

Cheng, H. (2009). Inequality in Basic Education in China: A Comprehensive Review. *International Journal of Educational Policies*. Vol.3(2) pp.81-106.  
ISSN:1307-3842

## **Inequality in Basic Education in China: A Comprehensive Review**

Henan Cheng\*  
*Columbia University*

### **Abstract**

China has achieved tremendous economic success over the past three decades; however, this remarkable economic development has come at the expense of an equal and equitable distribution of social and educational opportunity across the nation. This article presents a review of contemporary literature on the longstanding issue of educational inequality in China. In particular, it focuses on empirical research of educational inequality in three main areas: urban-rural inequality, regional inequality, and gender inequality. Four key research questions are addressed in the article: (1) What is the current state of educational inequality in China and how has it changed over time? (2) What are the determinants of overall inequality in schooling? (3) What are the main causes of educational inequality in China? (4) What strategies should the Chinese government adopt in order to promote equality and equity in education? The article concludes with discussions on the strengths and limitations of the existing body of work and directions for future research.

**Keywords:** *educational inequality; basic education in China; urban-rural inequality; regional inequality; gender inequality*

---

\* Henan Cheng, Ed.D. Candidate, Department of International and Transcultural Studies, Teachers College, Columbia University, USA. E-mail: hc2158@columbia.edu

## **Introduction**

Since its launch of economic reform and opening-up policies in 1978, China has achieved tremendous economic success. According to the latest World Bank statistics, in 2008 China replaced Japan to become the second largest economy in the world. Given its fast economic growth rate, economists predict that China might overtake the U.S. as the world's largest economy in only a few decades. However, it is important to bear in mind that China's remarkable economic development has come at the expense of an equal and equitable distribution of economic, social, and educational opportunities across the nation. In this paper, a review of contemporary literature on the longstanding issue of inequality in schooling in China is presented. More specially, the review focuses on empirical research of educational inequality in three main areas: urban-rural inequality, regional inequality, and gender inequality. The main purposes of the review of literature are to present an overview of the origins and development of educational inequality in China, and to identify knowledge gaps for future research. In particular, four key research questions are addressed in this paper: (1) What is the current state of educational inequality in China and how has it changed over time? (2) What are the determinants of overall inequality in schooling? (3) What are the main causes of educational inequality in China? (4) What educational development strategies should the Chinese government adopt in order to promote equality and equity in education?

Due to the limitation in length, the scope for this paper is restricted to the analyses of inequality at basic education (i.e. primary and secondary education) levels in China. Research on inequality in higher education, though equally important, is beyond the scope of this paper. After a search of the existing literature on educational inequality in China during the past two decades, approximately 30 empirical research and policy analysis papers published in Chinese as well as in English, including some of the most influential research in the field, have been selected for review. In addition to presenting the main findings of these studies, this review also highlights some key studies and assesses their empirical contributions to the research of Chinese education in general. While this review mainly focuses on the work of economists of education, it also covers

relevant research by sociologists of education, anthropologists, and educational policy analysts.

The remaining part of the paper is organized into five sections. The first section presents a conceptual and analytical framework. The second, third, and fourth sections concentrate on three different dimensions of educational inequality respectively: urban-rural inequality, regional inequality, and gender inequality. The final section of the paper provides a summary and discussion of knowledge gaps for future research.

## **Conceptual and Analytical Framework**

### **Definitions of Inequality**

The pursuit of equality of opportunity is one of the most enduring themes in human civilization. The ideas of educational equality can be found in the work of many ancient philosophers such as Confucius, Plato, and Aristotle. For example, more than two thousand years ago, Confucius, China's greatest philosopher and educator, already expressed an egalitarian view of education in his famous dictum that "in teaching there should be no distinction of classes" (Confucius, c.a.500 BC, 15: 38).

In modern societies, the notion of educational equality originated from American philosopher John Rawls' (1971) three principles of equality of opportunity. According to Rawls, equality and equity of opportunity in the context of an educational system refers to: first, providing equal educational facilities to those who are qualified; second, bringing everyone to a minimal level of education; and third, making special provisions for disadvantaged groups (Rawls, 1971). Based on these principles of Rawls, Farrell (1999 & 1994) further summarized three main forms of equality related to the school system: equality of access, equality of inputs, and equality of outcomes.

As Farrell and other scholars have pointed out, educational equality has many different dimensions including race, ethnicity, socio-economic status, gender, and geographical locations, etc. (Farrell, 1994 & 1999; Coleman et al, 1966; Husén, 1974 & 1975; Liu & Holger, 2001). Given the special contexts of educational development in China, this paper focuses specifically on three aspects of educational inequality in China: urban-rural inequality, regional inequality, and gender inequality.

## **Indicators of Inequality in Education**

Although Rawls' principles of equality provide some general and useful criteria to examine the issue of inequality in basic education in China, it is still necessary to use more specific indicators to measure inequalities that exist in different aspects of education. Taking into account distinctive features of education at different levels, Chinese scholars Yang and Zhou (2003) proposed four interrelated, yet relatively independent, indicators: (1) overall educational inequality indicator; (2) compulsory education inequality indicator; (3) upper secondary education inequality indicator; and (4) higher education inequality indicator. These four indicators emphasize different aspects of inequality in education. For instance, overall inequality indicator and higher education inequality indicator have a specific focus on the differences in educational attainment and enrollment rates in relation to urban-rural, regional, and gender differences; whereas compulsory and upper secondary inequality indicators mainly consider the differences in educational financing associated with urban-rural and regional disparities (Yang & Zhou, 2003).

The indicators used in this paper cover all the indicators suggested by Yang and Zhou (2003). In addition, it also includes other educational indicators such as parental expectations, self-confidence of students, and motivation and aspirations of students.

## **Theories of Social and Educational Inequality**

The review of literature indicates that existing research on educational inequality in China is largely under-theorized. Very few, if any, empirical studies have examined the issue through a theoretical lens. Given such theoretical deficiency, it is helpful to present a brief overview of major Western theories on this topic in order to gain a deeper understanding of the current situation in China.

