



# Who achieves superior rates of upward social mobility and better labor market outcomes in China: international student returnees or postgraduates who study domestically?

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## Abstract

Given the growth in student mobility and transnational higher education, there is an abundance of research on international students' studying and living experiences in a new environment. However, their poststudy transitions and social mobility have rarely been touched. This study addresses how student returnees perform in China's labor market and social mobility, following their accomplishment of their master degree in the UK and return to China. In theoretical considerations of the graduates' social mobility, Bourdieu's capital theory helps identify the capital accumulation and conversion in the social mobility process. Based on a survey to collect data, 756 questionnaires are collected, including 347 questionnaires for returnees and 409 questionnaires for home graduates. Multi-regression model and visualization are employed to analyze the collected data. This study reports that home graduates have better performance in social mobility than their peers. Additionally, employment preference and spatial mobility between international and home graduates represent large diversity.

**Keywords** Social mobility · Spatial mobility · Employment outcomes · Student returnees · China

## Introduction

According to Blau (1977), social mobility means the dynamic change of social status. As a basic factor behind the majority of patterns of structural movement within social structures, social mobility affects the social positions and distribution patterns of social resources and power as well as influences people's lifestyles, behavior, cognitive attitudes, and values. Sociologists commonly adopt Bourdieu's (1984) capital theory to study class reproduction (Tsang 2013), social mobility (Moskal 2020), and social distinction (Findlay et al. 2015). For example, Blackmore and Rahimi (2019) investigate employment outcomes of international students from a Bourdeusian perspective, finding benefits to workforce

diversity in terms of gender, cultural, and linguistic capital. Their results indicate lower value for international graduates because they reproduce monocultural in the place of inclusive organizations. As with previous work on international students, Cebolla-Boado et al. (2018) study the capital accumulation and conversion that drives Chinese students to study abroad. Their findings underline the need to integrate a range of types of capital (human, symbolic, and cultural). In addition, other studies explore the spatial mobility of graduates. For instance, in an analysis of capital accumulation and the conversion of international education in three stages of Chinese student migration, Xiang and Shen (2009) report the important role played by spatial scale in the social mobility of international graduates in relation to capital theory, because this determines the value of capital and the efficiency of capital conversion. Borck and Wrede (2018) develop a spatial equilibrium model of two regions consisting of an urban area and a suburban area to analyze the relationship between spatial mobility and social mobility, finding the correlations between social mobility and different regions.

Although many studies have investigated international students' study and experience in receiving countries, their poststudy transition, such as their employment and later

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social mobility, has rarely been studied (Moskal 2020). Recent work has explored international graduates' occupational trajectories (Hao and Welch 2012; Kim 2016; Moskal 2017; Collins et al. 2017; Roy et al. 2019) and their social positioning after returning to their home countries (Blackmore and Rahimi 2019). However, these studies did not use comprehensive survey data to test the impact of international education and Chinese education on social mobility in an empirical way. Moreover, little work has investigated the differences in spatial patterns of social mobility between those who have received international education and Chinese domestic education, and studies use visualization to show the results of social mobility only rarely. Likewise, the diversity of graduates is usually not an object of study. Thus, it remains unclear whether international education can enable upward social mobility to a greater degree than Chinese domestic education after a degree is received from abroad. More importantly, it is unclear whether social mobility is associated with spatial mobility. Using the existing literature, we establish our research problems, with a focus on comparative social mobility and labor market outcomes between international and domestic graduates. To fill the above-mentioned research gaps, we conducted a comparative study of international and domestic graduates. In this study on social mobility and the labor market, we also took spatial factors into account.

In connection with the above discussion, this paper studies Chinese students' intergenerational mobility and spatial mobility after they complete their master's degrees abroad to determine the different mechanisms of social mobility between Chinese master's degree graduates who studied internationally and at home. Using 756 questionnaires completed by 347 international graduates and 409 domestic graduates, we employ spatial maps and a multiregression model to address the following research questions. What are the employment outcomes for student returnees from the UK after they return and enter China's employment markets relative to their peers? Which group achieves superior rates of upward social mobility? Bourdieu (1989) provided a new conceptual framework for class analysis, which transformed Weberian individual social stratification by occupation into a series of forms of capital (Neilson 2018). Various forms of capital, such as economic, cultural, social, and symbolic, held by individuals are applied as grouping criteria to classify social class in an empty, abstract, multidimensional canvas, defined by Bourdieu as the "social space." Taking this lens, this study is framed using Bourdieu's concepts of capital accumulation and conversion, field, and inequality reproduction. We reviewed the existing literature and established the research results with a focus on Bourdieu's concepts of capital accumulation and conversion. We focused on capital conversion in relation to spatial mobility. We used the Bourdieusian concepts of capital transmission and

accumulation to frame the survey. Adopting the theoretical consideration of Bourdieu's capital theory to study international graduates' social mobility, we focused on postgraduate students as they are closer to the labor market. In this paper, we extend the argument that social mobility of internal and international graduates is interlinked in the context of regional and socio-economic change in China and indicate the ways in which this change is impacted by the divergent mobility of domestic and international graduates. Further, the inequality patterns of spatial distribution in social mobility between international and Chinese master's education are presented with a visualization.

The remainder of this paper is organized as follows. "Literature review" section contains the literature review, which incorporates a theoretical discussion of social mobility as a review of the determinants of social mobility. "Methodology" section introduces our methodology, including data sources, variables, and method. "Spatial patterns of social mobility between international and Chinese education" section presents the spatial pattern analysis of social mobility used to create maps. "Results" section gives an analysis of the results for the mechanisms affecting social mobility, and "Conclusions" section presents the conclusions and policy implications.

## Literature review

### Chinese domestic education and graduates' social mobility

The discussion of education and social mobility in China admits of various perspectives. Rich bodies of research have proven that education can efficiently promote social mobility in China, especially after the resumption of the university entrance examination in 1977 (Wang 2010). Liu (2016) indicates the importance of higher education for students from rural areas. Through higher education, these graduates can acquire the chance to live in a city and achieve social upward mobility. Therefore, after the 1978 reform, higher education has played a pivotal role in promoting social mobility, and university graduates have developed greater upward social mobility (Fang and Feng 2005; Dong et al. 2009; Wang 2010).

However, recent research has produced strong evidence to the contrary, that education contributes less to social mobility in China and that its role in promoting social mobility has weakened (Zheng 2007; Yu 2014; Xu 2016). Xiong (2015) argues that education fails to facilitate upward mobility for migrant students in urban cities. A ceiling effect and a counter-school culture have further strengthened inequality in China's educational system, which has resulted in further class reproduction and class solidification. Huang and Ming

(2014) argue that the role of education in promoting social mobility in China has been weakened because of differences between urban and rural areas and among different schools. As the imbalance in educational resources has led to varying levels of educational attainment, education's role in promoting social mobility has weakened.

