Inequality of Higher Education in China: An Empirical Test Based on the Perspective of Relative Deprivation*

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The primary goal of this paper is to examine what makes Chinese college students dissatisfied with entrance opportunities for higher education. Based on the author's survey data, we test two parameters which could be a potential cause of this dissatisfaction: 1) distributive inequality, which emphasizes the individual's dissatisfaction caused by unequal quota distribution; and 2) relative deprivation, which emphasizes the individual's dissatisfaction caused by social comparison relative to a reference group. Results show that relative deprivation has a significant effect on individual's dissatisfaction compared to unequal quota distribution. As a conclusion, college students' dissatisfaction was caused by the fact that they realized they could not get a fair distribution comparison to their reference groups. Individual subjective valuation gradually becomes an important standard of judging educational inequality, that makes educational inequality more complex to be resolved. Considering the ingrained household registration system and admission policy, we propose that individual's relative deprivation will probably persist or even worsen during the period of social transition.

Keywords: higher education; educational inequality; entrance opportunity; quota distribution; relative deprivation

Introduction

China's higher educational development and school expansion has increased dramatically since 1999. The total number of enrollments increased from 6.42 million in 1998 to 31.05 million in 2010, raising the gross enrollment ratio from 9.8% in 1998 to 26.5% in 2010. Some findings show the inequality of higher education has improved with the increase of educational supply, especially for females and people with lower socioeconomic status and residents from rural communities (Ding, 2006; Ding & Liang, 2010; Wang, 2010). However, some findings

suggest an even more rapid increase in social criticism of educational inequality than in the past (Qiao, 2007; Xie et al, 2008). According to Xie, et al (2008, p. 94), who proposed that:

> Compared with the past, despite the tremendous development of higher education in recent years, the educational inequality is still being strongly criticized increasingly even more than in the past. … In other words, educational expansion and development did not show a positive effect on people's satisfaction.

Why does this dissatisfaction keep growing rapidly despite the dramatic development in educational supply? Unfortunately, the past studies do not address people's "subjective judgment" of educational opportunity. As a result, the question "what makes people dissatisfied with their entrance opportunity?" remains unanswered.

Most of the media surveys and research in the past focused on regional discrimination, which highlighted that unequal quota allocation which leads to people's dissatisfaction (Li, 2010; Liu, 2010; Pan et al., 2010; Qiao, 2007; Wang & Chan, 2005). Subject to the regulations of the National Education Ministry (2010), high school graduates must take the college entrance examination in their place of household registration location. The difference between the total number of candidates and quota distribution among regions leads to the inequality of educational opportunities. In Figure 1, we list the probability of entering a central subordinate university by region in 2006.[1] Following Qiao's research, the *absolute equality index* (E_{har} = regional admission scheme/regional candidates) expresses the probability of entering a central subordinate university in the region, the *relative equality index* (E_{ha} = E_{har}/E_{hat}, E_{hat} = regional population/national population) expresses the probability of entering a central subordinate university considering the population of each region. That is to say, the higher value of E_{har} or E_{ha} means higher probability of entering a central subordinate university for the regional candidates.

Figure 1 shows that there is a large gap of entrance opportunities among regions. Those students from the western minority regions (e.g. Qinghai, Tibet) and parts of municipalities (e.g. Beijing, Shanghai) have higher probability of entering a central subordinate university than those from central provinces, which have a higher population but only a few higher education institutions (e.g. Henan, Shandong). In 2001, three candidates from Shandong province took the Ministry of Education to court, arguing that the admission policy is unconstitutional in that it assigns large quota for those candidates from Beijing but only a small amount for themselves (Li, 2001). Consequently, most researchers believe that the unequal quota is the reason for candidates' dissatisfaction with their entrance opportunities.

However, according to Xie et al. (2008), who provided a social psychological concept to explain why these Shandong province's candidates dissatisfied with entrance opportunities. Based on the perspective of *relative deprivation* (hereafter called the RD), they emphasized that these candidates not only got lower opportunity, but also felt a sense of RD when they compared themselves with those candidates who had a better opportunity, such as the ones from Beijing and Shanghai.

