

Urban citizenship, quality domesticity, and the queer precarity of rural migrants in Beijing

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Abstract

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Geography

Lack of local *hukou* restricts migrant access to a slate of social services in Beijing, designed to prevent migrants from settling in the city, outsourcing social reproduction of the labor forces back to the countryside. The dual land system acts in tandem with the household registration system to relegate migrants to informal settlements in the city margins then incentivizes demolition of these settlements for profitable development. Through a descriptive, geospatial analysis of the Beijing 2000 and 2010 Census and municipal land transactions, this thesis contributes a systemic understanding of the spatial relationship of large residential developments and migrant settlement patterns. Regional variance along characteristics of education, agricultural, and collective *hukou* differentiate the primarily young clusters of migrant settlements past the 5th Ring Road. The age structure in and around the sites of large scale redevelopment indicate the outsourcing of social reproduction. This spatial and temporal marginalization through which migrants are denied access to proper urban family, domesticity, and citizenship leaves migrants in a state of queer precarity.

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CHAPTER 1: The Dual Urban-Rural System and the Production of Marginal Citizenship

Introduction

The large scale migration in China has captured widespread media attention, frequently cited as the largest migration in human history (Miller, 2012; Saunders, 2011). More than 260 million migrants, about 20% of the population, live away from their official place of residence. Many flow back and forth between the city and countryside, some move from city to city, while still other migrants live long term in their destination. All serve as the backbone to an export driven economy that has seen unprecedented GDP growth in the last decade (NBS, 2011). As China is increasingly accessed by global capital, a stark economic and social contrast divides the rural areas in which many migrants have their roots from China's booming, globalized cities. Within the Chinese city, especially those along the eastern seaboard, this rural-urban divide is reproduced as a divide between local and non-local residents (Chan, 1994).

Pushed in part by a significant wage and opportunity gap between city and countryside, the legion of migrants flooding into and powering China's cities have many faces. They include fresh high school graduates and drop-outs destined for the factories in the Pearl River Delta in hopes of helping support their families, financially preparing themselves for marriage, or simply experiencing the world beyond their hometowns. Mothers and fathers migrate to finance a child's education or family medical bills that agricultural labor alone cannot support. Many migrant children accompany their parents to the city, families living together in cramped quarters while children attend under-resourced and often precarious migrant schools. College students or recent graduates, the products of persistent parental sacrifice, hope for their long years of study to pay off.

Many young migrants are what Si Lian (2009) dubbed the *Ant Tribe*, college graduates from the countryside or smaller cities seeking their fortunes in China's large metropolitan areas. Like many other migrants, they have done as their country encouraged them to; years of study, an intimidating college entrance exam, higher education. They work jobs far below their skill level, suffer multi-hour long commutes, and board in rooms with a handful of other migrants in their mid-twenties, frequently in underground dwellings. For a variety of reasons, many migrants are dedicated to pursuing life in the city. However, significant institutional barriers have been erected and maintained to discourage and make near impossible the ability for these young people to settle long term and thrive in the urban areas along the coast. Their societal status at birth, determined by the position of their birthplace in the urban hierarchy, is the largest obstacle to their ability to perform the role of a modern urban citizen.

Categorically barred from public housing assistance in a city with rapidly rising rent, increasing housing market pressure prices migrants out of the center city and inner suburbs. Many migrants live in informal settlements clustered in Beijing's peri-urban fringe. These Villages-in-the-City (*chengzhongcun*), built by farmers on collective village land after the municipal government acquisitions the farmland surrounding the village residential plots, these settlements serve as both the primary source of income for village land holders and the only source of affordable housing for many migrants. Despite what the media and Beijing authorities characterize as crowded, dirty slums of questionable housing code, these settlements offer their residents a sense of community, a frequently robust informal economy, and enable Beijing's migrant workers to provide the labor power energizing China's capital.

As China courts foreign capital and cities vie to compete both domestically and internationally, the country is increasingly faced with the need to contain the disruptive effects of

capital while navigating between Socialist-Leninist governance and an international neoliberal economy. Building on Natalie Oswin's (2010; 2012; 2014) work on 'proper domesticity' and the queering of foreign migrant workers in Singapore, this thesis argues China engages in a similar state domestic project, constructing and regulating a modern, quality citizenship prepared to compete in the global economy through the household registration system. Further, access to modern, "quality" Chinese citizenship and urban social reproduction are regulated and naturalized through heteronormative regimes of control, such as the *hukou*, and reinforced through the geographic exclusion of migrants' bodies via housing and urban renewal efforts. While a lack of local *hukou* dictates many factors impacting rural migrants' ability to thrive and reside long term in large cities such as Beijing, access to affordable, social housing is perhaps the most visible. As a critical site of domesticity, housing plays a significant role in regulating normative citizenship. This can be observed through the development of housing policy in Beijing and the role *hukou* plays in the spatial exclusion and disregard of migrants' residential security. Beijing, increasingly engaging in "city-branding" campaigns prompting mass demolitions in the name of urban renewal, deliberately seeks to displace migrants and constrain their right to the city.

Survey research and ethnography has explored in detail the lives and demographic characteristics of the heterogeneous population of migrants, as well as the impact urban renewal programs have had on their economic situation and relocation decisions. Other research mapped the distribution of informal migrant settlements, the expanding urban boundaries, the changing industrial infrastructure, housing quality, and gated communities. Studies have yet to look specifically at land transactions for the development of large residential housing developments at

the subdistrict level. Further, studies have yet to read this spatial exclusion through the lens of “proper domesticity” and queer othering.

Broadly, this thesis argues that the *hukou* functions as a heteronormative national political strategy, excluding migrants from modern, quality Chinese citizenship by spatially and temporally excluding them from urban social reproduction. This argument rests along three theoretical premises:

1. Migrant *hukou* status (local/ non-local & agricultural/ non-agricultural) functions as a barrier to urban social reproduction.
2. Modern ‘quality’ citizenship is constructed through the regulation of migrant social reproduction of labor.
3. The spatial marginalization of migrants by state and state-enabled market forces is a deliberate domestic project.

An exploratory rather than explanatory project, this thesis seeks to describe the relationship between migrant residential patterns and locations of large residential land transactions in Beijing 2003 - 2013.

Background

Following the 1949 Communist Revolution, China's new communist government followed a Soviet-style strategy of rapid industrialization. This industrialization strategy utilized a dual track approach (*eryuan zhi*), privileging the urban industrial economy by artificially inflating industry alongside the devaluation of agricultural products. The dual system, tied peasants to the land through the enforcement of a Soviet-style household registration system,

known as *hukou*. In cities, industrial workers lived under the *danwei* and were provided with housing, basic medical care, and food rationing coupons. The rural populations, organized into agricultural communes, were expected to be self-sufficient and subject to mandatory grain procurement. The commune and *danwei* functioned as the institutions of social, residential, and economic order in Socialist China, dividing rural and urban populations. Migration was disallowed (Cheng and Selden, 1994; Wang, 2004).

After Deng Xiaoping's ascent to power, implementation of the Household Production Responsibility System in 1979 lifted some barriers to migration, freeing peasants from their land and increasingly allowing temporary migration to urban areas (Chan et al., 1999; Liang and Ma, 2004; Wang, 2004). Initially, despite loosened migration restrictions, urban residents continued to rely on food rationing coupons, requiring migrants to self-supply food while laboring in the cities. The maintained control of urban property. Rural residents were granted entitlement to a small parcel of agricultural land, with ownership rights largely held by the collective.

Migration restrictions continue to fade away as China pushes to assume the role of the “World's Factory”. However, the Chinese population remains deeply divided on the basis of rural and urban *hukou* (Chan et al., 1999; Treiman, 2012). Upon birth, the *hukou* system registers all Chinese citizens at a place of official residence and, until recently, classified persons as agricultural or nonagricultural. The local administrative district of one's household registration grants access to most social services. Healthcare, unemployment, social security, and education, particularly that past the compulsory nine years of education, remains inaccessible for many rural migrants outside the place in which their *hukou* is registered. While the widening wealth disparity in the west is frequently tied to the rise of neoliberalism, growing inequality in China is not the result of neoliberalism alone, but of the enduring technologies of the socialist system of

rapid industrialization and the dual system (Hu, 2015; Lin, 2007; So and Chu, 2012; Weng, 2014). As China seeks to enjoy the economic benefits of urbanization without incurring the social costs, migrants to the city are not afforded many of the rights granted to local citizens, including affordable housing, quality jobs, the possibility for retirement, and education for their children. The *hukou*, a primary mechanism of the Stalinist dual system, continues to underpin the widening inequality and wealth disparities in 21st century China (Buckingham & Chan, 2018).

***Hukou* and the Construction of Second Class Citizenship**

In the city but not of the city.

Zhang Li (2001) asks in part how China's transitioning governmental and economic structure is changing migrant subjectivities to extend control and regulation in a capitalist world. In pre-reform China, Zhang argues, power relations lace the rapidly expanding urban areas and social space of the city. Differential status and administration of benefits through the *hukou* and *danwei* system sets the stage for China's accumulation by dispossession (Buckingham, 2017). The administrative hierarchy structuring political, economic, and social relations pre-reform, has been reproduced in current social divisions both inter- and intra-regionally (Zhang, 2001). In the first decades after migration restrictions were lifted, Chan (1994) noted migrants were separated by an invisible wall. Solinger (1999) named this inter-city differentiation a "dual urban society". Migrants are still "in the city, but not of the city" (Chan, 2011). As migrants enter and populate urban centers, *hukou* differentiations have been slow to dissipate. The rural-urban divide in China is reproduced as a *hukou*/non *hukou* divide in Chinese cities (Buckingham & Chan, 2018; Wang, 2004).

While the last fifteen years have seen a number of measures directed at *hukou* reform and the removal of *hukou* associated barriers on paper, opinions differ on the real impact of government initiated reforms. Zhang (2014) contests the existence of any deep-rooted rural-urban divide and inequality, arguing local governments are responsible for the slow pace of *hukou* reform. Despite the Central Government directive for a local *hukou* allocation overhaul, very few mayors took action. Zhang does not, however, discuss the large tax burden many local governments are placed under by China's tax remittance structure, diluting the effect of Central Government directed *hukou* reform without also addressing funding assistance for social programming. Zhang contextualizes differential citizenship claims within China as a difference in entitlements rooted in a local-nonlocal divide, citing both restricted upward inner city migration for local *hukou* holders (Wang, 2004), and benefits only extending to the urban salaried, politicians, and bureaucrats (Nee and Stark, 1989). Chan and Buckingham (2008) critique this line of reasoning, demonstrating these reforms to be little more than cosmetic, failing to dismantle the underpinnings of the *hukou* system and inequality in opportunity. Many scholars agree that the household registration system still serves as origin and continuation of the rural-urban divide, on both a local and national scale (Cheng and Selden, 1994; Wang, 2009).

The process and difficulty of obtaining a local *hukou* in different cities varies. Many smaller cities and the city-region of Chongqing actively encourage in-migration and *hukou* conversion. However, obtaining a local *hukou* is notoriously difficult in high-inflow cities such as Beijing and Shanghai. Requirements often use complex point systems that heavily weight graduate and professional degrees, high-level employment, income, and stability and quality of housing. Even temporary official residence papers, necessary for school enrolment and many

benefits, are inaccessible for those with informal employment or housing (Buckingham & Chan, 2008).

The discrimination, exclusion, and often harsh conditions migrants face in the city has occupied much of the research on rural-to-urban migration (Anderson et al 2003; Buckingham & Chan, 2008; Chan 1994, 1996, 2009; Knight and Song 1999; Solinger 1999; Wang 2004). Barred from permanent settlement by a myriad of regulations on employment and social services many migrants do not settle in the destinations, returning to their villages of origin after they have been aged out of productivity (Meng and Zhang, 2001). Lacking a local *hukou*, migrants face many barriers to unified family structure, employment, legal rights, social status, housing, and affordable, quality education for their children. Rural migrants often face stigma and social exclusion once arriving in the city (Afridi et al., 2014; Li et al., 2006; Wang et al., 2010). Stemming from this stigmatization, Li et al. (2006) found through qualitative interviews based on network sampling and census records that given the sheer number of rural migrants 10% of China's population suffered from mental health issues of some kind. Such social exclusion and discrimination also impact the accumulation of social capital, contributing to further economic marginalization (Lu, Ruan & Lai, 2013). The household registration system has institutionalized a class structure (Montgomery, 2012).

Employment

In 2012, the Chinese National Bureau of Statistics found urban *hukou* holders had a nominal income per capita of 24,564 RMB compared to the 7,916 RMB income per capita for rural residents (Song, 2016). Though rural migrants worked on average eight hours longer per week than local residents, they only made 68% of local residents' income (Li and Li, 2007). These calculations do not even take into account the vast disparity in public benefits urban

residents receive that further widen this wealth gap. Studies on economic marginalization find significant correlations with *hukou* status (Shin, 2009). Employment hierarchies in many ways reflect administrative hierarchies (Liu, 2015). Significant occupational segregation, especially pronounced in better paying government and state-owned enterprises, accounts for some of this wage differential (Song, 2016; Zhang & Wu, 2017). Many of these positions are available only to local *hukou* holders. Migrants have fewer job prospects, costlier job searches, and harsher financial penalties of job loss compared to local residents (Zhang, 2010).

Education

China faces widening urban-rural disparities in educational quality, attainment, and economic return (Connelly & Zheng, 2007; Hannum, 1999; Wang, L., 2011). Long work hours, lack of affordable housing, and education enrollment barriers discourage parents from migrating with their children, contributing to an estimated 58 million left-behind children living in the countryside (Heckman and Yi, 2012). Liu and Erwin (2015) argue left-behind children in China's countryside face similar impacts to the children of transnational economic migration. The number of migrant children are also increasing (Guo, 2007; Lai et al., 2014; Lan, 2013; Wei, 2013). An estimated 60% of migrant families move with their children (Montgomery, 2012). Total children living away from their place of registration grew from 25.33 million in 2005 to 35.81 million in 2010, a 41% increase (Lan, 2013; Wei, 2013). In 2009 migrant children represented 20% of all children in Beijing (Duan & Yang, 2009).

In the city, rural migrants face financial and administrative challenges to enrollment in local schools (Cheng & Yang, 2010; Goodburn, 2009; Li & Placier, 2015; Li et al., 2010). Only in 1996 were schools requested by the Ministry of Education to provide education to children with temporary residency permits. Previously migrant children were barred outright from local

schools (Han, 2009; Rural Education Action Project; Zhou & Cheung, 2017). While as of 2006 national law recommends local governments take responsibility for the education of migrant children residing in their jurisdictions, the state provides little to no funding for these students. Left with the financial burdens, local governments often use their own discretion in applying the request (Montgomery, 2012). Schools and local governments widely ignore a 2008 National Development and Reform Commission directive barring schools from charging extra fees to migrant students (Ming, 2013). Among schools that purportedly register migrants, admittance relies on a migrant family's *guangxi* connections and whether they can supply "five-key government-issued documents", including a labor contract which only 21% of migrants in 2004 held (Montgomery, 2012). Characteristic of Chinese bureaucracy, a migrant must often obtain a series of other required documents first before applying for one of these key documents. Even if 2007 legislation requiring companies to supply migrant laborers with labor contracts was enforced, an estimated one-third of migrants are self-employed (Montgomery, 2012). A Human Rights Watch report estimates nearly 90% of families cannot assemble the necessary documents, leaving their children effectively excluded from public schools, even in cities that claim to enroll migrant children (Montgomery, 2012).

Given these barriers, migrant children often have no option but to attend frequently expensive and under-resourced migrant schools lacking proper materials and certified teachers (Goodburn, 2014; Kwong, 2004; Wang & Holland, 2011). Compared to their urban peers, rural migrants have poorer academic performance (Liang and Chen, 2007). High education level among rural migrant parents' correlates with higher quality education for migrant children, in large part due to ability to pay school fees. However, based on data from the 2008 Rural Urban Migration in China survey, only 20% of migrant parents had finished high school or vocational

school and a smaller 2.5% had obtained higher education (Zhou and Cheung, 2017). Though a 2015 national government press announcement claimed 150 million migrants would be granted public education and other urban benefits by 2020, evidence suggests minimal progress toward this goal (China Hands, 2015).

Barriers exist to higher education as well. The *gaokao*, the exam determining college selection and entrance for Chinese students, is written and administered at the provincial level. Content and scoring varies between provinces and students are required to sit for the *gaokao* in the province in which their *hukou* is registered. Thus, even migrant students living with their parents in the city must return to their home province for their last few years of secondary school to study for their provincial *gaokao*. Many of these ‘returned children’ ultimately drop out of school before sitting their exams (China Labor Bulletin, 2013; Left-Behind Children Survey, 2012). China’s unequal admissions system preferences students from these areas, with students in Beijing and Shanghai requiring significantly lower test scores to gain admittance while receiving a higher caliber education. Students who come from families in which one or both parents serve in an administrative role are eighteen times more likely to be accepted to an elite university (Wang, L., 2011).

Stigma

Confirming previous research on negative stigma against migrants, Tse (2016) found urban residents hold prejudices against rural migrants. Among urban residents, urban *hukou* at birth, high income, and advanced education are associated with increased prejudice. These findings suggest both lasting impacts on migrant social standing and a generational transmission of prejudice. Huang and Yi (2015) point to the state’s use of naming and categorization to control the migrant population (Foucault, 1980; Borneman, 1992; Bourdieu, 1991). Terms like

‘floating population’ convey a spatially unrooted, low quality, powerless, and ignorant population. Posed as a threat to stable social order, this framing implies a need for institutional control (*kongzhi*) and management (*guanli*) (Huang and Yi, 2015). Shifts to terminology like ‘peasant workers’ (*nongmingong*), ‘workers from outside’ (*wailai wugong ren yuan*), and ‘long-term residents from outside’ (*changzhu wailai renkou*) continue to categorize migrants as rural outsiders, temporary laborers in the city rather than members of urban society (MOHURD 2007; State Council 2006, 2011).

“Urbanization with Chinese characteristics”

As China enters into a global, Post-Fordist economy and cities compete for Foreign Direct Investment, Ma (2004) identifies a shift in scale of power from a unified national government to an archipelago of local scales. Decentralization and localized power, as well as localized financial pressure, likewise contributed to increased intercity competition (Lin and Liu, 2000; Wu, 2002). Wu (2002) and Ong (2006) argue the emergent entrepreneurial city is a project created by nation-states. Fleischer (2010) remarks on Beijing’s urbanization and quest for international investment as a developmentalist modernity, marked by attempts to brand Beijing as the “Manhattan of Asia” and present a “beggar free” inner city. Cities view migrants as lacking *suzhi* and thus a barrier to this modernity. City branding strategies in Beijing have been found to be a cause for mass dislocation, especially areas with large concentrations of migrants (Buckingham & Chan, 2008; Fan, 2008; Liu, 2015). Liu (2015) further suggests that the Beijing municipal government funded city branding efforts conversely lead to a lower standard of living and larger wealth gap for migrants. Rather than extending public housing allocation and entitlement benefits to rural migrants, Beijing excludes migrants from the center city, denying their right to the city claims.

Wang et al. (2014) categorize perspectives on Chinese urbanization into three theoretical perspectives: institutional, rational choice, and procedural dynamic. The institutional perspective stresses the ways government institutions have driven urbanization in China (Gaubatz, 1999; Wang et al., 2014; Wu, 2007). In contrast, rational choice emphasizes the role of private citizens in bottom-up urbanization, frequently in relation to urban sprawl (Lin, 2007; Ma, 2005; McGee et al., 2007). The authors use procedural dynamic to describe a hybrid analytical approach that treats Chinese urbanization as an ongoing process of patterns, trends, impacts, and responses by state, market, and private actors (Chan, 1994; Wu, 2003). Scholars working within this framework believe current urbanization in China cannot be understood only within theoretical frameworks developed to describe urbanization in the west.

Theoretical focus has shifted from the role of globalization have to an interest in the role of neoliberalism in the changing Chinese city (Dick & Rimmer, 1998; Friedmann, 2005; Lin, 2007; Ma, 2004; Ma & Wu, 2005). Hu (2015) argues that the application of theoretical views of capital accumulation that center inter-city competition, urban entrepreneurialism, and neoliberal strategies (Brenner & Theodore, 2002; Harvey, 1989) mischaracterize the primary role of the Chinese city as a market center while minimizing the role of state actors. Researchers note a link between land reform and the courting of FDI for property development (Wu, 1999, 2002; Yeh, 2005). The new urban land market incentivizes profitable urban land development over residential use value (Lin, G. et al., 2014; Shin, 2009; Tao et al., 2010; Yang & Chang, 2007; Zhu, 2005). While Chinese and Western cities show similar patterns of the urbanization of injustice (Liu, 2015), the continuity of the household registration system in China structures the housing market, and associated development and land expropriation, to produce unique social formations in China rooted in the household registration system (Chan and Wei, forthcoming).

Housing

Urban *hukou*, party membership, and upper level positions in state corporations correlate with higher quality housing (Logan et al., 2002; Huang & Yi, 2015). When housing was initially privatized, Beijing *hukou* holders were offered subsidies for purchase of their pre-existing government rental units. As the price of market rate real estate skyrockets, Beijing continues to only offer local residents public assistance for both housing rental and purchase. Ineligible for public housing, most migrants likewise cannot afford the high price tag of market rate housing. Liu (2015) finds the lack of housing to be a large barrier to local welfare for migrants.

