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MASTER THESIS

**Tuition fees in Chinese public higher education
and their implications for equity of access**

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Declaration of Authorship

The author hereby declares that she compiled this thesis independently , using only the listed resources and literature , and the thesis has not been used to obtain a different or the same degree.

Prague, March22, 2016

Signature

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Daiwei Zou

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Abstract

From the resumption of university entrance examination in 1977 to 1997, china's higher education has remained free of charge for 20 years. But in 1997, china changed its policy of higher education; students are required to pay for their university education. Since then, the tuition fee for university has undergone a rapid increase. By the year 2013, the tuition fee has increased up to 27 times that of 1997. The increase in university tuition has caused much concern from the public, and many people complained that it not fair for students from rural areas and people with low income.

This thesis studies the educational inequality caused by the increase in university tuition and its impact on china's social and economic development. The author applies multiple case studies with the help of official database, the affordability of urban and rural residents to the higher education tuition, university enrollment plan, the financial aid system and government Appropriation over the time period of 2011—2015. The author found that the increased tuition has become a huge economic burden for students from low-income urban families, and thus result in the inequity of access opportunity for those students. It is also found that the disequilibrium enrollment plan among areas caused the inequity of access opportunity.

Key words: Chinese higher education, tuition and fees , educational equity

Abstrakt

Od znovuzavedení systému přijímacích zkoušek v roce 1977 bylo vyšší vzdělání bezplatné po dobu dvaceti let. Nicméně v roce 1997 Čína změnila svou dosavadní politiku a univerzitní vzdělání opět zpoplatnila, což postupem času vedlo k výraznému nárůstu jeho ceny. V roce 2013 tak bakalářský titul stál až 27 krát více než v roce 1997, a to začalo vyvolávat mezi veřejností obavy, že se vzdělání stává nedosažitelným pro lidi z chudých provincií a s nízkými příjmy. Tato práce zkoumá nerovnosti ve vzdělání způsobené právě nárůstem poplatků za studium a jeho dopad na sociální a ekonomický rozvoj Číny. Autorka využívá množství případových studií a široké škály materiálů z volně dostupných databází včetně výhledů počtu přijímaných studentů, studií o dostupnosti vysokoškolského vzdělání pro studenty z venkovských a městských oblastí a studií systému finanční podpory a vládních výdajů na vysoké školství v období 2011-2015. Autorka shledává, že nesoulad v plánech předpokládaného počtu přijímaných studentů mezi jednotlivými oblastmi a zvýšené školné se stává velkým problémem a ekonomickou zátěží pro nízkopříjmové domácnosti což vede k nespravedlnosti v přístupu ke vzdělání.

Klíčová slova: Čínské vysoké školství, školné a poplatky, spravedlivost ve vzdělávání

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List of abbreviations

HE	Higher education
HEI	Higher education institution (either university or non-university education provider)
PRC	People's Republic of China
YZU	Yangzhou University
GUFE	Guizhou University of Finance and Economics
XJTU	Xi'an Jiaotong University
Gaokao	National College Entrance Examination
GNP	Gross National Product
NPC	National People's Congress
CPPCC	National Committee of the Chinese People's Political Consultative Conference
NDRC	National development and reform commission
NBS	National Bureau of Statistics of the People's Republic of China

Master Thesis Proposal



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Proposed Topic:

Tuition fees in Chinese public higher education and their implications for equity of access

Topic Characteristics:

Students in China are being shouldered with more financial responsibility for their higher education .(Haiying Dong ,Xuehong Wan, 2012) In the past twenty years , the tuition fees in Chinese public higher universities increased rapidly . The increasing tuition has become a pressure above many ordinary income families and low income families. The increased tuition made the students from different household income levels in an unequal state when they make decisions whether access the higher education, which resulted in the inequity of access opportunity .

From 1950 to 1984, the China's higher education has been practiced free charging. Under the planned economy system, the higher education was a pure public welfare utility. The Chinese government administered the higher education recruitment and assigned the graduates . Also the tuition fees of higher education borne by the state. Since 1989, the China's higher education institutions established the "dual-track system" which started charge fees to all of the students .The training fees of government-supported students are paid by the state, but the students had to paid the miscellaneous fees .The commoner paid the tuition and fees by themselves. Since 1997, every student must pay tuition fees to attend their higher education . The standard of higher education tuition fees was assigned by the central government. In reality ,the higher institution usually adjust the tuition properly based on the tuition standard . The implementation of the standard of tuition fees and accommodation fees must be approved by the provincial level government. And the standard of the charging must approved by the commodity price departments.

In 1999, the government carried out an enrolment expansion policy. The public funding for the higher education was not enough for all of the institutions, while the operation of the higher education institutions had to depend on loans and tuitions.

The current higher education tuition fee varies according to institution, program and location .According to guidelines from the Minister of Education ,tuition should reflect the per student operational costs of the institution , the appropriation from the government , local economic development and household income .

Within a centralized education system, the Ministry of education also carried out diversified higher education financial aid system. Financial aid to students include 4 parts, namely students loans, Scholarships, Work-study programs and Tuition waivers.

The tuition system relieved the pressure on the higher education funding shortage since the implementation of enrolment expansion policy, and it also promote the higher education admission. However, the increasing tuition has become a pressure above many ordinary income families and low income families. Further more , it caused many poor student gave up to attend the universities which means the inequity of access opportunity.

Objectives

In my thesis I would like to analyze and explain two problems in Chinese public higher

education tuition system. The first one is that the higher education tuition fees has rapid growth since the reform of institution charge in higher education in 1997, and the other one is about their implications for equity of access opportunity.

The main contribution of this paper will be providing an evidence of Chinese higher education tuition system in similar researches. In the past twenty years, the Chinese higher education tuition reached to 805USD per student in 2014, which is about 6 times more than in 1994.

Research questions

1. How does the system of tuition fee collection function in Chinese higher education?
2. Why and by how much did the tuition fees rise within the system of Chinese higher education?
3. How does the system of tuition fee collection affect the equity of access to higher education in China?
4. Is there a more reasonable system of tuition charge applicable to the Chinese higher education system?

Theoretical concept

a. Theory of human capital

Adam Smith in *The wealth of Nations*(1976)formulated the basis of what was later to become the science of human capital (Leroy Almendarez,2011). Human capital theory emphasizes how education increase the productivity and efficiency of workers by increasing the level of cognitive stock of economically productive human capability, which is a product of innate abilities and investment in human beings . The provision of formal education is seen as an investment in human capital , which opponents of the theory have considered as equally or even more worthwhile than that of physical capital(Woodhall,1997).From the perspective of the investment subject of higher education , the state ,enterprise and individual are beneficiaries, but individuals are the most directly beneficiaries. State and enterprise are indirect beneficiaries. In China, the higher education should implement individual cost sharing, charge the tuition from the higher education receiver, and the state ,enterprise and individual should undertake appropriate proportion. But actually how much should individual undertake is an issue take account by the academics, we still have no unified standard.

b. Cost sharing

The concept of cost sharing in higher education is based on the idea that the costs of higher education should be shared among those who benefit from education (Johnstone, 1986). The government give the compulsory education stage full investment because its goal focus on providing social service, it will produce more social benefits .However , the higher education is not compulsory for every one , it takes more personal benefits .Taken into account the both private and public benefits of education, its seems reasonable that the individual students bears at least a part of the costs of education (Astrid Schwarzenberger & Vibeke Opheim,2009).

c. Equality of educational opportunity

James Coleman mentioned that the equality of opportunity meant several things: 1. Providing a free education up to a given level which constituted the principal entry point to the labor force. 2. Providing a common curriculum for all children , regardless of background . 3. Partly by design and partly because of low population density, providing that children from diverse backgrounds attend the same school . 4. Providing equality within a given locality , since local taxes provided the source of support for schools(Coleman,1986) . The concept of equality of educational opportunity derives from people's pursuit of equity . As the <<The Universal Declaration of Human Rights>> in 1948 declared by the United Nations, "Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages." It meant that ensure everyone has the right to education is the important part consists of the social justice . The principle of equal education is to provide educational service to all of the population , while the inequality of educational opportunity made the expansion of unequal distribution of social income and the most vulnerable groups getting poorer and poorer . Thus the higher education should be treat as public affairs that to adjust the gap between the richer and poorer, and take account of the family's ability to ensure the

equality of educational opportunity to everyone.

Methodology

I will carry out the “desk research”, i.e. collection and analysis of secondary data related to the studied issues. First of all, Chinese legislative documents, existing research studies, statistical data (for example, National Bureau of Statistics of the People’s Republic of China, China Education statistics) and multiple case studies (Yin, 1994) of the selected higher education institutions -- Central University of Finance and economics¹, Xi’an JiaoTong University² and Yangzhou University³, including websites analysis.

Outline

Abstract

1. Introduction and research problem description
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 3. Theoretical background and the review of world literature
 4. Methodology
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 - a. Context
 - b. Overview of the whole tuition system
 - c. Case study of selected higher education institutions
 6. Synthesis of findings
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Signatures

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Student

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Supervisor

1. Introduction and research topic

1.1 Introduction

The policy of higher education(HE) tuition is an important part of educational financial policy and will have great impact on the welfare of students and their families. With the introduction of new policy of university tuition in 1989, the fairness and justice in China's higher education has been brought into public concern. From 1950 to 1984, Higher education in China was free of charge . In 1989, a few Chinese universities began to experiment with policies that required students to pay few tuition. Since then, the higher education tuition has maintained a rapid growth trend. Under the background of enrollment expansion in higher education, the tuition has been increasing annually and it takes a large proportion of household income and become a financial burden for many families, especially for families in rural areas. For the twenty years from 1992 to 2013, the tuition payment has increased more than twenty times. The rapid growth of the tuition has a great negative impact on the fairness and equality in education. The increasing tuition may have crucial negative impacts on students who comes from low income families. According to a research , the proportion of rural students in the university population is remarkably decreasing . In the 1980s,the proportion was about 30%. By 2004 it had declined to 19.2%, this rate is surprisingly low because the rural population accounted for 58.2% of China's total population (Wu,2010).

Trend of the Higher education tuition

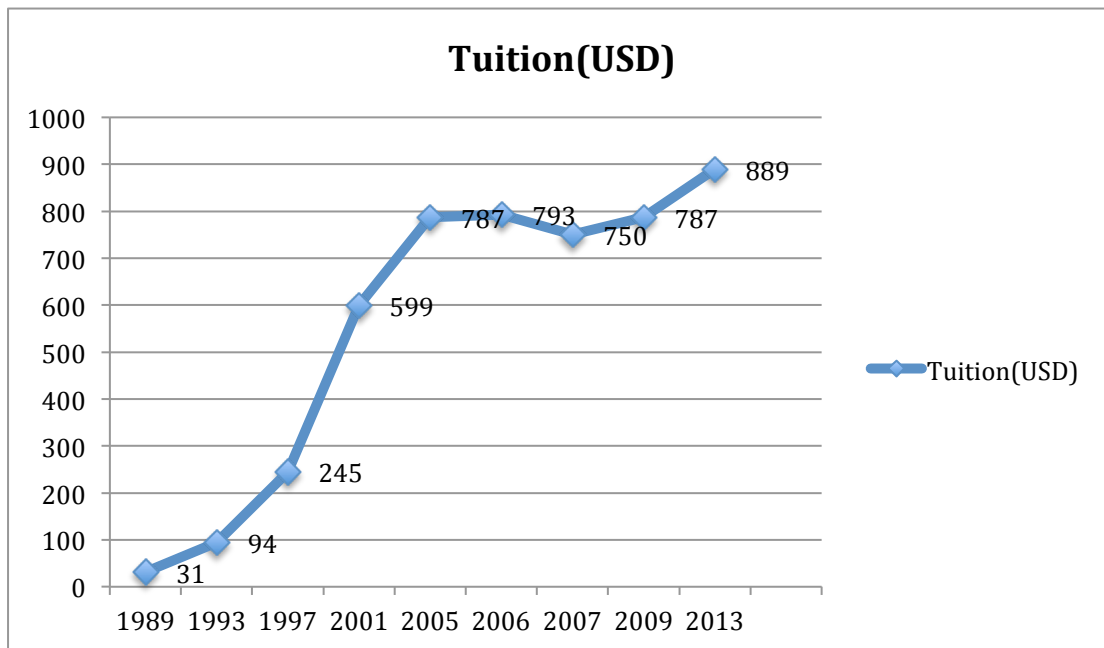


Figure 1.1: Trend of the Higher education tuition for each academic year, 1989-2013.

Source of data: China Educational Finance Statistical Yearbook 1989-2013.

Education is the foundation for the social and economic development of a country. Fairness and equality in education reflects social and economic equality. China is still a developing country. Compared to the huge population, the higher education resources is too much limited. Under such circumstances, equal opportunity in access to higher education is of much concern for all Chinese people. This issue will affect stability in social development, sustainable economic growth and the welfare of the people .

China is a large country with more 30 provinces, and the economic development of these provinces is quite unbalanced. Imbalanced economic development requires different educational policy. But in china, this difference has not been taken into consideration.

-
1. The tuition does not consider the regional differences, which is not fair for students coming from underdeveloped regions .
 2. Uneven distribution of educational resources. According to the official source, china has about 2000 universities and colleges by the end of 2015, but most of them located in big cities and rich regions. This uneven distribution make local students enjoy prestige over those from underdeveloped regions.
 3. The different chance for admission into universities and colleges between local and nonlocal student has also caused much inequality .

This thesis is mainly to parse the connotation of education fairness from the point of view of scarcity in higher education , and analyze the impact of the present rising tuition on the realization of education equity. Based on the data collected from authorized resources and previous research made on such topic, i discuss problems caused by the change of policy in tuition charge with respect to equal opportunity in access to higher education .

The structure of this study is as following . The first Chapter is this chapter, which is introduction , to introduce the skeleton of the whole study and motivation . The second Chapter is the Research goal and research questions. It described the goal of this research and listed several research questions which this thesis will work on. Chapter three is to describe methodology used by this thesis, which is based on the desk research and case study.

The forth Chapter is the summary of literature review of similar researches , from which inspired me to obtained motivation for this study. Meanwhile, literature

mentioned in this Chapter also provided theoretical support on this subject .

The fifth Chapter is the analysis of Chinese higher education tuition system and Case study , providing the China's HE tuition system and compared several indicators in three public higher education institutions (HEIs) . From the Case study , we will know the tuition increasing circumstance and its implications for equity of access.

Chapter six is the discussion of results from the Case study in previous chapter, to discuss our expectation .

Chapter seven is the final conclusions and discuss further possibility of research .

1.2 Terminology

As a first part of the thesis, it is necessary to define several terms used in the text in order to make it more comprehensible and comparable with other publications. In this thesis, the author uses two terms which are related to the main topic . These terms are educational equity and university tuition fees. In this thesis, the author will focus on the topic of higher education equity through the perspective of the increasing tuition fees and its implications.

Educational equity

The pursuit of education equality is universal to all human societies because education fairness is the foundation of social justice. In China, education equality is relatively a new concept. The issue came to people's attention around 2000 because of the large-scale population flow into regions away from their hometown. At the same time, the implementation of the expanding tertiary education policy dramatically caused the issue of poor students, the concept of educational equity appeared at that

time. With the gradual development of society , the research of education fair changed in perspectives and field of study , but the concept has no uniform definition within the Chinese academic area (Yang,2007).

Educational equity is one aspect of social justice. From the point of stage right now, education equity refers to each social member's can get justice and equal treatment when they accept public education resources. Educational equity includes Equality of educational opportunity, equality of educational process and equality of educational quality(Yang,2006) . According to the universal declaration of Human Rights adopted and proclaimed by the general assembly of the United Nations in 1948, the article 26 proclaimed that the right to education is the basic Human Rights .“Everyone one has the right to education . Education should be free, at least in the elementary and fundamental stages .” The right should regardless of race, color, gender, language , religion and so on . This reflects the educational equity . While in the reality society , educational equity is just a dream for people because the inequality of social status and economic status exist . Due to the limitation and scarcity of education resources , it is no possible to reach totally educational equity in any period. Thus the objective social conditions and the difference of educators determines that the equity could be only “relative equity” .

A famous Chinese scholars Dongping Yang thinks that the educational equity includes two category, the first category refers to External fair, related to the social system; the other one refers to internal fairness, it's the design of the internal education system, such as the National College Entrance Examination

system(Gaokao). Nowadays, educational equity refers to every social member should be treated equally in front of the education opportunities , in other words, it is Equality of educational opportunity(Liu,2002).

In my thesis , educational equity is a value that refers to three aspects , namely Equality of educational opportunity , equality of educational process and equality of educational quality. Equality of educational opportunity means each students could have equal opportunity to access HE , each students could free choose the HEIs which they want to study in without the consideration of their family background and contribute to an appropriate tuition . Equality of educational process refers to the right to choose the major for all the students . Equality of educational quality means each HEIs could provide high quality education and increase the enrollment plan of prestigious HEIs .

University tuition fees

University tuition fees are fees charged for instruction during higher education . University tuition fees are charged by HEIs to assist with funding of staff and faculty, course offerings , lab equipment ,library and so on to provide students a comfortable studying environment .

According to the definition of tuition in the Oxford advanced learner's dictionary, tuition refers to the money you pay to be taught, especially in a college or university (Oxford Dictionary).

Kangping Wang thinks that the university tuition means the basic learning costs for the students and the families requires to pay to the school . The tuition mainly means

used to compensate for higher education costs of the institutions, the part of the expenditure should be paid by students and their families based on a reasonable allocation proportion(Wang,2001). While the university charge refers to the school charges costs relate to the instruction and teaching for students and their families , it includes tuition ,textbooks, training fees, accommodation and so on.

In my thesis , the university tuition fees means the fees charged for instruction during higher education , not including accommodation fees and fees of textbooks and other fees.

