

Urban Biased Social Policies and the Urban-Rural Divide in China

by

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Thesis submitted in partial fulfillment of
the requirements for the degree of Master of Arts in the Department of
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ABSTRACT

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Abstract

This thesis provides a case study of the urban-rural divide and its relationship to public policies in China. By utilizing multiple data sources from both government statistics and independent surveys, this study examines the trends of China's urban-rural divide and analyzes the influences of three public policies: 1) the household registration system, 2) the education system, and 3) the healthcare system on the divide. The findings show that urban-rural gaps in both economic and social dimensions are large and have been increasing since China's market reform of the late 1970s. The gaps are closely associated with the strong urban bias imbedded in the public policies. Specifically, the household registration system differentiates the urban and rural populations, provides the urban population with privileges in income and education, and restricts the rural population's access to urban resources. The education and healthcare systems further strengthen the gaps through their dualistic structures and different funding schemes implemented in urban and rural areas.

Contents

Abstract.....	iv
List of Tables	vi
List of Figures	viii
1. Introduction	1
2. Studying the Urban-Rural Inequality in China	4
3. The Urban-Rural Divide in China	12
3.1 Income Gap.....	12
3.2 Educational Gap	15
3.3 Inequality in Healthcare and Infrastructure.....	20
3.4 The Urban-Rural Divide at the Provincial Level	25
3.5 Overall Trends in the Urban-Rural Gap.....	32
4. Social Policies and the Urban-Rural Gap.....	34
4.1 Household Registration System	34
4.2 Education System	46
4.3 Healthcare System	59
5. Discussion and Conclusion.....	66
References.....	71

List of Tables

Table 1: Per Capita Income of Urban and Rural Household in China, 1978-2013. (China Statistical Yearbook, 2014).	13
Table 2: Illiteracy Rate, Urban vs. Rural, 2000, 2010. (Census, 2000, 2010).....	17
Table 3: Per Capita Healthcare Expenditure of the Urban and Rural Household, 1990, 1995, 2000, 2010-2013. (NBS, 2014).....	23
Table 4: Urban/Rural Ratio in Per Capita Household Income by Province, 2000, 2005, 2010, 2013. (NBS, 2014).	26
Table 5: Urban and Rural Per Capita Household Income and Urbanization in Shanghai, 1980-2010. (Shanghai Statistics Bureau, 2014).....	28
Table 6: Urban and Rural Per Capita Household Income and Urbanization in Yunnan, 1980-2010. (Yunnan Statistics Bureau, 2011).	29
Table 7: Individual Total Income by Hukou Status, 1995, 2002. (CHIP, 1995, 2002).....	39
Table 8: Income, Years of Education, and Hukou Status of the Top and Bottom Income Quintiles, 1995, 2002. (CHIP, 1995, 2002; Yue et al, 2008).	40
Table 9: Education Level by Hukou Status, 1995, 2002, 2005. (CHIP, 1995, 2002; Wu, 2012).	42
Table 10: Marginal Returns to Education at Mean Education Levels, Urban, Rural, 1995, 2002. (yuan) (Yue et al, 2008).....	43
Table 11: Important Education Policies in China, 1958-2001. (The Central People's Government of China, 2013).....	1
Table 12: Percentage of National Education Budget Distribution by Education Level and Sector, 2006 – 2010 (%) (Ministry of Education, 2006, 2007, 2008, 2009, 2010, 2011).	53
Table 13: Educational Attainment of Primary School and Junior High School Teachers, Urban vs. Rural, 2010. (Ministry of Education, 2010).	55
Table 14: Professional Rank of Primary School and Junior High School Teachers, Urban vs. Rural, 2010. (Ministry of Education, 2010).	55

Table 15: Gross Primary School and Junior High School Enrollment Ratio, Urban vs. Rural, 1990, 2000, 2005, 2010. (Ministry of Education, 2001-2010; Chen (2013)).....	57
Table 16: Public Healthcare Programs in China	59
Table 17: Percentage of Population Covered by Public Healthcare Programs, Urban vs. Rural, 2005, 2009-2013. (NBS, 2014; National Health and Family Planning Commission, 2014)	62
Table 18: Average Per Capita Subsidies from Different Healthcare Programs, 2005, 2009-2013. (National Health and Family Planning Commission, 2013)	63

List of Figures

Figure 1: Change of Urban/Rural Household Per Capita Income Ratio, 1978 – 2013. 14

Figure 2: Average Years of Education of Population over 15 Years Old, National, Urban, Rural, 1988. (Gustafsson, Shi & Sicular, 2008)..... 16

Figure 3: Urban-Rural Difference in Average Years of Education, 1990-2005. (Li, 2006). 18

Figure 4: Urban-Rural Difference in Per Capita Educational Expenditure, 1990-2005. (Li, 2006). 19

Figure 5: Number of Hospital Beds per 1000 People, Urban vs. Rural, 1978, 1980, 1983, 1985-1998. (NBS, 2000)..... 21

Figure 6: Number of Healthcare Personnel per 1000 People, Urban vs. Rural, 1978, 1980, 1983, 1985-1998. (NBS, 2000)..... 22

Figure 7: Administration Structure of China. 48

1. Introduction

Over the past several decades, the market economy and globalization have arguably been the two most important influences on the economy of developing countries. Most of the poor and developing countries have either voluntarily or involuntarily adopted market reform, which was believed to not only promote economic development but also help redistribution and poverty reduction (Bauer, 1984). Contrary to the predictions of liberal economics, however, many developing countries have been experiencing increasing inequality despite their economic achievement. As one of the most dynamic developing countries in the world, China adopted unilateral market reform in the late 1970s and has achieved unprecedented rapid economic growth over the past four decades. However, the Chinese economic miracle has been characterized by increasing and persisting high inequality, which is predominantly driven by spatial inequality between urban and rural areas (Yang, 1999; The World Bank, 1997).

Today's China is marked by two distinct economies: one urban or modern economy with rapid expansion, significant foreign investment and trade, and some of the world's most advanced industries, and one rural or lagged economy with traditional agriculture and extreme poverty. The urban-rural inequality in China has attracted the attention from scholars across various disciplines, but the available literature is limited in two key respects. First, most of the studies focus exclusively on economic inequality.

Second, market mechanism and globalization have usually been utilized as the independent variables. More recent studies started to question the role of political institutions, public policies, and power relations in shaping the urban-rural divide in China. Most notably, the study of urban-biased policies and spatial inequality has been applied to the case of China.

Inspired by the earliest works on urban bias and the recent efforts in applying the concept to China, this paper attempts to provide a detailed investigation of whether urban-biased social policies have contributed to the increasing urban-rural divide. There are two primary aims of the paper: the first is to examine the development of the urban-rural inequality in China, including economic and social inequality. The second is to analyze how social policies have influenced the urban-rural inequality with specific focus on three sets of policies: the household registration system (*hukou*), the education system, and the healthcare policy.

This paper contributes to the ongoing study on China's urban-rural inequality in three ways. First, it expands the study of inequality beyond economic inequality to inequality in other social dimensions. Second, social policies and political institutions are the primary independent variables rather than market mechanism. Third, this paper also joins the recent efforts in understanding the mechanism of the inequality in developing

countries through detailed micro-level and case study to explore the relevance of China's experience for other developing countries.

The paper is divided into four sections. The first section provides the background of the study and discusses how previous studies have approached the question of urban-rural inequality in China. The second section draws a picture of the urban-rural inequality in both economic and social dimensions by examining multiple resources from both government data and independent studies. The third section provides an analysis of the influences of social policies and government decision-making on the increasing urban-rural divide. The last section summarizes the key conclusions that may be drawn from the analysis and discusses implications for future research.

2. Studying the Urban-Rural Inequality in China

China started unilateral market reform in the late 1970s and conducted rapid market reform over the 1980s and 1990s. In 2001, China officially joined the World Trade Organization (WTO) and became one of the leading trade partners to both developed and developing countries. China has one of the developing world's most open trade and financial regimes, and scholars have argued that China has become the most open economy among developing countries (Branstetter & Lardy, 2006). Starting from its market liberalization, China's economy has skyrocketed. Over the past two decades, China has maintained its annual GDP growth rate over 8 percent (The World Bank, 2015), one of the highest in the world. In 1978, the year when China started its reform and open-up policy, China's GDP was \$148 billion, but this number increased to \$5.93 trillion in 2010, when China surpassed Japan to become the second largest economy in the world. By 2014, China's GDP reached \$9.24 trillion, which is over 60 times more than that in 1978 (The World Bank, 2015; National Bureau of Statistics of China (NBS), 2014).

Economic growth has also resulted in rapid urbanization. In 1978, only around 18 percent of Chinese population (0.17 billion) lived in urban areas, but this number has been steadily increasing with an average annual urban population growth rate around 4 percent. Over half of Chinese population (53 percent) live in urban areas today (World Bank, 2015). At the same time, we have seen the decrease of rural population as a

percentage of total population. Before 1991, rural population had been growing slowly (around 0.5 percent annually), mostly due to the natural population growth; but starting from 1991, the process of urbanization has counteracted the effect of the natural population growth in rural areas and the rural population growth rate has been negative. However, what is noteworthy is that a substantial portion of Chinese population (0.636 billion, or 47 percent of the whole population) still lives in rural areas, where the majority of Chinese poor population is concentrated.

Despite its economic success over the past several decades, China's overall inequality, measured by Gini coefficient, has been reported to increase rapidly. There are disagreements over the exact Gini coefficient of China due to the problems of China's government statistics, which have been criticized for their lack of credibility and transparency (see Hvistendahl, 2013). In 2000, China's Gini coefficient was 0.41 according to government statistics (NBS, 2014), but the publication of this measure had been stopped since 2000 for unknown reasons and this makes it harder to trace the change of the overall inequality in China over the past decade. In 2013, the Chinese government published the data again, and Gini coefficient was reported to be slightly lower than 0.5. Due to the ambiguity of government data, other scholars and third parties have estimated China's Gini coefficient from other resource. Khan and Riskin (1998) found that China's Gini coefficient had increased from 0.38 in 1988 to 0.45 in 1995.

According to the estimate of The World Bank (2015), China's Gini coefficient in 1981 was 0.29, but the number increased dramatically during 1980s and 1990s and reached 0.43 in 2002. The overall inequality in China kept at the same high level for the last decade.

A more recent study (Xie & Zhou, 2014) estimated that the Gini coefficient in China has increased to a much higher level between 0.53 and 0.55 since 2005. Moreover, the authors found that China has been experiencing a much faster increase in inequality level over the past decade than before. Although both official statistics and studies done by independent researchers cannot provide a decisive answer to how unequal is China today, one important trend worth noting here is that the inequality level in China has been increasing along with its market reform and embrace of globalization. In comparison with other developing countries (for example, India, Indonesia, and Vietnam's Gini coefficients are 0.33, 0.43, and 0.36, respectively) and other Asian countries (for example, Japan's Gini coefficient is 0.38), China has become one of the most unequal economies among developing countries and in its own region.

Studies have found that China's inequality is predominately driven by spatial inequality, especially the urban-rural divide. Xie and Zhou (2014) found that the urban-rural divide and the provincial inequality are the two most important forces underlying China's overall inequality. One report from The World Bank (1997) argued that the urban-rural income inequality explained more than half of the overall income inequality

in China in 1995, and also explained more than 75 percent of the change in overall inequality in 1980s and 1990s. Another study in Jiangsu and Sichuan provinces found that the urban-rural divide almost explained all of the change in overall inequality from 1986 to 1994 in these two regions (Yang, 1999).

Given the high level of inequality in China and the prominence of the urban-rural divide, scholars have tried to examine whether the market liberalization and the rapid structural adjustment are the reasons behind. Classic studies on market reform and inequality use cross-country regressions and have produced mixed results. Forbes (2000) found that economic growth can lead to rising inequality, but Dollar and Kraay (2002) argued that growth and the market economy are actually good for redistribution and do not necessarily lead to inequality.

Cross-country studies have been criticized by other scholars who argue that the data from developing countries are usually of low quality and significant variations of political institutions and measures make comparisons of inequality among developing countries problematic. (Ravallion, 2001). One classical study by Goldberg and Pavcnik (2007) gathered most research evidence on the effects of globalization on inequality and found that no measure of inequality in developing countries has shown a decrease during the period of rapid market liberalization and globalization, and many measures have increased. However, they famously argued that “the mechanisms through which

globalization has influenced inequality are country, time, and case specific” (Goldberg & Pavcnik, 2007). There is little doubt today that market reform and globalization do have strong influences on inequality, although they might not be the direct causes.

Considering the limitations of classical studies and the need for more detailed case studies, China scholars started to examine the specific mechanisms and factors influencing the urban-rural divide in China. Wei and Wu (2001) did the first study on trade openness and inequality in China, and they found that the urban-rural inequality surprisingly declined in regions that experienced greater degree of openness in trade. The failure of trade openness to explain the growing urban-rural divide led other scholars to examine the influence of political institutions and public policies. For example, Smoke and Kim (2003) reported that the biased fiscal transfers have resulted in inequality in Asian countries. In the case of China, Wong (2007) argued that the fiscal transfers in China favor regions with larger tax bases and less than one third of the transfers are distributed to the poor regions. Thus, the population in poor areas received less transfers from the government than the population in more economically prosper areas. Malesky, Abrami, and Zheng (2011) compared the cases of China and Vietnam and concluded that the Chinese government devotes much less budget to transfers and redistribution than Vietnam, and the relatively smaller decision-making body in China

provides less incentives on developing strategies and policies for equalizing and poverty reduction.