Beijing, like many of China's coastal metropolitan areas, faces an affordable housing crisis (Huang, 2012). Research studying Beijing's urbanization, development, and suburbanization shows migrants, already the demographic most lacking access to affordable housing, take the brunt of increasing housing costs and demolitions (Logan et al., 2009). Huang and Yi (2015) argue the government executes a strategy of spatial exclusion through housing, meant to control, marginalize, and entrench the inferior status of migrants in cities. They point to strategies of 'purification and control' and the 'managing migrants with housing' (*yifang guang ren*) (Huang & Yi, 2015). A 2007 regulation explicitly targeting migrants, limited housing density to a maximum two people per room and a minimum 5 square meters living space per capita.

As housing near the city center becomes increasingly inaccessible, migrant settlements cluster in proximity to the 'urban-rural intersection' (*chengxiang jiehebu*) or 'urban-rural transitional belt' (*chengxiang jiaojiedai*) on agricultural residential land (Zhang, 2001). Municipal acquisitions of agricultural land have expanded the morphological city and positioned peripheral farming villages as the sites of significant informal migrant settlement. The dual land

structure enables the formation of these Villages-in-the-City (*chengzhongcun*) (Buckingham & Chan, 2018). In 2008, 116 ViC were located in the urban fringe, housing approximately 4 million migrants (Lin, Y. et al., 2014). Many of these informal settlements are proximal to informal employment opportunities and industrial parks. For migrants, they serve as important source of informal housing, education and jobs (Lin, Y. et al., 2014).

Kim (2016) estimates one million people also live in Beijing's underground, renting apartments in basements and bomb shelters. These residents trend younger, with lower levels of education and income (Huang & Yi, 2014). Despite regulations in 2010 meant to discourage underground housing and string of evictions starting in 2011, a robust rental market for underground apartments continues (Zhang, 2013; Huang & Yi, 2014; Kim, 2016). Liu (2015) found that government demolition and clearing of informal, and illegal, housing and neighborhoods overtly targeted migrants working in low-skill positions. Prior to the Beijing 2008 Olympics, 104 ViC inside the 4th Ring Road were demolished. In 2010, Beijing started redeveloping another 50 ViC, replacing the informal housing settlements with market-rate housing, public rental housing for available to those with Beijing *hukou*, and industrial land (Lin, G. et al., 2014). While housing is provided for the locally registered residents of the redeveloped ViC, the migrants living in those areas often find themselves pushed further from the city center.

Suzhi.

Yan Hairong (2003, p. 494) describes *suzhi* as “qualities of civility, self-discipline and modernity” as well as ‘a neoliberal governmentality’. Discourse in China regarding population quality (*suzhi*) has been argued to represent an individualization of status and productive capability (Rofel, 2007). As consumption increasingly signifies urban citizenship, consumption of housing and education are visible and effective means of belonging and measure of *suzhi*

(Fleischer, 2010). “Consumption as moral imperative” is increasingly viewed as a hallmark of urban China (Fleischer, 2010: Xx).

Suzhi describes an individual’s capacity for contribution to Chinese modernity, people as backward or progressive, educated or uneducated (Fleischer, 2010). The discourse stands in as a signifier for overtly geographic divisions between urban and rural, interior and coastal, and small and large cities. Ultimately descriptions of *suzhi* recreate the urban/ rural divide operating on the assumption that people of low quality hail from rural regions (Anagnost, 2004; Ho, 2009; Kipnis, 2006; Rofel, 1999).

Identity has likewise been caught up in the ongoing debate over the relationship between globalization, neoliberalism, modernity, ‘authentic Chineseness’ and westernization (Ho 2009; Rofel, 2007). Discourse frames migrant sexualities simultaneously as repressed and sexually subversive, a source of prostitution and STDs as well as a threat to proper sexual mores (Hoy, 2007). Migrant women especially threaten institutions of family and marriage (Zhang, 2001). Ho (2009: p. 3) suggests that the assumption of gay and lesbian identities by the urban class both signifies a “quest for the western experience of modernity and authenticity”, shrouded in the ongoing tension between social status and class. The question of simultaneous betrayal and articulation of Chineseness (Ho, 2009: p. 4) doubles as a question of who will come to represent the epitome of what this Chineseness entails. Within the same-sex identified male community, the question of *suzhi* has been particularly compelling. Gay male prostitutes, colloquially known as money boys, and those of ‘low *suzhi*’ are seen as a barrier to a rights based approach to LGBT equality in China (Ho, 2009; Rofel, 1999; Solinger, 1999).

Queering as a state strategy

In her work on the modern family in Singapore, Nathalie Oswin (2010; 2014) argues that foreign migrant construction workers in Singapore are queered through sexual norms and governance that deny them access to public housing as well as the ability to marry and settle in the city-state. Their inability to participate in ‘proper domesticity’ likewise places them beyond the margins of modern quality citizenship in Singapore. In doing so, Oswin moves beyond the study of queer subjects and a hetero/ homosexual binary to research “the ways in which heteronormativity works through teleological narratives of progress and social reproduction” to produce both normalized citizens and queered others (2014, p. 414).

The treatment of rural-to-urban migrant workers in Beijing bares resemblances to migrant workers in Singapore. Like foreign laborers in Singapore, rural migrants in Beijing are “stranded in a heterotemporality that is queered via regulatory mechanisms that render them permanently transient and outside naturalization and normalization” (Oswin 2014; p. 415). *Hukou* functions as this regulatory mechanism. Classified at birth through inheritance, family forms the foundational building block structuring relationships, opportunity, and mobility as well as the unit through which national and local government can enact population control and management. Within the city, *hukou* regulates migrant access to schools, to affordable housing, to employment, to social welfare benefits, and a life not marked by precarity. The precarity of social reproduction is not simply a byproduct of the influx of capital and neoliberal urbanization, but the intended result of social governance evident in Beijing’s urbanization.

The household registration system places rural-to-urban migrants on a timeline that traverses in and out of the city, sometimes staying but always leaving. Elizabeth Freeman (2007: 159) contextualizes asynchrony as a queer phenomenon, accompanying those traveling along "marginalized time schemes" whose time has “not yet arrived or never will”. The experience of

many rural-to-urban migrants is produced through a temporal exclusion from developmental heteronormative timelines of family life and thus urban belonging and citizenship.

Michael Warner writes in *Fear of a Queer Planet* “reprosexuality involves more than reproducing, more even than compulsory heterosexuality; in involves a relation to self that finds its proper temporality and fulfilment in generational transmission” (1993: 9). Migrant workers are “in the city, but not of the city” (Chan, 2011), very explicitly lacking a future through city planning geared toward making such a future effectively impossible, destined to fail in the pursuit of normative urban reprofuturity. Caught amongst tensions between the local and the global, the modern and the traditional, the rural and the urban, migrants are “destined for no future, based not upon whether they can or cannot reproduce children but on what capacities they can and cannot regenerate and what kinds of assemblages they compel, repel, spur, deflate” (Puar, 2007: 211). Pursuing a structurally unachievable temporal futurism, migrants labor for the possibility of a future for their children or themselves in the city. Rights regimes administered through the *hukou* and structural barriers only act to secure the future prosperity of the state. Barred from the possibility of normative family and a teleological progressive life in the city, the predominantly rural migrants exist in a state of queered precarity.

The move to apply a queer analytic to the Chinese *hukou* system and migration does not claim migrants as queer subjects themselves. Nor should it serve to divorce queerness from the fleshy, fluid nature of the love, sex, and desire of queer subjects, distracting from the political potency of queer lives, visibility, and activism. Rather, it argues the analytical usefulness of viewing heteronormativity as a continual project and assemblage of norms through which power operates.

Methods

Broadly, this thesis asks: what is the relationships between migrant settlement patterns, and urban redevelopment? Census subdistricts form the primary scale of analysis. This subject is approached through a series of questions. Descriptively, this project asks: How are migrant residents, agricultural *hukou*, college education attainment, collective households, and age distributed across Beijing at the subdistrict level? How have the demographics shifted at the District-level of Beijing from the 2000 to the 2010 Census? How are large residential land transactions temporally and spatially distributed across Beijing? Inferentially, how does *hukou* status relate to college attainment, household type, and age distribution? How does *hukou* relate to land transactions, controlling for household type, college attainment, and age distribution? What features characterize the age structure in areas with of residential redevelopment?

Through an exploration of these questions, this thesis seeks to demonstrate:

1. Migrant spatial distributions show migrants concentrated on the urban margins and correlated at the subdistrict level with rates of young adults, children, collective households, and education level.
2. A 2000 Census to 2010 Census shift of migrants and associated characteristics at the district level from the inner suburbs to the outer districts.
3. Residential land transactions trend outward, mirroring 2010 migrant distribution patterns and 2000-2010 demographic shifts.
4. Outsourcing of social reproduction is evident in migrant dense regions and significant land transactions.

These questions are approached through tabulations from the 2010 Beijing Population Census at the subdistrict level, comparison between the Beijing 2000 and 2010 Population Census at the district level, compiled to account for changes in administrative districts between census years, and municipal land transactions records crawled and published as a database by Beijing City Lab. Using bivariate correlations and distribution maps, variations in demographic composition among subdistricts is analyzed through the relationship between *hukou* status (local or migrant) and *hukou* type (agricultural or non-agricultural) with collective household type, one generation households, higher education rates, and age composition. District level Census tabulations are used for comparison between the 2000 and 2010 Beijing Census Land transaction data was filtered to include only land transactions over 100,000m² built for the purpose of housing. These transactions were projected as point data and joined with the subdistrict polygons based on spatial location. Relationship between large residential land transactions and migrant settlement characteristics were analyzed using bivariate correlations, spatial and temporal representation. A hot spot analysis identified subdistricts in and around significant clusters of land transactions. Given the fluid nature of precarious migrant settlements, the ambiguity between land transaction release and construction, and the lack of precision in shapefile boundaries, the hot spot clustering analysis helps identify a larger regional trend in land transaction location, including both subdistricts with numerous land transactions and subdistricts likely to be impacted by significant clustering of regional development. Age pyramids were constructed for eleven of these subdistricts to visualize the age structure in areas with significant residential development activity.

Chapter Two overviews the changing land use patterns of Beijing in the pre and post-reform eras and the role of dual rural-urbans structure in driving Beijing' suburbanization. An

intensification of migrant displacement and the demolition of informal migrant settlements is described as the intended outcome of inter-city competition induced city marketing efforts in conjunction with municipal conversion windfalls. Chapter Three introduces the data sources, assembly, and design then describes the analysis results. Chapter Four offers an interpretation of the relationship between migrant spatial distribution and large scale residential land transactions and situates migrant spatial and temporal marginalization within the context of a queer temporality and precarity.

CHAPTER 2: The cultivation of quality domesticity in Beijing's global city narrative

Shifting land use patterns

The land area of Beijing covers 6,336 sq mi, roughly the size of Connecticut and Rhode Island combined. The municipality is considered a provincial level administrative district, further classified into eighteen districts and counties, further subdivided into 289 subdistrict level administrative divisions (see *figure 1*). The municipal boundaries of Beijing contain large swaths of rural and mountainous land. In the late 1950s, Beijing extended administrative control over nine rural counties as well as nine urban districts. At the time of the 2010 Census, the districts of Dongcheng, Xicheng, Chongwen, and Xuanwu composed the urban core (see Figure 2). Xuanwu and Chongwen have since merged into Xicheng and Dongcheng. The near suburbs, Haidian, Chaoyang, Shijingshan, and Fengtai, experienced significant growth following the 1949 Revolution before migrant restrictions were implemented. As migration restrictions were lifted, population growth has dramatically increased in the first tier outer districts, Tongzhou, Mengtougou, Daxing, Fangshan, Changping, and Shunyi. In 1978, the built-up area of Beijing encompassed 335 square kilometers. Twenty years later by 1998, the built up area increased 45.6%, reaching 488 kilometers squared (Fleischer 2010). The 2nd level outer districts, Pinggu, Huairou, Yanqing, and Miyun, remain largely rural but have more recently experienced sustained growth and development as urbanization intensifies. Still, much of the areas included within Beijing's boundaries is outside of the urban core's commuting zone, including farmland, mountains, forest, national scenic areas, portions of the Great Wall.

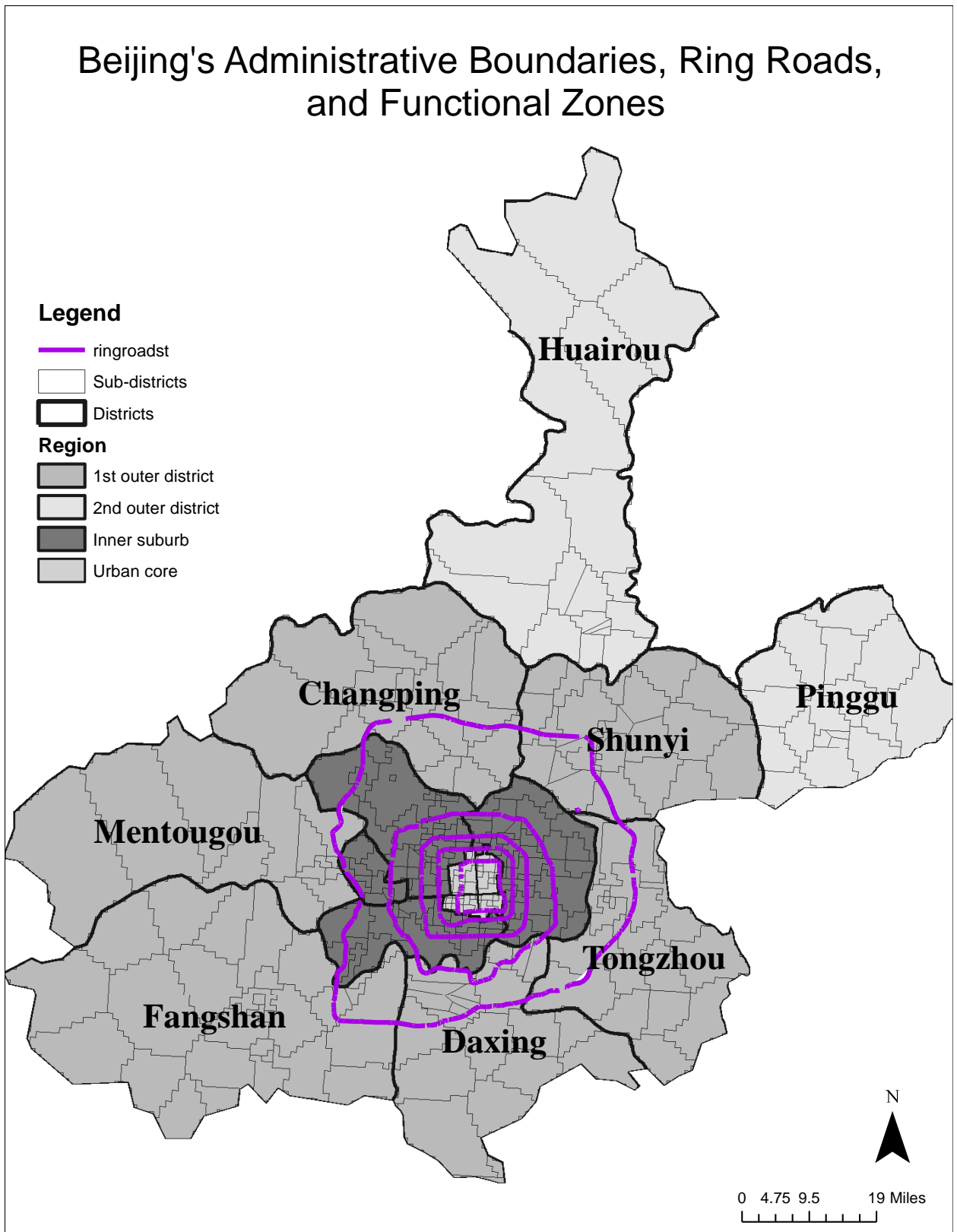


Figure 1: Beijing administrative boundaries and ring roads

Beijing's Administrative Boundaries, Ring Roads, and Functional Zones

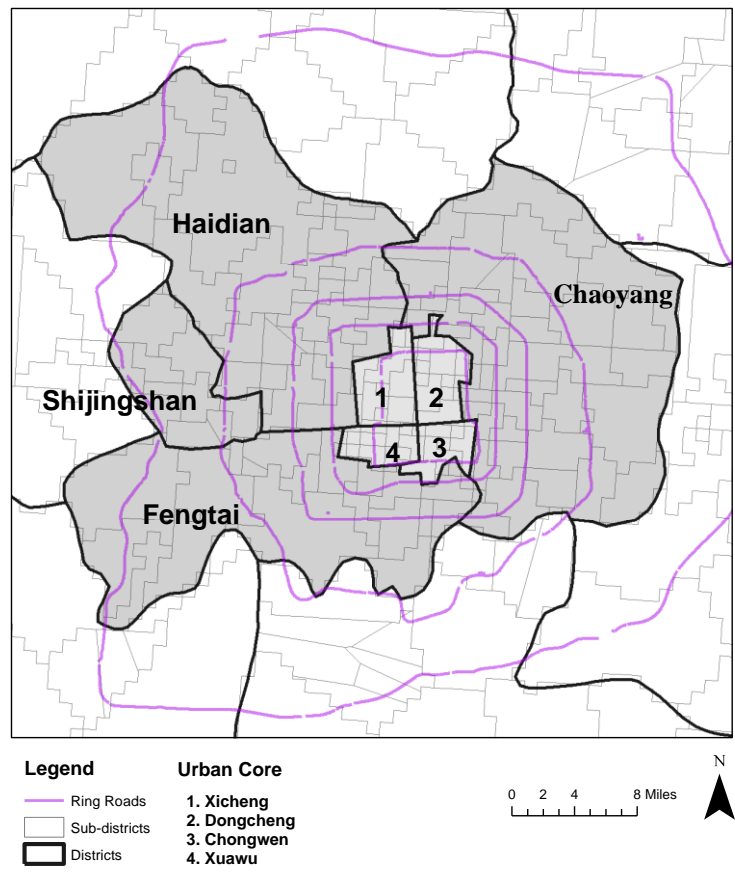


Figure 2: Beijing urban core, inner suburbs, and ring roads

Following the 1949 Communist Revolution, the central government designed cities to support rapid industrialization. Land in the city center and peripheries was used to serve industrial purposes. Agricultural land surrounding Beijing was brought under Beijing’s direct administrative control to facilitate procurement of agricultural produce for urban consumption. The *Danwei* served as a central feature of the Socialist city, functioning as a “city within a city” (Ma & Wu, 2005, 6). Worker housing compounds clustered near the factory and included stores for household goods, healthcare and other facilities needed to serve workers’ daily needs.

Government administration facilities were located apart from commercial and business districts. The central party government, rather than a commercial land market, structured all land use. Urban residential stratification along income lines was minimal, with social class often aligning with Chinese Communist Party membership and rank.

Land classification and transfer

Distinctly different from urbanization in Europe and North America, the dual urban-rural land classification system fuels Chinese urbanization. A function of this system, agricultural *hukou* does not carry entitlements to the same basket of benefits as their urban counterparts. However, those with agricultural *hukou* are entitled ownership to a small parcel of land theoretically adequate for subsistence agriculture. The ownership rights for much of this residential and agricultural rural land are held by the village collective, thus the land may not be sold by an individual farmer. Land usage is largely restricted to the residential or agricultural purposes for which it was classified. Purchase is limited to government and State Owned Enterprise (SOE). In contrast, nearly all urban land is owned by the state, which reserves the right to lease and allocate land to different land holders. The Chinese tax sharing system places a significant burden on municipal governments in financing local social security obligations. Urban land transactions, in which rural land is administratively reclassified as urban land and sold for development, serve as a primary vehicle for state direction of urbanization and local government revenue source.

The 1986 Land Administration Act standardized farmer compensation for land acquisitions as three to six average annual income over the previous three years. In the 1990s, municipal governments were granted the authority to acquire land classified as rural for the development of specific projects, later allocating the land for different uses. Municipal

governments retain authority to acquire urban land previously allocated for use in urban infrastructure projects, such as the construction of new highways and transportation centers. Work-units also are able to acquire rural land in order to develop it to meet the needs of specific project goals. While the previous sets of land transactions serve municipal and work-unit project development, other land transactions allow municipal governments to benefit fiscally from land acquisition and leasing. Paying the customary three-to-six times annual income to farmers, municipal governments may acquire peripheral agricultural land for urban land leasing. Sold at market rate, primarily to foreign commercial developers, municipal governments enjoy large “conversion windfall” profit margins. Similarly, urban land held by work-units may be acquired and reclassified and sold by municipal governments for commercial purposes at market rate. Work units may also exchange lands and more recently secondary land market allowing for the transaction of leased lands among land holders has developed.

Global City Dreams

The land use patterns of Chinese cities increasingly resemble those of many Western cities. As Chinese cities seek to attract foreign capital and the future of Chinese economic development depends on increased domestic consumption, cities face the challenge of transitioning Maoist-era production cities into consumption cities (Ma & Wu, 2005). After 1978 and accelerating through the 1990s, Beijing industrial employment shifted. While employment in Primary and Secondary industrial employment has fallen in both percentage and real terms, employment in tertiary sectors has grown, most markedly since 2002. The industrial infrastructure of Beijing has likewise been repurposed (Doi & Chai, 2015). As the tertiary sector increasingly dominates city center land use, malls, restaurants, high-end retail establishments, and other sites of consumption have replaced factories and housing complexes. The growing land

use segregation separating financial, commercial, and residential districts has accompanied the increasing visibility of social and wealth disparities (Ma & Wu, 2005).

The immense pool of surplus labor in the countryside facilitated China's ability to meet the demands of just-in-time production, specialization, and flexible accumulation (Ma & Wu, 2005) that supplies the shelves of Walmart with bargain price "made in China" goods. Originally institutionalized to deflate agricultural production costs, the *hukou* system now artificially deflates of labor costs in "the world's factory" (Chan, 2010). *Hukou* restrictions kept young rural workers cycling through the city, returning to the countryside as maximum productive capacity was exhausted. Outsourcing social reproduction of the labor to the countryside prolonged China's supply of surplus labor, delaying the closure of the urban-rural pay gap.