Contemporary theories of social system and stratification have been dominated by two competing approaches: structural-functionalist approach and conflict theory approach. There are fundamental differences between these two paradigms on the role of education in modern societies and the underlying causes of educational inequality. From the structural-functionalist perspective, a society, just like an organism, is consisted of different sub-systems that perform different tasks to meet its basic survival needs (Durkheim, 1972; Parsons, 1959). Schools in highly complex, modern societies, for

instance, serve important functions of achieving “role differentiation” and “social solidarity” (Feinberg & Soltis, p.16). Prominent structural-functionalists like Parsons and Schultz believe that education is “the great equalizer” because it can provide equal opportunity and generate social mobility (Parsons, 1959; Inkles & Smith, 1974; Schultz, 1961). Although structural-functionalists admit that inequality does exist in education, they argue that the existence of educational inequality is mainly due to differences in talent, attitude and responsibility among individual students rather than a consequence of system-wide defects.

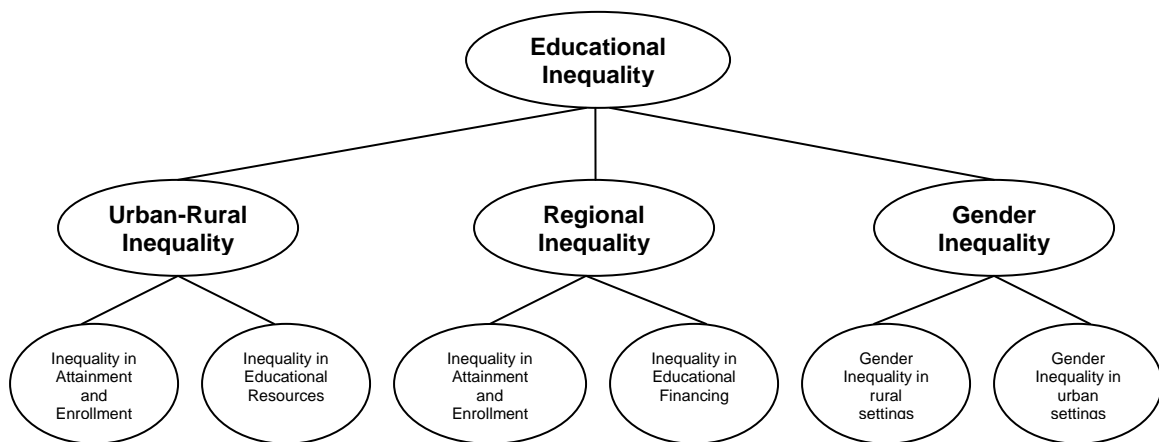
In contrast, Marxist-oriented conflict theorists such as Bourdieu, Collins, and Bowles and Gintis argue that social and educational inequality is the result of fundamental flaws in social system. These conflict theorists see education as the most important “ideological state apparatuses” that only serves the interests of the ruling class (Althusser, 1971; Bourdieu, 1977; Collins, 1971; Bowles & Gintis, 1976). In particular, Bourdieu, whose theoretical work has placed a special emphasis on the concepts of culture and cultural reproduction, argues that education, through the hidden curriculum and symbolic violence, plays a critical role in reproducing the culture of the dominant group and in maintaining unequal social relations (Bourdieu, 1977; Bourdieu & Passeron, 1977). Similarly, Neo-Marxist economists Bowles and Gintis also criticize that educational system in capitalist American society “legitimizes economic inequality by providing an open, object and ostensibly meritocratic mechanism for assigning individuals to unequal economic positions”. They conclude that schools in modern societies actually “justify and reproduce inequality rather than correct it” ((Bowles & Gintis, 1976, cited in Porter, 1981, p. 628).

Structural functionalism and conflict theory both have their own problems and limitations; nevertheless, these two different theoretical perspectives can be useful in the examination of the current situation of educational inequality in China.

### **Three Dimensions of Educational Inequality in China**

In order to capture the multi-dimensional nature of inequality in education in general, this review adopts an analytical framework that highlights three main dimensions of inequality in basic education in China. As Figure 1 shows, these three dimensions include: first, urban-rural inequality; second, regional inequality; and third inequality

between men and women. Furthermore, for each of these three dimensions, the issue of inequality in education can be analyzed from the perspectives of educational inputs and outcomes. For example, the investigation of inequalities in educational inputs takes into account not only the differences in government educational spending, but also the disparities in non-government (i.e. private) educational resources. With respect to the analyses of educational outcomes, the review mainly focuses on inequalities in educational quality, and school attainment and achievement.



**Figure 1. The framework for Analyzing Educational Inequality in China**

Applying the above analytical framework, the following three sections of this paper will be devoted to the descriptions and analyses of each of the three dimensions of educational inequality in China.

### **Urban-Rural Inequality in Basic Education in China**

To appreciate the complexity of the issue of urban-rural educational inequality, one needs to first understand China's household registration (*hukou*) system, the "most fundamental political institution" in Chinese society, and its role in the provisions of social service including educational service (Solinger, 1999, p. 3). Established in 1958, the *houkou* system was initially used by the Communist government as a means of separating rural and urban populations and restricting rural-to-urban movement (Solinger, 1999; Liang et al, 2007; Kwong, 2006). Under this system, every Chinese citizen is required to register

and obtain either rural or urban permanent household registration status (i.e. *hukou*)<sup>1</sup>. The existence of the *hukou* system not only makes it extremely difficult for rural population to gain permanent residence status in the cities, but more importantly, it excludes rural residents from most state provisions, including provision of schooling, that urban residents are entitled to.

Given this unique feature of the urban-rural social divide in China, there has been a large body of research on the issue of urban-rural inequality in China. Most of this research, however, has focused on examining the economic aspects of the issue, such as disparities between urban and rural incomes (Jian, Sachs, & Warner, 1996; Kanbur, 1999; Lee, 2000; Jones, Li, & Owen, 2003; Yao, Zhang, & Hanmer, 2004; Chen & Feng, 2000; Bao et al, 2002). Recently, more attention has been given to the issue of social inequality in China, and a growing number of studies have specifically focused on educational inequality between urban and rural areas. A review of the existing literature found that studies in this field are quite broad. While some studies have focused on investigating urban-rural differences in educational attainment and achievement, many empirical studies have attempted to quantify and measure urban-rural disparities in educational financing at different levels of education. This section reviews empirical research focusing on both of these two aspects of urban-rural inequality in basic education in China.