Although previous studies have produced important findings about China's inequality, they provide only partial answers to our understanding of the urban-rural divide in China. We still do not have a comprehensive picture of the reasons behind the growing and persisting divide. As an attempt to join the ongoing efforts in explaining China's urban-rural divide, other scholars have introduced the study of urban bias and examined its implication to China. The development of urban bias theory should be credited to two important works. In his influential book *Why Poor People Stay Poor*, Lipton (1977) argued that urban-rural conflict is the most important class conflict in the developing world, with concentrated resources and power, the urban classes are able to design and implement development plans that are "from, by and for the people in cities" (p.68). As a result, decision-making process and policies that are predominantly made by urban elites are usually ignorant to the needs of the rural population.

In his study of African countries, Bates (1981) argued that policies that favor urban development control prices of agricultural products, leave the cost of development to the rural population, and limit their capability to become better off. Both of the authors find that urban bias is resulted from the concentration of resources and political power in urban areas, where policies are developed in favor of urban economic

development. The key question in applying urban bias theory to the case of China is whether China is also an example of urban bias, if so, what policies and government decision-making processes have contributed to such bias? A small but growing literature in this area has already shown some evidence of urban bias in China.

Oi (1990, 1993) did several studies on China's agricultural policies and found that government subsidies to urban areas on food and housing have significantly contributed to the urban-rural income inequality in the early years of market reform. Khan et al (1993) examined urban-biased housing policy and found that housing subsidies accounted for over 30 percent of urban income in the 1980s and no such subsidies were available in rural areas. Yang (2007) argued that urban areas have benefited from development plans biased towards heavy-industry development, and the agricultural surplus has been extracted for the capital accumulation in urban areas. Although most of the studies on China's urban bias focus on economic policies, a few studies have inquired into the role of social policies. Wu and Treiment (2004) studied the role of the household registration system in influencing social stratification and income and found that the system favors the urban population who has access to more occupation opportunities with higher payment. However, most of the existing studies of urban bias in China focus exclusively on economic inequality and economic policies without consideration of inequality in other dimensions and the role of social policies.

In filling this gap and joining the efforts in understanding urban-biased policies in China, this study attempts to first examine the trends of the urban-rural divide in income, education, healthcare, and other social dimensions, and then study how public policies have influenced these trends. Based on my analysis, I find that the urban-rural divide has been increasing in both economic and social dimensions since the late 1970s when China started market reform. Urban bias embedded in the household registration system favors the urban population by providing privileges in income and access to educational resources and social services. The system also restricts the rural population from accessing to urban resources through strict control on rural-to-urban migration. With the establishment of the urban-rural distinction by the household registration system, the dualistic structures and different funding schemes of education and healthcare systems in urban and rural areas further strengthen and enlarge the urban-rural gap.

3. The Urban-Rural Divide in China

The large urban-rural divide in China is not new, but starting from China's policy reforms of the late 1970s, the divide has been increasing and has received significant attention. Moreover, its contribution to overall inequality has also been increasing. In 1988, its contribution was 37 percent. That number increased to 41 percent in 1995, and reached a new high as 46 percent in 2002 (Gustafsson, Shi, & Sicular, 2008). With the latest data from the NBS and other nationally representative surveys, the urban-rural divide in China is reexamined here to include inequality along both economic and social dimensions, the latter of which have been largely ignored by previous studies.

3.1 Income Gap

Urban-rural income differences have received the most intensive attention from scholars. Here I use the most recent government data to show the change in these differences since China's market liberalization. The *China Statistical Yearbook*, published annually by NBS, is the only comprehensive source of government statistics on the national economy and living conditions of the Chinese population. *Table 1* presents the data on per capita income of urban and rural households. The data shows that per capita income of both urban and rural households have been increasing since 1978, the year when China officially started market reform. More importantly, the urban/rural ratio has

also been increasing. Beginning in 2002, per capita income of urban households is over three times greater than that of rural households and this trend continues to the present.

**Table 1: Per Capita Income of Urban and Rural Household in China, 1978-2013.
(China Statistical Yearbook, 2014).**

Year	Per capita income of urban household (yuan)	Per capita income of rural household (yuan)	Urban-rural ratio
1978	343.4	133.6	2.6
1980	477.6	191.3	2.5
1985	739.1	397.6	1.9
1990	1510.2	686.3	2.2
1991	1700.6	708.6	2.4
1992	2026.6	784.0	2.6
1993	2577.4	921.6	2.8
1994	3496.2	1221.0	2.9
1995	4283.0	1577.7	2.7
1996	4838.9	1926.1	2.5
1997	5160.3	2090.1	2.5
1998	5425.1	2162.0	2.5
1999	5854.0	2210.3	2.6
2000	6280.0	2253.4	2.8
2001	6859.6	2366.4	2.9
2002	7702.8	2475.6	3.1
2003	8472.2	2622.2	3.2
2004	9421.6	2936.4	3.2
2005	10493.0	3254.9	3.2
2006	11759.5	3587.0	3.3
2007	13785.8	4140.4	3.3
2008	15780.8	4760.6	3.3
2009	17174.7	5153.2	3.3
2010	19109.4	5919.0	3.2
2011	21809.8	6977.3	3.1
2012	24564.7	7916.6	3.1
2013	26955.1	8895.9	3.0

The gap is large by international standards; Eastwood and Lipton (2004) have reported that the urban-rural income ratio of most Asian countries falls between 1.3 and 1.8, with the Philippines as an outlier with a ratio of 2.2. Another source (Knight & Song,

1999) studied the urban-rural income ratio in 12 countries in Asia, the Middle East, and Africa, and found that China's ratio is the third highest after Zimbabwe and South Africa. To further explore the changing trends of the urban-rural household income ratio, *Figure 1* shows the change of the urban-rural per capita household income ratio from 1978 to 2013.

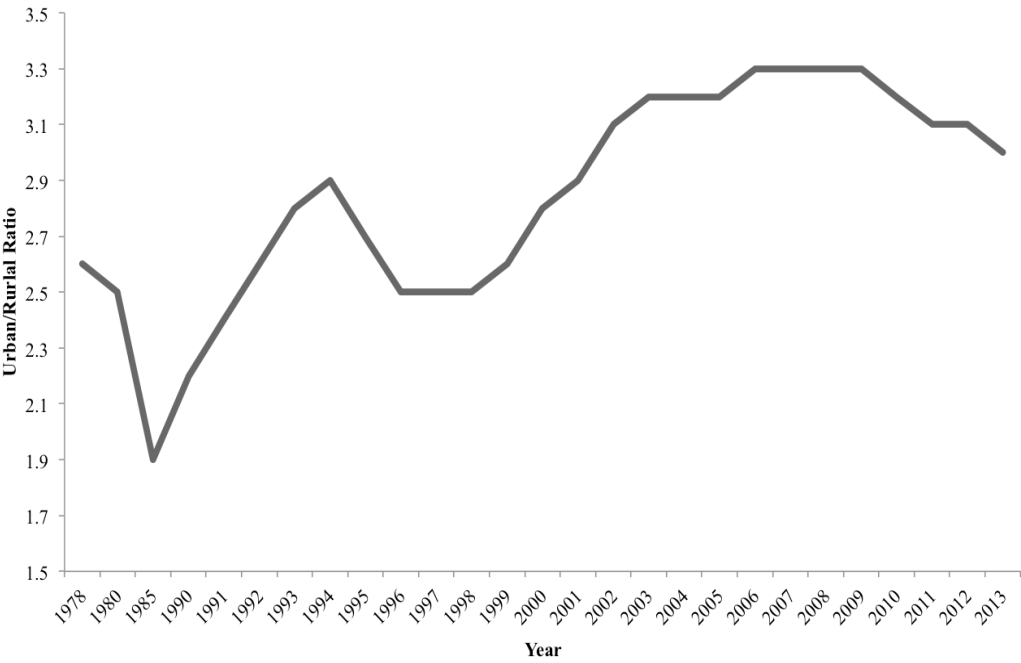


Figure 1: Change of Urban/Rural Household Per Capita Income Ratio, 1978 – 2013.

As can be seen, the urban-rural income gap first decreased significantly in the early years of market reform, probably due to the immediate economic benefits generated in both urban and rural areas and the blurred urban-rural difference. The gap

then increased dramatically between 1985 and 1995. After going through a short period of decline in 1996, it increased steadily from 1998 to 2009, by which time urban households per capita income was over 3.3 times greater than that of rural households. In 2010, the gap started to decline gradually. But in general, over the past three decades, the urban-rural income gap in China has increased to a very high level.

The significant increase and prominence of the urban-rural income gap, especially over the last two decades, is surprising given the equalizing forces from the central government and the increase of rural-to-urban migration flows. Beginning in the late 1990s, the Chinese government has developed equalizing strategies to boost the rural economy. These strategies include reduction of housing subsidies in urban areas, agricultural tax reduction, and investment in infrastructure and education in rural areas. But the growing gap between urban and rural areas occurred despite the government's equalizing efforts. Similarly, although labor migration from rural areas to urban areas has increased considerably since 1990s, migration seems to have had a limited impact on the increasing urban-rural gap. Khan and Riskin (2008) found that including migration only reduces the income gap by 6 percent.

3.2 Educational Gap

The urban and rural populations are also found to differ significantly in measures of educational attainment and access to educational resources. The data on the

urban-rural differences in educational measurements is fragmented, and no consistent data is published on these measures every year, making it difficult to track the changes of the urban-rural educational inequality. Here I use data from a 1988 national household survey conducted by Chinese Academy of Social Sciences (CASS) reported in Gustafsson, Shi & Sicular (2008), the census data for 2000 and 2010, and sources from independent studies to depict a picture of the trends in the educational gap.

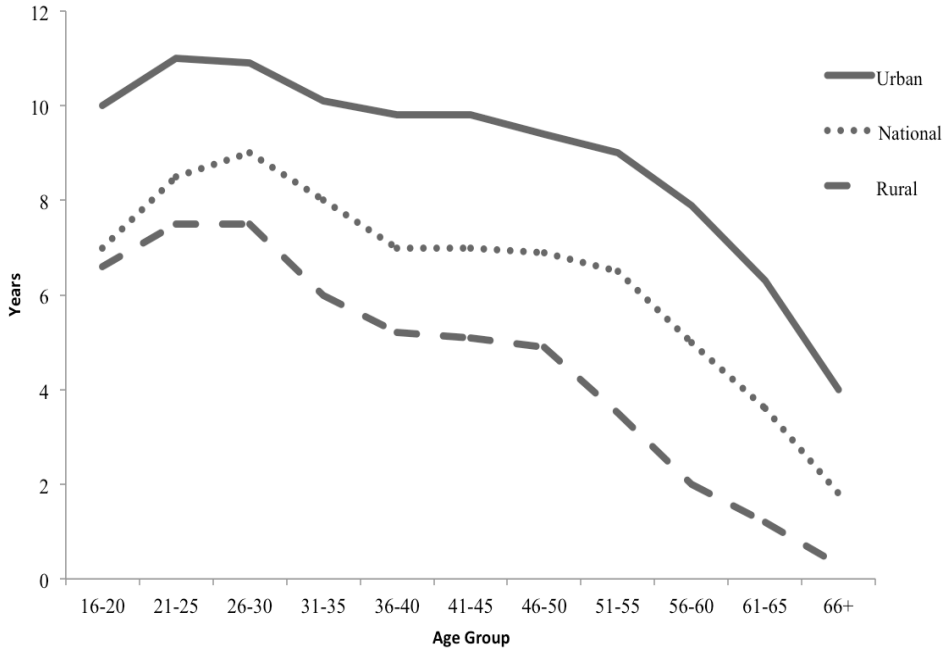


Figure 2: Average Years of Education of Population over 15 Years Old, National, Urban, Rural, 1988. (Gustafsson, Shi & Sicular, 2008).

Figure 2 shows the average years of education of the population over 15 years old by different sectors in 1988. As shown, significant gaps in years of education existed

between urban and rural areas across all age groups. Average years of education in rural areas were also significantly lower than the national level. On average, the urban population had 9.6 years of education in 1988, but the number for the rural population was only 5.5 years, resulting in a difference of 4.1 years. Since the census data for 2000 and 2010 does not measure the average years of education of the urban and rural populations, I use instead the data on the illiteracy rate to show the educational gap observed in 2000 and 2010 and *Table 2* presents the data. As can be seen, across all age groups, the illiteracy rate in urban areas is lower than that in rural areas in both 2000 and 2010. Although the illiteracy rate in both urban and rural areas was lower in 2010 than in 2000, the gaps across all age groups still persist. However, due to the discontinuity and inconsistency of government data, it is hard to compare the level of education over a longer time period or examine the change of the educational gap over the past few decades.

Table 2: Illiteracy Rate, Urban vs. Rural, 2000, 2010. (Census, 2000, 2010).

Age group	2000 Urban (%)	2000 Rural (%)	2010 Urban (%)	2010 Rural (%)
15-19	0.2	1.39	0.11	0.51
20-24	0.33	2.11	0.1	0.69
25-39	0.64	2.61	0.15	1.1
30-34	0.87	2.87	0.24	1.62
35-39	0.91	3.32	0.39	2.03
40-44	1.68	5.92	0.61	2.59
45-49	2.97	8.76	0.74	3.32
50-54	4.47	12.87	1.51	6.61
55-59	7.36	20.19	2.7	9.48
60-64	13.75	32.17	3.94	13.87

To complement the data presented above, I present here an independent study done by Li (2006), who examined the change of the urban-rural educational inequality between 1990 and 2005 in China. *Figure 3* and *Figure 4* present the urban-rural difference in average years of education and average educational expenditure per capita, respectively.

