Privatisation and Income Inequality in Western China

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献给我的父亲。

To my father.

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ABSTRACT

The theme of this master project in sociology is to study the relationship between privatisation and income inequality in Western China. The main research theme is whether a higher degree of privatisation is related to greater income inequality. China has experienced massive economic growth in the reform period over the last 30 years. In the planned economy, the private sector was nearly non-existent, and the growth of the private sector has been a central factor in the transformation towards a market economy. The aim of the project is to investigate how this development has affected the wage structures in Western China in respect to income inequality.

In the reform period, millions of people have been lifted out of poverty and experienced improved living conditions. However, increased income inequality across many social dimensions has been following in the wake of the economic growth, and created new challenges and social problems. The Western region has been lagging behind in regards to development compared to the coastal provinces, and this regional dimension is important in relation to income inequality in China.

I use cross-sectional data from the Medow survey, which was conducted in 2004-2005 in 11 provinces in Western China. The survey was designed and carried out by Fafo, in cooperation with Chinese partners. Medow is the largest living condition survey that has been conducted in Western China, and has data on both household and individual level on a wide range of topics. I use multilevel analysis to study both individual and structural aspects in relation to income inequality.

The level of income inequality in a society is influenced by many factors. I chose to focus on five social structures - education, sector, occupation, urban-rural diversity, and migration, and how these social structures affect income inequality, in relation to the process of privatisation. I draw on a range of theoretical perspectives, to frame how privatisation can influence the five social structures, with further consequences for income inequality. I employ neoclassical economic theory with an emphasis on human capital and market mechanisms related to the labour market, market transition theory with a focus on transitional China and increased returns to education, segmented labour market theory which directs attention to the diversified occupational structure, social closure approach with an emphasis on social categories that establishes boundaries and inequality, and neo-Marxism/Structuralism which is related to uneven regional development and migration issues.

In general, the main findings confirm that a higher level of privatisation co-exists with greater income inequality between different social groups in Western China. Prefectures with more privatisation tend to have increased income distance between individuals with different educational attainment, between individuals working in the agricultural sector and other sectors, between different occupational positions, between urban and rural citizens, and between migrants and residents. However, income differences between individuals in the state and private sector are found to decline in prefectures with a higher degree of privatisation.

There has been much research on income inequality in China within sociology and economy, but less attention has been given to study this in the context of the Western region. There has also been less focus on the relationship between privatisation and income inequality. My study has both an empirical and theoretical purpose. Empirically, my findings challenge the simplistic view that market economic reforms promote equality through development and the "trickle-down" effect of economic growth to wide segments of the population. I show that privatisation in itself not necessarily contributes to increased equality, but can be seen to maintain and create income inequality. Theoretically, the study contributes with a critical discussion of boundaries and processes of social exclusion in the Chinese labour market, and how they are affected by privatisation in the developing market economy. I discuss how different social groups such as peasants, rural migrants, people with low education and low occupational positions have limited possibilities to improve their life chances. An important implication is that the social boundaries are often reinforced by the practice of and ideology behind privatisation.

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Chapter One. Introduction

This master project in sociology is about the relationship between privatisation and income inequality in Western China. Through several reform waves over the last 30 years, China has transformed its planned economy into a market economy (with "Chinese characteristics"), and become integrated in the world economy. The transformation has been accompanied by high economic growth rates, and the income and living standards have improved substantially for large segments of the population. The reforms have changed the distribution system of the planned economy, and the market economy has created new dynamics throughout the economy and in the labour market. Privatisation and the creation of a private sector has been a central development. Many state-owned enterprises have been merged, closed down, or privatized. The private sector has become an important aspect in the national economy.

However, the development has also been accompanied with growing economic inequality. Uneven distribution and increasing levels of inequality may lead to problems such as social instability, marginalisation, reduced inter-personal trust and polarised class relations. Egalitarian values are still central for the Chinese government, since socialist ideology continues to play an important role in China. The Chinese government has been concerned about increasing regional disparities, and have expressed concerns about the rising income inequality.

Western China has fallen behind in the reform period, and the regional disparities between Eastern and Western provinces have grown. Therefore, the central government launched the Western Development Policy in 2000. The plan focused on economic development and building of infrastructure in the West, in addition to improve living conditions, reduce poverty, promote social and political stability and reduce regional disparities. This economic development strategy has been strongly connected to expansion of the market economy, with focus on expansion of open markets, support to private initiatives, increased foreign direct investments and growth of the private sector.

1.2 Research Questions

Many social factors can contribute to create income inequality in a society. I chose to focus on five social structures, and how these social structures affect income inequality, in relation to the process of privatisation. These structures are: 1) changing returns to education, 2) sectors in the labour

market, 3) occupational structure, 4) the rural-urban divide, and 5) migration.

My research hypotheses are:

1. The higher degree of privatisation, the higher income inequality between individuals with different educational attainment.

Education is one of the most important structures for social stratification. Earlier research on income inequality in China has concluded that increasing returns to education is a central factor for overall income inequality in China (Gustafsson et al. 2008: 112). The educational impact on income and wages are also expected to increase. With a stronger market orientation in a society, the returns to education are expected to increase, since enterprises in the private sector reward employees with higher human capital and competence, in order to stay competitive in the market (Nee & Cao 2004: 47).

2. The higher degree of privatisation, the higher income inequality between individuals working in different sectors.

I further study income inequality between different sectors in the labour market. Privatisation affects the sector relationship, for example through the growth of profit incentives in the private sector, and downsizing of the state sector. Furthermore, it is important to study how the largest sector in Western China, the agricultural sector, is affected by privatisation in relation to the other sectors.

3. The higher degree of privatisation, the higher income inequality between individuals with different occupational positions.

I have chosen to study income differences between occupations, because this opens up for studying connections between labour market stratification, issues of class relation, and returns to education. In the evolving market economy, occupation status is import for income and social status (Bian & Zhang 2002, Li & Sato 2006, Shue & Wong 2007).

4. The higher degree of privatisation, the higher income inequality between rural and urban citizens.

Urban-rural income inequality is considered to be one of the most important factors for increased income inequality in China (Gustafsson et al. 2008: 23, Khan & Riskin 2008: 78). It is debated how privatisation will affect income differences between urban and rural citizens. Economists often argue that the process of modernisation and privatisation will contribute to reduce regional inequality, through the "trickle-down" effect (Dollar 2007). However, many empirical studies argue that the process of market transformation contributes to increased urban-rural disparities in China (Wahl 1998, Gustafsson et al. 2008).

5. The higher degree of privatisation, the higher income inequality between migrants and residents.

Finally, I have chosen to include migration, since the growth of labour mobility has been important in the reform period, and migration is a central characteristic of a more open labour market in the market economy.

1.3 Former Research and Theoretical Approach

In this study I focus on Western China as a region. The study draws on views and perspectives from both sociology and economics. Studies of China as a transitional society have been important (Nee 1989, Zhou 2000, Walder 1995). Studies of factors contributing to income inequality are also central (Gustafsson et al. 2008, Sicular et al. 2010). There have also been studies on the relation between privatisation and income inequality (Zhou 2000, Xu & Zou 2000). Relatively little research has been done on Western China as a region. There are several studies from specific areas in Western China, but limited research have aimed to draw general, statistically informed conclusions about the Western region as a whole. Most studies based on large-scale surveys have ambitions to cover all regions of China, in order to be able to generalise about nation-wide changes of income inequality. To my knowledge, such studies have not given much attention to within-region conditions of Western China.

On one side, it is important to have a contextual perspective, and be alert to conditions that are specific to this region. The Western region is special in some respects, being economically the most

backward region, and with a majority of the population working in the rural sector. On the other side, Western China is also intimately woven into the general social fabric of nationwide social and economic processes, which affects all regions. Processes related to privatisation affect labour market institutions and income distribution throughout China, and it is important to view processes in Western China in relation to wider social transformations that affects all of China. Therefore I also view the situation in Western China from a more general perspective.

I use various theoretical approaches when studying the relationship between privatisation and income inequality, through different social structures. The theoretical perspectives I draw upon are market transition theory, segmented labour market theory, neoclassical economic perspectives, historical-structural/neo-Marxist approaches, and social closure theory. The explanatory scope of the theories varies to some extent. Perspectives most related to returns to education are the neoclassical perspective, segmented labour market theory, market transition theory and social closure theory. The perspective that focuses most directly on inequality between sectors is market transition theory. When it comes to inequality between different occupations, the most relevant perspectives are neoclassical theory, segmented labour market theory and social closure theory. In regards to rural-urban inequality, the neoclassical perspective, structuralist/neo-marxist perspective and social closure theory are most relevant. And concerning migration, the neoclassical perspective, segmented labour market theory and structuralist/neo-marxist views are most applicable.

1.4 Data and Method

My study is based on a living condition survey (Medow) in Western China, which was conducted by the Fafo Research Institute and Chinese partners in 2004-05. The total sample size is 44,000 households and 144,000 individuals across 11 provinces. These can further be divided into 128 prefectures. From this dataset I constructed individual-level variables concerning income, education level, work sector, occupation, rural/urban registration and migrant status. I also constructed a structural-level variable of privatisation, and finally the variable of income inequality with both individuals and structural characteristics. Privatisation is defined as the share of workers employed in the private sector. I focus on the prefecture level, which corresponds to administrative units below the province level. For the statistical analysis I use multilevel technique, which makes it possible to study individuals nested in prefectures. The advantage of this statistical technique is that

it can provide rich information of both individual characteristics and their social positions, and the structural impact on income inequality.

1.5 Structure of the Thesis

In chapter two I review the situation of inequality in China and Western China based on former research. I also discuss the concept of privatisation, and give a historical overview of the reform period, with an emphasis on sectors of the labour market and privatisation. In chapter three I present theories which frame how privatisation can be related to income inequality, based on five main theoretical approaches. These theories will be discussed in relation to relevant social structures and the impact of privatisation on income inequality. In the end of chapter three I summarise main points from the theoretical perspectives, and present the hypotheses. In chapter four I present data and variables used in the statistical analyses, and the research method. The results from the analyses are presented in chapter five. Finally, in chapter six, I first go through the hypotheses, and review which hypotheses are supported and which are rejected, and then bring together the findings in light of the theoretical and contextual aspects relevant to Western China. Then I go through weaknesses and limitations of this project. The chapter ends with concluding remarks and possible further research.

Chapter Two. Income Inequality, Privatisation and Historical Background

In this background chapter, I will first give an overview regarding income inequality in China, both on the national and regional level in Western China. Then I give a brief account of former research on factors contributing to income inequality in China. Afterwards I account for privatisation in general, and privatisation in China. The last part of the chapter is a historical overview of changes in the reform period, with a focus on privatisation.

