

One City, Three Peoples: Migration, Immigration and the Making of Global Shanghai

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Entering the twenty-first century, Shanghai, China's largest metropolis, had undoubtedly regained its status as not just the largest, but also the most global city in China. In recent decades, Shanghai has emerged as the fastest growing and one of the most dynamic and attractive global cities in the world.¹ Its population in the last three decades or so doubled, from 12 million to over 24 million. A city in 2008, only a decade ago, ranked the 25th among global cities in the world in terms of GDP, is now estimated to move up to number seven by 2025, by far with the fastest pace of ascending in the world.²

Shanghai's phenomenal ascendance to a premier global city is deeply embedded in the global and domestic political and economic contexts (Wasserstrom 2003, 2009; Farrer 2010, 2019), but this ascendance is first and foremost also a story of migration and immigration. It is a story of how people of different origins and statuses worked and carried on their daily lives side by side, in the same geographic space, but governed by different political and social institutional logics. During the two decades of extraordinary economic growth since the mid 1990s, Shanghai's population increase comes *entirely* from internal and international migration. It is the massive internal and international migration that has made Shanghai the global city today.

Shanghai's rise in its economic as well as cultural preeminence has relied on its people, or more precisely, three peoples: local residents who are among the healthiest and best educated in China, an enormous influx of migrants from all over China, and a rapidly rising number of foreign expats. Shanghai's position as China's premier magnet of labor and talent is unmistakable: against the backdrop of little increase of its local population (those with Shanghai *hukou*) and slow growth of the national population, the city's population

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¹ Several major studies of global cities have all recognized Shanghai's ascent to the top 20 global cities in the world, and some predicted Shanghai's continued prominence to be a leading global city (e.g. A.T. Kearney 2012, 6-7, MGI 2011, PWC 2013).

² Source: <https://pwc.blogs.com/files/global-city-gdp-rankings-2008-2025.pdf>. According to the Global Financial Centers Index which measures cities based on their attractiveness to financial services professionals, London remained in the top spot among 88 financial centers surveyed in 2016, and Shanghai rose 3 places from the last year, ranking 13th on the list (http://www.longfinance.net/images/gfci/GFCI21_05_04_17.pdf).

expanded in an accelerating pace. Shanghai's population grew by 12.5 percent during the eight years of 1982 and 1990 (the years between two censuses were conducted), 23 percent between 1990 and 2000, and 40 percent between 2000 and 2010. In one decade alone, between 2000 and 2010, Shanghai's resident population expanded by 6.6 million, from 16.4 to 23 million. As a reference, for the last period, between 2000 and 2010, China's national population grew by only 6 percent (Cai 2013).

How did migration and immigration to Shanghai take place in the last three and half decades? What are the institutional logics that have governed the three peoples, local residents, domestic migrants, and international immigrants, in the same city? What are the roles of continued migration and immigration in Shanghai's further ascent to become a top-tier global city? In this paper, we examine the process and the institutional arrangements of migration and immigration in Shanghai. In the first section below, we review recent changes in Shanghai's demographic profile, focusing on the roles of internal migration and international immigration in Shanghai's population change. We will then examine the changes of institutional arrangements that have governed the lives of people of different origin and status and separated them into three peoples. We will further evaluate the critical roles of continued migration and immigration in fulfilling Shanghai's aspiration to be a top tier global city in the coming decades, with illustrative results based on population projections. We conclude the paper with discussions on the institutional arrangements and policies that are needed to ensure continued migration and immigration, should Shanghai remain on its track to ascent further to be a top-tier global city.

One City, Three Peoples

Shanghai is a city where its population is composed of three separate groups or segments: local population with Shanghai household registration (*hukou*), local resident population with household registration elsewhere in China, or domestic migrants, and residents from outside of China (including those from the Chinese territories of Taiwan, Hong Kong, and Macau). Together these three segments make up Shanghai's population, but each exhibits distinctive demographic and social characteristics, live under different institutional rules and policies, and play their separate but indispensable roles in the makeup of Shanghai's social and economic landscape. These three segments are products of China's political, social, economic and legal legacies and their separate changes and integration will define Shanghai's population in the future.

The diverse trends of two major components of Shanghai's population, those with and without local household registration, are shown in Figure 1. Between the 38 years of 1980 and 2017, Shanghai's population (including both those with and without local *hukou*) more than doubled, from 11.52 to 24.18 million, but the segment of the *hukou* population with rose by only 27 percent, from 11.47 to 14.55 million. At the same time, the segment of migrants (people without local *hukou*) grew astronomically. As a result, the share of Shanghai local resident population with Shanghai *hukou* dropped from almost 100 percent in 1980 to 59 percent in 2013. In the last few years, the share of local resident population stayed about the same, at around 60 percent. In other words, two out of every five persons residing in Shanghai now are migrants from elsewhere in China.

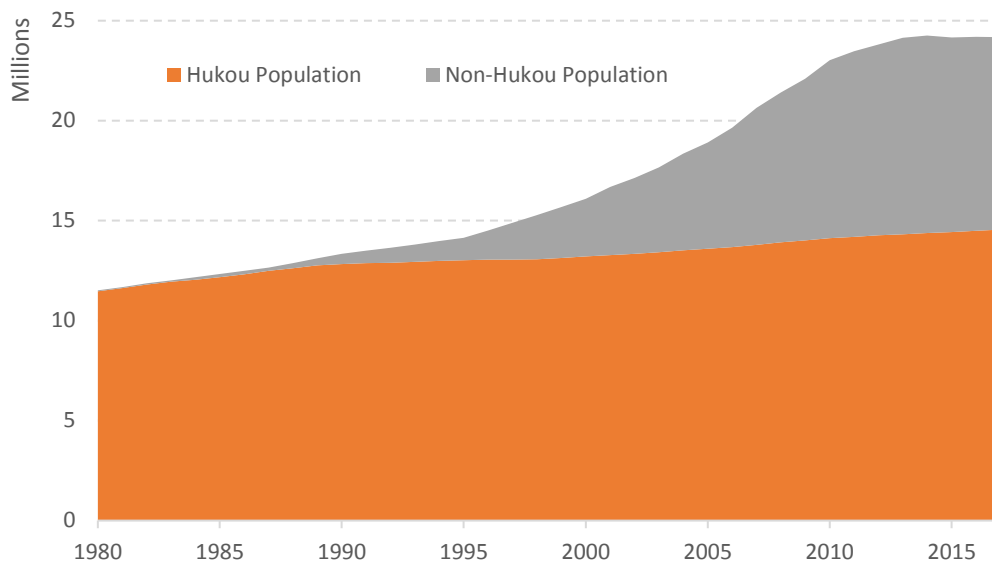


Figure 1. Changes in Shanghai Resident Population by Hukou Status, 1980-2016

In the last few decades, Shanghai has also returned to be the top Chinese destination for foreign residents. Following a three-decade long of virtual absence under socialism, foreign residents have come back. By the turn of the twenty-first century, the number of foreigners registered living in Shanghai for six months and longer returned to its historical height last achieved in 1949, at about 40,000, though by the proportion of total city population it was still far below its historical peak. In the last decade and half, however, Shanghai has seen an explosive increase in regular foreign residents, with the number tripling, far outpacing the growth rate of the city's overall population (Figure 2). In 2000, there were only 60,020 registered foreigners living in Shanghai. That number rose to 100,011 by 2005, peaked at 176,363 in 2013, before dropping slightly to 163,363 in 2017. These numbers, however, only include those who are registered and are in Shanghai for six months and longer. There are at least about the same number of foreign residents who are in Shanghai for less than six months. The total number of foreign residents in Shanghai in recent years hence are more likely to be in the neighborhood of 350,000 and above. Records kept at the Shanghai Public Security Bureau for instance report a much larger number of foreign residents registered in Shanghai, with the number almost steadily rising from 338,7000 in 2010 to 375,900 in 2017. While the share of foreigners living in Shanghai is still very small in comparison to other global cities, the recent increase is extremely rapid. With the rapidly increasing presence of foreign residents, Shanghai has also positioned itself to be a truly globalized city.

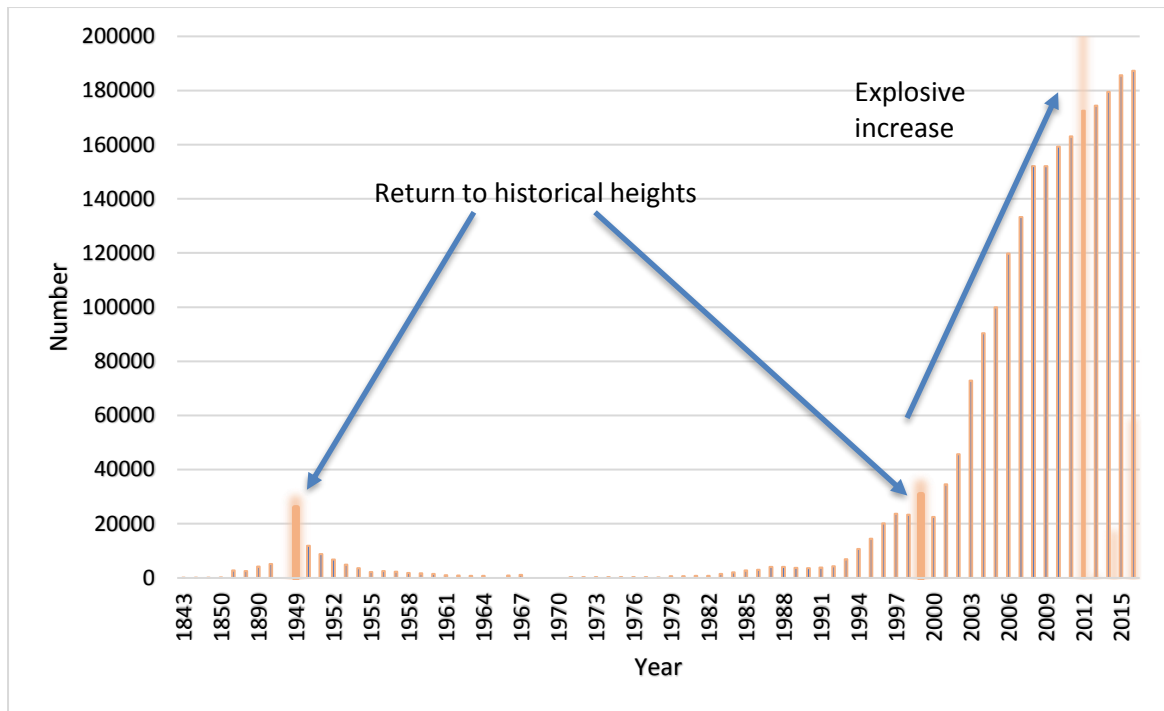


Figure 2, Foreign Residents in Shanghai, 1843 to 2013

(sources: up to 1895, 《旧上海人口变迁的研究》附录, 表 46; 邹依仁, P145, post-1949 to 2000, 《上海国际化人口研究》表 4-6; 何亚平, P88, post 2000, Shanghai Statistics Bureau), post 2013, estimated based on total foreign residents and the average share of those who stay over six months between 2010 and 2013 (about 50%).