However, factory relocation of transnational corporations to Southeast Asia due to rising Chinese labor costs has incentivized intercity competition as a growing municipal prerogative. Though the central government retains a firm hand over economic policy and development, local planning has increasingly shifted to municipal government. In turn, local governments have handed much of the responsibility for urban planning design to contractors and international corporations with investment capital. Starting in the 1990s, foreign architects were hired to design skyscrapers, replacing the building stock in much of the urban core (Fleischer, 2010). The new millennia brought the marketing of a "Great International City" as the model for the "ideal Chinese city" (Gaubatz, 2005, 98). In the midst of China's campaign to enter the WTO, China pursued a 1990's goal to develop 50 "international cities". Chinese cities engaged in increased brand marketing efforts, playing host to a slate of international sporting events and conferences (Gaubatz, 2005). Large infrastructure projects expanded transportation corridors. In Beijing, Haidian, Chaoyang, and Xicheng Districts have endeavored to develop themselves as Central

Business Districts and financial centers, transforming the old *Danwei* “city within a city” model into one of distinct residential, commercial, entertainment, and business sectors.

Accompanying this modernization and polishing of the infrastructure for business and investment purposes, city officials increasingly criminalized vagrancy and begging to project a “beggar free” inner city. Other attempts at increasing Beijing’s appeal to foreign investment include crackdowns on “uncivilized” behaviors such as public spitting. Such regulations implicitly and explicitly target migrants, meant to regulate and exclude ‘low-end populations’ from the public sphere. Urban beautification campaigns as part of city marketing strategy in the lead up to the 2008 Beijing Olympics stressed social reform of public behavior, promoting the image of a civilized, modern ‘harmonious society’ (Broudehoux, 2012). Street vendors, a migrant dominated occupation due to the difficulty of finding formal employment, face increasing regulation and harassment (Swider. 2015).

Urban planning tension has been a theme in central Beijing as interests negotiate around historic preservation, development of the old hutongs, and large Maoist era housing blocks, particularly in Xuanwu and Chongwen (Cook et al., 2013). Preservationists charge that the historic buildings of old Beijing are being demolished and replaced by “plazas, supermarkets, department stores, malls, and hotels” (Cook et al., 2013). City planners have stated intentions to preserve 37% of Old Beijing. By 2010, 9.34 million m² of housing had been condemned. By the 1980’s 3,900 of Beijing’s 7,000 hutongs in 1949 remain. In more recent years, hutong demolition has proceeded at a rate of approximately 600 per year (Wang J., 2011). Dongcheng and Xicheng have poured resources into developing their respective business districts, Dongcheng as the city’s core area and Xicheng as the financial center.

Within the inner suburbs, municipal infrastructure projects, such as the construction of the Third and Fourth Ring Roads in the 1990s and the Fifth Ring Road in 2003, have spurred significant population growth since 1975 (Doi & Chai, 2015). Accounting for 60% of all development in Beijing in 2005, development post 2000 has been intensive, particularly of commercial housing (Liu, 2015). The 5th Ring Road and 6th Ring Road in 2009 propelled outward growth in the agricultural regions 30-50 kilometers away from the city center (Liu, 2015). Post 2000, 25% to 30% of Beijing's commercial housing development has targeted this region (Doi & Chai, 2015). Development frequently targets informal migrant enclaves, executing large scale demolitions in places such as Tangjialing. Such urban renewal projects have a disparate effect on residential areas already made precarious by rising housing costs in Beijing.

Housing Inequality

The *danwei* system guaranteed housing provision for industrial workers. Though housing quality varied along social and political hierarchies, housing availability was not subject to market forces. Migration not sponsored by the *danwei* was explicitly disallowed, preventing uncontrolled pressure on the housing market before migration restriction were relaxed. Prior to reform, under-funding induced overcrowding posed the most significant challenge to housing supply. The first wave of migrants from the countryside in the 1980s worsened overcrowding and housing shortages. In response, the central government moved to address the lack of funding, incentivizing new housing construction. Some cities instituted rent hikes and allowed tenants the option of purchasing their dwellings in an effort to raise capital for new housing construction (Cook et al., 2013). Much of the responsibility to fund and construct additional housing fell on the *Danwei*. Pre-existing disparities in *Danwei* funding were reflected in increasing housing inequalities (Fleischer, 2010).

Land use and development began to shift dramatically during the reform era following the ascension of Deng Xiaoping in 1979. In 1987, the First Session of the Seventh People's Congress proposed a system for the paid transfer of land rights, opening the door to the current system of long term leasing. A year later in 1988, the State Council issued "Provisional Regulations of the People's Republic of China on Land Use Tax in Cities and Towns" directive, establishing the urban land market. Importantly, this directive also transformed the role of the dual urban-rural structure from rapid industrialization to rapid urbanization, encouraging cities to utilize the land use tax for revenue to meet their heavy tax burden.

The 1991 Second National Housing Reform Conference solidified the experiments of the 1980s into three national initiatives: financing much need repairs to the aging 1950's housing stock through rent increases, allowing tenants to purchase their residencies with the assistance of installment plans, and allowing the sale of new construction on the market. The burgeoning financial sector and increasing wages incentivized investment in housing (Cook et al., 2013). Further reforms in 1992 increased investment in private entities rather than state developers for the construction of housing, much of which was geared toward the upper end of the market. Finally, in 1998 the State Council formally replaced public housing provisions with subsidies, codifying a shift from a welfare-oriented system to a market oriented housing system (Yu & Cai, 2013).

A complete withdrawal of the state from housing did not accompany the shift from housing provisions to subsidies. In 2000, one third of new construction was state built and work units continued to provide housing subsidies (Fleischer, 2011). After two decades of privatization, the home ownership rates among urban households grew from 20% in the 1980s to 70% in 2000. High-income residential districts became an increasingly common feature in

Beijing's urban, and less urban, landscape. Such neighborhoods, catering to high-income foreigners, overseas, and local Chinese, concentrate to the North and Northeast.

Beijing has instituted four different types of social housing to assist residents who can't afford the market-rate housing. However, requirements make such subsidized housing inaccessible to those without local Beijing *hukou*. Two types of housing, 'Affordable Housing' (*jingji sheyong fang*) and 'Fixed-price Housing' (*xianjia fang*) offer below market rate purchase options for middle and low income residents holding a Beijing *hukou* for at least three years. Purchase of both types of housing come with more limited property rights than market rate housing. Government sets controls for the price and type of housing for fixed-price housing while the government allocates land to developers for affordable housing, offering the developer a set profit. Two types of affordable rentals are also offered. A limited number of 'Low-rent Housing' (*lian Zhu fang*) subsidized units are available in state owned properties for low-income Beijing *hukou* holders only. The only type of social housing available to migrants is public rental housing. However, to be eligible, a migrant must have worked in Beijing for at least a year, paid into the public housing fund, and have a temporary residence card or be employed in one of the science and technology development areas. Low-income migrants are usually employed in the informal economy, rendering them ineligible.

Demolitions

In a city with rapidly increasing rents far exceeding the financial capacity of many new arrivals, migrant enclaves cluster in the rural fringes of Beijing. The land ownership rights of agricultural *hukou* holders and their village collectives enables them to profitably construct and rent comparatively affordable housing to migrants. Renting out part of their residential property accrues more income than farming. Construction of housing on collectively owned land brings in

further income for the rural collective. Local district governments in turn benefit from fees charged to migrants. Previous migrant enclaves included a cluster of garment workers from Wenzhou in Zhejiangcun in Fengtai District in the 1980's (Zhang, 2001). Enclaves in Haidian have included Henancun, Xinjiangcun, Anhuicun, and Tangjialing.

However, a state-controlled pro-growth coalition formed between Beijing and corporate developers over the last two decades pushed these migrant settlements farther and farther to the margins (Jeong, 2011). Land rent has become an increasingly important source of income for the Beijing government. Beijing's growing middle class, no longer tied to work-unit housing, have dramatically increased the demand for high-end housing. The government provides this previously agricultural land to developers through a series of *hukou* conversions and land acquisitions. In exchange for a combination of monetary compensation, housing, and employment, the municipality converts local village residents' *hukou* from agricultural to non-agricultural. The city then converts the newly acquired agricultural land to urban and leased to developers. Developers in turn demolish the informal housing structures to make way for high-rent, high-rise apartments and residential communities.

Through this process in 2001, Xinjiangcun in Haidian District was demolished to make way for apartments and a 23-story business tower (Jeong, 2011). Two Henancuns were also demolished in 2005. Local villagers from one of these locations were compensated with 30,000 RMB, promises of higher wage employment in the new development, and a portion of profits from the land sale. When interviewed in 2008, villagers had yet to see the promised wage increase or their portion of land sale profits (Jeong, 2011).

Tangjialing, a vibrant unofficial residential settlement in northwest Beijing and the site of Si's (2009) initial studies on the Ant Tribe, was demolished in December of 2010 as part of an

urban renewal strategy. The planned redevelopment of the area included the construction of 100,000 square meters of low-rent public housing for villagers with a *hukou* in Tangjialing and market-rate housing for white-collar workers with a local Beijing *hukou*. Of the 3,000 newly developed apartments only 800 were allocated to displaced villagers. Population density shrunk. Rent in these new complexes started at 1000 RMB per month (Gu et al., 2015). Villagers compensated with ownership of an apartment are only allowed to sell their home to the local housing office, not on the open market. Reduction in bus lines and the loss of income from rent collections resulted in a 70% unemployment rate among previous villagers. A portion of the land was also converted to industrial land for use in high-tech manufacturing (Gu et al., 2015).

This redevelopment pushed the majority of Tangjialing residents, estimated at approximately 41,000 migrants, farther from the city center into the outer districts. 15,000 people relocated to Shigezhuang and West Banbidian in Changping District. A survey of 461 residents of Shigezhuang found that 69.3% had a college degree and almost half of those survey had lived in the Shigezhuang for less than a year (Gu et al., 2015). Other popular destination included Xiaoniufang, Liulitun, Xiyuan, Fenghuying, and Huoying. Following urban renewal in Tangjiling, many neighboring migrant destinations also experienced large rent increases, including a 30% jump in Huilongguan and Tiantongyuan. Over a single year, rent in Xiaoniufung Village increased from 450 RMB in 2010 to 700-800 RMB in 2011. Rent in Xidian increased from a median range of 250-450rmb in 2009 to 350-600rmb in 2010 (Gu et al., 2015). Such experiences of villagers after *hukou* conversion are common and the benefits of *hukou* conversion often over promised. As their settlements are demolished, many migrants relocate to a proximal area only to quickly find their new home slated for demolition.

CHAPTER 3: Residential Development for Whom: Outsourcing Social Reproduction and the Spatiotemporal Marginalization of Migrants

Purpose.

This study describes the relationship between different migrant demographic profiles and large-scale residential redevelopment in Beijing at the subdistrict level. Mass migration into the urban center, by job seekers and students alike, puts pressure on Beijing to regulate and control these new migrants. Many migrants are in their early twenties and thirties. Some have come seeking the higher wages Beijing offers, hoping to send remittances home, save to one day build a house or marry. Many come to the city for or after graduating post-secondary education. For children of the Post-1980s generation, years of sacrifice by their parents, extended family, and sometimes whole villages have given them the opportunities to pursue post-secondary education, graduate from college, and pursue success in the big city. Burdened by household registrations outside Beijing, many urban jobs are off the table for residents without local *hukou*. Unable to return to the countryside, whether by personal choice, shame, or lack of employment opportunities, many migrants struggle financially in the city. Skyrocketing rents across Beijing and the exclusion of non-local residents from affordable housing programs forces migrants away from the urban core. As a result, migrants often live in informal housing settlements constructed on agricultural land in the peri-urban fringe. Beijing also views this collectively owned agricultural land as a critical source of profit through land transfers and sale to private developers. Urban redevelopment targets these areas as developers demolish migrant housing to build profitable residential development inaccessible to the legions of displaced migrants.

Research Questions

Broadly, this thesis asks: what is the relationship between migrant settlement patterns, and urban redevelopment? Census subdistricts form the primary scale of analysis. This subject is approached through a series of questions. Descriptively, this project asks: How are non-local *hukou*, agricultural *hukou*, college education attainment, collective households, and age distributed across Beijing at the subdistrict level? How have the demographics shifted at the District-level of Beijing from the 2000 to the 2010 Census? How are large residential land transactions temporally and spatially distributed across Beijing? Inferentially, how does *hukou* status relate to college attainment, household type, and age distribution? How does *hukou* relate to land transactions, controlling for household type, college attainment, and age distribution? What features characterize the age structure in areas of intensive residential redevelopment?

Through an exploration of these questions, this thesis seeks to demonstrate:

1. Migrant spatial distributions show migrants concentrated in the rural-urban transition zone and correlated at the subdistrict level with rates of young adults, children, collective households, and education level.
2. A 2000 Census to 2010 Census shift of migrants and associated characteristics at the district level from the inner suburbs to the outer districts.
3. Residential land transactions trend outward, mirroring 2010 migrant distribution patterns and 2000-2010 demographic shifts.
4. Outsourcing of social reproduction is evident in migrant dense regions and significant land transactions.

Data Assembly and Design]

Beijing 2010 subdistrict Census.

Beijing subdistrict shapefiles.

The shapefiles for the subdistricts of Beijing were obtained through the generosity of Yanning Wei. As of the 2010 Census the urban core encompassed the districts of Xicheng, Dongcheng, Xuanwu, and Chongwen. After the 2010 Census, Xuanwu and Chongwen Districts were merged into Xicheng and Dongcheng Districts respectively. The surrounding Chaoyang District, Haidian District, Fengtai District, and Shijingshan comprise the inner suburbs. Further from the city center Mengtougou District, Changping District, Shunyi District, Tongzhou District, Daxing District, and Fangshan District mark the first level of outer districts. Largely rural, Yanqing County, Miyun County, Huairou District, and Pinggu District are the second level of outer districts beyond the commuting zone (Feng, Zhou, and Wu, 2008). In 2015 Miyun County and Yanqing County were upgraded to metropolitan districts. The districts are further subdivided into 289 subdistrict level administrative divisions. Due to data restrictions by the publishers of the Shapefiles, the subdistrict boundaries are unfortunately lacking in precision.

2010 Beijing Census

Data were sourced from the Township, Town, and Subdistrict Volume of the Tabulation on the 2010 Population Census of Beijing Municipality. At the time of access, data were divided into variable specific tabulations downloadable as separate excel sheets. The data set was cleaned, filtered, and combined into a citywide database of Beijing census results organized by subdistrict name. In order to compare the variables across subdistricts of different population size, values for most variables were computed to a percent of a given subdistrict's total universe

for the given variable. Generation per household were reported as ratios in the original tabulations.

Translations.

English-Mandarin translation was needed to align spreadsheets and shapefiles. The Beijing Subdistricts shapefile provided by the University of Michigan China Data Center labels polygons with *pinyin* and their unique census identifier. Data tabulations from the National Bureau of Statistics gave the names of census designated places in English, unaccompanied by their unique census identifier. Separate towns and townships were also included in the data tables that were not included in the shapefile table. Common variables and attribute data between the shapefiles and tabulations were compared to verify English and Chinese place names were accurately matched.

Variables

Age 20 – 29, children, migrants, *hukou* type, household type, generations per household, and education were the primary variables used in analysis (see *table 1*). For the purpose of analysis, columns were combined to create a count of the population under 15, and between the ages 20 – 29. Population counts are given for residents living in the subdistrict for more than six months at the time the census was taken. *Hukou* type is classified as agricultural or non-agricultural. This relates to an inherited registration class not active occupation. Households are classified as family households or collective households, such as university, factory dorms and group housing in which residents are not blood relations. Persons rather than households are used as the unit of analysis to count the population registered in collective households. Households are the unit of analysis for one-generation households. Education variables, taken from the

population age 15 and above, for some college or trade school and undergraduate were combined to create a variable for higher education.

Table 1: Variables, pinyin of label in Chinese census tabulations, variable description, and unit of measurement

Variable	Chinese	Description	Unit
Population	常住人口 (<i>chángzhù rénkǒu</i>)	Total population residing in location 6+ months	Person
Migrant	外来人口 (<i>wàilái rénkǒu</i>)	Population with <i>hukou</i> in other city or province	Person
Agricultural	农业户口 (<i>nóngyè hùkǒu</i>)	Population with agricultural <i>hukou</i>	Person
Collective	集体户 (<i>Jítǐ hù</i>)	Population non family-based households	Person
Higher Education	大学专科 & 大学本科 (<i>dàxué zhuānkē & dàxué běnkē</i>)	Population with vocational or undergraduate education	Person
One Generation	一代户 (<i>yī dài hù</i>)	Family households composed of one generation	Household
Age 20 to 29		Population ages 20-29	Person
Children		Population under age 15	Person

Comparative 2000-2010 Census data tables and shapefiles

District-level data and shapefiles optimized to account for administrative district changes between census years were prepared by the University of Michigan China Data Center. Variables selected for 2000 and 2010 included raw populations totals for the following attributes: population, household registration in a different province (migrant), collective household residence (collective), bachelor's degree attainment (higher education), non-agricultural *hukou*,

and ages 20-24 and 25-29. Attributes were also given for child dependency ratio (0-14) and proportion of non-agricultural residents.

An attribute for agricultural *hukou* was calculated by subtracting values for non-agricultural population from their population universe. The 5-year totals for ages 20-24 and 25-29 were combined to create a single attribute for residents 20-29 (twenties). New fields and were created and calculated in ArcMap to compute *migrant*, *collective*, *university*, *twenties*, and *agricultural* as proportions of total population in each district for 2000 and 2010. Absolute change and rate of change from 2000 to 2010 were also computed for each variable.

Land Transactions 2003-2013

Published by the Beijing Municipal Bureau of Land and Resources website as part of an Open Government Initiative, the data set includes 7,366 recorded land transactions crawled and geocoded by Beijing City Lab. Land plot provision right transfers in Beijing are primarily classified as land transactions, land allocations, and land acquisitions. Whereas land allocations are reserved for non-profit land uses, transfers of market use, for-profit purposes are classified as land transactions. Land acquisitions involve government acquisition of village collectively owned agricultural land for conversion into urban land, and subsequent land transaction or allocation. The data on land transactions includes the plot recipient, description of location, administrative district (for some), geo coordinates, intended use, plot size, planned floor space, transaction fee, date of signing, contract start date, contract completion date, release date, volume rate, and page views. Prior to mid-2009, the release date was the only time stamp variable recorded for every transaction.

Previous analysis done with this data set in conjunction with the data on land allocations focused on the changing spatial and temporal patterns of housing and employment provisions (Rong, Jin, and Long 2015). Their research showed housing provisions accounted for 32% of all land transactions and allocations, developing at a steady rate throughout the decade, and demonstrating a general decentralizing trend. Approximately 58% of all parcels allocated for housing were outside Ring Road 5, 38% of those between Ring Roads 5 and 6.

After download, the dataset was filtered to isolate large residential developments. Plots with a land area of less than 100,000 square meters were excluded. The *intended use* column was coded for descriptions involving residential use. These descriptions included villas (*bieshu*), residential (*zhuzhai*), R2 residential land (*er lei fangzhu*), and a variety of mixed uses including public services, parks, commercial space, cultural use, and office space. Data were sorted by year according to release date. A new field was created for each year 2003-2013 and '1' entered in the field corresponding to the release date of each individual tract. A spatial join based on geographic location was then performed to join the large residential land transactions dataset with the subdistrict level census data and shapefile in Arcmap. Points within polygons were summed adding a count attribute to each subdistrict for the total number of large residential land developments per subdistrict, total number per year 2003-2013, total land development area, and total floor space.

Findings

Migrant spatial distributions show migrants concentrated in the urban-rural transition zone and correlated at the subdistrict level with rates of young adults, children, collective households, and education level.