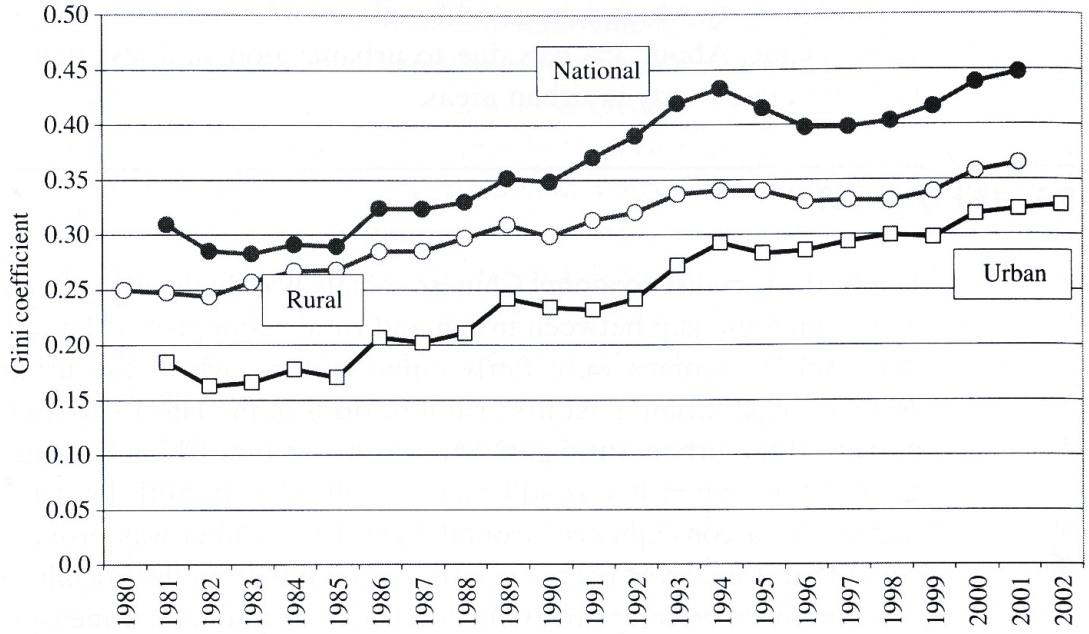
2.1. Inequality

2.1.1 Inequality in China

China has experienced a rapid economic growth over the last 30 years. This development has improved the living conditions for large segments of the population, lifted millions out of poverty, and raised living expectancies. However, there has been a substantial rise in overall income inequality in the same period. The Gini-coefficient is a statistical measure of income inequality in a society.[1] In 2002 the overall Gini for equivalised disposable household income in China was 0.45 (Gustafsson et al 2008: 20). This level of inequality puts China among the top most unequal countries in Asia, on level with Thailand (0.43) and the Philippines (0.46) (Lu & Neilson 2004). Figure 2.1 shows the development of the Gini-coefficient in the period 1980-2002. The national inequality includes the income difference between rural and urban areas, and this relationship significantly boosts the income inequality level throughout the period. Generally, low and middle-income countries are more unequal than developed high-income countries, and large countries usually have higher inequality than small countries. In the early 1980s, China was a low-income country with the world's largest population, but its degree of inequality was as low as some high-income, small to medium-sized Western countries such as Sweden (0,25) and Germany (0,28) (Naughton 2007: 217).

[1] The Gini-coefficient is ranged from 0 to 1, from total equality to maximal inequality. A value placed between these extremes indicates how unequal the income distribution is. As the value rises, the degree of income inequality is higher.

Figure 2.1 Patterns of inequality in China 1980-2002, measured by Gini-coefficient. Source: Naughton 2007: 218.



The trend of increasing income inequality has been pronounced throughout most of the period. There was a drop in national inequality in the early phase in 1982, when the agricultural reform raised the income of farmers, improved the rural economy, and decreased the urban-rural gap (Whyte 2010: 14). In the years after 1990, the growth of national inequality was especially high. It reached a top in 1994, and then dropped to a lower level. This drop was partly caused by the downsizing and privatisation of state-owned enterprises, which created much urban unemployment and decreased social welfare. The inequality steadily climbed up again until the last year of 2002. Gustafsson et al. (2008) find that overall income inequality when comparing 1995 and 2002 was relatively stable.

2.1.2 Western China and Regional Inequality

Income inequality in China follows several dimensions. Internal rural inequality has been significantly higher than urban inequality throughout the period, unlike many other countries, which exhibit larger urban than rural inequality. However, the income gap between urban and rural areas seems to play an important role in pushing up the total inequality level, and this gap clearly increased in the 1990s (Naughton 2007: 219). Furthermore, there are large regional differences in

China, and one important aspect of this is the regional inequality between Western and Eastern China (Chow 2007: 178).

Western China consists of twelve provincial-level administrative areas. Among these are six provinces (Gansu, Guizhou, Qinghai, Shaanxi, Sichuan, and Yunnan), one municipality (Chongqing) and three autonomous regions (Ningxia, Tibet, and Xinjiang). The western region covers an area of 6.9 million square kilometres, which amounts to 74 per cent of the whole national territory. The population was 367 million in 2002, which was 29 per cent of China's total national population (Lu & Nielsen 2004).

The provinces of Western China are diverse socially, culturally and economically, with important variations within the provinces. Xinjiang has had the highest economic growth, and the highest GDP per capita. Other provinces have highly developed industries, such as Sichuan, Shaanxi, and Chongquing. Some provinces are on the other hand very poor, such as Guizhou and Gansu (Goodman 2004: 6). Western provinces also have many characteristics in common. Most of them have problems with weak communication and infrastructure in many areas. Agriculture is generally important in western China. According to statistics from 2005, almost 68 per cent of the workforce works in the agricultural sector. Five per cent works in the industry, and six per cent in construction (Yao et al. 2007: 72). There are important disparities between developed economic centres and lagging peripheries, and between different ethnic groups. Regional disparities are large, and there are many difficulties for poor areas and rural areas to develop their economy, connected to social issues such as poverty, low social services and welfare insurance, unstable employment, income and distribution, food price, etc. (He et al. 2008: 24).

In 2002, the combined economy of Western China accounted for only 17 per cent of total GDP in China, and income per capita in the West amounted to only 40 per cent of that in Eastern China (Lu & Neilson 2004). In the same year, the mean income in the eastern region was two times higher than the mean income in the western region (Gustaffson et al. 2008: 50). However, the income level in the central region is closer to the western level, being only 1.2 times higher.

Sicular et al. have found that there are significant regional variations regarding rural-urban inequality inside each region. As showed in table 2.1, there was largest rural-urban difference in the western region in 2002, and lowest in the eastern region (Sicular et al. 2010: 93). In the West, the urban-to-rural income ratio was 4.3 in 2002. The annual urban mean wage was 8,582 yuan, and the

rural wage 2,006 yuan. The rural-urban ratio is lower in both central and eastern provinces. In eastern provinces, a more rapid economic development in rural areas has taken place, leading to a higher rural income level, and a decreased rural-urban gap. Meanwhile, there was relatively low development and income growth in central and western regions, and rural-urban inequality grew in these areas (Sicular et al. 2010: 93). Knight and Song have argued that the ratio of urban to rural mean income per capita was much higher in poorer provinces, on the basis that the urban wage level was more or less the same across the whole country, but that the rural economy in poorer provinces was much worse than in more developed provinces, thus creating a larger income gap (Knight & Song 1999: 115). The income difference between western and eastern provinces is also noteworthy, in that urban workers in eastern region earn 4,431 yuan more than urban workers in the West.

Table 2.1. Income in Different Regions, 1995 and 2002 (yuan). Source: Sicular et al. 2006: 9.[2]

Region	1995	2002
Western provinces	2140	4137
Urban	5036	8582
Rural	1168	2006
Ratio of urban to rural	4.31	4.28
Central provinces	2240	4555
Urban	4172	7941
Rural	1559	2652
Ratio of urban to rural	2.68	2.99
Eastern provinces	4259	8509
Urban	7498	13013
Rural	2537	4526
Ratio of urban to rural	2.96	2.88

2.1.3 Western Region Development

In 2000, the Chinese government launched a development strategy for Western China, which was intended to create increased economic growth, raised living standards and modernisation in the West. Another goal was to decrease regional differences between the east and the west. The project

[2] Based on survey data from several provinces in each region. Western provinces: Sichuan, Guizhou, Yunnan, Shaanxi, Gansu. Central provinces: Shanxi, Jilin, Anhui, Jiangxi, Henan, Hubei, Hunan. Eastern provinces: Beijing, Hebei, Liaoning, Jiangsu, Zhejiang, Shandong, Guangdong.

had three main goals: First, the reform projects emphasized ecological construction, cross regional transportation of resources, and construction of the Qinghai-Tibet railway.[3] Secondly, realising plans for improving the infrastructure such as building new roads, power plants, electricity, telecommunications, and promoting urban development. The third goal was to improve people's living standards through increased economic growth (Ding and Neilson 2004: 263). The plan includes measures such as privatisation of state-owned companies, tax concessions that encourage investment from both Chinese and foreign investors, increased educational levels among people in the west, better healthcare, encouraging research, preserving the environment, developing agriculture, restructuring the industry, developing tourism, and so on (The Central People's Government of the PRC 2001).

The development strategy also emphasized the economic reform, privatisation, promoting foreign direct investment, and sustainable development (Chow 2007). The political economist McNally has drawn attention to how the development strategy is promoting important aspects of the market economy to the western provinces. He writes:

> "The Open Up the West campaign is pushing the structural transformations that are already gripping coastland provinces westward. The infrastructure for accelerated capital accumulation is being put in place, including political and economic support by the state for market forces, property rights and private holders of capital." (McNally 2004: 115)

There are some reports about how this plan works. An annual report published in July 2009, shows that the GDP of Western China has increased from 1.5 trillion yuan to 5.8 trillion yuan from 1998 to 2008, and the average annual growth rate in west was about two per cent higher than China's average growth. At the same time, income inequality has also increased in the area, both when comparing provinces, and inside richer provinces, for example through wider income gap between urban and rural. But Western China is still the poorest region in China (Ren et al. 2009). This confirms findings from other scholars, which show that the East-West gap continues to increase, despite of the initiatives and efforts implied by the Western Development Strategies (Wei 2000: 19).

[3] In detail, this project includes the transportation of gas and electricity from west to east, and the transportation of water from south to north,

2.1.4 Inequality in China: Former Research

Inequality in China has attracted much scholarly attention, and generated a wide and interesting research literature in several fields, such as economics, sociology, political science, development studies, social geography and culture studies. Since the research field is so broad, I have no ambition to cover it thoroughly here.[4] In the following account, I focus on central research themes related to income inequality in China as a whole. Limited research attention has been given to Western China as a region in the inequality-literature. Most studies based on large-scale surveys are on a national level, covering all regions in China. There are, however, some other studies that have been based on case-research or much smaller samples, drawn from a limited amount of cities or rural areas, in one or two provinces.

Economists have made important contributions to the study of income inequality in China, and an important focus has been the factors contributing to inequality, particularly the urban-rural income inequality (Sicular et al 2010, Gustafsson 2008). Related topics are within-urban inequality (Xu & Zou 2000), and within rural inequality (Benjamin et al. 2006). Other factors include returns to education and human capital, the role of inflation, land ownership, party membership, ethnicity and gender. Regional dimensions such as the east-west divide has received some attention in the inequality literature (see for example Ho et al.: 2002, Gustaffson et al. 2008), but somewhat less than the other factors.