Of the three segments of Shanghai's population, local population with Shanghai hukou changed the least. Between 2000 and 2017, Shanghai's population with local hukou increased by only 10.1 percent, whereas domestic migrant population increased by 151.3 percent, and long-term (six-months or longer) foreign residents rose by 172 percent. Largely influenced by the factors that will be discussed below, the trends we have seen in the last three decades, especially the last decade, namely slow or even shrinking Shanghai hukou population and rising shares of domestic and international migrants, will continue.

Shanghai Hukou Population: Smaller and Older

Shanghai has been a pioneer in China's rapid demographic transition from high death and birth rates to low death and birth rates. Shanghai's fertility level, measured by the total fertility rate (number of children a woman is expected to have in her life time, given age specific fertility rate of a particular year), reached the below replacement level of 2.1 children as far back as in 1971, three years before urban China as a whole. Starting from 1973, total fertility rate in Shanghai has not been above the level of 1.5 children per couple. For urban Shanghai residents, total fertility rate dropped to below replacement level in 1964, ten years before urban China as a whole (Coale and Chen 1987). The latest population census in 2010 reported a fertility level of only 0.7. These numbers make Shanghai not just the lowest fertility region for China but also an ultra-low fertility city in the world (Lutz et al. 2010, Merli and Morgan 2011). At the same time as fertility level dropped to an extremely

low level, mortality decline and health improvement have continued. In the last three and half decades, male life expectancy at birth in Shanghai rose by ten years, from 71.3 in 1980 to 81.3 in 2018. Female life expectancy similarly increased by almost ten years, from 75.4 to 86.1, making Shanghai the healthiest region in all China.³

Half century of extremely low fertility, coupled with a population that is getting older, have led to net reduction in local population. As far back as in 1993, two and half decades ago, death rate in Shanghai started to exceed birth rate. With only three exceptions, in 2012, 2014 and 2016,⁴ every year since 1993 Shanghai registered a natural decline of the hukou population. Since 1993, Shanghai has achieved a cumulative loss of 44,000 residents with local hukou status, due to natural decrease. As the share of older population has been increasing, even with lower mortality rates across ages, the number of deaths is expected to increase, hence resulting in the relatively high, even rising, death rates.

Considering the higher death rate than birth rate, the modest increase in population with Shanghai hukou status is *entirely* due to the number of domestic migrants to Shanghai who have been granted Shanghai local household registration. In the two decades between 1993 and 2013, had there not been new Shanghai hukou given to migrants, Shanghai's hukou population size would have shrank by 425,000, nearly half million. Between 1993 and 2017, 3.38 million people moved to Shanghai with local household registration status granted, and 1.24 million moved out of Shanghai. As a result, there is an addition of about 2.14 million Shanghai residents with local household registration.

Sustained low fertility and mortality for Shanghai's local population has already made this population among the oldest in China. By the end of 2017, the share of Shanghai's hukou population who are over the age 60 was already 33 percent, namely close to 1 in 3 was already an elderly, exceeding the share in Japan in 2012 (31.9 percent).⁵

Domestic Migrants: Young and Larger

Shanghai's drastic expansion in its population in the last few decades, the last two decades in particular, comes entirely from the huge influx of migrants from elsewhere in China. As shown in Figure 1, in the last two decades or so, since 2000, the share of domestic migrants as total resident population in Shanghai doubled, from less than 20 to 40 percent. In 2018, 9.76 out of the 24.24 million Shanghai residents are migrants from elsewhere in China. Most of the migrants moving into Shanghai are those without local household registration. As shown in Figure 3, annual influx of population granted a local hukou fluctuated mostly around 100,000 a year, whereas the annual number of new migrants without local hukou rose to 200,000 a year in the early 1990s, to 400,000 in the late 1990s, and to over 800,000 in the late 2000s. In the last few years since 2010, however, there has been a substantial downturn in the annual number of non-hukou migrants to Shanghai. In 2013, there were only about 350,000 non-hukou migrants, a level of about one-third of the peak reached in

³ <http://www.stats-sh.gov.cn/html/sjfb/201903/1003219.html>

⁴ Year 2012 is the dragon year. Year 2014 is the first year that China partially relaxed the one-child policy, allowing couples to have a second child if one parent is a single child. Year 2016 is the first year that China abandoned the one-child policy and enforced the two-child policy.

⁵ Data source: Shanghai Statistical Yearbook 2018, and UN database.

2007. Such a drop seems to mirror the slowdown of rural to urban migration nationwide. During the third quarter of 2015, migrant labor outflow remained unchanged from the same time a year ago, in contrast to the 5 percent annual increase seen in years earlier, as reported by China's National Bureau of Statistics.⁶

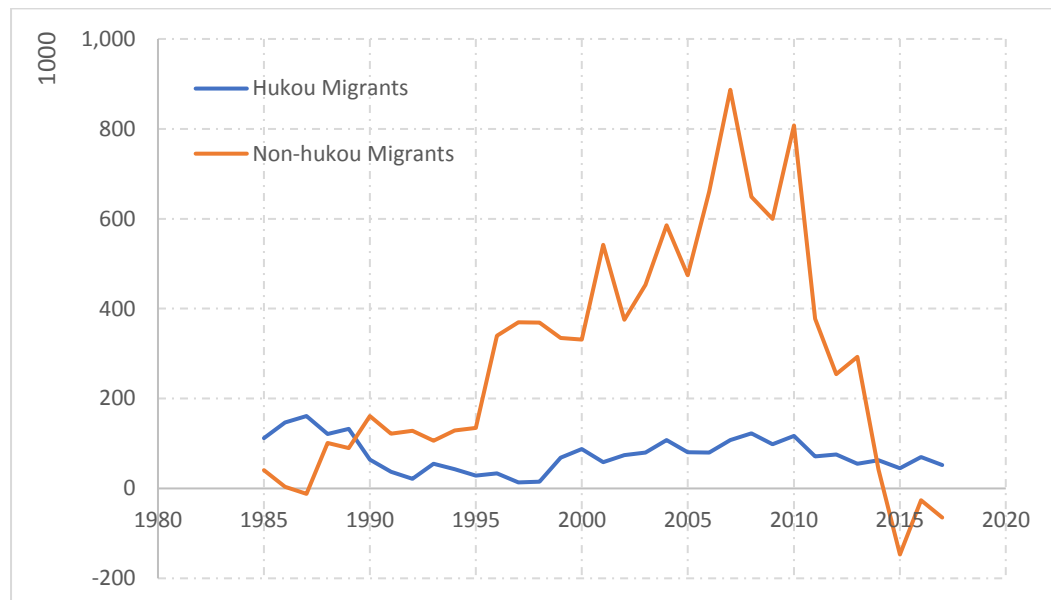


Figure 3. Number of Migrants to Shanghai Annually, by Household Registration Status, 1985-2017

Source:

Domestic migrants to Shanghai not only form an increasing share of the total Shanghai population, they also concentrate in the most productive working ages. In Figure 4 we plot age distribution of two populations in Shanghai, in the form of a population pyramid. Among all residents in Shanghai in 2017, migrants concentrate in the working ages of 20 to 49, with the largest share in the age group of 25 to 29, in which migrants count for half of all Shanghai residents.

Another feature of the migrants' age profile needs to be recognized. Aside from that for the prime labor force age, is the presence of migrants of very young ages, who make up a large share of the population below the age of 20. In some cases (e.g. ages 5 to 19), there are almost as many migrants as children with local household registration. Unlike China's first generation of migrants in the 1980s and early 1990s, who are most likely to return to their origins of migration when they reached older ages, the second generation of migrants, those who moved to cities in the last decade or so, are more likely to settle in their destinations, including getting married and having children. In 1990, of all births born in Shanghai, only 3.1 percent are by parents with household registration elsewhere in China. By 2009, the share rose to 50 percent. While some of these births are born by parents who came to Shanghai to make use of Shanghai's better medical facilities, the majority are from parents who reside in Shanghai but without local household registration. Incorporating the

⁶ <http://data.stats.gov.cn/easyquery.htm?cn=B01>

children of migrants into cities will become an increasingly important agenda for social and economic policies.