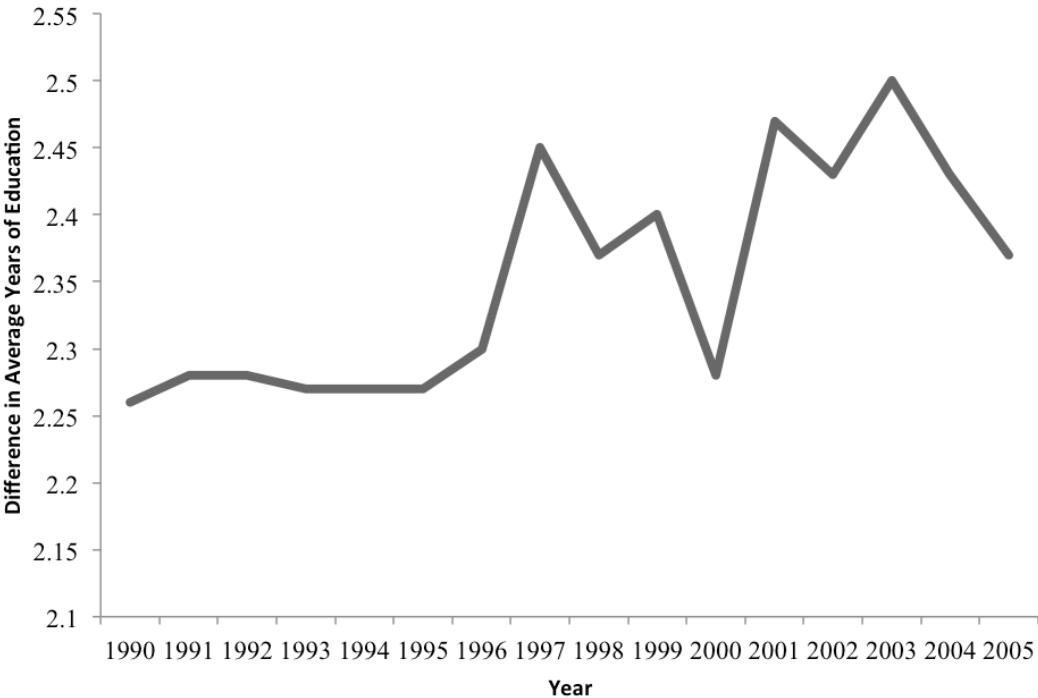


Figure 3: Urban-Rural Difference in Average Years of Education, 1990-2005. (Li, 2006).

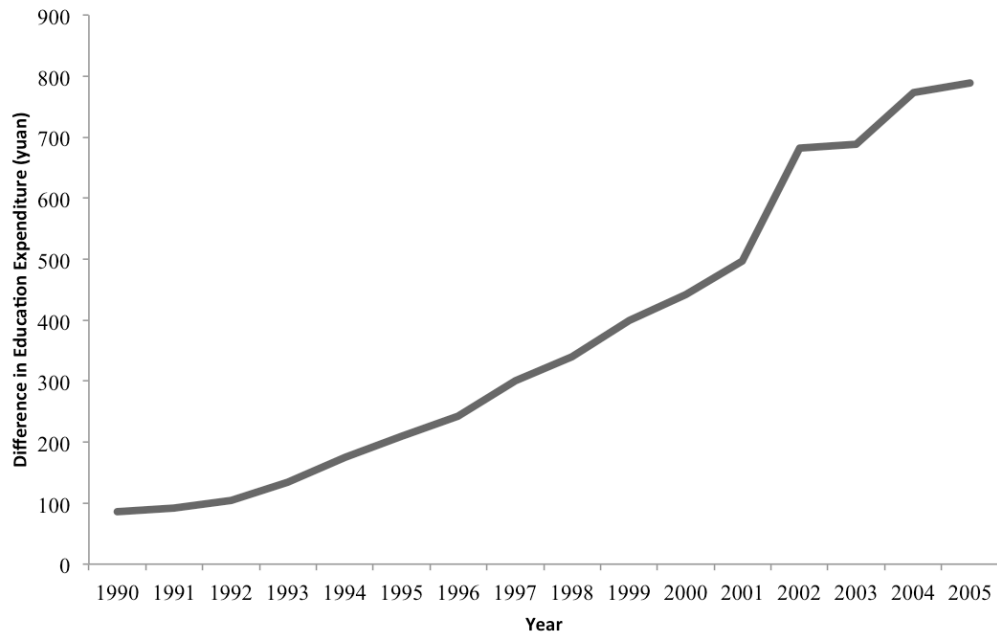


Figure 4: Urban-Rural Difference in Per Capita Educational Expenditure, 1990-2005. (Li, 2006).

As shown in *Figure 3*, the average years of education of the rural population was less than that in the urban population with a difference of over 2 years between 1990 and 2005. Although the number fluctuated between 1990 and 2005, we can see that after reaching a peak in 1997, the difference in later years is larger than that in earlier years, with the exception of 2000. In general, the gap in average years of education has grown from 1990 to 2005. *Figure 4* shows the urban-rural difference in per capita educational expenditure between 1990 and 2005. Education expenditure is another common measurement of educational inequality, and the trends in *Figure 4* clearly shows that the difference in educational expenditure between the urban and rural populations

increased significantly between 1990 and 2005, especially in more recent years. By 2005, the gap in educational expenditure reached 788.72 *yuan* per year, which is 9 times more than that of 1990. The significant increase in the education expenditure is associated with the increasing income gap presented earlier, and there is no sign that the gap has narrowed in more recent years, given that the income gap has also been increasing after 2005.

The findings presented here have shown that only the measure on the illiteracy rate shows a declining urban-rural gap over time. Both average years of education and educational expenditure provide strong evidence of the increasing educational gap. The prominence of the educational gap has also been increasing in recent years, Qian and Smith (2008) show that the urban-rural educational inequality is the most important contributor to the overall growth of educational inequality in China after the coastal-inland gap, making the Gini coefficient of education in China among the highest in the world.

3.3 Inequality in Healthcare and Infrastructure

While the income and educational inequality have received some attention in previous studies, the urban-rural gaps in other aspects have not been well studied. One of the most important gaps exists in healthcare. China's healthcare system and its investment in healthcare have been widely reported to be one of the worst in the world

(Zhang & Kanbur, 2005). According to WTO (2000), China is ranked 144th in overall healthcare system performance and 139th in health expenditure per capita worldwide. What is worse is the widening healthcare gap between urban and rural areas. Some scholars reported that China is among the countries with the most unequal healthcare finance in the world (Gustafsson, Shi & Sicular, 2008). Drawing on two datasets from the *China Statistical Yearbook*, this section attempts to provide some evidence on the widening urban-rural gap in healthcare resources and investment.

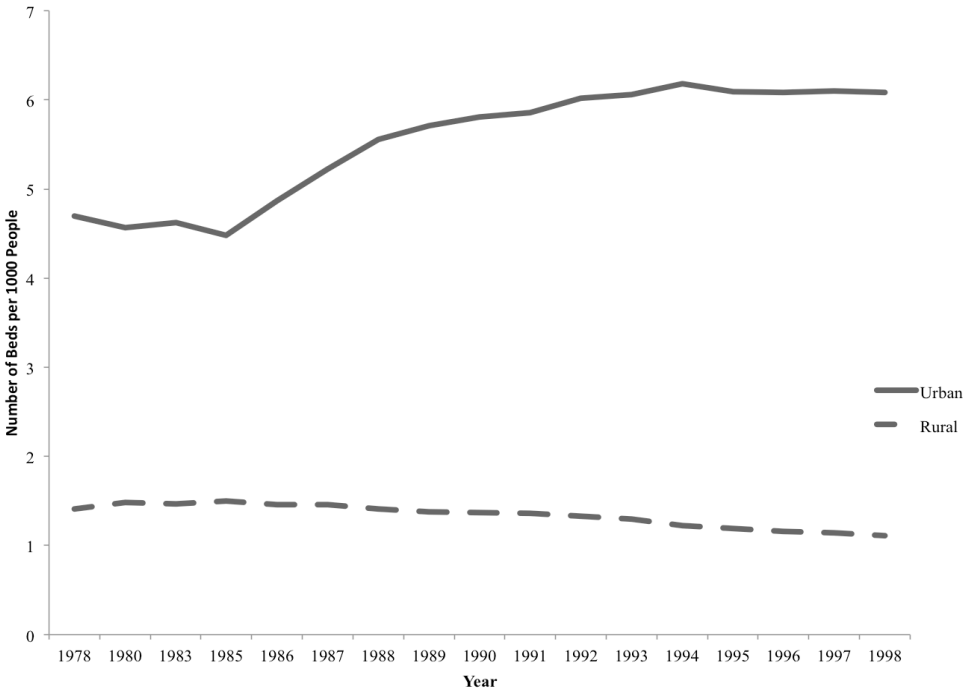


Figure 5: Number of Hospital Beds per 1000 People, Urban vs. Rural, 1978, 1980, 1983, 1985-1998. (NBS, 2000).

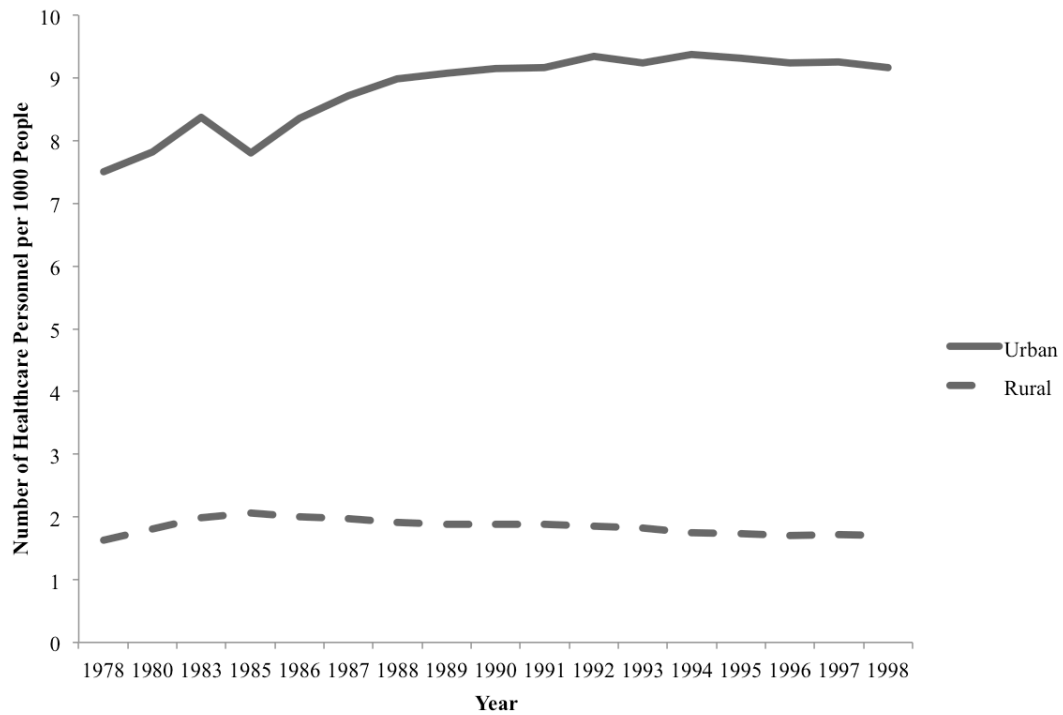


Figure 6: Number of Healthcare Personnel per 1000 People, Urban vs. Rural, 1978, 1980, 1983, 1985-1998. (NBS, 2000)

Figure 5 and Figure 6 present the data from NBS on the number of hospital beds and the number of medical personnel per 1000 people in urban and rural areas between 1978 and 1998. As can be seen, the number of hospital beds and the number of healthcare personnel per 1000 people in urban areas were significantly higher than those in rural areas. The urban-rural gaps in these two indicators also show similar patterns over time: after fluctuating between 1978 and 1985, both of the gaps increased steadily from 1985 to 1998. In 1985, the urban-rural differences in the number of hospital beds and the number of medical personnel per 1000 people were around 3 and 1, respectively,

while the differences increased to around 5 and 3.2, respectively, in 1998. The enlarging urban-rural gaps in medical facilities and medical personnel are surprising given China's rapid economic development and its increased investment in healthcare sector and healthcare reform in both urban and rural areas.

Table 3: Per Capita Healthcare Expenditure of the Urban and Rural Household, 1990, 1995, 2000, 2010-2013. (NBS, 2014).

	Urban (yuan)	Rural (yuan)	Difference (yuan)
1990	25.7	19.0	6.7
1995	110.1	42.5	67.6
2000	318.1	87.6	230.5
2010	871.8	326.0	545.8
2011	969.0	436.8	532.2
2012	1063.7	513.8	549.9
2013	1118.3	613.9	504.4

Table 3 presents the data on per capita healthcare expenditure of the urban and rural households in 1990, 1995, 2000, and between 2010 and 2013. Although the data is not available for each single year, it can clearly be seen that the urban-rural gap in healthcare expenditure increased dramatically from 1990 to 2010. After a decline in 2011, the gap reached its highest point in 2012 and declined again in 2013. The data and evidence presented above have shown support for the widening urban-rural gap in access to healthcare facilities and expenditure.