Since China launched its mass higher education initiative in the 1990s, scholars have increasingly argued that higher education is not able to promote social mobility in China. Yeung (2012), using data from the CGSS between 2005 and 2008, found that although the expansion of higher education has shown an equalizing force, in that more youth have access to higher education than was true in the prereform era, intergenerational inequality persists. Young students from socio-economically advantaged families can remain in their social class by accessing better higher education resources. Thus, family background is a persistent and strong factor in enrollment at top universities. Similarly, Mok (2016) also examines the impact of the expansion of higher education in China, finding that it brings with it lower graduate employment and downward social mobility within the context of an increasingly globalized economy and changing labor market needs. Extensive research has also shown that arguing the massification of higher education has not led to more occupational opportunities and upward social mobility for youth. On the other hand, the massification of higher education has resulted in the devaluation of degrees (Mok and Han 2016; Mok and Wu 2016).

### International graduates' social mobility

International education is an important means of accumulating international cultural capital to enable international graduates to maintain their social class or continue their upward mobility (Tsang 2013). Xiang and Shen (2009) explore the role of international student migration from China to other countries, focusing on transformation among different types of capitals. They find that international education plays an important role in class formation and reformation in various Asian countries. Tsang (2013) examines the ways that the Chinese second-generation middle class, who are unable to obtain admission in China's premier universities, are turning their back on public universities and are instead attending private universities in China, as a result of unequal intergenerational mobility. These private universities and overseas higher education are providing opportunities for the second-generation middle class to maintain their social class. In other words, students with abundant economic and cultural capital have better access to international higher education. In Tsang's research, parental financial support is found to be important for intergenerational social mobility. Fan and Cheng (2018) studied the differential in choice of and access to

studying abroad among different social strata in China, supported by original survey data from ninth graders at Beijing middle schools. Particular attention is paid to families of the upper middle classes, including high-ranking officials, wealthy business owners, and white-collar professionals. Overseas education is seen as an option for high-quality educational resources and as a tool for those in advantaged social classes to maintain their station and for disadvantaged classes to achieve social upward mobility.

The results regarding the relationships between the career development of international graduates and labor market outcomes in China are not consistent. Although international student mobility is widely perceived to enhance international graduates' employability in globalized labor markets, Mol (2017) reports that only a minority of employers consider recruiting international graduates because employers must make decisions that take into account the practical demands for a foreign language and to international experience. Hao and Welch (2012) explore returnees' job-seeking experiences after returning to China and find that re-integration and Chinese informal networks (*guanxi*) and values have positive repercussions. Returnees' employment outcomes are often not as positive as expected (Hao and Welch 2012). Thus, international higher education is not equally valued by all employers.

Nevertheless, Chinese international students widely consider that studying abroad is a valid strategy for accumulating human capital and social capital. In the international higher education, often considered to be a generally positive experience, soft skills, such as independent study skills, are improved, and their social networks can be established (Hu and Cairns 2017). It is reported in the literature that UK degrees are considered more valuable for one's career than Chinese degrees are (Counsell 2011). International graduates believe that soft outcomes, related to personal pursuits and life fulfillment, are more important for labor market outcomes than hard outcomes, such as incomes or positions (Lin-Stephens et al. 2015). The labor market outcomes of Chinese returnees are thus diverse. UK returnees have optimistic views of their poststudy careers due to their improved English language skills and their UK-quality higher education. Similarly, Mok et al. (2017), who employed a mixed-methods research approach, analyze returnees' labor market outcomes and career development, with particular reference to their marketable skills and contextual impact. They reveal that international graduates rate their overseas study experiences highly for what they obtain in terms of hard knowledge, soft skills, and intercultural understanding, all of which contributes to their positive career development. In line with Mok et al.'s (2016) research, Mok et al. (2017) provide additional evidence to describe Chinese returnees' employment and other outcomes. As is concluded shown by

numerous scholars (e.g., Knight 2014), skills are essential for employability. Chinese returnees' soft skills include foreign language proficiency. The ability to speak fluent English is among the most advantageous factors in a returnee's job search (Mok et al. 2017).

A recent study was conducted by Moskal (2020) on the poststudy transition of Asian international postgraduates. Gender is a particularly important factor in their poststudy transitions and career development. China has experienced continuous changes in women's position. However, male graduates continue to enjoy greater scope in developing their professional careers, while females encounter greater challenges due to family pressure and social convention. Additionally, international qualifications and overseas study experience do not help Asian females in a substantial way, as they still face discrimination in the labor market at home.

### Spatial inequality and social mobility of university graduates

A growing number of scholars are addressing university graduates' spatial mobility in China (Fu and Gabriel 2012; Liu and Shen 2014; Cui et al. 2015; Mok and Wu 2016; Liu et al. 2017). However, research rarely focuses on the transitions of graduates impacted by spatial mobility. With the notable exception of Liu et al.'s (2017: 652) research, little attention has been paid to the diversity of graduates or to the effects on mobility patterns of critical life cycle events, such as university entry and labor market transitions. The literature provides analyses of how conversions among these types of capital have intensified and been converted in terms of geography. We link Bourdieu's concepts of capital conversion and field to geographical patterns of social stratification for international graduates.

Spatial mobility among China's graduates takes many forms, including rural–urban migration (Qin et al. 2018), west-to-east flows (Guo et al. 2016), gendered differences (Jin and Whitson 2014; Goodburn 2015), and the impact of the *hukou*<sup>1</sup> (household registration system) (Wang 2005; Chan and Buckingham 2008; Zhang and Wang 2010), all of which are connected to education and the changing family structure (Zimmer and Kwong 2003; Davin 2005; Choy and Li 2017). Over the last two decades, Chinese cities have witnessed an influx of university-educated rural migrants. Because China has limited educational resources in relation to its population size, higher educational attainment enables new job market entrants to make the rural–urban transition, inducing faster urban growth (Choy and Li 2017).

<sup>1</sup> *Hukou* is the household registration system, and one's *hukou* status determines one's spatial mobility (rural–urban migration) and well-being (Xiang 2016).

Liu (2016) describes the importance of higher education to students from rural areas before China launched its policy of expanding higher education. Rural students generally enter cities to acquire higher education, and many of them remain there after finding work. This geographical mobility changes their *hukou* status and promotes capital conversion in the process of social stratification. Thus, the general tendency is for higher education to allow rural students to move to and stay in cities, achieving upward social mobility.