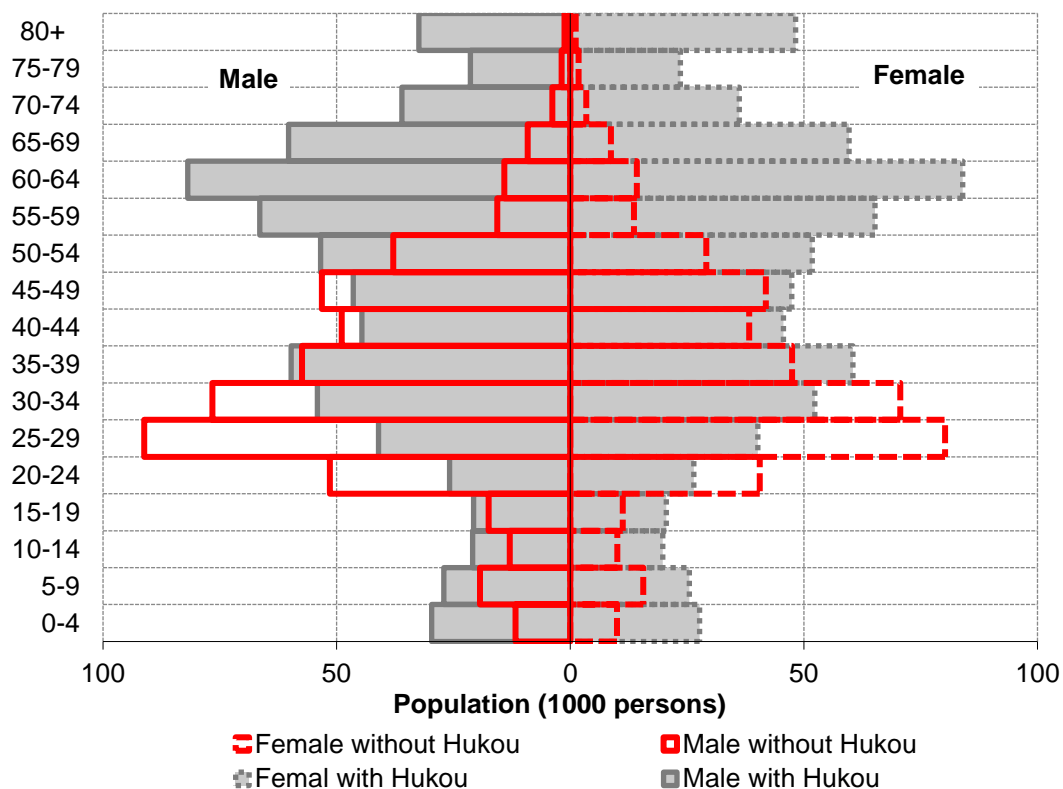


Figure 4 Population Age Pyramids, Shanghai, 2017
Source: Shanghai Statistical Bureau

The rising share and number of migrants in Shanghai define the demographic profile of the city, and serve indispensable roles economically and socially. These migrants not only make up nearly half of all labor force in the primary working ages, they also make the whole city much younger. As shown in Figure 4, in the age pyramids of Shanghai resident population for 2017, with migrant population included (in shade), the overall age structure of Shanghai still looks like a Christmas tree, with a very small base (due to low fertility and small number of births) but a large shade in the primary working ages. With migrants excluded, the population distribution is already very top heavy, with largest groups in the late 50s and early 60s, heading for an even older population in the years to come.

Such “youthfulness” of the population, as a result of the presence of young migrants, profoundly defines the cultural and social scene of the city, making it more creative, vibrant, dynamic, and cosmopolitan. Migrants’ contribution is not limited to their consumption of material and cultural goods in the city. They also contribute to the city’s pension and other social benefits funds.

Foreign Residents: Rising and More Diverse

A unique component of Shanghai's demographic profile, a feature that has made Shanghai increasingly a global city, is the rapidly rising number of foreign nationals living in Shanghai. Shanghai's reputation as a global city has always been associated with its openness and with its relatively numerous and highly diverse foreign residents. At the last peak of foreign residents' presence in the early twentieth century, Shanghai had no fewer than 58 different nationalities presenting (Wakeman and Yeh 1992).

Since returning to its historical peak number in 2000, Shanghai has seen an explosive increase in the presence of foreign residents. In 10 years since 2005, the number of foreigners living in Shanghai (with proper registrations) increased by nearly 80 percent, to 178,335 in 2015, followed by a slight decline to 163,363 in 2017 according to Shanghai government statistics (see Figure 2). The 2010 population census counted more foreigners residing in Shanghai, with a number of 208,284. Of this number, nearly three quarters, 143,156, are foreign nationals, while the rest are actually from the Chinese territories of Hong Kong (19,290), Macao (910), and Taiwan (44,928). While this number from the 2010 census appears to be small in the context of the large population base in Shanghai, with a share of slightly less than 1 percent, it does not look so small when viewed from other perspectives. First of all, a number (excluding visiting foreigners) of nearly 200,000 is by no means a small number. Such a number can be the size of a small or even a medium sized city in many countries in the world. Second, within China, this number makes Shanghai by far the most globalized city. A comparison can be made with Beijing, China's capital city. At the time of the last census in 2010, Beijing as the site of many embassies and headquarters of multinational corporations, had a foreign population of only about 90,000, accounting for less than half a percent of the total population in Beijing. It is a number far smaller than the number counted in Shanghai, which was over 200,000. Shanghai also hosted 5.7 million foreign tourists and 1.2 million compatriots from Hongkong, Macau and Taiwan in 2016, with a total of 6.9 million tourists from outside mainland China, a number 65% higher than that in Beijing.⁷ Among them, those from Japan, Korea and the U.S. topped the list. Foreign residents in Shanghai play highly important roles in Shanghai's globalizing economy: research and development, manufacturing, banking and finance, and trade. They also drive the cultural and social life in Shanghai, linking it directly with other centers around the world, and making Shanghai a major source of cultural creation and production.

In comparison to the other two peoples, the foreign population in Shanghai have their unique demographic characteristics. It is a younger population compared to local residents with household registration, with a large bulge in the mid ages and a very small share above age 60. Yet, it is an older population when compared with domestic migrants, with the largest age groups located in the age groups between 30 and 55. Moreover, in contrast to both other two peoples, for whom sex ratio between men and women are largely balanced, sex ratio of the foreign population in Shanghai is highly skewed toward the male. This is especially among those in the age groups above age 30, where males outnumber females by as much as 50 percent. Such unique features of the foreign population in Shanghai are

⁷ Data source: China Tourism Statistical Yearbook 2017.

associated with the roles they play in Shanghai, which in turn, are conditioned by the institutional logics and policies they are under, which we will discuss in the next section.

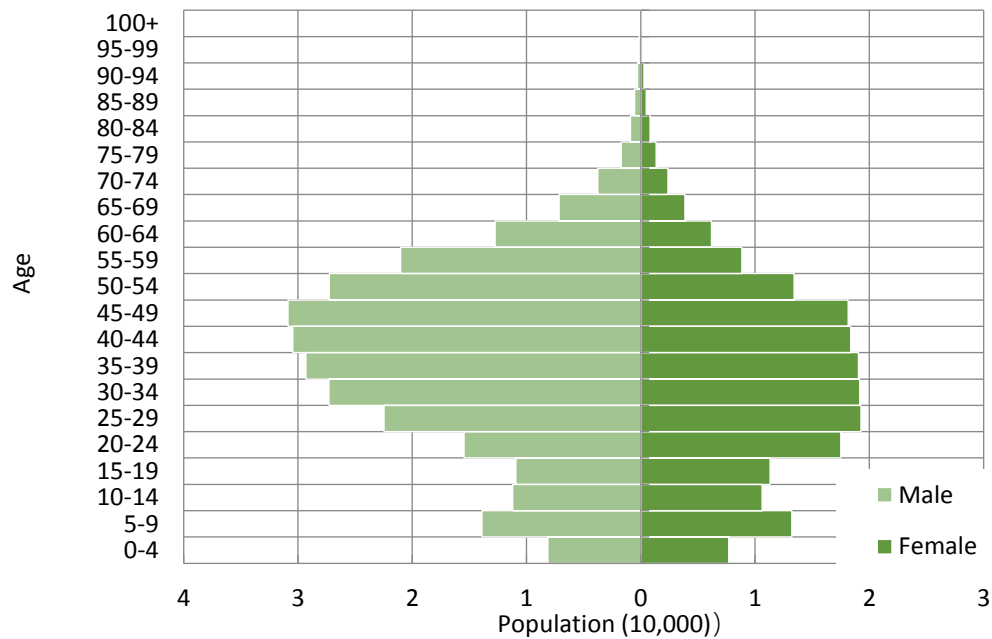


Figure 5 Age and Sex Composition of Foreign Residents in Shanghai, 2017

Among the three peoples in Shanghai, foreign residents are also the most highly educated. As shown in Figure 6, which is based on data from the 2010 population census, over 70 percent of the adult foreign residents had a college or higher education, compared with close to 30 percent among local residents, and less than 15 among migrants. For migrants, the largest share among them, slightly over half, are those with only a middle school education. Such sharp differences in education among the three peoples naturally lead to sharp differences among them in employment, income, and benefits.