Another important part of the urban-rural inequality in China can be found in infrastructure. Although the Chinese government has devoted a lot in construction and

improvement of infrastructure in rural areas, the urban-rural gap still persists. The only available data on the rural infrastructure is the *Agricultural Census* in 1996 (NBS, 1996), the 1996 data indicates that the development of infrastructure in rural areas is far behind that in urban areas. Although most rural households had access to water and electricity, almost no household had access to gas. In comparison, the percentage of the urban population with access to gas is 73.2 percent in 1996 (NBS, 1997). In terms of road density, the length of road per 10 thousand people in urban and rural areas was 7 km and 18.4 km, respectively, in 1996. (NBS, 1996,1997). The higher number in rural areas should be attributed to the fact that the size of rural area and rural population is larger than the urban area and the urban population. However, most of the road construction in rural areas is of low quality, and probably the most important reason is the poor quality of governance in rural areas.

Although no dataset about the quality of governance in rural China has been established, some recent studies have already found some evidence on this. One survey study of quality of governance in China (Saich, 2012) found that Chinese people think village governments are less competent than city governments, and give lower scores to village governments in terms of public service provision. And rural residents are less satisfied with their governments than urban residents. Another study has found that the quality of village projects in China is associated with the poor quality of governance;

communities with problems in government capability usually cannot implement good projects (Liu et al, 2013). Given that infrastructure is found to promote agricultural productivity and nonfarm employment in the rural areas (Fan & Zhang, 2004), infrastructure can become another source of the urban-rural inequality.

3.4 The Urban-Rural Divide at the Provincial Level

Although the data at the national level has shown that the urban-rural divide is large and increasing, it is possible that different trends can be observed at the regional or the provincial level. To see whether the urban-rural gap varies across regions within China, the NBS data on the urban and rural per capita household income in 31 provinces is examined and the urban-rural income ratios in 2000, 2005, 2010, and 2013 are calculated and presented in *Table 4*. Although the data before 2000 is not available in NBS, making it hard to compare the trends at the provincial level to the trends at the national level in the early time of the market reform, several important findings can be drawn here. First, most provinces (28 out of 31) experienced an increase in the urban-rural income gap in 2005 in comparison with 2000. Second, from 2005 to 2010, situation varied in different provinces, but not many provinces experienced a significant change and the gaps stayed roughly at the same level over the 5-year period. Third, in 2013, most provinces (29 out of 31) experienced a decline in the gap. These three general trends mirror the observations found at the national level.

Table 4: Urban/Rural Ratio in Per Capita Household Income by Province, 2000, 2005, 2010, 2013. (NBS, 2014).

	2000	2005	2010	2013
<u>National</u>	<u>2.8</u>	<u>3.2</u>	<u>3.2</u>	<u>3</u>
Beijing	2.2	2.4	2.2	2.2
Tianjin	2.2	2.3	2.4	2
Hebei	2.3	2.6	2.7	2.5
Shanxi	2.5	3.1	3.3	3.1
Inner Mongolia	2.5	3.1	3.2	3
Liaoning	2.3	2.5	2.6	2.4
Jilin	2.4	2.7	2.5	2.3
Heilongjiang	2.3	2.6	2.2	2
Shanghai	2.1	2.3	2.3	2.2
Jiangsu	1.9	2.3	2.5	2.4
Zhejiang	2.2	2.4	2.4	2.4
Anhui	2.7	3.2	3	2.9
Fujian	2.3	2.8	2.9	2.8
Jiangxi	2.4	2.8	2.7	2.5
Shandong	2.4	2.7	2.9	2.7
Henan	2.4	3	2.9	2.6
Hubei	2.4	2.8	2.8	2.6
Hunan	2.8	3.1	2.9	2.8
Guangdong	2.7	3.1	3	2.8
Guangxi	3.1	3.7	3.8	3.4
Hainan	2.5	2.7	3	2.7
Chongqing	3.3	3.6	3.3	3
Sichuan	3.1	3	3	2.8
Guizhou	3.7	4.3	4.1	3.8
Yunnan	4.3	4.5	4.1	3.8
Tibet	5.6	4.5	3.6	3
Shaanxi	3.5	4	3.8	3.5
Gansu	3.4	4.1	3.9	3.7
Qinghai	3.5	3.7	3.6	3.1
Ningxia	2.8	3.2	3.3	3.2
Xinjiang	3.5	3.2	2.9	2.7

Despite the fact that the trends in most provinces are similar to those at the national level, significant variations exist among provinces in terms of the magnitude of the gaps, the urban-rural income gaps in some provinces are significantly larger than

those in other provinces. As can be seen, provinces with the largest urban-rural income gaps are Guizhou, Yunnan, Tibet, Shaanxi, and Gansu, all of which are located in the southwest and northwest, the innermost parts of China. In 2005, all the five provinces had income ratios over 4, in 2013, when the income gaps in most of the provinces went below the national average, the five provinces still had significantly higher income gaps when comparing to other provinces, especially more economically prosper areas along the coastal region . One possible explanation for the extremely large urban-rural income gaps in some provinces may be related to the relative size of rural areas to urban areas and the different development level. The southwest and northwest of China are the poorest regions in China and the latest to experience market reform and opening-up. Agriculture is the major economic sector and a significant portion of the population still lives in rural areas. Economically advanced areas may have relative small or almost no rural areas due to rapid economic development and urbanization. Also, the development level of rural areas in different regions may also differ significantly. With smaller size of rural areas and relatively higher level of rural development, provinces with better economic development may have smaller urban-rural gaps.

To see if the hypothesis is correct and provide further evidence on the urban-rural divide at the provincial level, I present two case studies here on Yunnan, which is one of the poorest regions in China with the highest urban-rural income ratio in 2013,

and Shanghai, which is the economic center of China with one of the lowest urban-rural income ratio between 2000 and 2013. I look at the data on the urban and rural per capita household income and the size of urban population in the total population in these two places between 1980 and 2010, and the data is presented in *Table 5* and *Table 6*.

Table 5: Urban and Rural Per Capita Household Income and Urbanization in Shanghai, 1980-2010. (Shanghai Statistics Bureau, 2014).

Year	Urban per capita income (yuan)	Rural per capita income (yuan)	Urban/rural ratio	Urban population (%)
1980	637	401	1.6	61.3
1985	1075	806	1.3	63.8
1990	2183	1665	1.3	67.4
1995	7172	4246	1.7	70.8
1996	8159	4846	1.7	71.5
1997	8439	5277	1.6	72.2
1998	8773	5407	1.6	73.0
1999	10932	5481	2.0	73.8
2000	11718	5565	2.1	74.6
2001	12883	5850	2.2	75.3
2002	13250	6212	2.1	76.4
2003	14867	6658	2.2	77.6
2004	16683	7337	2.3	81.2
2005	18645	8342	2.2	84.5
2006	20668	9213	2.2	85.8
2007	23623	10222	2.3	86.8
2008	26675	11385	2.3	87.5
2009	28838	12324	2.3	88.3
2010	31838	13746	2.3	88.9

Table 6: Urban and Rural Per Capita Household Income and Urbanization in Yunnan, 1980-2010. (Yunnan Statistics Bureau, 2011).

Year	Urban per capita income (yuan)	Rural per capita income (yuan)	Urban/rural ratio	Urban population (%)
1980	420	147	2.8	10.9
1985	752	325	2.3	11.6
1990	1514	489	3.1	12.3
1995	4064	1010	4.0	13.6
1996	4977	1229	4.0	14.0
1997	5558	1375	4.0	14.4
1998	6042	1387	4.4	14.6
1999	6178	1437	4.3	15.2
2000	6324	1478	4.3	15.5
2001	6797	1533	4.4	15.8
2002	7240	1608	4.5	16.1
2003	7643	1697	4.5	16.3
2004	8870	1864	4.8	16.4
2005	9265	2041	4.5	16.4
2006	10069	2250	4.5	16.6
2007	11496	2634	4.4	16.6
2008	13250	3102	4.3	16.6
2009	14423	3369	4.3	16.6
2010	16064	3952	4.1	16.6

By comparing the statistics of Shanghai with that of Yunnan, we can see that although the urban and rural household income in both provinces increased significantly between 1980 and 2010, Shanghai has been developing in a much faster speed than Yunnan since 1980s. In 1980, the difference between the urban per capita income in Shanghai and Yunnan was only 217 *yuan*, but by 2010, urban residents in Shanghai earned roughly 2 times greater than rural residents in Yunnan, resulting in a difference of 15,774 *yuan*. What is much worse is the gap in rural per capita income, in 2010, rural residents in Shanghai earned 3.48 times greater than rural residents in

Yunnan. These observations are expected because of Shanghai's advantage in geographical location and the Chinese government's policies in establishing Shanghai as a financial center.

Also, the data on the urban population as percentage of the total population shows that the majority of the population in Shanghai lives in urban areas. In 1980, more than 60 percent of the population in Shanghai lived in urban areas, and the number increased to 88.9 percent in 2010. In comparison, however, only 10.9 percent and 16.6 percent of the Yunnan population lived in urban areas in 1980 and 2010, respectively. Moreover, the urban-rural income gap in Shanghai is significantly smaller than that in Yunnan. Between 1980 and 1998, the urban-rural income ratio in Shanghai was lower than 2, although the ratio reached 2 in 1999, it has not gone beyond 2.3. The urban-rural income ratio in Yunnan started at a much higher level of 2.8 in 1980, went beyond 4 in 1995 and remained at such a high level. In 2008, the ratio reached 4.8, an extremely large gap when comparing with all other provinces in China. Taking these findings together, evidence can be found to support the hypothesis. The relatively higher level of rural development and considerably smaller size of the rural area in Shanghai result in smaller urban-rural income gap. While the income of urban residents in Yunnan have grown fast, rural residents, with a lower starting point in income and larger size, experienced slow progress and lagged development, enlarging the urban-rural gap.

Although the pace of rural development and the size of rural sector may explain the regional differences in the urban-rural income gap, the income gaps increased in the 1980s and 1990s regardless of the decreasing rural sector in both of the provinces, suggesting the possibility that some common factors in this period were enlarging the urban-rural divide across provinces.

Despite the regional differences in the urban-rural income gap, the data in *Table 4* also shows that three provinces (Sichuan, Tibet, and Xinjiang) experienced continuous declines in the urban-rural income ratios. This is different from the trends at the national level and in other provinces. The decline in these three provinces can be attributed to the equalizing efforts implemented in these provinces by the central government to maintain political stability and prevent revolutionary danger. Tibet and Xinjiang share two important features in common. One is that the majority of the population lives in rural areas, the rural population accounts for over 50 percent and 70 percent of the total population in Tibet and Xinjiang, respectively (NBS, 2000; 2010). And the other is that these two provinces are majority-minority areas, meaning that the majority of the population in these two areas belongs to ethnic minorities. According to the census data in 2000, over 90 percent of population in Tibet and over 50 percent of population in Xinjiang were ethnic minorities (NBS, 2000; 2010). Sichuan is a province with a wide variety of ethnic minorities, although ethnic minorities do not form the majority of the

population in Sichuan, the northwest part of Sichuan is an important area where ethnic minorities concentrate.

The living conditions of ethnic minorities in China are consistently and significantly lower than those of the ethnic majority (or the *han* ethnicity). Ethnic inequality is another important topic in China's inequality (for example, see Gustafsson & Shi (2003)), but this is out of the scope of this thesis. As early as in the 1950s, the Chinese government established a system of regional autonomy in minority areas and allowed local ethnic minorities to manage their own regional affairs. Tibet and Xinjiang are provinces with regional autonomy. As part of the regional political system, the central government initiated numerous economic plans aiming at assisting the rural development and increasing the living conditions of the ethnic minorities in these two provinces in order to prevent political conflict. All the equalizing forces in these two provinces targeting at the ethnic minorities can be the reasons behind the declining urban-rural income gap.

3.5 Overall Trends in the Urban-Rural Gap

This thesis reexamines the urban-rural gap in China by using the most recent data from multiple sources. Almost all the evidence shows that the gap is increasing and widening, and there is limited evidence that the gap will narrow in the near future. The sectoral income gap has been widening since China's market reform, and the urban

households per capita income is consistently over 3 times greater than rural income over the past decade. The educational and healthcare gaps have also been enlarged over the past few decades. The urban and rural populations differ significantly not only in income and wealth, but also in their access to education and healthcare resources. Provincial data shows regional difference exist in terms of the urban-rural income gap, but the general trends at the provincial level over time mirror those at the national level. Two case studies in Yunnan and Shanghai provide some evidence that the regional difference may be attributed to different level of rural development and the size of rural sector.

Despite the gap presented here, the urban-rural differences also exist in other areas including but not limited to housing, taxation, and political rights. Both equalizing forces from government and recent vast increase in rural-to-urban migration seem to have had limited effects in counteracting these growing gaps. The root behind the gaps should be found in the public policies developed in the early years of development to achieve two aims: 1) to differentiate the urban and rural populations, control the movement of population, and protect the benefits of urban elites with the most political and economic resources; 2) to favor the development of urban areas in the early years of market reform. In the next section, I analyze the influence of these important public policies on the widening urban-rural gap in China.