Another factor has been the impact of privatisation. In above-mentioned research, privatisation is sometimes defined as the reduction of state-owned enterprises. Using panel data from 1995 and 2002, Xu and Zou (2000) found that a decreased share of state-owned enterprises leads to higher income inequality, together with other factors such as economic growth, inflation and urbanisation. The sociologist Zhou (2000) have focused on the reduction of state-owned enterprises and growth of the private sector, and concluded that these processes have contributed significantly to income inequality. Privatisation, both in terms of the reduction of state-owned enterprises, and growth of a private sector, is a central feature of the marketisation of the Chinese economy, and therefore a way to measure the extent of the reform transformation. Zhou has also emphasised the active role of state institutions in the evolving market economy (Zhou 2000: 1141).

[4] Gustaffson (2006) has compiled an overview over case and small-sample studies. Some studies on village level have been done in Western China, such as several studies done by Xing et al. about income inequality in villages in the Guizhou province (Xing et al. 2006, 2009).

Using data from 1995 and 2002 from the CHIP-survey (Chinese Household Income Project), Gustafsson et al. (2008) studied the importance of a set of factors that have received much attention in the literature, in investigating the impact of increased inequality. Through the use of regression-based income decomposition, they isolated each variable's impact on income inequality. They found that returns to education, and especially to higher levels of education, were a large contributor to inequality (Gustafsson et al. 2008: 112). They related this finding to the expansion of markets in China, and to increased demand for skilled and highly educated employees. Furthermore, the analysis confirms that place of residence is important, a finding that reflects the differences between urban and rural residence status. They also find that factors such as party membership, ethnic minority status and health contributes to increasing inequality, but less so in 2002 than in 1995, and the impact of these factors were modest. The ownership of farmland, expected to be important for many rural households, contributed little to decrease inequality (Gustaffson et al. 2008: 113).

A sociological debate has been about changing mechanisms of income distribution in transitional economies. A central contribution is market transition theory proposed by the economic sociologist Victor Nee (1989). Nee proposes that the development towards a market economy creates changes in the income distribution, with the result that more capital is being channelled to individuals active in the growing market sector. Individuals connected to the state apparatus and political positions lose their privilege in income distribution, and so do the organisational hierarchies from the planned economy system. Others contend that there is a complex interplay between the market and state forces, and that state institutions continue to play central roles, also in the evolving market economy (Zhou 2000, Walder 1995). In empirical research, these issues have been studied by comparing returns to education with returns to political positions such as party membership (for e.g. Nee and Cao 2004). Most findings report that while human capital have become more important in the reform period, the returns to political capital have also remained influential.

Other topics in sociological research related to inequality have been the transformation of the class structure (Zhang 2000), labour markets (Knight & Song 1995), gender inequality (Hu 2007), social mobility (Knight & Yueh 2006), and social boundaries (Wang 2008). For an informative review of sociological research related to inequality and income distribution in China, see Bian (2002), "Chinese Social Stratification and Social Mobility".

2.2 Privatisation

As we have seen, a whole range of factors contributes to create income inequality. I have chosen to focus on privatisation, and to what extent privatisation contributes to income inequality in Western China. There are several reasons for studying privatisation in this region. The growth of the private sector is a central aspect of the development process towards a market economy. This sector creates changed dynamics in the labour market, in prestige hierarchies, possibilities for social mobility, in distribution mechanisms, and in relation to many other important aspects in society. To study such a development is to study a society in transition, from a pure planned economy to a mixed market economy. Some claim that this development will create more development and overall wealth, which all citizens benefit from, and that increased inequality is not necessarily linked to economic development. However, if the distribution of resources becomes more unequal, this can lead to growing unrest among people, to social problems and instability. Chinese leaders, when launching the plan for development of the Western areas in 2000, acknowledged the importance of diminishing regional inequality and to promote widespread economic growth also in the western provinces, in order to create increased stability and quality of life for people in the West. If growing inequality can be seen to be connected with the economic development, these goals may be undermined.

2.2.1 Definition: Generally about Privatisation

Privatisation is defined generally as a process where public and state property is converted into private assets, and processes where the ownership of industry, business, and service enterprises changes to being under private control (Roland 2008: 200). But there are also various arrangements for shared ownership of enterprises, for example when the state owns a part of the total shares of a company, and private interests own the rest.

The idea of privatisation in neo-classical economic theory is often based on the standard market model. According to this model, the market consists of free, independent agents who maximise their profit by buying and selling goods and services in the market place. Buyers and sellers are expected to have the same knowledge about product characteristics, and how the market operates (Sclar 2000: 7). The state should have a limited role, and not operate in the market as a player. Supporters of privatisation often argue that a higher degree of free market, combined with profit motivation,

will lead to initiative and competition, and this will in turn result in increased managerial productivity, effectiveness, profits, and better quality of products and services. According to this perspective, privatisation is viewed as a rational and logical response to the problems of increasing state expenses, inefficient state-owned enterprises and the negative consequences of state control, for example in terms of limiting human initiative and creativity.

The subject of privatisation versus state ownership is a controversial political debate in many countries. Scholars, also among economists, claim that privatisation does not have the positive effect on achieving efficiency as proponents have argued, and that inefficiency is not necessarily an inherent characteristic of state enterprises and public ownership (Sundaram 2008: 199, 201). Privatisation can be difficult to implement successfully as a solution for an inefficient state, in sectors where real costs and benefits are difficult to measure, for example in health care where the quality of service can be difficult to assess (Sclar 2000).

Several factors can work together and affect how privatisation works. Among others, the type of goods and services that are to be privatised, the involved parties in the process of privatisation, and the transition cost of institutions (Araral 2009: 175). Similarly, the characteristics of the processes of privatisation can also matter to the outcome of privatisation, as well as the economic, political and historical context of the region or country where privatisation takes place (Birdsall & Nellis 2003: 1621).

2.2.2 Privatisation in China

Privatisation has been a central aspect of the reform processes. The term privatisation primarily refers to ownership change of state-owned enterprises. It can also refer to the growth of the private sector, especially in China, where there was no private sector before the reforms. Furthermore, the general withdrawal of state or public services in certain areas can be viewed as a form for privatisation, since it is a reduction of state responsibilities, and increased reliance on private service providers. This creates opportunities for private parties and enterprises in areas such as private schools and private health care in both urban and rural areas.

Reform changes in China have been much more gradual and step-wise than the “shock therapy”-reforms of the early 1990s in Russia and Eastern Europe (Nee & Cao 2004: 25). In China, local levels of the state have played vital roles, such as province, prefecture, and county level

governments. They have been in charge of developing and implementing political, economic, and institutional changes in their areas. Furthermore, many institutional changes were first tested out in local areas to gather valuable experience, before being implemented nation-wide through wide reforms decided by the central government.

There has been a massive sector reconfiguration in the Chinese economy, and of the labour market. The public sector has declined substantially in terms of number of employees, especially due to the privatisation of state-owned enterprises and collective town- and village enterprises from the mid-1990s. The private sector has grown from being nearly non-existent in 1978, to employing 36 per cent of the entire work force in 2003, because of growth of individual businesses in urban and rural areas, privatisation of state-owned enterprises, and private ownership of town- and village enterprises. The agricultural sector has decreased in size, from employing 69 per cent of the work force in 1978, to 47 per cent in 2003. The most important change in this sector is the shift from collective farming to household farming in the early 1980s.

An understanding of China's modernisation should be contextual, with attention to China being a post-socialist state. The Communist Party has remained firmly in control, and represents political continuity and stability in a rapidly changing economy. The continuity of the socialist ideology has also been important (Sun 2008: 106-109). Because of this continuity of party ideology and the socialist legacy, it is still highly controversial to use the term "privatisation" in the China, due to its obvious connections to the capitalistic system. Chinese authorities prefer more neutral descriptions like "reform and opening-up", "to build a socialist economy with Chinese characteristics" and "restructuring the Chinese economic system".

2.3 Historical background: Privatisation in the Reform Period

The first phase of the reform process started in 1978 and lasted until the early 1990s. Central in this period is reforms in the agricultural sector with independent peasant farming, the introduction of managerial autonomy and market competition for state-owned enterprises through the contract responsibility system, and the evolving private sector (Naughton 2007: 97).

The reform process slowed down in the beginning of the 1990s, but gained further momentum from the middle of the decade. In the second phase of reform, the state established new and modern tax

institutions, financial and banking systems, and introduced new laws in order to create transparent rules for the fast growing non-state sector and the market economy (Naughton 2007: 103). Economic growth continued to be high, and most Chinese citizens experienced improved living conditions. However, the massive changes in the labour market also created instability such as widespread lay-offs, unemployment, more job insecurity, and increased differences between rich and poor.

In the following historical overview of the changes in the reform period, I start with a brief account of the situation in the pre-reform planned economy. Then I focus on reforms in the agricultural sector, the growth of town and village enterprises and privatisation in the late 1990s, the reform and privatisation of state-owned enterprises, and finally the growth of the private sector, which is partly a result of processes in the other sectors.

2.3.1 Sectors in the Planned Economy

The Chinese planned economy in the period from 1949 to 1978 was a command economy, with the state controlling the economy. Central and regional government levels decided what to produce, how much to invest, assigned production targets, allocated production requirement and distributed services and goods (Chai & Roy 2006: 32, 33, Naughton 2007: 57, Chow 2007: 29). The socialist priority of rapid industrial growth was at the expense of agricultural production and consumption. China struggled with serious shortcomings of food and basic consumer goods. In 1978 there were rationing for 20 everyday products, including grain, clothes, soap, tofu and bicycles (Naughton 2007: 81).

Almost the entire work force was employed in labour organisations owned by the state. In 1978, the total labour force was 402 million. Of these, 69 per cent worked in collective farming, 14 per cent in state-owned enterprises, 6 per cent in township and village enterprises, five per cent in urban collective organisations, four per cent in government and public service units, and two per cent in rural non-agricultural enterprises (Naughton 2007: 182). The private sector was virtually non-existent. The Chinese labour market was strictly organised, and very few were able to change jobs or experience social mobility. The household registration system called hukou has separated people living in urban and rural areas since its implementation in 1958. It was nearly impossible to change

place of residence, and although the system has been liberalised to some extent, it has remained active throughout the reform period (Whyte 2010: 20).[5]

2.3.3 Rural Reform

The death of Mao and the following imprisonment of the Gang of Four in 1976 opened up for new policy directions and more open discussions in the communist party. The reforms started in 1978, with Deng Xiaoping as the lead reformator. New reform visions were established, through influential slogans like "Don't argue, try bold experiments and blaze new trails".