Cities have different social structures and degrees of social equality, with the talent accumulation within them explained by Bourdieu's concept of the field. Bourdieu (1986) presents a powerful demonstration that convertibility determines the value of capital, and spatial scale determines the efficiency of conversion. Differential access to education, the labor market, and redistributive politics are key factors that impact social mobility (Hedberg and Tammatu 2013). In cities, one's neighborhood also directly affects perceived social mobility. The neighborhood itself is a form of symbolic status and capital (Emily 1999), showing resemblance to Bourdieu's concept of the field. Moving from a low income to a prosperous neighborhood is likely to increase social status and promote social mobility. Moreover, each neighborhood represents a unique social environment that may represent an exclusion from other neighborhoods. Neighborhoods are related to mutual social assistance and to high-quality educational opportunities (Chen et al. 2018). Therefore, the value of the field enhances the spatial mobility of individuals and determines mobility patterns among talents.

## Methodology

### Data collection

This study uses Bourdieu's capital theory as a lens to frame the survey. Further, specifically Chinese characteristics, such as social classifications, are incorporated. This study also took Dong and Chen's (2013) investigation of the role of higher education in social mobility, as measured by source, amount, level, type, region, orientation, qualification, and speed of social mobility, into account. Some variables from Dong and Chen's research were taken into account, including registered residence, university reputation, location of university, university program, and grade point average (GPA). All variables in this study fall under Bourdieu's concept of capital (economic/social/cultural capital).

The questionnaire was presented to the Chinese-speaking participants in Chinese. To ensure the accuracy of the translation from Chinese to English for sequential data analysis, three Chinese university professors in English and four Chinese master's-level graduates (two international and two

domestic graduates) reviewed the questionnaire. This study consisted of pilot and main rounds of research. We conducted a pilot study to ensure the validity and reliability. In the pilot study, 48 survey questionnaires were collected and were assessed, and we found that the questionnaire was valid, and the data were valid and reliable. This pilot study provided feedback to improve the questionnaire.

In relation to the efficiency and convenience and large-scale research need, the questionnaires were distributed online through WeChat. In hard-to-reach and hard-to-involve populations, online sampling can expand the geographical scope of research and increase levels of confidence (Baltar and Brunet 2012). We sought to get respondents from all Chinese universities and employed a randomizing strategy to distribute the questionnaires. We used a mixed-methods sampling strategy to collect additional data. Our recruitment efforts were supported by 62 Chinese universities. These 62 were at all levels of Chinese universities (C9,<sup>2</sup> 985 project,<sup>3</sup> 211 project,<sup>4</sup> Yiben,<sup>5</sup> Erben, and Sanben<sup>6</sup>), and the relative proportions of respondents among these showed a good balance. The online questionnaires were sent out by academic and administration staff in the 62 cooperating universities to their alumni. We sought university graduates via social networks. To reach international graduates who had returned to China, we gained access to a WeChat group (most Chinese students studying abroad join such groups). We also requested help from human resources departments at public administration/private/foreign companies in 27 Chinese cities. Through these networks, we were able to contact sufficient UK graduates.

Finally, we collected 756 valid questionnaires. The sampling of these questionnaires was not biased and shows good diversity. The residences of origin and current residences of the 756 participants were spread across 32 provinces and 183 cities. The participants had graduated from over 200 universities in various subjects, including engineering, the sciences, the social sciences, and the arts and humanities. Their current occupations varied as well, including civil

**Table 1** Demographic information of respondents

	Domestic graduates (N=409)		International graduates (N=347)	
	No	Ratio (%)	No	Ratio (%)
Age (Years)				
19–21	0	0	0	0
22–24	0	0	16	4.61
25–27	127	31.05	279	80.40
28–30	245	59.90	42	12.11
> 30	37	9.05	10	2.88
Only one child in family				
Yes	187	45.72	267	76.95
No	222	54.28	80	23.05
Gender				
Male	178	43.52	140	40.35
Female	231	56.48	207	59.65
One-parent family				
Yes	26	6.36	21	6.05
No	383	93.64	326	93.95
Current work situation				
Employed	357	87.29	278	80.12
Unemployed	52	12.71	69	19.88
Current work place				
Foreign or Sino-foreign company	28	6.85	83	23.92
Chinese private company	86	21.03	95	27.38
Chinese public company/institution	198	48.41	79	22.77
Family business	1	0.24	2	0.58
Self-employed	13	3.18	13	3.75
Government	30	7.33	5	1.44
Other	2	0.49	2	0.58
Blank	51	12.47	68	19.60

servant, office clerk, teacher, engineer, doctor, governmental cadre, and others. In addition, the sample showed a good balance of gender and age. Table 1 shows the detailed demographic information of participants.

## Variables

Social mobility was the dependent variable in our study. Blau and Duncan's (1967) US study is the source of standards for social mobility research, namely, the coding of occupations into the US's occupational classification scheme and status attainment model (Duncan and Hodge 1963; Duncan 1966). Lu (2002) provides coded occupations in China in a study of social stratification, classifying China's social class into ten tiers (state and society administrator, manager, private enterprise owner, technological specialist, clerk and office worker, individual entrepreneur, commercial and

<sup>2</sup> The C9 league includes the top 9 universities in China. It is also the top university league in China.

<sup>3</sup> This usually refers to the top 39 universities in China. The 985 project was proposed in 1998 by the Ministry of Education in the Action Plan for Education Revitalization for the 21st Century to provide generous funding and resources for selected higher education institutions that had the potential to deliver world-class research excellence.

<sup>4</sup> It refers to the top 100 universities in the twenty-first century in China. The 211 project was launched by the State Council in 1995 to establish 100 world-class universities.

<sup>5</sup> Yiben refers to the first tier of bachelor's degrees.

<sup>6</sup> Sanben refers to the third tier of bachelor's degrees in China, while Erben refers to the second-tier. Many Sanben Universities are now incorporated into Erben Universities. The boundary between Erben and Sanben universities is disappearing.



**Table 2** Independent variable information

Variables	Abbreviation	Definitions
Background information	Gender (G)	Male or female
	Birthplace (BP)	City of origin
	Current living place (CP)	City of current residence
Parental information	Father's occupation (FO)	Father's occupation
	Father's education (FE)	Father's educational level
	Mother's occupation (MO)	Mother's occupation
	Mother's education (ME)	Mother's educational level
Educational information	Undergraduate university (UU)	University of bachelor's degree
	Undergraduate GPA (UG)	GPA in undergraduate study
	Postgraduate university (MU)	University of master's degree
	Master GPA (MG)	GPA in graduate study

service worker, industrial worker, farmer, and unemployed). Our study follows Lu's social stratification coding (Table 3). Comparing fathers' occupation and participants' occupation allowed intergenerational social mobility to be calculated.