2010 Descriptive Statistics

Table 2: Beijing 2010 census descriptive statistics for variable population totals at the subdistrict level

Descriptive Statistics (population)				
Variable (totals)	Minimum	Maximum	Mean	Std. Deviation
Population	2,452	358,317	64,637.75	53,685.34
Migrant	67	197,420	23,925.76	29,633.84
Agricultural	292	182,541	23,979.81	25,935.22
Collective	3	120,074	10,988.50	16,131.58
Higher Education	0	137,297	18,451.19	21,961.05
Age 20 - 29	130	106,793	16,820.65	17,348.12
Age 25 - 34	133	108,661	14,129.52	14,509.60
Children	134	31,103	5,525.83	4,593.20

Table 3: Beijing 2010 census descriptive statistics for variables as a percent of subdistrict total

Descriptive Statistics (%)				
Variable (%)	Minimum	Maximum	Mean	Std. Deviation
Population	2,452	358,317	64,638	53,685
Migrant (%)	2.71%	82.84%	30.19%	17.83%
Agricultural (%)	1.28%	91.74%	45.11%	28.96%
Collective (%)	.12%	68.32%	13.66%	11.35%
Higher Education (%)	.00%	55.32%	23.34%	14.70%
One Generation (%)	25.19	80.62	48.13	10.05
Age 20 - 29 (%)	5.26%	49.21%	22.90%	7.12%
Age 25 - 34 (%)	5.38%	33.29%	19.09%	5.33%
Children (%)	2.34%	14.32%	8.83%	1.95%

Spatial Distributions

Population

Total subdistrict population skews right, ranging from 2,472 residents in Puwu Township to 359,415 residents in Dongxiaokou in Changping District ($M = 64,637.75$, $SD = 53,685.34$) with 50% of subdistrict population falling between 25,000 and 100,000 residents (*Table 2*). Subdistrict populations are highest in the inner suburbs of Haidian and Chaoyang and the outer district of Changping. The population outliers shown in *Table 3*, Huilongguan Area and Beiqijia Town of Changping District, Xueyuanlu Subdistrict and Betaipingzhuange subdistrict in

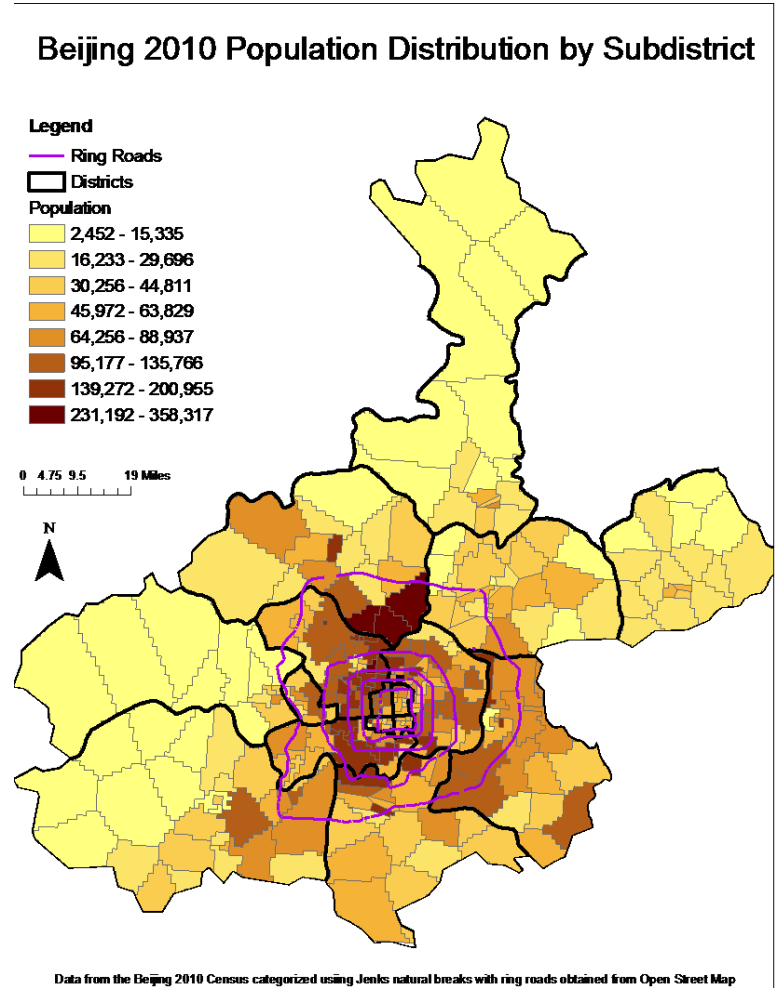


Figure 3: 2010 Beijing Census population distribution by subdistrict

Haidian, and Shibalidian Area in Chaoyang District. Populations are highest in the inner suburbs close to the city center and major highways, particularly in western Beijing (*Figure 3*).

Migrant

Migrant population distribution across subdistricts largely corresponds with population distribution. Beiqijia Town has the largest migrant population with 197,420 residents, significantly higher than the mean of 23,926 (SD = 29,633.84). Like the subdistrict's overall population, Puwa Township also has the fewest migrant residents (67) as well as the lowest proportion of migrants (3%). As a proportion of subdistrict population, distribution of migrant residents normalizes with a small right skew and a mean of 30.19 (SD = 17.83. Wanliu Area in Haidian District contains the largest proportion of migrant residents (83%). Beiqijia Town is comprised of 75% migrant residents.

Figure 4 shows subdistricts in the center city have uniformly low concentrations of migrant residents. Likewise, the far rural and mountainous fringes in Huairou, Pinggu, Mentougu, and Fangshan Districts have relatively low populations of migrant residents. Large migrant population are found almost exclusively beyond the 4th Ring Road. Subdistricts in the inner suburbs of Haidian and Chaoyang to the north and east have large migrant populations while those in Fengtai and Shijingshan to the south and west have very low migrant populations. The northern subdistricts of Haidian, Changping, Chaoyang, and Shunyi between the 5th and 6th Ring Roads show significant migrant compositions, with most approaching or over 50% of total population, particularly in the northeast. Migrant populations remain higher in outer district subdistricts accessed by the 6th Ring Road, more noticeably in the north and south. Hosting one of the largest proportions of migrants, Yanqi Economic Development Zone (81%) stands out to the north in Huairou District.

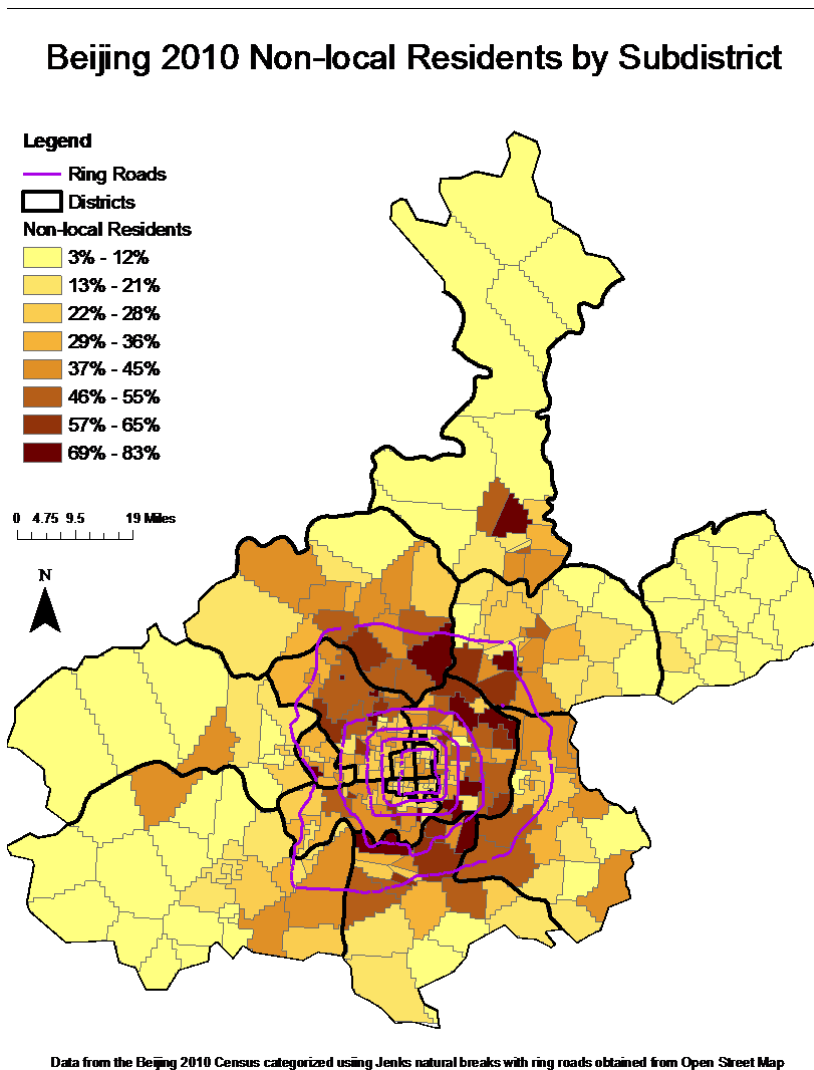


Figure 4: Beijing 2010 Census non-local residents by subdistrict

Agricultural Hukou

Subdistrict agricultural composition skews slightly to the right with no outliers (M = 45.11, SD = 17.83). Ninety-two percent of the population in both Liulimiao Town in Huairou District and Puwa Township in Fangshan District hold agricultural *hukou*. Shougang Qianan Mining Area, at 1.2%, has the smallest proportion agricultural *hukou* (292 residents). The

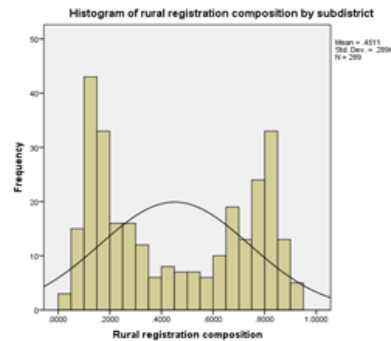


Figure 5: Beijing 2010 Census histogram of subdistrict migrant concentration (%)

notably bimodal distribution of agricultural residents, reflects the continuing importance of *hukou* in population segregation (*Figure 5*).

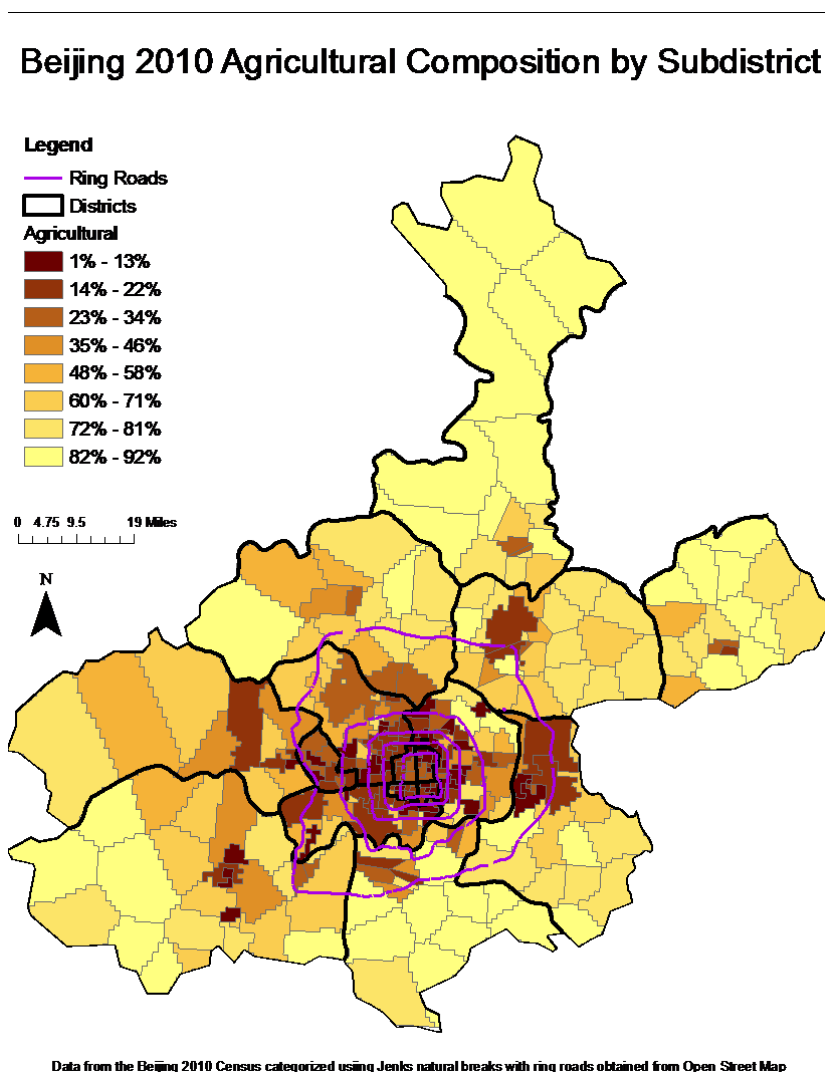


Figure 6: 2010 Beijing Census agricultural *hukou* concentration by subdistrict (%)

Agricultural *hukou* holders comprise a minimal percent of the population in subdistricts within the urban core and inside the 5th Ring Road of the inner suburbs (*figure 6*). With the exception of a few subdistricts to the southeast of the city center in Chaoyang District and Daxing District, less than half (50%) of residents hold an agricultural *hukou* inside the 5th Ring Road. However, most subdistricts in northern Chaoyang beyond the 5th Ring Road have majority agricultural populations, including Jinzhan Area (88%), Cuigezhuang (83%), and Sunhe Area

(78%). With some exception, the proportion of agricultural *hukou* holders rises the farther from the city center, still comprising more than 50% of the population in most of the outer districts, but with notable exceptions. Fewer than 20% of the population in Tongzhou's northern subdistricts hold agricultural *hukou*. The agricultural composition of the two southernmost subdistricts in Changping, Huilongguan (28%) and Dongxiaokou (32%) contrast with the majority agricultural subdistricts of Changping further from the urban core.

Collective Households

Collective household populations range from 3 in Puwa Township to 120,074 in Beiqijia Town ($M = 10,988.50$, $SD = 16,131.58$). Subdistrict proportion of collective households skews significantly right, comprising under 1% of all households in 5 subdistricts to 68% of households in Qinghedistrict. While the mean is 13.66 ($SD = 11.35$), Figure 7 shows a large number of outliers. Eleven sub districts, collective households comprise more than 40% of all households and over 50% in 5 subdistricts. Higher collective household population are most prevalent in northern Beijing, particularly in southern Haidian and central Changping. Haidian's high collective households are located inside the 5th Ring Road while those in Changping, Beiqijia (48%), Shahe (44%), Machikou (33%), and neighboring Sunhe (34%) in Chaoyang, lie outside the 5th Ring Road. While generally lower than those in Haidian and Changping, the subdistricts of Fangshan, Daxing, and Tongzhou accessed by the 5th and 6th Ring Roads contain higher proportions of collective residents the neighboring inner suburbs and rural areas.

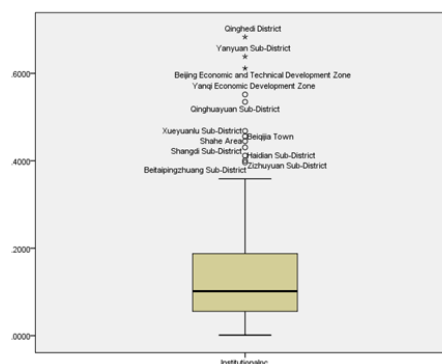


Figure 7: 2010 Beijing Census boxplot of collective household resident concentration by subdistrict

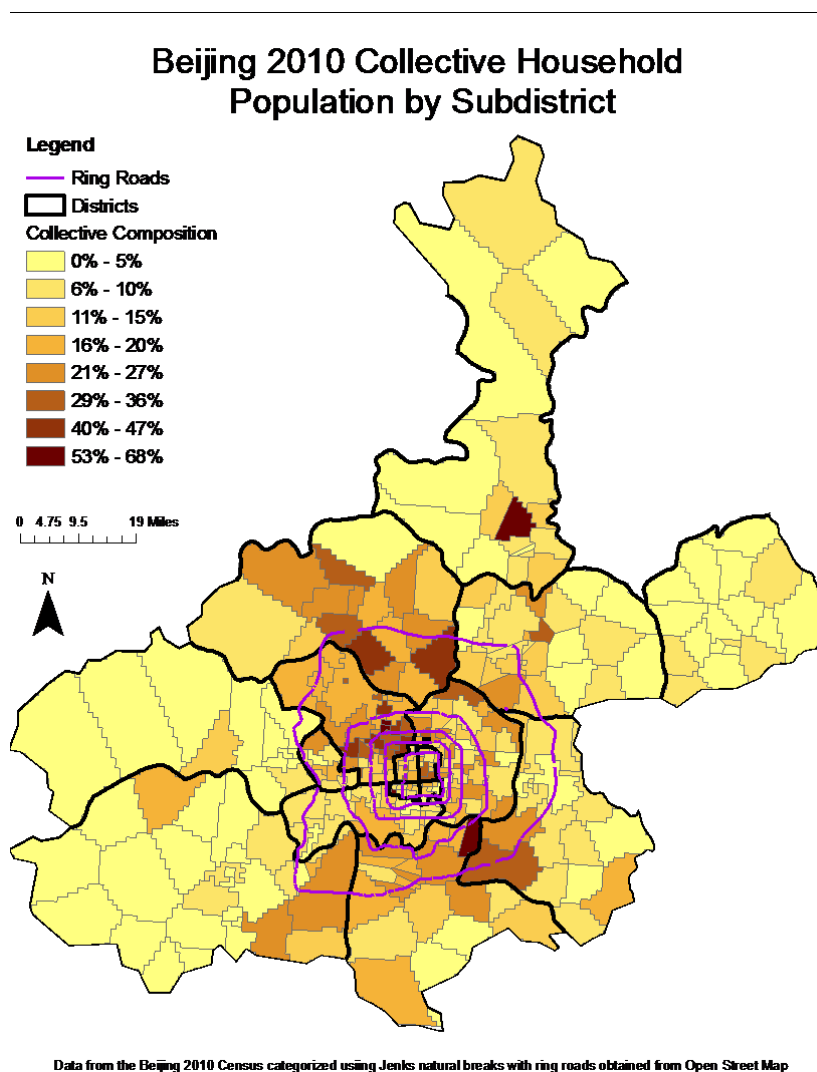


Figure 8: Beijing 2010 Census collective resident concentration by subdistrict

Children Under 15

The number of children under age 15 per subdistrict range from 134 in Yanqi Economic Development Zone (4.5% of population) to 31,103 children in Dongxiaokou Area (8.7% of population). By proportion, children are normally distributed ($M = 8.83$ $SD = 1.95$). The proportion of children under 15 are notably low across Beijing. Composition ranges from 2.3% in Qinghedi District (247 residents) and 3.8% in Yanyuan Subdistrict (1,410 residents) to 14.3% in Xili Subdistrict (22,575 residents).

Children compose a larger share of the population in the outer rural areas. Children comprise a small proportion of the population in the urban core (less than 8%). Subdistricts with higher proportions of children include much of Fengtai and Shijingshan as well as southern Chaoyang and northern Tongzhou due west from the urban core. The subdistricts of Haidian and Changping with exceptionally high collective households have similarly low proportions of children, ranging from 4%-7% in the subdistricts of Haidian between the 4th and 5th Ring Roads, Beiqijia Town, Shahe Area, Sunhe Area in Chaoyang.

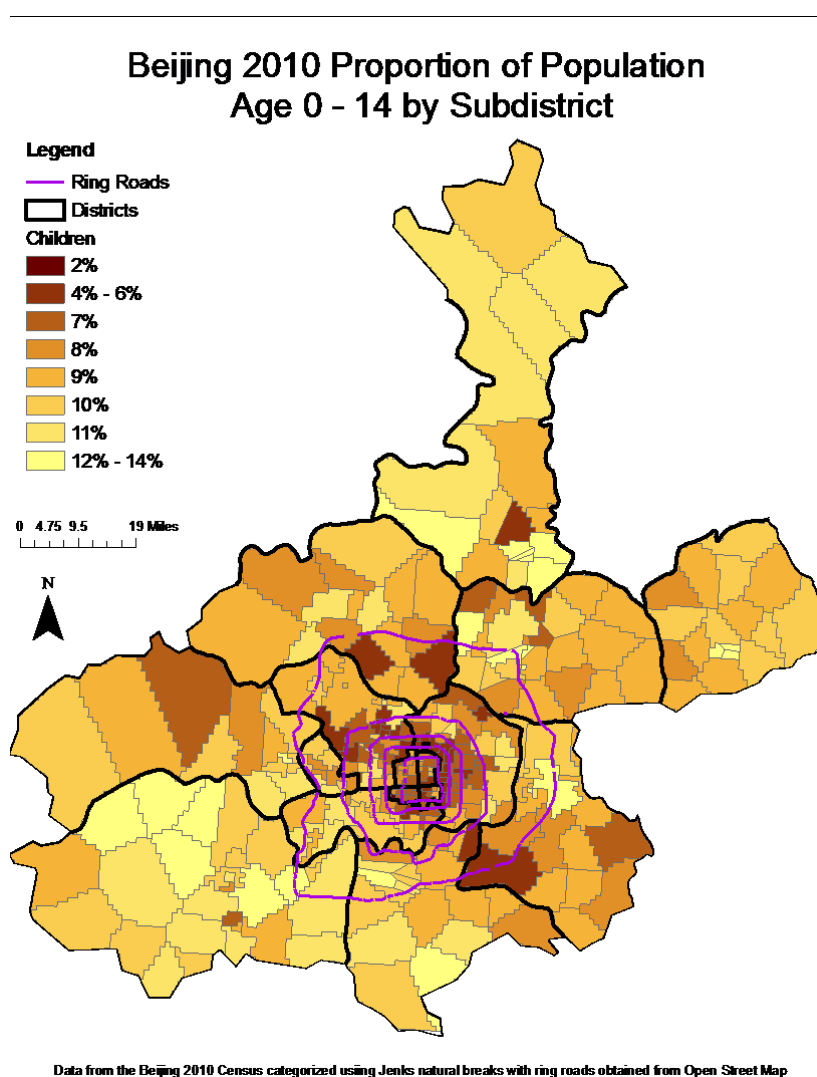


Figure 9: 2010 Beijing Census child composition by subdistrict

One Generation

Family households in the urban core subdistricts, Fengtai, Shijingshan, southern Haidian, and outer rural subdistricts have ratios of one generation households below 50%, with the notable exceptions of Mentougou and western Fangshan. In contrast, most family households in Chaoyang are majority one generation as are those to the north, east, and south of the urban core between the 5th and 6th Ring Roads. In Haidian, the ratio of one generation households declines significantly in the subdistricts both inside the 4th Ring Road and outside the 6th Ring Road. Similarly, majority one generation households only comprise the majority of family households in the subdistricts of Changping and Shunyi closest to the urban core.