2 Research goal and research questions

Since the first charge of tuition fee for higher education in 1989, the growth of China's higher education tuition has kept increasing. The annual growth rate of tuition remain at around 25% in the year from 1996 -- 2000, while the growth rate achieved 44% during 1998 to 1999 (Liu,Yu,Li[2006]) . In 2007, the NDRC specifies "except other special rules, the criteria for higher education tuition level and accommodation level in various schools shall not be higher than that of the autumn semester of 2006", the tuition level will remain stable in the next five years(Li,2004) . In 2005 February , China's deputy minister of education Baoqing Zhang mentioned that according to of rough survey of the current daily operation cost , the training costs for science and engineering students is about ¥15000 (\$2310.3) per year , about ¥12000 (\$1848) to ¥13000 (\$2002) for the liberal arts students per year, and about¥40000(\$6160.8) for a medical students per year(Fu,Long,Chen&Wang[2006]). The Act of higher education fee management stipulates the proportion of tuition for students shall not exceed 25% of the Training fee for per person . Therefore the tuition should not exceed ¥3750 (\$577.6), ¥3250(\$500.6) and ¥10000(\$1540.2) for the science and engineering students, the liberal arts students and the medical students respectively . But in 2011, the proportion of tuition for students rose up to 30.4%, which had already exceeded the sum speculated. (China Educational Finance Statistical Yearbooks 2011). Most of the scholars points out that the university tuition fees exceed the affordability of the people concerned(Bi,2009).

The principal research goal of this thesis is to bring the issue into the focus of attention from both the public and the administrators. I also try to find out the main problems of current higher education tuition policy and the impact of it on the educational development. Finally, I will propose some strategies to improve the Chinese higher education tuition policy, hoping it can throw light on the china's educational reform.

This thesis uses multiple case studies to investigate the problems in Chinese higher education with respect to the tuition payment in Chinese universities. It attempts to answer questions like:

1. How does the system of tuition fee collection function in Chinese higher education?
2. Why and by how much did the tuition fees rise within the system of Chinese higher education?
3. How does the system of tuition fee collection affect the equity of access to higher education in China? How much cost ratio is reasonable for the students and families to share?
4. Is there a more reasonable system of tuition charge applicable to the Chinese higher education system?

Chapter 5 of my thesis reviews the history of Chinese higher education tuition system and analyzes the cause of the educational inequality in China .

3 Methodology

This is an empirical study aim to reveal the tuition fees circumstance in Chinese public HE and analyze their implications for equity of access.

To get the results, our study will carry out the “desk research” and do multiple case studies to analysis the relevant indicators in three selected HEIs . Because of the limitation of the time and data availability, the data used for this study is only the tuition data of undergraduate students. The current tuition fee varies according to institutions and program in both master’s and Bachelor’s professions. According to the current HEIs categories, the HEIs including HEIs affiliated by the central ministry, regular public HEIs , research institutes , Higher Vocational Colleges ,private colleges and adult HEIs . While in this thesis, the opportunity of access in HEIs means the opportunity in China’s public HEIs , including HEIs affiliated by the central ministry and regular public HEIs, not refers to Higher Vocational Colleges ,private colleges and adult HEIs. Because the tuition in these HEIs are much higher it in public HEIs. In this thesis, I selected three public HEIs which are Guizhou University of Finance and Economics, Xi’an JiaoTong University and Yangzhou University. I selected these three public HEIs based on the following reasons: Firstly, the three public HEIs are all recruiting students from all parts of China. Secondly , The Xi’an Jiaotong University belong to the “Project 985” and “Project 211”, it is affiliated directly by the Ministry of Education ,it can be representative of key universities . While Yangzhou University and Guizhou University of finance and economics are both provincial university

which can be representative of local colleges and universities. Thirdly , Guizhou University of finance and economics is a financial university , Yangzhou University and Xi'an Jiaotong University are comprehensive university , they can represent the similarities and differences between two types of colleges and universities in the admission opportunity. Fourthly , the location of Xi'an Jiaotong University is Shaanxi Province , Which belong to West region of China. Guizhou University of finance and economics located in southwest of China , which is an undeveloped area . Yangzhou University located in the economic developed city –Eastern region of China . The tuition standard of three selected HEIs can reflect the local people's economic level to some extent.

I will mainly analysis the secondary data which collected from governmental document, such as the Chinese legislative documents , existing research studies ,books and statistical data of National Bureau of Statistics of the People's Republic of China , China Educational Finance Statistical Yearbook , China statistical yearbook and HEIs official websites. I will collect the statistical data about the research issues from the HEIs websites and analysis them .

As for the analysis process, there are five indicators used in this research which are tuition , enrollment plan , Financial aid system , Government Appropriation and The ratio of China's public appropriation on education to the Gross National Product . I will collect and analysis the tuition trend in three HEIs in last 5 yeas . Since the higher educational resources and education opportunity allocation unbalanced , and the amount of government appropriation based on the students numbers to some extent ,

therefore the data about enrollment plan in three HEIs could be also helpful to analyses the inequity of education access opportunity .

In my study , no primary data on students' background , economic situation , parents' educational level, family population , students numbers from urban and rural areas, place of birth, academic performance ,gender, attitudes at three universities are collected , so it may limits the study to some extent. I tried to ask the three universities' Statistical office director whether they could offer me the basic data about students background information , the regional composition of the student body of their university, the enrollment in each department in the recent 5 years , and the gender ratio of the enrollment . But unfortunately, all of them refused to offer me the data I need. Therefore , This paper uses official, publicly available statistical data to analyze what has happened to tuition and fees in Chinese higher education in recent years. Thus all the data we collected are arranged from 2010 to 2015.

4 Theoretical background and literature review

4.1 Theoretical background

The practice of charge in higher education institutions in western countries started earlier than it is in China. So the study of higher education tuition in China was done with reference to that is practiced in foreign universities.

After the WWII, there were many scholars studied the university charge from different perspectives. Since then, the theory were developing and became mature. In general, there are three theories about the universities charge. They are cost sharing, theory of human capital and equality of educational opportunity respectively.

Cost sharing

Cost sharing refers to the split of higher education costs between four groups (Johnstone,2004):

- The government or taxpayers subsidies higher education through tax revenues.
- Parents and family may bear costs of higher education and students' living costs . These costs may covers through pass savings, income , or borrowing .
- Students may bear part of the tuition and living costs through their part-time jobs and non-repayable public financial assistance .
- Individual donors may contribute to institutional budgets or financially assist some students through grants.

There has been a shift in the burden of higher education costs from being borne predominately by governments to being shared with parents and students(Santiago et al,2008). The theory of cost sharing has become the key theoretical basis for each

countries when they setting higher education tuition.

Taken into account the both private and public benefits of education, its seems reasonable that the individual students bears at least a part of the costs of education (Schwarzenberger & Opheim,2009) .

It's rational for students and families to share the costs of HE: i) Public money available for HE is lacking in light of enrollment growth and competing priorities for public funds ;ii) Students who benefit should contribute to the costs of HE; iii)public savings from individual contributions can be channeled to improve equity of access ;iv)Tuition introduce the virtues of price as a market mechanism(Santiago et al,2008).

The government give the compulsory education stage full investment because its goal focus on providing social service, it will produce more social benefits . However , the higher education is not compulsory for everyone , it offers more personal benefits . These are reflected by greater labour force participation , higher lifetime learning, lower possibility of being unemployed, good lifestyle and better health .

Before the 1980s, all the costs of HE formerly have been covered mainly by the government. With the continuous economic development and improvement of people's living standards , the residents' demand for higher education is increasing. With the expansion of the college enrollment , the size of the universities is also developing rapidly, but the ability of government to support the higher education is declining ,finally resulting the fees lacking of majority universities and colleges. In

such cases , HEIs have begun to raise funds through multi channels , cost-sharing and cost recovery system has become the direction of efforts(Zeng,2000).

In the 1990s, cost sharing has been introduced into China and widely used in China's HEIs . It has stimulated the reform of Chinese higher educational financial policy and mitigated the financial burden of higher education caused by the expansion of students .

The increased cost sharing is probably inevitable. Thus, the cost sharing entered into the public policy of several countries according to different situations of social political economic system.

Based on Johnstone, Cost sharing can be taken in a number of forms between the governments and the student (adapted from Johnstone, 2006) :

- The introduction of tuition fees where those did not exist;
- A rise in the level of tuition fees where those already existed;
- The creation of a special tuition-paying track for a proportion of students;
- The imposition of “user charges”(e.g. registration fees) for recovering the expense of some previously heavily subsidized institutional services(such as meals and accommodation);
- The reduction of students grants and scholarships;
- An increase in the effective cost recovery on students loans(e.g. through a reduction of the subsidies on student loans);
- The limitation of capacity in the highly subsidized public sector together with the official encouragement of a tuition –dependent private tertiary education sector.

Theory of human capital

Human capital is defined in the Oxford English Dictionary as “the skills the labor force possesses and is regarded as a resource or asset .”This definition is broad ,it includes school quality , training , individual skills towards work, etc.

In 1964, Becker published his book <Human Capital>, he thinks human capital is directly useful in the production process. Human capital increases a worker’s productivity in all tasks , though possibly differentially in different tasks , organizations , and situations . The term Human capital was proposed by Schultz in 1982, later he became the founding father of the theory . Adam Smith in The wealth of Nations (1776)formulated the basis of what was later to become the science of human capital(Leroy Almendarez,2011). The future of any country and any institution lies in the talents . Especially in the situation of talents shortage appears in developed and developing countries , investing in human capital is very important.

It is difficult to separate human capital with education . Human capital theory emphasizes how education increase the productivity and efficiency of workers by increasing the level of cognitive stock of economically productive human capability, which is a product of innate abilities and investment in human beings .

The provision of formal education is seen as an investment in human capital , which opponents of the theory have considered as equally or even more worthwhile than that of physical capital(Woodhall,1997).From the perspective of the investment subject of higher education , the state ,enterprise and individual are beneficiaries, but individuals are the most directly beneficiaries. State and enterprise are indirect beneficiaries. In

China, the higher education should implement individual cost sharing, charge the tuition from the higher education receiver, and the state ,enterprise and individual should undertake appropriate proportion. But actually how much should individual undertake is an issue take account by the academics, we still have no unified standard.

Equality of educational opportunity

James Coleman mentioned that the equality of opportunity meant several things:

1. Providing a free education up to a given level which constituted the principal entry point to the labor force.
2. Providing a common curriculum for all children , regardless of background .
3. Partly by design and partly because of low population density, providing that children from diverse backgrounds attend the same school .
4. Providing equality within a given locality , since local taxes provided the source of support for schools(Coleman,1986).

The concept of equality of educational opportunity derives from people's pursuit of equity . As the <<The Universal Declaration of Human Rights>> in 1948 declared by the United Nations, "Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages." It meant that ensure everyone has the right to education is the important part consists of the social justice . The principle of equal education is to provide educational service to all of the population , while the inequality of educational opportunity made the expansion of unequal distribution of social income and the most vulnerable groups getting poorer and poorer . Thus the higher education should be treat as public affairs that to adjust the gap between the richer and poorer,

and take account of the family's ability to ensure the equality of educational opportunity to everyone.

The relationship between cost sharing , human capital and equality of educational opportunity is quite complex .A core meaning of equality of educational opportunity is that the higher education should be equitably accessible to every students .It should be acceptable regardless of socio-economic class, race, religion , ethnicity of one's parents . According to this construction , cost sharing can be appropriate equitable to those low income family background students who need-based grants or student loans. Human capital theory stresses that education increase the productivity and efficiency of workers by increasing their personal productive ability, which means the importance that the equality of educational opportunity is to the investment in human beings . The investment of higher education is definitely benefits individual careers . More or less the equality of educational opportunity reaches, more students would be covered by higher education institutions, and the human capital would be more productive .

4.2 Literature review

Johnstone raises the famous cost sharing theory(Johnstone,1986) . Namely the underlying costs of higher education should be borne by government or taxpayer, parents, students and philanthropists . The theory of cost sharing provides the rational of tuition charging in higher education institutions.

There are several arguments in the literature that justify the tuition in higher education . Shanmai Wang analysis the present financial aid system in China ,

concludes that the relatively perfect financial aid system could help for the education fairness (Wang,2007).

To analysis the tuition property and the basis of tuition fee standards , Shanmai Wang applied the American economist Paul A.Samuelso's theory of public goods , he thinks the higher education service at least a quasi-public good, it is not a private good with excludable and rivalrous property , also its not pure public good with non-excludable and non-rivalrous property , it has both part property of public good and private good, so it is quasi-public good.

Based on review of research on “The theoretical basis of higher education fees”, He Baoyue(He,2002) analyzed the theoretical basis about China's higher education tuition . He discussed the tuition from the perspective of economy ,and thinks it is rational for the HEIs to implement the tuition charge. The special value of education product makes the tuition charge system carried out by the higher education in line with the equity principle of the market economy . In addition , the property of high cost and specialty , multifunctional of higher education product make its rational to share the cost of HE together by the state, enterprises and individuals.

There are some researches investigating the criteria for higher education tuition in perspective of costs of training fee for per person. Based on review of research on “Thinking about the facts which impacting on tuition” ,Liu Shaoxue(Liu,2001)elaborated it is difficulty to decide the expenditure per students , temporary they can according the university daily operation funds instead of the expenditure per students, but its not reasonable ,there are much university staffs

makes the education expenditure increased , part of expenditure through cost sharing pass on to the students . Meanwhile the social security system is not completed, the pension , health insurance and housing fees has been listed in the university daily operation funds , due to the high expenditure of the university daily operation fees, caused the low level of university facilities and equipment , much burden on students and no improvement on education condition . Based on review of research on “Analysis of the cost reason of the increase of the fee of higher education”, Pi Jianghong (Pi, 2003) pointed out the improper design of the higher education costs is the main reason that caused the increasing tuition in China’s public HE. The root reason of the increasing tuition is the improper increased university education costs . In China, Unreasonable university education cost sharing is the main reason of tuition increased.

Some researchers investigated the higher education tuition and education equity and pointed that the university tuition has both positive and negative effects on the reality of educational equity.

In his paper, “*The positive impact of college tuitions on educational fairness*” , Zhang Yan(Zhang, 2008) concerned about the higher education charge enlarges the value of educational fairness and promote the education fairness. Based on the research on university fee and the fairness of higher education”, Qingxiu Guo(Guo,2007)found that more and more families could not afford increasing fees since China implemented college charging system in 1997. The article points out the negative

impacts of tuition on education fairness, it effects the entrance opportunity for the low income background family and further effects their major selection orientation.

Jiafu Cheng, Weihong Zhang and Siqi Chen (Cheng and Chen, 2014) analyzed the education equity from a historical perspective . In their article “Equal access to key universities for peasant children in China : a historical perspective”, they think the key issue in China’s higher education is the entrance opportunity unfairness for peasant children . Even though the policy was supported more the working-class and peasant children access to universities in the early years of new China, however, during the years of reform , working-class and peasant children gradually began to lose their access to HE under the exam-oriented education policy . And since the middle of the 1990s, the peasant children’s status has taken a turn under the policy of self-paying policy . Under the scarce situation of higher education source , the students with rich family background have taken more entrance opportunity to higher education than the peasant children . Its necessary for the state to reform social and educational policies to remedy the disadvantages situation of peasant children .

Li Wenli and Min Weifang studied the private educational expenditures and willingness to pay for education , based on a survey of students in public university, vocational college and private higher education institutions in Beijing , they found the type of institutions ,main study specialization and the family income are factors which effect the individual education expenditure, family-paying is the main way for students’ education ; The higher tuition , the lower paying willingness . People who

has lower social status have high possibility to give up the education because of the high tuition(Li and Min,2002) .

They conclude that the increasing tuition bring negative impacts to poor students' entrance opportunity and willingness to higher education.

Based on review of questionnaire research on 7 high schools in two provinces in China in 2002, Xu Guoxing (Xu,2004)came to a conclusion that most of the high school students think the university tuition are too high; the high tuition already has negative effects on the low-income family .

Most of previous literatures did their investigations by focusing on the compared explanation of high tuition and the poor families' low affordanceability , lack of effective strategies to solve this issue .

In China, most of literatures of tuition charge in higher education and education equity analysis focus on theoretical perspective , while less studies on empirical study . According to the literature, most of the scholars admit that cost sharing is the grounded theory of tuition charging and its reasonable to charge tuition from families and students . Every coins has two sides. The university tuition has positive and negative effects on educational equity . I support the idea that tuition improve the educational equity to some extent , while it also brings negative impacts to poor students' entrance opportunity. And the tuition policy really matters the educational equity . In the existing empirical studies , the scholars focus on the effect of tuition charges to students and families , while less study on the measurement of HE cost and the functional analysis of cost. But there is no study on the question "how much cost

ratio is reasonable for the students and families to share?”.

However, from my point of view, tuition charge in higher education and education equity are quite complicated conceptions .Its necessary to study the issue on empirical way and mixture it with theoretical knowledge.

5 Analysis of Chinese higher education tuition system

It's necessary to charge tuition in higher education institutions due to its not compulsory education . Actually , the higher education was pure public good under the planning economy . The government issued the education act and invest fund to education , all the cost of higher education covered by the state ,all of the education resources management by the government , no tuition for students and students got subsidize from the government ,the talents would be distributed in different position after their graduation by the government . While under the market economy , industrialization of education appears gradually . Since then the tuition be borne by individual came out to the HEIs. According to a study by the Chinese Professor Shanmai Wang , the growth rate of the higher education tuition was 27.65% from 1993 to 1997 . And in 1999 , the growth rate of the tuition was 40.3% in public universities compared to 1998. The tuition has been increasing since then .

5.1 Context

China's higher education has undergone a tough and extraordinary experience. After the foundation of People's Republic of China in 1949 , the economy system has been transformed as well as the charge system in HE area transformed . In general , it has experienced three stage of development .

a. Free of charge stage

In the first 30 years after the founding of the PRC, the Chinese government carried out the planned economy system . During this period , economic targets and various aspects of higher education were all set by the government .