This study modeled the indicators used in earlier studies, including family background and educational attainments in particular. The independent variables adopted were gender, birthplace, current residence, father's and mother's education level and occupation, participant's undergraduate and postgraduate university ranking, and participant's undergraduate and postgraduate GPA. These variables are often featured in social mobility research (Bertaux and Thompson 1997; Jenkins and Jones 1950; Kinloch and Perrucci 1969). We also observe specifically Chinese characteristics, such as *hukou*, as China's residence registration policy determines individual well-being in terms of education, medical treatment, and home purchase. This old Maoist institution still plays a pivotal role in individuals' lives in China (Chen and Qin 2014; Tsang 2013). In this study, the city classification was drawn from the Chinese system that classifies cities into five tiers according to municipal GDP and population. We used the classifications published by the Chinese National Bureau of Statistics in 2018 (CNBS, 2018). A value of 1 to 5 was assigned to each city, matching the CNBS tiers. Analyzing changes of residence can provide information on the spaces within which social mobility is achieved, and it can demonstrate the features of social mobility.

For plenty of people whose birth places are not metropolitans, current residence barriers space of metropolitans support for their nowadays social mobility. In China's metropolises, job opportunities and social mobility are much greater than they are in small cities. Further, differences in city scale, rural residence, and urban residence also produce differences in the individual qualities of higher education (Chen 2015) and occupation (Gao et al. 2016).

Gender differences strongly influence social mobility, which plays significant role in many countries and even in the most mature market economies. In China,

gender inequality persists in job-hunting and social mobility (Moskal 2020; Cao and Hu 2007); males also tend to earn higher salaries than females and have access to more opportunities for upward social mobility than females (Chen 2014). In this model, gender is taken as a dummy variable, where 1 represents male, and 0 represents female. Table 2 indicates all variables. The independent are categorical ones, and the coding for all variables is given in Table 3.

### Model specification

This study employed a multiple regression model, which can better deal with relationships between various independent variables and a dependent variable than a regression model. The coefficients of the variables were calculated, and the effects of relevant factors were quantified. The multiple regression model is statistically expressed as follows:

$$\begin{aligned}
 Socialmobility_i = & \alpha + \beta_1 G + \beta_2 BP_i + \beta_3 CP_i \\
 & + \beta_4 FO_i + \beta_5 FE_i + \beta_6 MO_i + \beta_7 ME_i \\
 & + \beta_8 UU_i + \beta_9 UA_i + \beta_{10} MU_i \\
 & + \beta_{11} MA_i + \varepsilon_i, \varepsilon \sim (0, \sigma^2)
 \end{aligned}$$

In this model, 11 independent variables were used (see Table 3 for details). As with the univariate regression model, the multiple regression model uses ordinary least squares to measure the parameters  $\beta$  of the  $i$  respondent.  $\varepsilon_i$  is the error term for respondent  $i$ .

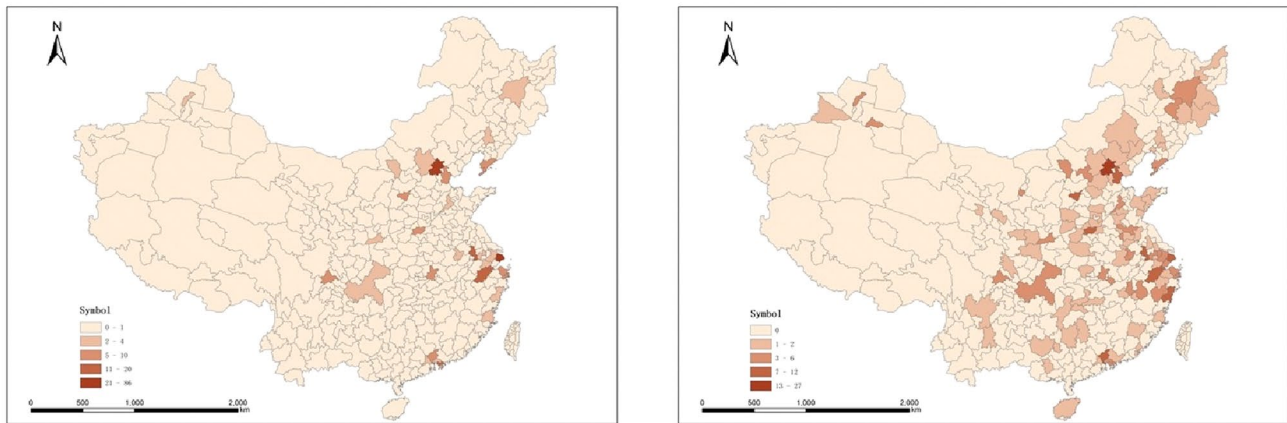
### Spatial patterns of social mobility between international and Chinese education

In our study of the social mobility of international graduates, we found that spatial scale is an important factor that is crucial to graduates' social mobility. Imbalances in

**Table 3** Coding of independent variables

Variables	Scores				
	5	4	3	2	1
University GPA	≥ 90% in China A in UK	≥ 85% in China B+ in UK	≥ 80% in China B in UK	≥ 70% in China C+ in UK	≥ 60% in China C in UK
University ranking	Top 9 universities in China REF ranking from 1 to 10	985 project universi- ties in China REF ranking from 11 to 30	211 project universi- ties in China REF ranking from 31 to 50	Yiben universities in China REF ranking from 51 to 80	Erben or Sanben universities in China REF ranking from 81 to 154
Parental education	Higher education	Vocational or high school education	Secondary school education	Primary school educa- tion	No formal education
Parental occupation (social class meas- urement)	State or society administrator, pro- fessional manager	Private enterprise owner, technological specialist	Clerk or office worker, individual entrepre- neur	Commercial or service worker, industrial worker	Farmer, unemployed
City	First-tier cities	Second-tier cities	Third-tier cities	Fourth-tier cities	Fifth-tier cities

Cities are coded according to the classification criteria published by CNBS (2018). Gender, only child, and single-parent family are dummy variables. The master curriculum, master supervisor, and talent policies are perceived by participants and assessed from value of 1 to 5