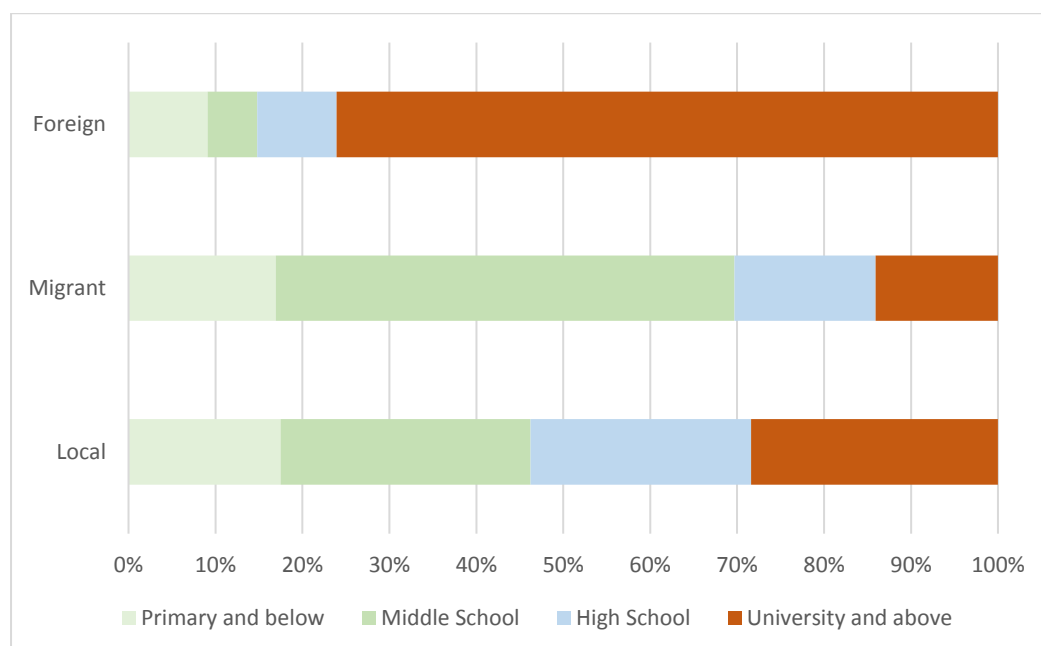


Figure 6 Comparison of Educational Attainment of Three Groups of Shanghai Residents, 2010

Source: China 2010 Population Census

Most foreigners residing in Shanghai are for business or education reasons. In 2010, based on the population census, the largest share of foreign residents in Shanghai reported to be in Shanghai as “employees and their family members of foreign companies,” who accounted for about a third of all male and one-fifth of all female foreign residents enumerated in the census. The next largest group for males is in “business” and for female “students. The three categories of “business,” “employees,” and “students” account for nearly 80 percent of all male foreign residents, and 55 percent of all female residents (Figure 7). As their number increases, the geographic origins of Shanghai’s foreign population have also become more diversified. Increasingly a larger share of foreigners living in Shanghai are no longer coming from countries that are the traditional sources. Between 2005 and 2015, for instance, the share of registered foreigner residents from Japan and South Korea, the two largest groups, dropped from 44 to 31 percent, while the share from “other” countries (not the traditional European and North American countries and Australia) rose from 15 to 28 percent.

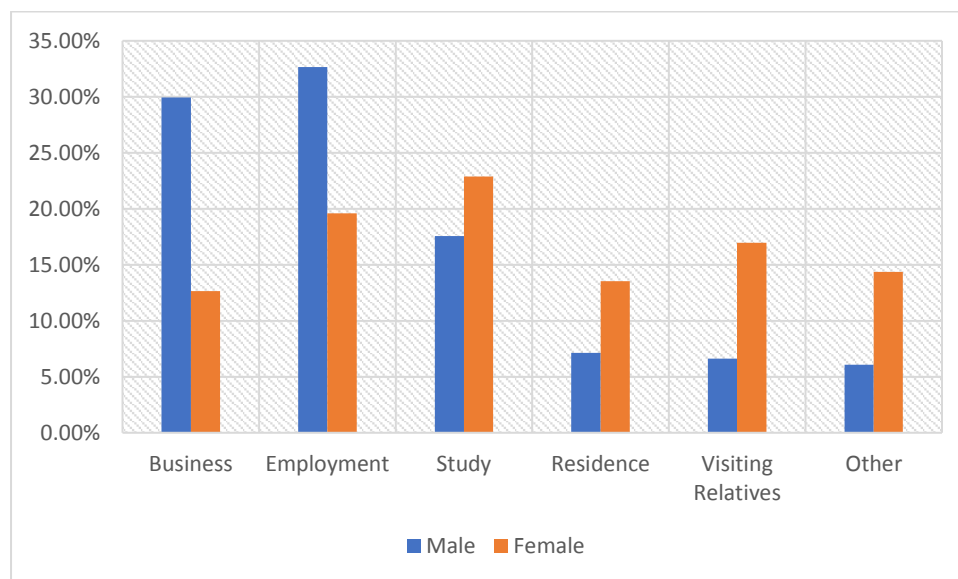


Figure 7: Reasons for Residence, Long-Term Resident Foreigners, Shanghai, 2010

Source: China 2010 Population Census.

It would however be an over-simplification to equate all foreign residents in Shanghai to highly mobile transnational elites (Farrer 2010, 2019). Rather, as the sociologist James Farrer summarizes, “foreign settlers grasp at both ‘outsider’ and ‘insider’ statuses in claiming a kind of cosmopolitan urban citizenship. Importantly, for some expatriates at the bottom of the professional hierarchy, neither of these narratives of elite cosmopolitan citizenship is plausible.” (Farrer 2010, 7). Many of the newly arrived foreigners, for instance, work as English teachers, whose pay and benefits are nowhere near those of corporate executives (Farrer 2010, 13). A recent survey of long-term foreign residents in Shanghai reported that over 20 percent of them list “education” as their profession (Shanghai

Research Team 2015). As Farrer's research shows, the foreign settler group "contains perhaps as many 'refugees' from global capitalism as elite 'talents.'" (Farrer 2010, 15)

One City, Three Systems

Migration, however, is never a natural and self-driven process dictated by demographic imbalances and technological development. Rather, it always involves a political, economic, and social currents and countercurrents. In the case of Shanghai, for nearly three decades between the mid 1950s to the early 1980s, it became a city virtually sealed from migrants from elsewhere in China, and best symbolized the Chinese case of one country, two societies, by which "the revolution led by Mao Zedong, ... in actual practice created something very much akin to serfdom to the majority of Chinese citizens – more than 80 percent of the population residing in rural villages who were effectively bounded to the soil (Whyte 2010, 1)." Between 1958 and the early 1960s, total migration rate, defined as the percentage of in-migrants and out-migrants as total population, dropped from over 10 percent to 3 percent. For nearly two decades after the late 1950s, Shanghai managed to reduce its total resident population by migration control (Wang et al. 2002). City residents in Shanghai with their local hukou received guaranteed economic and social benefits, ranging from food, housing, education, health care, to employment, benefits that were largely eluded by Chinese citizens who did not have a local urban hukou.

Even by the mid 1990s, a decade after city gates were opened to allow migrants from rural China to enter to work and to live, overt forms of discriminations of rural migrants in Chinese cities were rampant (Solinger 1999). Shanghai's first policy for migrants, in 1991, was summarized in three key terms: "containment, deportation, and management." Shanghai also classified jobs into three categories, with rural migrants explicitly excluded from two of them, which included such jobs as operating an elevator in the buildings. In Shanghai, for every migrant labor hired, the employer was required to pay a contribution of RMB 50, about one-tenth of a migrant labor's monthly income, to the city government as a special fee. Half of the total fees collected was used to subsidize reemployment of local residents. Migrant laborers were segregated into lowly paid industries and occupations, and even after controlling for their educational attainment and other demographic characteristics, received an income significantly less than their urban counterparts. Migrants mostly came to cities by themselves, leaving their children and family behind in the villages, and in cities they were excluded from receiving social benefits such as health care, pension, and were not allowed to purchase housing units. It was not until 1998 that children of migrants could attend urban schools (Wang et al. 2002). By the early 2000s, though migrants and local residents working in the same economic sector reported roughly the same income, such a seeming convergence disguises an important segregation, namely many migrant labor and labor with local household registration worked in different industries and with different occupations (Lu and Wang 2013).

Domestic Migration: from General Discrimination to Selective Inclusion

In the two decades since the mid 1990s, while the share of migrants in Shanghai quadrupled from 10 to 40 percent, and while the profiles of migrants in Shanghai changed significantly, local residents and migrants are still living side by side in two parallel social spheres. The

institutional barriers separating the two populations, nevertheless, also changed. Instead of across-the-board and overt discrimination that was prevalent two decades earlier, the new institutional arrangements is best characterized as selective inclusion, namely to allow a small segment of the migrants who can best serve the city to come and to stay.

To accommodate and to integrate local and migrant populations, Shanghai has designed and implemented a two-prong system, one for residency and the other for local household registration status. Implemented since 2002, Shanghai's residency system allows a migrant to apply and to maintain a residence permit.⁸ Residence permits are granted for a period of six-month, one year, three-year, or five-year. Migrants granted residence permits qualify for local employment (including government agencies) and residence, for applying and registering a business, and are eligible for participation in social security and housing funds contribution programs. For migrants with a one-year or longer residence permit, their children are eligible to be enrolled in local primary and junior high schools and to take part in the vocational high school and vocational college entrance exams in Shanghai. Such a system was launched in part for the benefits of the local residents: migrants are required to pay into the social security system. Given their young age structure, migrants' contribution to the local social security system fundamentally resolved the problem of insufficient social welfare funds for local residents.

It is entirely a different story if one wishes to become a "full resident," namely to have a local household registration that entitles one the full benefits. To be granted a local hukou, a migrant will have to go through one of the routes, most of them clearly and heavily tilted toward favoring high educational attainment, high income, and talents. For instance, one of the routes requires a migrant to have seven years of records of Shanghai residency, and have proof of having paid 84 months into the social security system. In addition, proof of ownership of housing in Shanghai is expected (in fact required). A migrant could qualify with a middle-level technical title, or an income twice the average (social average income level set for paying social security) for the previous three years consecutively. Alternatively, a migrant needs to qualify in one of the many "talent" categories, which generally limit to the highly educated, working in high-tech sector, or managerial persons with high annual income (over 1 million RMB, or about USD \$150,000, about ten times of local average per capita income level).