Considering the above, we suggest using the concept of RD to assess whether and how it affects the individual subjective dissatisfaction with entrance opportunity, which is one of the aims of this study. Hence, we assume that people's dissatisfaction is based on two factors: unequal quota distribution and RD. Which is a more significant predictor for individual's
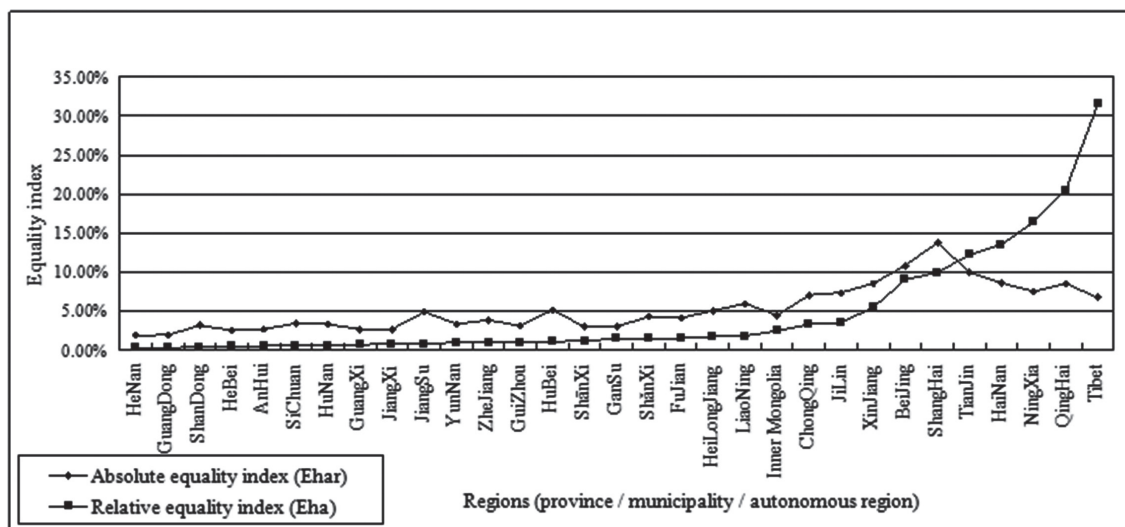
Figure 1   The probability of entering a central subordinate university in each region (2006).

Sources: National Bureau of Statistics of China (2006); Qiao (2007).

dissatisfaction? The question is analogous to some sociological research, which argued whether objective socioeconomic status or subjective RD could be a more convincing predictor for individual's happiness and satisfaction. (Ishida, 2011; Ma & Liu, 2010; Stewart, 2006; Tropp & Wright, 1999; Zhang et al, 2011).

The concept of "relative deprivation", first proposed by Stouffer et al. (1949), is based on the assumption that RD represents the individual's frustration produced by comparing self with other individuals or groups. Based on Stouffer et al's survey, Merton (1957) integrated the concept of reference group into the discussion of RD and proposed that reference groups play an important role in the concept of RD. According to Merton, the basic concept of a reference group can be understood as associated individuals or groups that has an impact on forming individuals' attitudes and values. Since then, classical RD approach has been greatly developed. The most often used concept is Runciman's (1966) theory (Stark & Taylor, 1989; Yitzhaki, 1979; 1982), which identifies the following four conditions for an individual to feel RD: 1) he or she does not have X (some desired object or opportunity called X), 2) he or she sees some other person(s) have X, 3) he or she desires X, and 4) he or she sees it feasible that he or she should have X. Qualifications (1) and (3) emphasize the utility derived from X, the objective deprivation of the person who lacks X, and the availability of a reference group for comparison is defined by qualifications (2) and (4). Runciman argued that the absolute amount of inequality is a function of the unequal allocation of goods, RD is concerned particularly with the individuals' feeling of not having received their fair share in the allocation process. Hence, one's feeling of RD triggers when an individual / group realizes that they did not receive a fair reward or a desired object when comparing themselves with the reference group. Consequently, individual's RD can be used to predict individuals' dissatisfaction, but this dissatisfaction cannot be used to predict individuals' RD.

In recent years, empirical studies on relative deprivation have witnessed a rapid increase in China, and are being widely used not merely in social psychology, but also in economics,

sociology, education, medicine, and other social sciences. For instance, Martin (2009) indicated that socioeconomic status and Gini coefficient are poor predictors of Chinese attitudes of inequality; urban residents are more dissatisfied with income inequality than rural residents. The reason is that farmers prefer to compare themselves to residents around them, whereas urban residents felt more frustration as they prefer to compare themselves to the rich in their cities. Ma and Liu (2010) indicated that, individuals' relative income (comparing the people around themselves) has more effect than individuals' absolute income on predicting perception of distributive injustice in China. Zhang, Wang and Chen (2011) demonstrated that during the years 2005–2009, the RD associated with economic and social status proved to be a more reliable predictor of Chinese life dissatisfaction than were the absolute income and social status per se. Knight and Gunatilaka (2009) reported that in spite of Chinese rural-to-urban migrant households' relative income and socioeconomic status was higher than rural households, their average happiness scores are lower than in rural households. The reason is that the migrants raise their aspirations by making urban households their new reference group, which in turn further increases their RD. In addition to the previous studies, Xie et al 's (2008) study provides a solid theoretical foundation for this paper. They indicated that with the social transformation and popularization of higher education in China, university degree has become more important for individuals' upward mobility than it was in the past. Individuals felt easily dissatisfied when they thought they were being treated unequally when comparing themselves with those who have better opportunities. However, their study did not conduct an empirical analysis for their theoretical hypothesis. In this paper, we attempt to use an empirical analysis of RD to discuss educational inequality. We deem it necessary to present empirical evidence rather than just an abstract theoretical analysis when educational policy needs to be adjusted.