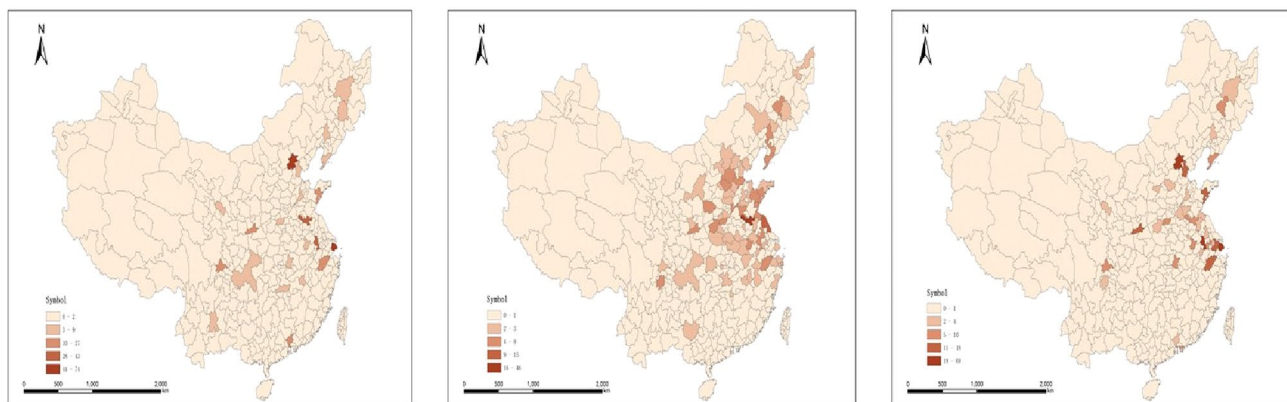


**Fig. 1** Current (left) and registered (right) residence information of international graduates

development in China entail strong links between social mobility and spatial mobility (Chen et al. 2016). The geographical flow of talent is thus not only spatial mobility but also represents a kind of social mobility (Wang 2014). Talent mobility takes place through the intermediary of space. Drawing on Bourdieu’s capital theory, it can be seen that spatial scale is crucial for capital convertibility. Space is a provisionally fixed territorial scope of social actions or relations (Xiang and Shen 2009). Thus, it can be seen that university graduates’ spatial mobility is closely connected to their individual success and further social mobility. The cumulative effects of individual mobility choices are often associated with opportunity and wealth accumulation.

Using cartographic and statistical data, we described the spatial mobility of the respondents. Figures 1 and 2 show the spatial distribution of social mobility of our participants. We

find that the international graduates and the domestic ones are quite divergent. Most international graduates were from cities in the first or second-tier, and most lived in urban eastern areas (Appendix 1). Unlike the international graduates, many domestic graduates were from less-developed regions and tend to work and live in second-tier or third-tier cities (Appendix 2). Figure 1 reports international graduates’ spatial mobility between their registered and current residence. After the international graduates completed their study in the UK, they preferred to live in first-tier cities, with concentrations in Beijing or Shanghai (Fig. 1). Figure 1 shows this pattern of clustering. By contrast, domestic graduates tend to return to their home cities or to second- or third-tier cities. Domestic graduates showed a clustering pattern in second- and third-tier cities around Beijing or Shanghai. The maps also indicate that master’s university location of the domestic graduates



**Fig. 2** Master's university location (left), registered residence (middle), and current residence (right) of domestic graduates

had an association to their cities of residence (Fig. 2). Highly educated youth with education in China strongly prefer to stay in the city where they completed their master's programs. Employment and social mobility take place in a specific spatial scale, and the spatial mobility pattern shown indicates distinctive features between the two sets of university graduates.

The demographic information provided further means of analyzing the data. Appendixes 1 and 2 show that the majority of international graduates are from large and developed cities and return to these cities, but their spatial mobility between developed cities does not ensure upward social mobility. Mok et al. (2017) found that international graduates have advantages in family background, and thus, their international study mobility may result in the reproduction of social inequality after they return back to China, due to the financial support they can obtain from their families. In China's metropolises, high costs of living discourage graduates from disadvantaged family backgrounds. Additionally, a UK studying experience is helpful in meeting the recruitment requirements of foreign companies in China, and international companies based in major cities are becoming preferred by international graduates (Moskal 2017). Among the domestic graduates, only 49 did not show spatial mobility, meaning their place of origin, master's university, and destination were the same city. The demographic information show that the 49 respondents were born in Beijing, Shanghai, or a provincial capitals. More importantly, these 49 participants were from upper middle class family, indicating that social origin had a significant impact on their spatial mobility.

The mapping analysis indicates a relationship between social mobility and place of origin and its positive association with parental socio-economic status. The spatial scale is linked to capital conversion efficiency and to total value of capital (Xiang and Shen 2009). International cultural capital makes

the capital conversion system more complicated. Mapping analysis also shows that Beijing and Shanghai have the lion's share of international graduates concentrate. As Bourdieu and Randal (1993) point out, social formations are structured by a series of hierarchically organized fields, with its own laws of functioning and with its relations to other fields. If one is to enter a field, that person must possess the habitus that predisposes entry to the field. This person is required to possess at least the minimum amount of knowledge, skill, or talent to be accepted as a member in the field (Bourdieu and Randal 1993).

The spatial aggregation of high-end talent can be explained from a neighborhood perspective (Hedberg and Tammatu 2013). In such a perspective, the clustering of talent has a direct impact on individual perceived social status and mobility, and the neighborhood itself becomes a kind of symbolic status and capital (Emily 1999). Relocation from less to more prosperous neighborhoods can increase one's possible upward social mobility (Chen et al. 2018). Using Bourdieu's concept of field, individuals with similarities are seen to show an agglomeration effect. In the analytical results, international graduates show a significant clustering pattern in Beijing and Shanghai, showing the impact of Bourdieu's concept of field. Although the *hukou* system is still a barrier to new urban residents' spatial and social mobility (Song et al. 2016), large cities still make allowances for talents with desired cultural capital (Li and Mao 2017). Core cities such as Shanghai and Beijing have granted *hukou* permits to international graduates to attract talent. Therefore, different graduates have unequal opportunity to enter a major city, and they thus have different spatial clustering patterns. Over 40% of domestic graduates remained in the cities where they had completed their master's programs, due to the social connections they established, local economic development conditions, and career opportunities (Wang 2014).