For college graduates in Shanghai whose household registration is elsewhere in China, a point-system is used (Zhang 2012). Unlike the residence permit system which is applied to almost all the migrants in Shanghai, the points system for obtaining a Shanghai hukou has a very high threshold. Shanghai began this system in 2004, the earliest in the country, as a way to draw talented migrants and to exclude low-skilled migrants. Under the point-system, a new college graduate who secures regular employment in the city can be awarded the Shanghai hukou if his or her qualifications pass the point threshold. The points system includes several dimensions, including educational attainment, academic ranking, foreign language skills, computer competency, holding of patent, as well as reputation of the employer. Normally, a graduate with a Master's degree from a top university could secure the success in applying for local hukou under such a system. Separately, Shanghai also has

⁸ Source: Issue of Shanghai Residence Permit to Talents enforced in 2002

policies for Chinese students returning after studies overseas. Even for them, requirement for educational credentials is quite high, such as graduating from top-ranked universities or with high-level degrees.

In June 2013, the point-system was extended to include migrants in Shanghai with a residence permit, which includes a series of indicators such as age, education, professional certificate, employment, social security contribution and investment. The threshold is set similarly high to hukou application. Once the migrants with residence permit have accumulated enough points (120 points in the latest regulation), although they are not entitled to Shanghai hukou, they can enjoy largely the same benefits as local hukou residents, particularly in terms of children's education and family members' social security entitlement. For example, their children are able to participate in senior high school and college entrance examination in Shanghai; their spouses and co-resident children can join Shanghai social security systems.

Comparisons of educational profiles of domestic migrants between the years 2000 and 2015, for which census and mini-census data are available, reveal the broad educational expansion in China in the last two decades, since 1998, (Yeung) and the outcome of selective nature of Shanghai's migration policy as well. Back in 2000, migrants and local residents in Shanghai had vastly different educational attainments. Seventy percent of migrants in Shanghai had an educational attainment of middle school or less, while the share for local residents was 51 percent. More tellingly, only 3 percent of migrants had college or higher education, while for local residents, the share was 14 percent. By 2015, the gap in education closely substantially. While still a higher share of local residents, 30 percent, had college and more education, the number for migrants rose to 22 percent.

Foreign Residents: from Political Exclusion to Talent Selection

Regulations governing foreigners' entry and residence in China have undergone tremendous changes in the last three decades, beginning with the establishment of the Foreigner Entry and Exit Control Agency in 1983. For decades under socialism, China had virtually no foreigners residing other than those of the diplomatic sector and a few "friends of the Chinese people." In the era of political hostility and isolation from the world outside, foreigners were suspected and watched as spies of foreign forces hostile to China, and their entry, exit, and stay were under the purviews of the public security and foreign affairs apparatuses.

Laws, regulations, and policies governing foreigners' residency in China have changed drastically over the last three, especially the last two decades. Yet so far the new regulations and policies remain highly selective and restrictive, resulting in a foreign population in China that is still extremely small in size and highly distinct in their personal profiles, as shown earlier in this paper. In addition to their unique age and sex composition compared with local residents and domestic migrants, foreigners in Shanghai are also highly selective with their higher education and professional skills. Their employment, as well as their residential pattern, differ significantly from the other two segments of the population in Shanghai.

Following the national regulation of foreigners' employment announced in 1996, Shanghai in 1998 issued its own regulation, requiring foreigners hired to be essential for the employment organization and that the foreign employee has technical or management expertise or possessing special skills that are lacking in China. Several years ahead of whole country, however, Shanghai in 1999 removed restrictions of foreigners' residence in Shanghai, which previously was only restricted to hotels permitted to receive foreigners. Foreigners since then can choose to stay in any hotel and are allowed to live in local neighborhoods. In 2002, Shanghai formulated its regulations on Shanghai Residence Permit for attracting talent, including attracting foreign nationals. Foreigners granted residence permit are excluded from the basic old age insurance, health insurance, and housing funds. In 2004, China started to implement regulations to grant foreigners permanent resident status. In 2011, regulations were announced for foreign employees' participation in social security.

In the last several years, three new regulations began to be implemented, all in the direction of making it easier to attract foreign talent to Shanghai. In 2013, Shanghai issued regulations on granting foreign talent Shanghai residence permit, allowing foreigners with a residence permit to invest and to start a business, to employ and to be employed, to participate in social insurance, and to allow their children to attend local schools. Foreign talent again is required to have college education credential. In May 2015, Shanghai moved further to lower the threshold for granting residence permit for foreign talent and simplified the application process. The new regulations removed requirements of employment organization type and requirements of employee rank and position, relaxed residence length requirement, and confirmed the principle of "letting the market determine talent." Foreigner can be sponsored by their employers to apply for permanent resident status in China, if they have continued employment in Shanghai for four years, with residence in China no less than six months annually, with stable income sources and residence, and with annual income and tax payment meeting standards (referenced to the previous local average income and tax level, currently at annual income of 600,000 RMB and annual tax payment of 120,000). The same measures also started to explore ways to support foreign students to start new businesses in Shanghai after their graduation. Most recently, announced on July 1st 2015, foreign talent residents with permanent resident status and work permits are allowed to employ one foreign household helper (with proper documents of employment contract, income guarantee, personal insurance and health certificate).

Shanghai has also been attracting more international students in the last decade and more. For foreign students who come to Shanghai to study, not only did the number increased drastically in the last decade, their funding sources and origins also shifted significantly. The share of students on exchange programs increased from 6.9 percent in 2007 to 11.3 percent in 2017. Students who paid for their own expenses decreased from 83.6 percent to 63.6 percent. And, importantly, the share of students supported by the Chinese government increased three-fold, from merely 8 percent to 23.9 percent. While the share of foreign students from Asian countries dropped sharply from 84.7 to 54.8 percent and those from North America remained unchanged, the share of students from Europe and from Africa

both increased, to 25.3 percent and 7.7 percent respectively in 2017, up from 18.2 and 4.7 percent in 2007.⁹

Changes in the types of foreigners in the last decade reflect the selective nature of Shanghai’s policies. As shown in Figure 8, over the ten-year period between 2007 and 2017, while the overall number of long-term registered foreigners in Shanghai increased only modestly by 22.5 percent, from 133,340 to 163,633, those in the category of “foreign experts and their family members” increased by more than six-fold, from fewer than 6,000 to 42,769. The other category with the largest increase is foreign students and family, whose number rose from 13,368 to 79,701, a five-fold increase. As more foreign companies increasingly relied on local resources, the number of representatives for foreign firms increased only very modestly, while those classified as employees in foreign firms saw a net decline. It is likely that such increase in the category of “foreign experts” is due to reclassification of those previously registered as representatives of foreign firms, but the increase in this particular category is clearly a result of the policy reorientation discussed above.

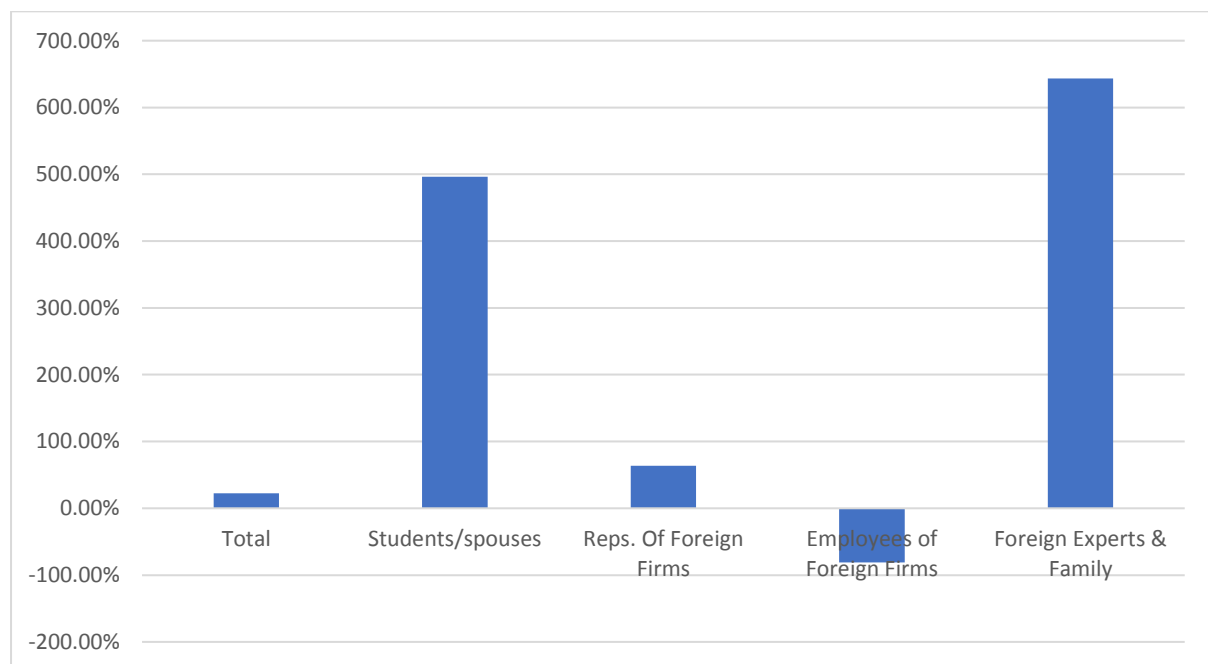


Figure 8 Changes in Types of Foreign Residents in Shanghai, 2017 vs. 2007

Source:

At the same time, as survey results report, long-term foreign residents in Shanghai mostly live in their own separate world and many have no desire to stay. A large share, 40 percent, live in housing communities exclusively or mostly for foreigners. Of the nearly 60 percent of survey respondents who sent their children to schools in Shanghai, over 80 percent chose private schools. Of the 45 percent of respondents who had a medical care need, only about 20 percent went to a local public hospital. Social interactions between foreign residents and

⁹ Data sources come from Shanghai Bureau of Education.

locals is rather limited: while about 70 percent of foreigners of Japanese and Korean origins report they have local Chinese friends, the share among American and English residents is only about a third. As attractive as Shanghai is as a dynamic global city, only about half of the foreigners surveyed expressed a desire to stay in Shanghai for the long term. Part of the reason is the high and rising living cost, especially housing, in Shanghai, but the lack of social integration and the difficulties in getting permission to stay pose as a major reason. Only a third of those surveyed in Shanghai were satisfied with services in getting visas and residence permits.¹⁰ Foreigners in Shanghai, while enjoying perhaps a title among those called “the New Shanghainese,” as Farrer observes, “in contrast, celebrates expatriates’ role in the ‘opening up’ of the city, but this story also lacks a clear pathway to full social and cultural citizenship.” “While the old Shanghailanders separated themselves from Chinese society, the contemporary expatriate settlers felt themselves excluded.” (Farrer 2010, 7, 16) The narratives of foreign expatriates in Shanghai, therefore, is both belonging in and not belonging. (Farrer 2019)

Migration and Shanghai’s Future

Whether Shanghai can continue its path to ascend to be a top-tier global city depends on many factors and opportunities. The first and foremost factor is its population, who will not only make up the resident population but also will make or break the city with their economic contribution, social participation and cultural innovation. Can Shanghai continue its ascendance to become a greater global city without migration and immigration? To answer this question, we resort to a population projection exercise.