### **Urban-Rural Inequality in Educational Enrollment and Achievement**

The educational inequality between urban and rural areas has been a fundamental source of overall educational inequality in China. This inequality is clearly reflected in large gaps in basic literacy and educational achievements between the two areas. According to the recent China Human Development Report, in 2000 the average illiteracy rate was 11.6 percent in rural areas, which is almost three times that of the illiteracy rate in urban areas (UNDP, 2005). With respect to educational attainment and enrollment, substantial gaps can also be found between rural and urban populations. The Fifth Census in 2000 showed that rural residents on average had 6.8 years of schooling, three years fewer than urban residents. Although there are relatively low urban-rural gaps

---

<sup>1</sup> Based on the 2005 China 1 % Population Sample Survey Data, the China National Statistic Bureau estimated that, by the end of 2006, the rural population was 737 million, accounting for 60.7 % of the total population in China.

at the primary and lower secondary levels largely due to the government's efforts in universalizing the nine-year compulsory education, the gaps at upper secondary level and beyond are extremely high: only 8.5 percent of the rural population was educated beyond high school in 2000, in comparison with 43.5 percent of the population in the cities (UNDP, 2005). Moreover, recent statistics also indicated an alarming trend of widening urban-rural gaps beyond the compulsory education level. For instance, the 2005 China Human Development Report showed that the proportion of urban lower secondary students entering upper secondary schools had increased 19 percent between 1999 and 2002, whereas this proportion only increased 10 percent in rural areas during the same period of time (UNDP, 2005).

Some Chinese scholars suggest that the substantial urban-rural disparities in basic education are a direct result of large disparities in teacher quality and school facilities between these two areas. For instance, a recent study by Yuan (2005) showed that, although the overall quality of teachers has increased greatly in the past twenty years, the disparities in teacher quality between urban and rural areas have actually widened. Due to the severe shortage of qualified teachers, many rural schools are forced to hire *minban*<sup>2</sup> and substitute teachers who have much lower levels of education and, in many cases, have no certification whatsoever. It was found in Yuan's (2005) study that the overall educational level of primary and secondary teachers in rural areas was 30 percentage point lower than those in urban areas. In addition to the teacher quality gaps, Yuan's research also highlighted the striking urban-rural disparities in physical conditions of schools. The study reported that, of all the primary school buildings that were in dangerous conditions across the nation, 81.97 percent were located in rural areas in comparison with merely 4.95 percent in urban areas (Yuan, 2005).

Given the fact that large gaps also exist across different regions in terms of educational attainment and achievement, some researchers are interested in identifying which type of inequality, regional vs. urban-rural, is the more important source of the overall inequality in China's basic education. Qian and Smyth (2005), for instance, conducted a comparative analysis of urban-rural disparities and regional disparities in school attainment and enrollment. They found that the urban-rural inequality accounted for a much larger share of the overall educational inequality. Using Gini coefficients and

---

<sup>2</sup> "*minban*" (people-managed) is the Chinese term for "private" or non-government".



decomposition analysis, Qian and Smyth (2005) measured the urban-rural disparities in educational attainment between 1990 and 2000. Specifically, the researchers adopted two proxies -- average years of schooling (AYS) and percentage of graduation (PG) -- to indicate the magnitude of urban-rural disparities in educational attainment. The empirical analysis provided strong evidence that urban-rural inequality, rather than regional inequality, was the predominant contributor of the overall educational inequality in China. Interestingly, such a pattern of educational inequality is also consistent with the pattern of inequality in economic development that was found in an earlier study by Tsui (1993) which indicated that urban-rural economic inequality is more predominant than regional economic inequality.

In addition to the research that documents urban-rural educational inequality at a specific time, in recent years a growing number of studies have attempted to investigate the evolution and trends of urban-rural inequality over a long period of time. For instance, a study by Hannum (1999) examined the trends in urban-rural inequality in basic education using tabular data between 1949 and 1990. Empirical evidence clearly indicates a U-shaped evolution of urban-rural differences in basic educational provision and enrollment during this period. Hannum (1999), using indicators of educational supply, participation, and attainment, found a downward trend in urban-rural inequality in basic education during the Cultural Revolution years (1966-1978) and an upward trend in the post-Revolution years. In her explanation of those trends of educational inequality between urban and rural areas, Hannum argued that changes in policy orientation have played a crucial role in shaping the development of urban-rural educational inequality. The scholar pointed out that the economic development associated with market reform in China came at the expense of an equitable distribution of educational opportunities across the urban-rural boundary. Based on her observations of the trend of widening urban-rural educational inequality after 1978, Hannum concluded that educational opportunities for the rural population in China have eroded significantly since the launch of the economic reforms (Hannum, 1999).

Hannum's conclusions are supported by more recent and comprehensive evidence presented in Zhang and Kanbur's (2005) empirical analysis of the trends of urban-rural educational inequality. Like Hannum (1999), Zhang and Kanbur (2005) also observed a similar pattern of the changes of urban-rural inequality over time. Using comprehensive

time-series data from different sources, the scholars adopted a detailed decomposition of rural-urban inequality measured by the Gini coefficients and Generalized Entropy (GE). They found that social inequalities, including inequalities in education and healthcare, between rural and urban areas have increased substantially since the economic reforms began. Particularly, with respect to basic education, Zhang and Kanbur (2005) revealed large urban-rural gaps in literacy: the rural illiteracy rate was more than double that of the urban illiteracy rate in 2000. Moreover, the researchers provided direct and strong quantitative evidence on how urban-rural inequalities in education have evolved over a long period of time. Similar to the results of Hannum (1999)'s analysis, Zhang and Kanbur's (2005) findings also supported the view that the increasing urban-rural educational inequalities were closely associated with the economic reform that has a strong emphasis on efficiency rather than equality.

### **Urban-rural Inequality in Educational Finance**

As mentioned previously, in addition to urban-rural inequalities in educational outcomes measured by school enrollment and attainment, significant disparities also exist in educational inputs such as school funding and other educational resources. In fact, financial inequalities between urban and rural areas are a key issue in the problem of overall urban-rural inequality in basic education in China. Inequalities in educational finance are often regarded as the direct cause of the urban-rural inequalities in educational development.

According to a national study by Yuan (2005), the average urban primary per-student expenditure was 1.86 times that of rural per-student expenditure in 2001. The urban-rural gap in educational finance was even greater at the secondary level: per-student expenditure of lower secondary education in urban areas was almost double that of per-student expenditure in rural areas (Yuan, 2005). Moreover, Yuan's research showed that large urban-rural gaps in school spending not only exist in poor inland provinces, but also exist in the most developed Chinese metropolitan areas like Beijing, Shanghai, and Tianjing<sup>3</sup>. The statistics indicated that the urban budgetary per-student

---

<sup>3</sup> In China, in terms of administrative structure, a metropolitan area includes a large city and its surrounding rural counties. For instance, the city of Beijing has eight districts and ten suburban counties.

spending in these three areas was almost twice that of rural spending in 2001 (Yuan, 2005).