Based on the review of the previous literature, RD could be seen as a more significant predictor to explain individuals' dissatisfaction with entrance opportunity. Therefore, we propose the following hypothesis:

Hypothesis: Compared with the effect of unequal quota distribution, RD is a stronger predictor of individuals' dissatisfaction with entrance opportunity.

1. Method

1.1. Respondents and Date

In 2011, we conducted a survey in 11 universities across two provinces (Hebei, Jilin) and three municipalities (Beijing, Shanghai, Chongqing). 1670 questionnaires were sent out and 1179 questionnaires were retrieved (effective response rate: 70.6%). We chose college students as our respondents since they took part in the college entrance examination and knew about the fact of unequal quota allocation, and thus their evaluation is thought to be more accurate than those who did not take part in the entrance examination process. The samples come from three "Project 985" universities, two "Project 211" universities, four provincial key universities and two normal colleges (see table 1). In order to maintain a balanced response rate across regions, we selected one university in Beijing, three universities in Shanghai, one university form the southwest, one university from the northeast and four universities from the central region respectively. We handed out the questionnaires randomly to college students in their study rooms, libraries and dormitories.

Table 1   The characteristics and constitutions of universities in the survey data

University	University type	University Evaluation	Region	Sample
A University	"Project 985"	Superior (Rank 1–30)	BeiJing	135
B University	"Project 985"	Superior (Rank 1–30)	ShangHai	71
C University	"Project 985"	Superior (Rank 1–30)	ShangHai	60
D University	"Project 211 "	Median (Rank 40–140)	ShangHai	81
E University	"Project 211 "	Median (Rank 40–140)	ChongQing	437
F University	Normal key university	Inferior (Rank 150~200)	HeBei	40
G University	Normal key university	Inferior (Rank 150~200)	HeBei	66
H University	Normal key university	Inferior (Rank 150~200)	HeBei	113
I University	Normal key university	Inferior (Rank 200~)	HeBei	89
J University	Normal university	Inferior (Rank 200~)	HeBei	36
K University	Normal university	Inferior (Rank 200~)	JiLin	207

Note: Project 211 aims at strengthening research infrastructure in approximately 100 selected universities. Project 985 aims at constructing the best universities in China with substantial funding support to enhance their international competitiveness.

Table 2   The correlation of dependent variables

	Dissatisfaction of distribution	Dissatisfaction of acceptance rate	Dissatisfaction of entrance opportunity
Dissatisfaction of distribution		.568**	.263**
Dissatisfaction of acceptance rate			.257**
Dissatisfaction of entrance opportunity			

1.2. Variables

1.2.1. Dependent variables

We use logistic regression analysis to test our hypothesis. The dependent variables include three questions: 1) "How satisfied are you about the quota allocation for each region?" 2) "How satisfied are you about the acceptance rate for each region?" 3) "In general, how satisfied are you about the entrance opportunity in higher education?" Respondents could choose one out of four degrees of satisfaction: "satisfied," "fairly satisfied," "not very satisfied," "dissatisfied". In the present analysis, we converted satisfaction levels into binary distinctions of "satisfied" = 0 and "dissatisfied" = 1.

Table 2 lists the results of correlation analysis of dependent variables. As "dissatisfaction of distribution" and "dissatisfaction of acceptance rate" is closely related to distributive policy, the two dependent variables have high correlation. Hence, if one independent variable can predicts "dissatisfaction of distribution", it may be a significant predictor for "dissatisfaction of acceptance rate". However, it may not be a significant predictor for "total dissatisfaction", since "total dissatisfaction" include lots of other factors, such as individual's failure and low attainment, and so on.

1.2.2. Independent variables

In the present paper, the two most important independent variables are quota distribution and RD. The unequal quota distribution can be regarded as the probability of entering

Table 3   Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Dependent variables					
Dissatisfaction of distribution (satisfaction = 0)	1178	.00	1.00	.61	.487
Dissatisfaction of acceptance rate (satisfaction = 0)	1179	.00	1.00	.63	.481
Total dissatisfaction (satisfaction = 0)	1179	.00	1.00	.44	.497
Independent variables					
Quota distribution	1176	1.89	13.77	4.99	2.960
Relative deprivation	1179	.00	.47	.06	.124
University rank (211 + 985 project = 0)	1179	.00	1.00	.39	.490
Students type (retry students = 0)	1179	.00	1.00	.31	.466
Expectation and attainment (expectation < attainment = 0)	1177	.00	2.00	1.34	.800
Educational funding per capita	1176	6.61	8.12	7.00	.315
Geographic region (west area = 0)	1176	.00	2.00	1.12	.822
Sex (female = 0)	1179	.00	1.00	.34	.472
Ethnicity (minority = 0)	1179	.00	1.00	.89	.308
Father's occupation (lower class = 0)	1176	.00	2.00	.73	.723
Father's education (less than middle school = 0)	1174	.00	1.00	.63	.484
Urban-rural (village = 0)	1177	.00	2.00	.94	.849
Valid N	1170				

Note: the variable of educational funding per capita is logged educational funding per capita.

higher education in each region, which can be expressed as E_{har}. About the variable of RD, the detailed method and analysis will be discussed later.

