city.

$$Y_{ijdkab} = \alpha_0 + \alpha_1 His\_City_j + \mathbf{X}_i \mu_1 + \mathbf{X}_j \mu_2 + f(geography) + \eta_a + \eta_b + \eta_{da} + \eta_{ka} + \epsilon_{ijdkab}$$
 (3)  
[Table 9 about here.]

Table 9 reports the estimated coefficient of *His\_City*, controlling for a smooth function of the distance to historical city boundary (panel A), geographic coordinates (Panel B), and both (Panel C). Not surprisingly, history alone has some influence on today's housing price, as suggested by most of the positive coefficients of *His\_City* presented in the table. Yet, the overall size and significance of the coefficients indicate that the effect of historical cities is rather limited. This conclusion is further supported by comparing the effects of Concessions and historical cities in one estimation setup, as described by the following equation:

$$Y_{ijdkab} = \theta_0 + \theta_1 His\_City_j + \theta_2 Concession_j + \mathbf{X}_i \sigma_1 + \mathbf{X}_j \sigma_2 + f(geography) + \rho_a + \rho_b + \rho_{da} + \rho_{ka} + \epsilon_{ijdkab}$$
 (4)

To estimate Equation 4, we combine the samples used for estimating Equation 1 and Equation 2. Reported in Table 10, the analysis of combined samples shows that the estimated effect of Concessions remains highly significant and quantitatively similar to the baseline estimation, whereas historical cities demonstrate small and mostly insignificant effects on housing prices. This finding is robust regardless of the forms of the RDD smooth function being used: we control for third-order polynomials of distance to both Concession and historical city boundaries in panel A and third-order polynomials of geographic coordinates in panel B. The long-run effect of Concessions on housing prices does not simply capture a premium stemming from their historical value. Moreover, premised on the notion that historical economic activities were mostly concentrated in historical cities before the establishment of Concessions, the above findings shed light on a possible transition between two spatial equilibria - from historical cities to Concessions, while the latter has persisted until the present day.

# [Table 10 about here.]

Multilevel Structure. Our data set is organized by geographic hierarchies. In particular, apartments are nested within communities, which are nested within districts. Using data that can be aggregated by groups in an OLS setup, however, usually biases the standard errors of the estimates downward, with a potential risk of over-rejecting the null hypothesis (Moulton, 1990). Therefore, we take into account the nested structure by using nested clustering errors and multilevel regressions. In a nested clustering setup, the residuals within each cluster and between the clusters in a larger group are specified, and hence the covariance structure of the errors is modeled more accurately. Meanwhile, multilevel regressions explicitly model the heterogeneity of groups and account for variations in the data that would otherwise be missed in a completely pooled model (Gelman, 2006). Gelman

<sup>&</sup>lt;sup>22</sup>Despite the non-results on housing prices, historical Chinese cities might have other long-run urban implications, which are beyond the scope of our paper.

<sup>&</sup>lt;sup>23</sup>Depending on the context, multilevel models are also referred to as hierarchical linear models or mixed effects models

and Hill, 2006). The results after using the two above methods are reported in Table A5, and we find that our results remain robust after taking into account the multilevel structure of our data.

**Data Quality.** Even though our data come from a reputable and high-quality website, and hence data quality issues are expected not to be severe, we seek to ensure that any potential quality issues do not affect the results of our analysis. First, we re-estimate the baseline equation with a quantile regression setup focusing on the conditional median of housing prices, because data points of low quality might exhibit extreme values in the housing price variable and thus become outliers. Second, we control for the platform through which a transaction took place (either on Fang.com or through other agencies) because transaction data through Fang.com may be better maintained than data from other sources. Finally, we address the data quality issue by using the number of transactions per community as weights in the baseline regression. Communities that exhibit higher frequencies of trades are assigned greater weights because they can provide more up-todate information on the current market value of properties and thus have more accurate data. Communities with infrequent transactions, on the other hand, may have outdated data and are thus assigned smaller weights. As reported in Table A6, we find that our results are mostly unaffected by the modifications that address potential data quality issues.

# 7 Mechanisms

What explains the persistent attractiveness of Concession areas long after they ceased to operate as such? We have seen that the fact that these are historic places explains only a small part of the price premium, if at all. The Concessions, while they existed, served two basic functions: First, they allowed self-governance, which had a superior quality than the governance in the Chinese-governed areas around the concessions. The governance in the Concessions effectively protected property rights, ensured lower corruption levels and higher transparency (Jin, 2023) and made concessions into centers of economic activities.

<sup>&</sup>lt;sup>24</sup>An alternative weight variable could be the size of the developer. For example, larger developers may be more transparent in sharing community and apartment information to the transaction platform than smaller developing firms. We proxy the size of the developer by the number of apartments constructed by the developer. Our results remain robust after using the developer size as weights.

 $<sup>^{25}</sup>$ In a sense, Concessions functioned as precursors of the "Special Economic Zones (SEZs)," which were created in China in the 1980s.

Second, Concessions provided superior amenities and infrastructure to the Westerners and the Chinese residing in the Concessions.

We argue that the advantages of Concession areas for businesses have largely disappeared after the foundation of the PRC, as the same legal system applied in all regions and that differences in governance quality would be eliminated at such a fine grained level as the actors inside and outside the boundaries of the former concession areas are essentially the same. In contrast, superior urban facilities, once established in Concessions, have largely remained in place despite these areas changing hands from the colonial powers to the Nationalist government, the Japanese army, and finally to the Communist Party. It seems plausible that such a difference in access to urban facilities explains large parts of the housing price premium of Concession areas today.

We test these hypotheses in the following sections. To measure contemporary business and urban facilities, we rely on the API services of Baidumap, which allows us to download the geographic coordinates of certain landmarks pre-labeled by Baidumap. In particular, our analysis examines the following facilities: primary schools, hospitals, banks, shopping centers, and historical landmarks. To measure business activities, we rely on two data sources to locate Chinese firms: the Annual Survey of Industrial Firms (ASIF) in 2007 and the information on Chinese listed firms from Hexun.com. Conducted by the Chinese National Bureau of Statistics (NBS), the ASIF reports data on the universe of industrial firms with annual sales above 5 million Chinese Yuan. The data on listed firms are from Hexun.com, which is one of China's earliest and best-known websites on the Chinese stock market. For both firm-level data sources, we obtain the addresses of the firms and locate them using Baidumap. The following subsections examine the two channels in detail.

# 7.1 Financial and Business Development

To test the aforementioned hypothesis, we start by examining the potential channel of financial and business development in Concessions. Shanghai, for example, had developed

<sup>&</sup>lt;sup>26</sup>Jin (2023) and Jin and Schulze (2024) show that the take-over of the corrupt Chinese customs stations by the transparent and non-corrupt, foreign-run Chinese Maritime Customs has persistent effects on the level of economic activity and innovation intensity as norms of honesty and lawfulness were inherited and persist to the present day. This, however, refers to counties rather than urban blocks or different sides of the former Concession boundaries. Moreover, China has created SEZs, which provide incentives to locate there rather than in the high-rent former Concessions.

 $<sup>^{\</sup>rm 27}{\rm The}$  data were downloaded between October 2020 and March 2021.

<sup>&</sup>lt;sup>28</sup>Industry is defined as energy, manufacturing, and mining.

into Asia's most significant financial center by the late nineteenth century, and remains to be China's financial center until the present day. According to Levine et al. (2023), Concessions in Shanghai, especially the International Settlement, attracted various foreign banks and Chinese traditional banks (*Qianzhuang*). By the same token, numerous foreign firms were established in Concessions during the early twentieth century, focusing primarily on shipbuilding, reeling, printing press, and export processing industries (Chang, 1987). Begere, 2014).

If Concession areas remained more attractive for businesses than other parts of the city today, the concentration of businesses in Concession areas could lead to an increase in the demand for homes (and thus in housing prices) because employees may seek to take residence near their employers to minimize commuting costs. To test the above hypothesis, we utilize the geo-referenced data set of financial institutes, industrial firms, and listed firms. Reported in Table 11 we find that apartments in Concession areas are on average slightly closer to banks, but the estimated coefficients are all insignificant, suggesting that banks are no longer concentrated in the Concession areas as they were during the treaty port era.

# [Table 11 about here.]

Next, we examine the spatial distribution of industrial firms. As reported in panel A of Table 12, apartments in concession areas are not closer to industrial firms than homes in other areas, suggesting a potential shift of industrial activities from former Concession areas to more attractive places today. To examine whether firms that benefit from an open economy after 1978 are more likely to stay in Concession areas and, consequently, affect local housing prices, we categorize firms in our sample into exporting firms and firms that receive FDI. As reported in panels B and C in Table 12, apartments in Concession areas are closer to export firms but not to firms that receive FDI. These results, if anything, suggest a potential persistence of the export processing sector in Concession areas while foreign capital started to target other attractive sectors outside Concessions. However, we are cautious about the interpretation as most coefficients (except for columns (1) and (2) in panel B) are insignificant, providing only weak statistical support. Additionally, our

<sup>&</sup>lt;sup>29</sup>Tianjin, for another instance, became the financial hub in north China. Several foreign banks established branches in Tianjin's Concession, such as HSBC, Russo-Chinese Bank, and Deutsch-Asiatische Bank.