4. Social Policies and the Urban-Rural Gap

The increasing and persisting gap is surprising in China, and one of the major reasons is the biased public policies developed in the early years of development in favor of advancing economic growth in urban areas and controlling population mobility to achieve political stability under an authoritarian regime. The following sections attempt to analyze these public policies and provide evidence of how these policies are associated with the large urban-rural divide in China. Among the three social policies mentioned above, the household registration system is the most prominent one due to its long history and significant impact and is the major focus of my analysis.

4.1 Household Registration System

The household registration system or *hukou* originated in 1951 when China was under a state socialist economy. Basic living goods like food and other household items were subject to a rationing system that distributed ration certificates to local residents by the government. Local residents could then use the ration certificates to purchase goods in designed state-owned stores. With the aim of administrating the distribution of ration certificates and preventing people from one place to purchase goods in another place, *hukou* was first proposed. However, except controlling for the food and goods purchasing process, *hukou* did not limit people's mobility between urban and rural areas in terms of employment and was not associated with access to any social services.

In 1953, China developed its first Five Year Plan (1953-1957) with the declared aim of “building the foundation of socialist industrialization” (Chinese Communist Party (CPC), 2015). A considerable number of state-owned enterprises were launched and a vast number of labors were needed, millions of previous peasants from rural areas were recruited without restrictions (Wu & Treiman, 2004). However, the huge flow of migrant workers from rural areas endangered the central government’s plan of controlling human resources distribution and building a welfare system in urban areas. In response, the Chinese government designed a strict *hukou* system in 1955 and the National People’s Congress (NPC), the highest law-making body in China, passed the first and only official regulation on *hukou* administration in 1958, which has been implemented till today.

Looking at the regulation, the *hukou* system is established for “maintaining social stability, protecting citizens’ rights and benefits, and serving the Chinese socialist construction” (NPC, 1958). The *hukou* system first established two different types of registration status, “agricultural” and “non-agricultural”, or “urban” and “rural”. Each citizen is required to register as one of the two categories, and the initial registration status is determined by location of residence and the occupation of father. In urban areas, the registration unit is household; the rural population registers as communes or villages.

Once the initial registration is completed, the registration statuses of the newborns are determined by the status of their mother.

The change of *hukou* status is subject to strict official sanction, and one study finds that the three most important channels for rural population to convert to urban status are higher education, CPC membership, and military service (Wu & Treiman, 2004). All these channels, however, are extremely limited to the rural population, making it difficult for *hukou* conversion. The *hukou* system is the first man-made institution that created the distinction between the urban population and the rural population in China, some scholars even argue that the registration system separates China into two rigid ranks: urban rank and rural rank (Ren et al, 1996).

To support the implementation of the *hukou* system, the Chinese government have adopted complementary policies starting from the late 1970s. In 1980s NPC passed the Household Responsibility System (HPS) in rural areas with the declared aim to promote structural adjustment in rural areas. Under this system, state-owned lands in rural areas were distributed to peasants and state-planned quota on agricultural production was lifted. As a result, peasants could manage and design agricultural production by themselves. However, rural households only have the rights of use for their land not rights of alienation. Once they permanently leave their original place of residence, the lands will be taken by local authorities, which results in a significantly

high cost for rural households that consider moving to urban areas for higher incomes and better social services (Yang, 1997). Another change in the *hukou* in the 1980s was that local governments started to issue temporary resident permits to people with rural *hukou* but who have obtained formal employment in urban areas (Liu, 2005). The permits granted rural workers the rights to work and live in urban areas but they did not have access to urban education resources, welfare programs and other social services.

The *hukou* system has important relevance to the urban-rural inequality in several ways. First, other developing countries also have household registration systems, but the *hukou* system in China is unique in the way that it does not only aim at providing demographic statistics, but also explicitly at differentiating the rural population from the urban population and controlling population movement. Second, rural-to-urban migration is strictly inhibited under the system, and other complementary policies impose unaffordable costs on the rural population who intends to move to urban areas. Although rural-urban migration has been increasing since the early 1990s and millions of previous peasants are now working in urban areas, their rights in various social services and access to urban welfare programs are denied.

Third, *hukou* also alienates the rural population from the major benefits of economic growth in urban areas. The *hukou* system not only restricts people's location of residence, but also controls birth, marriage, death, employment and social welfare

including education, healthcare, and housing. For example, both state-owned and privately owned enterprises in urban areas are only allowed to recruit people with urban *hukou* and welfare programs and schools in urban areas are only accessible to people with urban *hukou* and formal employment. Under this system, the urban and rural populations are ascribed different status and life opportunities and their status are extremely difficult to change.

However, it is misleading to conclude that the *hukou* system itself has caused the urban-rural divide in China. The system should be viewed as a political strategy utilized by the urban elites to concentrate resources on the urban development, while excluding the rural population from enjoying the fruits of economic development. To further provide support for these claims, I use the 1995 and 2002 Chinese Household Income Project (CHIP), a nationally representative survey on individual and household characteristics in China's urban and rural areas and resources from other independent studies to show how the *hukou* system has influenced the income and educational inequality.

According to the census data on *hukou* registration, around 25 percent of Chinese population has urban *hukou* status in 2000, and this number increased to 29 percent in 2010. *Hukou* is tightly correlated with place of residence. Previous studies have found that the simple fact of being in urban areas can result in significant privilege in income.

After controlling for the common factors that are associated with income in China like education, party membership, and age, Yue et al (2008) found the fact of simply having urban residence yields 2,350 *yuan* and 4,606 *yuan* in income in 1995 and 2002, respectively. Given that the average urban households per capita income in 1995 and 2002 are 4,283 *yuan* and 7,702 *yuan*, respectively (see Table 1), urban residence contributed to over 50 percent of urban households income in 1995 and nearly 60 percent in 2002. The enlarged gap reflects the increasing prominence of *hukou* status to personal income and that population with rural *hukou* is significantly undermined.

Table 7: Individual Total Income by Hukou Status, 1995, 2002. (CHIP, 1995, 2002).

Year	Hukou status	Income (yuan)
1995	Urban	6153.34
	Rural	386.27
	Difference	5767.07
2002	Urban	10674.42
	Rural	1016.8
	Difference	9657.62

Table 7 presents the individual total annual income by different *hukou* status in 1995 and 2002 reported in the CHIP surveys. As can be seen, a significant income gap exists between population with urban and rural *hukou* status. In 1995, the gap is around 5,767.07 *yuan* but the number increased to 9,657.62 in 2002. Part of the reasons may be attributed to the increasing prominence of urban *hukou* status and the increasing economic returns to urban employment relative to rural employment. Another finding

from the CHIP surveys reported in Yue et al (2008) shows the percentage of urban *hukou* among the top and bottom income quintiles and part of the data is presented in *Table 8*.

The data in *Table 8* reports the income gap between the top and bottom income quintiles in 1995 and 2002. The most important conclusion is that among the bottom quintile in 1995 and 2002, only around 1 percent had urban *hukou* status. The vast majority of the richest quintile in 1995 and 2002, however, had urban *hukou* status, and the proportion increased from 81 percent to 91 percent over the seven-year period. This data reflects the fact that people with urban *hukou* are more likely to gain higher income and become members of the upper social class in China than people with rural *hukou* status. The evidence and data presented here have shown that urban *hukou* status is associated with higher income through its strong correlation with urban residency.

Table 8: Income, Years of Education, and Hukou Status of the Top and Bottom Income Quintiles, 1995, 2002. (CHIP, 1995, 2002; Yue et al, 2008).

Variables	1995		2002	
	Poorest 20%	Richest 20%	Poorest 20%	Richest 20%
Income per capita (yuan)	770	8,068	1,270	14,495
Average years of education (years)	5.76	9.99	6.41	11.41
Urban hukou (%)	1	81	1	91

However, place of residence associated with the *hukou* system only explains part of the income gap. Another important factor through which urban *hukou* can

significantly increase individual income is education. The difference in average years of education between the top and bottom quintiles in 1995 and 2002 shown in *Table 8* reveals that education may also have a major influence on income. *Hukou* status is highly correlated with years of education. The population with urban *hukou* status has direct access to good educational resources located primarily in urban areas. This effect is magnified by the income gap between different *hukou* status. The population with urban *hukou* also has more resources to invest in education. Previous studies have shown that education has become another important source of inequality (see Yue et al, 2008).

To provide evidence of the association between *hukou* status and education and how this might contribute to the income gap, I use the data from CHIP surveys in 1995 and 2002 on *hukou* status and education level. An additional data source from the China General Social Survey of 2005 reported in Wu (2012) is added here to provide a broader perspective and *Table 9* presents these statistics. As can be seen, all three surveys show a significant gap in average years of education between population with urban *hukou* and rural *hukou*; and the gap has not changed significantly from 1995 to 2005. Moreover, different *hukou* status is also associated with the level of education, especially higher education.

Table 9: Education Level by Hukou Status, 1995, 2002, 2005. (CHIP, 1995, 2002; Wu, 2012).

	CHIP (1995)		CHIP (2002)		China General Social Survey (2005)	
	Urban	Rural	Urban	Rural	Urban	Rural
Average years of education (years)	9.5	5.0	9.55	6.61	10.25	5.96
Primary school (%)	15.1	39.4	12.4	33.1	19.1	57.5
Junior high school (%)	28.1	32.6	26.4	40.6	30.9	32.5
Senior high school (%)	19.5	7.0	23.3	9.6	32.2	9.7
College or higher (%)	6.0	0.2	7.3	0.5	17.9	0.4

One important fact is that the percentage of population with only primary or junior high school education in rural areas is comparable to that in urban areas. This is an understandable outcome since China initiated nine-year free and compulsory education (including primary and junior high school) in 1986 and the rural population is also included and has access to free education up to junior high school. However, people with urban *hukou* dominate the category with senior high school, college or post-college education. What is worse is that the overall percentage of population with senior high

school and college education has been increasing in urban areas from 1995 to 2005, but the number in rural areas has not changed considerably. In 2005, for example, around 18 percent people with urban *hukou* had college education, a much higher percentage than the 6 percent in 1995, but the number among rural population was only 0.4 percent, which is not significantly different from the level 10 years ago.

Table 10: Marginal Returns to Education at Mean Education Levels, Urban, Rural, 1995, 2002. (yuan) (Yue et al, 2008).

	Rural	Urban	Urban (evaluated at mean rural education level)
1995	39.58	230.23	129.70
2002	86.95	756.90	460.14
2002 (evaluated at mean 1995 education level)	65.07	711.48	

To complement my data here, I also present in *Table 10* the marginal returns to education by urban and rural sectors based on a regression study done by Yue et al (2008), who also used the CHIP surveys in 1995 and 2002. What is noteworthy here is that Yue et al (2008)'s study uses location of residence other than *hukou* status, but their results are also relevant because 97 percent of the participants in 1995 and 2002 CHIP surveys living in urban areas have urban *hukou*, and all survey participants living rural areas have rural *hukou*. Moreover, schools in urban areas are only accessible to those with urban *hukou*, so their results actually seem to reflect how people with different

hukou status differ in returns to education. In 1995, for example, a rural resident with the mean education level would gain 39.58 *yuan* more with one additional year of education, while an urban resident with average education could gain 129.70 *yuan* more with one additional year of education. In 2002, both returns to education by urban and rural residents increased, but more importantly, the gap between the marginal returns to education had also widened, from 90.12 *yuan* in 1995 to 373.19 *yuan* in 2002.

The influence of *hukou* status on education and income could be clearly seen in the evidence presented above. However, the *hukou* system enlarges the urban-rural divide not only by establishing higher income and education levels in favor of the urban population, but it also strictly prevents the rural population from accessing these resources through migration. There is no data available to trace how many people with rural *hukou* have successfully converted their *hukou* status and who these people are. One report by the China Data Center at Tsinghua University (2013) found that the number of people who have converted from rural *hukou* to urban *hukou* only increased 7.7 percent in 2013 when comparing with the number 20 years ago. The rate of migration flow (21 percent) of the rural population is also lower than that (23.7 percent) of the urban population, and the majority of migrant workers with rural *hukou* cannot convert their *hukou* status even though they have been working in urban areas for years (China Data Center, 2013).

The complicated conversion process also shows the strict population control under the *hukou* system. *Hukou* conversion needs to go through more than six rounds of official sanctions by different government agencies, including rural communes, the police authority, local government at origins, the family planning agency, the human resource agency, and local government at destination. The process is usually long and some people wait for years to obtain urban *hukou*. Moreover, the government also sets an annual quota, which is roughly 0.2 percent to 0.5 percent of the total rural population (Wang, 2004), to limit the number of *hukou* conversion.

The evidence presented above have shown how the *hukou* system establishes biased treatment in favor of the urban population, which has occupational opportunities with higher income and access to better education resources. The urban population is ascribed “urban privilege”, an invisible package of better opportunities and resources, upon birth. However, what is important here is that all the findings suggest that the *hukou* system is not a direct cause on the urban-rural divide. Imagine that if the government invests the same amount of resources in rural areas to assist industrial development and provide educational resources at the same level as in urban areas, the effect of the *hukou* system on the urban-rural gap will disappear. As a result, the *hukou* system should be viewed as a political tool or bureaucratic strategy, which was established by the urban political elites to isolate investment and resources in urban

areas and protect the benefits of the urban population while excluding the rural population from access to these benefits.