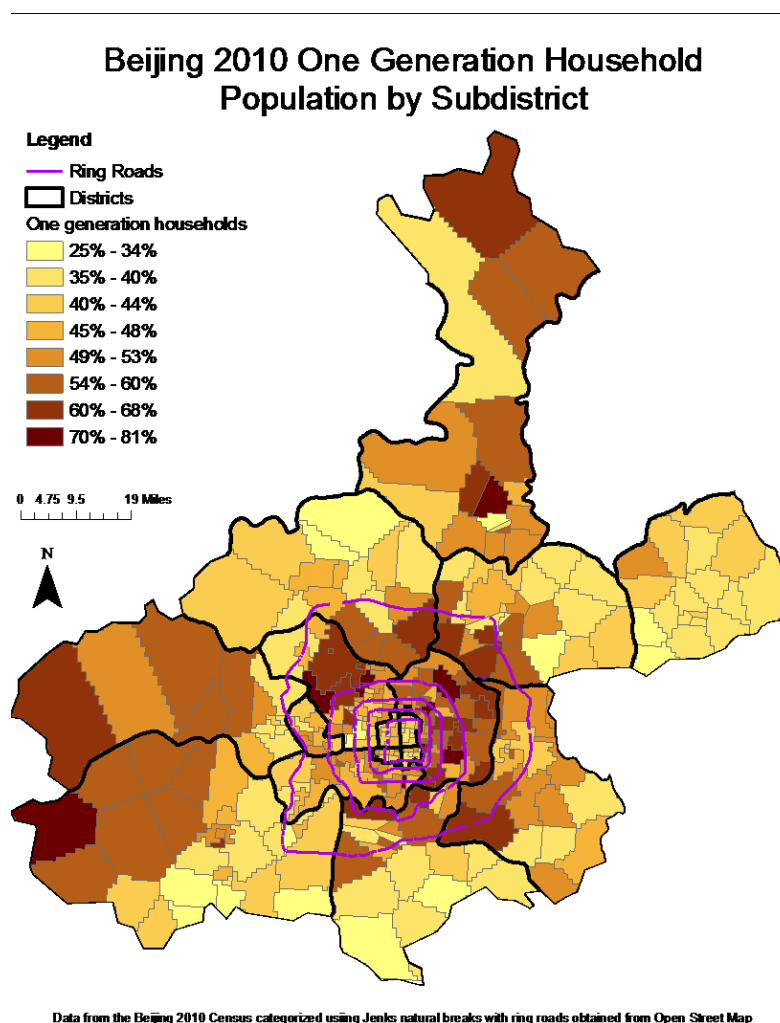


Figure 10: Beijing 2010 Census proportion of households with one generation by subdistrict

Higher Education

Higher education attainment ranged from no residents in Tiancunlu Subdistrict and 23 residents in Puwu Township to 137,297 residents (40%) in Dongxiaokou Area ($M = 18,451.19$, $SD = 21,961.05$). Rates of post-secondary education ranged from 0% in Tiancunlu Subdistrict to 55% in Zizhuyuan Subdistrict ($M = 23.34$, $SD = 14.70$). Similar to the frequency distribution of rural percentages, the distribution of higher education compositions across sub districts is also bimodal, values clustering under 10% and over 30% (*figure 11*). The outer rural areas have near-universally low rates of post-secondary education. Education attainment is highest in the urban core and subdistricts of the inner suburbs inside the 5th Ring Road. High rates in the inner suburbs are concentrated in the southern subdistricts of Haidian extending to much of Shijingshan, central Fengtai, and northern Chaoyang. High post-secondary education rates extended past the 5th Ring Road in the subdistricts of Haidian the neighboring subdistricts of Changping. East of the urban core, northern Tongzhou and the subdistricts surrounding the airport in Shunyi likewise have rates of post-secondary education above 30%.

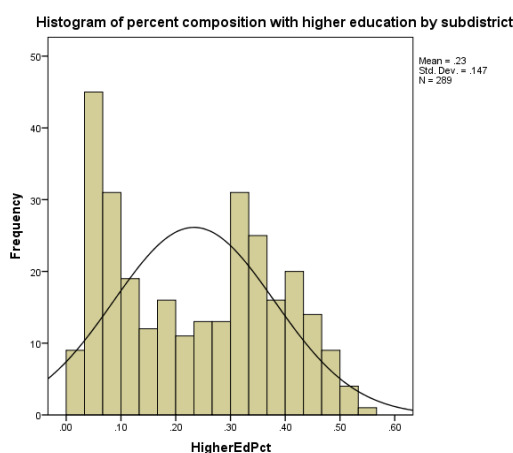


Figure 11: Beijing 2010 Census higher education attainment rates by subdistrict

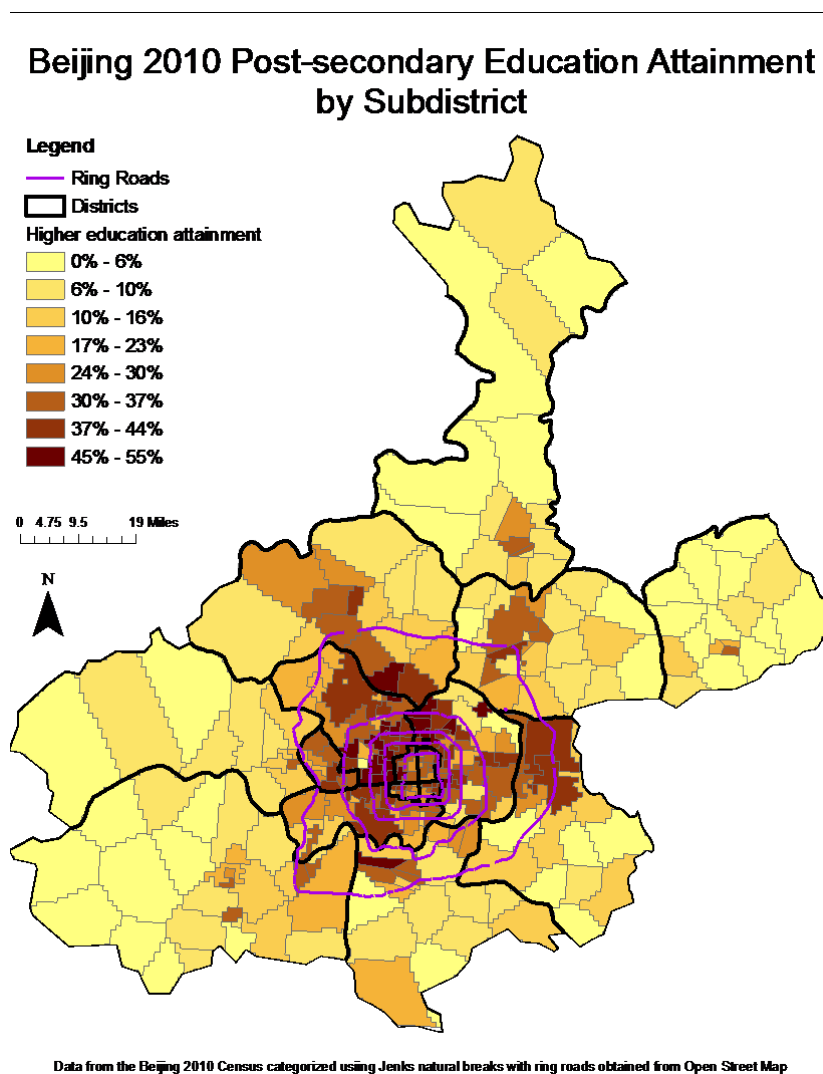


Figure 12: Beijing 2010 Census higher education attainment rates by subdistrict

Age 20 - 29

Absolute populations of residents ages 20 to 29 range from 130 residents in Puwa Township (5.3% of total population) to 106,793 residents in Xueyuanlu Subdistrict (43.9%). By percent, Beijing residents in their twenties are normally distributed across subdistricts ($M = 22.90$, $SD = 7.12$). Age 20-29 years olds compose 5.3% of the Puwa Township population to 49.2% in Yanyuan Subdistrict. The highest concentrations of residents ages twenty to twenty-nine are found in the university areas of Haidian District inside the 6th Ring Road, specifically Yanyuan Subdistrict (49%), Wanliu Area (45%), Xueyuanlu Subdistrict, and Qinghuayuan

Subdistrict (both 44%). The subdistricts of Changping bordering Haidian are similarly young, including Shahe Subdistrict (37%) and Huilongguan (35%). The Changping subdistricts between the 5th and 6th Ring Roads and extending past the 6th Ring Road along the G6 Expressway have above average to high populations in their twenties. Similar populations are found in between the 5th and 6th Ring Roads in Shunyi, southern Tongzhou, and Daxing. Populations in Daxing subdistricts south of the 6th Ring Road are smaller, though still above average. Concentrations of residents in their twenties are lowest in the city center outer fringes of the hinterlands.

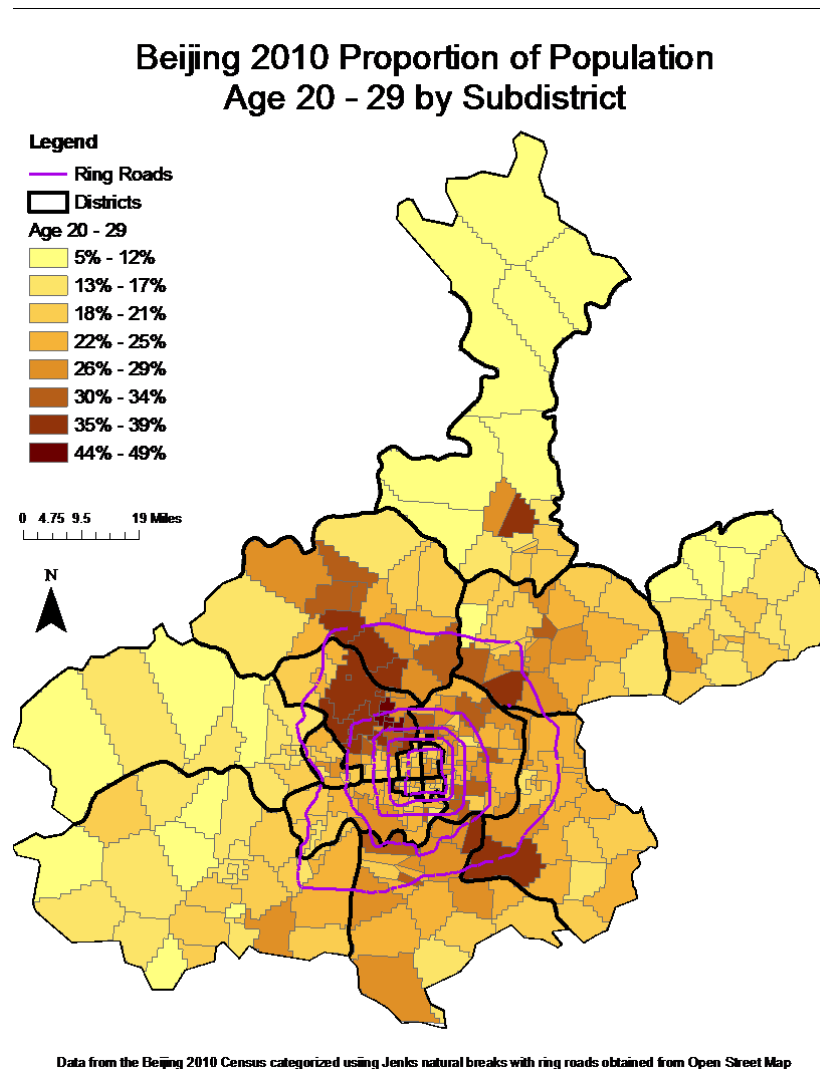


Figure 13: Beijing 2010 Census proportion of residents ages 20-29 by subdistrict

Relationship between characteristics of subdistrict composition

Subdistrict migrant proportion has a strong non-parametric correlation with both the proportion of residents in their twenties, $r_s(287) = .713, p < .01$, and residents living in collective households, $r_s(287) = .723, p < .01$, as well as a moderate linear correlation with one generation households, $r(287) = .613, p < .01$ (see *Table 4* and *Table 5*). These correlations support the common trends between the variables visualized above and support associations between migrants, age, and collective housing. The cubic fit lines for migrant with both twenties and collective households model steep positive relationships in point with smaller migrant proportions, growing more dispersed along with the migrant population (see *Figure 14* and *15*). Low migrant subdistricts, such as those in the urban core and far peripheries, have correspondingly low proportions of collective households and young adults. However, differences in subdistrict demographic profiles appear and migrant populations increase. This differentiation is especially apparent in the relationship between migrant and collective composition. A cubic fit line models the steep positive relationship between the cluster of values of under 40% *migrant* and 15% *collective* and a polarized distribution of points over 40% *collective*, with *migrant* values under approximately 35% or over 60% (*Figure 15*). Though both Tongzhou and Changping have large proportions of migrants, collective housing rates are much lower in Tongzhou.

Higher education has a low to moderate non-parametric correlation with collective households, $r_s(287) = .441, p < .01$, and migrants, $r_s(287) = .292, p < .01$. The agricultural ratio of subdistricts shares a strong negative correlation with subdistrict rates of higher education, $r(287) = -.875, p > .01$. This significant disparity is illustrated in the distribution maps above. As expected, low education attainment rates are present in the largely rural peripheries of

Mentougou, Fangshan, Pinggu, and Huairou, while higher rates of education are found close to the urban core and in the university districts of Haidian. The relationship between education and agricultural population persists through much of the inner and outer districts. The subdistricts of northern Tongzhou, west of the city center, have both small migrant populations and high rates of education. Elsewhere, higher education and agricultural *hukou* form similar gradients between the urban core and outer rural areas, though subdistricts north of the urban core such as Shahe, Machikou, and Shangdi have higher than expected education rates compared to their agricultural composition.

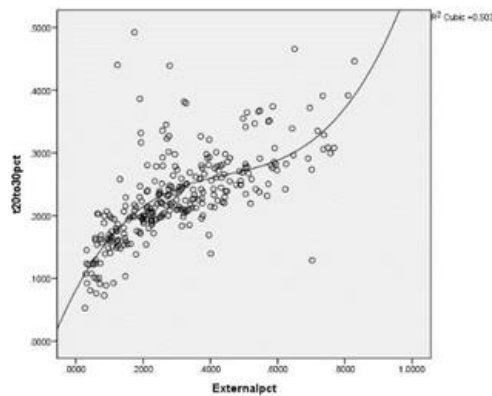


Figure 14: Beijing 2010 Census correlation between subdistrict proportion of migrants and Ages 20-29

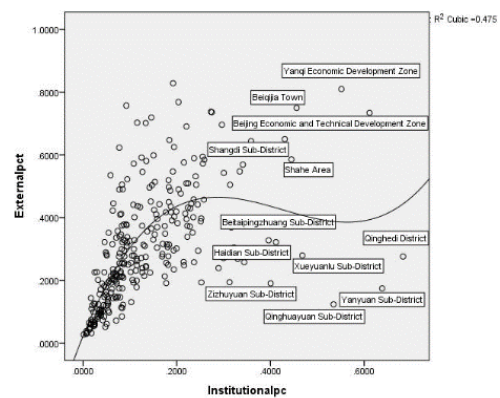


Figure 15: Beijing 2010 Census correlation between subdistrict proportion of migrants and collective residents

Table 4: Beijing 2010 Census bivariate correlations of subdistrict proportions of selected variables

	Migrant (%)	Agricultural (%)	Collective (%)	Higher Education (%)	One Generation	Age 20 - 29 (%)	Children (%)
Migrant (%)	1	.031	.540**	.157**	.613**	.675**	-.198**
		.604	.000	.008	.000	.000	.001
Agricultural (%)	.031	1	-.130*	-.875**	.053	-.170**	.314**
	.604		.027	.000	.372	.004	.000
Collective (%)	.540**	-.130*	1	.361**	.308**	.811**	-.539**
	.000	.027		.000	.000	.000	.000
Higher Education (%)	.157**	-.875**	.361**	1	.054	.444**	-.372**
	.008	.000	.000		.359	.000	.000
One Generation	.613**	.053	.308**	.054	1	.342**	-.324**
	.000	.372	.000	.359		.000	.000
Age 20 -29 (%)	.675**	-.170**	.811**	.444**	.342**	1	-.504**
	.000	.004	.000	.000	.000		.000
Children (%)	-.198**	.314**	-.539**	-.372**	-.324**	-.504**	1
	.001	.000	.000	.000	.000	.000	

Table 5: Beijing 2010 Census nonparametric correlations for subdistrict proportions of selected variables

Spearman's Rho		Migrant (%)	Agricultural (%)	Collective (%)	Higher Education (%)	One Generation	Age 20-29 (%)	Children (%)
Migrant (%)	Correlation Coefficient	1.000	-.037	.723**	.292**	.547**	.756**	-.186**
	Sig. (2-tailed)	.	.534	.000	.000	.000	.000	.002
Agricultural (%)	Correlation Coefficient	-.037	1.000	-.148*	-.852**	-.001	-.133*	.362**
	Sig. (2-tailed)	.534	.	.012	.000	.993	.024	.000
Collective (%)	Correlation Coefficient	.723**	-.148*	1.000	.441**	.316**	.845**	-.436**
	Sig. (2-tailed)	.000	.012	.	.000	.000	.000	.000
Higher Education (%)	Correlation Coefficient	.292**	-.852**	.441**	1.000	.106	.460**	-.381**
	Sig. (2-tailed)	.000	.000	.000	.	.072	.000	.000
One Generation	Correlation Coefficient	.547**	-.001	.316**	.106	1.000	.382**	-.271**
	Sig. (2-tailed)	.000	.993	.000	.072	.	.000	.000
Age 20 -29 (%)	Correlation Coefficient	.756**	-.133*	.845**	.460**	.382**	1.000	-.452**
	Sig. (2-tailed)	.000	.024	.000	.000	.000	.	.000
Children (%)	Correlation Coefficient	-.186**	.362**	-.436**	-.381**	-.271**	-.452**	1.000
	Sig. (2-tailed)	.002	.000	.000	.000	.000	.000	.

District spatiotemporal shifts

Table 6: Beijing 2000-2010 Census district level variable population growth rates

Descriptive Statistics for 2000 to 2010 Beijing census variable growth rates				
	Minimum	Maximum	Mean	Std. Deviation
Ages 20-29	18.23%	288.1%	91.83%	73.28%
Higher Education	60.37%	791.64%	366.60%	245.58%
Migrants	56.41%	490.26%	191.68%	145.87%
Collective	5%	306%	94.72%	94.17%
Child Dependency	-11.6699	-2.83	-5.5	2.70
Population	-4.55%	170.08%	39.66%	45.85%
Land Transactions	0	68	20.38	20.08

From 2000 to 2010, migrant settlement patterns shift farther out from the urban core.

Population

Though Chaoyang experienced the greatest increase in absolute population between 2000 and 2010, the growth rate (55%) was much smaller than in Changping (170%) and Daxing (103%). Tongzhou's population grew 76%. In 2000, only Fengtai, Haidian, and Chaoyang had populations over 1 million. By 2010 Chaoyang (3,545,137) and Haidian (3,280,670) had a population over 3 million, Fengtai a population over 2 million, and Changping, Daxing, and Tongzhou populations over 1 million. In contrast, population in Chongwen and Xicheng declined during the same period.

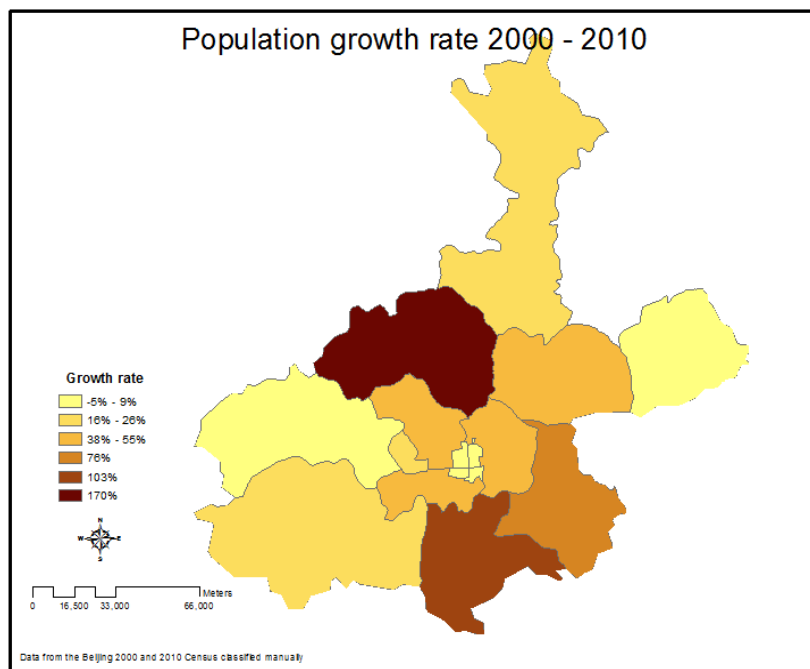


Figure 16: Beijing 2000-2010 Census population growth rate by district

Migrant

The number of inter-provincial migrants more than doubled in every suburb except Shijingshan and the outer districts of Pinggu, Huairou, and Mentougou. Absolute population increased the most in Chaoyang (1,002,966), Changping (694,077) a distant second. However, the southern suburbs experienced the greatest rate of growth. The inter-provincial migrant population of Tongzhou grew from 73,726 residents in 2000 to 435,173 residents in 2010, an increase of 490%. The number of migrants in Daxing increased 463%, from 114,422 in 2000 to 644,057 in 2010. Changping experienced a similarly high rate of migrant population growth (454%) while Chaoyang experienced a 196% increase.