**Table 4** Employment situation

Options	International graduates		Domestic graduates	
	Number	Proportion (%)	Number	Proportion (%)
A. Employed	279	80	357	87
B. Unemployed	68	20	52	13
Total number	347		409	
Upward social mobility	142	41	294	72
No mobility	156	45	73	19
Downward social mobility	59	17	32	8
Total number	347		409	

**Table 5** Educational data for international graduates

Undergraduate university	Number	Ratio (%)	Master's university	Number	Ratio (%)
Sanben and Erben	74	21	Others	10	3
Yiben	79	23	RER 51–80	13	4
211 project	76	22	REF 31–50	13	4
985 project	68	20	REF 11–30	122	35
C 9	50	14	REF 1–10	189	54
	347	100		347	100

## Results

### Descriptive statistics of social mobility

We first analyze the occupation results of the two kinds of graduates because we measured their social mobility in relation to occupation. Table 4 shows that domestic graduates have higher rates of employment than their peers, but international graduates have higher starting salaries than domestic graduates. According to the returned questionnaires, 279 (80.12%) international graduates were employed and 68 (19.88%) were unemployed. Among the 409 domestic graduates, 357 (87.29%) participants were employed and 52 (12.71%) were not employed. The domestic graduates had lower unemployment than their peers, which reflects the employment difficulties of international graduates (Blackmore and Rahimi 2019; Hao and Welch 2012). The demographic information indicated that most unemployed international graduates had graduated less than 10 months ago. In China's labor market, the main recruitment season goes from September to March (Gao and Wang 2018), so many returnees in this study missed the best time for finding work. More importantly, there may be a link to local entrepreneur culture. Employers consider that credentials indicate technical competence, while apparently objective criteria like visa eligibility and English language ability (linguistic capital) often filtered out many international candidates (Blackmore and Rahimi 2019:436).


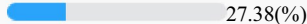
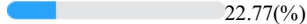
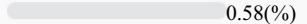
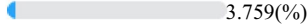
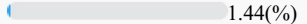
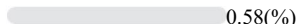
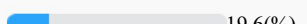
By measuring occupation changes between generations, we obtain results for intergenerational social mobility. The

results are shown in Table 4. We find that domestic graduates have more fluidity of social mobility than their peers. International graduates only maintained their original social class or even had downward social mobility. For international graduates, international higher education may be a tool for retaining their original social class (Tsang 2013). This study found that international graduates usually had a higher socio-economic family background than domestic ones. International graduates' parental education and social class were, on average, higher than those of their peers. Mok et al. (2017) indicate that, unlike domestic graduates, most students who graduated from international higher education institutions had advantaged family backgrounds. The narrow gap in upward social mobility for international graduates indicated that international higher education is a tool for retaining social status. The mobility ceiling effect was seen in international graduates' social mobility. Unlike international graduates, domestic graduates achieved significant social upward mobility through higher education. Their social origins were concentrated on industrial workers, one-person companies, and farmers. Thus, international mobility may result in the reproduction of social inequality as graduates from advantaged family backgrounds could afford the higher cost of living in metropolises. With respect to returnees' labor market results, it is evident that a UK study experience could help graduates meet the employment requirements of foreign companies in China, and international companies based in major cities are becoming returnees' preferred employers (Moskal 2017).

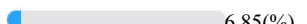
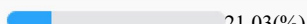
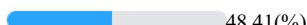
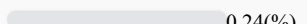
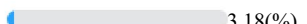
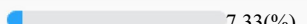
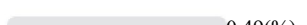
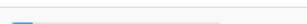
**Table 6** Educational data for domestic graduates

Undergraduate university	Number	Ratio (%)	Master's university	Number	Ratio (%)
Sanben and Erben	82	20	Sanben and Erben	22	5.38
Yiben	122	30	Yiben	67	16.38
211 project	151	37	211 project	178	43.52
985 project	42	10	985 project	103	25.18
C 9	12	3	C 9	39	9.54
	409	100		409	100

**Table 7** Workplace of international graduates

Options	Number	Proportion (%)
A. Foreign company or Sino-foreign joint venture	83	 23.92(%)
B. Chinese private company	95	 27.38(%)
C. Chinese public company or institution	79	 22.77(%)
D. Family business	2	 0.58(%)
E. I have my own business	13	 3.759(%)
F. Government	5	 1.44(%)
G. If there is no option matching your situation, please specify: _____	2	 0.58(%)
Blank	68	 19.6(%)
Total number	347	

**Table 8** Workplace of domestic graduates

Options	Number	Proportion (%)
A. Foreign company or Sino-foreign joint venture	28	 6.85(%)
B. Chinese private company	86	 21.03(%)
C. Chinese public company or institution	198	 48.41(%)
D. Family business	1	 0.24(%)
E. I have my own business	13	 3.18(%)
F. Government	30	 7.33(%)
G. If there is no option matching your situation, please specify: _____	2	 0.49(%)
Blank	51	 12.47(%)
Total number	409	

### Determinants of social mobility

The data for the sample in this study indicate that international graduates have better educational backgrounds than domestic graduates in terms of the ranking of their institutions (Tables 5 and 6), in opposition to the general

impression of international graduates in China. Indeed, Tsang (2013) concludes that international graduates' choices are determined by their poor performance on China's college entrance examinations. The theory here is that because these students fail to secure a place in one of China's top universities, they turn their backs on China's second-tier universities

**Table 9** Results of multi-regression model

Variables	Model 1		Model 2	
Constant	1.325***	(2.586)	1.074***	(3.951)
BP	0.086**	(1.184)	0.013*	(0.403)
CP	0.096**	(2.064)	0.012*	(0.412)
UU	0.133**	(2.827)	-0.010	(-0.305)
UG	0.042*	(0.926)	0.013	(0.403)
MU	0.066***	(1.414)	0.031**	(1.028)
MG	0.096*	(2.156)	0.001	(0.042)
G	0.031*	(0.710)	0.056***	(1.813)
FO	-0.608**	(-12.269)	0.462***	(8.611)
MO	0.036	(0.726)	0.135*	(2.863)
FE	-0.038*	(-0.631)	-0.041*	(-0.855)
ME	-0.030	(-0.464)	-0.159**	(-3.476)
R <sup>2</sup>	0.508		0.576	
R (adj) <sup>2</sup>	0.401		0.432	
F	14.002		50.924	
Number of observations	3817		3399	

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ . The number in the brackets is the T-test value

and instead pursue an international higher education. However, in this study, we find that the majority of international students acquired their undergraduate and master's degrees from better universities than their domestically educated peers.

Both groups had high employment rates, but they had very divergent employment orientations (Tables 7 and 8). International graduates put Chinese private companies and foreign companies or Sino-foreign joint ventures as their first and second employment choices, respectively, accounting for over 50% of international graduates. Firms demanding good foreign language and decision-making skills have a high demand for international graduates (Mol 2017), so, China's labor market has targeted the needs of international graduates over those of domestic graduates. Unlike the international graduates, 48.41% of domestic graduates chose public Chinese companies or institutions as their workplaces. The fact that the two groups of master's graduates entered different workplaces is related to their study environments. The position of teacher was highly representative. In this study, most domestic graduates preferred to teach in public schools, while international graduates chose private institutions. Moreover, 7.33% of domestic graduates chose to work as civil servants is a much higher rate than for the international graduates.