Institutional barriers established during the time of the centrally planned economy in many respects have been lifted in China, but the *hukou* system has shown no sign of relaxation. This section has provided evidence that the *hukou* system is a highly biased institution, which is associated with the persistently increasing urban-rural divide through providing the urban population with privileges in income and education. However, this gap is further exacerbated with the other biased social policies that enhance the conditions of the urban population while undermining that of the rural population. In the next section, I briefly analyze the biased effects of China's education system and healthcare system.

4.2 Education System

As shown in previous sections, the urban-rural divide in education is significant in terms of the illiteracy rate, average years of education, and per capita education expenditure. And the analysis on the *hukou* system provides evidence that *hukou* plays an important role in the educational gap through location of residency and income. In more recent years, education has also become an important source of inequality given its importance in raising personal income and the marginal returns in education differ considerably in urban and rural areas, thus further widening the gap. Although there

are many other factors that influence the urban-rural divide in education such as household characteristics, parents' education, and timing of attending school (Knight & Song, 1999), here I focus on the education policy in China and argue that the policy has been developed to give preferential treatment to the urban population to support the national economic plan that was already biased towards urban development even before China's market reforms and opening up to global market.

The most important feature of China's education system is a "dualistic structure with classified management". The "dualistic structure" means separate education management in urban areas and rural areas, and "classified management" refers to a system in which the major management and funding agency of education is classified according to different administration levels. Under such a system, the educational development of each administration level is governed by its own principal government. The start of such a system could be traced back to 1953, when the first government regulation on education reform, *Guidance on Reorganizing and Improving Primacy Education*, was announced. The regulation first specified the major aim of education development was to "Focus on urban development, while reorganizing public schools in rural areas" (People's Daily, 2006). A series of other policies more recently have also strengthened and influenced the dualistic system. However, before exploring the specific education policies over the past few decades, it is important to first briefly

describe the administrative structure in China and *Figure 7* shows a simplified version of the major administrative structure.

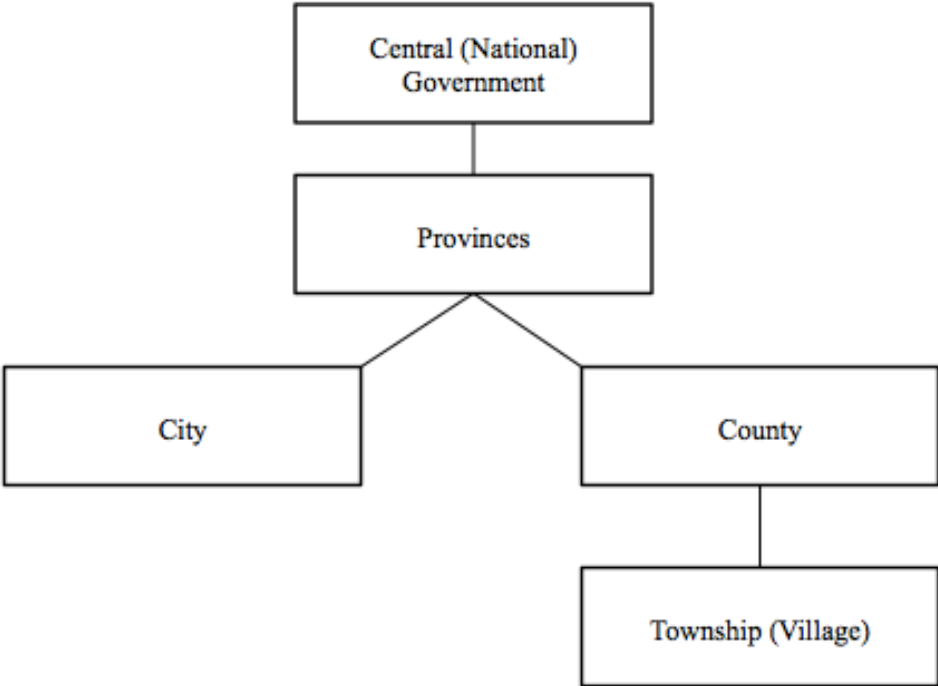


Figure 7: Administration Structure of China.

Under the central government, the province is the major administration unit, which is further divided into cities and counties. Cities are equivalent to urban areas, and counties, which include a lower level administration, villages, are the major rural areas in China. The central government has the most political and economic resources. With its strong mobilizing power under an authoritarian regime, the central government

is much faster and more powerful in implementing policies and reforms than governments in lower administration levels. Township government is the lowest level of administration and has the fewest economic resources. The key biased feature in the education system of China is its finance structure through the administration agencies responsible for funding and managing education development. By examining the important education policies and laws starting from 1958, I present the major development plan and funding scheme of education specified in each of the policies in *Table 11*.

As shown, there are six important education policies that have dealt with the education development plan in urban and rural China. Starting from 1958's *Guidance on Reorganizing and Improving Primacy Education*, which prioritized educational development in urban areas with most of the funding directly from the central government, China initiated a biased education plan in favor of urban development and has provided privileges to urban population with access to better education resources. The major funding and management body of rural education is county or village government, which usually lacks sufficient economic resources to provide educational facilities to the local population, and education with good quality is virtually impossible.

Table 11: Important Education Policies in China, 1958-2001. (The Central People's Government of China, 2013).

Year	Government document	Urban education	Main funding and managing agency of urban education	Rural education	Main funding and managing agency of rural education
1958	Guidance on Reorganizing and Improving Primary Education	Emphasize on urban development	Central government and provincial government	Reorganization without development plan	Township government
1959	Report on the Work of the Government 1959	Gather resources to develop "key schools" in urban areas	Central government	N/A	N/A
1985	Decision on Education System Reform	Urban education financed by central government	Central government	Leave rural education development to the hands of local government	County government and township government
1986	Compulsory Education Law of China	Urban has priority in generalize compulsory education	Central government	Gradual generalization of compulsory education	Central government, county government and township government
2001	Decision on Primary Education Reform and Development	Increase the quality of primary education in urban areas	Central government and provincial government	Reduce the burden of township government and county government is the central agency in rural education	County government

In 1959, the policy on development of “key schools” is proposed to build middle schools and universities with the best resources in terms of facilities, professional faculty, and curriculum structure available in China to cultivate talents. But the plan is only available in urban areas with direct funding from the central government. Under the *hukou* system, those schools with better education resources are only available to the urban population.

In 1986, China started its nine-year compulsory education program, and urban education was put on priority in the program implementation. This plan covers rural areas as well, and the central government is also involved in the finance and funding. As a result, the implementation of compulsory education is the only program in which rural education receives substantial support from the central government. Going back to *Table 9*, it can be seen that the percentage of population with primary education and junior high school education is the major achievement among all levels of education in rural areas. However, the inability of local government to pay their debts and provide sufficient funds degraded rural educational development in all other levels of education, especially post-secondary education, and worsened the urban-rural inequality (Sun, 2006).

In 2001, the government reduced the educational finance burden on township governments, and county governments became the major party in managing rural education. However, this did not substantially lift the burden on local rural

governments, since central government still did not directly support rural education development and the nature of the dualistic system had not been changed. With insufficient income and resources, local governments usually ran into debts and the cost of education was transferred to local peasants who could not afford it. Thus the biased education system, with little attention on rural development, has significantly boosted urban educational development while rural education finds itself underfunded and poor in quality.

To see how the biased education system has resulted in different funding and finance to urban and rural areas, it is enlightening to compare the data on the educational funding received by the urban and rural sectors in each year. However the *China Educational Finance Statistical Yearbook*, the only official publication on education statistics each year, only started to differentiate urban and rural data from 2007. So it is difficult to track the change of the policy from the early years of market liberalization in China, especially before the adoption of compulsory education in 1986, when the education development in rural areas was completely left in the hands of village and county governments. However, the statistics in recent years can still provide some evidence on the gap in the government expenditure on urban and rural education, and *Table 12* presents the percentage in distribution of national education budget by different level of education and sector from 2006 to 2010.

Table 12: Percentage of National Education Budget Distribution by Education Level and Sector, 2006 – 2010 (%) (Ministry of Education, 2006, 2007, 2008, 2009, 2010, 2011).

Education level	2006	2007	2008	2009	2010
College	32.31	30.97	29.98	28.98	28.78
Vocational school (urban)	N/A	2.54	2.6	2.49	2.27
Vocational school (rural)	N/A	0.32	0.39	0.36	0.33
Difference	N/A	2.22	2.21	2.13	1.94
Senior high school (urban)	N/A	10	9.58	9.3	8.84
Senior high school (rural)	N/A	1.47	1.47	1.48	1.4
Difference	N/A	8.53	8.11	7.82	7.44
Junior high school (urban)	7.26	7.82	7.54	7.79	7.73
Junior high school (rural)	8.6	9.09	9.85	10.29	9.72
Difference	-1.34	-1.27	-2.31	-2.5	1.99
Primary school (urban)	9.94	8.77	8.64	9.05	9.05
Primary school (rural)	15.26	15.50	15.85	16.50	15.93
Difference	-5.23	-6.73	-7.21	-7.45	6.88

There are several important findings to be drawn from *Table 12*: first, rural areas represent a higher percentage of the national education budget than urban areas in

terms of primary education and junior high school education. This outcome is expected for two reasons: one is that these two levels of education are parts of the compulsory education program started in 1986 and the central government is the major funding agency to cover rural areas. Given the low educational development level in rural areas, the fact that they take a larger share of the education budget is not surprising. Another reason is that the education funding sources in rural areas are meagre, and the national budget has to devote a larger proportion to rural areas in order to provide sufficient funding for compulsory education. This finding is also consistent with the statistics in *Table 9*, which has shown that rural areas have made substantial progress in primary and junior high school education. Second, a significant gap exists in senior high school education and vocational education, where the majority of the national education budget has been devoted to urban areas. For example, the national education budget is 1467 billion *yuan*, which results in a urban-rural budget gap of 2.85 billion *yuan* in vocational education and 10.91 billion *yuan* in senior high school education. Third, the proportion for the college budget share, the largest among all education categories, is entirely devoted to urban areas.

Evidence presented in *Table 9* and *Table 12* has shown that China's development plan of education is systematically biased towards urban education. Rural areas lag significantly in the development of educational resources, especially post-secondary education. The data on the percentage of population with primary and junior high

school education shows that the compulsory education program seems to benefit the rural population significantly, and the national educational budget devotes a larger portion to compulsory education in rural areas than urban areas. It is doubtful, however, if students in urban and rural areas receive compulsory education of similar quality. To answer this question, I use the data from *China Education Statistical Yearbook 2010*, the official publication on education related statistics and sources from other independent studies to provide some evidence on the quality of the compulsory education in urban and rural areas.

Table 13: Educational Attainment of Primary School and Junior High School Teachers, Urban vs. Rural, 2010. (Ministry of Education, 2010).

	Primary school		Junior high school	
	Urban (%)	Rural (%)	Urban (%)	Rural (%)
Graduate	0.46	0.03	2.11	0.2
Undergraduate	48.19	15.19	80.57	54.62
Associate degree	43.78	55.93	16.87	43.23
High school	7.46	28.12	0.45	1.91
Below high school	0.1	0.72	0.01	0.04

Table 14: Professional Rank of Primary School and Junior High School Teachers, Urban vs. Rural, 2010. (Ministry of Education, 2010).

	Primary school		Junior high school	
	Urban (%)	Rural (%)	Urban (%)	Rural (%)
Senior or above	58.01	50.15	21.96	8.92
First rank	31.54	38.21	42.66	40.02
Second rank	2.64	4.73	28.27	38.92
Third rank	0.39	0.31	1.35	4.46
Rank undecided	7.41	6.59	5.76	7.69

Table 13 and *Table 14* present the data on the educational attainment and the professional rank of primary school and junior high school teachers in urban and rural areas in 2010. The teaching profession ranking system is an accreditation system of teachers' experience and achievement in China, and five ranks: head, senior, first rank, second rank, third rank; are established to classify the qualification of teachers based on the number of years they have been teaching and their achievement. As shown, the educational attainment of teachers differs significantly between urban and rural areas in both primary schools and junior high schools. Over 48 percent of urban primary school teachers have undergraduate or graduate degrees, but the number among rural primary school teachers is only around 15 percent. In junior high schools, more than 82 percent of teachers in urban areas have undergraduate or graduate degrees, while teachers in rural areas with the same level of educational attainment account for less than 55 percent. While most urban primary school teachers has undergraduate or associate degrees, roughly one third of primary school teachers only has high school degrees.

Similar urban-rural gaps can also be found in the number of teachers with advanced professional ranks, the percentages of primary school and junior school teachers with senior or higher ranks in urban areas are around 58 percent and 23 percent, respectively, but the number for teachers in rural areas is around 50 percent and 9 percent, respectively. The evidence here shows that the qualifications of teachers differ considerably between urban and rural areas. Although both urban and rural children

are required to attend 9 years of education, the quality of education they receive differ by sector. Children in urban areas have access to much better educational resources, reflected here by teachers with significantly higher level in educational attainment and experience. Moreover, even though the law requires 9 years of education, many rural children are not able to finish the compulsory education, and one important reason is that rural households face higher educational costs than urban households. *Table 15* shows the gross enrollment rate of primary school and junior high school in urban and rural areas from the data of *China Educational Statistical Yearbook 2001-2010*, reported in Chen (2013).

Table 15: Gross Primary School and Junior High School Enrollment Ratio, Urban vs. Rural, 1990, 2000, 2005, 2010. (Ministry of Education, 2001-2010; Chen (2013)).