Given the great attention and research devoted to the issue of school financial inequality and inequity, many researchers and analysts have attempted to quantify and measure the magnitude of the inequality in school financing. Especially since the 1990s, there is a growing body of literature which attempts to address this issue. For instance, in a recent study Tsang and Ding (2005) investigated resource utilization and disparities in compulsory education in China based on county-level data in 1997 and 1999. They estimated five measures of inequality, including the Gini coefficient, the Theil Index, restricted range, federal range ratio, and coefficient of variation. Tsang and Ding's comprehensive analyses yielded several important findings. First, it was found that there was a large degree of inequality in per-student spending in compulsory education nationwide. The spending gap was particularly substantial between urban and rural areas, and between coastal and inland regions. Among all spending categories, non-personnel spending had the largest degree of inequality. Furthermore, the comparative analysis of 1997 and 1999 data revealed no significant change in overall financial inequality. However, it did find that per-student spending gap widened between urban and rural areas, as well as between coastal and inland regions.

In another national study, Li, Park, and Wang (2007) focused specifically on the trends of within-rural financial inequality. Drawing upon multi-level data on school financing in rural primary education, the study provided systematic empirical evidence on the changes in school equality and equity in rural China between 1993 and 2000. One important contribution of this study is that the analysis focuses on financial disparities in rural primary education at three different levels: across-province level, across-county level, and across-village level. The study showed, in terms of across-province disparity, overall inequalities in total per-student spending decreased modestly between 1993 and 2000. The ratio of central to coastal unit expenditure fell 2.4 percentage points between 1993 and 2000; and the western to coastal ratio fell 1 percentage point during the same period. However, large county-level inequalities still persisted across counties within the same province in rural primary school expenditures per student between 1993 and 2000. Furthermore, the analysis of school-level data indicated that inequality in school spending demonstrated different patterns for different educational expenditure variables. For

instance, inequality in operating expenditure was greater compared to inequality in personnel expenditure, and had stronger association with inequality in income levels of local communities. Based on their findings of greater inequality in local sources of educational finance than inequality in government budgetary spending, Li and his colleagues concluded that extra-budgetary finance exacerbated the inequality problem in the rural areas (Li, Park, and Wang, 2007).

### **Causes of Urban-Rural Inequality in Basic Education**

The review of relevant literature suggests that the current educational inequalities between urban and rural areas in China are caused by a range of factors, including historical factors, economic factors, and political factors. In particular, the political causes of urban-rural educational inequalities have been widely cited as the main cause of urban-rural inequalities.

Yang (2000), for instance, argued that the fundamental cause of urban-rural inequality in China is the systemic inequality in education at all levels. This systematic inequality, in Yang's view, can be examined from two different aspects: inequality in the distribution of educational resources, and inequality in educational policies (Yang, 2000). According to Yang's analysis, the large gaps in educational levels between rural and urban areas are closely related to the differences in their share of educational inputs (including both government and non-government inputs). Studies have shown that school financing has increasingly relied on non-government resources in local areas since China launched decentralization and diversification of educational financing reforms in the mid-1980s (Tsang, 1994; Yang, 2000). As a consequence, urban-rural educational inequalities have widened due to local rural government's low ability in mobilizing additional funding.

Furthermore, Yang argued that the systematic inequality is also clearly reflected in Chinese government's educational policies. Yang criticized the current policies as having a strong urban bias. The urban-oriented curriculum, textbooks, and educational standards neglect the special needs of rural population, which in turn fail to attract rural students and lead to lower school enrollment and attainment (especially at secondary level) in rural areas than in urban areas (Yang, 2000). Moreover, the strong urban bias of current governmental policies is clearly reflected in its strategy of allocating

disproportionately large share of resources to higher education. According to a recent study by Zhang (2005), the central government allocated around 90 percent of budgetary funds to higher education during the entire ten-year period in the 1990s, leaving less than 10 percent of government funds for basic education. Such urban- and higher education-orientated policies inevitably further exacerbates the urban-rural inequality in basic education because there are very limited governmental resources available for many primary and secondary schools in poor rural areas (Zhang, 2005).

The views of Yang (2000) and Zhang (2005) have received wide supports from a number of international scholars whose research has focused on the political causes of urban-rural inequality in China. Recent studies by these scholars have revealed the negative impacts of reforms on educational opportunities for rural population in China. For instance, Hannum's (1999) analysis of the changes in urban-rural inequality in education between 1949 and 1990 provides strong empirical evidence on the effects of politics on urban-rural inequality and inequity. Hannum found that urban-rural differences in basic education were closely linked with shifts in the political context of education policies in China: inequalities declined when the Chinese government adopted a radical egalitarian agenda before 1978; however, inequalities have widened significantly in the post-reform era when the educational development strategy focuses on promoting efficiency (Hannum, 1999).

Similarly, Tsang (1994) also demonstrates the oscillating nature of Chinese educational policies, pointing out that "educational developments [in China] have been highly politicized", and state policies of educational developments have changed back and forth "between 'redness' and expertise, and between the concerns for equality and efficiency" (Tsang, 1994, p. 3). The scholar explained that disadvantaged groups such as rural residents and women gained greater access to education and, as a result, inequalities were reduced when "redness" was emphasized in the Mao era; whereas, inequalities in educational opportunities increase when "expertise", or efficiency, is emphasized in the reform period (Tsang, 1994). The experiences of China, Tsang concluded, simply illustrate that there are always tradeoffs between equality and efficiency.

## **Regional Educational Inequality and The Impact of Uneven Economic Development in China**

### **Regional Inequality in Basic Education**

Besides substantial urban-rural educational inequality, another important component of the overall educational inequality is inequality across different regions in China. Significant gaps can be found in educational development between the eastern, central, and western regions<sup>4</sup>. In particular, the western region is facing a number of problems in schooling, including low literacy, low school enrollment and attainment, and a severe shortage of educational funding. According to the Fifth Census data, the illiteracy rate of certain western provinces such as Tibet was as high as 47 percent, which is in sharp contrast with less than 7 percent illiteracy rates in most eastern provinces (UNDP, 2005).