Based on the previous educational inequality research, we propose that geographic, demographic, socioeconomic and cultural capital variables (e.g., geographic classification; educational funding per capita, sex, ethnicity, family socioeconomic status[2] and urban-rural household) are effective predictors of entrance opportunity (Li, 2003; 2010; Pan et al., 2010; Wu & Zhang, 2010; Xie & Wang, 2006). As a result, these variables may be effective in predicting dissatisfaction with entrance opportunity. Hence, we put these variables into the models as control variables and examine their effects. In addition, university rank, students type, individual's expectation and attainment variables may be effective predictors for respondents' dissatisfaction with entrance opportunity. For example, those who entered prestigious universities may have experienced more satisfaction than others, and those students who failed and were forced to retry the entrance examinations (浪人) may have experienced more dissatisfaction than those who passed on their first try. Hence, we also insert these variables into the models and examine their effects. Table 3 lists the descriptive statistics for all the above mentioned variables.

1.3. Measure of relative deprivation

In the present paper, we utilizes Stewart's (2006) new measure of RD. Based on Stewart's research, it has been confirmed that the new measure does not only predict the economic aspect of RD, but also possesses the ability to predict the non-economic aspects of RD such as happiness and satisfaction. In addition, this new measure expanded on the previous research findings by pointing out that individuals feel deprivation not only when comparing with those above themselves, but also feel satisfaction when comparing with those below themselves.

According to Stewart, the formula of RD, Q_p, is:

$$Q_p(Y; z_p) = \frac{1}{N_p(z_p)^2} \sum_{i=1}^{I_p} g^2{}_{ip} \tag{1}$$

Where z_p ($z_p > 0$) is the deprivation line in the reference group p, N_p is the population size of the reference group p, I_p is the size of the population below the deprivation line in the reference group p, and $g_i = z - Y_i$ ($Y_i \leq z_p$), where Y_i is the score of the ith individual in the reference group p. The deprivation line is a point in score distribution where relative satisfaction perfectly offsets RD. The measure represents individuals' dissatisfaction caused by their scores being lower than the deprivation line in the reference group. As such, this measure defines the operational form of individual i RD, d_i, as:

$$d_i = g^2{}_{ip} / (z_p)^2 = (z_p - Y_{ip})^2 / (z_p)^2 \tag{2}$$

where the terms are the same as those in Equation 1 (Stewart, 2006). This measure is in accordance with three assumptions: 1) individuals above the deprivation line do not contribute to the total deprivation because their level of relative satisfaction offsets all RD ($d_i = 0$). 2) individuals below the deprivation line in a reference group have levels of RD that offset all relative satisfaction ($d_i > 0$). 3) The feeling of RD geometrically increases as an individual moves farther away from the deprivation line (Stewart, 2006).

Hence, before estimating individuals' RD, the most important point is to estimate the deprivation line. Stewart pointed out that the deprivation line could be approximated as the mean score in a reference group. In this paper, as each regional quota distribution is different, the deprivation line in each region can be estimated as the mean of self-rated entrance opportunity. However, since the sample size is limited to only a few samples in some regions, it is not considered suitable for defining the deprivation line of these regions.[3] Therefore, we need to incorporate with some regions into one group to ensure enough sample size. The present study incorporates several regions that are grouped neither geographically (West area, Central area, East area) nor by the amount of quota allocation of each region. One of the reasons is that a mere geographical incorporation of regions results in the quota allocation in Beijing, Shanghai and Tianjin being considerably different from other regions while still remaining in the same area. The second reason is that there is no criterion to define which regions are "advantageous" and which are "disadvantageous" when using only the amount of quota allocation per region.

In view of the above, we attempt to incorporate homogeneous regions into one group with similar quota distribution and respondents with similar perception of the quota distribution. To do so, we use decision tree analysis, which combines the homogeneous independent variables. We select the following self-evaluation: "In general, what do you think about the opportunity in your region: 1) low, 2) fairly low, 3) fairly high, 4) high" as dependent variable. As a next step, we insert quota distribution index of E_{har} and E_{ha} into the model as independent variables. Here, we did not use direct questions about reference group, such as "compared with other regions or students". Consequently, the RD in the present paper could be explained in terms of an individual realizing that he or she did not get a fair opportunity from distribution when unconsciously comparing with a reference group.