<sup>&</sup>lt;sup>30</sup>We define export firms and firms that receive FDI based on whether they report any export and FDI in the survey.

data set restricts our analysis to industrial firms, whereas other sectors might demonstrate a different spatial pattern.

# [Table 12 about here.]

Finally, we examine the distribution of listed firms, which alternatively proxies for the spatial structure of businesses. Presented in <u>Table 13</u>, we find that apartments in Concessions are not closer to listed firms than apartments in non-Concession areas, further indicating that Concession areas no longer exhibit a high concentration of commerce and business.

# [Table 13 about here.]

Summing up, our evidence in general does not support the hypothesis that Concessions continue to serve as the economic hub of cities today as they did in the past. This outcome is to be expected because the institutions established by Westerners to protect property rights in Concession areas no longer exist after 1949, which explains the lack of business concentration in today's Concession areas. Moreover, cities in our sample have all successfully established special economic zones (SEZs). As a consequence, firms might have moved to locations where starting businesses is more attractive and real estate prices are lower. For example, the Pudong New Area in Shanghai is one of the fastest-growing SEZs in China, hosting the headquarters of China's most important financial institutions as well as technology, and manufacturing firms. Similarly, the SEZs in Tianjin (Free Trade Zone and Economic-Technological Development Area), Wuhan (the Optics Valley), Hangzhou (Hangzhou Economic and Technological Development Area), and Suzhou (Huqiu District) all played a crucial role in cultivating local innovation and entrepreneurship.

# 7.2 Urban Facilities

We next examine whether urban facilities explain the long-term effect of Concessions on housing prices.

**Primary School.** During the late nineteenth century, modern schools were established in Concessions to meet foreign residents' demand for a Western lifestyle in China. While most schools established by municipal councils were exclusively for foreign children, some of them accepted Chinese students as well such as the *Ecole Primaire Chapsal* in Shanghai's French Concession (which still exists as a public primary school today). However, many

more schools in Concessions were established by Christian missionaries, who saw education as a means of promoting their cultural and religious values in China. In Shanghai, for example, 12 different churches had established more than 20 schools by the end of 1920 (Stauffer, 1922).

We are particularly interested in public primary schools because, in China, enrollment in these schools strictly requires household registration (known as Hukou) within the designated attendance zone. Additionally, only children from households registered as homeowners, rather than renters, are entitled to be enrolled. As a result, the accessibility and quality of public primary schools have a strong influence on housing prices (Chan et al., 2020) Zheng et al., 2016). In contrast, admission to public secondary schools in China does not strictly follow this rule. Therefore, we do not expect secondary schools to have as significant an impact on housing prices as primary schools. Furthermore, admission to most key secondary schools depends on an entry exam, making the primary school performance the "principal object of choice" (Gibbons and Machin, 2003).

We test whether apartments in today's Concession areas still provide better access to primary schools, and to what extent access to primary schools explains the effect of Concessions on housing prices. To that end, we first estimate Equation 1 with the outcome variable replaced by the distance to the closest primary school (in log). The results reported in Panel A of Table 14, however, show no difference in access to primary schools between apartments on both sides of Concessions. In panel B, the coefficient of Concession hardly changes after estimating Equation 1 with the distance to the closest primary school included as an additional control variable. These results suggest that, after 1949, local governments have been addressing the unequal distribution of primary education within cities, and therefore access to primary education in general may no longer be capitalized into housing values.

# [Table 14 about here.]

If access to primary education in general cannot capture the housing market effect of Concessions, does the quality of primary schools play a role? To address this issue, we examine the access to key primary schools (*Zhongdian Xiaoxue*). These schools usually have high academic standards and provide an opportunity for students to receive a high-quality secondary and tertiary education. They prepare better for entry exams for key secondary schools and thus pave the way for a successful educational and subsequently

professional career. High-quality primary schools are key for attracting high-potential families; they contribute to the attractiveness of urban districts.

Although an official list of key primary schools does not exist, they were usually named "laboratory school (Shiyan Xuexiao)" or affiliated with top universities (named as Fushu xuexiao following the name of a university). In our analysis, we obtain a list of key primary schools with their address from Fang.com. As reported in Panel A of Table 15, apartments in Concession areas are closer to key primary schools than homes in other places by 30%, and the difference is highly significant across all columns. In panel B, we find that the coefficient of Concession reduces from 0.169 to 0.142, while the distance to key primary schools significantly predicts housing prices today. These results indicate that access to better schools indeed explains part of the Concessions' effect on housing prices today. Specifically, the indirect housing market effect of Concessions through access to key primary schools is about 0.03 (0.28 x 0.096), which accounts for approximately 18% of the overall Concession effect.

# [Table 15 about here.]

Hospitals. Next, we examine Concessions and modern hospitals. Starting from the 1860s, Christian missionaries introduced Western medicine into China by establishing medical schools and hospitals. Although numerous hospitals were destroyed by Japanese bombing during the Second Sino-Japanese War and the Chinese Civil War, some were still preserved and remain functioning today, such as the General Hospital (now the First People's Hospital) in Shanghai and the Hankow Catholic Hospital (now the Central Hospital of Wuhan).

The persistence of better healthcare service in Concession areas can have manifold effects on housing prices. Apart from being a basic need for every individual, it attracts skilled medical professionals to settle in the area, resulting in a higher demand for homes. Moreover, the presence of more hospitals in an area may also attract healthcare-related industries (such as pharmaceutical and medical equipment), increasing the demand for labor. As presented in panel A of Table 16, apartments in Concession areas are on average closer to hospitals than apartments in other parts of the city. In Panel B, we find that including the distance to the closest hospital moderately reduces the coefficient of *Concession*. This result underscores the role of health care in explaining the housing price premium of Concessions. Particularly, the coefficient of *Concession* in column (4) reduces from 0.169 to

# [Table 16 about here.]

Shopping Centers. Concessions were also characterized as the center of entertainment, leisure, and modern life. Well-off foreign residents built luxurious hotels, cinemas, clubs, and restaurants to accommodate their cosmopolitan lifestyle. For instance, the Bund in Shanghai's International Settlement was lined with European-style buildings and became a symbol of Shanghai's modernity and prosperity. These social and entertainment functions of Concessions may still be in place today and have a substantial impact on housing prices. To test this hypothesis, we examine the distribution of today's shopping centers, which serve not only as a place for shopping but also as centers of entertainment and social interactions; a large body of empirical studies shows that access to shopping centers has a positive effect on real estate prices (Sirpal, 1994; Des Rosiers et al., 1996; Yu et al., 2012; Li et al., 2019; Zhang et al., 2019, 2020; Casey and Klemp, 2021). As demonstrated in panel A of Table 17, apartments in today's Concession area are on average closer to shopping centers than apartments in other urban areas by more than 50%, suggesting a high density of entertaining facilities in Concession areas today. In panel B, the inclusion of the nearest distance to a shopping center reduces the coefficient of Concessions to 0.160 (in column (4)), which indicates that the proximity to entertainment and leisure can potentially explain some of the effect of Concessions on housing prices.

# [Table 17 about here.]

Historical Amenities. Finally, we test whether historical landmarks explain the effect of Concessions on housing prices. In particular, the distinctive architecture and unique cultural features of buildings in Concessions have been partly preserved and maintained over the decades, with many of them functioning as museums today. The rich historical heritage may very likely attract home buyers to invest in the unique attractiveness of historical amenities (Bille and Schulze, 2006; Falck et al., 2011; Koster and Rouwendal, 2017; Ahlfeldt and Holman, 2018). On the other hand, historical landmarks may also be subject to limited commercial activities, renovating restrictions, noise, and congestion,

 $<sup>^{31}</sup>$ This is calculated by  $(0.246 \times 0.034)/0.169$ 

<sup>&</sup>lt;sup>32</sup>Many shopping centers have large food courts with a variety of dining options. In addition, these centers often have recreational facilities such as indoor playgrounds, cinemas, and karaoke, providing a wide range of social activities.

leading to a lower housing price on average. To test this channel, we measure the proximity to historical landmarks by the distance between an apartment to the closest points of interest that are labeled as "historical landmark", "church", or "temple". As reported in Panel A of Table 18, apartments in historical Concession areas, if anything, are on average farther away from historical landmarks. Moreover, panel B suggests that the price of an apartment increases as its distance to a historical landmark becomes larger, while the effect of Concessions on housing prices remains unchanged.

[Table 18 about here.]