The transformation of the agricultural sector was the initial step in the reform period, with the introduction of the household responsibility system in 1981. The agricultural sector struggled with the task of producing enough food for a growing population, because of old farming methods and technology, inefficient organisation, and much farmer discontent caused by the rigid collective system (Chow 2007: 49). The new system was based on experience drawn from local-level experiments in Sichuan and Anhui in 1978-79. The reform introduced household peasant farming. Each rural household rented a piece of land from local authorities. A certain quota of their production was to be given to the state as tax, and the farmers could keep the rest. This they would either use for own consumption, or sell in local, open markets (Chow 2007: 49). Accompanying the reforms were also increased grain prices, contributing to increased farmer income.

The new system gave farmers increased autonomy. They were free to decide the use of the land, what type of grain to grow, to experiment with new agricultural products, to grow specialized crops and sell their products. They could also rent the land out to others, and work in other sectors (Whyte 2010: 14). The reform significantly increased agricultural productivity. In the period 1978-1985, agricultural production increased more than six per cent annually (Knight & Song 1999: 36). By the end of 1992, more than 90 per cent of Chinese households in the agricultural sector were working independently in the family unit (Naughton 2007: 239).

An important development that followed from the rural reform, was the reduction of rural public services and welfare support. The pre-reform rural collective organisations were important in

[5] Usually, only residents with local hukou registration have access to the welfare benefits in their area, while people living outside their registered residency do not have the access to the same rights as local residents. This has been especially problematic for rural to urban migrants, for example struggling with getting school place for their children.

providing public services as education, medical care, and support to acquire farmland. After the household responsibility system was established, the role of rural collectives was reduced, and this also led to reduction of public services (Naughton 2007: 238). In the end of the 1970s, the health services covered about 70-80 per cent of rural residents. By the middle 1980s, less than 10 per cent of the rural population was covered by cooperative health service system, and the majority of rural citizens with health insurance were living in rich eastern coastal areas (Naughton 2007: 243-246).

An important development in the late 1990s has been the rise of off-farm rural work opportunities, creating a more diverse rural economy outside of farming. These other sources of work include for example town and village enterprises, non-agricultural rural businesses and migration to other areas in off-seasons. In 2000, 76 per cent of the age group 16-20 had some kind of off-farm work (Naughton 2008: 191).

2.3.4 Township and Village Enterprises

Rural industry and small enterprises, known as township and village enterprises, grew to become an important sector in the 1980s and 1990s, especially in rural areas. In 1978, this sector accounted for about six per cent of GDP, and had 28 million employees. This increased to 135 million employees in 1996, with a share of GDP of 26 per cent (Naughton 2007: 274).

There were several reasons for this growth in the reform period. Because of the increased efficiency in agricultural production, many farmers became available for non-farm work, especially in off-seasons, and town and village enterprises were ideal to absorb this excess work force (Whyte 2010: 14). Since these enterprises were collectively owned firms, they were not in open conflict with the socialist ideology. Relaxation of regulations on rural industrialization allowed rural enterprises to participate in the evolving market economy, and to evolve as an alternative to state-owned enterprises and create more open markets. Local governments were interested in supporting such initiatives, in order to increase revenue and reduce unemployment (Chow 2007: 288).

From the mid-1990s, many town and village enterprises were transformed into privately owned enterprises. These changes were very important for the general dynamics of the reform changes in a market-oriented direction, and they swept across rural areas all over China. In 2003, a total of 135.7 million people were employed in township and village enterprises. Only 9.1 per cent of these worked in collective/state -owned enterprises, amounting to 12.4 million employees. Instead, 28.5

per cent were employed in enterprises under private ownership, 22 per cent in individually run enterprises, and 12.1 per cent in various stock enterprises, including limited liability arrangements, stock cooperatives, joint stock, and jointly operated enterprises (Naughton 2007: 291).

2.3.5 Privatisation of State-Owned Enterprises

Reforms of the state-owned enterprises were more careful and limited than the rural reforms in the period 1978- 1992, and the reform processes became more radical from the mid-1990s. Reforms of the state sector were more complex, due to the central factor these industries played in the Chinese economy, and the tight economic and political integration this sector had with the state and the Party (Chow 2007: 51). Main reasons for reform were problems with productivity and heavy debt burdens of many state enterprises.

The contract responsibility system (also named the dual track system) was introduced in the period 1984-1987, inspired by the agricultural reform (Chow 2007: 48). The system gave greater autonomy to each enterprise in deciding what to do, but did not change the ownership situation of state-owned enterprises. The enterprises were obliged to fulfil certain defined tasks and pay the state a specified tax. They were free to sell the surplus production in the evolving open markets, and use the profits for bonus to employees and new investments. By the end of 1987, about 78 per cent of all state-owned enterprises was organised according to the contract system (Wu 2005: 147).

In the early 1990s, local governments struggled with heavy debt burdens and inefficiency in their enterprises. In 1994, the central party congress decided to abandon the contract management system, and opened up for converting state-owned enterprises into shareholder corporations, thus paving the way for the possibility of private ownership of former state-owned enterprises (Gan et al. 2008: 6).

Under the 15th Congress of the Chinese Communist Party September 1997, the Party leadership officially set the course to restructure the state-owned industrial enterprise sector. The congress was considered as a “milestone in China’s privatisation”, and redefined the public ownership strategy. The private sector was acknowledged to be an important factor in Chinese economy, and entrepreneurship and private initiatives were applauded. The shareholding system and co-operative enterprises were viewed to be beneficial forms of modern economic development, and this

development was underlined to be consistent with Chinese socialist ideology (Lau 1999: 70). General Secretary of the Communist Party Jiang Zemin announced the new goals:

> "… To create large-scale enterprises that has competitive strength, in different industries, with multiple ownership forms, located in different regions, and even transnational businesses, through the link of capital. To speed up the development of smaller state-owned enterprises through reorganization, re-unionization, merging, leasing, contract-management, stock cooperation, sale-out, etc." (The Central People's Government 2007a)

What followed was a massive wave of privatisation and structural changes in the economy. Significant reform initiatives were carried out, including downsizing, restructuring and transferring of state enterprises. The local governments had power and incentives to reorganize state-owned enterprises, in order to improve the economy in their local area. The policy principle of "keeping the large and let the small go" acted as a guideline for local level governments. The reforms had a focus on privatisation of smaller enterprises, especially those below county level. Certain sectors were still kept firmly under state control, like post and telecommunication, railroad, electric power, mass media, the banking system, the school system, and several large industrial enterprises. Thousands of small and medium sized state-owned enterprises where privatised across the country (Wu 2005: 198). While approximately 78 million people worked in state-owned enterprises in 1995, the number of employees had been reduced to 30 million in 2004, amounting to a reduction of 61,5 per cent (Naughton 2007: 106).

Privatisation of state-owned enterprises was carried out in several ways. Enterprises were converted to joint stock corporations and the shares were sold. This created diverse ownership situations, ranging from the state being sole or majority owner (especially of large enterprises), to the state being minority owner and private parties controlling a majority of the shares, to complete privatisation with all shares sold to private investors. Selling shares to employees have also been widespread, since it resonates with the socialist ideology. Other important privatisation methods have been through management buyout, auction sales, mergers and acquisitions, declaring bankruptcy and form new companies with changed ownership, lease contracts, and joint venture arrangements with foreign capital (Naughton 2007: 105, Garnaut et al. 2006).

2.3.6 Growth of the Private Sector

The changes accounted for above in other sectors have been central for the growth of the private sector. Privatisation of state-owned enterprises and town and village enterprises has been central in this respect. Furthermore, the increase of foreign-invested capital and foreign companies establishing in China have also contributed to private growth.

The growth of small-scale private businesses is another important factor. In the early 1980s, the authorities eased up strict regulations limiting small-scale private businesses. In rural areas, the household responsibility system meant that farmers could sell their products in markets and keep the profit, and this led to flourishing local marketplaces and bazaars. This led to a massive wave of small-scale economic activity both in rural and urban areas, and growth of service providers of all sorts, like small retail family businesses, restaurants, and privately run stores (Bian and Zhang 2002). However, there were strict limitations on the allowed size of these companies, at least until the mid-1990s and the 15th Party Congress' appraisal of the private sector. The size of the urban informal sector was 13 per cent of the total labour force in 2003, with correspondently 20,5 million people. The ownership in this informal sector is predominantly private. This is a diverse group consists of service and retail providers, construction and building firms, migrant workers and so on.

2.3.7 Sector Overview

As a result of these processes, the structure and size of different sectors in 2003 had changed considerably, both when comparing to the beginning of the 1990s, and when comparing to 1978. The total labour force had grown to 744 million. The private sector now amounted to 36 per cent of the total labour force, approximately 268 million people. Included in this sector is the urban informal sector (employing 13 per cent of total work force), household businesses (3 per cent), private companies (3 per cent), companies with foreign owners (1 per cent), and notably non-public town and village enterprises (16 per cent) (Naughton 2007: 182). The public sector now amounted to 14 per cent of the total workforce, including employees in state-owned enterprises (4 per cent), government and public service unit employees (5 per cent), publicly owned town and village enterprises (2 per cent), and employees in reformed corporations with mixed state/private ownership (3 per cent). The number of state administration employees has not changed much compared to 1978, so the biggest decrease has been in the state-owned enterprise sector, and the town and village enterprise sector. The agricultural sector was large also in 2003, with a share of 47

per cent of the work force, but this was a significant reduction of the sector's share of the total work force, compared to being 69 per cent in 1978.

The new political direction created a more diverse economy, with the growth of self-employed businesses, private enterprises, foreign-owned enterprises, and non-governmental organisations. However, the massive structural changes of the second half of the 1990s created much unemployment and instability in the labour market (Naughton 2007: 106).

Chapter Three. Theoretical perspectives

My main research question concerns whether privatisation is related to increased income inequality in Western China. The theoretical perspectives I use are neoclassical labour market theory, structuralist/neo-Marxist perspective, market transition theory, segmented labour market theory, and social closure theory. These theories are used to study how privatisation and income inequality are connected together in the Chinese labour market, through social structures of education, occupation, sectors, rural-urban diversity, and migration. These five social structures are much studied in previous research, and provide different perspectives on income inequality. They are differently affected by processes of privatisation and economic transformation in China.

I employ a range of theories and concepts to study the impact of privatisation on the social structures, and how this affects income inequality in China. Each perspective is used to frame some of the social structures, but some perspectives also have more general importance. I use the neoclassical perspective to focus on education, migration, rural-urban divide and occupational stratification. Market transition theory focuses on returns to education and inequality between sectors. The structuralist/neo-Marxist view is mostly related to urban-rural inequality and migration. Segmented labour market theory emphasise occupation and migration, and social closure theory is relevant to education, occupation and rural-urban differences. In the end of the chapter I present the five hypotheses, together with relevant and central points from the theories.

3.1 Neoclassical Economic Perspective

Neoclassical economic theory assumes that price is determined by the relationship between supply and demand in a market. This model is also applied to wages and income distribution in the labour market. Individuals who sell their labour force are suppliers, and employers are demanders. When there are less qualified candidates for a job, the wage will be higher because of limited supply (Becker 1975: 105). Privatisation can be a process where some abilities become more appreciated, and this leads to increased demand and higher wages for people with these qualities. Central in this regard is returns to educational attainment, where higher education is viewed as being an important qualification for individuals to get a better-paid job. Privatisation is also viewed as a process in which labour is set free, in terms of labour mobility across regions, and between different kinds of work.