Figure 2 shows that the E_{ha} is considered a significant predictor. 31 regions were combined into the following 5 groups. Group 1: $E_{ha} \leq 0.45$, group 2: $0.45 < E_{ha} \leq 0.99$, group 3: $0.99 < E_{ha} \leq 2.46$, group 4: $2.45 < E_{ha} \leq 5.49$, and group 5: $E_{ha} > 5.49$ (see table 4). That is,
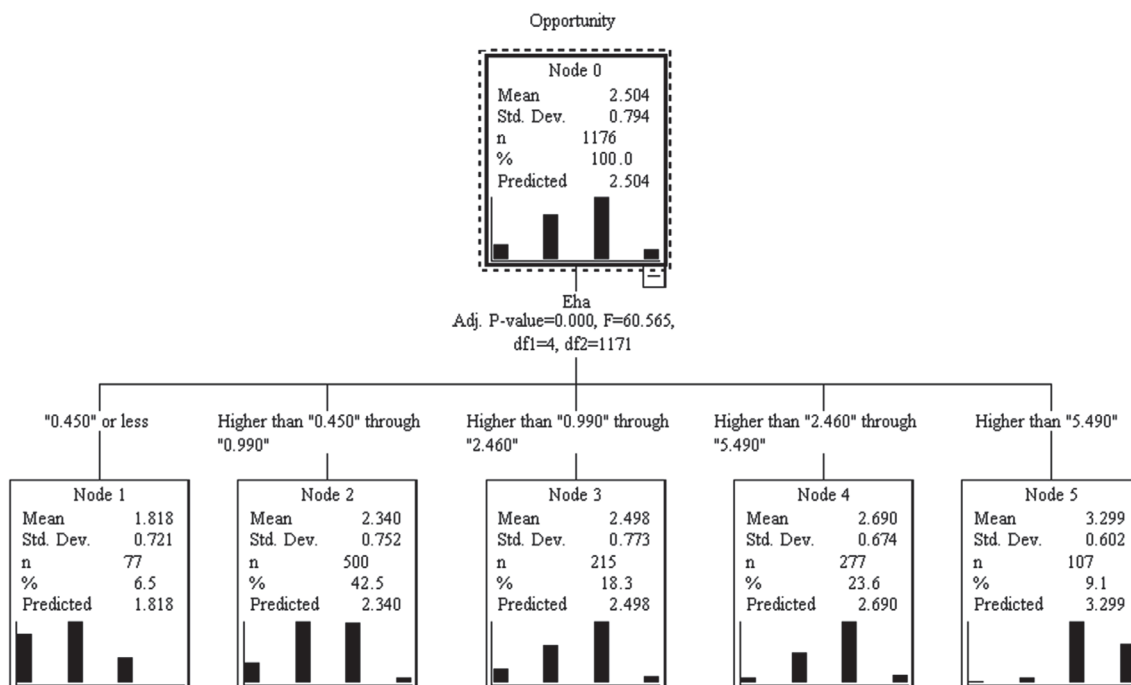
Figure 2   Sort regions based on decision tree analysis

Table 4   Classification of each region

Groups	Regions	Quota distribution	Self-rated quota distribution
1	He Nan, Shan Dong, Guang Dong.	Low	Low (1.818)
2	He Bei, Jiang Su, An Hui, Jiang Xi, Hu Nan, Guang Xi, Si Chuan, Yun Nan.	Fairly low	Fairly low (2.340)
3	Shān Xi, Inner Mongolia, Liao Ning, Hei Long Jiang, Zhe Jiang, Fu Jian, Hu Bei, Gui Zhou, Shǎn Xi, Gan Su.	Middle	Middle (2.498)
4	Ji Lin, Chong Qing, Xin Jiang.	Fairly high	Fairly high (2.690)
5	Bei Jing, Tian Jin, Shang Hai, Tibet, Hai Nan, Qing Hai, Ning Xia.	High	High (3.299)

the regions in group 1 (Henan, Shandong, Guangdong) do not only have less quota distribution than other groups, but also the respondents within this group tend to think they receive less quota distribution.

Based on an analysis of the above, the deprivation line of the five groups was estimated to be 1.818, 2.340, 2.690, 2.498 and 3.299 respectively. Following, the individuals' RD scores can be calculated using Equation 2. If we suppose that an individual in the group 5 reported his/her opportunity to be 2, then his/her RD should be: $d_i = (3.299 - 2)^2/(3.299)^2 = 0.155$. If an individual's self-rated opportunity is 4 (3.299 < 4), then his RD should be 0 as his relative satisfaction offsets all RD.