The value of historical landmarks might be captured particularly by cultural amenities that are related to the Western presence in Chinese history. In particular, churches were built in Concessions during the late nineteenth and early twentieth centuries, reflecting the strong presence of foreign missionaries and their dedication to spreading Christianity in China. Today, many of these churches still stand and continue to attract visitors and church members, contributing to the cultural richness and historical significance of the surrounding areas. For instance, the first Catholic cathedral in Shanghai, the St. Ignatius Cathedral, was built in the French Concession during 1906-1910. Now it is not only an iconic landmark of Shanghai but also a functioning religious center for masses and significant Catholic festivals. Thus, the preservation of churches in Concessions may explain the attractiveness of Concession areas today. In panel A of Table 19, we find that apartments in historical Concession areas are on average closer to churches. In addition, panel B shows that being closer to churches is associated with a higher housing price. Although the estimated coefficients of *Church* are only significant in two out of four columns, the reduction in the size of the coefficient of Concession suggests that access to churches may weakly explain the housing price premium of Concessions.

[Table 19 about here.]

# 7.3 Persistence

Why are former Concession areas better served with urban facilities than other urban areas today? Supported by the historical evidence, we argue that facilities such as schools and hospitals in Concession areas have largely been preserved since they were built in the early 19th century. These well-maintained facilities have persistently drawn potential

home buyers willing to pay a price premium to reside in (former) Concession areas, thereby explaining the Concessions' housing price effect.

Due to the lack of a consistent set of maps for all cities under investigation across different periods, we do not have the data to precisely describe the spatial distribution of facilities over time. However, historical evidence largely speaks in favor of such a pattern. Following the outbreak of the Second Sino-Japanese War, the Concessions fell under Japanese occupation. Most schools and hospitals in Concession areas persisted but changed leadership and administration under the Japanese rule. [33] Similarly, hospitals were not abolished but came under strict military regulation by the Japanese army, resulting in the departure of numerous medical experts who either refused to collaborate with the Japanese or sought refuge from potential prosecution. After the Second World War, with the Nationalist government regaining control over previously occupied territories, schools were handed back to the Nationalist governments with the curriculum restored to normal. Hospitals were handed over to Chinese hands as well: newly appointed Chinese directors pioneered the establishment of hospital boards, instituted revised regulations, and facilitated the recruitment of experts, which largely improved the service quality between 1945 and 1947 with notable achievements in Chinese Clinical Medicine (Shanghai Gazetteer Commisssion) 2020b.a).

After the Chinese Civil War, the CCP assumed control over the cities, adhering to the principle of minimal interference in residents' daily lives (Gould, 1951; Pang, 1997). CCP representatives were dispatched to schools to articulate policies, ensuring continuity in educational activities. Notably, teachers were permitted to continue their roles, with only a few selected private schools shut down due to suspicion of Kuomintang (KMT) espionage. In Shanghai, CCP deputies emphasized the maintenance of order in schools and the continuation of education (Pang, 1997). Meanwhile, Communist authorities took charge of all hospitals in Shanghai, but directors and medical experts largely retained their original positions (Shanghai Gazetteer Commisssion, 2020b, a). In Tianjin, schools resumed classes within a month following the CCP takeover (Wang, 2017). While staterun hospitals fell under military regulation, private and church-affiliated hospitals, where many medical experts were situated, continued operations under the protection of the

<sup>&</sup>lt;sup>33</sup>For instance, in Tianjin's missionary schools, Japanese teachers were dispatched to oversee student activities and language education (Wang, 2017).

<sup>&</sup>lt;sup>34</sup>The detail can be found in the memoir of Hang Wei (1908-1988), a Communist party member and educator, in the *wphoto database*, which is a website collecting historical archives related to the Communist revolution in China. It is accessible at <a href="http://www.wphoto.net/qianbei/article/ts/show/articleid/26387/">http://www.wphoto.net/qianbei/article/ts/show/articleid/26387/</a>

armed forces (Wang, 1986). Overall, historical accounts suggest that urban facilities in the former Concessions have been preserved despite major political disruptions that took place after the dismantling of the Concessions.

Even though we do not have data on amenities throughout the concession period until the present day, there is indirect evidence of the sustained attractiveness of these areas. We analyze the location decisions of prominent historical figures from 1878 to 1959. These renowned individuals were easily able and more likely to pay a premium for better facilities. We locate the residences of historical figures by identifying their keywords in Chinese "guju" (historical residence [of important people]), which is labeled by the Baidu map landmark data set. We restrict the analysis to Shanghai and Tianjin for this exercise because the residences are distributed on both sides of Concession areas in these cities, ensuring a meaningful comparison between Concession and non-Concession areas. Next, we study each individual in the data set from their biographies on Baidu.com and Wikipedia, including only those who died after 1840. We also code whether the residence represents the underlying individual's birthplace or a relocation destination. Based on this definition, the appearance year of a historical figure is determined by their birth year if the residence corresponds to their birthplace or by their relocation year if the residence represents a relocation destination. The final data set includes 32 residences, with the year of appearance ranging from 1878 to 1959. 35

# [Figure 4 about here.]

The regions generated in section 4 are used to represent Concession and non-Concession areas in Shanghai and Tianjin. Specifically, the Concession area is the combination of all Concessions in a given city, and a comparison area is represented by the combination of contemporary districts that overlap with Concessions (excluding the Concession area as such). We also reclassify the years of appearance into decades. Aggregating the appearance of historical figures decade by decade for both areas, Figure 4 shows, on average, a larger number of historical figures living in Concession areas than in comparison places. Note the strong increase in the total number of historical figures during the 3rd and 4th decades (from ca. 1880 to 1920), which is in line with the historical evidence that Concessions in Shanghai and Tianjin were by then fully developed and started to attract a large inflow of the Chinese population (Fei, 1991). To analyze the issue more concretely, we regress

<sup>&</sup>lt;sup>35</sup>A brief description of the 32 residences and the corresponding historical figures are reported in Table A7.

the number of appearances of historical figures, normalized by area size, on *Concession*. As reported in columns (1) and (2) of Table 20, the positive and significant coefficient of *Concession* suggests that Concessions were continuously attractive to renowned historical figures, as measured by the number of appearances per period (column (1)) and the number of appearances normalized by area size (column (2)). To capture the attractiveness of Concessions more accurately, we further restrict the sample of historical figures to those who relocated to the observed location. As reported in columns (3) and (4), the results are largely unchanged. The persistently higher density of historical figures in Concession areas supports our argument that renowned individuals were continuously attracted to Concession areas for their better access to facilities and amenities.

[Table 20 about here.]

# 8 Conclusion

This paper has shown, for the Chinese case, how the colonial past can shape the urban form in the presence. We use a unique historical event – the Nanking treaty in the wake of the First Opium War – that created Concession areas, where Westerners lived and did business and which were governed by them, to analyze to what extent these buoyant parts of towns outlived all political disruptions that followed. By using contemporary data on housing transactions, and by employing a spatial RDD approach to identify causality, we find that apartments located in former Concession areas command a price premium of 17%. These effects are robust to various RDD specifications and extensions. We have further shown that better access to urban facilities, rather than the concentration of firms, is likely to explain the long-run effect of Concessions on housing prices.

We are the first to demonstrate the persistence of the colonial past on a very fine grained level -500 meters to both sides of the former Concession boundaries - for the real estate market for private residences, which we causally identify.

Though the effect is well identified, our study has some limitations. As our focus is on transactions of second-hand apartments, and because we rely on an RDD approach to examine a highly localized effect, our findings cannot explain the implication of Concessions on other urban outcomes associated with the land and the rent market, which may be likewise important to urban development. Nor can we claim to have measured the overall economic contribution of Concessions to the city as a whole which may go well beyond

being persistently an attractive quarter. These features are highly relevant and open up the possibility of future research.

Despite these limitations, our findings contribute to the debate on the fundamental driving factors of urban development. By showing that the change of urban form in treaty port cities was driven by the establishment of Concessions - which were initially constructed in underdeveloped areas with poor geographic and pre-colonial socioeconomic conditions, our paper supports the argument that the spatial structure of the urban economy is not soley determined by locational fundamentals, and that a temporary shock in history can permanently change the spatial equilibrium of a city. This evidence has important policy implications: it shows that effective place-based policies can facilitate regional economic growth and improve welfare by encouraging a transition to a more favorable steady-state.