From 1949 to 1988, the higher education implemented the enrollment policy of free charge , distribute job after graduation and so on . Meanwhile , each students can get subsidize from the government . The no charge policy took great positive function on China's development of education affairs and construction of state .

From 1966 until 1976, the cultural revolution took place in China . The movement was a disaster for China's higher education. The cultural revolution brought China's education system to a virtual halt for some time .It have widely damaged the quality of education , especially the upper end of education system . The schools and universities were closed in the early months of the movement . All colleges and universities were closed until 1970 ,and most universities did not reopen until 1972 (Andreas ,2009) . The Gaokao were cancelled after 1966, to be replaced by a system of students recommended by the factories, villages and military units . So the aim of the education was for the political service.

While the HE was gradually fast after the cultural revolution , more and more people were desire to access HE, it makes the state finance hard to support the HE, education funding gap was more and more large. The free charge policy in HE can not satisfy the situation ,even effect the quality of HE at that time .

b. Double-track stage (1985-1996)

From the mid 1980s, the higher education charge policy gradually got reformed. In 1985 , the higher education system start to reform based on a document issued by the central government . It provisions all the higher education institutions have right to recruits commissioned students and self-supported students that outside of the recruit

plan . For the commissioned students , their delegate unit should pay the training cost under the terms of the contract. Meanwhile the self-support students should pay a portion of tuition .

The strategy means that China's education policy gradually give up the free charge higher education policy . In 1989 , a government documents declares that the students recruited by the national plan have to pay the tuition and accommodation. In the beginning of 1989, a few Chinese universities began to require students to pay a portion of some tuition and fees ,normally the tuition was ¥100 (\$15.4)—¥300 (\$46.2)per student. In 1990, the ministry of education issued the< provisional rules of tuition for self-supported students enrolled in colleges and universities>, since then the Chinese government accepted the HE cost-sharing theory which was first proposed by United States economists Johnstone in the early 1970s. Policymakers in China agree that cost sharing is conducive to educational equity (Dong and Wan,2012) . The decision make the Double-track system established in Chinese higher education policy . In 1984, China decided to recruits a number of commissioned and self- supported students to HE that outside of the recruit plan . While the students inside the recruit plan don't have to pay the tuition . This is the Double-track system in China's HE(Li,2008). It is the starting point that tuition charge in Chinese higher education. It was the turning point from a state-covers-all system to a cost-sharing system .It shows the reform in higher education area that all the higher education cost borne by the state change to be borne by both individuals

and state based on the theory of cost sharing . Since then , free charge in HEIs is no longer . No matter you are rich or poor , you have to pay if you accept the HE .

c. Unified tuition stage

Since HE was commercialized in 1992, tuition charging actually created more opportunities for HE than ever. In the June of 1992, the state education commission and some relevant departments issued the notice of further improvement of common HEIs charge system , it shows that China has vast territory, the economic development is very unbalanced, the national unified standards of tuition in common universities and colleges already can not adapt to the new situation at that time.

Therefore they proposed that the university tuition standards set by the central government is not suitable, and the power should be given to the provincial education administrative departments and the tuition should be set in accordance with local conditions (Bi,2009). It means that the state no longer sets the concrete tuition level .

While the provincial education administrative departments have the right to set the upper limit for the level of tuition fees .Thus the tuition started to reform all over the country, and the proportion of tuition was increased rapidly .And from the 1993, with the consideration of education equity ,some higher education institutions start to adopt the unified plan to recruit students and give up the old enrollment measure . Meanwhile , all of the students who pass the college Entrance Examination can study in the university and have to pay the tuition individually .

By 1997 , all higher education institutions were charging students some form of fees for their higher education(Dong &Wan,2006;Zhong&Zhan,2003) .

In 1999, the government document proposed it should increase the proportion of the tuition in the training cost, and stipulates the proportion of tuition for students shall not exceed 25% of the Training fee for per person. Namely the tuition for the science and engineering students should not exceed ¥3750 (\$577.6), and the tuition for the liberal arts students should not exceed ¥3250(\$500.6), for the medical students it should not exceed ¥10000(\$1540.2). Meanwhile, the Ministry of education decided to improve the enrollment of the students, later all of the higher education institutions operated with the policy enrollment expansion. It leads to the transformation from elite higher education to mass higher education in China .In reality , there were 1083,600 students enrolled in the public HEIs in 1998, and there were 1596,800 students enrolled in the public HEIs in 1999. In 2002, the enrollment plan of the HE among all the HEIs were 3205,000 students . It was obviously the period of mass HE in China.

From 1996 , the tuition in higher education institutions was over 2000RMB(\$308)for the whole academic year, and tuition increased 30%-50% compare to that in1996. In 1999 , the tuition was 2769 RMB(\$426.6), increased 40.3% than last year and the tuition reached 5000RMB(\$770) in 2000(Li,2015).

In 2004, the NDRC established public price hearings of tuition. It refers to the formulating ,adjusting government pricing before the government's decision on the tuition , the price management department of government should be in line with the principles of fairness , openness and justice , fully listen to the views on all aspects of the representatives of public in the form of the official meeting . In 2006 , the state

council stipulated , in the next five years , the tuitions and accommodations in each higher education institutions mustn't rise higher than the standard price which released in autumn of 2006 . At this period of time , the tuition did not changed . But from 2013 , the tuition increased again . Following the guidelines from the central government , provincial governments set the tuition fee levels of all the HEIs located in the province(Minister of Education2002). Since the provincial HEIs has much right to set the tuition based on the local condition , most of the provinces published that rising standard of the tuition , most of the HEIs which increased the tuition are provincial universities, while the tuition of central ministry affiliated HEIs has not increased because of the sufficient government appropriation.

5.2 Higher education system in China

Every country has its own unique higher education system and its special ways to classify the HEIs. Along with the development of the social economic and people's diversity demands , HEIs have to change all the while . China's HE is provided by HEIs . They offer all levels of HE degree programmes .

The annual National College Entrance Exam (Gaokao) is the only criterion to decide whether a student can get into university in China. It was reintroduced in late 1977 and is conducted once a year. Gaokao is a prerequisite for entrance into almost all HEIs at the undergraduate level . It is taken by students in their last year of high school studies. Admission to HEIs depends on candidates' scores in the Entrance Examination. The exams last about 9 hours over a period of 2 days. The content of Gaokao includes Chinese literature, Mathematics, English language. Students could

choose one of two academic areas, Humanities (History, Geography and Political education) or Natural Sciences (Physics, Chemistry and Biology).

The Gaokao examination paper is not uniform across provinces in China. Each province set the independent paper for entrance examination and admit fractional line.

Under the Hukou restriction system, Gaokao candidates have to attend the Gaokao in the place of where they were born. After the Entrance Examination, candidates have to make a wish list of universities they want to go based on their Gaokao score, while they do not know the actual score at that time, just a guessing score. If students fail in their first attempt, some of them will make another attempt in the following year.

In this section, we will focus on the classification of HEIs and the student financial aid system in China.

Higher education institutions

HEIs form the highest level of China education. Chinese HE experienced a period of enormous development after the People's Republic of China was founded in 1949. In the early 1950s, following the Soviet model, the Chinese government took a series of measures to reform its HEIs, with the goal of "developing specialized institutes and strengthening comprehensive universities, focusing on the development of industry-oriented talents and teachers".

There are public and private HEIs in China. All of them come under the responsibility of the Ministry of Education or other central ministries, or Provincial governments. The classification of it divide into four types. They are Institutions providing postgraduate programs (including Regular HEIs and Research Institutes),

regular HEIs(including HEIs Offering Degree Programs, Higher Vocational Colleges and Other institutions), adult HEIs and other Non-government HEIs.

According to the division of affiliation or administrative authority , the Chinese higher education institution can be divided into Central ministries affiliated HEIs, HEIs affiliated by Ministry of Education, HEIs affiliated by Provincial government ; According to the recruitment of students numbers and the competent department , HEIs can be divided into national universities , regional colleges and universities, the local colleges and universities; According to the talents cultivation level or subject characteristics, the Chinese HEIs could be divided into universities , colleges and professional colleges(Chen,2004). Generally, regular HEIs mainly offer undergraduate and postgraduate education. The number of enrollment full-time students should be in more than 5000 people in college .The number of enrollment full-time students should be in more than 8000 people in universities, meanwhile graduate students (Master's degree) should not less than 5% of the total number of students.

The Chinese higher education consisting of comprehensive universities, normal universities(i.e. teacher education), poly-tech institutes, medical schools, agricultural and fishery institutes, art schools , language-training institutes, athletics institutes ,finance and economy institutes and law institutes and a few others . According to the official statistics in 2014, Table 5.1 shows that Chinese higher education system consisted of over 2,529 regular (academically oriented) colleges and universities ,295 adult higher education institutions ,and 799 non

academically-oriented private agencies. Among the regular HEIs, a major 1689 were affiliated with provincial or local governments , 113 were affiliated with national ministries and enjoyed more funding and prestige, and 727 were privately funded and run .

Numbers of China's HEIs in 2014

	No.of HEIs
Regular Higher Education	2529
By degrees offered	
---4-yr HEIs	1202
---2-to 3-yr HEIs	1327
By affiliation	
---Central ministries	113
Ministry of Education	73
Others central ministries	40
---Provincial	1689
---Private	727
Adult Higher Education	295

Private Agencies	799
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Table 5.1 : Numbers of China’s HEIs in 2014. Source: National Bureau of Statistics of China(2014), <http://data.stats.gov.cn/easyquery.htm?cn=C01>

At present , the China’s HEIs consisting of state and provincial universities ,private universities . They offer accredited three levels degree programmes, namely Bachelor’s ,Master’s and Doctoral .

Due to its HE was transformed to a strong higher education system. The Chinese government started to suggest the “Project 211” and “Project 985”. The aim of “Project 211” is to strengthen 100 key universities and key disciplines well and to develop their teaching quality , research , and management into a high level in the world. The Ministry of Education controls all HEIs’ enrollment plan , funding and evaluation .

In China, the enrollment planning system of HEIs constitutes an important part in the enrollment system. Under the present management system of HEIs enrollment plan system, the enrollment plan of central ministry affiliated HEIs decided by the Ministry of Education. The enrollment plan of provincial HEIs, which made by the central ministry department of education according to the graduates of high school student, cultivate ability of provincial HEIs and social economic demand to distribute the enrollment plan among provinces is authoritative and prescriptive. In recent years, the provincial HEIs have more autonomy over the enrollment plan decision. The Ordinary HEIs enrolment work rules 2006 mentions that the enrollment plan

arrangement by the provincial HEIs have to be audited by the provincial department of education and then submitted to the Ministry of Education one year before its execution. Then the draft of the enrollment plan would be made after the audit of the Ministry of Education with the NDRC. The draft of enrollment plan will be approved by the NPC and CPPCC, then the central ministry affiliated HEIs and provincial HEIs carry out and publish the enrollment plan. (The Ordinary HEIs enrolment work rules,2006)

As of 2013, “Project 211” covers 112 HEIs. The early objective of “Project 985” was to establish Peking University and Tsinghua University. Both universities improved teacher’s welfare rapidly and hired experts by paying higher salaries than peer universities, which shocked the HE field and caused complaints from other universities. Project 985 gradually added new HEIs to its list(Zhang,2011). The purpose of the “Project 985” is to establish world-class universities in the 21st century. Currently there are 39 universities included in Project 985, all of which are taken from those included in Project 211. The government made generous financial support on these prestigious universities. Investment from the government in these prestigious universities is much higher than that in other HEIs. The Annex 1 shows the government appropriation for Project 985 universities.

The student financial aid system in China was initiated in recent years. Grant schemes exclusively merit-based exist in China. The Financial aid to students includes five parts(see Table 5.2). They are Grants, Scholarships, Work-study, Tuition waivers and student loans respectively.

(1) Grants. The state grants are funded to students with poor economic families who have economic difficulties , the financial aid is ¥2000(\$307) per person per year. In general , the students who have economic difficulties have to fill an application form about the information of students' household economic background approved by the administrative office of their resident place to the university . And the university administrative department will decide the quota allocation according to the application form evaluation . The grants funded by both the central government and provincial government .

(2) Scholarship. It's for students with outstanding performance in their study scores and campus' events. It includes the state scholarship, the national encouragement scholarship, outstanding student scholarship, professional scholarship. The main funding funded by both the central government and provincial government, it established for all of the regular HEIs students in China. But now there are more and more social organizations or individuals set up kinds of scholarship.

Meanwhile, the requirement standard of state scholarships , quota, and the amount is determined by the Ministry of Education .The state scholarship is to motivate good performing students on study and the reward standard is ¥8000(\$1230) per person one year . The national encouragement scholarship is for outstanding students with poor economic family backgrounds , the reward of it is ¥5000(\$769) per person per year . The applicants for the national encouragement scholarship should not be the fresh students in the university , and should to abide by the constitution and laws, observe

the regulations and principles of the university , have good moral character and outstanding academic grades , and with economic difficulties .

(3) Work-study. Universities may provide poor-economic students kind of part-time job, so students could earn some daily expenses in order to reduce individual economic pressure.

(4) Tuition waivers . Only a limited number of needy students may get this kind of aid. Generally , the number of students who could treated with tuition waivers is decided by the university .

(5) Student loans. The first loan program began in 1986. It's the main way of funding in China . The student loans is for students of economic difficulty which provided by the state or the financial institutions. It is ¥6000(\$923) per person per year , but no more than 20% of the total enrollments. The applicants should older than 16 years old and really have economic difficulties to study in the university , should hard studying and also should have no activity of violating the law and discipline. The applicants have to fill the application form of the state loans , provide the student identity card , the introduction of individual condition of economic difficulties and the certification approved by the administrative department of students' residents place. The interest would be repaid by the financial subsidies during the students' study years, while it should be repaid by the students after his graduation . The students required to repay the principal and interest during 6 years after the graduation.

There are six national normal universities (i.e. teacher education)in China , which are affiliated to the Ministry of Education, have had their tuition fees waived since the fall semester of 2007. The enrollment plan of the free tuition programs are made by the Ministry of Education each year .The students who study in the specified free tuition programs do not pay tuition fees in these universities , while they are required to work as teachers in the K-12 education system after graduation .⁴

Types of Chinese student financial aid

Types of financial aid	Funding standard (Per person per year)	Number of students (Each year)
The state scholarship	¥8000(US\$1230)	50000
The national encouragement scholarship	¥5000(US\$ 769)	510000
Grants	¥2000(US\$307)	3400000
Student loans	¥6000(US\$ 923)	20% of the total enrollments
Work-study	>=¥8/hour(US\$ 1)	Depend on HEIs
Tuition waivers in Normal	Free tuition	12000 students in The Six

⁴ "K12", K stand for Kindergarten , "12" stand for the primary education and secondary education .

HEIs		national normal universities
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Table 5.2 :The student financial aid system in China . Source: National College funded information platform, <http://xszz.chsi.com.cn>.

5.3 Overview of the whole tuition system

The public higher institutions are fund by the state or local government . People in China are living in the market economy system , HE must have its value . Higher education can satisfy people’s demands . Under the present education system , the standard of tuition as made by the provincial education administrative departments. It is necessary to discuss the pricing system of China’s public university .

5.3.1 The tuition pricing mechanism

In this part i would like to analyze the tuition pricing mechanism of China’s public higher education. The tuition price of public higher education is dominated by the central government , each higher institutions carried out the principle of high tuitions . In the whole process of pricing , the main master is the central government , the local government and public higher institutions. The Figure 5.1 shows the process of tuition pricing in Chinese higher educational mechanism (Wu,2010). The NDRC and the ministry of education decide the tuition price according to their coordination , then they release relevant policy and publish tuition standard .

Public higher institutions have autonomy to some extent , but they must pricing the tuition at the proper level which policy stipulated . With the approval of the department of the university , the adjustment of the tuition standard should be

reported to the education department ,finance department and bureau of commodity price of its province . Then the tuition can be implemented with the approval of the provincial government(Higher Education Charge Management Act,1996).

The tuition pricing mechanism of China’s public HE

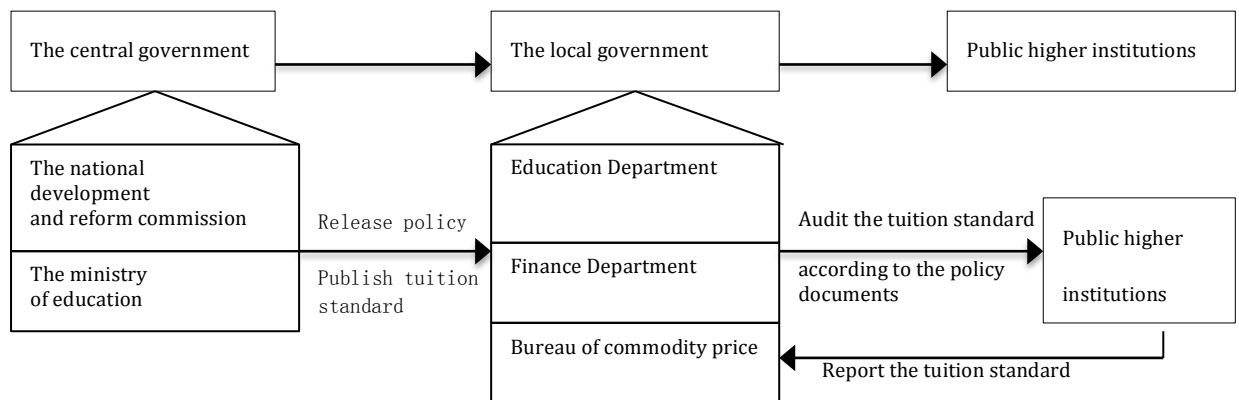


Figure 5.1: The tuition pricing mechanism of China’s public HE according to Wu(2010, p. 22)

5.3.2 The principle of tuition pricing

In China , all the tuition pricing lead by the government policy and documents, so actually there is a following government-led pricing principle . As I mentioned in the last part , public higher institutions have autonomy to some extent , but they must pricing the tuition in the standard area which policy stipulated. And the most important is the space of tuition pricing made by the higher institutions are small .