Great disparities also exist in educational resources across regions. In fact, the review of available literature indicates that the research on regional educational inequality in China has been dominated by analyses of educational financial inequality across different regions. For instance, in an earlier study of educational financing in 29 Chinese provinces, Tsang (1994) found that in 1989 the ratio of maximum to minimum per-student expenditure among the 29 provinces was 6.4 in primary education. In other words, the per-student expenditure in the top-spending province was 6.4 times that of the bottom-spending province. More recently, Yuan (2005)'s analysis demonstrates that, at the both primary and secondary education levels, the per-student total expenditure in the wealthy Shanghai city was more than 8 times that of poor, western province of Guizhou in 2000. Comparing the findings of Tsang and Yuan's studies, it is clear that the regional gaps in educational funding have widened since the late 1980s.

### **Determinants of Regional Educational Inequality**

Given the close connections between economic development and educational financing, some scholars, particularly economists of education, have focused on examining the impact of uneven economic development on regional inequality in school

---

<sup>4</sup> Another common way is to divide the country into three regions: Region One (*yi pian*), Region Two (*er pian*), and Region Three (*san pian*). Region One includes provinces which are the most advanced while Region Three is the least advanced and Region Two is in between (Tsang & Ding, 2005).

funding (Gustafsson & Li, 2004; Lampton, 1979; Tsang, 1994; Tsang & Ding, 2005). Lampton (1979), for instance, investigated the issue of inter-provincial inequality from a historical perspective in an early study. Based on comprehensive time-series data gathered for five provinces, including Anhui, Hunan; Guangdong, Shanxi, and Shandong, since 1949, Lampton analyzed the relationships between economic development and inter-provincial differences in educational development. A major finding of the study is that economic variables were the key determinants of differences among the provinces in the provision of basic education. Moreover, the study found that, in addition to economic factors, political factors also played an important role in the development of education. Lampton argued that leadership's choices relating to investment priorities and funding strategies had strong effects on inequality of education among Chinese provinces (Lampton, 1979).

In a more recent quantitative research, Wei and Yang (1997) further explored the relationships between regional differences in economic development levels and educational inequality. The researchers first examined the determinants of financial inequality across different provinces. The results of the multivariate regression analysis indicated that GDP per capita was the most important determinant of regional financial inequality in education. Using the 1993 data, for example, Wei and Yang (1997) found that about 78 percent of variance of financial inequality can be explained by the differences in GDP per capita (Wei and Yang, 1997). Furthermore, Wei and Yang analyzed the relationships between the disparities in economic development and the differences in the growth rate of educational expenditure across regions and found a similar pattern: GDP per capita has strong positive effects on the regional differences in the growth rate of educational expenditure. Again, using the 1993 data, about 55 percent of the differences in the expenditure growth rate can be explained by the differences in GDP per capita (Wei and Yang, 1997). Given the close link between GDP per capita and the growth rate of educational expenditure, it is not hard to understand why the educational expenditure gaps between rich (i.e. high GDP per capita) and poor (i.e. low GDP per capita) regions have widened in the 1990s. Those findings of Wei and Yang (1997) support earlier results of Lampton (1979), suggesting that economic development is the most important cause of inter-provincial inequality in the provision of education.

In another quantitative analysis, Tsang (1994) examines differences in educational expenditures by education level for 1989 based on provincial-level data. As one of the earliest statistical analyses exploring the financial inequality and inequity issue in basic education in China, Tsang's study presents convincing evidence indicating large gaps exist in unit expenditures in primary and secondary education. For example, it was found that in 1989 per-student budgetary expenditure varied significantly between 46.4 yuan (about \$ 7) per student for Hubei province and 297.9 yuan (about \$ 44) per student for Shanghai. The gaps were even greater for extra-budgetary expenditure on primary education. The ratio of maximum per-student expenditure to minimum per-student expenditure was 12.2 (Tsang, 1994, p. 9). In exploring the contributing factors of regional financial disparities, Tsang's analysis found that per capita GNP of region was highly predictive of average per-student budgeted expenditure at both primary and secondary levels.

While the aforementioned studies have all focused on provincial data in their examination of the issue, a number of researchers chose to use county-level data instead. According to Tsang and Ding (2005), one important deficiency of using provincial data in analyzing financial inequality is that the provincial average masks within-province disparities, which could also be an important source of inequality. Therefore, in their investigation of disparities in educational resource, Tsang and Ding (2005) chose to use county-level data in 1997 and 1999 to carry out comprehensive statistical analysis. The scholars found that there were substantial disparities in per-student spending across different regions and areas in the country. The spending gaps were particularly substantial between urban and rural areas, and between Region One and other regions (Tsang and Ding, 2005). Furthermore, the decomposition of the Theil indexes by provincial groups shows that within-province inequality is more dominant than across-province inequality: "between two-thirds and three-quarters of financial inequality resided within provinces, and between one-quarter to one third of the financial inequality existed between provinces" (Tsang and Ding, 2005, p. 15).

Similar to Tsang and Ding's findings, Yuan (2005) also found that within-province financial inequality is greater than between province inequality in his case study of Shangdong province. More specifically, the comparative analysis of educational funding across different parts of the province indicated that the per-student expenditure of



the wealthy eastern part of Shangdong province was 4.68 times that of the poor western part of the province. Furthermore, a pattern of declining per-student expenditure was observed as moving from the eastern part to the western part of the province (Yuan, 2005).

### **Educational Inequality between Genders**

Gender inequality, just like the other two dimensions of inequality, is a reflection of social and economic inequality in the large society in China. In a traditionally male-dominated country like China, it is not surprising to find that women have much fewer opportunities, including educational opportunities, than men. Substantial gender imbalances are clearly illustrated in many aspects of educational development. The illiteracy and semi-illiteracy rate of woman, for example, was more than two times that of men by 2001. Chinese woman, on average, received 6.5 years of schooling in 2000, 1.5 years less than men (Postiglione, 2006; UNDP, 2005).

Despite the significance of the issue of educational gender inequality in China, the research on this area is very limited and disjointed. In contrast with a well-developed literature on urban-rural and regional inequalities, only a handful of studies have explicitly examined educational inequality between genders in China in recent years. These studies, according to their different geographical focuses, can be classified into two groups: research focusing on gender inequality in rural areas, and research focusing on the issue in urban areas.

### **Educational Gender Inequality in Rural Settings**

A number of studies indicate that, by the mid-1990s, gender disparities in China were concentrated in poor rural areas, and among poor households, where children have to compete with more siblings for limited educational resources (Connelly & Zheng, 2003; Hannum, 2002; Hannum & Kong, 2002; Brown & Park, 2002). According to Hannum's (2002) observations, girls' schooling, in those poor rural areas, is more sensitive to costs than boys' schooling. And girls need to show promise at early age in order to remain in school (Hannum, 2002). This situation, to certain degree, may explain why girls tend to have lower school enrollment and attainment.