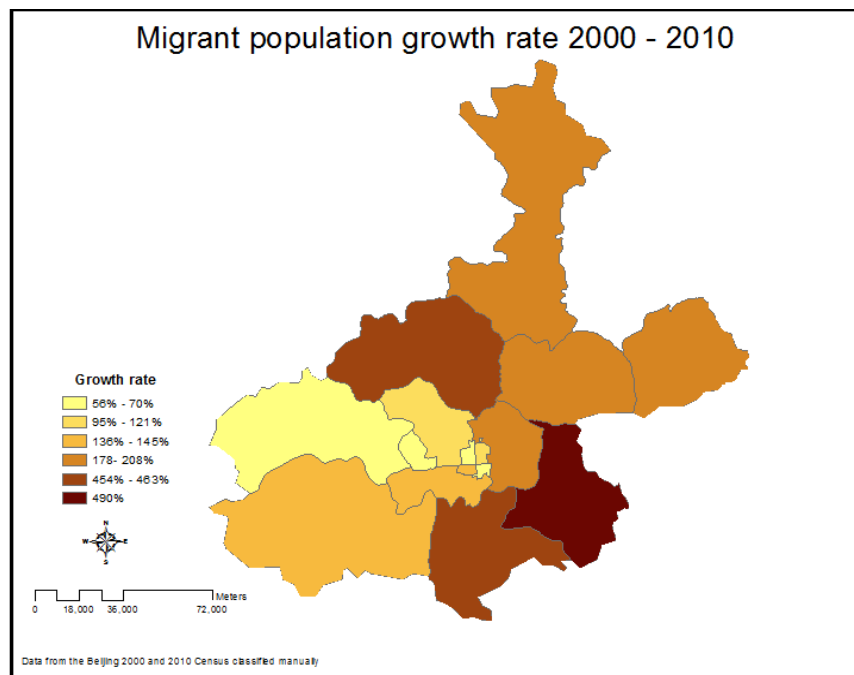


Figure 17: Beijing 2000-2010 Census migrant growth rate by district

Collective

Daxing (306%), Changping (280%), and Tongzhou (241%) experienced the highest growth rate of residents living in collective households. Only Haidian experienced a higher total growth in collective household residents 419,631 (79%). Compared to Changping's 333,310 growth in collective residents. In contrast to the significant increase in the three outer districts, Haidian, Chaoyang, and Tongzhou all only experienced a 79% growth rate.

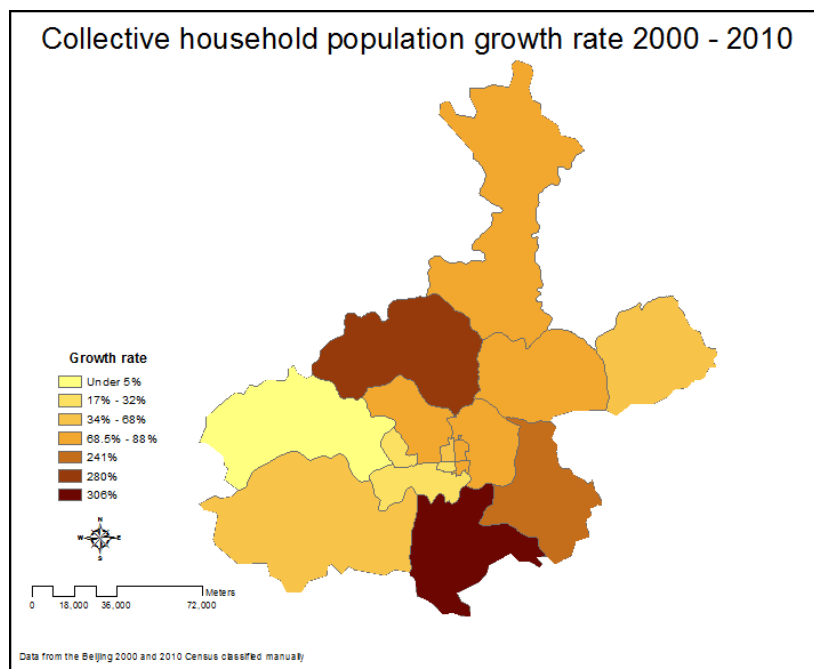


Figure 18: Beijing 2000-2010 Census collective household growth rate by district

Agricultural

By absolute population, Chaoyang, Changping, and Daxing experienced the greatest increase in agricultural population, followed by Fengtai and Tongzhou. The agricultural proportion of the population dropped in much of the outer districts but increased in the inner suburbs and urban core. Highest rates of increase were in Haidian and Chaoyang.

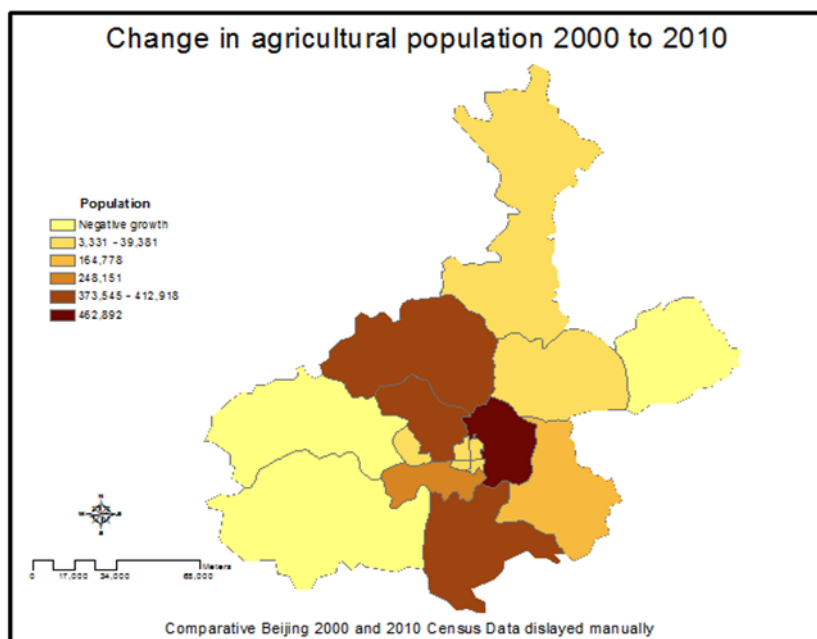


Figure 19: Growth of agricultural population in Beijing from 2000 to 2010

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Higher Education

The proportion of the population with a Bachelor's degree at the minimum doubled in every district except Xicheng. In Changping the demographic grew almost 800% between 2000 and 2010, from 31,788 residents in 2000 to 283,435 residents in 2010. Higher education attainment rate grew more than 700% as well in Shunyi (764%) and Tongzhou (721%), nadmore than 500% in Pingu and Daxing. While the increase in educational attainment was dramatic across Beijing, increases were especially remarkable in the outer districts to the north and west.

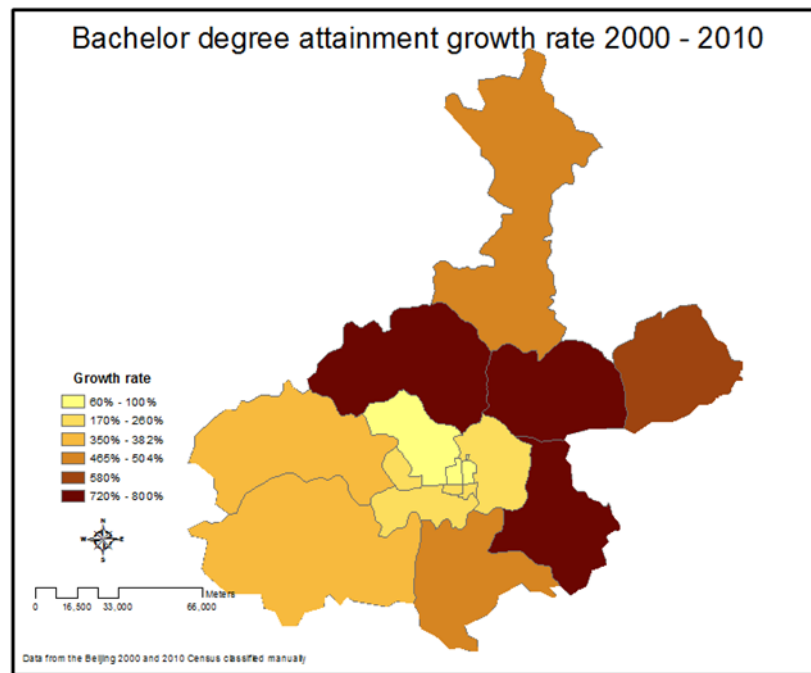


Figure 20: Beijing 2000-2010 Census Bachelor degree growth rate by district

Twenties

Of residents in their twenties, Changping experienced the most significant growth rate (288%) while Haidian experienced the largest raw population growth (506,338). The number of residents in their twenties also tripled in Daxing (205%) and more than doubled in Tongzhou (179%) and Shunyi (114%). Chaoyang (97%), Haidian (90%) and Fengtai (85%) also experienced very large increases in this demographic.

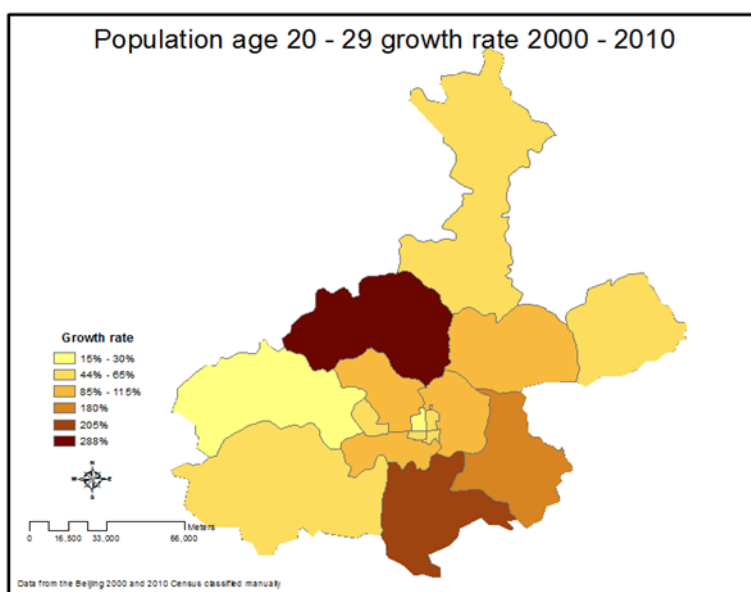


Figure 21: Beijing 2000-2010 Census population age 20-29 growth rate by district

Child dependency

The child dependency ratio decreased across every Beijing district. The decrease was smallest in the inner suburban districts and larger in the outer districts. Haidian has the smallest decline in dependency ratio, from 10.54% to 7.71%. However, Haidian continues to have one of

the lowest child dependency ratios, similar to Xuanwu (7.19%), Chongwen (7.23%), and Chaoyang (7.56), and Dongcheng (7.71%).

The highest child dependency ratios are in the farther outlying districts and counties, though these districts also experienced some of the highest rates of decline. Child dependency ratio gets lower close to the city center. Among the outer districts, Changping has the lowest dependency ratio (8.3%).

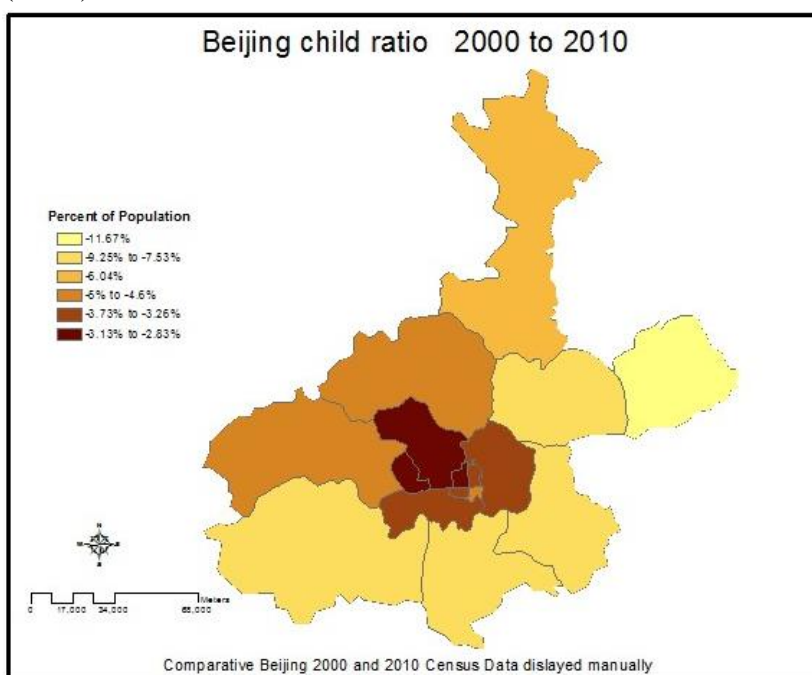


Figure 22: Beijing 2000-2010 Census change in child dependency ratio by district

Summary

From 2000 to 2010, the outer districts of Changping, Tongzhou, and Daxing experienced massive migration-driven growth. While all but the urban core experienced substantial population growth total population in Daxing and especially Changping more than doubled. Migrant populations in these same subdistricts quadrupled. This population growth in the outer districts was further accompanied by significant growth in higher education rates, collective households, and residents in the twenties. While the ratio of agricultural residents dropped in the

outer districts, Changping, Daxing, and Chaoyang still experienced large increases in absolute agricultural population. As the outer districts see increasing migrant inflow, demographic differences are increasingly apparent. The expanding population in Tongzhou has higher education level, lower increases in populations in their twenties, and lower increases in collective households. In contrast, Daxing experienced a very significant increase in collective households and a smaller increase in higher education and twenties compared to Changping.

Over the decade, residential land transaction trend further from the urban core, mirroring 2010 migrant distribution patterns and 2000-2010 demographic shifts

Land Transactions and Residential Development Projects

Spatial Trends

Between 2003 and 2013, 335 land transactions for parcels over 100,000 square meters with planned residential components were initiated (*Figure 23*). Land transactions are categorized by transaction release date. Construction start date and completion are not included in this analysis. These parcels ranged in size from 100,098.407 m² to 767,250.69 m² ($M = 178,651.29$, $SD = 105,518.37$).

In the years 2003 - 2013, 96 subdistricts contained at least one large residential land transaction parcel. Of these, the minimum number of recorded transactions per subdistrict was 1 (40 subdistricts) and the maximum was 22 in Cuicun Town ($M = 3.40$, $SD = 3.98$).

Concentrations of large residential land transaction were thickest to the north, east, and south of the city center in the outer districts. However, many subdistricts in Chaoyang District registered land transactions, ranging from 2 to 15 land transaction parcels. The largest number of land transactions were located in Changping District, in which many subdistricts had multiple land

transaction parcels . Many of these subdistrict in Changping District are reached from central Beijing along route S213, including Beiqijia Town, Xiaotangshan Town, and Cuicun Town with 7, 15, and 22 land transaction parcels respectively. Of the 11 Shunyi District subdistricts in which land transactions were located, the majority were the site of multiple land transactions, with Nancai Town alone containing 11. Land transactions in the outer districts south of Beijing are less dispersed than those to the east and west. Aside from a string of land transactions in the subdistricts along G45 Daguang Expressway, most parcels are concentrated in Changyang Town, Fangshan District, Weishanzhuang Town, Daxing District, and MajuQiao Town, Taihu Town, and Yongletian Town in Tongzhou Town.

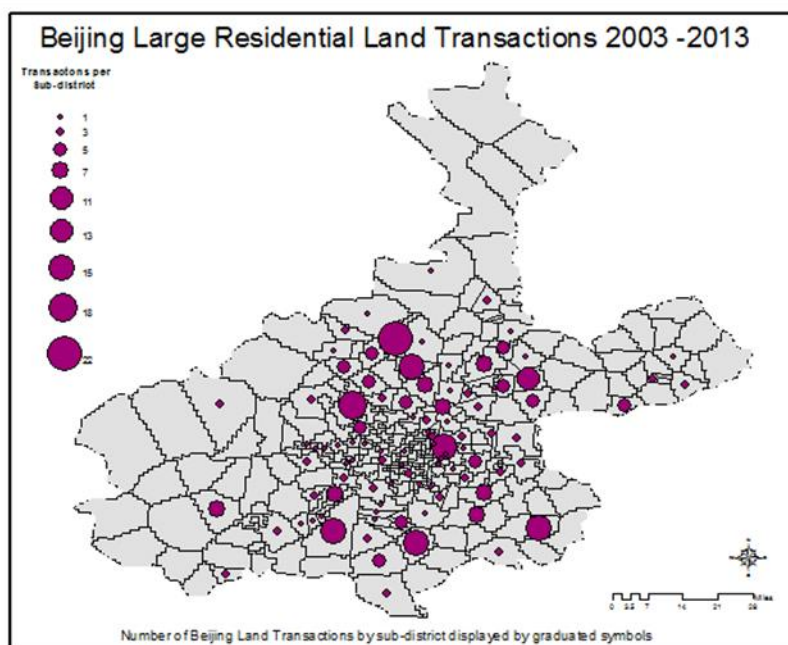


Figure 23: Distribution of large residential land transactions in Beijing released 2003-2013 by subdistrict

Optimized Hot Spot Analysis

An Optimized Hot Spot Analysis using the Getis-Ord G_i^* statistic was run across the large residential land transactions. Points were aggregated within the subdistrict polygons. 326 valid features were recorded and four outliers. Aggregated points within the polygons ranged from a minimum of 0 to a maximum of 22 with a mean of 1.128 and standard deviation of 2.7854. The Optimized Hot Spot Analysis was run with an optimal fixed distance band for peak clustering of 20322.9214 meters, yielding 83 statistically significant output features. 4.2% of features had less than 8 neighbors (*Figure 24*).

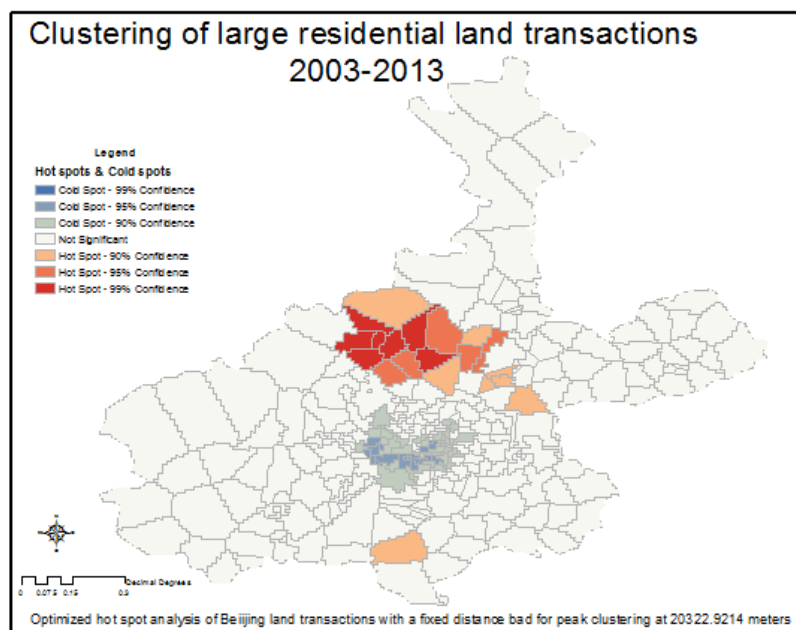


Figure 24: Optimized hot spot analysis of large Beijing 2003-2013 large residential land transaction clustering by subdistrict

Statistically significant clustering of large residential transactions is centered in Changping District. The majority of subdistricts in Changping District show clustering at the 90% confidence interval or above. All six subdistricts with high value clustering at the 99% confidence interval are located in Changping. These subdistricts are Shisanling Tow (2 parcels), Chengnan Subdistrict (1 parcel), Machikou Area (4 parcels), Nanshao Town (5 parcels), Cuicun

Town (22 parcels), and Xiaotangshan Town (15 parcels). Of the combined 49 land transactions in these six subdistricts, 38 were initiated in years 2003 and 2004. At a 95% confidence interval in Changping District, Shahe Area had 4 land transaction and Xingshou Town had 1, all 5 occurring in 2004. At the 90% confidence interval, Changling Town had 1 land transaction in 2004 and Beiqijia Town had 7, 3 of which occurred in 2004. Most of this area is located between the G6 Beijing-Lhasa Expressway and G45 Daguang Expressway. The Changping hot spot is almost entirely outside the 6th Ring Road, with only Beiqijia Town and Shahe Town just to the inside of the 6th Ring Road.

Three hot spots at the 95% confidence interval and three at the 90% confidence intervals also spilled over into neighboring Shunyi District. South of central Beijing, Panggezhuang Town in Daxing District had five land transaction parcels. Cold spots at the 90%, 95%, and 99% confidence intervals are centered around the central city districts of Xuanwu, Dongcheng, Chongwen and Xicheng and areas of Fengtai, Shijingshan, Haidian, and Chaoyang closest to the center city.

Temporal Trends

The years 2003 and 2004 have the highest recorded number of large residential land transactions (*Figure 25*). This may be due to an aggregation of previous years' transactions included in the total for 2003 and 2004, or related to the intensification of demolitions and development in preparation for the 2008 Olympics. If these years are included, there was a mean of 30 new permits a year and a 36% rate of growth in total transactions. Between years 2005 to 2013, an average of 21 permits were issued per year and an average 10% growth in total transactions. Spikes in number of new land transactions also occurred in 2006 (16 land transactions) and 2011 (40 land transactions).



Figure 25: Number of land transactions for residential use released in Beijing 2003-2013

A flurry of land transactions occurred in the lead up to the 2008 Beijing Olympics. Planned development was particularly significant in 2003 and 2004. Most of the transactions prior to 2008 were concentrated the north and northeast of the urban core. Though the seven parcels in Dongfeng Areas (Chaoyang District) were the only transactions located inside the 5th Ring Road in 2003, transactions in the following years largely remained in the inner suburbs (*Figure 26*). In 2004, a total of 85 new large residential land transactions were initiated. The

majority of transactions are located between the 5th and 6th Ring Roads. Of the subdistricts with large residential land transactions in 2004, many are clustered in the inner suburbs, closer to the city center (*Figure 27*). Further distance from the city-center, especially to the north-northeast, the number of land transactions per subdistrict grow farther away from the city center. Large residential transactions were recorded in only six subdistricts in 2005, predominantly within the inner suburbs (*Table 7*).