In 2007 , the NDRC released the tuition standard of public higher institutions . Table 5.3 shows the comparison of standard tuitions released by the NDRC and the practice tuition (Wu,2010) .

The comparison of standard tuitions released by the NDRC and the practice tuition in 2008

University	The standards published by the NDRC	The actual tuition
Peking University	765---842 \$	734.5—811\$
Tsinghua University	765---842 \$	765\$
Nankai University	643—765\$	643—765\$
Xi'an Jiaotong University	673—753\$	589---796\$
Zhejiang University	734\$	734\$
Xia'men University	835\$	835\$
Wuhan University	689—895\$	689—895\$
Jilin University	581—750\$	581—750\$

Table 5.3 : The comparison of standard tuitions released by the NDRC and the practice tuition in 2008 according to Wu(2010, p.21)

As the **Table 5.3** shows , the university could adjust the tuition more or less under the autonomy , while they normally should not higher than the upper limit set by the central government. In general , the tuition of Arts majors are lower than the engineering majors. All the universities in the **Table 5.3** are affiliated by the ministry of Education , these prestigious universities follow the tuition standard that published by the NDRC . The university may adjust the tuition based on the local economic condition, for instance, the tuition standards published by the NDRC of XJTU is 673—753\$. The interval means the tuition may have a bit difference among each

professions . In this case , the XJTU has to apply for the permission of adjustment of the tuition to the ministry of education . Obviously , we can find that except the Peking University and Tsinghua University, almost all the public higher institutions implemented high tuition principle, namely the actual tuition in these universities are as high as possible that close to the upper price limit .

5.3.3 The factors of tuition pricing

The first factor when we consider about the tuition pricing is the development scale of higher education and the national higher education funds . Table 5.4 shows the situation of the tuition changed from 1998 to 2013 . From Table 5.4 we can find the tuition increased much in 1999, and it increased 40.27% than tuition in 1998. But why does the tuition increased so much ? The key reason is the enrollment expansion policy released in 1999 , the student number increased 47.36% compared to the number in 1998 . More students need more education expenses . While the state funds was not increased ,in order to maintain the operation of the higher institutions, there is no way but to increase the tuition standard to fulfill the higher institution expenses .In the next few years the enrollment maintain increasing , the tuition standard increased as well (Wu,2010) . In 2007, the NDRC specifies “except other special rules, the criteria for higher education tuition level and accommodation level in various schools shall not be higher than the standard of 2006 autumn in the next five years ”(The NDRC,2007). Therefore there was no further rise in tuition fees from 2008 till 2012. Obviously, we can see the speed of tuition and enrollment was slowly from 2006 from the Table 5.4. In this case, the tuition pricing has closely connection with the national

HE funds. The increasing tuition pricing may be restricted if the education policy prohibit the tuition increased , and the state funds would increased in the future as well.

The increasing tuition in China's public HEIs in 16 years

Years	Enrollment (ten thousand)	Growth rate (%)	Average tuition for each student	Growth rate (%)	GDP per capita	Tuition ratio of per capita GDP
1998	108.36	8.32	¥1974 (\$303)	24.23	¥6796 (\$1045)	29.05
1999	159.68	47.36	¥2769 (\$425)	40.27	¥7159 (\$1101)	38.68
2000	220.61	38.16	¥3550 (\$545)	28.21	¥7858 (\$1208)	45.18
2001	268.28	21.61	¥3895 (\$598)	9.72	¥8622 (\$1326)	45.18
2002	320.5	19.46	¥4224 (\$649)	8.45	¥9398 (\$1445)	44.95
2003	382.17	19.24	¥4419 (\$679)	4.62	¥10542 (\$1621)	41.92
2004	447.34	17.05	¥4785 (\$735)	8.25	¥12336 (\$1897)	38.79
2005	504.46	12.77	¥5112 (\$784)	6.67	¥14103 (\$2169)	36.25

2006	546.05	8.24	¥5150 (\$793)	1.15	¥16084 (\$2473)	32.02
2007	565.92	3.64	¥4872 (\$747)	-5.8	¥19268 (\$2963)	27.51
2008	607.66	7.38	¥5061 (\$776)	3.88	¥22325 (\$3433)	25.29
2009	639.49	5.24	¥5117(\$785)	1.16	¥23916 (\$3677.86)	21.4
2010	661.76	3.48	unknown		¥30445 (\$4682)	
2011	681.50	2.98	unknown		¥36266 (\$5577)	
2012	688.83	1.08	unknown		¥40733 (\$6264)	
2013	699.83	1.6	¥5775(\$886)		¥45486 (\$6995)	12.7%

Table 5.4 :The increasing tuition in China's public HEIs in 16 years . Source : Calculated by the author based on data obtained from Wu (2010,p.2) and the China Statistical Yearbook 2009-2013

The second factor is the training cost. In each HEIs , different majors have different tuition standard because of different training cost . For instance, the tuition of art majors are much expensive than the humanities majors . Therefore, Thus the students

who come from wealthy family would freely choose the art majors and those who come from poor family would choose the science and engineering majors .

The third factor is the individuals expected rate of return . According to the pricing document released by the central government , the tuition of key programs is higher than the tuition of other programs because it has high individual expected rate of return . Each student wants a high individual expected rate of return . Obviously ,all of them want to learn more useful knowledge as much as they can . Chance of employment and future income also play a role when students choose their majors. Students would also think about the occupation wages after their graduation. The salary of Bachelor students after their graduation could be ¥3000 (\$461) for arts major's student and ¥4500 (\$691) for electronic information technology categories majors student per month.

Actually, not all of them could choose the major they are interested in because of their background and other factors. These three factors are more considerable in the process of the tuition pricing. There are other factors also would be considered sometimes , such as the types of higher institutions, prestigious or not prestigious , the geographical location(Big cities VS small cities, developed area VS underdeveloped area) , and the afford ability of family and so on .

5.4 Case study of selected higher education institutions

I chooses three universities as the research subject for thesis, Yangzhou University, Guizhou University of finance and economics and Xi'an Jiaotong University. As it shown in the following map, Yangzhou University located in the east part of China is

a prefecture-level city in Jiangsu Province. Guizhou University of finance and economics located in Guizhou Province where belong to the southwest of China. Xi'an Jiaotong Universty located in the capital of Shaanxi province---Xi'an, which located in the northwest of the China.

The Location Map of the three selected university in China



Graph5.1: The location map of the three selected HEIs in China . Source :Modified by Author

This Chapter includes an empirical study aim to reveal the tuition condition of three selected public HEIs and its implication in educational fairness. The study is divided into five sections. The first phase is to analysis indicators based on the tuition database collected form each HEIs official website, and understand the real situation of public HEIs tuition operation . The second phase is analysis of affordability of urban and rural residents to the HE tuition . The third phrase is to analyze the trend of three universities enrollment plan and provincial enrollment plan in recent five years.

The fourth phrase is to analyze the proportion of students sponsored by universities .

The last phrase is comparative analysis of financial allocation in three HEIs.

5.4.1 Tuition condition in Three selected public HEIs

After 1997, the sharp rise of tuition bring significant influence to the people’s daily life. Several universities use the autonomy right of adjust tuition to increase the tuition fees . With the prices of social good rising in recent years , the total cost of student living also increase.

Yangzhou University

Yangzhou University is a key comprehensive university in Jiangsu Province. The university was established in 1992 as a merger of 6 colleges namely Teachers College of Yangzhou, Agricultural College of Jiangsu, Engineering College of Yangzhou , Medical College of Yangzhou, Water Conservancy Engineering College of Jiangsu and Business School of Jiangsu . There are over 33,000 undergraduate students and 9000 Postgraduate students in present Yangzhou University . In my thesis , to investigate the status of tuition charging for full-time undergraduate students , I searched the data through the official website of Yangzhou University. The statistics of tuition status in YZU is in the following Table 5.5.

Tuition for undergraduates in YZU 2011-2015 , Per person per year

Discipline	Literatur e,History and Philosop hy	Institute of technolo gy	Finance and economics, political science	Sport major	Agriculture, forestry and normal	Medical	Arts	Business Administra tion (chinese-f oreign
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Year			and law					cooperatio n)
2011	¥4600 (\$70 6)	¥4600 (\$70 6)	¥4600 (\$706)	¥4600 (\$706)	¥2500 (\$384)	¥4600 (\$70 6)	¥6800 (\$10 45)	¥19200 (\$2950)
2012	¥4600 (\$70 6)	¥4600 (\$70 6)	¥4600 (\$706)	¥4600 (\$70 6)	¥2500 (\$384)	¥4600 (\$70 6)	¥6800 (\$10 45)	¥19200 (\$2950)
2013	¥4600 (\$70 6)	¥4600 (\$70 6)	¥4600 (\$706)	¥4600 (\$70 6)	¥2500 (\$384)	¥4600 (\$70 6)	¥6800 (\$10 45)	¥19200 (\$2950)
2014	¥5200 ---572 0 (\$79 9--879)	¥5500 ---605 0 (\$84 5--929)	¥5200-- -5720 (\$799- -879)	¥5300 (\$81 4)	¥2750 (\$422)	¥6800 (\$10 45)	¥6800 (\$10 45)	¥19200 (\$2950)
2015	¥5200 ---572 0 (\$79 9--879)	¥5500 ---605 0 (\$84 5--929)	¥5200-- -5720 (\$799- -879)	¥5300 (\$81 4)	¥2750 (\$422)	¥6800 (\$10 45)	¥6800 (\$10 45)	¥19200 (\$2950)

Table 5.5: The tuition for undergraduates in YZU 2011-2015, by major discipline .

Source :Author's compilation based on information exacted from Yangzhou

University official website. <http://zhaoban.yzu.edu.cn/col/col11213/index.html###>

In the year of 2011 till 2013, the tuition could be divided into four levels. They are \$384(Majors of Agriculture, forestry and normal), \$706(Majors of Finance and economics, political science and law), \$1045(Arts) and \$2950(Business Administration(Chinese-foreign cooperation)) respectively. The major of agriculture and forestry is the national professional majors, and enjoy the national project funds, so the tuition standard is \$384 per year. Other general majors tuition is \$706 per year. The tuition of faculty of arts are \$1045 per year and the Business Administration(Chinese-abroad cooperation) tuition is \$2950 each year.

From 2011 to 2013, the school tuition standard is in a unified level and it does not change, but obviously the tuition of Business Administration (Chinese-foreign cooperation) and arts major is much higher than general major's fees.

In the year 2014, according to the *Notification on Relevant Problems in Tuition standard of Public HEIs* issued by Price bureau of Jiangsu Province and the financial department of Jiangsu Province, give a certain autonomy to provincial HEIs to set the tuition price and allowing the advantage disciplines to rise the tuition standard, but the floating rate should not exceed by 10%.

Public HEIs Tuition standard in Jiangsu Province 2014

Types of Discipline types	HEIs	Tuition
Literature, History and Philosophy		¥5200(US\$799)
Institute of technology		¥5500(US\$845)
Institute of engineering		¥5800(US\$891)
Agriculture and forestry		¥2500(US\$384)
Medical		¥6800(US\$1045)

Arts	¥6800(US\$1045)
Sport majors	¥5300(US\$814)
Police majors	¥6000(US\$922)

Table 5.6 : The tuition standard information about the public HEIs in Jiangsu Province in 2014. Source : <http://www.jswjj.gov.cn>

As it shown in Table 5.6 above, except Arts and Business Administration Majors, the tuition of all of the majors are obviously increased . Compared to 2013, the tuition increase at least 13% , the highest rate reached 31.5%. The tuition of Literature, History and Philosophy majors were \$706 , then it is \$799 in 2014, it raised 13% . The tuition of Agriculture and forestry majors were \$384, while it is \$422 in 2014, it raised 10% . And the tuition of medical was \$706, while it is \$1045 in 2104 , it raised 47.83%.

In a word, through the comparative analysis of tuition status from 2011 to 2015 in YZU , I find the tuition among all disciplines has kept increasing in recent years. In 2011-2013 ,the tuition standard generally has not changed. While in the beginning of 2014, the tuition has obviously increased by a wide margin and the increased ration is over 13% than before.

Based on the Table 5.7, we can get the average tuition for undergraduates in YZU, the average tuition has not increased in 2010 –2013. Its mainly because the Ministry of Education issued the “Five year Limit tuition price order” in 2007 . Therefore the tuition has not adjusted from 2007 to 2013. According to the concrete data of the tuition for each majors in YZU, I find out that there are few discipline increased 84%, for instance, the tuition of The development of rural areas increased from \$384 to

\$707. As it shown in Table 5.7, with the improving of the per capita income of urban and rural residents, the proportion of tuition in residents' income is decreasing annually . In 2010, the proportion of tuition in urban residents' income was 23.89%, while it account for 77.12% in rural residents' income.

As the deadline of “Five year Limit tuition price order” in 2014, the tuition in YZU appears rising revenge , and it increased over 22.2%.

The gap between urban and rural areas is becoming one of the main factors influencing the unbalanced Chinese education . In the Key HEIs, the proportion of rural students declines in recent years. This suggests that the gap between urban students and rural students' entrance opportunity is more and more serious.

The proportion of average tuition in Yangzhou University to urban and rural residents' per capita disposable income appears decreased trend, while the proportion of tuition in rural residents' personal income is much higher than it in urban resident's personal income. In 2014, the tuition account for about 19.35% in urban residents' Per capita income , while it account for about 53.2% in rural resident's Per capita income. If a rural family have 2 or 3 children , the Per capita income of a rural family would be \$3224 in 2014 , and 2 Or 3 university students need \$1716 or \$2574, thus the HE tuition costs account for 53.23% or 79.84% in rural family's annually income . Therefore the tuition would be far beyond the affordability of peasants.

The increasing tuition brings a substantial pressure for all the households. In the case of tuition increasing in limited HE supply , the growing demand for HE can bring the

price surge, this could lead to a large number of students give up the HE because of low family income background, and further lead to inequality opportunity for HE.

Affordability of Urban and rural residents on YZU tuition

Year	The average tuition in YZU	Increased level of tuition %	Per capita disposable income of urban residents	The proportion of tuition in urban residents' income	Per capita income of rural residents	The proportion of tuition in rural residents' income
2010	¥4564.6 (\$701)	-----	¥19109 (\$2937)	23.89%	¥5919 (\$910)	77.12%
2011	¥4564.6 (\$701)	0%	¥21810 (\$3352)	20.93%	¥6977 (\$1071)	65.42%
2012	¥4564.6 (\$701)	0%	¥24565 (\$3775)	18.58%	¥7917 (\$1217)	57.66%
2013	¥4564.6 (\$701)	0%	¥26955 (\$4143)	16.93%	¥8896 (\$1367)	51.31%
2014	¥5580 (\$858)	22.2%	¥28844 (\$4433)	19.35%	¥10489 (\$1612)	53.2%

Table 5.7: The economic affordability of residents for the tuition of Yangzhou University. Source: China statistical yearbook 2010-2014

As it shown in the Figure5. 2 and Figure5. 3, the trend of the total enrollment plan is increasing in 2011-2015. The planned enrollment student of whom come from Beijing area are much fewer than student come from other provinces in the whole country . It shows almost 80% student are from Jiangsu province . For other provinces, there are few enrollment plan each year . In other words , the local students has more opportunity to study in Yangzhou University than non-local students . From the data its easily to find out the “Localization” tend to be serious in China’s HEIs. It not only

increases the gap between urban and rural areas, but also aggravated the inequality of higher education access opportunity.

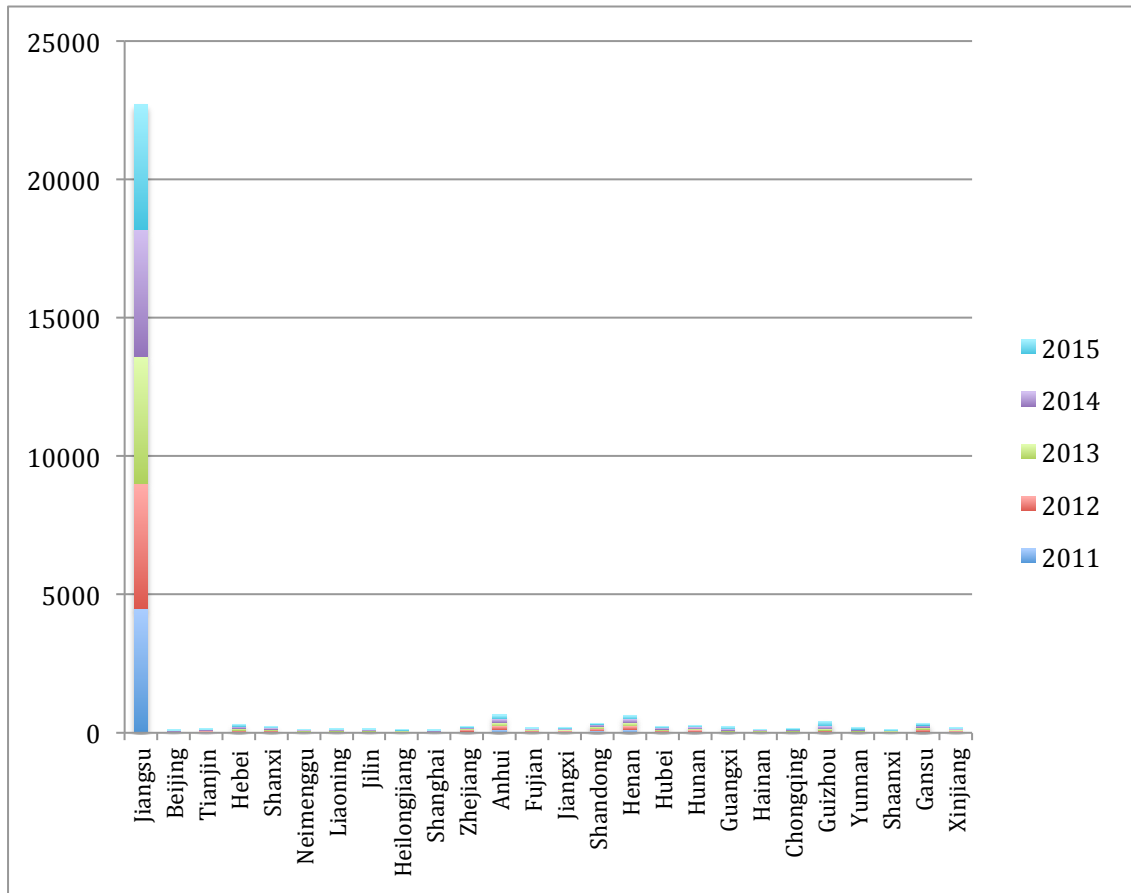


Figure5. 2: The enrollment plan of YZU in 2011—2015, by provincial . Source: Author’s compilation based on Yangzhou University ‘s Enrollment plan .