In a modern market economy, it is important for enterprises to have skilled and productive employees to be competitive. This leads to increased demand for people with relevant skills and education, and higher wages for these people. In neoclassical theory, this is conseptualised as increased returns to educational attainment. Privatisation is also viewed as a process in which labour is set free, in terms of labour mobility across regions, and between different kinds of work.

According to neoclassical theory, in the early phases of an evolving economy, higher returns to education might lead to higher income inequality between skilled and non-skilled workers in a shorter time frame. However, in a more mature open market economy with economic growth, and viewed in a long-term perspective, the results will be increased living conditions and a more equal income distribution, due to the "trickle-down" effect of resources that also will benefit the poor. An important model for this neoclassical view is the Kuznets Curve (Kuznet 1955). The model states that in a developing economy with economic growth, in the initial stages there will be higher inequality, but this will be reduced again in later, more advanced stages when the economy functions better and the economic growth is distributed more evenly throughout the population. Based on this, the neoclassical view can be seen to be positive towards the consequences of economic development on income inequality. Furthermore, the degree of privatisation can be conseptualised as a sign of how mature the market economy is, especially in a transitional economy as is the case in Western China.

3.1.1 Demand for Competence: Human Capital Theory and Technological Changes

Human capital is the value of an individual's education or work experience. Human capital theory states that it is rational for firms to employ people with higher education, because they are more productive and perform their work better. And since these people have invested more in their education through years of study, they also deserve to be higher rewarded for this (Becker 1975: 41, Becker 1993: 183, Bills 2003: 444). Work experience refers to how employees gain skills and knowledge from years of practicing their work, and seniority should be rewarded since they are more competent in their jobs.

A theory related to the human capital concept, but more explicitly connected to societal and technological change, is called Skill-Biased Technological Change (SBTC). It was developed by

economists in the 1980s, with the goal of explaining rising inequality in Western countries at the time. The main argument is that changes in technology led to increased demand for highly educated workers. Since the demand for this group of workers was larger than the available supply, wages for individuals with relevant high education increased, and this changed the income distribution of modern Western societies (Lemieux 2007: 22). Following the development of new technology, scientific and technological knowledge became more important for production (Becker 1993: 24). Computers and high technologies replaced many workers in doing simple routine based tasks. While demand for low-skilled routine jobs often decreased, the demand for high-skilled employees increased. This trend favoured individuals with higher education, and created a more stratified wage structure.

In the labour market, workers are allocated to positions on the basis of their education and skill level, is viewed to be more meritocratic and efficient than a labour market with institutional boundaries decided by the state. In China, such boundaries include the hukou system that limits mobility, the importance of political connections and political capital for job allocation, and the lack of education possibilities that limits individuals' potential. Through the formation of a more open labour market with a growing private sector, and increased importance of human capital, the neoclassical perspective expects decreased inequality over time, and directs the blame for creating income inequality at state-implemented institutional boundaries in modern China (Dollar 2007). Privatisation and market economy is viewed to have an equalising effects on the inequalities created by the state distribution system.

In the plan economic system in China, human capital in general played a very limited role. The allocation and distribution of jobs and people were politically and administratively decided upon. There were no open labour markets, and distribution of jobs and allocation of personnel were solved by organisations such as the work-units (*danwei*s) in urban areas, and collectives in rural areas. In these systems, the system favoured political loyalty and political positions, not competence and education credentials. Individual characteristics like differences in education played a very limited role (Zhao and Zhou 2002: 342).

The growth of the private sector and more open labour markets contribute to the growing importance of human capital and returns to education in China in the reform period (Gustaffson et al. 2008: 112). Furthermore, there have also been important technological development and modernisation in China in the reform period (Sigurdson 2004). Liberalisation of wage-setting

mechanisms in state enterprises and the technological changes has changed the previously centralised wage structures. In a market-oriented economy, technological changes in China favoured higher educated individuals, and contributed to develop a more stratified wage structure with increased income gaps between individuals with lower and higher education (Liu et al. 2007: 18, Liu 1998: 698, 721).

3.1.2 Rational Choice and Free Mobility: Migration Promotes Equality

According to neoclassical economists, market liberalism and privatisation function as central mechanisms that increase migration. Further, they argue that this liberation of labour mobility will create processes that lead to more equality, both between migrants and non-migrants, and between rural and urban areas. Neoclassical economics emphasise individual rationality through utility maximising and/or profit maximising. Related to migration, the neoclassical perspectives propose that migration is the result of individuals' rational choice, and migration has positive effects on economic development. Accordingly, migration contributes to increased income equality, when comparing the sending and receiving side of migration (de Haas 2008: 4).

For neoclassical economists, an individual chooses to migrate based on a rational calculation of costs and benefits from employment opportunities, and the prospects of obtaining a higher wage is the most important motive for migrating (Torado 1969: 138). The neoclassical perspectives resonate with the modernisation theory and the "push-pull" model, by assuming that rural-urban migration is part of a general economic development, determined by either individual choice, or equilibrium between supply and demand sides of the labour force (Harris & Todaro 1970: 127). Harris and Todaro (1970) have also pointed out that the elasticity of the induced migration contributes to change urban-rural wage differentials, and urban employment probabilities. Since migrants earn more from urban work, and send remittance back to their families, increased migration will lead to decreased inequality between urban and rural areas. Further, if processes connected to privatisation and more job opportunities leads to increased migration, this would promote equality in an overall perspective.

As an extension of the neoclassical perspective, transitional migration theory emphasises a perspective of different stages of development. While rural-urban migration often will increase inequality in earlier stages of development, in later stages it will contribute to decreased inequality, when development has reached a certain momentum (Zelinsky 1971: 233). Accordingly, income

inequality will decrease when migrant networks are established, the migration system is improved, and when cost and risks of migration are reduced (de Haas 2008: 40-41). The transition theorists also refer to many empirical studies which conclude that migration over time leads to higher development.

Migration was limited in China, and the state sector restricted access to job possibilities. But there has been increased demand for migrant labour after the economic reform, related to downsizing of the state sector, privatisation, and the extension of the private sector. Migrants represent a cheap and flexible labour force, and many work in the more informal private sector. When there is a high surplus of low-skilled migrant workers, the wages for this social group may be even lower. This can lead to higher income inequality between rural migrants and urban residents.

3.1.3 Neoclassical Development Theory: Urban-Rural Diversity

Neoclassical development theory is concerned with spatial development. This theory focuses on how the economic development is determined by market operation and price mechanisms, and that the state's main role is to ensure that the market institutions works well, to allow private competition, and to encourage economic growth (Brown & Warner 1991: 31). Neoclassical scholars believe that different interests will be balanced in the market mechanism. The economic growth will have a "trickle down" function in a society, and over time also benefit the poorest segments of the population. Modernisation theorists claim that increased rural-urban inequality is caused by the failure of backward rural areas to implement modern capitalist principles (Wahl 1998: 110). Accordingly, state distribution and governmental controls are the main reason for the urban-rural diversity. It is expected that with the emergence of open markets, modernisation, and privatisation, inequality between rural and urban areas will decrease. Lewis' model of urban-rural studies supports this idea, and predicts reduced urban-rural disparity following economic development and privatisation. Accordingly, industrial development depends on the elastic supply of rural work force. With further development, this elastic supply of rural labour will be changed. When the price for agricultural production is relatively improved, the wages for rural labour will be increased. In a competitive labour market, the urban wage will also raise. It is a win-win situation; the rural-urban transfer of labour will contribute to increased trade between rural and urban, and lead to less inequality (Knight & Song 1999: 4).

However, many studies show that although there is a higher degree of market economy and

privatisation, the urban-rural disparities have continued to increase throughout the reform period in China. While urban Chinese is enjoying both market profit and state benefits, peasants are more disadvantaged (Knight & Song 1999, Gustafsson 2008, Sicular et al. 2010, Whyte 2010). The understanding of urban-rural income difference should be connected to spatial context and different types of households, ownership, and locations. Knight and Song (1999) point out that in some well-developed rural areas, the blooming of township and village enterprises and rapid development of rural industries raised the income level of rural residents, and income disparity between these rural areas and cities declined. But in some other rural areas, local economy was not developed, and income inequality was still increasing.

3.2 Structuralist and Neo-Marxist Perspectives

Both Structuralists and Neo-Marxists focus on the structural impact on social phenomena. Their perspectives on inequality often overlap each other. While structuralists are interested in studying underlying social structures, neo-Marxists emphasise the importance of contradictory class positions and conflict. I mainly use these theories to gain another perspective on the rural-urban income gap, and migration situation. The Neo-Marxists conflict perspective argues that the expansion of capitalism is the reason for inequality, and capital penetration and exploitation are the key concepts. More expanded private sectors and privatisation can in practice be viewed as a process towards a more capitalist society. In this process, rural peripheries are exploited by the core areas, exporting rural resources and rural labours, in order to support urban development. Rural areas lose the valuable labour forces, are marginalised from development, and trapped in disadvantaged positions.

3.2.1 Market, Inequality, and Privatisation

There is much discussion about the factors contributing to inequality. Liberalism argues that the free market solution creates human initiative and growth, which will further benefit all in society through a trickle down-effect. Market economy represents a possibility for equality. Social inequality is, according to this view, a result of the state or political groups interfering with the redistribution of resources, creating benefits for the political elite (Sun 2008: 104). In contrast, neo-Marxism claims that the market institutions with their focus on competition, profit maximizing and practices of exploitation are the roots of social inequality. There is an interdependent relationship

between the capitalists and the workers, where the workers are excluded from access to the profits derived from their own labour, and exploited by capitalists. Capitalists, on the other hand, benefit from the exclusion of the workers, and generate inequality (Wright 2005: 23).

Further in the neo-Marxist perspectives, capitalism is tightly connected with private ownership and privatisation. In a capitalist production relationship, the means of production is privately owned (Wright 2005:10, Hughes et el. 2003: 50). In this sense, privatisation can be viewed as one of the basic characteristics for capitalism. Thus, the process of privatisation, and the transition from a previously socialist state to a capitalist state, can be related to increased inequality. The unequal distribution is not only connected to the capitalist exploitation of working class, but also combined with a more "natural" process of social reproduction of inequality in the process of privatisation, and various legitimated social boundaries. This will be discussed more in the section of social closure theory.

3.2.2 Development or Exploitation? Regional Disparity

One central perspective of neoclassical economists is that market promotes development, while state distribution creates inequality. One interesting debate is about uneven regional development. Dominant neoclassical economic theories argue that the emergence of urban-rural disparity is mainly due to failures of introducing modern capitalist operating methods and technology for industrialisation in rural areas (Wahl 1998). Some have criticised that the government policies systematically favour urban development and urban industrialisation. Accordingly, the expansion of privatisation and free market is the only way to reduce urban-rural inequality, and to promote development (Dollar 2007).