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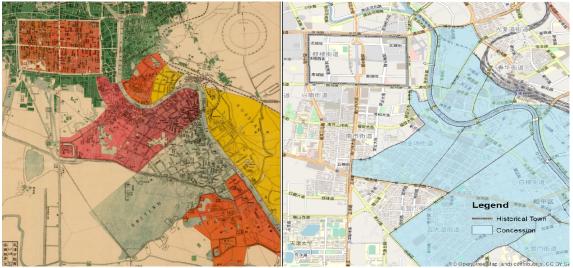
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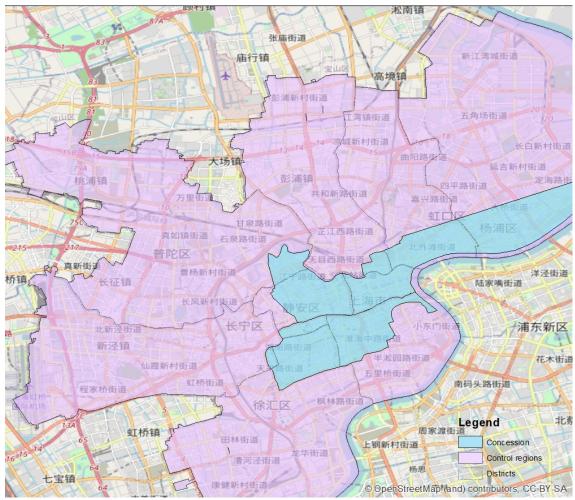
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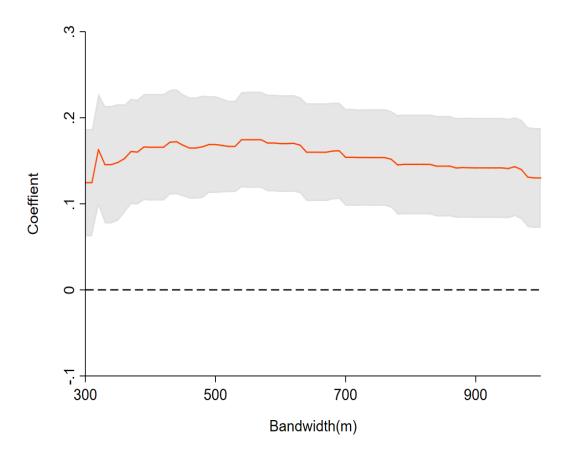
Notes: The graph compares the historical map of Tianjin in 1936 (accessible at https://www.raremaps.com/gallery/detail/36094/plan-of-tianjin-china-with-foreign-concessions-tianjin-dilitho-works) and a shape file of the historical city and Concessions digitized by us.

Figure 1: Concessions and Historical Town in Tianjin



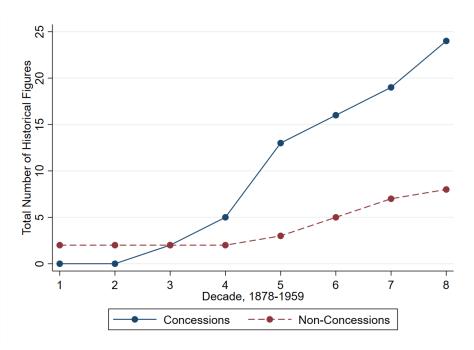
Notes: The graph highlights a Concession area and a comparison area for the analysis in section 4 using Shanghai as an example.

Figure 2: Examples of Testing for Selection Bias



Notes: The graphs plot estimated coefficients of *Concession* against different bandwidths. The dependent variable is housing price in log. All regressions control for housing and community characteristics as well as district, month, district\*year, and developer\*year fixed effects. Standard errors are adjusted for clustering at the community level. The grey area indicates 95% confidence interval.

Figure 3: RDD Coefficients and Flexible Bandwidth Selections



Notes: The graph compares the total number of appearances of historical figures between Concession and non-Concession areas across 1878 to 1959, divided into decades.

Figure 4: Comparing Historical Figures' Appearances

Table 1: Concessions in China

City name	Country that established Concessions
Shanghai	UK, FR, US
Xiamen	UK
Tianjin	UK, FR, US, DE, JP, RU, IT, BE, AT
Zhenjiang	UK
Hankou	UK, FR, DE, JP, RU
Jiujiang	UK
Guangzhou	UK, FR
Hangzhou	JP
Suzhou	JP
Chongqing	JP

Table 2: Descriptive Statistics

Sample:	Full Sample	<1km	$< 750 {\rm m}$	< 500 m
	Mean/SD	Mean/SD	Mean/SD	Mean/SD
Price/m2	31,968.795	38,317.537	39,013.957	37,546.872
,	(13,497.143)	(16,963.351)	(17,511.858)	(13,905.350)
Price/m2 in log	10.296	10.471	10.487	10.468
,	(0.388)	(0.401)	(0.407)	(0.366)
# Bedrooms	1.725	1.584	1.591	1.575
	(0.697)	(0.662)	(0.662)	(0.647)
#Living rooms	1.120	1.104	1.101	1.070
	(0.331)	(0.321)	(0.319)	(0.280)
Housing Size in log	4.017	3.973	3.967	3.951
	(0.387)	(0.426)	(0.432)	(0.415)
South	0.833	0.689	0.694	0.698
	(0.373)	(0.463)	(0.461)	(0.459)
Floor position	` ,	, ,	` '	,
Low	0.207	0.202	0.196	0.193
	(0.405)	(0.401)	(0.397)	(0.395)
Middle	0.369	0.379	0.382	0.388
	(0.482)	(0.485)	(0.486)	(0.487)
High	0.423	0.417	0.421	0.417
	(0.494)	(0.493)	(0.494)	(0.493)
#Floors	8.104	9.306	$9.297^{'}$	8.619
	(5.376)	(7.150)	(7.257)	(5.839)
Community controls				
Comm. age	25.326	25.239	25.529	24.956
	(6.204)	(6.460)	(6.462)	(5.990)
Comm. size in log	10.500	10.367	10.371	10.370
	(0.941)	(0.954)	(0.992)	(0.915)
#Household	1.447	1.133	1.111	1.058
	(0.896)	(0.536)	(0.546)	(0.504)
Green ratio	21.836	20.834	21.282	20.399
	(10.601)	(8.867)	(9.132)	(8.907)
Floor-area ratio	1.933	$1.998^{'}$	2.024	1.909
	(1.510)	(0.848)	(0.895)	(0.816)
Dis_his city	5.877	$\mathbf{\hat{5}.105}^{'}$	$5.054^{'}$	$5.237^{'}$
*	(3.760)	(1.767)	(1.702)	(1.711)
Observations	$23,\!566$	$5,\!382^{'}$	4,441	3,412

Table 3: Testing for Selection Bias

	Mean	Mean	Mean Diff.	S.D.
	(Concession)	(Non-Concessions)		
Initial Econom	nic Condition			
Town density	0.015	0.011	-0.004	(0.781)
His.city	8.199	8.672	-0.473	(0.345)
Agri. suit	44.000	60.556	-16.556	(18.953)
Climate				
Precipitation	87.115	85.350	1.764	(16.188)
Temperature	16.091	15.996	0.095	(0.975)
$\overline{Geography}$				
Elevation	12.310	13.115	-0.805	(5.168)
Ruggedness	8.880	9.068	-0.188	(0.584)
Natural Amen	ities			
Mountain	8.979	9.076	-0.097	(0.474)
River	6.449	6.986	-0.537	(0.513)
Lake	7.687	8.438	-0.751	(0.776)
Coast	11.099	11.088	0.012	(0.840)

Notes: The sample includes 5 Concession areas and 5 surrounding non-Concession areas. The mean of each variable for Concessions and non-Concession areas, as well as the mean difference with standard errors from t-tests are reported. Town density is the number of towns in 1820 normalized by the area size, which is accessible through China Historical GIS (CHGIS) database. His. city is the distance from the centroid of the area to the historical city center (in log). The following five variables are taken the grid-level mean at the area level: Agri.suit (agricultural suitability index) is taken from Zabel et al. (2014). Temperature and Rainfall are taken from Worldclim.org. Elevation and Ruggedness (terrain ruggedness index) are taken from Global Digital Elevation Model v2. Natural amenities are measured by the log distance to mountain peak, lake, river, and the coast line. Location of mountain peaks are taken from Open Street Maps, while the rest of the amenities are provided by CHGIS.

<sup>\*\*\*</sup> p<0.01 \*\* p<0.05 \* p<0.1

Table 4: Concessions and Housing Price

DV: Housing price per m2 in log					
Sample:	Full Sample	<1km	<750m	<500m	
	(1)	(2)	(3)	(4)	
Concession	0.089***	0.130***	0.154***	0.169***	
	(0.028)	(0.029)	(0.028)	(0.028)	
N	23,566	5,382	4,441	3,412	
R-squared	0.776	0.780	0.789	0.752	
Controls	Yes	Yes	Yes	Yes	
Month FE	Yes	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	Yes	
Developer*year FE	Yes	Yes	Yes	Yes	
District*year FE	Yes	Yes	Yes	Yes	

Notes: Housing level regressions. All regressions control for cubic terms of Dis\_Concession. Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms, #Living rooms, Housing Size, South, Floor position dummies (Middle and High, with Low being the reference group), #Floors, Comm. age, Comm. size, #Household, Green ratio, Floor-area ratio, Dis his city. Robust errors adjusted for clustering at the community level are reported in parentheses.