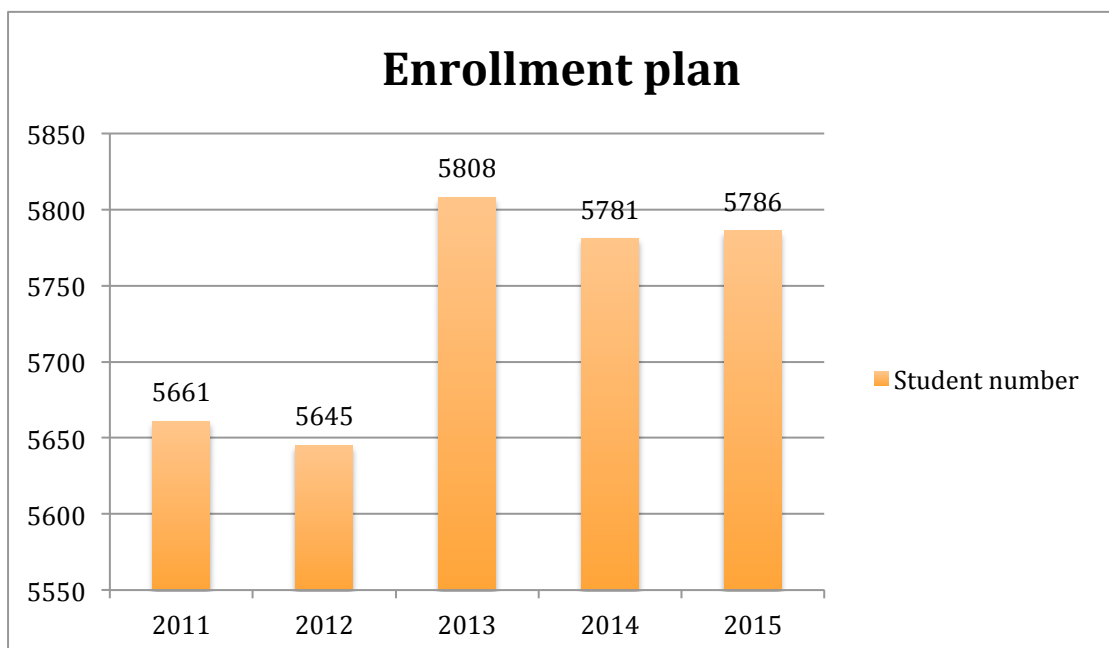


Figure 5.3: The trend of enrollment plan of YZU in 2011-2015. Source : Author's compilation based on YZU's each year Enrollment plan

The student financial aid system in Yangzhou University

The financial aid in Yangzhou University includes three parts, namely scholarships, grants and tuition waivers(see annex2). In recent years, the financial aid system mainly provided by the enterprises and individuals , and other social classes, the magnitude of the funding is commonly ¥400—¥1500 (\$61--\$231) . The application condition of funding projects generally stricter, funding quota and scope also are limited. There are 17 items of Scholarships and 8 items of Grants. In 2011, there are 22844 undergraduates in YZU , and 6319 students received scholarships , 5186 students have got different levels of grants . There are 50% of the total undergraduates received the all kinds of financial aid.

Guizhou University of Finance and Economics

GUFE is the only comprehensive university of Finance and Econimocs in Guizhou Province established in 1958. The GUFE encompassing its mainstream disciplines of economics and management, and other discipline categories, such as literature, law, science, engineering and education. There are over 23000 undergraduate students, 1211 graduates and 15 foreign students in present GUFE. In my thesis, I collected the tuition data from the official website of GUFE to analyze the tuition status. The following Figure shows the tuition standard statistics among each disciplines of GUFE.

The tuition for undergraduates in GUFE 2011-2015, by major discipline

Discipline Year	Economics, Law, Education, Literature, Management	Japanese majors & English language	Statistics, computer science, financial mathematics class	Arts(Music ology, Dancology & Environme nt design)	International programs (Finance &Accountin g)
2011	¥3200 (\$493)	¥3400 (\$524)	¥3400 (\$524)	¥6000 (\$924)	
2012	¥3200 (\$493)	¥3400 (\$524)	¥3400 (\$524)	¥6000 (\$924)	
2013	¥3200 (\$493)	¥3400 (\$524)	¥3400 (\$524)	¥6000 (\$924)	
2014	¥4100 (\$631)	¥4100 (\$631)	¥4200 (\$647)	¥9000 (\$1386)	¥22000 (\$3384.6)
2015	¥4100 (\$631)	¥4100 (\$631)	¥4200 (\$647)	¥9000 (\$1386)	¥22000 (\$3384.6)

Table 5.8: The tuition for undergraduates in GUFU 2011-2015, by major discipline.
Source: The GUFU official website

As it shown in Table 5.8 , the tuition fees of each discipline in GUFU have not changed during the year 2011---2013, while it has started increased its tuition from 2014. In the year of 2011 to 2013, the tuition could be divided into three levels . They are \$438 , \$465, \$924 respectively . The major of arts(Musicology, Dancology & Environment design) are much more expensive than any other majors . Its \$924 per

year for students who studies Arts majors . And the tuition of other majors are all around \$450 per year.

The tuition of GUFU has increased since 2014 . There are also some international programs has started recruiting students from 2014. While the tuition level of these international programs are very expensive . Students who studies international programs have to pay \$2925 for each year .

In the year 2014, according to the Notification on Adjustment of Tuition standard among Public HEIs issued by Price bureau of Guizhou Province and the educational department of Guizhou Province , give a certain autonomy to provincial HEIs to set the tuition price and allowing the advantage disciplines to rise the tuition standard , but the floating rate should not exceed by 10%.

Public HEIs Tuition standard in Guizhou Province

HEIs types Types of Discipline	Tuition
History , Agriculture and Philosophy	¥3830 (\$590)
Economics, Laws, Education ,Literature &Management	¥4100 (\$631)
Institute of technology& engineering	¥4200 (\$647)
Medical	¥4500 (\$693)
Arts (Musicology & Dancology)	¥9000 (\$1386)

Table 5.9: The tuition standard information about the public HEIs in Guizhou Province.

Source: <http://www.gzsjyt.gov.cn/Item/37350.aspx>

According to the Table 5.8 and Table 5.9 , practically , the tuition fees in GUFU follows the announcement about the tuition standard . Obviously , the tuition of international programs is much expensive than any other majors .That’s because these international programs runs cooperate with Western Michigan University and Edinburgh Napier University. Students could have chance to study in American and United Kingdom as exchange students after the third year of their study in GUFU. With the pricy tuition , students with good economic condition would have chance to study in this kind of program . Normally , it is no possible for rural students to enroll in these programs because of the economic background. The tuition of international programs are \$3384.6 per year , according to the Table5.10 , Per capita income of rural residents in 2015 is \$1615, thus the tuition is much more higher than the income of rural residents , normally the urban students prefer to study in these programs.

Affordability of Urban and rural residents on GUFU tuition

Year	The average tuition of GUFU	Increased level of tuition%	Per capita disposable income of urban residents	The proportion of tuition in urban residents' income	Per capita income of rural residents	The proportion of tuition in rural residents' income
2011	¥3383 (\$521)	-----	¥19109 (\$2943)	17.7%	¥5919 (\$912)	57.15%

2012	¥3425 (\$527)	1. 24%	¥21810 (\$3359)	15.7%	¥6977 (\$1074)	49.1%
2013	¥3615 (\$557)	5.55%	¥24565 (\$3783)	14.72%	¥7917 (\$1219)	45.66%
2014	¥5380 (\$829)	48.82%	¥26955 (\$4152)	19.96%	¥8896 (\$1370)	60.48%
2015	¥5992 (\$923)	11.38%	¥28844 (\$4443)	20.77%	¥10489 (\$1615)	57.13%

Table 5.10: The economic affordability of residents for the tuition of GUFU. Source: China statistical yearbook 2010-2014

As it shown in Table 5.10, the average income of urban residents and rural residents have increased in recent years . The tuition of most majors in GUFU has not increased in 2011—2013 . While there are some new professions started recruiting students year by year . Thus we can find out the average tuition of GUFU has increased year by year , especially in 2014, the average tuition of GUFU has reached \$829 compared to \$557 in 2013. Because GUFU started set some cooperate programs with the Western Michigan University and Edinburgh Napier University. The international programs was founded to promote the students’ ability to study more international practically research , and to provide high quality education on Accounting and Finance field . The tuition of GUFU account for 57.15% in rural residents’ income in 2011, while it account for about 17.7% in urban residents’ income .It’s a huge gap between the income level of urban residents and rural residents . In 2014, the average tuition has increased 48.82% compared to tuition in 2013. While it account for 60.48% in rural residents’ income and 19.96% in urban residents’ income in 2014. It shows after the

tuition increased in 2014, it still share a high proportion within the residents' income. In 2015, Per capita income of rural residents increased from \$912 (2010) to \$1615. Even though the tuition has not increased a lot in 2015, and Per capita income of rural residents also increased annually , while the tuition still take a crucial part in rural residents' income . It is no doubt that the HE acceptor (students) whether living in a rural family or rural family would be borne the same education costs . Thus obviously that the tuition in GUFEE still has an negative effect on the rural students' family . It's unfair to the rural students to accept the higher education .

The enrollment plan of GUFEE in 2011—2015

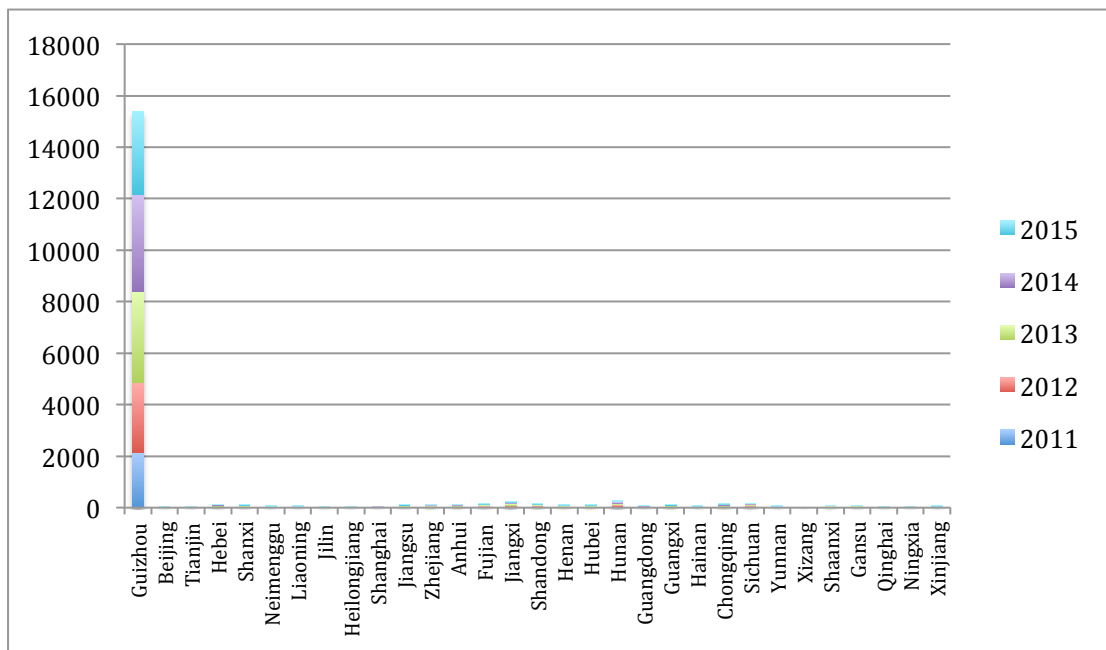


Figure 5.4: The enrollment plan of GUFEE in 2011—2015, by provincial . Source: Author's compilation based on GUFEE's Enrollment plan .

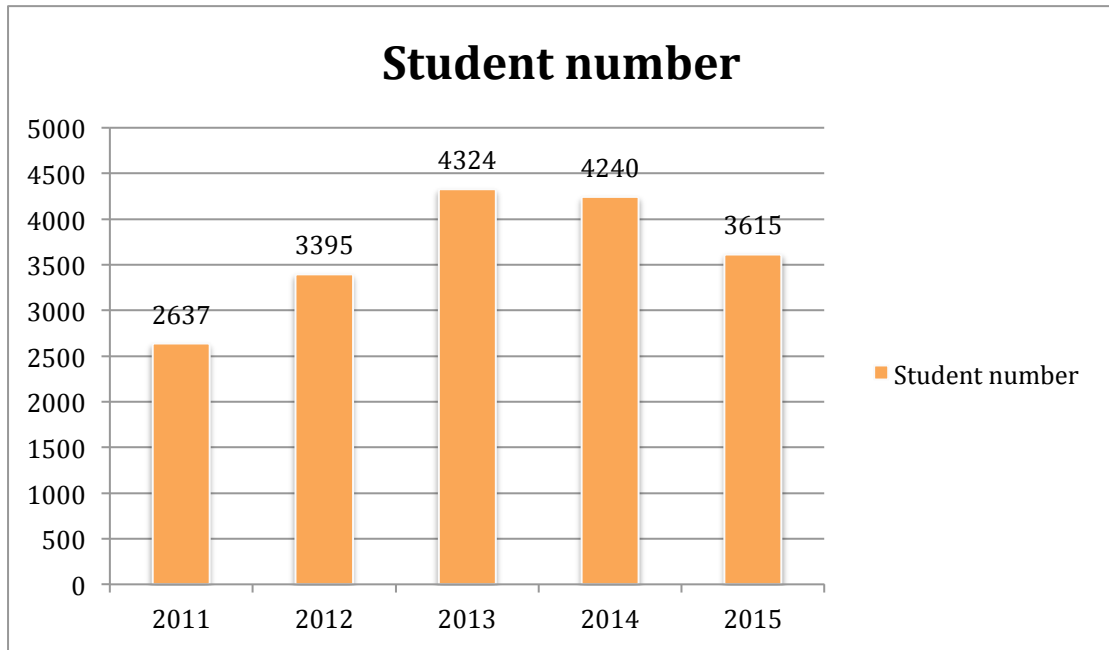


Figure5.5: The trend of enrollment plan of GUF E in 2011-2015. Source : Author’s compilation based on GUF E ‘s each year Enrollment plan

As it shown in Figure 5.5 above , The GUF E has planned to enroll around 2637 students in 2011 , 3395 students in 2012, 4324 students in 2013 , 4240 students in 2014 and 3615 students in 2015 . While as it shown in Figure5.4 , students who come from Guizhou Province are take a large proportion in the whole enrollment plan in this five years .The enrollment plan for students who come from Guizhou Province are much more than any other provinces in the whole country .

Guizhou province is located in the undeveloped area , and the education product are not as good as other areas . While the higher education is being improved annually , so the education quality is getting better and better .

In my opinion , as a public university , its unfair for all the students if their enrollment plan focus on local students . The construction funding of the public education is from each taxpayer all over the country , so its necessary for every students of this country

to share high quality education . Meanwhile , localization tendencies will seriously disrupt the education fair .

The funding system in the GUFEE

The financial aid in GUFEE includes 3 parts , namely scholarships , grants and tuition waivers . The financial aid system in the GUFEE mainly provided by the government and the university(see annex 3). There is almost no financial aid provided by enterprises and other social classes. The application condition of funding projects generally stricter, funding quota and scope also are limited. There are 8 items of Scholarships and 4 items of Grants . The magnitude of the Grants is commonly ¥1000—¥4000 (\$154--\$614) . In 2015, there are 29097 undergraduates in GUFEE, and 4987 students received scholarships , 9462 students have got different levels of grants . There are 49.66% of the total undergraduates receive the all kinds of financial aid.

Xi'an JiaoTong University

XJTU is a key university which is directly administered by the Ministry of Education and is one of the oldest current institutions of higher education in China. In 1956, the main body of Jiaotong University was moved to Xi'an according to the decision issued by the State Council, and was formally named Xi'an Jiaotong University in 1959, which was listed as a national key university. In April 2004, approved by the State Council, the original Xi'an Medical University and original Shaanxi Institute of Finance and Economics were integrated into Xi'an Jiaotong University.

Nowadays, XJTU is a comprehensive research university with scientific focus. It is composed of 10 branches of learning, namely: science, engineering, medicine, economics, management, literature, law, philosophy, education and art. The university, currently, consists of 26 full-time colleges and schools, 8 schools for undergraduates and 12 affiliated teaching hospitals. It is also belong to China's "211 Project" and "985 Project". Currently XJTU has a enrollment of 32200 full-time students, including 16456 undergraduates, over 15744 masters and PHD. candidates.

