Social Stratification in China's Higher Education Expansion: Findings from a College Student Panel Survey in Beijing

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Abstract

Higher education in China has experienced an unprecedented expansion since 1998. Despite the heated public debate on equity in access to higher education, particularly related to the province-based quota system, only anecdotal evidence has been presented to show the decline of students from disadvantaged backgrounds in enrollment in several elite universities. The examination of the role of expansion and differentiation in higher education and its implications for stratification remain to be seen, mainly due to the unavailability of appropriate data. In 2009, we launched the first wave of the "Longitudinal Survey of College Students," aiming to collect the panel data on 5000 students from 15 universities in Beijing, tracking their differential experience in career choices, adaptation strategies and subsequent labor market outcomes. This paper analyzes students' retrospective information on high school experience and admission processes, analyzes show how family background, high school, and preferential policies have channeled students into different types of tertiary institutions. As found elsewhere, the transition from elite to mass high education has also been accompanied by differentiation between elite research universities and less selective colleges of second tiers, with latter increasingly occupied by children of working classes.

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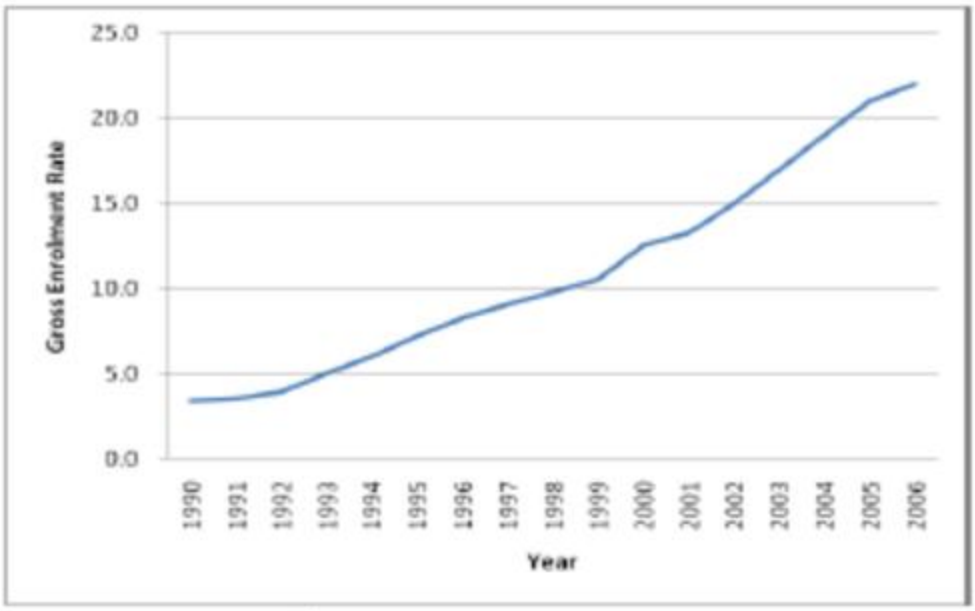
Introduction

Students of social stratification have long been interested in issue of whether educational expansion has reduced inequality by providing more opportunities for individuals from disadvantaged background, or enhanced inequality by expanding opportunities disproportionately for those who are already privileged. Given the nearly saturation of primary and secondary education in western developed societies, the expansion of higher education and its impact on social stratification has been receiving more attention among stratification and education researchers, because tertiary degree is the gatekeeper of managerial and professional positions in the labor markets in almost all modern societies.

The transition from elite to mass high education has also been accompanied by differentiation between elite research universities and less selective colleges of second tiers, with latter increasingly occupied by children of working class. Moreover, tertiary credentials are found to be devalued during the twentieth century and educational qualifications for entry into desirable jobs have increased over time. Research on higher education provides an opportunity to revisit theories on the role of expansion and differentiation in shaping stratification regime