Table 9 demonstrates the results of the mechanisms of social mobility (model 1 for international graduates and model 2 for domestic graduates). For model validity, this study considered the possibility of multicollinearity, as the

variables may have potential intercorrelation. For example, much research indicates that education has a strong inner relationship with occupation, so the relationship between father's education and occupation should be carefully examined. To examine model validity, the correlation coefficients were analyzed, and the independent variables were found to be weakly correlated. The largest Pearson's correlation coefficient was 0.50, and the others were much smaller, indicating that the explanatory variables were independent. Therefore, multicollinearity is not a significant issue in the models.

Unlike the international graduates, the domestic graduates had evident social upward mobility, supporting the role of China's higher education in social upward mobility. This result is in opposition to Mok's research. According to Mok and Wu's (2016), China's higher education massification results in low employment and cannot promote social upward mobility, but they do not divide university graduates into undergraduate and postgraduate degrees, which may be the cause of the difference in analytical results. Master degree holders in China still have advantages in China's labor market, and they experience upward social upward mobility, confirming the role of cultural capital in promoting social class. However, in relation to capital conversion and labor market outcomes, international graduates do not perform as well as their peers, indicating an opposite result to Tsang's (2013) analysis, which observes the advantaged family background and expected labor market outcomes of international graduates. In this study, however, we report that international graduates did not perform as well as their peers. This may result from the narrow space for international graduates to achieve upward social mobility.

In addition, the effects of various factors on social mobility are shown in Table 9. The coefficient of gender in model 1 is 0.031 and 0.056 in model 2, so in this study, male graduates have greater strength in social mobility than female graduates. The coefficient of gender of the domestic graduate is larger than for the returnees, revealing that male domestic graduates have much great advantages over female domestic graduates. In China, gender features persistent barriers for social mobility (Moskal 2020). This is true for domestic graduates without international mobility in particular, which is consistent with the existing literature.

Although Bourdieu's social stratification theory does not account for the role of spatial scale in capital conversion, it is nevertheless crucial for capital convertibility and social change (Xiang and Shen 2009). In detail, Xiang and Shen (2009) examine the concept of spatial scale in relation to Bourdieu's capital theory and highlight its importance of spatial scale for determining the efficiency of capital conversion and, subsequently, the total value of capital. This study's frame includes Bourdieu's capital theory and Xiang and Shen's concept of spatial scale,

and we also noticed the impact of spatial mobility among international graduates in social mobility. With respect to birthplace and current living place, both groups of master's graduates have positive signs. For international graduates, the coefficients for current living place were larger than those for birthplace. The two numbers were much larger than the coefficients for birthplace and current living place for domestic graduates. Registered living place and current living place of international graduates had more effects than domestic graduates. The coefficient values for registered residence and current living place of returnees were very high and had a positive sign. Because many returnees have a registered residence in a first-tier cities in China, many remain at their registered residence after finishing their master's courses. First-tier cities can provide greater job opportunities and career development. After China's open-door policy was launched, China's development became spatially unequal, with coastal cities first being opened up to foreign investors (Guo et al. 2016; Qin et al.). The eastern areas of China have attracted more foreign investment and international trade, leading to faster economic development (Huang and Ming 2014). The precise city inhabited has large effects on graduates' occupation and social mobility (Hedberg and Tammatu 2013). Moreover, cities have different social structures and degrees of social equality. The differential access to education and the labor market and redistributive politics have been identified as key factors impacting social mobility (Choy and Li 2017; Liu 2016).

For international graduates, paternal occupation had very significant negative effects on social mobility, which may be determined by international graduates' social origin. International graduates regard international higher education as a tool for retaining their advanced social status (Tsang 2013). As they seek employment outcomes, most international graduates successfully maintain their social origin. Li and Zhu (2017) indicate that class solidification may be possible in future Chinese society because the dominant class is learning how to use market exclusion to achieve class reproduction. In this study, participants with dominant social origins achieved little social upward mobility or remained in their social class. From the research results, it is hard to conclude that China has the possibility to develop class solidification. Unlike the international graduates, domestic graduates' social mobility has a strong and positive connection to their paternal occupation, and these effects are very large. This result was also determined by the job preferences of the two types of master's degree graduates. Over 50% of local graduates expressed a preference to work in Chinese public institutions where social capital is vital.

Variables of education outcomes (university ranking and GPA) had positive effects on social mobility. The undergraduate universities of international graduates had positive

effects on their social mobility. By contrast, domestic graduates' undergraduate universities had weak negative effects. The master's university of international graduates and domestic graduate had similar positive effects, indicating that the master's university has an important role in postgraduates' social mobility. With respect to GPA, undergraduate and master's GPA had positive effects on postgraduates' social mobility. In summary, educational attainments had evident effects on postgraduates' social mobility in China and for domestic graduates in particular.

## Conclusions

This study analyzes the social mobility of international and domestic graduates in China. Applying a quantitative approach, we find that domestic master's graduates perform better in China's social mobility than student returnees from the UK. However, the two groups of master's graduates had very different employment preferences. International graduates had more capital in terms of social status and spatial mobility. For social mobility, the majority of domestic graduates featured upward social mobility, and international graduates retained their class or experienced downward social mobility. However, the international graduates showed a clustering pattern in terms of spatial mobility to China's core cities. Thanks to intergenerational support, international graduates had better labor market outcomes.

For international graduates, father's occupation had strong negative effects. The parents of many returnees had an advanced social class, but in China at present, intergenerational mobility within the privileged classes is weakening (Li and Zhu 2017). Although international graduates did not achieve social upward mobility through international higher education, they still successfully converted different types of capital and retained their position in their social class. For domestic graduates, educational outcomes such as achieving a master's had strong positive effects, indicating the important role of higher education in China for promoting social mobility.

Because of the reality of certain Chinese institutions (such as the *hukou*) and ongoing economic imbalances, major cities act as talent hubs (Moskal 2020) and have abundant resources with which to maintain their advantages. High-end talents will face much more competition in the labor market, as seen in work outcomes and social mobility. More importantly, graduates are often precluded from living in major cities due to their institutions and talent policies, as well as the cost of living. Although the core cities can provide greater opportunity for upward social mobility, the majority of the domestic graduates moved to second- or third-tier cities, while international graduates were concentrated in Beijing, Shanghai, the main cities in the Yangtze



River Delta area, and the Beijing–Tianjin–Hebei region. Spatial mobility has strong links to graduates' social mobility through a mixed mechanism of institutions (such as the *hukou*), talent policies, unbalanced spatial distribution of education resources, family background support, and the efficiency of capital convertibility. The clustered patterns of international graduates settling in core cities may bring about a novel stratification of place. In addition to the equality of social mobility, equality of spatial mobility should also draw our attention.