Tuition for undergraduates in XJTU 2011-2015 , Per person per year

Discipline Year	Institute of technology (including medical, foreign language class)	Popular major science technology (including medical)	Literature and history class	Arts	Accounting
2011	¥4950 \$761	¥5200 \$799	¥3850 \$592	¥9900 \$1521	¥4950 \$761
2012	¥4950 \$761	¥5200 \$799	¥3850 \$592	¥9900 \$1521	¥4950 \$761
2013	¥4950 \$761	¥5200 \$799	¥3850 \$592	¥9900 \$1521	¥4950 \$761
2014	¥4950 \$761	¥5200 \$799	¥3850 \$592	¥9900 \$1521	¥4950 \$761

2015	¥4950	¥5200	¥3850	¥9900	¥4950
	\$761	\$799	\$592	\$1521	\$761

Table 5.11: The tuition for undergraduates in Xi'an Jiaotong University, 2011-2015, by major discipline. Source: The official website of Xi'an Jiaotong University.

As it shown in Table 5.11 above, XJTU has five kinds of disciplines among all of the subjects. They are Institute of technology (including medical, foreign language class), popular technology majors, History majors , Art majors and accounting . The tuition standard of each disciplines are different. The tuition of normal technology majors and accounting majors are the \$761 one person each year, while for the popular technology majors are \$799. The tuition of History majors are \$592 each year and for the arts majors are \$1521 each year. Obviously, the tuition has not changed during this 5 years .

Then I checked the official tuition standard which published by the local government . As it shown in the Table 5.12, Compared to the central ministry document, the tuition of each subjects are higher than the document stipulated . One thing I need to mention is Xi'an Jiaotong university is affiliated by the Central ministry. And it has special official document to limit the tuition standard .

Public HEIs Tuition standard in Shaanxi Province

Items	Tuition standard
a. Literature, financial and history class	¥3500 (\$538)
b. Institute of technology	¥4500 (\$692)

(including traditional Chinese medicine, foreign language class)		
c. Medical majors		¥5000(\$769)
d.Arts	Class1	¥7000(\$1076)
	Class2	¥9000(\$1384)
	Class3	¥11000(\$1692)
e. Some majors in “Project211”and “Project985”		The floating rate of tuition could be 10% on the basis of the same majors
f. Popular major in some schools		¥ 5200、 5500、 6000(\$800,845,923)

Table 5.12 : The provincial tuition standard for public HEIs in Shaanxi . Source : Website of Education Department of Shaanxi Provincial Government
<http://www.snedu.gov.cn/jynews/rdjj/201508/27/51572.html>

Tuition standard of central ministry affiliated HEIs for XJTU

Department	Institute of technology (including medical, foreign language class)	Popular major science technology	Literature , history and accounting class	Medical	Arts
Tuition standard	¥4950 (\$761)	¥5200 (\$799)	¥3850 (\$592)	¥5200 (\$799)	¥9900 (\$1521)

Table 5.13: Tuition standard of central ministry affiliated HEIs for Xi’an Jiaotong University.

Source: The announcement about the tuition standard of HEIs which affiliated Central ministries ,2007

http://www.sdpc.gov.cn/zwfwzx/zfdj/jggg/200707/t20070706_147410.html

As it shown in Table 5.13, the central ministry’s document stipulated the tuition level of XJTU , and with the comparison to the practically tuition , they are perfectly the same .

Here I also have to mention that universities which affiliated by the central ministry are following the central ministry documents, while other provincial universities should follow the local governments’ documents .

But obviously in the same area, the tuition level in the “Project 985”HEIs are higher than provincial HEIs. That’s because the “985”HEIs have more outstanding professors and high quality education resources .

The tuition of Xi’an University has not changed in this 5 years (see Table 5.14). In 2010, the tuition of XJTU account for about 86.99% in the Per capita income of rural residents. While the tuition account for about 26.95% in the Per capita disposable income of urban residents. It’s a huge gap between the income level of Urban residents and rural residents. In 2014 , the average of tuition in XJTU account for about 49.09% in the Per capita income of rural residents, while the tuition account for about 17.85% in Per capita disposable income of urban residents. The gap of economic condition between the Urban residents and rural residents become smaller than it was in 2010. But the tuition still take an important part of rural residents’ income .

Affordability of Urban and rural residents on XITU tuition

Year	The average tuition of	Increase d level of	Per capita disposable income of	The proportion of tuition in	Per capita income of rural	The proportion of tuition in

	XJTU	tuition%	urban residents	urban residents' income	residents	rural residents' income
2010	¥5149 (\$791)	-----	¥19109 (\$2937)	26.95%	¥5919 (\$910)	86.99%
2011	¥5149 (\$791)	0%	¥21810 (\$3352)	23.61%	¥6977 (\$1071)	73.8%
2012	¥5149 (\$791)	0%	¥24565 (\$3775)	20.96%	¥7917 (\$1217)	65.04%
2013	¥5149 (\$791)	0%	¥26955 (US\$4143)	19.10%	¥8896 (\$1367)	57.88%
2014	¥5149 (\$791)	0%	¥28844 (\$4433)	17.85%	¥10489 (\$1612)	49.09%

Table 5.14: The economic affordability of residents for the tuition of Xi'an Jiaotong University. Source: China statistical yearbook 2010-2014

According to the total enrollment plan of XJTU, the enrollment number of student have increased from the year 2012 to 2015(see Figure5.7). While as it shown in Figure5.6, the enrollment plan has significant difference between each province. Obviously , the enrollment plan for Shaanxi Province student is more than any other provinces. In 2015 , the total enrollment plan is 3315 students, while there are 1035 students are for Shaanxi Province , it is 31.2% of total enrollment. And the enrollment plan for west underdeveloped provinces are fewer than other provinces . For instance , the enrollment plan for Tibet province ,Qinghai province and Ningxia province are 5, 30 ,50 respectively in 2015 . Comparing to other provinces plan , the student number are too little .

The enrollment plan of XJTU in 2012—2015, by provincial

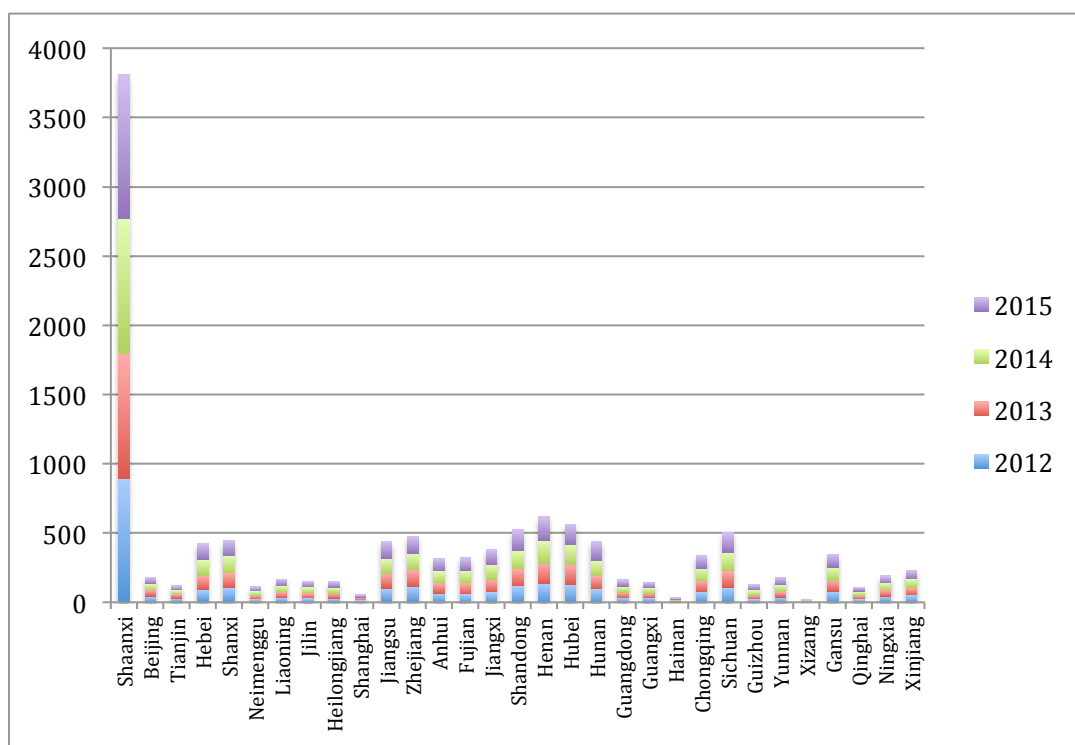


Figure5.6: The enrollment plan of Xi'an Jiaotong University in 2012—2015, by provincial . Source: Author's compilation based on Xi'an Jiaotong University 's Enrollment plan .

The trend of enrollment plan of XJTU in 2012-2015

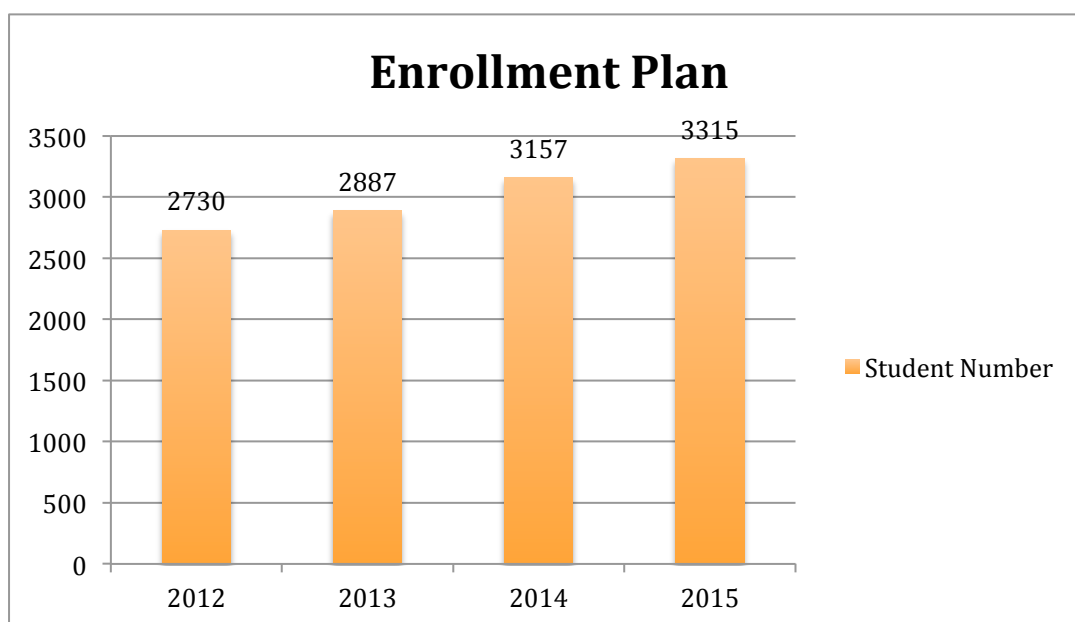


Figure5.7: The trend of enrollment plan of Xi'an Jiaotong University in 2012—2015.

Source: Author's compilation based on Xi'an Jiaotong University 's each year Enrollment plan

The funding system in XJTU

The funding system in Xi'an Jiaotong University has several kind of scholarship and student grant for undergraduate student (see annex4). There are 41 items of scholarship and 21 items of student grant . But for the national scholarship, only 220 student have chance to gain it per year. Meanwhile there are 511 student have opportunity to apply for the National Scholarship for Encouragement.

According to the scholarship items document , the scholarship mainly consist of school funding and social funding . Social funding include individual funding and some state-owned enterprise funding and institutions funding . For instance , there are 30%of the undergraduates (not including freshmen) have chance to gain the Siyuan scholarship, ¥1000(\$154) per person per year , there are 1.5% of the undergraduates(not including freshmen) could gain the Pengkang scholarship , ¥5000 (\$769)per person per year. There are 3‰ of the undergraduates (not including freshmen) could gain the Tangwenzhi scholarship , ¥8000 (\$1230) per person per year . In 2014, there are 15985 undergraduates in XJTU, and 5619 students have got scholarships and 4665 students have got the different kind of grants . There are 64%of the total undergraduates receive the all kinds of financial aid.

Xi'an Jiaotong University also provide work-study programs for poor economic condition students. The relevant management office could provide more the 2000

position for students to enroll in work-study program. This program make several low income students gain more experience during the part time job , and also give them more chance to gain a small amount of money to release their economic stress.

Comparative analysis of three HEIs

The Growth Trends of average Tuition and Fees among Three selected HEIs

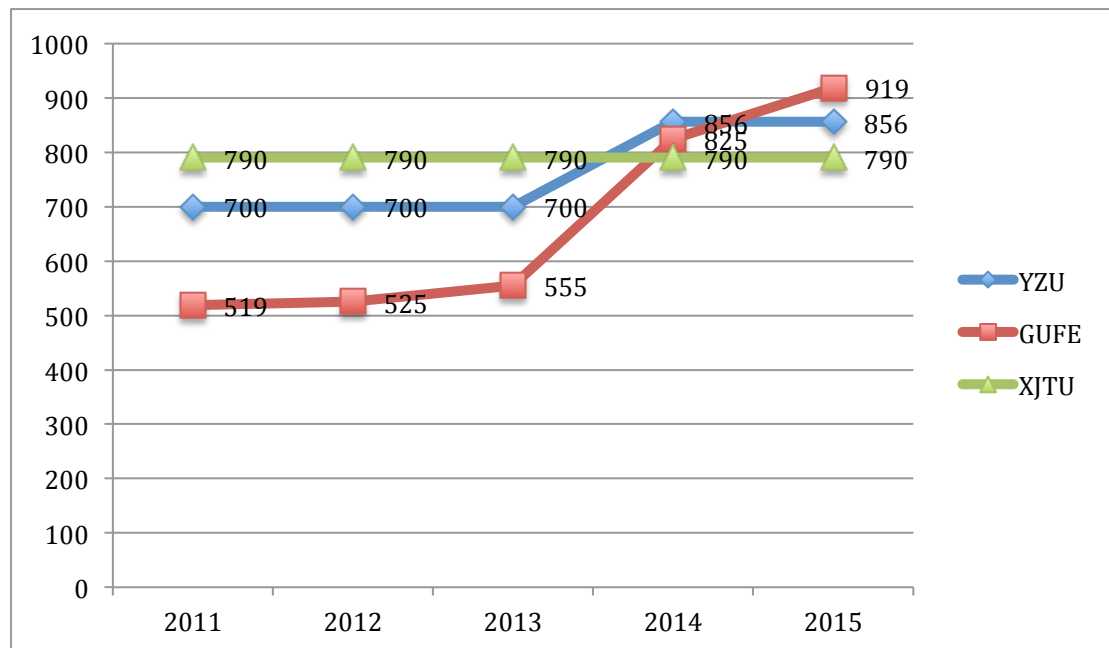


Figure5.8: The Growth Trends of average Tuition and Fees among Three selected HEIs. Source: Author’s compilation based on the HEIs’ official statistics

In order to better understanding tuition and fee trends, I compare the average tuition among three HEIs in 2011---2015. From the Figure5.8 , we know the average tuition are maintain in the price ¥3300 (\$508) to ¥6000 (\$923). As HEIs affiliated by the central ministry , the average tuition of XJTU is higher than it in YZU and GUFU before 2014. And in 2014, the average tuition of YZU and GUFU have remarkable increased even higher than it in XJTU.

On the one hand, the central ministry affiliated HEIs got funded directly by the central government. On the other hand , In 2007, the Ministry of education issued an act that forbid tuition increase among 5 years in all the HEIs . While the year 2013 is the deadline of the act . Thus some provincial HEIs start to increase the tuition . For the HEIs affiliated by the central ministry , their tuition have not changed during the recent years . Therefore the tuition of XJTU has not increased by the year 2015 , it shows the tuition of provincial HEIs are increasing to some extent because of the decentralization of the authority on the process of tuition formulation. According to the above we already know the gap between residents' economic condition in different area.

The students from both developed area and undeveloped area are all have to pay the same price on the tuition .It obviously reflects the unfairness in Chinese higher education and affects opportunity equal opportunity in access to HEIs for people who is living in undeveloped areas.

The Trends of Enrollment plan among Three selected HEIs

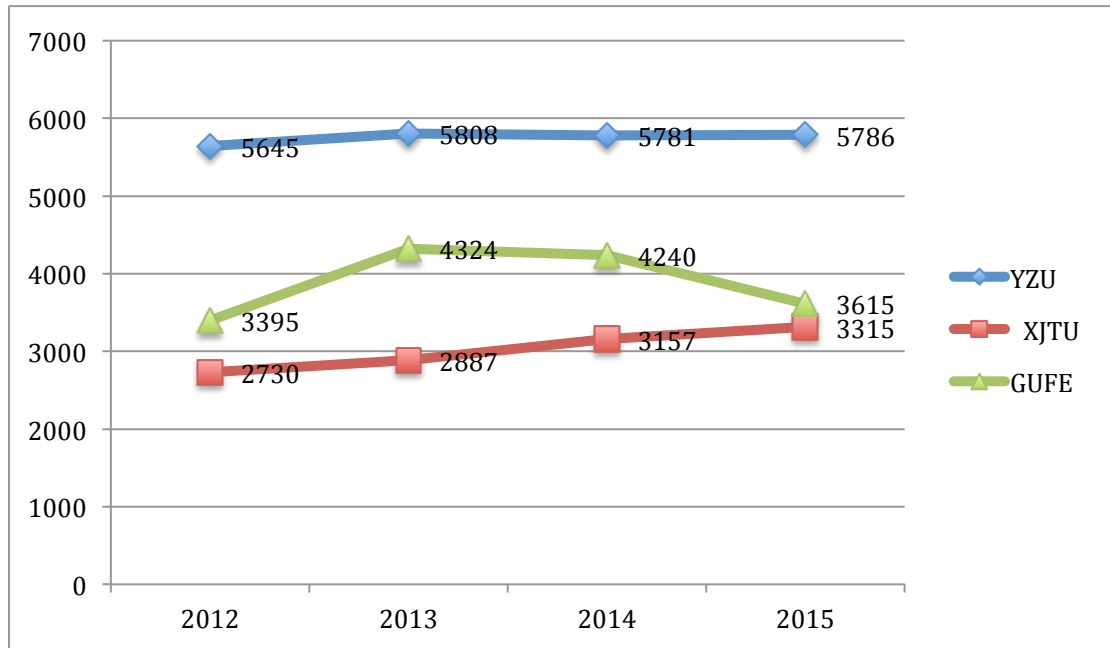


Figure5.9: The Trends of Enrollment plan among Three selected HEIs.