<sup>\*\*\*</sup> p<0.01 \*\* p<0.05 \* p<0.1

Table 5: Different Functional Forms

DV: Housing price p	er m2 in log			
Sample:	Full Sample	<1km	<750m	<500m
	(1)	(2)	(3)	(4)
Panel A: Distance to				
Concession	0.130***	0.132***	0.149***	0.173***
	(0.025)	(0.028)	(0.028)	(0.027)
R-squared	0.770	0.780	0.787	0.751
Panel B: Distance to				
Concession	0.097***	0.130***	0.146***	0.175***
	(0.027)	(0.028)	(0.029)	(0.027)
R-squared	0.776	0.780	0.787	0.751
D 10 0 11 1				
Panel C: Coordinates		0.100***	0.105***	0.150***
Concession	0.136***	0.103***	0.135***	0.170***
D 1	(0.024)	(0.028)	(0.028) $0.785$	(0.027)
R-squared	0.770	0.777	0.785	0.750
Panel D: Coordinate	e second-order	nolynomial		
Concession	0.141***	0.137***	0.147***	0.165***
Concession	(0.023)	(0.027)	(0.029)	(0.031)
R-squared	0.777	0.786	0.790	0.753
To Equation	0	000	000	000
Panel E: Coordinates	s, third-order p	olynomial		
Concession	0.141***	0.141***	0.147***	0.165***
	(0.023)	(0.026)	(0.029)	(0.031)
R-squared	[0.777]	0.787	[0.790]	$0.753^{'}$
Panel F: third-order				
Concession	0.094***	0.153***	0.159***	0.152***
	(0.026)	(0.029)	(0.030)	(0.030)
R-squared	0.786	0.789	0.794	0.758
N	23,566	5,382	4,441	3,412
Controls	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Developer*year FE	Yes	Yes	Yes	Yes
District*year FE	Yes	Yes	Yes	Yes

Notes: Housing level regressions. Regressions in each panel control for different forms of the geographic smooth function. Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms, #Livingrooms, Housing Size, South, Floor position dummies ( Middle and High, with Low being the reference group), #Floors, Comm. age, Comm. size, #Household, Green ratio, Floor-area ratio, Dis his city. Robust errors adjusted for clustering at the community level are reported in parentheses.
\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table 6: Concessions and Housing Price, Advertisement Data Set

DV: Housing price per m2 in log						
Sample:	Full Sample	$<1 \mathrm{km}$	$<750 \mathrm{m}$	<500 $m$		
	(1)	(2)	(3)	(4)		
Concession	0.076***	0.087***	0.100***	0.107***		
	(0.025)	(0.031)	(0.030)	(0.032)		
N	10,847	3,650	$3,\!122$	$2,\!376$		
R-squared	0.827	0.804	0.810	0.786		
Controls	Yes	Yes	Yes	Yes		
Month FE	Yes	Yes	Yes	Yes		
Developer*quarter FE	Yes	Yes	Yes	Yes		
District*quarter FE	Yes	Yes	Yes	Yes		

Notes: Housing level regressions. All regressions control for cubic terms of  $Dis\_Concession$ . Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms,  $\#Living\ rooms$ ,  $\#bath\ rooms$ ,  $Housing\ Size$ , South, Floor position dummies (Middle and High, with Low being the reference group), decoration level dummies (simple deco., medium deco., good deco., and premium deco., with no deco. being the reference group), #Floors,  $Comm.\ age$ ,  $Comm.\ size$ , #Household,  $Green\ ratio$ ,  $Floor-area\ ratio$ ,  $Dis\ his\ city$ . Robust errors adjusted for clustering at the community level are reported in parentheses.

\*\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table 7: Concessions and Colonial Origins

DV: Housing price p	DV: Housing price per m2 in log					
Sample:	Full Sample	$<1 \mathrm{km}$	< 750 m	< 500 m		
	(1)	(2)	(3)	(4)		
Panel A: British Cor	icession					
UK	-0.001	-0.003	-0.081	-0.054		
	(0.068)	(0.068)	(0.071)	(0.073)		
Concession	0.089***	0.130***	0.161***	0.173***		
	(0.028)	(0.030)	(0.028)	(0.028)		
R-squared	0.776	0.780	0.790	0.752		
Panel B: French Con						
France	0.024	0.162***	0.180***	0.195**		
	(0.076)	(0.046)	(0.054)	(0.093)		
Concession	0.089***	0.129***	0.152***	0.167***		
	(0.028)	(0.030)	(0.029)	(0.029)		
R-squared	0.776	0.780	0.790	0.752		
Panel C: German Co						
Germany	0.165***	0.119**	0.147***	0.125**		
	(0.042)	(0.050)	(0.049)	(0.050)		
Concession	0.003	0.057	0.061	0.092**		
	(0.030)	(0.041)	(0.040)	(0.036)		
R-squared	0.779	0.783	0.794	0.756		
Panel D: Japanese C						
Japan	-0.135**	-0.125**	-0.110*	-0.114**		
	(0.053)	(0.062)	(0.066)	(0.053)		
Concession	0.116***	0.148***	0.167***	0.186***		
	(0.029)	(0.030)	(0.030)	(0.030)		
R-squared	0.778	0.782	0.791	0.754		
NT	02 500	r 200	4 441	2.410		
N M (1 DE	23,566	5,382	4,441	3,412		
Month FE	Yes	Yes	Yes	Yes		
Year FE	Yes	Yes	Yes	Yes		
Developer*year FE	Yes	Yes	Yes	Yes		
District*year FE	Yes	Yes	Yes	Yes		

Notes: Housing level regressions. All regressions control for cubic terms of  $Dis\_Concession$ . Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms,  $\#Living\ rooms$ ,  $Housing\ Size$ , South, Floor position dummies (Middle and High, with Low being the reference group), #Floors,  $Comm.\ age$ ,  $Comm.\ size$ , #Household,  $Green\ ratio$ ,  $Floor-area\ ratio$ ,  $Dis\ his\ city$ . Robust errors adjusted for clustering at the community level are reported in parentheses.

<sup>\*\*\*</sup> p<0.01 \*\* p<0.05 \* p<0.1

Table 8: Concessions and Duration

DV: Housing price per m2 in log					
Sample:	Full Sample	<1km	<750m	<500m	
	(1)	(2)	(3)	(4)	
Concession	0.158***	0.174***	0.220***	0.220***	
	(0.047)	(0.047)	(0.047)	(0.048)	
Duration	-0.002*	-0.001	-0.002*	-0.002	
	(0.001)	(0.001)	(0.001)	(0.001)	
R-squared	0.777	0.781	0.791	0.753	
N	$23,\!566$	$5,\!382$	4,441	3,412	
Month FE	Yes	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	Yes	
Developer*year FE	Yes	Yes	Yes	Yes	
District*year FE	Yes	Yes	Yes	Yes	

Notes: Housing level regressions. All regressions control for a quadratic polynomial of Dis Concession. Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms, #Living rooms, Housing Size, South, Floor position dummies (Middle and High, with Low being the reference group), #Floors, Comm. age, Comm. size, #Household, Green ratio, Floor-area ratio, Dis his city. Robust errors adjusted for clustering at the community level are reported in parentheses. \*\*\*\* p<0.01 \*\*\* p<0.05 \* p<0.1

Table 9: Historical Cities and Housing Price

DV: Housing price pe	DV: Housing price per m2 in log				
Sample:	Full Sample	<1km	$< 750 {\rm m}$	<500m	
	(1)	(2)	(3)	(4)	
Panel A: Distance to	border, 3rd o	rder polyr	nomial		
	(1)	(2)	(3)	(4)	
His_City	-0.040	0.049	0.109**	0.121**	
	(0.046)	(0.045)	(0.046)	(0.048)	
R-squared	0.866	0.833	0.850	0.845	
Panel B: Coordinates	s, 3rd order po	olynomial			
His_city	0.007	0.011	0.033	0.070	
	(0.027)	(0.039)	(0.073)	(0.065)	
R-squared	0.870	0.846	0.844	0.860	
Panel C: 3rd order di	istance and co	ord. poly			
His_City	-0.032	0.025	0.099*	0.087	
	(0.042)	(0.036)	(0.051)	(0.068)	
R-squared	0.871	0.856	0.862	0.860	
N	10,703	2,005	1,393	924	
Month FE	Yes	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	Yes	
Developer*year FE	Yes	Yes	Yes	Yes	
District*year FE	Yes	Yes	Yes	Yes	

Notes: Housing level regressions. All regressions control for cubic terms of Dis\_Concession. Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms, #Living rooms, Housing Size, South, Floor position dummies (Middle and High, with Low being the reference group), #Floors, Comm. age, Comm. size, #Household, Green ratio, Floor-area ratio, Dis his city. Robust errors adjusted for clustering at the community level are reported in parentheses.