Year	Primary school (%)		Junior high school (%)	
	Urban	Rural	Urban	Rural
1990	99.31	98.22	104.76	76.57
2000	99.54	98.94	106.50	80.80
2005	99.85	98.90	115.20	66.31
2010	103.5	98.67	114.35	57.52

As can be seen, the enrollment ratios of primary school in urban and rural areas are comparable, but large gap exists in the enrollment ratios of junior high school. In 1990, the gap in junior high school enrollment ratios between urban and rural areas is 28.19 percent, the number decreased to 25.7 percent in 2000, but increased to 56.83 percent in 2010. This suggests that a significant portion of junior high school-age children in rural areas is not able to attend school even though it is mandatory. The

problem worsened between 2000 and 2010, the percentage of rural children who cannot attend junior high school increased dramatically. Despite the increasing enrollment ratio in urban areas, over 40 percent rural children did not attend junior high school in 2010. One of the reasons can be found in the policy reform in 2001. Looking back to *Table 11*, the county government became the only funding agency of rural education. Without the support of village governments, part of the education cost was transferred to the local people. Rural households who cannot afford the cost have no choice but to give up sending their children to school (Chen, 2013).

China's education system established a dualistic structure, which develops distinct strategies in urban education and rural education: urban areas are always put in priority in educational development and the majority of efforts have been devoted into urban education. Due to the fragmented development plan and the low capability of local governments, educational development is undermined in rural areas. The situation is worsen by the hukou system, which systematically prevents the rural population from access to urban education opportunities, thus resulting in an entirely biased system to favor urban areas in distributing national budget funding, especially on post-secondary education. Although the nine-year compulsory education program covers both urban and rural areas since 1986, the quality of compulsory education also differs in urban and rural areas and many rural children are not able to finish the mandatory years of

education. Such a dualistic system exists not just in education. Evidence in the following section will show that a similar pattern can be found in the healthcare system.

4.3 Healthcare System

It has been shown that the urban-rural divide in healthcare is significant in terms of medical facilities, medical personnel, and per capita expenditure on healthcare. The reasons behind the gap could be attributed to two factors: the first is the prominence of the *hukou* system in separating the urban and rural populations and preventing the rural population from access to healthcare resources in urban areas. The second is the dualistic healthcare system, which provides different healthcare programs to population in urban and rural areas with different financing schemes. Under this system, the urban and rural populations have access to different healthcare programs, and *Table 16* summarizes different programs and their funding sources.

Table 16: Public Healthcare Programs in China

Hukou status	Healthcare programs before 1999	Healthcare programs since 1999	Finance of programs
Urban	Government employee health insurance system	Basic medical insurance for urban residents (since 2007)	Central government
	Labor health insurance system	Basic medical insurance for urban employees	Employers
Rural	Cooperative medical system		Local government and self-finance

Urban healthcare programs have experienced two stages: the first stage was from 1949 to 1999, when healthcare only covered people working in government and state-owned enterprises. Government employees had access to the Government Employee Health Insurance System (GIS), which was financed by the central government and provided comprehensive coverage. Labor Health Insurance System (LIS) covered employees in state-owned enterprises with funding from the employers. But people outside government and state-owned enterprises did not have healthcare plans even if they had urban *hukou* status and this included the population working in the private sector and the unemployed.

Beginning in 1999, a comprehensive labor healthcare program was established in response to the rapid structural adjustment brought about by market liberalization and people from private sectors were included for the first time. All urban residents with urban *hukou* and formal employment are covered by Basic Medical Insurance for Urban Employees (BMIE), and employers are responsible in financing the programs. In 2007, a new healthcare program, Basic Medical Insurance for Urban Residents (BMIR), targeting all urban residents including the unemployed was introduced, and this program provides subsidies ranging from 40 percent to 60 percent of total medical expenditures conditioned on time and categories of health problems. Urban residents can participate in either BMIE or BMIR, and cannot join two programs at the same time. Although the urban healthcare programs cover all urban residents, migrant workers from rural areas

who work and live in urban areas are excluded due to restrictions of *hukou* status, and this particular group of people face high medical costs in every hospital visit.

A different system, namely Cooperative Medical System (CMS), is in operation in rural areas since the time of state socialist economy till today. The program is unique because funding of the system comes from two sources: individuals and local governments. Similar to the “classified management” in education system, the CMS leaves the management of healthcare to the local governments. Most people in rural areas during the 1960s and 1970s had access to small clinics established in the early years of the program, and the coverage once achieved more than 90 percent of rural population in the late 1970s.

However, the market reforms in the 1980s led to significant structural adjustment in the rural economy. Both local communities and governments did not pay enough attention to the rural healthcare system and the system literally failed in the 1990s. The coverage of the system was around 80 percent of total rural population in 1981, but the number decreased to 6.6 percent in 1998 (Zhong & Gustafsson). In 2002, the government started a program aimed at rebuilding the CMS and its coverage has been increasing again. In order to examine how have the urban and rural population benefited from public healthcare programs, *Table 17* presents the percentage of population covered by public healthcare programs in urban and rural areas. From here I focus on the new

healthcare system after 1999 because data on the old healthcare system before 1999 is not available.

Table 17: Percentage of Population Covered by Public Healthcare Programs, Urban vs. Rural, 2005, 2009-2013. (NBS, 2014; National Health and Family Planning Commission, 2014)

Year	Urban (either BMIE or BMIR) (%)	Rural (CMS) (%)
2005	N/A	75.66
2009	62.23	94.19
2010	64.59	96.00
2011	68.53	97.48
2012	75.36	98.27
2013	78.40	98.70

Table 17 shows that the healthcare program coverage of both the urban and rural populations increased between 2005 and 2013, and the percentage of population covered by healthcare programs in rural areas is considerably higher than that in urban areas. Over 20 percent of the urban population did not have access to any healthcare program in 2013, and most of them are migrant workers, who were not able to get any healthcare benefits because of *hukou* status. Besides, the tremendous success of the rebuilding efforts of the CMS can be seen, in 2005, 75.66 percent of the rural population joined CMS and the number increased rapidly to 98.70 percent in 2013. Despite the high coverage, however, the important question to ask here is whether the quality of the healthcare programs is similar between the urban and rural populations? And whether the high healthcare coverage in rural areas means good coverage? To provide answers to these

questions, *Table 18* presents the amount of subsidies per capita by different healthcare programs and sector and the percentage of subsidies in total healthcare expenditures.

Table 18: Average Per Capita Subsidies from Different Healthcare Programs, 2005, 2009-2013. (National Health and Family Planning Commission, 2013)

Year	Average subsidies per capita from basic medical insurance for urban employees (yuan)	Average subsidies per capita from CMS (yuan)	Difference (yuan)	Employee subsidies as percentage of total individual healthcare expenditures (%)	CMS subsidies as percentage of total individual healthcare expenditures (%)	Difference (%)
2005	3918.6	34.5	3884.1	87	17	70
2009	1275.2	110.79	1164.41	60	28	32
2010	1378.39	142.09	1236.3	61	30	31
2011	1756.61	205.55	1551.06	64	32	32
2012	1838.14	299.13	1539.01	63	37	26
2013	N/A	362.74	N/A	N/A	37	N/A

Individual subsidies on urban healthcare are only available for the BMIE and the data presented here have shown two important trends. First, urban residents with BMIE receive a substantially higher amount of per capita subsidy than rural residents under the CMS, and the gap has been growing from 2009. Due to the small number of participants and relatively sufficient funds in 2005, the subsidies received by urban employees are extremely higher than the subsidies in other years. But the urban-rural gap of healthcare subsidy increased from 1164.41 *yuan* in 2009 to 1551.06 *yuan* in 2011.

Second, urban employees and rural residents under these two different healthcare programs also differ significantly in terms the percentage of per capita healthcare expenditure covered by subsidies. Under the BMIE, urban employees can get

over 60 percent of their healthcare expenditure reimbursed by the program, while rural residents under the CMS can only get around 30 percent of healthcare medical expenditure covered, resulting in a difference around 30 percent. With budget from the central government and support from employers in urban areas, the urban population enjoys healthcare program with better quality than the rural population. Although the healthcare program coverage in rural areas is higher than that in urban areas, the portion of healthcare cost reimbursed each year of the rural population is only around half of the percentage reimbursed of the urban population, as a result, the rural population still faces higher healthcare cost.

The internal structure of China's healthcare programs and the finance scheme, especially in rural areas, reveal a biased healthcare system with preferential treatment to people with urban *hukou* and employment, while the development of healthcare programs in rural areas are almost institutionally neglected. Even though CMS was rebuilt in recent years and the coverage is surprisingly high, evidence presented here has shown that the system functions much worse than that in urban areas. With concentrated medical resources and privileges in healthcare programs established by biased policies, the urban population enjoys much better healthcare service and a substantially more of their healthcare expenditure is covered by government or employee insurance. However, neither of this is available to rural areas since their access to healthcare resources and better insurance programs are systematically undermined

by the biased policies, the lack of direct support from the central government, and their destinies are left to the hands of local governments, which lack the capacity to build a competent healthcare system.

5. Discussion and Conclusion

This study has shown that the growing urban-rural gap is closely linked with the public policies implemented in China by its central government with a bias toward economic development in urban areas while neglecting rural development. Specifically, three major findings can be drawn: first, the large urban-rural divide in China still exists today, and there is no clear evidence that the gap will narrow in the near future. While the income gap has been intensively studied by previous literature, I have shown that the urban-rural gaps in terms of education and healthcare are also astonishing in scope and that equalizing efforts of the government and the recent increase in rural-urban migration have not significantly reduced these gaps.

Second, data from both government and independent surveys have shown that the *hukou* system, as a bureaucratic strategy, is established by the urban elites to provide preferential treatment to urban residents, resulting in significant higher income than rural residents, who are denied access to urban resources. Third, the dualistic structure in China's education and healthcare systems further widens the urban-rural gap. Important policies in education and healthcare explicitly prioritize urban development with direct and strong support from the central government, while education and healthcare development in rural areas are usually left to the hands of incapable local governments or farmers themselves, who are already under significant economic

burdens. Thus, the urban and rural populations differ significantly in access to education resources and healthcare programs.

However valid these three findings, limitations in this study are also obvious in several ways. First, I find that data from the Chinese government is problematic and inconsistent in many ways, and existing independent data from survey sources are not sufficient to eliminate these problems. As a result, many of the data and evidence utilized in this study are not consistent in terms of timelines, and often the data only covers limited years, making it difficult to trace the changes since the market reform and opening-up era continuously. However, the available evidence does support the existence of the strong urban bias imbedded in public policies. Second, the public policies studied here and the political incentives behind them are limited in this study. Many other important policies on the urban-rural divide including the housing policy and the taxation reform are left out, and these await for further research. Third, the qualitative and case study approach used in this paper cannot provide further investigation on the relative importance of the selected public policies on the urban-rural gap compared to other economic and geographical factor. However, the evidence has clearly shown the strong relationship between China's public policies and the urban-rural inequality.

Looking into the future, there seem to be two important debates on the urban-rural inequality in China. The first is whether the increasing inequality will result in

political instability or revolutionary danger in China. And the second is how will China respond to the persisting inequality. While some people are pessimistic about the first question, some studies have shown that the Chinese population's perception about the increasing inequality is less radical than many people have expected. Xie (2000) found that Chinese people see the inequality as a necessary and acceptable by-product of economic development largely due to the government's propaganda, which has popularized the idea that it is necessary for a small part of the population to become better off first.

For the second question, the increasing inequality in China has forced the central government to make a change and some positive progress can already be seen. Gilley (2008) proposed a legitimacy-based model to explain institutional change in China. According to Gilley, increasing inequality can endanger the legitimacy of the Chinese government by reducing citizens' perception of the performance of the government. In response to potential challenge to legitimacy, a series of institutional and policy reforms have been conducted to relieve the tension between the urban and rural populations and correct the development bias that favored urban areas in the early years of development. The first serious plan on improving rural development came into place in 2003, when the central government under the leadership of President Jiang officially announced that the government would put great efforts in helping rural development and proposed a development plan of focusing on "three most urgent issues of rural development:

agriculture, farmer, and rural areas” in *The Report of The Work of the Government* (The Central Government of China, 2003). Since then, the Chinese government dramatically increased investment in rural areas; more importantly, agricultural tax reform was initiated as an experiment in 20 selected regions.

Under the leadership of President Hu between 2003 and 2013, the notion of building “socialist harmonious society” was proposed as the most important development goal, and this resulted in several important reforms to reduce the urban-rural inequality at both the national level and local level. First, *Regulation of Agricultural Tax* was passed by the NPC in 2005 to completely remove the agricultural tax, which had existed in China for over 2500 years. However, the elimination of the agricultural tax imposed economic burdens on local government, especially village governments that heavily relied on agricultural tax as income. In response, reorganization of the administrative structure was carried out to downsize the public service, solve the problem of overstaffing, and merge village governments into country governments to reduce the cost and increase efficiency. The province of Yunnan, for example, removed 15% of the village governments in 2005, and Wenzhou in Zhejiang province, planned to remove all administration agencies in villages with a population of less than 500 (Dang, 2010).