Table 5 Logistic regression of absolute distribution and relative deprivation

	Model 1	Model 2	Model 3
Quota distribution (Ehar)	−.126**	−.090*	−.009
Relative deprivation	3.738***	3.411***	1.528**
The rank of university (Base: 211 + 985 project)	.232	.155	.276*
Students type (Base: retry students)	−.202	−.146	−.348*
Expectation and attainment (Base: expectation < attainment)			
Expectation = attainment	.764***	.757***	.488*
Expectation > attainment	1.088***	1.243***	1.049***
Educational funding per capita	−.095	−.590	.211
Region (Base:west)			
Middle	.061	.089	.316
East	.011	.134	−.062
Sex (Base:female)	.188	.046	−.017
Ethnicity (Base:minority)	.436*	.537*	.125
Father's occupation (Base:lower class)			
Middle occupation	−.039	−.212	−.019
Upper occupation	−.209	−.105	.095
Father's education (Base:less than high school)	.102	.119	−.023
Urban-rural (Base:village)			
County town	.234	.263	.275
City	.123	.197	.284
Constant	2.220	3.475	−3.009
Cox & Snell R^2	.139	.136	.084
Nagelkerke R^2	.185	.182	.109
N	1170	1170	1170

***$p < 0.001$ **$p < 0.01$ *$p < 0.1$. Model 1: dissatisfaction of distribution. Model 2: dissatisfaction of acceptance rate. Model 3: total dissatisfaction of entrance opportunity.

2. Results

The purpose of the analysis is to examine whether unequal quota distribution or RD can predicts individuals' dissatisfaction with entrance opportunity by controlling for other variables. We created three models by using the three dependent variables, and then inserted all independent variables into these models. The results are showed in Table 5.

Table 5 shows that the RD coefficient is significant and indicates that as RD increases, the probability of reporting "dissatisfaction" increases in all three models. The positive coefficient indicates that respondents with higher levels of RD are more likely to experience dissatisfaction with entrance opportunity than those with lower levels of RD. The odds of total dissatisfaction of respondents who experienced RD are 4.6 times ($= e^{1.528}$) of those who did not experience it.

In models 1 and 2, the negative coefficient of quota distribution was found to be significant. It shows that as quota distribution decreases, the probability of reporting "dissatisfied with distribution" and "dissatisfied with acceptance rate" increases. That is, the respondents in disadvantageous regions felt more dissatisfaction than those in advantageous regions. However, this variable cannot indicate an increase in the probability of reporting "total dissatisfaction" when quota distribution decreases. That is, the total dissatisfaction of respondents in relatively disadvantageous regions does not differ from those in relatively advantageous regions, in spite of

their dissatisfaction with the unequal distribution. Consequently, we can confirm the hypothesis that RD is a more influential predictor of individuals' dissatisfaction with entrance opportunity than the unequal quota distribution.

Why is there no difference between the disadvantageous regions and advantageous regions in terms of the total dissatisfaction? The first reason can be explained that quota distribution variable is not enough to offset the effect of comparison when students think about their total dissatisfaction. The second reason can be explained by the respondents' tendency to pay more attention to the importance of individual's merits. Most students tend to believe individual's academic achievement to be a core element in determining the odds of entering a higher education facility.[4] Therefore, they believe they can enter a prestigious university as long as they try hard enough. This leads to the total dissatisfaction being unanimous across regions. This explanation is consistent with certain findings, which indicate that Chinese have long believed the role of education to be crucial in creating a meritocratic society, where the talented is allowed to thrive regardless of their social origins (Wu & Zhang, 2010).

As indicated above, previous studies have demonstrated that those who are female, those who from west and central areas, rural areas, lower socioeconomic and cultural capital households, have less educational opportunities than those are male, those who from east areas, urban areas, higher socioeconomic and cultural capital households. However, table 5 shows that these variables are irrelevant predictors for dissatisfaction with the exception of the minority variable. In other words, respondents did not attribute their dissatisfaction to their disadvantageous social and family background. It should be noted that ethnicity is a significant predictor for models 1 and 2, and indicates that minority students' satisfaction with distribution and acceptance rates is higher than that of Han students. The reason can be the fact that minority students obtain more extra benefits from "mark adding of exam policy".[5] However, the total satisfaction rate of minority students is not higher than that of Han students. The reason is that obtaining additional benefits is not enough to offset the effect of other variables, such as relative deprivation, and so on.

In addition, we found that the university rank and students type are significant predictors for model 3. The coefficients indicate that the "non-211 and 985 project" university students feel more dissatisfaction than the "211 and 985 project" university students, and those who had to retry the entrance examination feel more dissatisfaction than those who passed their entrance examination on the first try. Hence, we found they are likely to attribute their total dissatisfaction to their experience with failure and low attainment. On the other hand, these variables are not significant predictors for models 1 and 2 since students' opinions for the unequal policy are similar, regardless of their success or failure. Finally, we found that individual's expectations and attainments are very significant predictors for all three models. Those with higher attainment than their expected level not only feel more total satisfaction than other students, but even they feel more satisfaction with unequal quota distribution than others.

3. Conclusion and Discussion

This paper attempts to answer the question of what makes people dissatisfied with the educational inequality in spite of having more entrance opportunities than in the past. Based on the concept of relative deprivation, we found that RD is a much better predictor of explaining

individuals' dissatisfaction with entrance opportunity.