In a national study using the 1990 Census data, Connelly and Zheng (2003) examined the determinants of the differences in school enrollment and graduation rates of youth aged from 10 to 18. The results of regression analysis indicated that place of residence (i.e. rural vs. urban) and gender are the two most important contributing factors of the disparities in enrollment and graduation rates. Rural girls, in particular, face a double disadvantage: as rural youth, they have fewer opportunities than urban youth; as rural girls, they have fewer resources than rural boys. Meanwhile, the comparative analysis of different provinces found that gender gaps in school attendance rates vary significantly across different provinces in the country. Specifically, large gender gaps (i.e. more than 10 percentage points) can be found in rural Anhui, Jiangxi, Shandong, Hunan, Guandong, and Sichuan provinces (Connelly & Zheng, 2003, 2006). According to Connelly and Zheng, the provincial differences are in large part due to the combination of cultural differences and higher opportunity costs of girls in southern coastal provinces where there is a high demand of low-cost labor in light manufacturing industry such as textile and toy industries.

In addition to the quantitative investigation, some scholars also carried out qualitative research on the issue. Two recent case studies explored the family level determinants of gender gaps in education attainment and offered detailed insights into the impact of family factors on educational gender differences in poor rural settings. For instance, in a case study of four poor rural counties in Gansu and Hebei provinces, Li and Tsang (2002) investigated cultural and socio-economic factors in household education decisions. The empirical analysis of 400 rural households revealed that a “gender hierarchy” existed in household education decisions, in which parents had lower educational expectations for girls than for boys (Li & Tsang, 2002, p. 26). Furthermore, the multivariate regression analysis indicated that poor families bear a heavy economic burden of household education spending, which exacerbates gender inequality in educational opportunity because the schooling of girls is more sensitive to the financial situation of the family.

In another case study of Gansu province, Hannum and Kong (2003) investigated household mechanisms leading to gender disparities in education and found more complicated results. Based on the survey data of two thousand randomly- selected samples in twenty counties in Gansu in the year of 2000, Hannum and Kong found no

gender gap in parental economic investment and educational expectations, which contradicted traditional explanations that tend to attribute gender gaps to different parental educational expectations between boys and girls. The survey showed that the vast majority of rural mothers held quite egalitarian views on whether or not they think daughters are less capable or less worthy of investment. Furthermore, Hannum and Kong found that, with regard to children's attitudes themselves, there were no gender gaps in academic confidence, industriousness, own achievement, and alienation from school. The only significant gap favoring boys found in this research lay in mothers' and children's own aspirations, and chore allocation. Based on these mixed results, Hannum and Kong concluded that lower aspirations as well as less family resources available to girls because of large sibships and the fact that boys absorb more educational resources, may contribute to educational gender differences in rural areas. (Hannum & Kong, 2003)

### **Educational Gender Inequality in Urban Settings**

Due to the combination of a range of factors including higher socio-economic status, higher parental education levels, and "one-child" policy, educational gender inequality is a less serious issue in urban areas than in rural areas. While the literature on gender inequality in rural areas mainly focuses on basic education, most of the analyses on gender imbalances in urban areas tends to concentrate on higher education, which is beyond the scope of this review. However, a search of existing literature still found several case studies of gender inequalities at basic education level in urban China.

In an early study, Broaded and Liu (1996) investigated the determinants of senior secondary school attainment in the city of Wuhan. The data was gathered in 1992 from 670 students in five different junior high schools. The results of the regression analysis suggested that gender has the strongest influence on high school placement, followed by family background variables such as mother's education and father's education. Further examination of factors affecting the distribution of junior high school graduates revealed that students make enrollment decisions based on their calculations of the relative costs and benefits of pursuing academic or vocational tracks at the high school level. It was found that a significantly higher proportion of boys than girls chose to continue their education on the academic track rather than the vocational track. These differences, according to Broaded and Liu (1996), illustrate the fact that "even when girls and boys in

urban China share the same structural location in the schooling system and even when important aspects of their family background are held constant, they nevertheless face rather different opportunity structures in both the labor market and the marriage market” (Broaded & Liu, 1996, p. 55).

In a more recent investigation of gender inequality in five middle schools in Beijing, Liu and Holger (2001) found evidence indicating that girls tended to have lower self-confidence than boys in certain subjects, such as mathematics, even though they achieved higher marks and received more parental support. Moreover, it was found that such low confidence among girls had a negative impact on their post-secondary attainment and future social mobility. Despite the importance of these findings, the authors stress the need to conduct a more profound statistical analysis in the future.

### **Trends in Educational Gender Inequality**

The review of relevant studies found that the changes in educational gender inequality in China are closely linked with two key factors: first, the political factor; and second, the economic factor. Hannum and Xie (1994), for instance, found political shifts between egalitarianism and social efficiency have had strong effects on gender inequality in basic education based on their analysis of tabular data from the 1990 China Census and the 1985 China In-Depth Fertility Survey. Empirical evidence showed that the trends of educational gender inequality demonstrate a similar pattern as the urban-rural inequality: between 1949 and 1985, educational gender inequality declined in the period with a strong emphasis on egalitarianism, while inequality increased in the period that focused on economic development and efficiency.

However, in a more recent research of relationships between economic development and gender differences in education, Gao (2004) observes different trends in educational gender inequality. Gao found that, although economic growth cannot eliminate gender inequality in education, it can postpone the emergence of gender inequality. Based on the data from the Second National Survey on Women’s Status, Gao’s analysis showed that gender inequality in education has declined in the 1990s compared to the 1980s. Meanwhile, the study also found that gender inequality tended to emerge at the lower-secondary level in the 1980s; whereas it usually appeared at the upper-secondary level in the 1990s. Furthermore, Gao’s comparative analysis of gender

inequality across different areas yielded some interesting results: the higher the level of economic development a region has, the later gender inequality emerges. Specifically, it was found that gender inequality tended to appear at a higher education level in the eastern urban areas; whereas in the western and rural areas gender inequality often emerged at the lower-secondary level of schooling (Gao, 2004).

### **Discussion and Conclusions**

Educational inequality is not a new problem in China. Despite the Chinese government's efforts in universalizing basic education, large educational inequality still persists at primary and lower-secondary education levels. Based upon the above comprehensive review of the literature on the three dimensions of inequalities, several major conclusions can be made regarding inequality in basic education in China.