Second, local governments pioneered reform of the *hukou* system. In 2005, 11 provinces in China jointly started an experiment on the unification of urban and rural

hukou and lifted restrictions on the population movement. The reform was further promoted with the change of the leadership in 2013. In 2014, the central government released a plan to lift *hukou* restrictions on employment, education, and access to social services. The plan put forward a reform to gradually combine urban and rural *hukou* into a unified “resident *hukou*”. Current rural residents who have been living in the rural areas with formal employment can join the urban *hukou*, and educational and healthcare resources in urban areas will be accessible to urban residents with certain years of working experience regardless of current *hukou* status. The plan further announced that the government will help around 100 million migrant workers from rural areas to obtain resident *hukou* in urban areas (The Central Government of China, 2014).

Despite the ongoing progress, whether the new plan will be well implemented at the local level is still unknown. Given the increasing burden of the urban population expansion, local governments, especially those in big cities, still face challenges to incorporate migrant workers from rural areas. More importantly, no plans have been proposed to protect the rights of migrant workers in access to educational and healthcare resources. Lipton (1997) mentioned that the key to reducing the urban-rural conflict is the convergence of urban and rural economic interests in the making and implementation of national development plans, but whether and how such unified plans will be carried out in China is still to be seen.

References

- Bates, R. H. (1981). *Markets and States in Tropical Africa: The Political Basis of Agricultural Policies*. Berkeley, CA: University of California Press.
- Bauer, P. T. (1984). *Reality and Rhetoric: Studies in the Economics of Development*. Cambridge, MA: Harvard University Press
- Branstetter, L., & Lardy, N. (2006). *China's Embrace of Globalization* (No. w12373). National Bureau of Economic Research.
- Chen, X. (2013). Zhong Guo Cheng Xiang Xi Wu Jiao Yu Jun Heng Du De Ce Ping He Jian Yi. (Assessment and Policy Recommendation of the Compulsory Education Program in Urban and Rural China.) (In Chinese). *Hu Nan Nong Ye Da Xue Xue Bao. (Journal of Hunan Agricultural University)*, 14 (2), 71-77.
- Chinese Communist Party (CPC). (2015). *History of Five Year Plans*. Retrieved March 3rd, 2015 from <http://dangshi.people.com.cn/GB/151935/204121/> (In Chinese).
- Dang. (2010). Wo Guo Xiang Zhen Ji Gou Gai Ge De Hui Gui Yu Zhan Wang. (The Review and Prospect of County and Village Administration Reform). (In Chinese). Retrieved from CPC news website March 27th, 2015 from <http://theory.people.com.cn/GB/41038/11219428.html>
- Dollar, D., & Kraay, A. (2002). Growth is Good for the Poor. *Journal of Economic Growth*, 7(3), 195-225.
- Eastwood, R., & Lipton, M. (2004). Rural and Urban Income Inequality and Poverty: Does Convergence between Sectors Offset Divergence within Them? in Cornia, G. A. (Ed). *Inequality, Growth and Poverty in an Era of Liberalization and Globalization*. Oxford, UK: Oxford University Press.
- Fan, S., & Zhang, X. (2004). Infrastructure and regional economic development in rural China. *China economic review*, 15(2), 203-214.
- Forbes, K. J. (2000). A Reassessment of the Relationship between Inequality and Growth. *American economic review*, 90 (4), 869-887.
- Gilley, B. (2008). Legitimacy and Institutional Change The Case of China. *Comparative Political Studies*, 41(3), 259-284.

- Goldberg, P. K., & Pavcnik, N. (2007). Distributional Effects of Globalization in Developing Countries. *Journal of Economic Literature*, 45, 39-82
- Gustafsson, B., & Shi, L. (2003). The Ethnic Minority - Majority Income Gap in Rural China during Transition*. *Economic Development and Cultural Change*, 51(4), 805-822.
- Gustafsson, B. A., Shi, L., & Sicular, T. (2008). Inequality and Public Policy in China: Issues and Trends. In Gustafsson, B. A., Shi, L., & Sicular, T. (Eds). *Inequality and Public Policy in China*. Cambridge University Press.
- Hvistendahl, M. (2013). *The Numbers Game*. *Science*, 340 (6136), 1037-1039
- The Inter-university Consortium for Political and Social Research. (2010). *Chinese Household Income Project, 1995, 2002*. Retrieved March 5th, 2015 from <http://www.icpsr.umich.edu/icpsrweb/ICPSR/series/243>
- Khan, A. R., & Riskin, C. (1998). Income and inequality in China: Composition, distribution and growth of household income, 1988 to 1995. *The China Quarterly*, 154, 221-253.
- Khan, A. R., Griffin, K., Riskin, C., & Renwei, Z. (1993). Sources of income inequality in post-reform China. *China Economic Review*, 4(1), 19-35.
- Khan, A. R., & Riskin, C. (2008). Growth and Distribution of Household Income in China between 1995 and 2002. In Gustafsson, B. A., Shi, L., & Sicular, T. (Eds). *Inequality and Public Policy in China*. Cambridge University Press.
- Knight, J., & Song, L. (1999). *The Urban–Rural Divide: Economic Disparities and Interactions in China*. New York: Oxford University Press, New York.
- Lin, Z. W. (2006). An Integrated Study of China's Income Gap and Educational Gap. *Journal of Shanxi University of Finance and Economics*, 4, (in Chinese)
- Lipton, M. (1977). *Why Poor People Stay Poor: Urban Bias in World Development*. Cambridge, MA: Harvard University Press.
- Liu, Z. (2005). Institution and Inequality: The Hukou System in China. *Journal of Comparative Economics*, 33(1), 133-157.

- Liu, C., Zhang, L., Huang, J., Luo, R., Yi, H., Shi, Y., & Rozelle, S. (2013). Project Design, Village Governance and Infrastructure Quality in Rural China. *China Agricultural Economic Review*, 5(2), 248-280.
- Ministry of Education of the People's Republic of China. (2006, 2007, 2008, 2009, 2010 2011). *China Educational Finance Statistical Yearbook*. China Statistics Press.
- Ministry of Education of the People's Republic of China. (2001-2010). *China Education Statistical Yearbook*. Retrieved March 25th, 2015 from <http://tongji.oversea.cnki.net.proxy.lib.duke.edu/chn/navi/YearBook.aspx?id=N2012010030&floor=1>
- National Bureau of Statistics of China. (1996). *The First Agricultural Census*. Retrieved March 26th, 2015 from http://www.stats.gov.cn/tjsj/pcsj/nypc/dyncnypc/200308/t20030826_40195.html
- National Bureau of Statistics of China (1997-2014). *China Statistical Yearbook*. Retrieved February 7th, 2015 from <http://www.stats.gov.cn/tjsj/ndsj/2014/indexeh.htm>
- National Bureau of Statistics of China (2014). *2000 Census Data*. Retrieved February 27th, 2015 from <http://www.stats.gov.cn/tjsj/pcsj/rkpc/5rp/index.htm> (in Chinese)
- National Bureau of Statistics of China (2014). *2010 Census Data*. Retrieved February 27th, 2015 from <http://www.stats.gov.cn/tjsj/pcsj/rkpc/6rp/indexch.htm> (in Chinese)
- National Health and Family Planning Commission of China. (2013, 2014). *China Health and Family Planning Statistical Yearbook*. Retrieved March 25th, 2015 from <http://tongji.oversea.cnki.net.proxy.lib.duke.edu/chn/navi/HomePage.aspx?id=N2014120147&name=YSIFE&floor=1>
- National People's Congress (NPC). (1958). *Hukou Deng Ji Tiao Li*. (Regulations on Household Registration). (In Chinese). Retrieved Feb 15th, 2015 from http://www.npc.gov.cn/wxzl/gongbao/2000-12/10/content_5004332.htm
- People's Daily. (2006). *Guan Yu Zheng Dun He Gai Jin Xiao Xue Jiao Yu De Zhi Shi*. (Guidance on Reorganizing and Improving Primary Education.). Retrieved March 3rd, 2015 from <http://cpc.people.com.cn/GB/64184/64186/66658/4492865.html> (In Chinese)
- Oi, J. C. (1990). The Fate of the Collective after the Commune. In Davis, D., & Vogel, E. F. (Eds). *Chinese Society on the Eve of Tiananmen: The Impact of Reform*. Cambridge, MA: Harvard University Asia Center.

- Oi, J. C. (1993). Reform and urban bias in China. *The Journal of Development Studies*, 29(4), 129-148.
- Qian, X., & Smyth, R. (2008). Measuring Regional Inequality of Education in China: Widening Coast–Inland Gap or Widening Rural–Urban Gap?. *Journal of International Development*, 20(2), 132-144.
- Ravallion, M. (2001). Growth, Inequality and Poverty: Looking Beyond Averages. *World development*, 29(11), 1803-1815.
- Ren, X. L., Tian, B. X., Huang, G. W., & Li, S. Q. (1996). China's "Registration Taboo". *Chinese Sociology & Anthropology*, 29(1), 15-26.
- Saich, A. (2012). The Quality of Governance in China: The Citizen's View. *HKS Faculty Research Working Paper Series RWP12-051*, John F. Kennedy School of Government, Harvard University.
- Shanghai Statistics Bureau. (2014). Shanghai Statistical Yearbook 2014. Retrieved March 21st, 2015 from <http://tongji.oversea.cnki.net.proxy.lib.duke.edu/chn/navi/YearBook.aspx?id=N2014090171&floor=1>
- Smoke, P., & Kim, Y. H. (2003). *Intergovernmental Fiscal Transfers in Asia: Current Practice and Challenges for the Future*. Manila: Asian Development Bank.
- Sun, Y. X. (2006). Zhong Guo Cheng Xiang Jiao Yu De Zheng Ce Fan Si. (A Policy Review on China's Urban-Rural Educational Inequality). *Jiang Xi Jiao Yu Ke Yan (Jiangxi Education and Research)*, 1, 36-38
- The World Bank. (2015). *World Development Indicators*. Retrieved February 7th, 2015 from <http://databank.worldbank.org/data/views/reports/tableview.aspx#>
- The Central Government of China. (2003). Report on the Work of the Government 2013. (In Chinese). Retrieved March 26th, 2015 from http://guoqing.china.com.cn/2012-02/13/content_24624266.htm
- The Central Government of China. (2013). *Proposal on the Further Reform of the Hukou System*. (In Chinese). Retrieved March 27th, 2015 from http://www.gov.cn/zhengce/content/2014-07/30/content_8944.htm

- Treiman, D. J., Walder, A. G. (1996). *Life Histories and Social Change in Contemporary China*. Distributed by the UCLA Social Science Data Archive. Available on-line at <http://www.sscnet.ucla.edu/issr/da>
- China Data Center. (2013). *Report on the Preliminary Results of the Survey on Urbanization*. (In Chinese). Retrieved March 25th, 2015 from <http://www.chinadatacenter.tsinghua.edu.cn/news.php?id=309>
- Wei, S. J., & Wu, Y. (2001). *Globalization and inequality: Evidence from within China* (No. w8611). National Bureau of Economic Research.
- Wong, C. (2007). Can the Retreat from Equality be Reversed? An Assessment of Redistributive Fiscal Policies from Deng Xiaoping to Wen Jiabao. In Shue, V., & Wong, C. (Eds). *Paying for Progress in China: Public Finance, Human Welfare and Changing Patterns of Inequality*. London and New York: Routledge
- Wu, X., & Treiman, D. J. (2004). The household registration system and social stratification in China: 1955–1996. *Demography*, 41(2), 363-384.
- World Bank. (1997). *Sharing Rising Incomes - Disparities in China*. Retrieved February 13th, 2015 from http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/1997/09/01/00009265_3980203115516/Rendered/PDF/multi0page.pdf
- WTO. (2000). *World Health Report*. Retrieved February 26, 2015 from <http://www.who.int/whr/2000/en/>
- Xie, Y., & Zhou, X. (2014). Income inequality in today's China. *Proceedings of the National Academy of Sciences*, 111(19), 6928-6933.
- Xie, Y. (2000). Ren Shi Zhong Guo De Bu Ping Deng. (Understanding Inequality in China) (in Chinese). *She Hui (Society)*, 30(3), 1-20.
- Wu, X., & Treiman, D. J. (2004). The Household Registration System and Social Stratification in China: 1955–1996. *Demography*, 41(2), 363-384.
- Wu, X. (2011). The Household Registration System and Rural-Urban Educational Inequality in Contemporary China. *Chinese Sociological Review*, 44(2), 31-51.
- Yang, D. T. (1999). Urban-Biased Policies and Rising Income Inequality in China. *American Economic Review*, 89 (2), 306-310.

- Yang, D. T. (1997). China's Land Arrangements and Rural Labor Mobility. *China Economic Review*, 8(2), 101-115.
- Yue, X., Sicular, T., Shi, L., & Gustafsson, B. (2008). Explaining Incomes and Inequality in China. In Gustafsson, B. A., Shi, L., & Sicular, T. (Eds). *Inequality and Public Policy in China*. Cambridge University Press.
- Yunnan Statistics Bureau. (2011). Yunnan Statistical Yearbook 2011. Retrieved March 22nd, 2015 from <http://tongji.oversea.cnki.net.proxy.lib.duke.edu/chn/navi/YearBook.aspx?id=N2011090104&floor=1>
- Zhang, X., & Kanbur, R. (2005). Spatial Inequality in Education and Health Care in China. *China Economic Review*, 16(2), 189-204.
- Zhong, W., & Gustafsson, B. (2008). In Gustafsson, B. A., Shi, L., & Sicular, T. (Eds). *Inequality and Public Policy in China*. Cambridge University Press.