With the background of Shanghai’s demographic changes outlined in the first section of the article, it is possible to map out how Shanghai’s demographic trajectories decades ahead, with certain assumptions. The first scenario to consider, a scenario that is actually not possible, is that Shanghai will return to a city occupied only by those with local household registration. This scenario is unthinkable both because without the migrant population Shanghai’s economy will simply collapse, and because the local population is already very old and is shrinking. In addition, without the presence of foreigners, Shanghai will lose its international glamour and vitality.

The more realistic scenarios to consider are to project future changes of the two core components of Shanghai’s population today, those with local household registration and those without (domestic migrants), with reasonable assumptions of fertility and mortality changes in the future and migration flow in recent years. Once such projections are done, the two segments of the population can be added together to form the future population of Shanghai (foreign residents are excluded here due to their extremely small share). Given

¹⁰ The survey was conducted by a research team in Shanghai University in December 2014 to January 2015, with a sample size of 1,207. Both sex ratio, with 61.3 percent males, and age, with a mean age of 36.2, correspond well to the registered foreigners in Shanghai (see Figure 5 in this paper). Over 90 percent of the respondents had a college degree or higher education. The average length of staying in Shanghai for the respondents was 43.2 months, with 83.3 percent in Shanghai for over six months (Shanghai University Research Team 2015).

these two core populations have different characteristics, in fertility, mortality, and migration, we treat them separately (see Appendix for assumptions used).

Assuming migration into Shanghai follows the pace as in recent years and at the same rate as migrants are granted a Shanghai household registration (hukou), population aging in Shanghai will make both the economy unsustainable and the burden of supporting the elderly unbearable. Even with assumptions of rising fertility and continued in-migration with local hukou, in the next few decades Shanghai’s hukou population will shrink significantly, from the reported 14 million in 2010 to 12.4 million in 2050. What are more noteworthy are the further changes in the age structure of Shanghai’s population with local household registration. Table 1 shows changes in two indicators: support ratio measured as the number of working age population (aged 20 to 59) to those aged 60 and over, and the share of the population aged 65 and over. Without more migration, the support ratio will drop from currently about 2 to 1 by 2030 and to 0.7 in 2050. This means that after 2030, there will be less than one person in the working ages of 20 to 59 for every elderly person aged 60 and over in Shanghai. Similarly, the share of the elderly persons aged 65 and over, which already stands at a high level of nearly 20 percent, will rise to over 40 percent. Almost one of two persons in Shanghai then will be aged 65 and over.

[Table 1 about here]

	Hukou			Non-Hukou			Total	
year	ratio 20-59/60	%65+		ratio 20-59/60	%65+		ratio 20-59/60	%65+
2010	2.78	15.86%		32.21	1.22%		4.73	10.16%
2015	1.94	19.61%		20.01	1.89%		3.73	11.75%
2020	1.39	25.97%		15.20	3.16%		3.04	14.81%
2025	1.14	32.48%		9.12	4.12%		2.62	17.48%
2030	1.06	36.37%		5.42	6.73%		2.30	19.66%
2035	1.02	37.69%		3.80	10.83%		2.06	21.65%
2040	0.94	37.99%		2.89	14.79%		1.82	23.40%
2045	0.81	39.23%		2.14	18.42%		1.50	25.53%
2050	0.71	41.93%		1.56	22.95%		1.21	28.94%

Table 1 Projected Support Ratio and Aging in Shanghai, 2010 to 2050

At the recent rate of migration, with 355,000 persons moving into Shanghai and following the young age pattern we have seen between 2000 and 2010, the migrant population in Shanghai will also become much older. This is so in part because of a slower migration rate in recent years than in the late 2000s, and in part because of the expected low fertility of the migrant population. With their migrant status and incorporation into local culture, it is quite possible that the migrants will follow the reproductive patterns of local residents, converging on having an average of 1.5 children.

To project future changes of population in Shanghai without local hukou status, in addition to assuming their fertility level will also converge to 1.5 children per couple at the end of the projection period (2050), we also assume a faster increase in life expectancy, at a rate of 1.75 years per decade, in contrast to the 1.5 years per decade for population with local household registration. Due to the very young age structure of the migrant population in Shanghai in 2010, and with continued inflow of migrants at a level observed in 2013, the migrant population in Shanghai will increase substantially, from 9 million to 26.9 million, almost three folds. Adding this number to the projected size of Shanghai population with local household registration status by 2050, 12.4 million, will lead to a combined total population of 39.3 million, still short of the 40 million mark. If the annual number of migrants to Shanghai is reduced to 100,000, the size of the migrant population will also increase, to 21.1 million in 2050.

The most striking message from this projection exercise is that even with the current level of migration to Shanghai (at 355,000 per year) and with a very young migrant population base, this major segment of the Shanghai population will also age very quickly. In just about ten years from now, the support ratio (between those aged 20-59 and 60 and over) will drop precipitously from 20 now to less than 10 in 2025, to only about 5 by 2031, and about 1.5 by 2050. At the same time, the share of the elderly population aged 65 and over will rise from less than 2 percent now to close to 7 by 2030, and then rapidly increase to 22 percent by 2050 (see Table 1). Such a rapid pace of population aging of the migrant population is caused in part by the expected low fertility, but it is also caused to a large extent by the large number of migrants who moved into Shanghai in the first decade of the twenty-first century.

Putting the two major components of Shanghai's population, those currently with local household registration and those without, one sees one likely scenario of Shanghai's population in the next 35 years. With the changes in the two sub-populations discussed above, it is not unexpected that overall Shanghai will grow into a much older city, even with the recent massive migration and an assumption of continued migration of young people into Shanghai. The support ratio between those aged 20-59 and those aged 60 and over will drop quickly, from 3.7 now to 2.3 by 2030, to 1.8 by 2040, and to 1.2 by 2050 (Figure 9). There will be in other words only 1.2 workers per elderly aged 60 and over by 2050. During the same time span, the share of the elderly aged 65 and over will rise from about 12 percent now to 20 percent in 2030, 23 percent in 2040, and 29 percent in 2050.

In the next 35 years, with the assumptions made above, namely a gradual rise in fertility, further improvements in health, and continued influx of migrants at the recent level, there will not be major shifts in the total number of working age individuals. The total number of people aged 20 to 59 will rise from 17.6 million in 2015 to 19.3 million in 2030, 20.1 million in 2040, then drop to 18.5 million by 2050 (Table 1). Note that with expanded higher education the average age of entering the labor force could go above 20 but with expected postponement in retirement age, the upper limit of labor force age is also very likely to go above 60.

The share of labor force aged population as total population, however, will drop from 68 percent now to 59 percent in 2030, 56 in 2040, and to only 47 percent in 2050. At the same

time, in the next 35 years Shanghai's labor force will also become older. As shown in Table 1, while the number of total labor force aged population will increase, the absolute number of young labor, those aged 25 to 39, will soon decline. In 2015, there are estimated 8.4 million persons in this age range. This number will soon peak, in 2018, to 8.6 million, followed by a steady decline to 5.8 million in 2030, then a slight rebound to 6.2 million in 2040 and 6.9 million in 2050. In 2050, with a projected population that is going to be 54 percent larger than it is in 2015, the number of young laborers will be 17 percent smaller.

To alleviate the pressure of an aging labor force and an aging population in general, Shanghai of course can resort to circular migration, namely, to continue welcoming young migrants but at the same time driving out older migrants. Shanghai's high housing cost and the lack of social benefits such as health care made available to migrants make it rational for some migrants to return to their place of origin. While this has been the pattern in the past and may indeed be the choice of some migrants in the future, it cannot be assumed as a given. Many of the second- and third-generation migrants may decide to stay in Shanghai, some simply have no other place to return to. The social and political cost of maintaining such a policy can be high, as social benefits provision is expected to be nationalized and social inclusion and integration is promised by the government.

As the results of population projection in this paper show, even with continued in-migration to Shanghai at the recent annual levels, Shanghai's total population will not even exceed 40 million in 35 years, and more importantly, Shanghai's population can become quite old, in the absence of circular migration, with older migrants moving out and young migrants coming in. In recent years, due to a number of reasons, both economic and administrative, and demographic perhaps as well, migration to Shanghai has slowed down. Economically both the economic restructuring and the rising living cost have kept some migrants away. In an effort to control Shanghai's population size, administrative measures have been taken to make it hard for migrants to stay. Demographically more than two decades of low fertility nationwide in China, including in rural areas, has begun to show its consequences. To maintain the vitality of Shanghai's economy and society, and in addition to further integrate current Shanghai migrants into the local society, Shanghai needs to continue a proactive and welcoming policy to attract new migrants. These migrants cannot be confined only to those with college education, as the economy needs a work force of all backgrounds, skills, and abilities. As discussed above, the current high-threshold entry and settlement system (both resident permit and hukou) needs to be improved to allow new migrants to come and to settle down.