We came up with the following conclusions: Firstly, although the entrance opportunity of higher education increased rapidly, the college students are likely to pay more attention to whether they could get a fair distribution by comparing themselves to their reference group rather than considering how much absolute quota has been actually assigned to them. That is to say, those in disadvantageous regions are not necessarily always dissatisfied with their entrance opportunity, and those in advantageous regions are also not necessarily always satisfied with their entrance opportunity. The key factor is that their dissatisfaction/satisfaction was caused by their reference group's opportunities are higher/lower than their own. This conclusion is the most important finding in the present paper.

Secondly, it is worth noting that college students did not attribute their dissatisfaction to their disadvantageous social and family background, even though the earlier reproduction and social stratification studies have proved that the children in disadvantageous social and family background have less opportunities to enter a university. That is, college students paid little attention to potential inequality, such as the mechanism of reproduction and social stratification. This finding is consistent with earlier studies which emphasized that rising inequality is not a serious concern as long as those who lag behind are provided opportunities for mobility (Martin, 2009; Li, 2002; Zhang, 2008). However, in today's China, we cannot ignore the fact that distributive inequality has caused a rapid increase in people's dissatisfaction, which has become the most crucial factor in the field of educational inequality.

Finally, in the past, individuals experienced less dissatisfaction as they had little aspiration to enter a university, and the mechanism of social comparison was not in effect. However, under the influence of social transition, privatization of educational facilities and competitive society, individuals' educational aspirations and upward mobility are recently becoming stronger than in the past. Thus, compared with the past, individuals are more inclined to experience RD when realizing they did not get a fair opportunity to enter a university or the freedom of upward mobility when compared to others. The result is that in today's China, the increasing educational injustice is represented by not only the objective distributive inequality but also subjective feelings of RD, which make educational inequality an even more complex problem to be solved. It is impossible to eliminate the individual's RD as they will not stop comparing themselves with others, but it is possible to reduce it by narrowing down the distribution gap. However, due to the ingrained household registration system and admission policy, the individual's RD is expected to persist or even worsen in the period of social transition.

In conclusion, we found that relative deprivation is the most important factor which makes college students dissatisfied with entrance opportunity of higher education, which is the contribution of this study. However, there are still some limitations in this research.

Firstly, the educational inequality among regions is a vast and complex issue. In this paper, we ignored some possible complicated factors that result in the conclusions have been idealized. Future research need to focus on the next two issues. First, the household registration system has important effects on parents' educational strategy in early childhood education. Those non-registered migrants' children have more negative learning attitude and educational expectations because of having less opportunities for entering higher education (Koo, 2012). The experience of family education and school education could also be important factors for individuals' dissatisfaction with educational opportunities. Second, educational inequality among regions as a major issue, not only is related to the distributive inequality which is the

concern of this paper, but also is related to the large gap among the cut-off lines for admissions (合格線) in key universities in different regions, the phenomenon of college entrance examination immigrants, and so on. Here, we did not take into account such inequalities as possible factors for individuals' dissatisfaction, but further research should take these issues into consideration.

Secondly, the survey data was limited to the college students in 11 universities but did not include those who failed to enter university. However, considering the high levels of dissatisfaction among college students, we can imagine that those who failed the entrance examinations might feel more dissatisfaction, because they are likely to attribute "their failure" to the lack of opportunities not only by comparing with those have more opportunities, but also by those who succeeded in the examination process. Future research should take these individuals into consideration.

Thirdly, the data is only cross-sectional rather than longitudinal. While the present paper examined college students' high dissatisfaction in the present, it cannot predict how their dissatisfaction levels change over time. The results here do not rule out the time as another variable that may be a significant predictor in explaining dissatisfaction.

Notes
1. There are 113 central subordinate universities in China by the end of 2010.
2. Upper class = large proprietors, higher professionals and managers; lower professionals and managers; routine nonmanual workers; middle class = small proprietors with employees; small proprietors without employees; lower grade technicians and manual supervisors; lower class = skilled manual workers; unskilled and semiskilled manual workers; self-employed farmers; unskilled agricultural workers.
3. Some regional sample size are too little to estimate the regional deprivation line, for instance, Qinghai (sample = 3); Tibet (sample = 2); Ningxia (sample = 6); Inner Mongolia (sample = 9), and so on.
4. In this survey, 81.2% of respondents think that an individual's effort is the most important factor to enter a university.
5. Mark adding policy of college entrance exam for minority students is used to maintain fair access to higher education between Han Chinese and minority groups.