Unlike most developed countries, tertiary education in China has been substantially expanded prior to the saturation of secondary education since 1998. As shown in Figure 1, from 1998 to 2004, the enrollment of new regular undergraduate students on average grew by 26.9 percent annually, increasing from 1.08 million in 1998 to 4.47 million in 2004. Total enrollment increased from 3.41 million in 1998 to 13.33 million in 2004. While there were many other social, demographic, and global forces driving the policy changes, the economic consideration dominated the discussions in the literature on educational reform, with no serious concerns about the equity issues. After the Asian financial crisis in 1997, the government needs to find an effective means to boost domestic consumption. Colleges were allowed to charge tuitions. Admission is decentralized with much less emphasis on testocracy and many other channels are opened to college admission. On the other hand, the Chinese government's initiative to build world-class university has led to much differentiation among universities with respect to resources, faculty, and facility, and student selectivity in China's higher education. This paper aims to examine the mechanism of how students are placed into different types of tertiary institutions, especially how region/province, family background, high schools, exam scores, and preferential admission policies have shaped inequality in tertiary educational opportunities.

Figure 1: Gross Enrolment Rate of Higher Education, 1990-2006



Source: Ministry of Education[8].

Data and Variables

The data to be analyzed are from Beijing College Student Panel Survey since 2009. With assistance from Beijing Education Bureau, we gained access to registration records of all students enrolled in tertiary institutions in Beijing (N=587,312). We focus on 54 public funded universities that students account for 86% and restricted to year 1 and 3 student, N=186,296) in the year of 2009. Multi-stage stratified sampling methods are employed, with university as the principal sampling unit (PSU) and major as the secondary sampling unit. To ensure differentiation, 6 strata are designed: Peking University, Renmin University, Tsinghua University, all other 211-project universities under the jurisdiction of the central government, all non-211-project universities under the jurisdiction of the central government, all local universities under Beijing municipal government. Among the first three elite universities in China, we select 25 majors, and each major selected 20 students. We also select 6 211-project universities and 2 non-211-project universities both under central government, and 4 local universities, with 15 majors from each university and 20 students from each major. As results, 5100 students from 15 universities of all kinds are selected and 4771 interviews have been completed in summer 2009, with a success rate of 93.4%. Students' name and personal contact information (email address, mobile phone, and family address and the contact information for their close friends) are also collected for the subsequent follow-ups of which 4431 completed the second wave of survey (retention rate 93%). These students are followed up in 2010 and 2011. We have successfully followed 4431 students in the second wave and 4217 students/graduate in the third wave. Table 1 shows the information and sampling frame designs. Data are weighted in the analysis

Strata	Definition	Year 1+Year Students	Sample
1	Peking University	5,626	25 majors
2	Renmin University	5,069	25 majors
3	Tsinghua University	5,651	25 majors
4	Other 211 university under MOE	87,305	6 universities *15 majors
5	Non-211 university under MOE	21,708	2 universities *15 majors
6	Beijing Local university	60,937	4 universities* 15 majors
Total		186,296	

Strata	University	Major	Sample
1	1	25	25x20
2	1	25	25x20
3	1	25	25x20
4	6	6x15	90x20
5	2	2x15	30x20
6	4	4x15	60x20
Total	15	255	5100

The survey contains 9 modules, including, basic information, psychological well-being, college admission, college –academic learning, college-political and social activities; college: finance and economics, occupational expectation and career planningvalue and behavior, and family background. In this paper, we examine how students are channeled into different types of colleges in Beijing. There are four dependent variables. The first is school type, with three categories: 1=elite, 2=national 211, 3=other. The second and third are major's competitiveness and prospect, measured as a continuous variable ranging from 1 to 10. And last independent variable is whether the student has received any preferential treatment in admission treatment, including exemption from entrance exam, special exam, extra credits, and endorsement (yea=1).

Independent variables include family location (1=village/town 2=county level city, 3=prefectural city, 4=provincial capital, 5=Beijing), whether he respondent is from key point school (1=national/provincial 2=prefecture/county level 3=none), family socioeconomic status (1=high, 2=middle, 3=below middle), preferential treatment (yes=1), test score (top 100 within province), as well as gender (male=1), ethnicity (han=1).

Multi-nonmial regression and linear regression models are employed in the analysis.