Shanghai has a long way to go to attract and to host more talent globally. The share of Shanghai's population who are foreign born, while the highest in China, is still way below global cities in North America, Europe, and in Asia. With less than 1 percent, Shanghai not only lags far behind New York and London, each of them has over 30 percent foreign born, but also significantly less than Seoul and Tokyo, which have 4 and 2.4 percent respectively. To attract more global talent, Shanghai will need to make its foreign population entry and resident rules more open and flexible.

Conclusion: Making Three Peoples One

In the last four decades, especially the two since the mid 1990s, along with China's historical economic boom, Shanghai has risen to become the premier global city in China, and as the fastest growing large global city in the world. Shanghai's rise as a global city, as this paper documents, is a story of migration and immigration. Without the massive inflows of domestic migrants and foreign residents, Shanghai would have no chance to be the global city it is today.

Yet, Shanghai today has also evolved into a city with three peoples. The three peoples who make up the population of Shanghai, local residents with Shanghai household registration status, domestic migrants who work and live in Shanghai but are not formally considered Shanghaineses, and foreign residents, have vastly different social and demographic profiles and identities. The local resident population with Shanghai household registration is much more educated than the migrant population, they occupy mostly better jobs and with full benefits, but are getting older in age and smaller in size. The vast number of domestic migrants are young and are subject to different forms of discrimination due to their resident status but they are also getting older and becoming more educated. The resident foreign population, whose are mostly either "foreign experts" or students, concentrate more in the mid-ages, and have a highly skewed sex ratio.

These and other characteristics of the three different peoples are by and large outcomes of the different institutional arrangements they live under. The three peoples in Shanghai live side by side, but their entry into and residence in the city are subject to entirely different institutional arrangements. The "point system" that is used to grant *domestic* migrants local hukou and largely the same benefits as hukou holders in Shanghai now is not unlike those used, such as in Canada and Australia, for admitting *international* immigrants. Against the background of massive inflow of domestic migrants, the share among them who have been given a local household registration status, hence eligible to full "citizenship" rights, is extremely small. The overwhelming majority of the domestic migrants in Shanghai, therefore, remain to be outsiders in their own country. Foreign residents, whose number also rose rapidly, are mostly welcomed only to work and to study, and the policies to admit them are explicitly utilitarian and instrumental, based on their potential contribution to Shanghai's economic growth and technological development.

Such separate institutional arrangements governing the lives of three peoples in Shanghai, while rooted in the Chinese socialist history and is constrained by policymakers' economic and political considerations, pose as institutional barriers preventing social and economic integration of all residents in the city, and, in the long-run, suppressing if not suffocating Shanghai's aspirations to develop further into a truly great global city in the twenty-first century. Studies of future global cities often rank Shanghai as the most promising city to grow further in the years and decades to come. In the last two decades Shanghai has made significant progress in reducing the institutional barriers for migrants to be integrated into the local community, and in many ways Shanghai has led the country. But significant policy gaps remain, as is the case for China as a whole (Pieke 2012). The high threshold for residence permit is certainly a barrier for migrants to settle down and to be integrated into

the local society. And a lack of such integration is detrimental both to Shanghai's economy and its society. A vibrant and sustainable economy requires a labor force that is not all college-educated, and social inclusion is indispensable for social harmony. In other leading global cities, a significant share of the labor force does not have college degrees.¹¹

As Shanghai moves beyond its past goals of "four centers" (financial services, shipping, trading, and economic activities), and to excel to become an "excellent global city" by 2035, it will need a population and an environment that can meet the future demands, to make Shanghai a more vibrant and attractive global city, first and foremost for its residents. As per capita GDP level increases, the share of the labor force in technology and science sectors, especially in information and computer technology, and in products services also rises. Yet almost all major studies of global cities have also pinpointed where Shanghai lacks the most: talent pool, diversity of population, ease of doing business, mobility, livability, and cultural experiences.¹² In the absence of progress made in several areas, such as in human capital, Shanghai's further ascendance in the ranking of global cities becomes questionable.¹³

With the huge influx of migrants in the last two and half decades, especially during the first decade of this century, Shanghai has already formed a healthy and productive population base. The nearly 10 million residents in Shanghai without a local household registration,

¹¹ In Hong Kong, for instance, among population aged 15 and over, 70 percent do not have college education. In London, 52 percent do not have. Even among working population aged 25 to 64, 42 percent do not have college education. In Tokyo, 43 percent of those aged 15 and over in 2012 only have less than college education. In New York City, among population aged 25 and over, only 35 percent had college and higher education (according to 2000 census). More recent data in the U.S., based on 2009-13 American Community Survey, report 45 percent without any college education, and 35 percent completed college or more education. In the most-educated city state Singapore, in 2012 over 50 percent of those aged 25 and above do not have a college degree. While these statistics are not totally comparable given the age ranges of the population, it is nevertheless totally clear that a viable economy and a city cannot exist only with college-educated people.

¹² For example, in the PWC ranking of global cities, Shanghai ranked very high on "economic clout" but relatively low on "ease of doing business" and "demographics and livability." In the overall category of "ease of doing business," which includes "ease of starting a business," "resolving insolvency," "employee regulations," and "ease of entry" Shanghai was ranked the last among the 27 cities included (PWC 2013, 74).

¹³ For instance, Shanghai's ranking in the A.T. Kearney global cities studies has virtually not improved since 2008, when it was ranked the 20th in the world. In 2010 and 2012, and again in 2015 Shanghai was ranked the 21st, and in 2018, the 19th (A.T. Kearney 2018). Among the five criteria that compose the overall ranking score, Shanghai consistently scores very high on "business activity," but low on all other four.¹³ Shanghai's ranking in "human capital" not only lags behind cities such as New York, London, Tokyo, Hong Kong, Los Angeles, Chicago, Singapore, but also Toronto, Melbourne, Montreal, and Buenos Aires. Shanghai's score on "Information exchange" is ranked among the lowest of the 25 cities included in the global cities ranking. It is perhaps for these reasons that Shanghai is not selected as one of the 16 "Global Elite" cities by the latest A.T. Kearney report, and did not make the list of the 25 cities as cities with future potential in the global cities outlook (A.T. Kearney 2015, 2018). In the Asia and Pacific region, five cities made the list of the 16 "Global Elite" city status, and they are Tokyo, Seoul, Singapore, Sydney, and Melbourne.

with a heavy concentration among young ages, are the backbone of Shanghai's economy and social and cultural life. Many of these migrants, now in their twenties and early thirties, are born in the 1980s and 1990s with little or no knowledge and experiences in farming, with little or no intention to return to the countryside, and with deepening roots in Shanghai. Unlike China's first generation of migrants, many of whom intended to earn incomes in the cities but to return to the countryside at older ages, many if not most in the current generation of young migrants will want to stay in Shanghai even when they become older. Accommodating and integrating these migrants into the local community is increasingly no longer a choice but a necessity.

The future of Shanghai as a global city rests on its ability to attract and to accommodate continued migrants from elsewhere in China and globally. In addition to its history and economic opportunities, a major reason for Shanghai to be China's top city in attracting domestic and international migrants so far is its attractive living environment. Shanghai is perceived to be a socially open and diverse and culturally dynamic and interesting city, with its open spaces, museums, shops, and restaurants. Yet Shanghai still has a long way to go to catch up with first tier global cities, especially in the areas of ease of doing business, information exchange, and cultural assets, as identified by leading studies of global cities (cited earlier in this paper).¹⁴ Shanghai also lags globally as a destination for global talent.¹⁵ To attract talent and to create and to remain a diverse a vibrant city, Shanghai cannot count on selecting domestic and foreign migrants based purely on their academic credentials and technical expertise. It cannot continue to be a city with three peoples separated by different institutional barriers. For Shanghai to become a truly open and inclusive global city, the three peoples need to become one.

¹⁴ In recent years, another obstacle that is likely to constrain Shanghai's growth is the rapid increase in the cost of living, especially the cost of housing. In 2015, Shanghai was already ranked the 6th most costly city to live in the world for expatriates (Mercer 2015a). Yet, at the same time Shanghai is ranked beyond top 100 in the ranking of quality of living among cities in the world. Shanghai's ranking, 101th, is far below Singapore (26th), Tokyo (44th), Hong Kong (70th), Seoul (72nd), and Taipei (83rd) (Mercer 2015b).

¹⁵ In a study for New York City to be the "Destination of Choice for Talent," six key aspects are identified. These key aspects are: capabilities (the right portfolio of talent, with the right skills and capabilities to match current and future demands), talent diversity, global mobility, talent optimization (balance of cost versus quality of talent), ecosystem (interconnection and efficiency of a city's customers, organizations, markets, products, government and society), and workspace (Aon 2013). Shanghai is ranked number 11 of 15 in the overall "Geographic Benchmarking across Talent Drivers" for the financial sector, whereas Singapore, New York City, and Hong Kong are ranked numbers 1, 2, and 3 respectively. The areas Shanghai received the lowest scores are again "Global Mobility and Migrations" and "Talent Diversity (skill and culture)." For the high-tech sector, Shanghai is not even included in the top 15 global cities (Aon 2013, 10-11).

Appendix I: Assumptions used for projecting Shanghai population

To project changes in Shanghai’s population with local household registration, the following key assumptions are made: fertility (measured by total fertility) will gradually increase from the currently observed 0.8 to 1.5, a level that is above the level currently observed in cities in East Asia; mortality will continue its decline, with life expectancy at birth rising by 1.5 years for each decade (6 years in four decades by 2050); sex ratio at birth of 110 boys per 100 girls, a level that is considered roughly normal, and age specific migration pattern as recorded for 2000 to 2010, but with an annual number of 62,000 (level reported for 2013).