References
Ding, X. H. (2006). Expansion and equality in Chinese higher education. *Peking university Education Review, 4*(2): 24–33 [published in Chinese].
Ding, X. H., & Liang, Y. (2010). The changes in access to higher education in China. *Journal of Higher Education, 31*(2): 1–5 [published in Chinese].
Ishida, A. (2011). A quantitative model of relative deprivation and reference group: An application of Yitzhaki's individual relative deprivation index. *Sociological Theory and Methods, 26*(2): 371-388.
Knight, J., & Gunatilaka, R. (2010). Great expectations? The subjective well-being of rural-urban migrants in China. *World Developmen 38*(1): 113–124.
Koo, Anita. (2012). Is there any chance to get ahead? Education aspirations and expectations of migrant families in China. *British Journal of Sociology of Education, 33*(4): 547–564.
Li, C. L. (2003). Socio-political changes and inequality of educational opportunity. *Social Science in China, 3*: 86–98 [published in Chinese].
Li, C. L. (2010). Expansion of higher education and inequality in opportunity of education: A study on effect of "kuozhao" Policy on equalization of educational attainment. *Sociological Studies, 3*: 82–113. [published in Chinese]
Li, L. F. (2010). Research on distribution the entrance to higher education. *Peking University Education*

Review, 8(2): 56–70 [published in Chinese].

Li, Y. (2001, August 21). Qingdao three candidates sue the ministry of education. *BBC Chinese.* Retrieved from http://news. bbc.co.uk/chinese/simp/hi/newsid_1500000/newsid_ 1505900/1505983. stm

Li, Y. N. (2002). Li Yining on the issue of reducing income gap. *Guangming Daily*. Retrieved from http://www. china.com.cn/chinese/OP-c/94258.htm

Liu, H. F. (2010). Where should the national college entrance examination go? *Peking University Education Review, 8*(2): 2–13 [published in Chinese].

Ma, L., & Liu, X. (2010). People's perception of distributive justice in urban China. *Sociological Studies, 5*: 33–49 [published in Chinese].

Martin, K. W. (2009). Views of Chinese citizens on current inequalities. *Sociological Studies, 1*: 96–120.

Merton, R. K. (1957). *Social theory and social structure, revised and enlarged edition.* NY: The Free Press.

National Educational Ministry, (2010). The regulation of college admissions 2010. http://gaokao.chsi. com.cn/gkxx/ss/201003/20100326/68361300-1.html

Pan, K. F., Xu, S., Chen,Y., Kang, L., & Lan, Y. H. (2010). Principles and scheme designs of enrollment quota allocation for national key universities. *Peking University Education Review, 8*(2): 43–55 [published in Chinese].

Qiao, J. Z. (2007). Regional differentiations of entrance opportunity for high-quality higher education. *Journal of Beijing Normal University (Social Science Edition), 1*: 23–28 [published in Chinese].

Runciman, W. G. (1966). *Relative deprivation and social justice: A study of attitudes to social inequality in twentieth-century England.* Berkeley: University of California Press.

Stark, O., & Taylor, J. E. (1989). Relative deprivation and international migration. *Demography, 26*(1): 1–14.

Stewart, Q. T. 2006. Reinvigorating relative deprivation: A new measure for a classic concept. *Social Science Research, 35*(3): 779–802.

Stouffer, S.A., Suchman, E. A., DeVinney, L. C., Star, S. A., & Williams, R. M. (1949). *The american soldier: Vol. 1. Adjustment during army life.* Princeton University Press.

Tropp, L. R., & Wright, S. C. (1999). Ingroup identification and relative deprivation: An examination across multiple social comparisons. *European Journal of Social Psychology, 29*: 707–724.

Wang, E. & K. W. Chan. (2005). 倾斜的分数线—中国大学录取条件的地区差异 [Tilting scoreline: Geographical inequalities in admission scores to higher education in China]. In F. Cai. and Z. Zhang (Eds.), *Labor Market in China's Transition*, (237–266). Beijing: China Population Publishing House [published in Chinese].

Wang, W. Y. (2010). Scale expansion of higher education and changes of access among children from different social strata. *Peking University Education Review, 8*(4): 120–130 [published in Chinese].

Wu, X. G., & Zhang, Z. N. (2010). Change in educational inequality in China, 1990-2005: Evidence from the population census data. *Research in Sociology of Education, 17*: 123–152.

Xie, W. H., Li, L. F., Sun, F., & Wen, W. (2008). *Educational equity and development in China (1990-2005): A new theoretical hypothesis on educational equity and its preliminary demonstration.* Educational Science Publishing House [published in Chinese].

Xie, Z. Y., & Wang, W. Y. (2006). The difference in higher education access opportunity of the children in different strata in China in the context of the popularization of higher education. *Journal of Educational Studies, 2*(2): 65–74 [published in Chinese].

Yitzhaki, S. (1979). Relative deprivation and the Gini coefficient. *Quarterly Journal of Economics, 93*(2): 321–324.

Yitzhaki, S. (1982). Relative deprivation and economic welfare. *European Economic Review, 17*: 99–113.

Zhang, S. W., Wang, E. P., & Chen, Y. W. (2011). Relative deprivation based on occupation: An effective predictor of Chinese life satisfaction. *Asian Journal of Social Psychology, 14*: 148–158.

Zhang, Y. W. (2008). Market reform and income distribution. *Chinahrd online.* Retrieved from http://www.chinahrd.net/news/enterprise-dynamic/2008/0225/87550.html