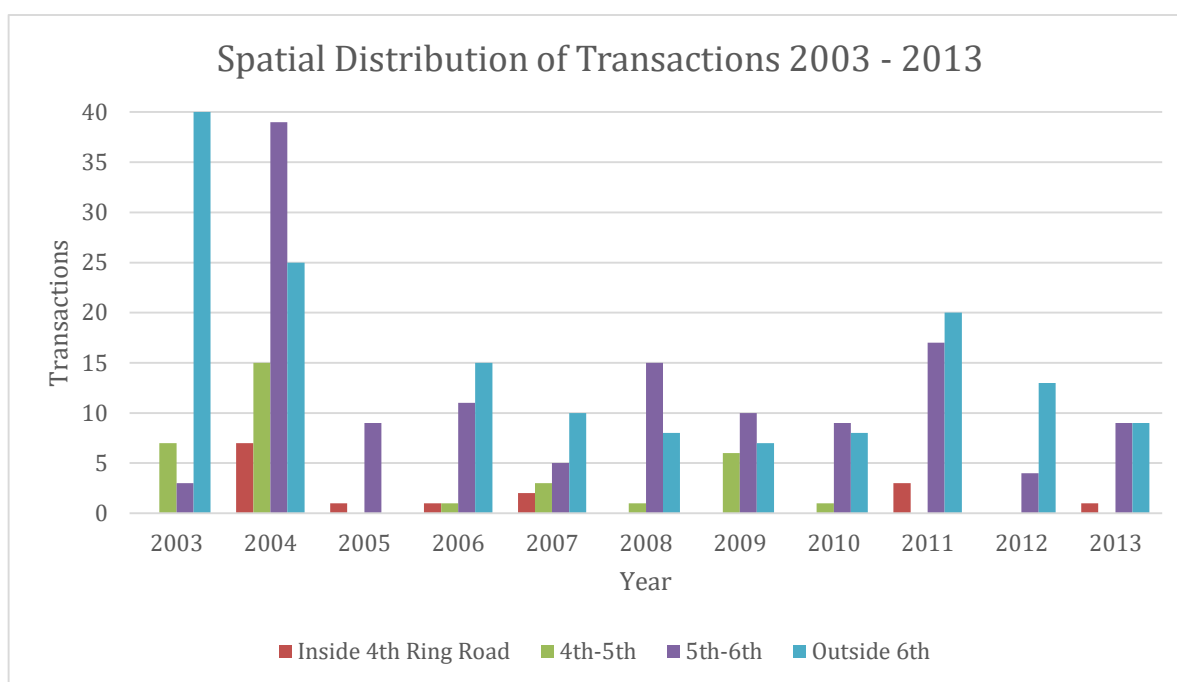


Figure 26: Distribution of large residential land transaction in Beijing 2003-2013 by Ring Road location

Only two land transactions were granted to the west of the city center in 2007, Nanjiao Township, Fangshan District and Jindingjie Subdistrict, Shijingshan. Four transactions were located south of the city center; Yizhuang Area and Xingfeng Subdistrict in Daxing District between the 5th and 6th Ring Roads and Majuqiao Town and Kuoxian Town in Tongzhou District. In 2008, 24 permits were issued across 16 subdistricts, predominantly in the outer districts between the 5th and 6th Ring Roads. The majority of land transaction in 2008 are clustered northeast of the city center, spreading out from the 5th Ring Road.

After 2008, the new land transactions for large residential developments occurred almost exclusively out of the urban core and primarily in the outer districts. Most transactions remained scattered between the 5th and 6th Ring Roads, but drifted further outward from the urban core to concentrate around the 6th Ring Road rather the 5th Ring Road as found earlier in the decade. New land transactions also trended away from the peri-urban areas northeast Changping to the southwest urbanizing areas of Daxing. By 2009, with the exception of Balizhuang Subdistrict and Dongfeng Area in Chaoyang District, Hui Township, Fengtai District within the 4th Ring Road, every land transaction is proximal to or between the 5th and 6th Ring Roads. In 2010, all but the parcel in Beiqijia Town, Changping District are located in a half loop to the south and east of the city center. The 40 land transactions in 2011 were spread across 21 subdistricts. All land transactions aside from the three in Yangfangdian Subdistrict, Haidian District are located outside of the 5th Ring Road, forming a ring around central Beijing. The majority are scattered between the 5th Ring Road and 6th Ring Road or just beyond the 6th Ring Road.

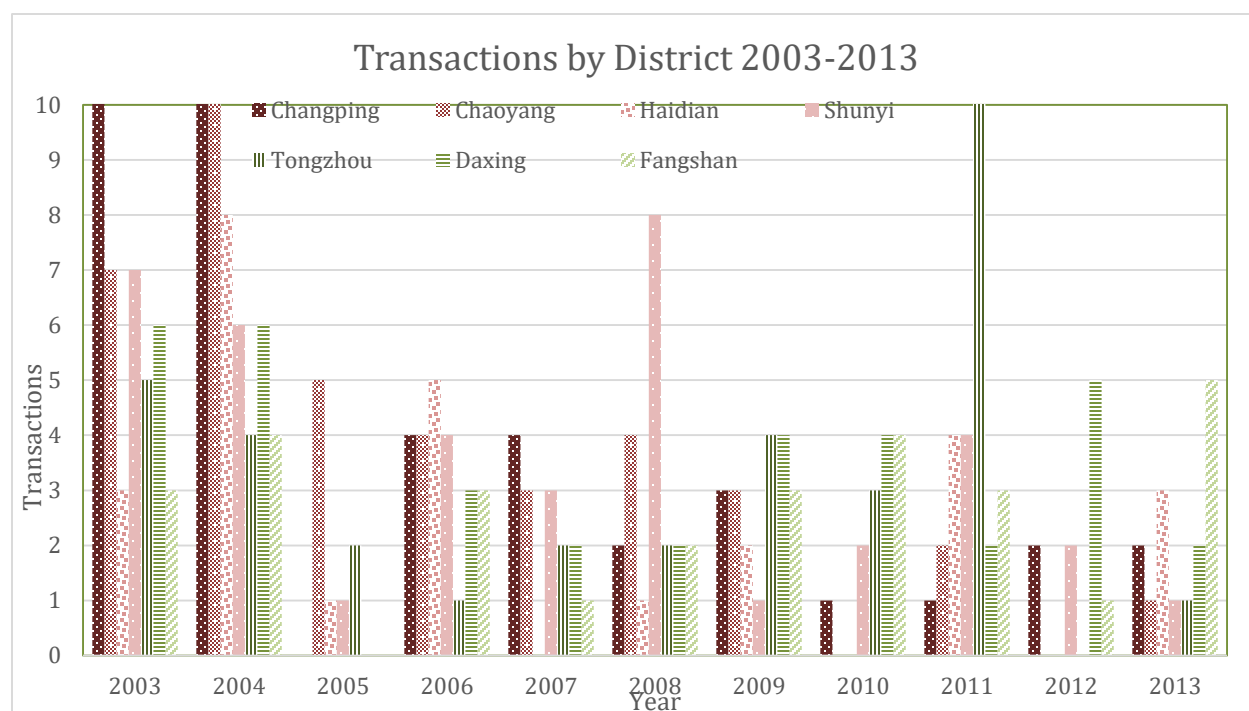


Figure 27: Beijing land transactions 2003-2013 by district

Every land transaction in 2012 was located outside the 5th Ring Road. Changxindian Town, Fengtai District and Guangning Subdistrict, Shijingshan District are the only two parcels located in the inner suburbs. In Daxing District, Yinghai Area lies between the 5th and 6th Ring Roads while Panggezhuang Town, Weishanzhuang Town, and Caiyu Town on the southern border of Beijing are all outside the 6th Ring Road. In Changping District to the north, Beiqijia Town and Nanshao Town are both located alongside the 6th Ring Road. In the northeast, Nancai Town, Shunyi is just outside the 6th Ring Road. Likewise, Changgou Town on the southern border of Fangshan District is far beyond the 6th Ring Road into Beijing's hinterland. In 2013, aside from Ganjiakou Subdistrict, Haidian District inside the 3rd Ring Road, every land transaction was outside the 5th Ring Road. These parcels predominately span the stretch of outer district between the 5th and 6th Ring Roads or lie just outside the 6th Ring Road. There's a small cluster of parcels in Yizhuang Area, Daxing Taihu Town, Tongzhou, and Dougezhuang Area, Chaoyang. In the north, Dongxiaokou Area, Changping District is located between the 5th and 6th Ring Road while Cuicun Town, Changping District and Renhe Area, Shunyi District are just outside the 6th Ring Road.

Table 7: Distribution of large residential land transactions in Beijing 2003 to 2013 by year, functional district, administrative district, and subdistrict

Year (#)	Urban core and Inner suburbs: (Xicheng, Xuanwu, Dongcheng, Chongwen, Haidian, Chaoyang, Fengtai, Shijingshan)	First tier outer districts: Changping, Shunyi, Tongzhou, Daxing, Fangshan, Mentougou
2003 (50)	Chaoyang: Dongfeng (7) Haidian: Malianwa (3)	Changping: Cuicun (17), Xiaotangshan Shunyi: Nancai (7) Tongzhou: Kouxian (5) Daxing: Weishanzhuang (6) Fangshan: Nanjiao (3) Mentougou: Yanchi (1)
2004 (86)	Xicheng: Shichahai Xuanwu: Chunshu Haidian: Malianwa (5), Qinglongqiao, Sijiqing, Zizhuyuan Chaoyang: Dongfeng (5), Dougezhuang (2), Jiangtai (2), Liulin, Maizidian, Sanjianfang, Sunhe, Wangsiying, Xiaohongmen, Changyang, Cuigezhuang Fengtai: Changxindian (2), Xincun (2), Donggaodi, Wanpingcheng Shijingshan: Laoshan, Pingguoyuan	Changping: Xiaotangshan (8), Machikou (4), Shahe (4), Beiqijia (3), Nanshao (3), Cuicun (2), Dongxiaokou, Huilongguan, Changling, Chengnan, Xingshou Shunyi: Lisui (4), Konggang, Tianzhu Tongzhou: Zhongcang (2), Beiyuan, Majuqiao Daxing: Panggezhuang (3), Linxiaolu, Xihongmen, Xingfeng Fangshan: Changyang (2), Chengguan Mentougou: Xiaotangshan
2005 (10)	Haidian: Malianwa Chaoyang: Sunhe (4), Guangzhuang	Shunyi: Houshayu Tongzhou: Yongshun (2) Fangshan: Yongdingmenwai
2006 (28)	Haidian: Malianwa (5), Xiaotangshan Chaoyang: Aoyuncun, Dongba, Guanzhuang, Jinsong, Majuqiao	Changping: Xiaotangshan Shunyi: Konggang, Lisui, Renhe, Shengli, Xiaotangshan Fangshan: Chengguan (2), Yancun
2007 (20)	Haidian: Xisanqi Chaoyang: Dongfeng (2), Wangjing Shijingshan: Jindingjie	Changping: Beiqijia, Cuicun, Nanshao Shunyi: Niulanshan, Shengli Tongzhou: Kuoxian, Majuqiao Daxing: Xingfeng, Yizhuang Fangshan: Yongdingmenwai (2), Nanjiao
2008 (24)	Chaoyang: Laiguangying (2), Sunhe (2) Fengtai: Changxindian (2)	Changping: Cuicun Town, Dongxiaokou Shunyi: Shengli (4), Konggang (2), Renhe (2), Tianzhu Tongzou: Beiyuan, Majuqiao Daxing: Xingfeng (2) Fangshan: Changyang, Xilu Mentougou: Yongding
2009 (23)	Chaoyang: Balizhuang, Dongfeng, Guanzhuang Fengtai: Hua Haidian: Qinglongqiao (2) Shijingshan: Lugu	Changping: Beiqijia, Huilongguan, Shisanling Shunyi: Niulanshan Tongzhou: Yuqiao (2), Kuoxian, Taihu Daxing: Weishanzhuang (3), Xingfeng Fangshan: Changyang (3)
2010 (18)	Fengtai: Changxindian, Xincun	Changping: Beiqijia Shunyi: Nancai (2) Tongzhou: Beiyuan, Majuqiao, Zhongcang Daxing: Weishanzhuang (2) Caiyu, Qingyuan Fangshan: Changyang (3), Gongcheng

2011 (40)	Xicheng: Yangfangdian (3) Haidian: Malianwai (4) Chaoyang: Dongba, Guanzhuang Fengtai: Wangzuo (3)	Changping: Xiaotangshan Shunyi: Niulandshan (2), Gaoling, Shiyuan Tongzhou: Kuoxian (5), Taihu (4), Majuqiao, Yuqiao Daxing: Beizangcun (2) Fangshan: Changgou, Changyang, Nanjiao Mentougou: Yongding
2012 (17)	Fengtai: Changxindian Shijingshan: Guangning	Changping: Beiqijia, Nanshao Shunyi: Nancai (2) Daxing: Panggezhuang (2), Caiyu, Weishanzhuang, Yinghai Fangshan: Changgou
2013 (19)	Haidian: Sujiatuo (2), Ganjiakou Chaoyang: Dougezhuang	Changping: Cuicun, Dongxiaokou Shunyi: Renhe Tongzhou: Taihu Daxing: Yizhuang, Yufa Fangshan: Changyang (3), Changgou, Nanjiao Mentougou: Chengzi, Yanchi

Outsourcing of social reproduction evident in migrant dense regions and significant land transactions.

Population pyramids were made for a selected eleven subdistricts in the urban-rural transition zone in and around clusters pinpointed by the hot spot analysis. Seven subdistricts are located in northern Beijing including six subdistricts are located in northern Beijing including six subdistricts of Changping (Beiqijia, Xiaotangshan, Huilongguan area, Dongxiaokou Area, Shahe Area, and Baishan Town) as well as Sunhe in Chaoyang. The four subdistricts to the south include Changyang in Fangshan Districts and Weishanzhuang, Beizang Town, and Panggezhuang in Daxing District. The number of large residential transactions per subdistrict were varied. The majority of land transactions in the northern subdistricts occurred prior to the 2010 Census. The subdistricts to the south were the site of more land transactions after 2009.

In every subdistrict except Dongxiaokou Area (32%) and Huilongguan Area (28%), the majority of residents were agricultural *hukou* holders and the proportion of agricultural residents were higher than migrant residents. Migrant residents outnumbered local residents in all subdistricts to the north with the exception of Baishan Town (40%) and the negligible exception of Xiaotangshan (48%). The subdistricts to the south from a lower migrant population ranging from 49% in Beizang Town to 19% in Panggezhaung. In the majority of subdistricts, 15% - 25% of residents lived in collective households, with the exception of Shahe (44%), Sunhe Area (34%), Beiqijia (46%), and in contrast Panggezhuang (7%). Higher education was generally higher in the north. College education to the north varied between Sunhe (8%), 15% - 20% in Baishan Town, Xiaotangshan Town, and Beiqijia Town, to 34% in Shahe Area, and over 40% in Dongxiaokou Area (40%) and Huilongguan (47%). In contrast, to the south only in Changyang (18.5%) did more than 10% of residents have some college education.

The age structure for Beijing shows 4 subdistrict trends (*Figure 33*).

1. The proportion of children consistently declines, reaching the lowest levels in the 10-14 age bracket, before expanding in the 15-19 age bracket.
2. The largest proportion of the population lies between 20-29, approximately 7% larger than the 15-19 demographic and 3% larger than the 30-34 demographic.
3. There is a small but steady decline every 5-year age bracket, less than 2% separating the 30-34 bracket from the 45-49 bracket.
4. Population decline accelerates age 50-64, stabilizing after age 65.

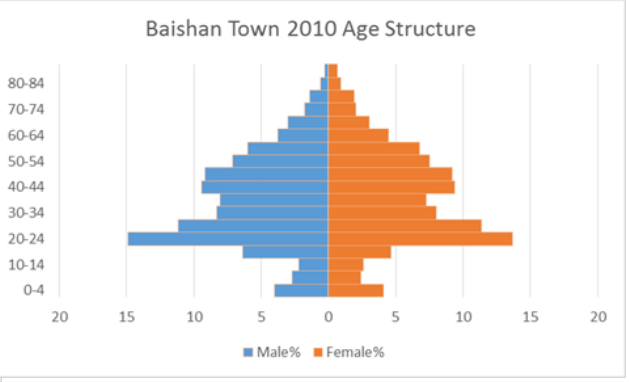
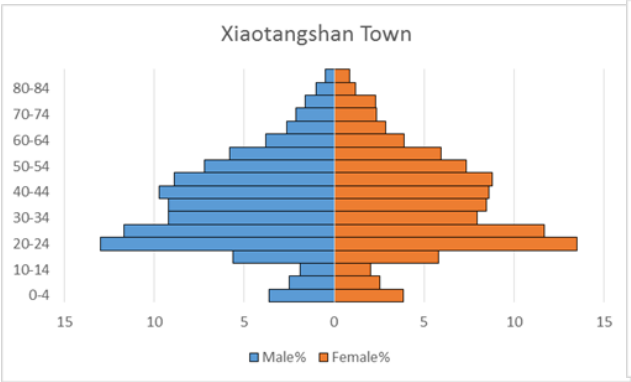
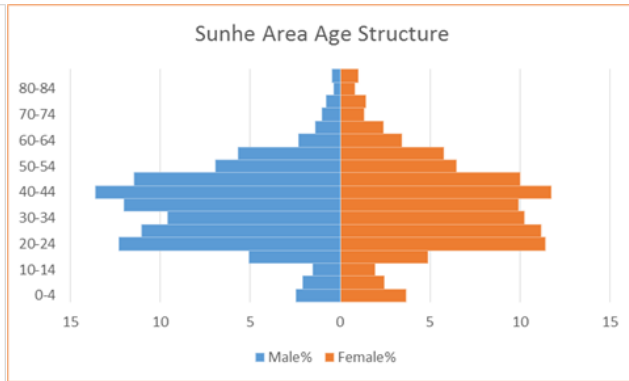
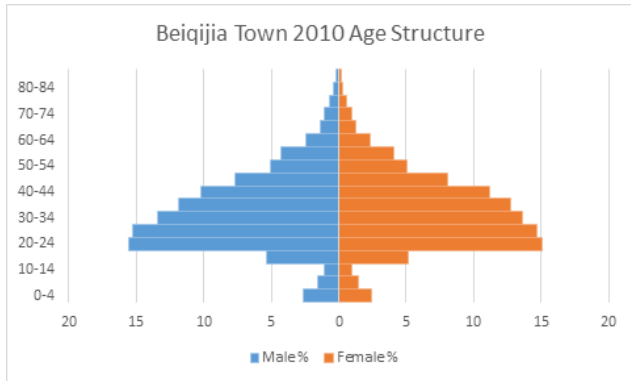
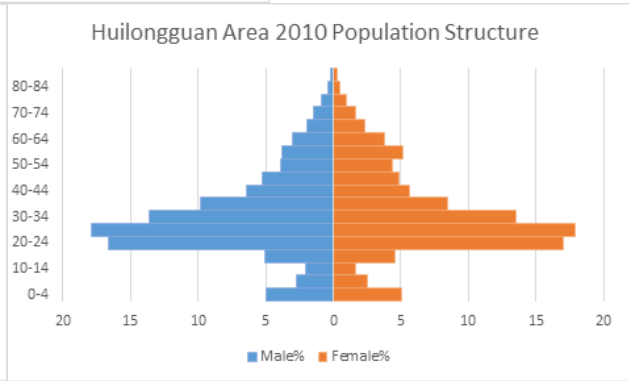
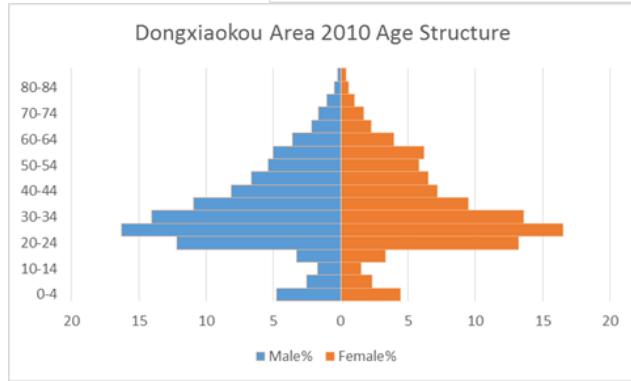
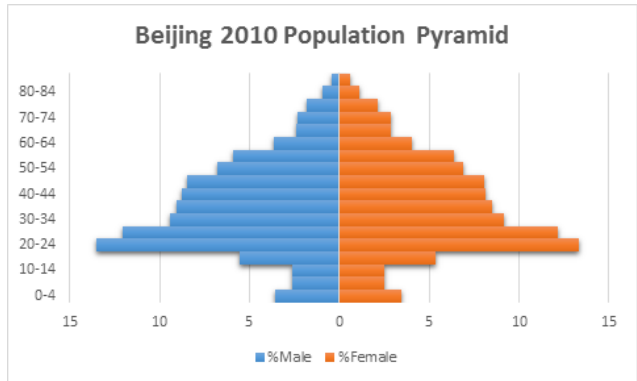
Across every subdistrict, the population declines between the 0-4 and 5-9 age bracket. In each of the selected subdistricts north of Beijing the proportion of children continues to decline in the 10-14 age bracket as well. This incremental childhood decline is less pronounced in the southern subdistricts. In Panggezhuang and Weishanzhuang the proportion of the population 10-14 is actually slightly higher than the 5-9 bracket. These two subdistricts have the highest proportion of agricultural residents at over 80% and well as the lowest proportion of migrant residents (19% and 33% respectively), and the lowest proportions of collective households (7% and 15%).