Source : Author collected from Official website of three selected HEIs

Data about the enrollment plan from 2012 to 2015 are used to seek a better understanding of how different types of HEIs set their enrollment plan in China to impact the higher educational equity . According to Figure9.5 above , the enrollment plan of XJTU have annually increased . While the enrollment plan of YZU have increased from 2012 to 2013, it has decreased in 2014. Anyway , there is a huge gap of the enrollment plan between YZU and XJTU. In generally , YZU set enrollment plan with around 5700 students per year , while the enrollment plan in XJTU is less than 3400 students each year . The ratio of enrollment plan for XJTU to Yangzhou University is 59.6%. Then we move on to the trend of GUFU , the enrollment plan of GUFU have increased form 2012 to 2013 , while it have decreased from 2014 . It was 3395 students in 2013, and 4324 students in 2014, then it has decreased to 3615 in 2015. Compared to XJTU, the enrollment plan of GUFU is more than it in XJTU. If

we compare the enrollment plan of GUFU with YZU , we can find out that there is also a huge gap between these two universities . Since YZU and GUFU are both provincial universities , the enrollment plan has such a difference . Therefore, the enrollment plan in ministry-affiliated HEIs is fewer than it in provincial HEIs.

Thus I can conclude that HE is a scarce resource for everyone in China , especially the high-quality HE resource . For instance , the HE in HEIs which are affiliated by central ministry are supposed to provide high-quality education services .

If we review the thesis content above, it is easy to find out two main facts: 1) With the limited enrollment plan , each university always makes a large proportion of its enrollment plan for its local students . 2) The HEIs which are affiliated by central ministry have fewer enrollment plans for the southwest undeveloped area students . It's kind of area discrimination which reflects the higher education inequity in China.

Comparison of Government Appropriation in Three HEIs

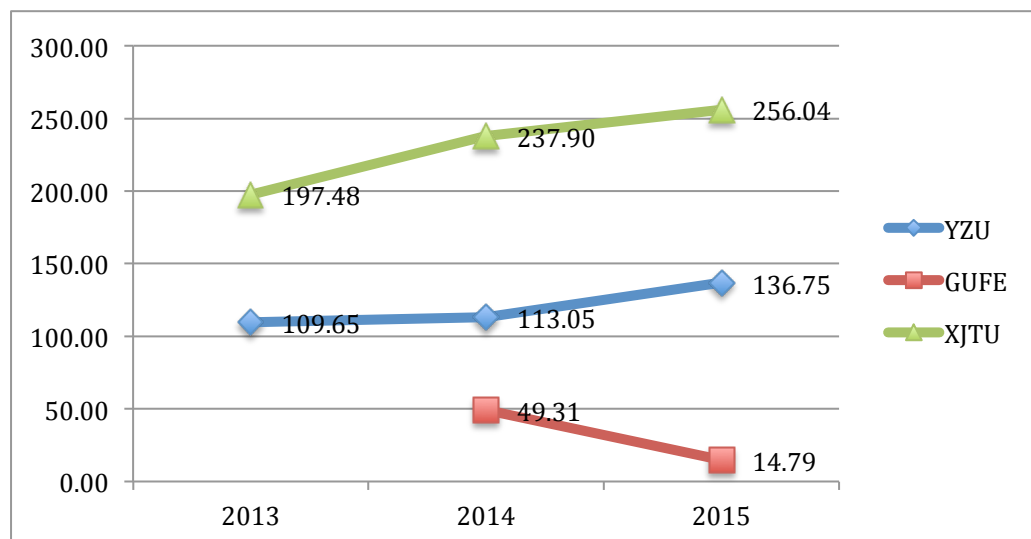


Figure 5.10: Comparison of Government Appropriation in Three HEIs (USD million). Source: Income balance of YZU statistics (2013,2014);Income balance of GUFU statistics (2013,2014,2015);Income balance of XJTU statistics (2013,2014,2015)

According to the Figure 5.10, the government appropriations for three selected HEIs were maintained almost annual growth. The government appropriation for XJTU is more than \$190 million per year, and the appropriation was increasing annually. While it for YZU is around \$120 million per year. The government appropriation for GUFU has decreased from \$49.32 million in 2014 to \$14.79 million in 2015.

Thus we compare the government appropriation for YZU and GUFU, both of them are provincial universities. There is a huge gap between these two HEIs. In 2015, the government funding in YZU is almost nine times as it in GUFU. Therefore the government finances are not balanced between provincial HEIs. While when we compare the public finance for YZU and XJTU, the public funding in XJTU is higher than government appropriations in YZU. That's because the public funding of XJTU is from the central government appropriations, while the public funding of YZU is from the regional government. Its essential different funding channel.

6 Discussion of results

The tuition charge situation and funding system in three selected public HEIs have been discussed in this thesis. As mentioned above, except the HEIs which affiliated by central ministry has not changed, the tuition standard of other provincial HEIs all have increased by major discipline since 2013. According to the Jiangsu Provincial act about the HEIs tuition stipulation, tuition of all discipline has average increased 16.61%, and for medical majors, the tuition increased 47.83% than it before, only the art discipline has not changed.

According to the case study, there are several issues among Chinese public HEIs tuition:

1. The impact of Rising Tuition and fees on HE equity of access

(1) The rural students and their families bear the high cost of education

In China, students are consumers and “buyer” of higher education. In western countries, students tend to do part-time job or loan to the cost of higher education. While in China, because of long term of the dependence of the children to parents, parents pay the cost of education for their children in most cases. Therefore, the tuition actually mainly impact the parents. In the higher education expenses, parents not only afford the tuition, but also pay all of the living cost including accommodation fees, textbooks and other expenses. Generally, a student spends around \$6147 in their university period. In addition, most educational resources are located in urban areas. The local price level slightly higher than the living standard of native place for poor students. This is a huge economic burden for low-income urban

residents and peasants .It caused the change of higher education entrance opportunities in the regional distribution of rural and urban areas .

According to the analyze of affordability of residents to the tuition of three selected HEIs , I find out the tuition of HEIs affiliated by the Central ministry are higher than it in provincial HEIs. Central ministry HEIs distributed in different areas in China, also influence the tuition standard. For instance, as a HEI affiliated by the central ministry, XJTU located in western part of China, its belong to undeveloped area, the average tuition level is around \$791 per person . Even though the Western part of China is undeveloped, and residents' economic life level is lower than the developed eastern region, but the tuition is not in a low level in the west region .

The three HEIs' students mainly come from local , and the tuition of three HEIs account for urban resident's income are 19.35%, 20.2% and 17.85% respectively. But the tuition of three HEIs account for rural resident's income are 53.2%, 55.6% and 49.09% respectively . Therefore the tuition standard is clearly take a large proportion of rural resident's income.

The rising tuition and fees brings heavier and heavier burden to the poor-students. From the burden of university tuition fees accounted for the proportion of total household income, the burden of tuition to rural residents is more than urban residents. It is not in conformity with the principle of ability to pay, so its not fair.

With the improvement of people's life level, the costs of school running and enrollment expansion are increasing , so its rational that the tuition rising to some extent . But such a large growth and the current tuition still account for a large ration

in rural residents' household. For rural households with two college students, higher education tuition burden is too heavy for them. So the rural students face the inequality of access to HE under high tuition fees .

(2) The Impact of high tuition on students' choice with HEIs and discipline

With the gradual marketization of HE, the price gap appears between different disciplines and different HEIs due to supply and demand . Namely the tuition of popular disciplines are higher than regular majors. Regularly , the tuition fees of Arts discipline is quite high , while the disciplines of normal, military, agriculture, forestry charge low fees.

The Gini Coefficient is a measure of statistical dispersion intended to represent the income distribution of a nation's residents, and is the most commonly used measure of inequality. In general, the gini coefficient is less than 0.2, the income of the residents' is in average level ; The gini coefficient between 0.2 to 0.3, the income gap of nation's residents is in quite average level ; The gini coefficient between 0.3 to 0.4 is reasonable ,while 0.4 to 0.5 means the gap of income is too big. If the gini coefficient is more than 0.5 , it means the gap is disparity. The gini coefficient value is 0.473 over 0.4 in 2013,therefore the gap of Chinese income between urban and rural residents still quite large.

Although i did not get the family background of each professional students of three selected HEIs during the period of studying , but related studies show that in the numerous factors influencing students choice , students from different family economic background has a significantly different priorities. There is a research on

the impact of family capital on major choice for college students based on the perspective of educational equity in 2013, the author Fan Wei, Hao Pan-pan ,Zhu Junhua did a research make a questionnaire for the fresh students in 6 different kind of HEIs in China, the data shows that the students from high-capital families more tend to choose economic management disciplines and engineering disciplines, the students from low-capital families tend to choose medical, liberal arts, the minority languages, journalism and science . And the students who studies agricultural and forestry majors are mainly comes from low-capital families (Fan, Hao &Zhu, 2015).

In the period of choosing majors and HEIs before the access, students usually cannot according to their interests and ability , thus due to the affordability factor, it is destined that the choice of poor students make them at a disadvantage situation in the access of HE resources .

2. Analyze of Education system

(1) The unfairness of Gaokao admission system

China's current college entrance examination system largely abandoned the impact of rights, background and interpersonal factors on the education equity , and guarantee the individual to accept higher education rights equally.

In China, the college entrance examination is the sole criterion for a talent selection.

Although the Gaokao form is fair, namely "everyone is equal in front of the marks".

This surface fairness implies the deeper substantial unfair , because the current enrollment plan by provincial , the current Gaokao test is totally different in each

provinces, and the country admit fractional line is not unified, so the result directly affects the realization of the higher education equality of access opportunity.

Different high school teaching textbook and non-unified test content reflect the education inequity . Due to China's household registration system seriously affect the opportunities for students to study, although there are some un-local students along with their parents accept primary or secondary education in their living city , while when they face the Gaokao , they have to attend the test in where they were born . They studied the different textbooks and take an examination with different questions. For this part of students , both questions of college entrance examination and admissions system against education equity. In my opinion, China's higher education should cancel the Hukou restrictions of university entrance examination, give a chance of fair competition for all candidates.

(2) The disequilibrium enrolment plan among areas

According to the statistics research on the enrollment plan of three HEIs mentioned before, College enrollment plan, especially the distribution of the admission students in Central ministry affiliated universities to all provinces to a great extent reflects the level of social justice and education justice. After the college expansion policy implementation, the competition of student to the high-quality HE resources becomes fiercer, the enrollment plan of Key universities shows the inequity of admission opportunity among all provinces.

The underlying causes of China's current provincial crossed admission quotas reflect the economic development has a big gap between provinces in the entire country,

resulting in uneven development of education, especially insufficient supply and strong demand for high-quality educational resources. Enrollment Quota urban bias groups also because the adequate resources to higher education eastern region, while others are relatively low. The reason of Admissions quotas tend to urban students is that the higher education resource is enough in eastern part of China, and other areas are relatively insufficient(Wang,2008).

This thesis shows that due to the scarcity of higher education, a limited number of enrollment plan in each key universities, and quota for each province enrollment plan is different , as well as admit fractional line . And the Gaokao test among each province is different . Thus aggravate the inequity of Gaokao admission criteria . The "localization" tend to be serious among China's HEIs, each province in the process of enrollment plan arrangement more quota allocation for their local students. This phenomenon may cause the waste of human capital and loss in some provinces, and even affect the future structure characteristic of some industry or professional personnel.

As HEIs affiliated by Ministry of Education, XJTU annually set around 3000 students on enrollment plan . While as provincial university , Yangzhou University annually recruit around 5600 students for enrollment plan . The GUFU annually recruit around 3300 students for enrollment plan . The Key universities collected the high-quality education resources, the gap between different HEIs on enrollment plan is so large, which makes the entrance opportunity of HE more unequal, serious damage the higher education equity.

In my view, in order to change the phenomenon of uneven distribution among HEIs, China's public HEIs should balanced allocation of enrollment plan and unify the Gaokao test and score , ensure the equity of higher education enrollment.

3. Quite low and uneven Government Appropriation

According to figure5.10, I can find out during the year 2013 to 2015, the government appropriation for“985project” HEIs are much higher than it provincial HEIs.

The National fiscal expenditure is unbalanced in HEIs, the funding of “985project” & “211 project” HEIs are from the Ministry of education or central government . While the funding of provincial HEIs are from provincial government , due to the limited resources in the province, the inputs are already in short supply, provincial HEIs need more state financial support.

As far as I am concerned , there is no essential difference between central ministry affiliated HEIs and Provincial HEIs , all of them are state public higher education affairs, thus the Input mechanism shouldn't simply partition in accordance with the "provincial" and "deployment".

The level of a country's fiscal funds into education reflects the degree of the government's emphasis on education to some extent. In some sense, whether the education input is enough or not ,will directly restrict the development of education in one country. In the Higher education field, different countries have different public education service policy. Internationally accepted "State financial education funds accounted for the ratio of the gross national product" as a measure of an important indicator of a country's investment in education funding condition . Since 1980,

annual public education funds in more developed countries account for around 5% of their GNP (Jorge ,2002). In 2013, the China’s public apportions on education was \$376 billion, and the GNP was \$8958billion; the China’s public apportions on education was \$356 in 2012, the GNP was \$8185 billion; the China’s public apportions on education was \$285 billion in 2011, and the GNP was \$7366 billion; the China’s public appropriation on education was \$225 billion in 2010, the GNP was \$6254 billion; the China’s public apportions on education was \$188 billion in 2009 , and the GNP was \$5300 billion. I calculate the ration of the public appropriation on education to GNP during 2009—2013.

The ratio of China’s public appropriation on education to the Gross National Product(GNP),2009—2013

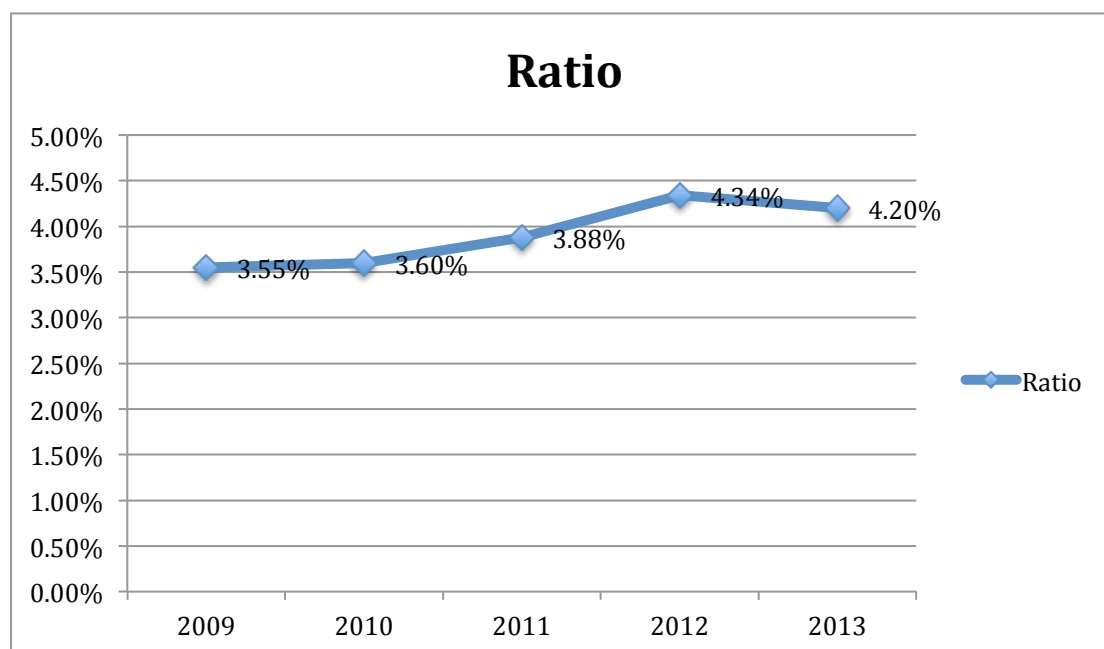


Figure 5.11: The ratio of China’s public appropriation on education to the Gross National Product(GNP),2009—2013. Source: Author’s compilation based on National Bureau of Statistics of the People’s Republic of China

According to the Figure 5.11, I can find out that the ratio of the State financial education funds to Gross National Product among the year 2009 to 2013 is 3.55%, 3.60%, 3.88%, 4.34%, 4.20% respectively . The trend of the ratio has increased from 2009 to 2012 , while it decreased to 4.2% in 2013. Anyway , its value still lower than the developed countries standard around 5%. It means the funding that invested by the China 's government still too fewer than the developed countries and it must be inputted more funding into education .

The reality of China's public education expenditure as a percentage of GNP is still relatively low proportion, which seriously hampered the healthy development of Chinese education. Therefore, all levels of government and administration departments should attach great importance to ensure that investment in education and improve public expenditure on education accounted for the proportion of GNP.

4. Improvement of University financial aid system

With respect to the Public HEIs funding system , there are varies of scholarships (see Annex2, Annex3 and Annex4), especially there are many funding from the individual investment or some enterprises .

On the one hand , even though the government has published some stipulation to the student loan , while the process of the application for students loan are complicated , and ¥5000 (\$769) is a small amount of money compared to the total tuition among the 4-year university life . Then these poor students normally give up there enrollment opportunity and the university will make additional enrollment for some lower-score students . That's the inequality of access for poor students in higher education .

On the other hand , each kind of scholarship and grant is all for outstanding students .

Namely student who have good grades and outstanding performance in some university activities have opportunity to gain the grants and scholarships .

In my opinion , the student loan should not connect with students' study performance and study grades . All of the poor students should have opportunity to apply for the student loan , not only for the “very best ” students.