Preliminary Results

Table 2 Multinomial Logit Models on Entering Three Types of Schools

	Model 1		Model 2	
	National Elite	Other key research university	National Elite	Other key research university
Place origin (village/town [omitted])				
County level city	0.502***	0.177	0.424**	0.168
	(0.134)	(0.121)	(0.163)	(0.125)
Prefectural city	0.837***	0.408**	0.354*	0.300*
	(0.139)	(0.130)	(0.172)	(0.134)
Provincial capital	1.186***	0.504***	0.627***	0.318*
	(0.153)	(0.149)	(.183)	(0.154)
Beijing	-1.695***	-2.567***	-1.504***	-2.476***
	(0.121)	(0.118)	(0.162)	(0.122)
Family class (upper middle [omitted])				
Middle	-0.659***	-0.177	-0.546***	-0.112
	(0.115)	(0.122)	(0.130)	(0.123)
Low middle or below	-0.965***	-0.367**	-0.804***	-0.254
	(0.128)	(0.131)	(0.151)	(0.133)
Male	0.438***	0.476***	0.467***	0.457***
	(0.085)	(0.082)	(0.102)	(0.084)
Han nationality	0.055	-0.671***	1.319***	-0.434***
	(0.145)	(0.121)	(0.200)	(0.142)
Key point school (national/provincial)				
Prefectural/county	-	-	-1.138***	-0.404***
			(0.125)	(0.094)
Not key point school	-	-	-1.806***	-0.984***
			(0.185)	(0.128)
Top 100 in province	-	-	4.457***	0.105
			(0.419)	(0.489)
Preferential admission policy	-	-	2.427***	0.576***
			(0.125)	(0.124)
Constant	-1.008	1.271***	-2.762***	1.179***
	(0.191)	(0.173)	(0.255)	(0.200)
Pseudo R2	0.197		0.292	
Observations	4752		4736	

Table 3. Determinants of College Major Competitiveness

	Major competitiveness	Major prospect
Place origin (village/town [omitted])		
County level city	-0.356	-0.264*
	(0.132)	(0.109)
Prefectural city	0.324*	-0.073
	(0.139)	(0.113)
Provincial capital	0.388*	-0.094
	(0.155)	(0.120)
Beijing	-0.601***	-0.382***
	(0.121)	(0.102)
Family class (upper middle [omitted])		
Middle	-0.158	-0.246**
	(0.110)	(0.092)
Low middle or below	-0.240	-0.421***
	(0.124)	(0.106)
Male	0.064	0.265***
	(0.083)	(0.070)
Han nationality	0.165	0.301*
	(0.139)	(0.117)
Key point school (national/provincial)		
Prefectural/county	0.026	-0.155
	(0.096)	(0.082)
Not key point school	0.210	-0.418***
	(0.134)	(0.117)
Top 100 in province	0.823***	0.464***
	(0.170)	(0.135)
Preferential admission policy	0.619***	0.292***
	(0.105)	(0.087)
Constant	4.287***	7.027***
	(0.197)	(0.162)
R2	0.038	0.029
Observations	4729	4734

Table 3. Merit and Viture?

	Preferential Admission	Exam top 100 in province
Place origin (village/town [omitted])		
County level city	0.392**	0.087
	(0.131)	(0.172)
Prefectural city	0.685***	0.178
	(0.137)	(0.172)
Provincial capital	0.953***	-0.017
	(0.145)	(0.187)
Beijing	0.512***	-2.243***
	(0.121)	(0.437)
Family class (upper middle [omitted])		
Middle	-0.291**	-0.239
	(0.107)	(0.145)
Low middle or below	-0.271*	-0.206
	(0.121)	(0.174)
Male	0.091	-0.140
	(0.083)	(0.128)
Han nationality	-2.557***	-0.064
	(0.122)	(0.212)
Key point school (national/provincial)		
Prefectural/county	-0.301**	-0.529***
	(0.099)	(0.168)
Not key point school	0.054	-0.674*
	(0.131)	(0.299)
Constant	0.680***	-2.684***
	(0.171)	(0.262)
Pseudo R2	0.148	0.069
Observations	4736	4745

Summary and Conclusion

There is a clear pattern of social stratification within the expanding higher education sector, with the national elite school on the top and non-research oriented school on the bottom. Access to different higher education opportunities are highly structured by Space (home origin). Family background (class ranking at local), school tracking (key point high school of different ranks), preferential admission policies provide a way alternative to the entrance examination to get ahead in China's higher education sector (good school and good major), in which students from better-off families are more likely to take advantage. Merit-based performance is determined only by high school type (key-point school).