Like Beijing, each of the selected subdistricts also has a sharp population increase in the 20-29 demographic. In Beiqijia, Dongxiaokou, and Huilongguan more than 10% separates the 15-19 age bracket from the 20-24 bracket. Though all three subdistricts are majority migrant, 71% of Beiqijia holds an agricultural *hukou* while a minority of residents in Dongxiaokou and Huilongguan hold agricultural *hukou*. Almost half the population (46%) of Beiqijia also lives in collective households. The proportion of children in Beiqijia is significantly lower than in

Beijing, Dongxiaokou, and Huilongguan. Population declines steadily every 5 years from 30 to 59, with the most significant decline between 45-49 and 50-54.

The gap between 15-19 and 20-24 is most dramatic in Huilongguan. However, in both Huilongguan and Dongxiaokou the 25-29 population is larger than the 20-24 demographic. The 30-34 demographic in Dongxiaokou is larger than the 20-24 demographic as well, declining substantially from 35-39 and reaching a steadier rate of decline after age 45. In Huilongguan, the population drops dramatically between 30-39, reaching a steadier rate of decline after age 40. Both of these subdistricts have the highest rates of education (47% and 40%) and neighbor tech zones.

In contrast, Sunhe Area, Baishan Town, Weishanzhuang, Panggezhuang, and to a lesser degree Beizangcun and Xiaotangshan, population distinctly declines in the 30-34 age bracket, expanding again in the 40s demographic before declining again after age 50. The population decline between 45-49 and 50-54 is particularly large in Sunhe Area. Of these subdistricts, Sunhe Area has the largest migrant population share (57%) and collective households (34%). The education rate is one of the lowest (8%), corresponding to the large agricultural population though consistently lower than the other majority-migrant subdistricts. This pattern also holds for the southern subdistricts, with the exception of Chaoyang. Of the selected southern subdistricts, Chaoyang has the lowest agricultural *hukou*, highest rate of collective households, and highest rate of higher education attainment. Chaoyang and Sunhe were both the sites of sustained development prior to the 2010 Census.



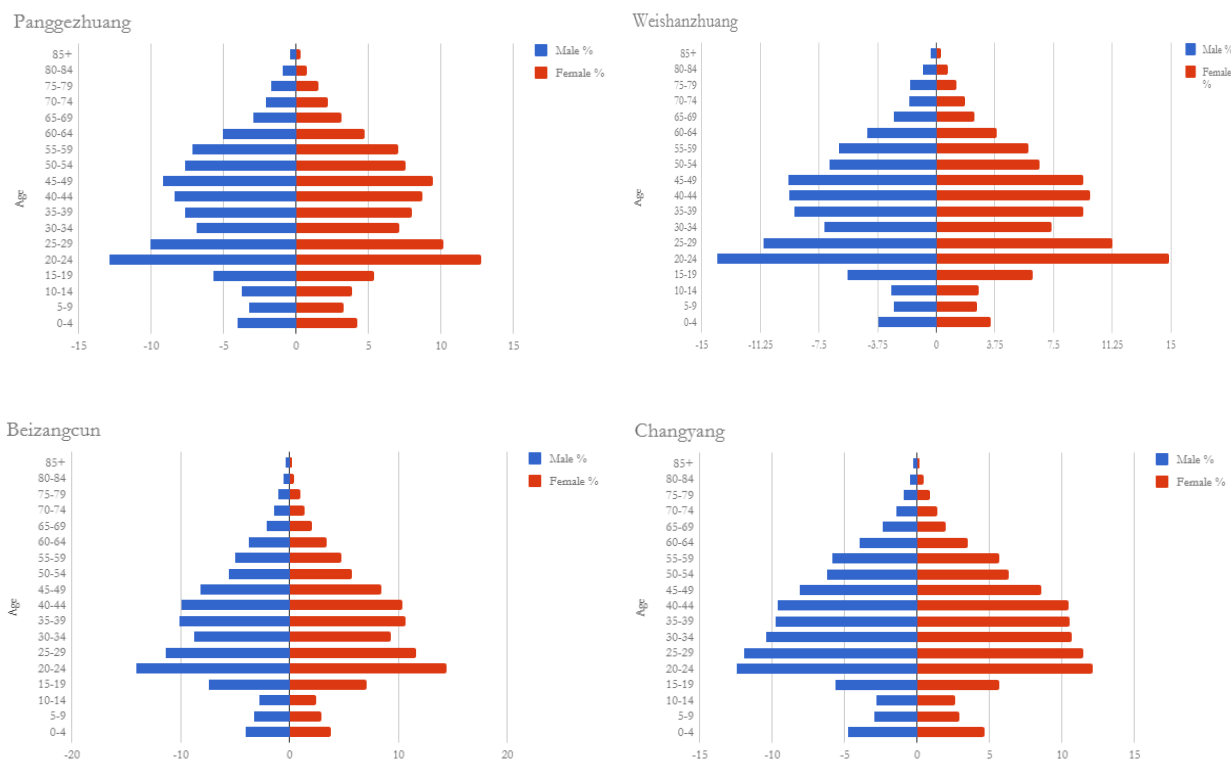


Figure 28: Age structure for Beijing and selected subdistricts in large residential transaction hot spot areas

CHAPTER 4: Rural migrants in a queer time and place: Queering the migrant worker as a state domestic project

The dual rural-urban structure and household registration system created a tiered class hierarchy in China, enabling a new generational transmission of power and wealth. China's embrace of the international market has been shaped by the continued existence of the dual structure as the primary tool through which China directs the trajectory of global capital and urban development. Likewise, the dual system continues to condition and shape the trajectories of migrants' lives. Following the same logic and strategy that pre-reform enforced mandatory gain procurement in the countryside, the Beijing and national governments outsource to the countryside the cost of reproducing the labor responsible for building the gleaming sky scrapers signifying Beijing's arrival on the international stage. Regulated through the *hukou*, administrative hurdles, public stigma, and state power refuse many rural migrants access to the modernity created through their labor, relegating migrants to life outside the bounds of urban citizenship and quality domesticity.

Language and discourse cloak the image of rural migrant workers in a language of others, outsiders, and an inescapable sense of placelessness. The migrant worker is constructed as always outside the bound of the city and the bounds of a settled home life. They are named the 'floating population' (*liudong renkou*), 'blind flow' (*mangliu*), 'peasant workers' (*nongmin gong*), or simply 'outside people' (*waidiren*). For city officials, migrant workers represent the 'low-end population' that must be managed, controlled, and eventually purged from the urban landscape. As Beijing engages in high-energy campaigns to improve the *suzhi* of residents and thus the progressive potential of the city and nation, the 'structurally innate and unescapable' low *suzhi* of the imagined rural laborer presents as a substantial barrier to progress and modernity

(Lei, 2003; Kipnis, 2007). The state has a simultaneous imperative to develop a ‘quality’ citizenry in Beijing and major cities along the coasts and to draw on the cheap labor power migrants provide, producing migrants as always temporally and spatially in-between. In the words of a migrant in Beijing, they are stuck between “cities that won’t let us stay and villages to which we cannot return” (*liubuxia de chengshi, huibuqu de jiaxiang*) (Zhan, 2015). The intentional spatial displacement of migrants through housing policy and demolitions is interwoven with a temporality meant limit possibilities for intimacy, love, and family within Beijing. Transient and cast outside the norms of quality citizenship, this state domestic process can be productively understood to govern migrants through a perpetual state of queer precarity.

Spatial marginalization

Census data show many migrant populations pushed to the margins of metropolitan Beijing, clustering in the urban-rural transitional zone beyond the 5th Ring Road and stretching further past the 6th Ring Road. The subdistricts of central Beijing and the inner suburbs host only small populations of migrants. Starting in 2003, campaigns to “beautify the city” (*meihua chengshi*) in preparation for the Olympic Games drove mass demolitions near the urban core, clearing all ViC inside the 3rd Ring Road by 2010 and reducing the estimated total number of ViC in Beijing from 332 in 2005 to less than 100 by 2014 (Bach, 2010). Many migrant residents of Haidian, Chaoyang, and Shunyi during the 2000 Census were pushed further into Changping as the informal settlements were demolished.

Subdistricts close to the urban core that persist to have high numbers of migrants tend to have more educated populations not sharing collective households. By age, they are less concentrated in their twenties and early thirties. High market housing cost combined with significantly restricted access to public assistance, make housing proximal to central Beijing

inaccessible for most residents without Beijing *hukou*. Of the migrants found here, many may be highly skilled professionals with *hukou* in other cities high on the administrative hierarchy, workers in technology industries deemed of high enough *suzhi* to contribute to Beijing's aspirational vision, or migrants seeking informal housing in the subaltern world of basements and bomb shelters. In the peripheral areas of Beijing, migrants compose the greatest share of subdistrict populations between the 5th and 6th Ring Road, spreading past the 6th Ring Road into the rapidly developing agricultural lands. This trend was most distinctly mapped in northern Changping.

Concentrations of residents in their twenties follow similar distribution patterns to migrants, composing larger shares of the population between the 4th and 6th Ring Roads. The highest concentrations of young adults live in Haidian, spilling over into the neighboring subdistricts of Changping. Clusters of young people are not confined to subdistricts in proximity to the education infrastructure. High number of residents in their twenties are early thirties characterize the age structure of Beijing, accompanied by a severe lack of children. Regions close the urban core and far into the rural hinterlands with fewer migrants have higher proportions of children under 15. In many migrant dominate subdistricts, children account for less than 6% of the total population.

Globally across Beijing there is no statistically significant correlation between the proportions of migrants and of agricultural *hukou* holders within a given subdistrict. However, variations in agricultural residents, as well as variations in strongly correlated higher education and collective households, offer indications about the differences between subdistricts with large migrant populations. The agricultural outer regions of Beijing and the core urban area of the city have similar migrant and household type; however, the levels of educational attainment are in

stark contrast. The strong negative correlation between subdistrict agricultural *hukou* population and higher education attainment suggests agricultural *hukou* still poses a significant barrier to higher education. This relationship between agricultural *hukou* and higher education persists in the inner and outer districts with high migrant populations. Numerous universities and high tech zones attract young people from outside Beijing to Haidian. Many subdistricts of Haidian have high proportions of migrant residents, young adults, residents living in collective households, as well as residents with higher education. In contrast, subdistricts to the northeast in Changping have similar proportions of collective households, young adults, and migrants, but differ significantly along agricultural and education lines. Whereas many of the subdistricts of Haidian are majority migrant and majority non-agricultural, the agricultural population is larger than the migrant population in many of the majority migrant subdistricts of Changping. This indicates both that many of the local residents retain agricultural *hukou* and that much of the migrant population clustered in these areas hold agricultural *hukou*.

Spatial variations in these correlations indicate differing demographic suburbanization trends in the outer districts to the north, east, and west of central Beijing. East of Beijing, the suburbs in outer Chaoyang and Tongzhou Districts are composed of largely urban populations, have lower agricultural populations, higher levels of education, and higher proportions of family households. Pockets of migrant settlement are also demographically and visually distinct in the southern suburbs of Tongzhou and Daxing. These majority migrant and majority agricultural subdistricts have larger proportions of agricultural residents than migrant residents. Compared to subdistrict in Changping with similar proportions of migrants, the southern subdistricts tend to have higher rates of agricultural *hukou*, lower educational attainment, have lower rates of collective households, and a somewhat increased presence of children.

Urban redevelopment as teleological narrative of progress & regulatory mechanism

Though there is only a small statistically significant positive correlation between land transactions per subdistrict and agricultural *hukou* and a small negative correlation with higher education, clustering analysis highlighted the large residential land transactions over most of Changping District with another small cluster in Daxing District. Many of these transactions are occurring in region which, during the 2010 Census, contained larger agricultural populations. Despite a drop in the ratio of agricultural residents in Changping between 2000 and 2010, Changping experienced a significant increase in absolute number of agricultural residents, presumably migrants.

The density of land transactions in 2003 and 2004 corresponds to the development push for the 2008 Olympic Games. Infrastructure projects to support the games and capitalize on flows of FDI and state capital perhaps facilitated the development push in these districts. Transactions in 2003 and 2004 were fairly dispersed around Beijing, both inside and outside the 4th Ring Road. In the years following, large residential land transactions were increasingly rare inside the 5th Ring Road. From 2006 onward, the locations of large residential land transactions have generally trended farther away from the city center, toward the border of the 6th Ring Road and beyond. Through 2008, land transactions were most populous in north and northeastern Beijing, primarily in the districts of Chaoyang and Changping, as well as Shunyi and Haidian. After 2008, land transactions trended to the south and east toward the districts of Tongzhou, Pinggu, and Daxing.

Chaoyang saw the largest population growth from 2000 to 2010 (1,255,381) and the second highest number of large residential land transactions from 2003-2013. The site of much of the Olympic Games infrastructure, land transactions in Chaoyang are higher pre-2008.

Chaoyang also saw significant growth in residents with *hukou* in other provinces (1,002,966), a substantial 80% of total population growth. The proportion of agricultural residents grew from 27% in 2000 to 30.5% in 2010 with a total increase of 462,892 agricultural *hukou* holders. However, the growth in the collective population remained relatively stable compared to overall population growth. Chaoyang also continues to have one of the highest rates of residents holding a bachelor's degree (19%).

Shunyi likewise was the site of a significant number of land transactions leading up to the Olympic Games, especially relative to the district's smaller population and population increase 2000-2010 (37.7%). Though Shunyi's population is less than a third the size of Chaoyang and experiences a smaller growth rate (37.7%). Though Shunyi has a higher percentage of migrants (32%) than districts in the city center and the outer districts, the share remains smaller than other proximal districts. The proportion of residents with agricultural *hukou* has dropped substantially from 2000 to 2010 from 79% to 60%, but remains one of the highest. Residents with bachelor's degrees in collective households remain at less than 10% of the population.

Changping District, experiencing the largest proportions of residential land transactions saw population growth of over 1 million residents, experiencing the highest growth rate of any district (170%). The number of residents from other provinces rose by almost 700,000, making Changping a majority-migrant district of 51% migrants compared to 25% 10 years earlier. Changping also shifted from a majority agricultural resident population in 2000 (58%) to 47% in 2010. The proportion of residents in their 20's increased from 21% to 30%, similar to the expanding proportion of residents in collective households (19% to 27%). By 2010, Changping had the highest rate of Bachelor's degrees in the outer districts (17%).

Like Changping, large residential developments in Daxing were accompanied by substantial increases in the real and relative increase in migrants and collectively housed populations. Boasting the 2nd highest growth rate, the population of Daxing more than doubled from 2000 to 2010 (103.31%). This change was accompanied by the largest demographic shifts of migrants (from 17% to 47%) and populations in collective housing (10% to 21%), and 20 year olds (18% to 27%). However, this was accompanied by a much smaller shift in higher education (3% to 6%). In 2010, Daxing still remained a majority agricultural *hukou* population, though the rate fell from 70% to 62%. In later years, the distribution of large residential land transactions has corresponded with high in-flow districts. In more recent years, transaction locations have been trending south toward Daxing and the neighboring subdistricts of Fangshan and Tongzhou.

Over the period between 2003-2013, land transactions have followed migrant settlements as demolitions displace community after community. Early demolitions cleared settlements in Haidian, Chaoyang, and Shunyi, pushing the recently displaced migrants to seek housing further toward the 6th Ring Road. Land transactions for urban redevelopment followed, impacting much of Changping. As Daxing and southern regions increasingly draw host migrants, redevelopment schemes have shifted to the clearing of these areas as well.

Queered temporality

Age distributions across Beijing are characterized by low proportions of children, overrepresentation of young adults, and small population past retirement age. Beijing's age structure is shaped by *hukou* restrictions that discourage migrants from either settling or raising children in the city. Across subdistricts, young adults are the dominant demographic. A large population of young adults, rapidly decreasing in middle age, characterizes most subdistricts to a greater or lesser extent. In Huilongguan and Dongxiaokou, universities and high tech zones

attract younger demographics that are somewhat transient in nature and thus support populations exceptionally concentrated between twenty and thirty-five. The proportion of highly educated, urban residents in these subdistricts also may indicate at least a somewhat more mobile population whose current residential choice is motivated by proximity to local educational infrastructure.

The majority migrant and agricultural subdistricts are also dominated by the 20-29 demographic. The most distinct difference between the subdistricts analyzed in Changping and Chaoyang districts compared to those in Daxing and Fangshan is the drop populations in their thirties. This trend corresponds with average child rearing age. A likely explanation suggests residents in the 30-34 and, to a lesser extent, 35-39 age groups return to their home province to start or raise families before returning to the city to work. These subdistricts also have a less steep decline as children age than subdistricts to the north. While this may be related to increased access to migrant schooling in Beijing, it is also possible many children of migrants who would otherwise be in this category are left-behind children.

In most subdistricts, the already small proportion of children decline as they age. Correspondingly, access to schooling grows more difficult as children advance in grade. This shortage of children is most distinct in the 10-14 age bracket as students begin high school and preparation for the gaokao. Barred from public schools, some parents may choose to return to their place of registration while their children attend school. Others leave their children behind in the village with family as the parents continue to live in the subdistrict. Populations also decline sharply as migrants reach retirement age and have little choice but to return to their places of registration if they wish to receive social security benefits.

The development of the modern city capable of driving China's transition from a production economy to a consumption economy functions through the real and brutal exclusion of migrants from the city boundaries. Obstacles from a lack of care and resources for the children of migrants, large-scale demolitions, and state driven urban-redevelopment projects seek justification in a language that cast migrants as undeserving and unable to participate in Beijing's futurity. The young and the old represent not potential or familial relationships worth cultivating, but a burden on municipal expenditures and developmental potential to be cast aside. While education, child-rearing, and filial piety are promoted and encouraged of the urban populations with local *hukou*, inside the bounds of citizenship and belonging. The cultivation of this quality citizenry who China hopes will drive the transition into a consumer society, casts rural migrants as queer others, surplus populations whose own futurity is irrelevant to the national domestic project.

Limitations

There is a danger of running afoul of ecological fallacies. Chinese migration, urbanization, and suburbanization are a shifting landscape of citizenship and residents left in a mode of perpetual precarity. While it is likely many residents of subdistricts such as Beiqijia are migrants in their twenties with a Bachelor's degree and an agricultural *hukou* living in a village-constructed informal settlement, that individual is not the scale of this research project. More micro-level ethnography and survey research on a wide array of settlements and housing redevelopments will bring greater knowledge to who these developments are impacted and what that impact is on their ability to execute their right to the city.

Further limitations arise from a lack of specificity in time. Data on land transactions is given for the date which the contract was completed but does not include data on when the

project the land transaction was issued for was initiated and completed. When comparing the years in which the transactions occurred and the snapshot in time of Census data, without further research into individual developments one can't speculate on the potential impact developments may have had on residents or the demographic characteristics of subdistricts at the time of the 2010 Census. However, the analysis presented in this project provides a basis on which to compare and build through demographic changes illustrated by the 2020 Census. The geographical bounding of these analysis and the incorporation of the largely rural hinterland, further obscures the patterns at play in the morphological city. Despite incorporation under Beijing's jurisdiction, the second tier outer districts and much of the first tier outer districts remain very rural and beyond Beijing's commuting zone. An analysis of the greater Beijing administrative unit does not account for the dynamics of the functional city.

Conclusion

Functionally, the objective of party and city officials is to reap the financial benefits of urbanization without incurring any of the financial or social costs. Migrants are drawn into the cities for their labor power while the greater costs of social reproduction are cast away from the city. The exclusion is normalized through discourse of *suzhi*, of an innate human quality generally defined in contrast to rurality. Rural migrants have few options for urban sexual citizenship and domestic belonging. Lacking alternative housing options, many continue to live in collective housing through their thirties. Options for the majority of migrants lacking the necessary documents to register children for public school are coded as transient and low *suzhi* migrant schools. Return migration to the countryside and the left-behind child phenomena diverge from urban domesticity and mark a dramatic temporal divergence from urban belonging and citizenship.

In November 2017, days after a fire in a crowded Daxing apartment building killed 19 people, mostly migrants, residents of similar migrant housing areas across Beijing were thrown, or dragged by police, into the wintery streets. Their possessions piled in bags, children in tow, many had nowhere to go. The municipal government used the November 18th fire as a catalyst for mass demolitions of migrant-dense communities throughout the city. Bulldozers razed not only the homes of this ‘low-end population’, but also demolished the storefronts, restaurants, and business residents relied on for income (Zhuang 2017). Soon, once the rubble is cleared, much of the land that recently supported bustling migrant communities will be sold to real estate developers for the construction of gleaming, modern residential compounds unaffordable to the previous inhabitants. The city government will see a significant windfall from these transactions, none of which will be used to compensate the migrants who watched their years of savings and work turn to dust with a week’s notice (Friedman 2017).

This wave of demolitions was abrupt, sweeping, and received significant media attention. However, these urban renewal efforts are only the most recent in what has been a crucial strategy of the municipal and central government, as a political strategy for social control and well as capital accumulation. In the pursuit of capital and domestic engineering, rural migrants are quite literally cast aside. This particular form of queer precarity is not rooted in a lack of a home, of a nurturing domestic space—the communities of intact Villages-in-the-City are a testament to an ability to dream, to construct one’s own narrative of life and belonging. Regardless of attachment to place, migrants’ domestic life is embroiled in a state project to refuse legitimacy to this domesticity in very tangible and brutal ways. The forces of temporal and spatial marginalization compound so that even if one finds a means to geographically remain in Beijing, their time still may not arrive and likely never will.

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