\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table 10: Concessions, Historical Cities, and Housing Price

DV: Housing price per m2 in log						
Sample:	Full Sample	<1km	$< 750 {\rm m}$	<500m		
	(1)	(2)	(3)	(4)		
Panel A: Distance to border, 3rd order polynomial						
Concession	0.141***	0.131***	0.140***	0.176***		
	(0.023)	(0.026)	(0.029)	(0.029)		
His_city	-0.056*	0.022	0.065*	0.032		
	(0.028)	(0.029)	(0.033)	(0.035)		
R-squared	0.812	0.789	0.792	0.761		
Panel B: Coordinates		olynomial				
Concession	0.140***	0.130***	0.137***	0.171***		
	(0.023)	(0.027)	(0.031)	(0.029)		
His_city	-0.060	0.069	0.076	0.113*		
	(0.041)	(0.048)	(0.066)	(0.061)		
R-squared	0.813	0.789	0.792	0.762		
N	27,105	7,387	5,834	4,336		
Month FE	Yes	Yes	Yes	Yes		
Year FE	Yes	Yes	Yes	Yes		
Developer*year FE	Yes	Yes	Yes	Yes		
District*vear FE	Yes	Yes	Yes	Yes		

Notes: Housing level regressions. Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Estimations reported in panel A control for a 3rd order polynomial of distance to both Concession boundaries and historical city boundaries. In panel B, a 3rd order polynomial of geographic coordinates is controlled for. Control variables include: #Bedrooms, #Living rooms, Housing Size, South, Floor position dummies (Middle and High, with Low being the reference group), #Floors, Comm. age, Comm. size, #Household, Green ratio, Floor-area ratio, Dis his city. Robust errors adjusted for clustering at the community level are reported in parentheses.

<sup>\*\*\*</sup> p<0.01 \*\* p<0.05 \* p<0.1

Table 11: Concessions and Banks

DV: Distance to the closest bank in log					
Sample:	Full Sample	<1km	<750m	<500m	
	(1)	(2)	(3)	(4)	
Concession	-0.077	0.002	-0.018	-0.029	
	(0.148)	(0.180)	(0.182)	(0.173)	
R-squared	0.346	0.380	0.385	0.456	
N	23,566	5,382	4,441	3,412	
Month FE	Yes	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	Yes	
Developer*year FE	Yes	Yes	Yes	Yes	
District*year FE	Yes	Yes	Yes	Yes	

Notes: Housing level regressions. All regressions control for cubic terms of  $Dis\_Concession.$  Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms,  $\#Living\ rooms$ ,  $Housing\ Size$ , South, Floor position dummies ( Middle and High, with Low being the reference group), #Floors, Comm. age, Comm. size, #Household, Green ratio, Floor-area ratio, Dis his city. Robust errors adjusted for clustering at the community level are reported in parentheses. \*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table 12: Concessions and Industrial Firms

Sample:	Full Sample	<1km	<750m	<500m	
	(1)	(2)	(3)	(4)	
Panel A, DV: Distan	ce to the close	st industr	ial firm in	$\overline{\log}$	
Concession	0.090	0.017	0.010	-0.029	
	(0.095)	(0.086)	(0.088)	(0.082)	
R-squared	0.263	0.476	0.528	0.572	
Panel B, DV: Distance to the closest export firm in log					
Concession	-0.331***	-0.199*	-0.175	-0.151	
	(0.105)	(0.106)	(0.108)	(0.092)	
R-squared	0.212	0.424	0.441	0.535	
Panel C, DV: Distan	ce to the close	st firm the	at received	FDI in log	
Concession	-0.051	0.107	0.087	0.056	
	(0.100)	(0.095)	(0.082)	(0.073)	
R-squared	0.252	0.409	0.549	0.583	
N	$23,\!566$	$5,\!382$	4,441	3,412	
Month FE	Yes	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	Yes	
Developer*year FE	Yes	Yes	Yes	Yes	
District*year FE	Yes	Yes	Yes	Yes	

Notes: Housing level regressions. All regressions control for cubic terms of  $Dis\_Concession$ . Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include:  $\#Bedrooms,\,\#Living\ rooms,\,Housing\ Size,\,South,\,Floor\ position\ dummies$  ( Middle and High, with Low being the reference group),  $\#Floors,\,Comm.\ age,\,Comm.\ size,\,\#Household,\,Green\ ratio,\,Floor-area\ ratio,\,Dis\ his\ city.$  Robust errors adjusted for clustering at the community level are reported in parentheses. \*\*\*\* p<0.01 \*\*\* p<0.05 \* p<0.1

Table 13: Concessions and Listed Firms

DV: Distance to the closest listed firm in log					
Sample:	Full Sample	<1km	<750m	<500m	
	(1)	(2)	(3)	(4)	
Concession	-0.045	0.027	0.031	0.048	
	(0.075)	(0.065)	(0.066)	(0.064)	
R-squared	0.712	0.741	0.727	0.714	
N	$23,\!566$	5,382	4,441	3,412	
Month FE	Yes	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	Yes	
Developer*year FE	Yes	Yes	Yes	Yes	
District*year FE	Yes	Yes	Yes	Yes	

Notes: Housing level regressions. All regressions control for cubic terms of  $Dis\_Concession.$  Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms,  $\#Living\ rooms$ ,  $Housing\ Size$ , South, Floor position dummies ( Middle and High, with Low being the reference group), #Floors, Comm. age, Comm. size, #Household, Green ratio, Floor-area ratio, Dis his city. Robust errors adjusted for clustering at the community level are reported in parentheses. \*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table 14: Concessions, Housing Price, and Primary Schools

Sample:	Full Sample	<1km	<750m	<500m			
-	(1)	(2)	(3)	(4)			
Panel A, DV: Distance to the closest primary school in log							
Concession	0.071	0.077	0.042	-0.007			
	(0.111)	(0.115)	(0.104)	(0.098)			
R-squared	0.312	0.440	0.565	0.579			
Panel B, DV: Housin	ng price per m	2 in log					
Concession	0.090***	0.128***	0.152***	0.169***			
	(0.027)	(0.029)	(0.027)	(0.028)			
Primary school	-0.008	0.025	0.052*	0.030			
	(0.008)	(0.026)	(0.029)	(0.034)			
R-squared	0.776	0.781	0.792	0.753			
N	$23,\!566$	$5,\!382$	4,441	3,412			
Month FE	Yes	Yes	Yes	Yes			
Year FE	Yes	Yes	Yes	Yes			
Developer*year FE	Yes	Yes	Yes	Yes			
District*year FE	Yes	Yes	Yes	Yes			

Notes: Housing level regressions. All regressions control for cubic terms of  $Dis\_Concession$ . Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include:  $\#Bedrooms,\,\#Living\ rooms,\,Housing\ Size,\,South,\,$  Floor position dummies ( Middle and High, with Low being the reference group),  $\#Floors,\,Comm.\ age,\,Comm.\ size,\,\#Household,\,Green\ ratio,\,Floor-area\ ratio,\,Dis\ his\ city.$  Robust errors adjusted for clustering at the community level are reported in parentheses. \*\*\*\* p<0.01 \*\*\* p<0.05 \* p<0.1

Table 15: Concessions, Housing Price, and Key Primary Schools

Sample:	Full Sample	<1km	$< 750 {\rm m}$	<500m			
	(1)	(2)	(3)	(4)			
Panel A, DV: Distance to the closest key primary school in log							
Concession	-0.318**	-0.333**	-0.330***	-0.280**			
	(0.142)	(0.130)	(0.122)	(0.122)			
R-squared	0.534	0.400	0.511	0.559			
Panel B, DV: Housin	g price per m	2 in log					
Concession	0.076***	0.119***	0.133***	0.142***			
	(0.026)	(0.028)	(0.027)	(0.024)			
Primary school	-0.040***	-0.032	-0.063**	-0.096***			
(key)	(0.007)	(0.020)	(0.026)	(0.022)			
R-squared	0.781	0.782	0.794	0.766			
N	$23,\!566$	5,382	4,441	3,412			
Month FE	Yes	Yes	Yes	Yes			
Year FE	Yes	Yes	Yes	Yes			
Developer*year FE	Yes	Yes	Yes	Yes			
District*vear FE	Yes	Yes	Yes	Yes			

Notes: Housing level regressions. All regressions control for cubic terms of  $Dis\_Concession$ . Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms,  $\#Living\ rooms$ ,  $Housing\ Size$ , South, Floor position dummies (Middle and High, with Low being the reference group), #Floors,  $Comm.\ age$ ,  $Comm.\ size$ , #Household,  $Green\ ratio$ ,  $Floor-area\ ratio$ ,  $Dis\ his\ city$ . Robust errors adjusted for clustering at the community level are reported in parentheses.