First, scholars have reached a consensus that there are substantial inequalities in basic education between urban and rural areas. Numerous studies have clearly illustrated that the large urban-rural inequalities not only exist in school enrollment and achievement but also in educational financing. Furthermore, comprehensive time-series analyses have provided convincing evidence that inequality between urban and rural areas has increased continuously over the 1990s and the early 2000s, making rural-urban inequality in China among the highest in the world. Many scholars have argued that political factors are the most important cause of the overall urban-rural inequality. Therefore, they call for a more vigorous role of the Chinese government in reducing inequality between urban and rural areas in educational access, mainly through allocating more funds and strengthening educational infrastructures in rural areas.

Second, with regard to educational inequality across different regions in China, it was found that most of the regional inequality is resided between coastal and inland regions, and within provinces. Although China's regional inequality had declined briefly in the early 1990s, the trend reversed in the later 1990s and early 2000s. It is widely recognized among researchers that China's highly uneven economic growth is the primary cause of regional inequality in education, particularly in educational financing. Existing studies present strong evidence suggesting that differences in GDP per capita have significant positive impacts on disparities in educational expenditure at basic

education level. Furthermore, research of regional inequalities at different levels reveals that within-province inequality is more widespread than across-province inequality.

Third, comparative analyses of urban-rural and regional inequality provide answers to the longstanding questions of whether urban-rural inequality or regional inequality is a greater contributor to overall educational inequality in China. So far, empirical evidence has indicated that urban-rural inequality has been always greater compared to regional inequality, although the latter has been rising more sharply in recent years.

Fourth, studies on educational gender inequality have tended to focus on examining the family and community factors and their effects on gender differences. It has been shown that large gender disparities exist in educational attainment and achievement, especially at the secondary school level. Researchers have agreed that rural girls, compared to boys and urban girls, are particularly disadvantaged in terms of access to educational opportunities. However, they have failed to reach a consensus over what are the family-level determinants of gender inequality. Some scholars have argued that the differences in parental expectations and family investment contribute to gender inequality in education; whereas others contend that there are no gender gaps in parental expectations and financial support of family members. Given the complexity of the issue, more systematic and in-depth research is needed in the future.

Finally, regarding the solutions to the problem of educational inequality in China, researchers have proposed more active involvement from the central government. In particular, effective utilization of intergovernmental grants is regarded as a useful means to alleviate severe shortage of educational funds in poor and rural areas. Meanwhile, scholars also emphasize the important role of a pro-poor development strategy in promoting overall educational equality and equity in China.

Although the existing literature has offered useful insights into the origins and current trends of inequality in basic education in China, there remain large gaps in knowledge that need to be addressed in future research. One important gap identified by the literature review is the notable lack of theoretical frameworks in the analyses. Although there is a growing body of literature focusing on the issue of educational inequality in China, few studies have examined it from theoretical perspectives. For example, there is little discussion in previous studies on major theories of social and

educational inequality like structural-functionalism and conflict theory, and how these theories can be used to analyze educational inequality in China. Moreover, very few studies have adopted theoretical conceptualizations about equality, such as equality of access, equality of inputs and equality of outcomes, in their analyses. Such lack of theoretical basis in the analyses would inevitably undermine the strength of the studies.

Another obvious knowledge gap is related to the research on gender inequality in education. In recent years, the studies on educational inequality in China tend to focus on urban-rural and regional inequalities, and have paid far less attention to the important issue of gender inequality. Due to the unavailability of national-level data, most of the literature on educational gender inequality is case studies for particular provinces and counties, such as those conducted by Hannum (2003), and Li and Tsang (2002) in Gansu province. Although these case studies help to fill some of the knowledge gaps, they are not very representative and, thus, cannot be generalized to other provinces or other settings. Therefore, it is very necessary to conduct more systematic and large scale research in these areas in the future.

### References

- Confucius (c.a.500 BC). *The Analects of Confucius*. Translated and annotated by Arthur Waley. New York : Macmillan, 1939.
- Bao, S., Chang, G., Sachs, J. and Wood, W. (2002). Geographic factors and China's regional development under market reforms, 1978–1998. *China Economic Review*, Vol. 13, pp. 89–111
- Bourdieu, P. (1977). Cultural Reproduction and Social Reproduction. In A.H. Hasley and Jerome Karabel (Eds.) *Power and Ideology in Education*. Oxford, UK: Oxford University Press.
- Bourdieu, P. and J. Passeron, (1977). *Reproduction in education, society and culture*. London; Beverly Hills: Sage Publications
- Bowles, S. and Gintis, H. (1976). *Schooling in capitalist America: Educational reform and the contradictions of economic life*. New York: Basic Books.
- Brooded, C.M. and Liu, C. (1996). Family Background, Gender and Educational Attainment in Urban China. *The China Quarterly*, No. 145, pp. 53-86
- Brown, P. and Park, A. (2002). Education and poverty in rural China. *Economics of Education Review*, Vol. 21, pp. 523–541
- Chen, B. and Feng, Y. (2000). Determinants of economic growth in China: Private enterprise, education, and openness. *China Economic Review*, Vol.11, pp. 1-15

- Collins, R. (1971). Functional and Conflict Theories of Educational Stratification. *American Sociological Review*, Vol. 36 (December), pp. 1002-1019.
- Connelly, R. and Zheng, Z. (2003). Determinants of school enrollment and completion of 10 to 18 year olds. *China Economics of Education Review*, Vol. 22, pp. 379–388
- Connelly, R. and Zheng, Z. (2006). Educational access for China's post-Cultural Revolution generation: enrollment patterns in 1990. In Hannum, E. and Park, A. (Ed.) *Education and Reform in China*. London and New York: Routledge
- Coleman, J. (1966). *The Equality of Educational Opportunity*. Office of Education. Washington: U.S. Department of Health, Education, and Welfare
- Davis, K. and Moore, W. (1945). Some principals of stratification. *American Sociological Review*, Vol. 10, pp. 242-249.
- Durkheim, E. (1972). *Emile Durkheim: Selected Writings*. Cambridge, UK: Cambridge University Press.
- Farrell, J. (1999). Changing Conceptions of Equality of Education - Forty Years of Comparative Evidence. In Robert, F. and Torres, C. (eds.) *Comparative Education - The Dialectic of the Global and the Local*. Maryland: Rowman & Littlefield
- Farrell, J. (1994). Social Equality and Educational Expansion in Developing Nations. In Torsten Husén and Postlethwaite, T.N. (eds.) *The International Encyclopedia of Education*. Oxford: Pergamon
- Feinberg, W. and Soltis, J. (1998). *School and Society* (3<sup>rd</sup> Ed.). New York: Teachers College Press.
- Gao, Y. (2004). "Shifting" Phenomenon and its Explanations ---- Discussions on the Relationships between Economic Growth and Educational Gender Equality (in Chinese). Universities Center for China Studies, The Chinese University of Hong Kong. Retrieved on February 18, 2006 from: <http://www.usc.cuhk.edu.hk/wkwzdetails.asp?id=2938>
- Inkles, A. and Smith, D. H. (1974). *Becoming Modern*. Cambridge, MA: Harvard University Press
- Jian, T., Sachs, J., and Warner, A. (1996). Trends in Regional Inequality in China. *China Economic Review*, Vol. 7, No. 1, pp. 1-21
- Jones, D., Li, C. and Owen, A. (2003). Growth and regional inequality in China during the reform era. *China Economic Review*, Vol. 14, pp.186–200
- Kanbur, R. (1999). Which Regional Inequality? The Evolution of Rural–Urban and Inland–Coastal Inequality in China from 1983 to 1995. *Journal of Comparative Economics*, Vol. 27, pp. 686–701
- Lampton, D. (1979). The Roots of Interprovincial Inequality in Education and Health Services in China since 1949. *American Political Science Review*, Vol. 73, No. 2, pp. 459-77
- Lee, J. (2000). Changes in the source of China's regional inequality. *China Economic Review*, Vol. 11, pp. 232-245