This perspective is controversial, and much discussed. Economic structuralism stresses the external and internal context of a society. According to this perspective, urban-rural inequality is created by different market conditions in different economic sectors. In some sectors there are too much supply, and in others too much demand. Such unstable supply-demand relationships can contribute to uneven regional development, and can explain the disequilibrium and polarisation of uneven wealth distribution (Brown & Warner 1991: 31).

Critical neo-Marxism focuses on class conflict, capital penetration, and exploitation, and represents another set of tools that can be used to frame rural-urban inequality. One such tool that is closely related to neo-Marxism is dependency theory. A central term is "uneven development", which implies that rural areas are excluded from economic development. It argues that the priority of urban areas is mainly caused by capital accumulation and monopoly capitalism. Urban industrial development is the first priority, since this sector has large potential to create fast economic growth through higher productivity and expansion of markets both internally and externally. Rural industry and agriculture is marginalised and exploited, since resources in these sectors are channelled to support urban development. Furthermore, in order to ensure production and avoid conflict among urban workers, social welfare benefits are channelled to urban citizens (Wahl 1998: 110). An essential theorist of the dependency approach is Wallerstein with the world systems theory. One of his most relevant concepts in relation to the urban-rural relationship is the dichotomy between core and periphery. The main reason for differentiation between regions is the economic interests of the rich and developed core areas, and their exploitation of the underdeveloped periphery. This exploitation obstructs internal development in peripheries. The hegemonic interest is powerful and there is limited possibility to change the social structure (Brown & Warner 1991: 31).

Privatisation is an important aspect both regarding the social transition from a socialist society to a capitalist economy, and the economic reforms in Western China. Therefore, it can be related to the increased urban-rural inequality. More privatisation can be a measure of a higher degree of capital monopoly, which is further related to income inequality between social groups and individuals. Neo-Marxist theory and Structuralism give a different picture of inequality than neoclassical economic perspectives. Their focus on the exploitative character of the urban-rural relationship is central. In these perspectives, privatisation is no longer a mechanism for promoting equality, but in contrast, privatisation becomes a practice of and expanding capitalist system, or a process of capitalist exploitation, which will bring about and co-exist with higher income inequality.

3.2.3 Free Labour Mobility or Exploitation: Migration theories

Some dominant neoclassical economy theories contend that the relationship between supply and demand will lead to equality between migrants and non-migrants in an open market economy. The historical-structural theory and neo-Marxists gives an opposite perspective. According to the structuralist perspective, migration leads to asymmetric growth and increased regional disparity (de Haas 2008: 26-30). When the access to political and economic resources is unequally distributed

between different regions, a certain dynamic evolves, where the underdeveloped regions are determined to lose. Capital and labour (migrants) float from the underdeveloped peripheries to developed centres, the peripheries are exploited by the core areas, and underdevelopment of rural areas follows this dynamic. Structural functionalism looks at the social relationship in a society, and shares much of the above-mentioned perspectives. For example, Parkin (1975) emphasised the contradictions between rural migrants who lost their land, and the landlords with surplus land. Through the land policy, rural areas are supplying both production and wage labour to the capitalist development.

Neo-Marxists view increased inequality between regions as a bi-product of practices related to capital accumulation and the spread of capitalist market principles (Massey et al. 1998: 36). In a capitalist society with less government regulation, regional inequality is growing (de Haas 2008: 27). Capital streams, privatisation, and cheap involuntary migration benefit urban development, while rural areas are trapped in disadvantaged positions (Castles & Miller 2003: 25). According to neo-Marxists, migrating rural workers are separated from their production means (the land they own), and enter the capitalist production sphere where they sell they labour-power. Some argue that when regional inequality occurs, polarisation between rural and urban will be enforced. Underdeveloped peripheries are trapped in poverty, and developed centres are facing even faster growth. Inequality thus becomes even larger.

Migration is viewed as a result of the expansion of capitalism, and migration can contribute to increased income inequality between urban and rural sectors, through adverse effects of migration inside rural areas (Gerold-Scheepers & van Binsbergen 1978: 5). First of all, migration causes a drain of valuable labour force in rural areas, mainly young men that could contribute greatly in agricultural activities and production, but also women and girls who migrate to work in for example textile factories. It is argued that migrants often come from economically advantaged families that can afford the cost of migration, as well as from more open-minded and better-educated people. When losing these bright young people with relatively high levels of human capital, the growth and development of rural areas are negatively affected. Secondly, inequality is increasing in rural areas, because better-off families are becoming even wealthier, since they receive significant amounts of remittance from their migrant family members (Lipton 1980: 11). Even though some capital of migrant remittance floats back to the rural areas, little capital are invested in developing the stagnant local economy and larger enterprise ventures, but are used for family savings and daily consumption (Lipton 1980: 12). Even if some of the money is used in business activity, they are

mainly put into small family and self-employment businesses like retail and service firms, which do not contribute much to overall economic rural growth (Penninx 1982: 802). The income differences will thus increase inside rural areas.

3.3 Market Transition Theory

Neoclassical economic theories and structuralist/neo-Marxist perspectives study inequality from different perspectives. The first mentioned are generally more optimistic, while the other ones are more pessimistic. However, both approaches research inequality as a static phenomenon situated in certain social condition. Market transition theory focus on how the changes of the reform period affect social stratification and income distribution in China. It was formulated by the economic sociologist Victor Nee (1989), and has created a wide debate. The theory's main position is that the growth of the market sector will reduce the importance of the public sector. The legacy from the planned economy is the prevalence of the state redistribution system and power connected to privileged positions in this system. This continues to be important also in reform China, but the growing market and especially the private sector changes the game. This development, which is termed "marketisation", will lead to important changes in the distribution of power and income in China. The hierarchy in the public sector is based on political capital and positions. The main principle in the market sector is human capital and returns to education, but of course controlling capital and investments is also important. Market transition theory proposes that as the market grows, market mechanisms will gradually replace political mechanisms when it comes to distribution of income (Nee & Cao 2004). Individuals with market power will gain advantages, while the advantages of individuals with political power will gradually be reduced. Human capital and returns to education has received much attention in the transition debate, as this is taken to be the central feature of the market sector.

This development has important consequences for income inequality. In the initial phases of reform, a growing market sector may cause increased equality, because it provides an alternative for entrepreneurs and other people who did not have positions in the redistribution system. However, as the market sector gradually becomes more important, this sector has much potential for generating higher inequality levels than before the reforms, particularly after the sector had been legitimized and actively supported by state, as the case was in China from the mid-1990s and onwards (Sun 2008: 104).

3.3.1 Increased Returns to Human Capital

A key point in market transition theory is that human capital becomes more important in regards to income distribution, with the growth of the private sector. According to Nee, "the transition to a market-like economy should result in higher returns to human capital characteristics" (Nee 1989: 674). In the market economy, there is increased competition between firms, and between individuals in the labour market. In order to increase profits and maintain market position, the demand for skilled-personnel with necessary knowledge and qualifications increases. The increased demand for skilled workers creates higher wages for educated employees, and a consequence of this is increased inequality between skilled and non-skilled, highly educated and low educated workers. The wage structure becomes more stratified and diverse, especially in the private sector.

This mechanism of income inequality emphasises the significance of institutional change. The emergence of more open labour markets creates a competition-oriented environment where educational credentials become more important, and receive higher rewards (Nee & Cao 2004: 47). If these principles are central in the private, market-oriented sector, then increased income inequality can be the result of a larger private sector.

Most research on returns to education in China and income inequality connected to market transition is on the national level. When it comes to the mainly rural Western China, the development towards a more open market sector can also be central for income inequality. In rural areas, income from agricultural sources remains to be the most important way of income for a large group of farmers. However, the growth of town and village enterprises has also created more non-farming work opportunities in many rural areas in the West, and this has contributed to increased inequality within villages in rural regions. Xing et al. find that human capital is an important factor when explaining wage differences between farmers in Western China, in addition to other factors like prices on agricultural crops and access to land (Xing et al. 2006: 2). Returns to education are expected to be even more important in urban areas in the West. Zhao and Zhou compared returns to education in 1978 and 1993, based on a sample of 4,600 urban respondents in six provinces from all regions of China. They found that the growth of income related to educational attainment was substantial, especially in non-state sectors where market mechanisms are even more important (Zhao & Zhou 2002: 370).

Critics of market transition theory have noted that education becomes also more important in other sectors than the private, as for example in the public sectors (Zhao & Zhou 2002). Increased demand for skilled employees becomes a general phenomenon in modern China, and more people aim to have higher education. It results in a competitive educational race (Wang 2008: 122).

3.3.2 Income Inequality Between Sectors

The effects of privatisation on wage level are ambiguous and points in several directions. There can be different effects for various groups of employees. The private sector is more diverse in terms of different kinds of jobs and tasks, divergent educational and skill requirements, and larger variation of wages in the occupational structure. The income of skilled employees in higher positions is divergently affected by privatisation, than the income of workers in low-paid, manual jobs, such as migrants (Hebel & Schucher 2006: 26). In the state sector, the wages of employees were administratively decided in the planned economy, and there were low levels of inequality inside the state sector before the reforms. The logics in the market economy are different, with the central drive towards higher efficiency and increased profits. In later years, the use of part-time and temporary contracts also in the state sector have become more widespread, making the labour market more insecure.

Some research points to that the competitive environment in the private sector may increase wages for employees in privatised firms, especially for skilled workers in demand (de Fraja 1993: 468). Sociologist Zhang Zhanxin has analysed income differences between employees in private- and state-owned enterprises, based on data from the Chinese Household Income Project (CHIP) in 1995. He finds that persons employed in the private sector generally had higher income than those who worked in government sectors, while there is often lower and less differentiated wages in state-owned enterprises (Zhang 2007: 114, 121). An explanation for this can be that employees in private sector over time receive higher wages, because the private enterprises are more successful in implementing effective production, and generate more profits which employees in turn benefit from (Nee & Cao 2004: 24). A growing private sector, combined with higher wages compared to the state and collective sectors, can create increased income inequality between people employed in private and state sector.

With the growth of the private sector, there is more focus on the principle “high-skills pay-off” and returns to education in the private sector (Ho et al. 2002: 661-662). Employees in the state and

public sectors are facing reduced protection and income when economic policy is turned in a more market-orientated direction, while individuals in private sector, who basically have higher income, may get even better wages through the restructured effective system. Income distance can therefore be even larger, and privatisation can thus lead to higher wage inequality between sectors. However, economists Haskel and Szymansky (1992) points out that wages in the public sector were previously privilege, but can be expected to decrease as the enterprises are privatised and expenses cut. They maintain that wage levels will even out, and be at roughly the same level in different enterprises across sectors.

3.3.3 Bonus Systems and Occupational Stratification

Occupation has become one of the most important determinants for social stratification, and several studies of wealth distribution and income inequality in China have found that occupation is one of the factors that have significant influence on individuals' income level and economic situation (cf. Bian & Zhang 2002, Li & Sato 2006, Nee & Cao 2004).