<sup>\*\*\*</sup> p<0.01 \*\* p<0.05 \* p<0.1

Table 16: Concessions, Housing Price, and Hospitals

Sample:	Full Sample	<1km	<750m	<500m			
	(1)	(2)	(3)	(4)			
Panel A, DV: Distance to the closest hospital in log							
Concession	-0.283**	-0.376***	-0.326**	-0.246**			
	(0.122)	(0.131)	(0.125)	(0.101)			
R-squared	0.338	0.391	0.390	0.562			
Panel B, DV: Housin		2 in log					
Concession	0.090***	0.134***	0.155***	0.161***			
	(0.027)	(0.028)	(0.027)	(0.027)			
Hospital	0.003	0.011	0.003	-0.034*			
	(0.009)	(0.019)	(0.020)	(0.020)			
R-squared	0.776	0.780	0.789	0.753			
N	$23,\!566$	$5,\!382$	4,441	3,412			
Month FE	Yes	Yes	Yes	Yes			
Year FE	Yes	Yes	Yes	Yes			
Developer*year FE	Yes	Yes	Yes	Yes			
District*vear FE	Yes	Yes	Yes	Yes			

Notes: Housing level regressions. All regressions control for cubic terms of Dis\_Concession. Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms,  $\#Living\ rooms$ ,  $Housing\ Size$ , South, Floor position dummies (  $\mathit{Middle}$  and  $\mathit{High}$ , with  $\mathit{Low}$  being the reference group),  $\#\mathit{Floors}$ ,  $\mathit{Comm}$ .  $\mathit{age}$ , Comm. size, #Household, Green ratio, Floor-area ratio, Dis'his city. Robust errors adjusted for clustering at the community level are reported in parentheses. \*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table 17: Concessions, Housing Price, and Shopping Centers

Sample:	Full Sample	$<1 \mathrm{km}$	$< 750 {\rm m}$	< 500 m		
	(1)	(2)	(3)	(4)		
Panel A, DV: Distance to the closest shopping centers in log						
Concession	-0.351***	-0.548***	-0.531***	-0.525***		
	(0.121)	(0.121)	(0.114)	(0.107)		
R-squared	0.560	0.516	0.622	0.687		
Panel B, DV: Housin	g price per m	2 in log				
Concession	0.071***	0.131***	0.150***	0.160***		
	(0.027)	(0.033)	(0.033)	(0.031)		
Shopping	-0.051***	0.002	-0.007	-0.016		
	(0.012)	(0.026)	(0.028)	(0.026)		
R-squared	0.780	0.780	0.790	0.752		
N	$23,\!566$	$5,\!382$	4,441	3,412		
Month FE	Yes	Yes	Yes	Yes		
Year FE	Yes	Yes	Yes	Yes		
Developer*year FE	Yes	Yes	Yes	Yes		
District*year FE	Yes	Yes	Yes	Yes		

Notes: Housing level regressions. All regressions control for cubic terms of  $Dis\_Concession$ . Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms,  $\#Living\ rooms$ ,  $Housing\ Size$ , South, Floor position dummies ( Middle and High, with Low being the reference group), #Floors,  $Comm.\ age$ ,  $Comm.\ size$ , #Household,  $Green\ ratio$ ,  $Floor\ area\ ratio$ ,  $Dis\ his\ city$ . Robust errors adjusted for clustering at the community level are reported in parentheses.

\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table 18: Concessions, Housing Price, and Historical Landmarks

Sample:	Full Sample	<1km	<750m	<500m			
•	(1)	(2)	(3)	(4)			
Panel A, DV: Distance to the closest historical landmark in log							
Concession	0.025	0.107	0.085	0.025			
	(0.093)	(0.120)	(0.123)	(0.116)			
R-squared	0.414	0.547	0.526	0.594			
Panel B, DV: Housin	~ -	2  in log					
Concession	0.089***	0.126***	0.149***	0.167***			
	(0.028)	(0.029)	(0.027)	(0.026)			
His_landmark	-0.010	0.036*	0.054***	0.068***			
	(0.011)	(0.020)	(0.021)	(0.021)			
R-squared	0.776	0.780	0.789	0.753			
N	$23,\!566$	$5,\!382$	4,441	3,412			
Month FE	Yes	Yes	Yes	Yes			
Year FE	Yes	Yes	Yes	Yes			
Developer*year FE	Yes	Yes	Yes	Yes			
District*year FE	Yes	Yes	Yes	Yes			

Notes: Housing level regressions. All regressions control for cubic terms of Dis\_Concession. Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms, #Living rooms, Housing Size, South, Floor position dummies (  $\mathit{Middle}$  and  $\mathit{High}$ , with  $\mathit{Low}$  being the reference group),  $\#\mathit{Floors}$ ,  $\mathit{Comm.}$  age, Comm. size, #Household, Green ratio, Floor-area ratio, Dis'his city. Robust errors adjusted for clustering at the community level are reported in parentheses. \*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table 19: Concessions, Housing Price, and Churches

Sample:	Full Sample	<1km	<750m	<500m			
•	(1)	(2)	(3)	(4)			
Panel A, DV: Distan	ce to the close	st church in	log				
Concession	-0.060	0.014	-0.028	-0.061*			
	(0.060)	(0.044)	(0.038)	(0.034)			
R-squared	0.556	0.853	0.896	0.928			
Panel B, DV: Housin	g price per m2	2 in log					
Concession	0.089***	0.132***	0.151***	0.166***			
	(0.028)	(0.029)	(0.028)	(0.028)			
Church	-0.004	-0.119***	-0.099*	-0.051			
	(0.015)	(0.045)	(0.055)	(0.088)			
R-squared	0.776	0.783	0.791	0.752			
N	$23,\!566$	$5,\!382$	$4,\!441$	3,412			
Month FE	Yes	Yes	Yes	Yes			
Year FE	Yes	Yes	Yes	Yes			
Developer*year FE	Yes	Yes	Yes	Yes			
District*year FE	Yes	Yes	Yes	Yes			

Notes: Housing level regressions. All regressions control for cubic terms of  $Dis\_Concession$ . Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms,  $\#Living\ rooms$ ,  $Housing\ Size$ , South, Floor position dummies ( Middle and High, with Low being the reference group), #Floors,  $Comm.\ age$ ,  $Comm.\ size$ , #Household,  $Green\ ratio$ ,  $Floor-area\ ratio$ ,  $Dis\ his\ city$ . Robust errors adjusted for clustering at the community level are reported in parentheses. \*\*\*\* p<0.01 \*\*\* p<0.05 \* p<0.1

Table 20: Concessions and Historical Figures

	Full Sample		Relocation Sa	mple
	# residences (1)	residence Density (2)	# residences (3)	residence Density (4)
Concession	1.000*** (0.428)	0.063*** (0.021)	1.063*** (0.436)	0.059*** (0.021)
N	30	30	30	30
R-squared	0.154	0.234	0.165	0.196

Notes: The unit of observation is area (Concession or non-Concession) - city (Tianjin or Shanghai) - period. The Dependent variable in columns (1) and (3) is the number of appearances of historical figures' residences in a period, and the number of appearances normalized by area size in columns (2) and (4). Robust standard errors are reported in parentheses.

\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table A1: Sample Balance

Sample:	Full Sample	<1km	<750m	<500m
# Bedrooms	0.017	0.099	0.091	0.097
// — 0 322 0 0 2220	(0.088)	(0.078)	(0.085)	(0.079)
#Living rooms	0.040	0.007	0.013	0.042
" 3 3 3 3	(0.043)	(0.050)	(0.060)	(0.031)
Housing Size in log	$0.051^{'}$	$0.048^{'}$	$0.053^{'}$	0.048
	(0.063)	(0.068)	(0.075)	(0.067)
South	$0.017^{'}$	0.099	$0.091^{'}$	$0.097^{'}$
	(0.088)	(0.078)	(0.085)	(0.079)
Floor position	,	,	,	,
Low	-0.007	0.001	0.014	0.021
	(0.022)	(0.031)	(0.034)	(0.035)
Middle	0.031	0.019	0.018	0.001
	(0.024)	(0.030)	(0.033)	(0.033)
High	-0.027	-0.022	-0.035	-0.026
	-0.007	0.001	0.014	0.021
	(0.494)	(0.493)	(0.494)	(0.493)
#floors	1.756*	0.289	-0.270	0.744
	(0.960)	(1.616)	(1.908)	(1.383)
Community controls				
Age	-2.168**	-1.870	-2.631*	-1.802
	(0.932)	(1.259)	(1.401)	(1.414)
Area size in log	-0.156	-0.084	-0.095	-0.106
	(0.166)	(0.235)	(0.273)	(0.268)
#Household	-0.417***	-0.084	-0.073	0.079
	(0.099)	(0.123)	(0.145)	(0.161)
Green ratio	0.101	0.831	-0.013	1.137
	(1.563)	(2.011)	(2.239)	(2.405)
Floor-Area ratio	-0.026	-0.122	-0.159	-0.037
	(0.121)	(0.179)	(0.215)	(0.207)
Dis_his city	-0.302	0.670*	0.838**	0.878**
	(0.333)	(0.345)	(0.347)	(0.391)
Observations	23,566	5,382	4,441	3,412

Notes: The table reports the mean difference in all control variables between apartments in and out of Concession areas. Results reported in columns (1)-(4) are subject to different bandwidth (full sample, 1km, 750m, and 500m, respectively). \*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table A2: Concessions and Housing Price, Full Results