- Li, C. (2003). *Socio-political Changes and Inequality in Educational Opportunities in China: Two different trends during 1940 to 2001*. Beijing: Chinese Academy of Social Sciences Press
- Li, D. and Tsang, M. C. (2003). Household Education Decisions and Implications for Gender Inequality in Education in Rural China. *China: An International Journal*, Vol.1, No. 2, pp. 224-248
- Liu, B. and Holger, D. (2001). *Gender and School Inequalities in China Case Study in Five Beijing Schools* Institute of International Education, Stockholm University. Retrieved on March 3, 2006 from: <http://www.interped.su.se/publications/114%20Yellow%20Report.pdf>
- Li, W., Park, A., and Wang, S. (2007). School Equity in Rural China. In Hannum, E. and Park, A. (Ed.) *Education and Reform in China*. London and New York: Routledge
- Gustafsson, B. and Li, S. (2004). Expenditures on education and health care and poverty in rural China. *China Economic Review*, Vol.15, pp. 292– 301
- Hannum, E. and Xie, Y. (1994). Trends in Educational Gender Inequality in China: 1949-1985. *Social Stratification and Mobility*, Vol. 13, pp. 73-98
- Hannum, E. (1999). Political change and the Urban-Rural Gap in Basic Education in China: 1949-1990. *Comparative Education Review*, Vol. 43, No. 2, pp. 193-211
- Hannum, E. and Kong, P. (2002). *Family Sources of Educational Gender Inequality in Rural China: A Critical Assessment*. Paper presented at the annual meetings of the National Academy of Education (Toronto, October 2002).
- Hannum, E. (2003). Poverty and basic education in rural China: Villages, households, and girls' education. *Comparative Education Review*, Vol. 47, No. 2, pp. 141-159
- Husén, T. (1974). *Talent, Equality and Meritocracy*. The Hague: Martinus Nijhoff.
- Husén, T. (1975). Strategies for Educational Equality. *Education, Inequality and Life Chance*, Vol.1, Paris: OECD.
- Parsons, T. (1959). The school class as a social system: some of its functions in American society. *Harvard Educational Review* (Fall), pp. 297-318.
- Porter, M. (1881). John Porter and education: technical functionalist or conflict theorist. *Canadian Review of Sociology and Anthropology*, Vol. 18, No. 5, pp. 627-638.
- Postiglione, G. (2006). Schooling and Inequality in China. In Postiglione, G. (Ed.) *Education and Social Change in China: Inequality in a Market Economy*. Armonk, NY and London, English: M.E. Sharpe.
- Qian, X. and Smyth, R. (2005). *Measuring Regional Inequality of Education in China: Widening Coast-Inland Gap or Widening Rural-Urban Gap*. Retrieved on March 25, 2006 from: <http://www.buseco.monash.edu.au/units/aberru/papers/1205XLChina.pdf>
- Rawls, J. (1971). *A Theory of Justice*. Cambridge, MA: Harvard University Press.
- Schultz, T. (1961). Investment in Human Capital. *The American Economic Review*. Vol. 1, No. 2, pp. 1-17.

- Tsang, M. (1994). Costs of Education in China: Issues of resource mobilization, equality, equity and efficiency. *Education Economics*, Vol. 2, Issue 3, pp. 287-312
- Tsang, M. and Ding, Y. (2005). Resource Utilization and Disparities in Compulsory Education in China. *China Review*, Vol. 5, No. 1, pp. 1-31
- Tsui, K. (1993). Decomposition of China's Regional Inequalities. *Journal of Comparative Economics*, Vol. 17, pp. 600-627
- UNDP (2005). *China Human Development Report 2005*. New York: UNDP.
- Wei, H. and Yang, D. (1997). Decentralization and Regional Disparity in Education in China (in Chinese). *China Social Science*, No. 1, pp. 15-26
- Yao, S., Zhang, Z., and Hanmer, L. (2004). Growing inequality and poverty in China. *China Economic Review*. Vol. 15, pp. 145 – 163
- Yang, D. (2000). *Theories and Practices of Educational Equality in China* (in Chinese). Retrieved on February 18, 2006 from: <http://www.fon.org.cn/roomofmembers/DONGPING/index.htm>
- Yang, D. and Zhou, J. (2003). *Preliminary Research on the Indicators of Educational Equality in China*. Retrieved on February 18, 2006 from: [http://www.usc.cuhk.edu.hk/wk\\_wzdetails.asp?id=4101](http://www.usc.cuhk.edu.hk/wk_wzdetails.asp?id=4101)
- Yuan, Z. (2005). Closing the Educational Gaps" (in Chinese). *The Journal of Beijing Normal University: Social Science Section*, Vol. 3, pp. 28-36
- Zhang, X. and Kanburs, R. (2005). Spatial inequality in education and health care in China. *China Economic Review*, Vol. 16, pp. 189–204
- Zhang, Y. (2005). *China's Education: Expansion of Inequality* (in Chinese). Retrieved on February 18, 2006 from: <http://www.cuhk.edu.hk/ics/21c/supplem/essay/0501035.htm>