A special feature of privatisation is the use of bonus arrangements in the private sector to increase incentive and productivity. This rewards successful employees, creates a more competitive environment, and contributes to create a more stratified and diverse wage structure (Nee & Cao 2004: 24). If the bonus arrangements are more likely to be used to award high-skilled employees, there will be larger wage differences between occupations based on different educational types and levels. Furthermore, this can lead to and overall increased income inequality between occupational positions.

Principles found in the market economy and private sector can also affect wage levels and social stratification elsewhere. From the implementation of contract management system in the 1980s, the use of bonus arrangements has also steadily increased in the state sector. It contributed to larger income differences within the state sector. The reforms from 1994 are especially influential, which underscored the importance of the private sector and accelerated the privatisation of state enterprises. New incentive mechanisms were introduced, in order to boost employee productivity in the remaining state-owned enterprises. Many enterprises faced growing pressure when competing with private enterprises in the open market economy. Wages became more stratified according to educational and occupational positions; more carrier schemes and promotion mechanisms were

introduced; seniority remuneration was strengthened; the bonus- and reward-systems became more important awarding high-performance workers (Knight & Song 1999: 48, Chow 2007: 51).

3.3.4 Sector Changes and Work Organisations

Different sectors have different forms of work organisations, which are important for income distribution. The economic reforms have influenced these work organisations in the various sectors in different ways, which affects income inequality both within sectors and between sectors. The traditional state work units, *danwei*, are a form of work organisation from the plan economic system. It has continued to play an important role also in the reform period in urban areas. In the planned economy, the danwei system was used as an effective mechanism for controlling and distributing social resources, and had special socio-economic significance and responsibility to regulate capital, resources, and workers. The division of labour was only a symbol for different working tasks, and occupations were thus not important for social position (Lin & Bian 2002).

The structure of danwei system has changed in the reform period, but is generally recognised to still play an important role concerning income distribution in urban areas (Xue et al. 2009: 3). The distribution of benefits like housing, health insurance, and other welfare arrangements are reduced, but danwei-arrangements continue to be important for earnings. This system generally promotes equality for people inside the organisations. However, the benefits of the danwei system are not available for everyone, so it maintains systems of inclusion and exclusion. Migrants are for example excluded, and people working in less organised sectors such as private enterprises. Furthermore, there has been a reduction of the danwei organisations, partly because of the reduction of state owned enterprises and growth of the private sector. In this way, privatisation can be seen to undermine the work organisations related to the older state distribution system, and the result may be worsened living conditions and reduced wages and benefits for state employees.

3.4 Segmented Labour Market Theory

Segmented labour market theory is an alternative to neoclassical economic views, which may be criticised for having an abstract and theoretical view of labour markets, with little empirical focus on how labour markets are organised and works in practice (Hebel & Schucher 2006: 8).

Segmented labour market theory is also an alternative to Marxist perspectives, which focuses on relationships of exploitation between capitalist and workers.

3.4.1 Primary and Secondary Segments

The main point in segmented labour market theory is that labour markets are not unified, but divided into segments with different logics and norms. There are different ways to define these segments. One is to divide between primary and secondary sectors, such as Piore did when studying the US labour market in the 1970s (Piore 1975). The primary sector consists of well-paid and stable occupations with higher wages, status and position in the work organisation. The secondary sector consists of job with low demands concerning skills, lower wages, worse working conditions and more job instability (Piore 1975: 126). Piore divided the primary sector further into an upper tier and a lower tier. The upper tier occupations were defined as being high-skilled professionals and leaders in management positions. Individuals with these occupations have higher wages, have higher possibilities for career and possibilities for promotion, and are associated with high mobility. There are internalised codes of behaviour within this social class, and the boundary between the upper and lower primary sector is based on formal prerequisites of educational credentials and various certifications (Piore 1975: 127).

Instead of dividing between primary and secondary sector, one can use the concept of internal and external labour markets, to focus on processes of exclusion and closure (Hebel & Schucher 2006: 9). This perspective is especially relevant to understand income distribution connected to certain groups which are institutional discriminated, such as migrant workers. It is also relevant when comparing rural and urban areas in China. While the urban areas represent a more developed economy with higher wages, poorer rural residents are often limited or excluded from being a part of the high economic growth. Segmented labour market theory has also been central when studying transitional economies, such as countries in Eastern European and in China (Hebel & Schucher 2006: 9). Segment theory terms like “core” and “periphery” have been used when analysing the labour market in China’s pre-reform planned economy. Workers employed in sectors close to the state system (such as steel industry and government administration) received much benefits and formed a core segment, while workers in sectors further from the state (such as collective and in the small-scale private sector) received much less benefits. Another way that labour market segmentation has been conceptualized in China has been done by sociologist Zang (2002), who

defined segments as being the private sector versus the public sector in a study of urban income inequality. However, in the following I will mostly refer to Piore's concept of primary and secondary segments.

3.4.2 Stratified Occupational Structure

The economic reform and privatisation in China in the last three decades has created new forms of labour markets, employment relationships, and occupational patterns. The division of labour has changed, from being relatively unified and equal in terms of wages in the planned economy, to become a more complex and diverse in the market economy (Hebel & Schucher 2006: 10). Segmented labour market theory is an important perspective to understand occupational structures in China, and increased inequality between occupational classes.

Transformations in the reform period have created a more diverse occupational structure. The private sector consists of more varied types of work, ranging from jobs demanding high skilled-competent employees, to low skilled work with less formal requirements. The growth of the informal service sector has created many new job opportunities outside the public and agricultural sectors, although the wages are often low. Technological change and modernisation has contributed to increased demand for competence and increased complexity in many work organisations. The increased stratification in the occupation structure is especially important in private sector, but can also be found elsewhere, like in the public and agricultural sectors.

The framework of segmented labour market theory is well suited to capture such processes. Jobs in the primary sector are highly rewarded and require high-skilled employees, while jobs in the secondary sector are low skilled and low-rewarded. These segments are open to different kind of individuals with different educational credentials and backgrounds. The increased differentialisation in the labour market can therefore be seen to contribute to increased income inequality overall, because these segments have different principles related to wages and compensation. For example, there is more use of reward and bonus arrangements in the primary segment, and higher returns to education.

3.4.3 Segmented Labour Market and Migration

The growth of migration flows has been a central development in modern China. The rural reforms in the beginning of the 1980s is an important factor for increased migration, since more efficient farming created a huge surplus agricultural workforce and a wave of rural-to-urban migration (Cheng 1998: 25). [6] The private sector is less restricted and more open to hire migrant workers, and a growing private sector have therefore create more work opportunities and demand for migrants. The hukou system is still active, but restrictions have been loosened up to some extent.

Migrants typically find work in the secondary segment of the labour market. Jobs in this segment are low-paid, with very modest demands towards formal skills and education.
Employers often exploit the cheap migrant workforce. The jobs are generally temporary and unstable. Furthermore, there are very limited possibilities for migrants to gain higher positions in the organisational hierarchy, partly because of discrimination towards rural workers, and due to educational demands (Piore 1979: 17). Secondary segment jobs are mainly in trades like construction, hauling, manufacturing, handicraft, street-corner commerce, transport, and domestic service. These jobs are often dangerous, physically demanding or dirty, and not very popular among urban residents (Li 2001: 19, 28, 31; Gaetano & Jacka 2004). The institutionalisation and closure between the primary and secondary sectors of the labour market have led to increased income inequality between migrant workers and resident workers, and wider income disparities between rural and urban areas (Cheng 1998: 31).

3.5 Social Closure Theory

A sociological alternative to understand inequality is to view labour markets and different professions as social fields surrounded by boundaries of inclusion and exclusion. A framework based on social closure theory is developed by Weeden (2002) to explain how occupational and organisational groups create boundaries around them, in order to increase wages and social status for the group.

Weeden has studied wage differences between different occupations in the United States, and identified five occupational closure devices in the labour market: Licensing, educational credentials

[6] By 1998, the surplus labour in rural China was roughly estimated to be 200 million (Cheng 1998: 31).

through the formal education system, certification through voluntary programs, representation by occupational associations, and unionization (Weeden 2002: 60). The necessity for individuals to obtain certain credentials, as for example particular levels of educational attainment and professional skills, serves as a systematic barrier of inclusion into a group and exclusion from a group. This limits access to particular labour markets (Weeden 2002: 58).

Closure mechanisms can also go through other social institutions and structures, such as the institutional boundaries between urban and rural areas, or boundaries around labour organisations like the urban danwei. Privatisation can be related to inequality through its reinforcement of closure mechanisms. China is becoming a market-oriented economy with a higher degree of privatisation, and the impact of closure mechanisms increases.

3.5.1 Social Closure in Education

Educational certification provides access to certain occupational fields that demand formal diplomas and grades from trusted educational institutions. This function of educational credentialing works in two different ways. First, certification can refer to the real skills that are necessary to qualify for the work tasks, and serves as a standardized judgment for employers to evaluate their candidates. Secondly, certification works as a symbolic, social marker, that communicates an individual's social belonging and cultural affiliation, and symbolise one's membership in a social group (Weeden 2002: 60, 61). The process of privatisation in China can make closure mechanisms more important. The occupational structure in pre-reform China was relatively egalitarian, both in term of wages and request for entry, and the demand for people with high education was low. After the reform period, new demands to credential certifications were defined formally and informally. The closure mechanism restricts the number of potential candidates for a job, based on their educational level. This is especially relevant for larger enterprises in the private sector.

Social closure theory further emphasise how professions can increase their wage level by limiting access to their own labour market. By establishing formal institutional barriers which emphasise formal requirements, obligatory diplomas, completed courses, and so on, practitioners inside for example fields like medicine, lawyers, IT-expert can increase their wage level. Such mechanisms can be relevant to a large number of especially high-skilled work positions, and can contribute to stratify the wage structure.

A related development in the reform period is the growth of private schools and school fees in public schools, both in rural and urban areas. The official educational policy strategy changed in 1993, and local governments, non-state actors, and private interests were encouraged to provide educational services to the population (Mok et al. 2009: 506). School tuition and various fees were increased dramatically in order to finance school activities and pay the teachers. The average school tuition increased from 200 yuan per student in 1986 to 6,000 yuan in 2006. The number of private educational institutions in China has increased from 50,000 institutions with 11 million students in 1998, to 70,000 institutions with equivalently 18 million students in 2004 (Mok et al. 2009: 507).

The privatisation of the educational system makes it easier for some social groups to obtain profitable educational credentials than for other groups that are less well-off. Differences in educational attainment have further consequences, when educational credentials from the right schools are converted into occupational positions and economic capital (Wu et al. 2008: 311). In 2005, the average cost for a university or college education was equal to a four years net income of a urban family, and 13 years net income for a rural family (Hansen & Thøgersen 2008: 144). Inequality in educational attainment are later converted into income inequality between individuals, households, and on a macro level creates increased regional disparities between rural and urban China, as well as rural poverty (Knight et al. 2009: 313, 332; Wu et al. 2006: 310-317; Li et al. 2009: 378-380).