DV: Housing price per n		×11	-550	·F00
Sample:	Full Sample	<1km	<750m	<500m
	(1)	(2)	(3)	(4)
Concession	0.089***	0.130***	0.154***	0.169***
	(0.028)	(0.029)	(0.028)	(0.028)
#Bedrooms	0.052***	0.069***	0.060***	0.057***
	(0.009)	(0.016)	(0.017)	(0.018)
#Living rooms	0.047***	0.056***	0.061***	0.061***
	(0.011)	(0.019)	(0.020)	(0.023)
Housing Size in log	-0.226***	-0.316***	-0.318***	-0.321***
	(0.023)	(0.036)	(0.040)	(0.046)
South	0.078***	0.075***	0.081***	0.083***
	(0.012)	(0.016)	(0.017)	(0.017)
Floor position				
Middle	-0.008	-0.006	-0.010	-0.015
	(0.007)	(0.012)	(0.013)	(0.014)
High	-0.110***	-0.144***	-0.155***	-0.161***
	(0.008)	(0.017)	(0.018)	(0.018)
#floors	-0.002**	-0.003	-0.003	-0.007***
	(0.001)	(0.003)	(0.003)	(0.002)
Community controls				
Comm. age	-0.003**	-0.005*	-0.004	-0.003
	(0.001)	(0.002)	(0.003)	(0.003)
Comm size in log	0.003	0.001	0.006	0.026*
	(0.007)	(0.016)	(0.017)	(0.015)
#Household	0.002	-0.091***	-0.102***	-0.128***
	(0.008)	(0.031)	(0.034)	(0.039)
Green ratio	0.001	0.002	0.003	0.002
	(0.001)	(0.002)	(0.002)	(0.002)
Floor-area ratio	-0.001	0.006	-0.005	0.037
	(0.001)	(0.027)	(0.028)	(0.024)
Dis_old city	-0.047***	-0.087***	-0.080***	-0.070***
	(0.004)	(0.013)	(0.018)	(0.021)
N	23,566	5,382	4,441	3,412
R-squared	0.776	0.780	0.789	0.752
Month FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Developer*year FE	Yes	Yes	Yes	Yes
District*year FE	Yes	Yes	Yes	Yes

Notes: Housing level regressions. All regressions control for cubic terms of Dis\_Concession. Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Robust errors adjusted for clustering at the community level are reported in parentheses.

\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table A3: Placebo Tests

DV: Housing price per m2 in log						
	(1)	(2)	(3)	(4)		
Panel A: Pa	arallel shi	ft by 1 kn	1			
	(E)	(S)	(W)	(N)		
Placebo	0.041	0.023	-0.051	0.093***		
	(0.037)	(0.040)	(0.036)	(0.029)		
N	3819	3321	3796	3228		
R-squared	0.725	0.686	0.758	0.851		
Panel C: Parallel shift by 2 km						
	(E)	(S)	(W)	(N)		
Placebo	0.051	0.041	0.014	-0.046		
	(0.035)	(0.038)	(0.034)	(0.048)		
N	2971	3127	4810	2063		
R-squared	0.749	0.627	0.729	0.877		
Panel C: Re	e-scaling (	Concession	n borders			
	-25%	+25%				
Placebo	0.029	0.005				
	(0.024)	(0.035)				
N	1738	3524				
R-squared	0.819	0.785				

Notes: Housing level regressions. All regressions control for cubic terms of Dis\_Concession, and restrict the sample to communities within 500m to the Concession boundary. In panel A and B, columns (1) - (4) indicate regressions after shifting the Concession boundaries towards east, south, west, and north, respectively. In panel C, wConcession areas are scaled up by 25% for the estimation in column (1) scaled down by 25% for the estimation in column (2). Control variables include: #Bedrooms, #Living rooms, Housing Size, South, Floor position dummies (Middle and High, with Low being the reference group), #Floors, Comm. age, Comm. size, #Household, Green ratio, Floor-area ratio, Dis his city. Robust errors adjusted for clustering at the community level are reported in parentheses.

\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table A4: Concessions and Colonial Origins, Comparative Analysis

DV: Housing price per m2 in log						
Sample:	Full Sample	<1km	<750m	<500m		
-	(1)	(2)	(3)	(4)		
UK	0.092	0.062	0.024	0.028		
	(0.075)	(0.089)	(0.095)	(0.096)		
France	0.119	0.217***	0.246***	0.230**		
	(0.083)	(0.071)	(0.068)	(0.097)		
Japan	-0.015	-0.039	-0.015	-0.029		
	(0.060)	(0.082)	(0.086)	(0.077)		
Germany	0.174***	0.119*	0.153**	0.128*		
	(0.049)	(0.070)	(0.068)	(0.070)		
Concession	-0.006	0.056	0.056	0.090		
	(0.041)	(0.063)	(0.061)	(0.055)		
N	$23,\!566$	$5,\!382$	4,441	3,412		
R-squared	0.779	0.784	0.794	0.756		
Month FE	Yes	Yes	Yes	Yes		
Year FE	Yes	Yes	Yes	Yes		
Developer*year FE	Yes	Yes	Yes	Yes		
District*year FE	Yes	Yes	Yes	Yes		

Notes: Housing level regressions. The colonial origins that are not controlled for are Japanese, Italian, Belgian, Russian, and Austro-Hungarian origins. All regressions control for cubic terms of Dis\_Concession. Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms, #Living rooms, Housing Size, South, Floor position dummies (Middle and High, with Low being the reference group), #Floors, Comm. age, Comm. size, #Household, Green ratio, Floor-area ratio, Dis his city. Robust errors adjusted for clustering at the community level are reported in parentheses.

<sup>\*\*\*</sup> p<0.01 \*\* p<0.05 \* p<0.1

Table A5: Multilevel Structure

-						
DV: Housing price per m2 in log						
Sample:	Full Sample	<1km	$< 750 {\rm m}$	< 500 m		
	(1)	(2)	(3)	(4)		
Panel A: Panel A: Multilevel regressions						
Concession	0.093***	0.127***	0.132***	0.154***		
	(0.024)	(0.030)	(0.031)	(0.031)		
Panel B: Nested clustering error						
Concession	0.089	0.130**	0.154**	0.169***		
	(0.056)	(0.050)	(0.047)	(0.031)		
R-squared	0.776	0.780	0.789	0.752		
N	23,566	5,382	4,441	3,412		
Month FE	Yes	Yes	Yes	Yes		
Year FE	Yes	Yes	Yes	Yes		
Developer*year FE	Yes	Yes	Yes	Yes		
District*year FE	Yes	Yes	Yes	Yes		

Notes: Housing level regressions. All regressions control for cubic terms of  $Dis\_Concession.$  Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Estimations in panel A apply multilevel regressions that take into account heterogeneities at the community and district level. Panel B reports estimations with nested clustering errors at the community-district level. Control variables include: #Bedrooms,  $\#Living\ rooms$ , Housing Size, South, Floor position dummies ( Middle and High, with Low being the reference group), #Floors, Comm. age, Comm. size, #Household, Green ratio, Floor-area ratio, Dis his city. Robust stand errors are reported in parentheses.

\*\*\* p<0.01 \*\* p<0.05 \* p<0.1

Table A6: Controlling For Data Quality

DV: Housing price per m2 in log							
Sample:	Full Sample	<1km	<750m	<500m			
	(1)	(2)	(3)	(4)			
Panel A: Quantile regression (conditional median)							
Concession	0.080**	0.136***	0.160***	0.165***			
	(0.036)	(0.038)	(0.039)	(0.036)			
R-squared	0.768	0.772	0.781	0.739			
Panel B: Controlling for data source							
Concession	0.088***	0.130***	0.154***	0.169***			
	(0.028)	(0.029)	(0.028)	(0.028)			
R-squared	0.870	0.846	0.844	0.860			
Panel C: Using number of transactions per community as weight							
Concession	0.054	0.110***	0.144***	0.156***			
	(0.035)	(0.033)	(0.034)	(0.031)			
R-squared	0.715	0.661	0.679	0.705			
N	$23,\!566$	$5,\!382$	4,441	3,412			
Month FE	Yes	Yes	Yes	Yes			
Year FE	Yes	Yes	Yes	Yes			
Developer*year FE	Yes	Yes	Yes	Yes			
District*year FE	Yes	Yes	Yes	Yes			

Notes: Housing level regressions. All regressions control for cubic terms of  $Dis\_Concession$ . Columns (2)-(4) restrict the sample to communities within 1km, 750m, and 500m to the Concession boundary, respectively. Control variables include: #Bedrooms,  $\#Living\ rooms$ ,  $\#Living\ rooms$ , #Living

Table A7: Descriptive Statistics of Historical Figures' Residences

	Min	Max	Mean
Year of birth	1844	1920	1889
Year of death	1916	2005	1958
Year of appearance	1878	1959	1928
# of observations	2.4		0
Inside Concessions	24	Artists	6
Outside Concessions	8	Businessmen	4
		Literati	7
		Military	6
		Politicians	4
		Revolutionaries	3
		Scholars	3

Notes: This table reports the descriptive statistics of birth, death, and appearance (birth or relocation year), year of historical figures, the number of observations inside and outside of Concession areas, as well as the distribution of their major professions.