Age Pattern of Migration In addition to making assumptions about future birth and death rates, the most important assumption for projecting Shanghai’s demographic future is migration by domestic migrants. Here, the best reference is to look at what have happened with the most reliable data sources available. To do so, one can use the 2000 and 2010 census data for population by age, sex, and hukou status. Comparing age structures of the local hukou and migrant populations between the two censuses, with a ten-year difference, one can derive an age-sex profile of Shanghai local resident population by hukou status separately. Figure 7 presents such a profile for non-hukou residents. It is very clear from the age pattern revealed here that highest rates of migration to Shanghai between 2000 and 2010 are among those of the primary young working ages.

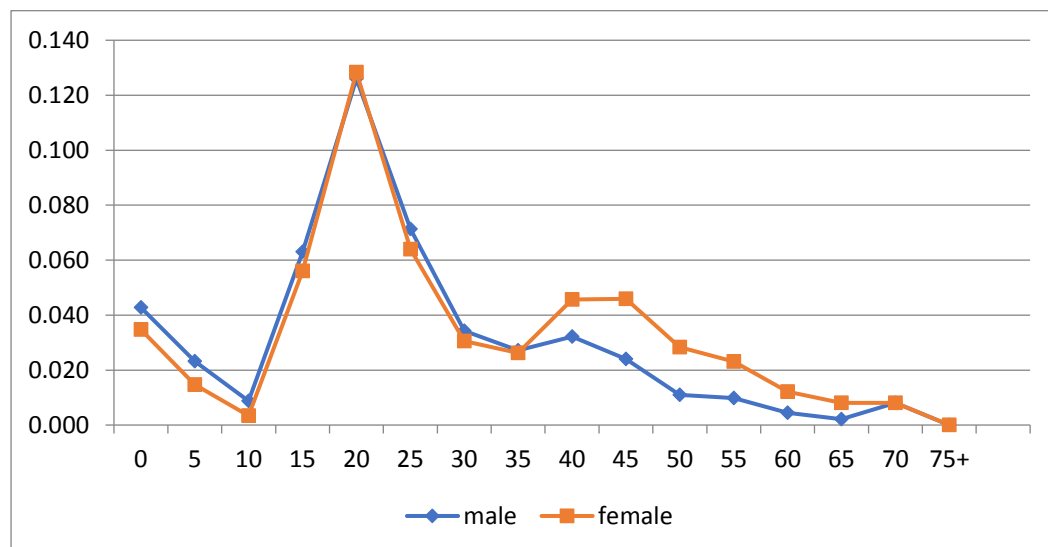


Figure 7. Age Pattern of Population Change among Shanghai Migrants (non-hukou), 2000-2010

Appendix II: Age Pyramids of Local and Migration Populations in Shanghai, 2010 and 2050

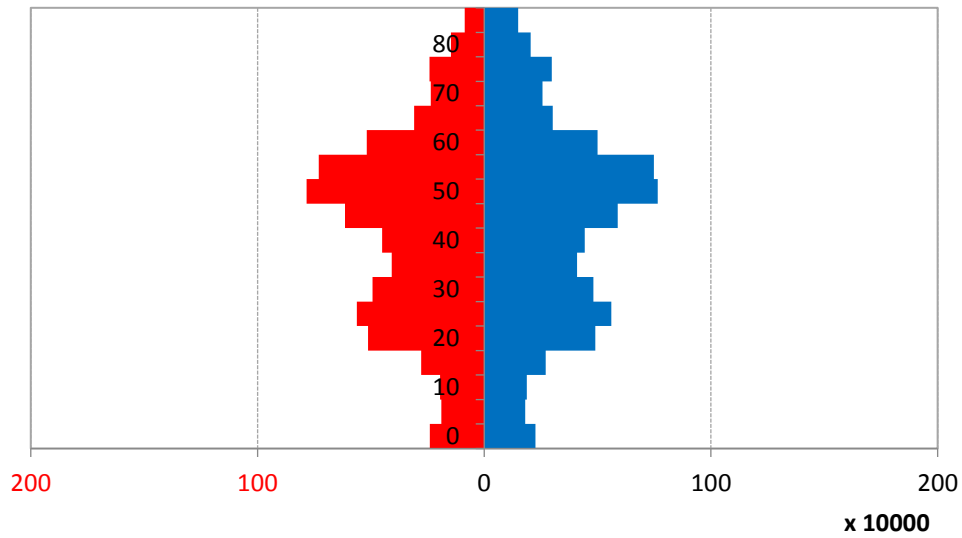


Figure 7a Population Age Structure, Shanghai Population with Local Hukou, 2010

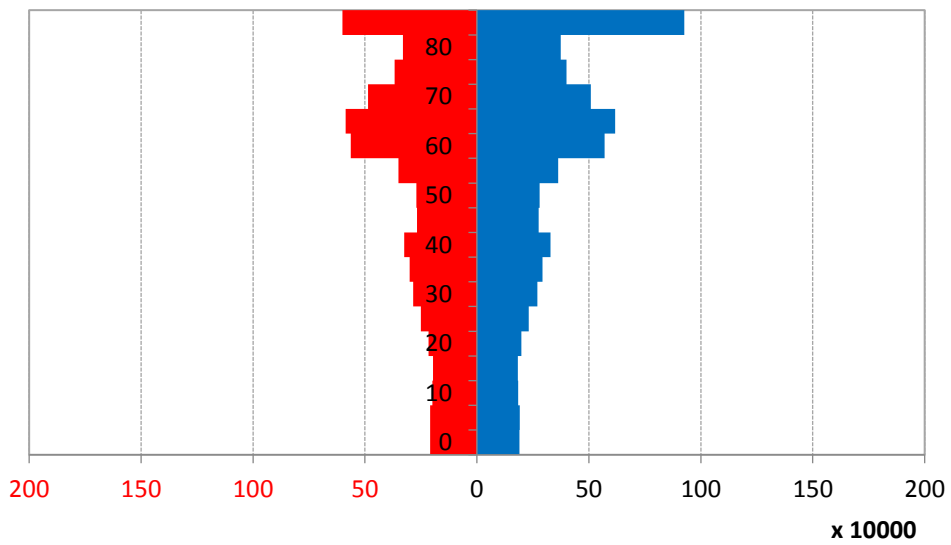


Figure 7b Projected Population Age Structure, Shanghai Population with Local Hukou, 2050

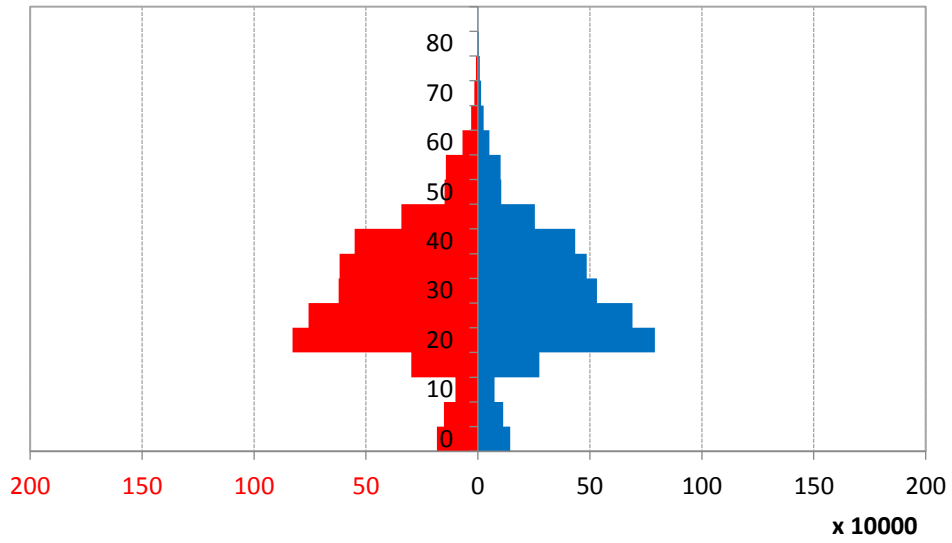


Figure 10a Age Structure of Population with Shanghai Household Registration, 2010

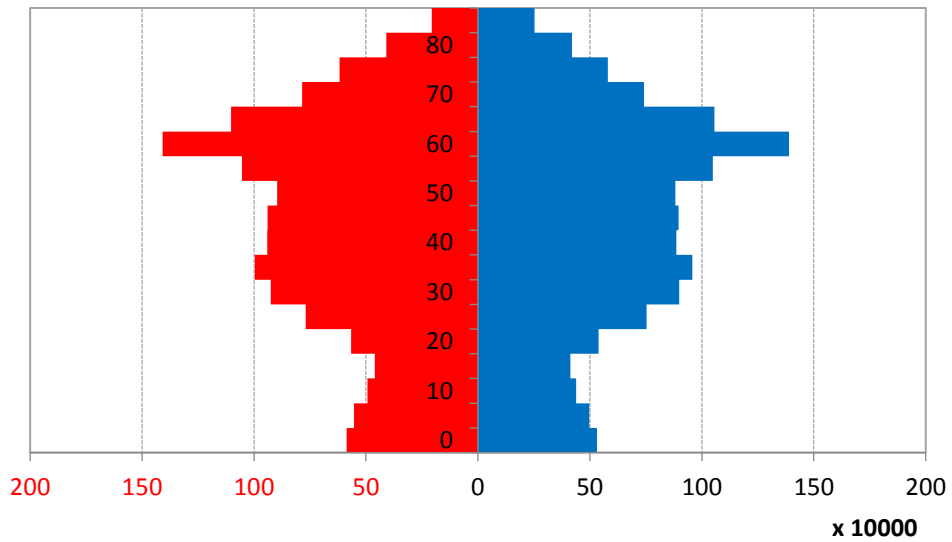


Figure 10b. Age Structure of Shanghai Population with Local Household Registration, 2050 (Projected)

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