5. Unreasonable Student training cost calculation

In the process of tuition pricing , the efficient interest of Central government and the local administrative departments can be reflected, but students and their families as stakeholder did not participate in it , they did not establish a reasonable mechanism of balancing of interests.

The provincial HEIs always strive to make the school benefit maximization when set the tuition standard . In addition , the cost accounting and auditing of higher education students has not yet to standardized. The provinces in formulating the tuition standard mainly on the basis of the HEIs opinions , to make tuition standard without violating the national policy on the basis of the higher tuition, so that the tuition standard lacks the interests of the general residents to tuition standard, and less considered the people's affordability(Zhang,2009).

Thus citizens do not know the information about how does the regular HEIs charge the tuition with what standard , and how much its cost. The public concern also have no idea about it . For a long time, china lacks of caliber unified operation plan of student training cost accounting, and due to people lack of deep understanding of

HEIs cost , lack of specific theoretical guidance on what costs should be included in the cost of college students cultivate . There are some limitations in the existing accounting system , this makes the cost accounting of university students cultivate appear very big divergences among scholars.

Since 2004, the Chinese government has established the education hearing system, allows students and parents on behalf to participate in the discussion , to discuss how to develop the college tuition standard .

It provides the consumers of HE to express their interests. However, since the operation of Chinese college tuition hearing system still has the problems such as it becomes a mere formality, nonstandard procedures and nonstandard content. Therefore, stakeholder's participation in China's regular HEIs tuition fees standard set remains to be further improved.

In my opinion, the main purpose of students and parents from different classes to participate in the hearing system is to be known their actual ability of regular college tuition standard by the policymakers. Therefore the organizers always do the research in advance to know the local residents' income, saving status in recent years.

The hearing system of higher education tuition should be strictly according to the following procedures: (1)The department which apply for price adjust shall submit the pricing plan for the commodity price departments at the provincial level; (2) The commodity price departments report the preliminary examination opinion; (3) The participants discussed the adjust pricing plan and the preliminary examination opinion. Audit education management cost, discussing pricing influence to society. According

to the regulations of the state policy, determine the pricing principles and method publicly, and argue for the implementation time and the price level of adjustment price level . And to determine the price adjustment proposal; (4) Hold a hearing meeting about the Tuition price adjustment. Invite citizens from different social strata to participate in the hearing and reply citizen's questions ; (5) The views of Comprehensive price department hearing meeting . Then officially announced the price adjustment plan and the execution date (Mao & Lai,2006).

7 Summary and conclusions

The pursuit of education fairness is the concept of ancient human society. The education fairness related to most of the vital interests of the masses throughout the country, also related to the economic and social development of regions. Along with the social economic development, and the improvement of peoples' life, people take more and more attention to education equity .

In this thesis , multiple aspects of indicators of the three selected public Chinese universities have been discussed, the impact of rising tuition and fees on educational entrance equity has been studied , the China's higher education system and the process of tuition policy making , and the increasing status of tuition in different types of HEIs have been analyzed . I explicated the history of Chinese higher education tuition policy changes and current situation, and further analyze the three public universities enrollment plan and finance aid system's influence on the education fair.

In this thesis, based on many indicators of the three public universities tuition policy has carried on the empirical research, with a comprehensive evaluation on the enrollment plan, financing system ,tuition status in the operation process, I find out the current problems existing in the ordinary university tuition policy, and raise suggestions to further improve China's regular university tuition policy.

The thesis got conclusions through the Case study . The comparison shows that the tuition in current public higher education institutions is too high to the payment ability of residents , and the existing policy has caused the higher education inequity .Because the tuition standard of Central ministry affiliated HEIs regulated by

the central government files, so the tuition has not significant increase in nearly five years; While the tuition charge of provincial HEIs have certain autonomy, so the average tuition at the YZU in 2014 grew by 22.3% compare to 2013; Current Chinese public HEIs tuition level is still on the high level, especially the high fees for students from rural and low-income families make an obvious economic burden on their HE entrance opportunity, caused the inequity of higher education entrance opportunities.

In the calendar year of college enrollment, the different treatment for students existing all the time, it not only embodies in the difficulty of the examination paper, but also on the enrolment and score. The HEIs which belong to “985 Project” and “211 Project” has a high quality education resources and teachers team, but the provincial enrollment plan is very limited and uneven in these HEIs.

In my opinion, firstly , the HEIs which affiliated by Central Ministry should increase enrollment plan on each province, balanced allocation of student enrollment, according to the population distribution to set the provincial enrollment plan . Let the candidates stand on the same starting line, equal competition. Secondly , the national college entrance examination should be unified examination papers. A unified examination paper and every student attend the university entrance exam equally , with the uniform standard recruitment to ensure the fairness of higher education enrollment.

In China, ,for the vast majority of high school graduates, attending the Gaokao is the only way to get chances or qualification of receiving higher education . Scores of Gaokao has a certain correlation with students’ knowledge level. On the one

hand ,there are many students fail in the Gaokao , it lead to the examinee cannot continue further in their ideal university.

On the other hand , once they make some mistakes on the application plan, some high-score students will be shut out of the desired university. Thus for all the students , it seems like gambling when they make decision on the HEIs choices. In fact , Vulnerable groups always at a disadvantage status facing with the acquisition of HEIs enroll information. Especially for the students who failed in the application step, they will often because of information asymmetry and choose too insurance HEIs. It means based on the actually score they might enroll in a prestigious university , but in fact they enroll in a regular university . This high-risk, difficulty gambling also caused the unfairness of higher education entrance opportunities.

In the process of this study, due to my academic field of vision , learning ability and the limitations of the study information , I feel there are the understanding of some questions may not very clear , maybe some of the argument is not yet mature, some views and opinions remains need to be discussed. On the specific operation, it is a worldwide problem that how to determine the cost of higher education . Nowadays, China has no real cost accounting , there is no cost connotation on university's daily operation cost. It just means to maintain the normal operation of HEIs, but is not necessarily the lowest cost efficient operation.

In my opinion, the true education should allow equal choice among all people. If China' HE could enlarge the option right that allow a student could apply to multiple university after the college entrance examination at the same time , thus the student

would have a chance to get offers from multiple university at the same time . In this case, the university will face the fate of the candidates selected . Therefore, the Ministry of education and relevant department of government should take more attention on improvement of education quality and education services, if the students really have the right to choose the HEIs , naturally they also have the right of supervision and evaluation on HEIs.

Public HE is the main body in China's higher education , it has a certain monopoly. Parents and students have no bargaining power. With a long-term return and ambiguity of higher education , it is difficult to pricing the higher education in reality . Therefore, it has a practical significance to make the tuition standard from the residents practical ability .

Setting tuition fee standards should based on the economic development level of different areas by local HEIs, and make all of the students could feel free to choose their preferences discipline with different economic affordability . The most important things is , the public HEIs should increase financial aid project as far as possible, to eliminate the influence factors of student learning result, and expand the beneficial students especially the number of poor students . Another suggestion is all of the public HEIs could consider to implement the complete credit system, it means the student can arrangement their study according to individual case, students who completed credits can graduate in advance. Or try to introduce the European universities operation mode, for students who have economic difficulties can study a while and then working for a period of time and to continue their study. Students can

freely arrange study time and time of graduation . It can not only save a lot of state funding for poor students, but also can develop the students' ability of economic independence. Further it also helpful for the development of Chinese higher education . The author believe that along with the gradually deepening of China's higher education system reform, the tuition system of public regular HEIs will increasingly perfect.

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9 Annex

Annex 1: List of sponsored “project 985” universities in 2015.

“Project 985”	Government appropriation(\$million)
Tsinghua University	627
Peiking University	547
Zhejiang University	402
Shanghai JiaoTong University	341
Huazhong University of Science and Technology	380
Shandong University	360
Wuhan University	397
Sun Yat-sen University	293
Fudan University	361
Xi’an Jiaotong University	306
Nanjing University	262
Sichuan University	360
Xiamen University	239
Tongji University	251
Southeast University	232
Jilin University	423
South China University of Technology	227
Tianjin University	259
Beijing Normal University	278
Renmin University of China	226
Dalian University of Technology	211
Northeastern University	208
Nankai University	232
Central South University	298
Chogqing University	238
China Agricultural University	178
University of Electronic Science and	182

Technology of China	
East China Normal University	192
Hunan University	198
Northwest A&F University	200
Lanzhou University	192
Ocean University of China	157
Minzu University of China	113

Annex 2: The financial aid statistics in YZU 2012

Name	Scope	Amounts (per person)	Numbers of students
Scholarships			6319
State scholarship	School	¥8000 (\$1230)	94
National encouragement scholarship	School	¥5000 (\$769)	957
Schoolmaster scholarship I	School	¥2000 (\$308)	236
Schoolmaster scholarship II	School	¥1000 (\$154)	895
Specialty scholarships	School	/	3582
Zhu Jingwen scholarship	School	¥2000 (\$308)	460
Zhu Jingwen special scholarship	School	¥8000 (\$1230)	5
Fei Xiaotong scholarship	School	¥4000 (\$615)	8
Puxiang scholarship	Partial Institutes	¥4000 (\$615)	6
Xiaolian scholarship	Partial Institutes	¥1500 (\$231)	10
Yanxiang scholarship	Partial Institutes	¥1500 (\$231)	10
Wenshi scholarship	Partial Institutes	¥3000 (\$461)	10

Sanyi scholarship	Partial Institutes	¥1000 (\$154)	10
Liu Yuzao scholarship	Partial Institutes	¥500 (\$77)	5
Minyou scholarship	Partial Institutes	¥2000 (\$308)	20
Huirui scholarship	Partial Institutes	¥4000 (\$615)	2
Outstanding scholarship	Partial Institutes	¥1000 (\$154)	9
Grants			5186
State grants	School	¥3000 (\$461)	4906
Zhu Jingwen grants	School	¥1500 (\$231)	60
Heart grants	School	¥1000 (\$154)	100
Ding Peihe grants	Partial Institutes	¥1000 (\$154)	20
Minority students grants	School	¥1000 (\$154)	60
Sanyi grants	Partial Institutes	¥400 (\$61)	25
Hengli grants	Partial Institutes	¥1000 (\$154)	15
Tuition wavier	School		20

Source: Yangzhou University official website.

<http://zhaoban.yzu.edu.cn/col/col4303/index.html>

Annex3: The financial aid statistics in GUFU 2015

Name of Scholarship	Numbers of students	Amount (per person)	Names of Grants	Numbers of students	Amount (per person)
State scholarship	35	¥8000(\$1230)	State grants I	413	¥1750(\$270)
National encouragement scholarship	1042	¥5000(\$769)	State grants II	7067	¥1500(\$231)
School scholarshipI	764	¥2000 (\$308)	State grants III	413	¥1250(\$193)

School scholarship II	1274	¥1500(\$231)	Special scholarships for poverty alleviation	1029	¥1000(\$154)
School scholarship III	1783	¥1000(\$154)	Hezhanli grants	112	¥4000(\$616)
Individual scholarship	69	¥500(\$77)	Tuition waiver	35	¥3200(\$493)
Hong yinxing diligent scholarship	10	¥3000 (\$462)			
Hong yinxing Innovation scholarship	10	¥3000 (\$462)			

Source: GUFEE official website

Annex4: The financial aid statistics in XJTU 2014

Name of Scholarship	Number of students	Amount (per person)	Name of Scholarship	Number of students	Amount (per person)
State scholarship	220	¥8000(\$1231)	Pengkangscholarship	183	¥5000(\$769)
National encouragement scholarship	511	¥5000(\$769)	Siyuan scholarship	3614	¥1000 (\$154)
ABB scholarship	9	¥12000(\$1847)	CASC scholarship I	1	¥5000(\$769)

CASC scholarship II	2	¥3000(\$462)	CASC scholarship III	4	¥2000(\$308)
Zhizaoshunde scholarship	10	¥4000 (\$615)	Fashite gear special scholarship	3	¥10000 (\$1539)
Fashite gear scholarship I	20	¥3000 (\$462)	Fashite gear scholarship II	30	¥2000 (\$308)
Fashite gear scholarship III	50	¥1000 (\$154)	Pan Wenyuan scholarship	5	¥4000 (\$615)
Hoingxin scholarship	10	¥6000 (\$923)	Songshanhu scholarship	18	¥2500 (\$385)
Fushishile(China) scholarship	10	¥5000 (\$769)	Fushishile(Shenzhen) scholarship	30	¥3000 (\$462)
Guanghua scholarship	20	¥2000 (\$308)	Hui neng scholarship	6	¥5000 (\$769)
Architecture scholarship	6	¥2000 (\$308)	Lu Shidi scholarship I	5	¥8000 (\$1231)
Lu Shidi scholarship II	10	¥6000 (\$923)	Shenyang Tool scholarship I	5	¥8000 (\$1231)
Shenyang Tool scholarship II	10	¥5000 (\$769)	Shenyang Tool scholarship III	20	¥3000 (\$462)
Samsung scholarship	15	¥5000(\$769)	Shengyi scholarship I	4	¥5000(\$769)
Shengyi scholarship II	10	¥2000 (\$308)	Suzhou gaixin area scholarship	10	¥5000 (\$769)
Suzhou industrial zone scholarship	20	¥3500 (\$539)	Shan shan scholarship I	2	¥3000 (\$462)
Shan shan scholarship II	3	¥2000 (\$308)	Shan shan scholarship I III	3	¥1000(\$154)
Fu Yite scholarship	10	¥4000(\$615)	Siweidongli scholarship	5	¥2000(\$308)
China nuclear	4	¥8000	China nuclear	8	¥6000

power scholarship I		(\$1231)	power scholarship II		(\$923)
Chen Qi scholarship	15	¥2000 (\$308)	Guangdong nuclear power scholarship	10	¥1000 (\$154)
Qin Shuming scholarship	5	¥1000 (\$154)	Huabao scholarship	10	¥1000(\$154)
Qing An scholarship	10	¥1000(\$154)	Logique scholarship	7	¥1000(\$154)
Li Fushan scholarship	10	¥1000(\$154)	Yu Bingchang scholarship	8	¥1000(\$154)
Wu Shihua scholarship	3	¥1000(\$154)	Golden Bay Scholarship	10	¥2000(\$308)
Zhong Zhaolin scholarship	5	¥1000(\$154)	Jiang Yue Scholarship	5	¥1000(\$154)
ABB scholarship	9	¥12000(\$1847)	Baosteel scholarship	4	¥10000(\$1539)
IBM scholarship	2	¥4000 (\$615)	Tang Zhongying scholarship	126	¥4000 (\$615)
Uniqlo scholarship	5	¥10000 (\$1539)	Jing Shuping scholarship	19	¥5000 (\$769)
Name of Grants	Number of students	Amount (per person)	Name of Grants	Numbers of students	Amount (per person)
State grantsI	3942	¥1500(\$230)	Chunyu grants	439	¥2000(\$307.7)
Boai grants	12	¥4500(\$692)	Zeng Xianzi grants	35	¥5000(\$769)
Yu Bingchang grants	20	¥1000(\$154)	Pan Xinping grants	30	¥4000(\$615)
Qiu Changrong	20	The value	Suzhou	15	¥3000

grants		equals annually tuition	Gaoxin Area grants		(\$462)
ShiChunhua grants	2	¥8000(\$1231)	Siyuangrants	45	¥4000(\$615)
Tai Zhidegrants	6	¥5000(\$769)	Zhen Ruwan grants	20	¥5000(\$769)
Jingjin grants	79	¥5000(\$769)			

Source: XJTU official website.

Annex5: The proportion of Higher Education Funds by the Government Appropriation in XJTU

Year	Total Income (ten thousand)	Government Appropriation (ten thousand)	GA as% of total income	Business income (ten thousand)	BI as% of total income	Affiliate income (ten thousand)	API as% of total income	Other income (ten thousand)	OI as% of total income
2013	\$44,987	\$19,753	43.91%	\$20,718 Tuition: \$10,113	46.05% 22.47%	\$737	1.64%	\$3,778	8.4%
2014	\$53,228	\$23,797	44.71%	\$23,905	44.91%	\$1,136	2.13%	\$4,3	8.25%

				Tuition: \$12,039	22.62%			91	
2015	\$69,323	\$25,610	36.94%	\$32,577 Tuition: \$18,432	46.99% tuition2 6.59%	\$1,085	1.56%	\$10,052	14.50%

Source: Income balance of XJTU statistics (2013,2014,2015)

Annex6:The proportion of Higher Education Funds by the Government Appropriation in YZU

Year	Total income (ten thousand)	Government Appropriation (ten thousand)	GA as% of total income	Business income (ten thousand)	BI as% of total income	Operating income (ten thousand)	OI as% of total income	Affiliates paid income (ten thousand)	API as% of total income	Other income (ten thousand)	OI as% of total income
2013	\$23,842	\$10,968	46%	\$7320 Tuition: \$4132	30.7%	\$2,209	9.26%	\$790	3.31%	\$2,555	10.72%

2014	\$23,762	\$11,308	47.59%	\$7,354 Tuition: \$4,838	30.95% Tuition 20.36%	\$2,371	9.98%	\$1,118	4.71%	\$1,609	6.77%
2015	\$26,367	\$13,679	51.88%	\$7,837 Tuition: \$4884	29.72% Tuition 18.52%	\$2,475	9.39%	\$1,162	4.41%	\$1193	4.53%

Source: Income balance of YZU statistics (2013,2014,2015)

Annex7: The proportion of Higher Education Funds by the Government Appropriation in GUF E

Year	Total Income (ten thousand)	Government Appropriation (ten thousand)	GA as% of total income	Business income (ten thousand)	BI as% of total income	Affiliates paid income (ten thousand)	Other income (ten thousand)	OI as% of total income
2014	\$9,731	\$4,932	50.68%	\$4,157 Tuition: \$3994	42.72% % 41.04%		\$642	6.6%
2015	\$4,511	\$1,479	32.51%	\$3,072 Tuition: \$3,072	67.5% tuition 67.5%		\$154	3.37%

Source: Income balance of GUF E statistics (2014,2015)