By investigating the social and spatial mobility of international graduates compared to domestic ones, this study contributes to the knowledge of social stratification and development in China and the role of international and domestic higher education in China. These findings present policy implications. The sustained expansion of China's domestic higher education enrollment has resulted in intense labor-market competition. Moreover, the role of education in promoting social mobility has become weak. The increasing number of international graduates has added to the intense competition in the labor market in China's core cities. The expansion of employment opportunities is fundamental for addressing this problem. The gap between the rich and the poor in China has widened during the country's rapid development following its economic reform and opening-up policy. China has one of the world's highest levels of income inequality. As a result of this inequality, different social classes are receiving different qualities of education (Fang and Feng 2005). Therefore, if equality of educational opportunities were improved, especially the chance of studying abroad, the gap between the social classes could be weakened.

In future research, scholars could consider providing further analysis on participants' demographic information and conduct further analysis of data. For example, one could compare respondents with a similar background but with the same master's degree at a university with similar ranking but in a different country. With respect to research design, we suggest that researchers collect large-scale data and conduct longitudinal research to study participants' social and spatial mobility.

## Appendix 1: Information on international participants

Provinces	Original				Current			
	Registered residence		Rural area		Current residence		Rural area	
	<i>N</i>	Ratio (%)	<i>N</i>	Ratio (%)	<i>N</i>	Ratio (%)	<i>N</i>	Ratio (%)
Eastern provinces	200	57.63	7	29.20	288	83.00	2	40.00
Beijing	27	7.78	0	0	75	21.61	0	0
Shanghai	12	3.46	0	0	86	24.78	1	0
Tianjin	10	2.88	1	4.17	8	2.31	0	0
Jiangsu	39	11.24	1	4.17	27	7.78	0	0
Hebei	10	2.88	1	4.17	4	1.15	0	0
Liaoning	13	3.75	0	0	9	2.59	0	0
Zhejiang	35	10.09	3	12.50	26	7.49	0	0
Fujian	4	1.15	0	0	4	1.15	0	0
Shandong	15	4.32	0	0	7	2.02	0	0
Guangdong	28	8.07	1	4.17	39	11.24	1	0
Guangxi	6	1.73	0	0	2	0.58	0	0
Hainan	1	0.29	0	0	1	0.29	0	0
Central provinces	107	30.83	15	62.50	39	11.24	2	40.00
Shanxi	21	6.05	2	8.33	6	1.73	0	0
Inner Mongolia	11	3.17	1	4.17	5	1.44	0	0
Jilin	5	1.44	0	0	0	0.00	0	0
Heilongjiang	7	2.02	0	0	3	0.86	0	0
Anhui	16	4.61	4	16.67	7	2.02	1	0
Jiangxi	7	2.02	3	12.50	0	0.00	0	0
Henan	18	5.19	1	4.17	6	1.73	0	0
Hubei	13	3.75	2	8.33	7	2.02	0	0
Hunan	9	2.59	2	8.33	5	1.44	1	0

Provinces	Original				Current			
	Registered residence		Rural area		Current residence		Rural area	
	N	Ratio (%)	N	Ratio (%)	N	Ratio (%)	N	Ratio (%)
Western provinces	40	11.53	2	8.30	20	5.76	1	20.00
Chongqing	4	1.15	1	4.17	3	0.86	0	0
Sichuan	10	2.88	0	0	5	1.44	0	0
Guizhou	2	0.58	0	0	0	0.00	0	0
Yunnan	1	0.29	0	0	0	0.00	0	0
Xizang	1	0.29	0	0	0	0.00	0	0
Shaanxi	7	2.02	0	0	4	1.15	0	0
Gansu	5	1.44	0	0	2	0.58	0	0
Qinghai	1	0.29	0	0	0	0.00	0	0
Ningxia	3	0.86	0	0	1	0.29	0	0
Xinjiang	6	1.73	1	4.17	5	1.44	1	0

## Appendix 2 Information on domestic participants

Provinces	Original				Master university	Current				
	Registered residence		Rural area			Current residence		Rural area		
	N	Ratio (%)	N	Ratio (%)	N	Ratio (%)	N	Ratio (%)		
Eastern provinces	219	54.00	64	45.00	303	74.08	321	78.48	15	75.00
Beijing	3	0.73	0	0	74		51	12.47	1	5.00
Shanghai	2	0.49	0	0	57		69	16.87	0	0
Tianjin	2	0.49	0	0	9		17	4.16	0	0
Jiangsu	79	19.32	37	26.24	84		103	25.18	12	60.00
Hebei	36	8.80	8	5.67	2		9	2.20	1	5.00
Liaoning	17	4.16	1	0.71	8		11	2.69	0	0
Zhejiang	23	5.62	6	4.26	15		21	5.13	0	0
Fujian	8	1.96	2	1.42	2		2	0.49	0	0
Shandong	42	10.27	10	7.09	28		27	6.60	1	5.00
Guangdong	2	0.49	0	0	22		10	2.44	0	0
Guangxi	4	0.98	0	0	2		1	0.24	0	0
Hainan	1	0.24	0	0	0		0	0.00	0	0
Central provinces	149	36.00	64	45.00	42	10.27	57	13.94	2	10.00

Provinces	Original				Master university	Current				
	Registered residence		Rural area			Current residence		Rural area		
	N	Ratio (%)	N	Ratio (%)	N	Ratio (%)	N	Ratio (%)		
Shanxi	35	8.56	12	8.51	0		4	0.98	0	0
Inner Mongolia	10	2.44	6	4.26	0		1	0.24	0	0
Jilin	10	2.44	0	0	9		7	1.71	0	0
Heilongjiang	5	1.22	2	1.42	5		2	0.49	0	0
Anhui	38	9.29	17	12.06	3		12	2.93	1	5.00
Jiangxi	1	0.24	5	3.55	4		2	0.49	0	0
Henan	35	8.56	16	11.35	5		11	2.69	0	0
Hubei	8	1.96	4	2.84	9		11	2.69	1	5.00
Hunan	7	1.71	2	1.42	7		7	1.71	0	0
Western provinces	41	10.00	13	10.00	64	15.65	31	7.58	3	15.00
Chongqing	3	0.73	1	0.71	4		1	0.24	0	0
Sichuan	9	2.20	4	2.84	28		11	2.69	2	10.00
Guizhou	1	0.24	0	0	1		0	0.00	0	0
Yunnan	1	0.24	0	0	3		0	0.00	0	0
Xizang	1	0.24	0	0	0		0	0.00	0	0
Shaanxi	14	3.42	5	3.55	25		15	3.67	1	5.00
Gansu	5	1.22	3	2.13	3		2	0.49	0	0
Qinghai	1	0.24	0	0	0		0	0.00	0	0
Ningxia	1	0.24	0	0	0		0	0.00	0	0
Xinjiang	5	1.22	0	0	0		2	0.49	0	0

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