3.5.2 Social Exclusion and Occupation

Reviewing Weeden's closure approach, inequalities reflected in occupation differences primarily results from social exclusion. Privileged social groups defend their economic interests by constructing social and legal boundaries, and impose demands for accessing certain occupations and positions (Weeden 2002: 59). The closure mechanisms rely on strategies such as restricting potential candidates for an occupation through increased legal and formal demands that limits access to these jobs, with the aim and result being higher wages for individuals who occupy the job positions in question. On one hand, various formal and informal demands are imposed and institutionalised: Individuals need educational credentialing and licensure for an occupational title in order to gain access to particular jobs. On the other hand, by signalling, labelling, and institutionalising the quality and importance of certain occupations through e.g. cultural stereotypes, formal certification, and unionization membership, the high wage level of these occupations are secured. Through these strategic closure mechanisms, inequalities between occupations are

institutionalised and legitimised (Weeden 2002: 60-68). Similar patterns are also recognised in China, and occupation serves to create social boundaries and enlarge inequality. Higher occupational position in Chinese market economy is associated with distributional power (Wang 2008: 122, 125).

Developing processes of privatisation and modernisation in China creates increased occupational diversity. While private sectors and entrepreneurs (especially in large private enterprises) are already adopting the credential-based stratification strategies, the occupational structure in traditional sectors such as state enterprises and government agencies may still more or less emphasise political power of party membership and cadre position.[7] Therefore, occupational position can play a more important role for income inequality, when processes of privatisation become more widespread.

3.5.3 Institutional Boundaries Between Rural and Urban

One approach to explain regional inequality, such as urban-rural diversity, is by focusing on the institutional boundaries from the pre-reform period, and how these continue to affect inequality between rural and urban areas in the context of economic transformation and privatisation. This case can be discussed in the Chinese context.

There are institutionalised boundaries between urban and rural areas in China, for example in regards to the household registration system. The rights- and welfare regimes are very different in urban and rural areas. Before the reform, urban work units and rural local collectives had the responsibility to arrange housing, medicine, schooling, and other social support to people (Whyte 2010: 12). For most urban citizens, social benefits such as health care and schooling has been maintained at relatively high levels in the reform period. In rural China, reforms have significantly reduced the level of welfare support and public services, and fewer resources are channelled to rural areas (Knight & Song 1999: 342-343).

In this sense, the differential treatment of urban and rural citizens is clear, and the hukou system emphasises the differences by limiting mobility, especially movement from rural to urban. This was

[7] Some of the closure strategies can also be found in the employment and promotion system in state sectors, as for example the strict demand of educational credentialing from formal educational institutions. However, since income level in state sector is still relatively equal, so occupational position and education credential play a less important role for income inequality, compared with in private enterprises.

written by Lipton as he described poor countries in general: " The rural sector contains most of the poverty, and most of the low-cost sources of potential advance, but the urban sector contains most of the articulateness, organization and power" (Lipton 1977: 13). Privatisation, in a broader definition of the term including the withdrawal of state responsibility and the replacement of private solutions, can be viewed as contributing to this institutional boundary between rural and urban Chinese. In urban areas, there is more state welfare available to residents with urban household registration. In rural areas, the withdrawal of state services and growth of expensive private welfare services has increased living costs and burdens for rural citizens.

3.6 Main Theoretical Points and Hypotheses

3.6.1 Returns to Education

Several of the theoretical perspectives are relevant to understand the relationship between educational attainment and income differences, and how privatisation contributes to increase differences based on educational attainment. The growth of a private sector, in conjunction with the general development towards a market economy both in China in general and in Western China in particular, creates increased returns to education, especially in the private sector, but also in other sectors. This development can be expected to create increased income inequality between people with different educational attainments.

According to the neoclassical perspective, the importance of human capital and returns to education grows in a competitive market economy, because enterprises need skilled workers in order to be productive. Human capital is seen to be especially valued in the private sector. Increased returns to education will probably lead to increased income differences between individuals with lower and higher education, but this is in the initial stages of reform. When the economy develops to become more mature and modernised, inequality will decrease as economic growth is distributed more evenly.

In market transition theory, human capital is viewed as the central distribution principle in the market sector. The market sector closely overlaps with the private sector. Wage distribution through human capital is conceptualised in opposition to political capital, which govern wage distribution in the state economy. As the private sector grows, human capital becomes more important for income

distribution, at the expense of political capital. Therefore, in the initial phases of reform, a growing private sector can function to equalise inequality created by state wage distribution, and therefore a growing private sector can contribute to overall decreased inequality. In later phases, however, market transition theory predicts that income inequality caused by the private sector will dominate and continue to grow.

Social closure theory conceptualises the importance of returns to education in another way. It emphasises how formal demands for educational credentials create boundaries that limit who gains access to job positions. Furthermore, especially professions with high education can establish such credential limits around their labour markets, in order to increase their wage level by restricting the number of competitors. A related development is the growth of private schools with expensive school fees, with restricts access to education, especially in rural areas.

New occupational hierarchies form, and educational attainment seems to be an important factor which influences this formation. Segmented labour market theory focuses on how a primary segment which consists of educated employees receive higher wages, while employees in the secondary segment receive lower wages, and have more instable jobs. This development contributes to create larger differences in the open labour markets. In rural areas, the growth of town and village enterprises and other sources of non-agricultural income have also led to the increased importance of education also in rural areas, where the mean education level is low.

Based on these theoretical perspectives, my hypothesis regarding educational attainment is:

Hypothesis 1: The higher degree of privatisation, the higher degree of income inequality between people with different educational attainment.

3.6.2 Between Sectors

In the study of inequality based on sector differences, my main distinction is between the state sector, private sector, and agricultural sector. Market transition theory focuses on differences between the state and private sector. While the state sector was dominant in the planned economy, the private sector has grown substantially in the reform period. In the beginning this would even out inequality, but as the private sectors grows, it could contribute to increased inequality both between sectors, and inequality overall. However, the situation is complicated, since the private sector is a

stratified sector with large internal differences. People working in private sector gain more advantages from the market development, while many in the state sector also fall behind compared to the pre-reform period. According to market transition theory, as the stratified private sector becomes more important at the expense of the formerly egalitarian state sector, this will lead to important changes in the distribution of income. And while the state sector earlier was more egalitarian, the influence from market economic principles has led to increased income differences also inside the state sector. In addition, income in the agricultural sector has also become more diverse, with a growth of off-farm income sources for farmers. However, farmers to a lesser extent than workers in the sectors benefits from the gains related to economic growth in the market economy.

Neo-Marxist theory and some structural scholars maintain that the agricultural sector faces a more disadvantaged situation in a more market-oriented society. When a society is transformed towards a capitalist production regime with the expansion of private sector, other sectors, especially the agricultural sector, will be exploited for the development of capitalist production and reproduction. In this sense, peasant can be exploited as a flexible labour force to work in the capitalist sector. The agricultural sector is in this way served as a resource for capitalist development, and the economic differences between peasants and people working in other sectors can increase.

Neoclassical theory maintains that the private sector is more productive and generates higher economic growth than other sectors, because it is competitive, flexible and benefits from valuing human capital more than other sectors. Regarding sector differences, my hypothesis is:

Hypothesis 2: The higher degree of privatisation, the higher degree of income inequality between people working in different sectors.

3.6.3 Occupational Positions

With increased marketisation and privatisation, the occupational structure has become more diverse, with more differentiated types of industries, different work tasks, and different jobs. The transition towards a market economy with an expanding private sector, weakens the role of traditional work units and collectives. The work units and collectives were distribution systems of wages and social benefits which had an equalising effect with regard to intra-urban and intra-rural inequality in the planned economy, and whose effects continued to matter in the reform period. As reviewed under

market transition theory, the use of bonus and reward systems especially in the private sector is likely to have a stratifying effect on wage inequality when comparing different occupational positions.

Segmented labour market theory emphasises how dynamics related to the private sector create increased wage stratification and increased income inequality, through the formation of separate segments in the labour market. The competitive principle in the market economy makes private enterprises emphasise more on human capital, and this leads to increased importance of returns to education. The formation of a more diverse and stratified occupational structure is an important characteristic of the private sector. The primary segment consists of well-paid jobs with high formal educational demands, while the secondary segment typically consists of low-paid, low-skilled jobs. The growth of the private sector has opened up the labour market, and created many jobs in the informal secondary segment, for example migrants working in the informal urban sector in construction and service industries.

Social closure theory focuses on how certain professions use closure mechanisms to limit access to the profession-internal labour market, by establishing formal educational demands. This will limit the supply of workers, and raise the wage level. Such strategies are mostly available to groups with high education, or professions with special competence that is in high demand. Furthermore, it contributes to legitimise the high wages of these professional groups. Such strategies may be more common in the private sector, where there is a more competitive milieu and demand for skilled workers. In this way, mechanisms related to social closure strategies, which are especially important the private sector, may contribute to increase income inequality between occupational positions.

Based on these theoretical perspectives, I aim to study whether privatisation has affected income inequality through increased wage stratification of occupational positions, and my hypothesis is:

Hypothesis 3: The higher degree of privatisation, the higher degree of income inequality between people with different occupational positions.

3.6.4 Urban-Rural Differences

The impact of privatisation on rural-urban inequality is much discussed between different social approaches. Neoclassical economists believe that processes of market expansion and privatisation will affect rural development in a positive way, and decrease rural-urban inequality. According to the neoclassical perspective, main reasons for the large rural-urban inequality in China are institutionalised state boundaries, such as the hukou system, political capital, and state ownership. Such institutions limit mobility, entrepreneurial initiatives and individual potential, and maintain repressive hierarchies of income stratification, especially related to urban-rural differences. The backwardness of rural areas is also caused by lack of technology and modern market institutions. The growth of the private sector in both rural and urban areas is viewed to create a more well-functioning market economy. This entails increased efficiency, higher productivity, free labour mobility, and higher economic growth. Free movement of knowledge and technology across rural and urban boundaries are also contributing factors. Benefits from economic growth are believed to trickle down also to poor segments of the population over time.

Neoclassical migration theory maintains that migration leads to reduce rural-urban income differences, also through remittance. Migrant workers earn higher wages in the urban labour market than they can in the rural, and send money back home to their family. This increases capital circulation in rural areas, and contributes to decrease income differences between urban and rural areas.

These neoclassical perspectives are based on the premise that there is perfect competition in the market, and they operate without external influences that messes up the models. However, social structure is a more complicated and intertwined process. Market competition is not perfect as these economic theories assume, and neoclassical economists often ignore the external institutions, norms and social context (Granovetter & Swedberg 1992). In addition, their perspective on privatisation as a rational process can often be simplified and politicised.

In contrast, structural and neo-Marxists argue that transformations related to the developing market economy are important for growing urban-rural diversity. Neo-Marxism terms the urban-rural differences as uneven development, caused by capital forces which give priority to develop industry and economy in rural areas, while channelling people and resources from rural areas. This strengthens urban economic growth, and has negative effects on rural development. These

processes, which are integrated into the way the market economy functions, contribute to increase the urban-rural income gap. Market actors seek economic growth, and are ignorant to the detrimental effects of their actions in other areas. Dependency theory conceptualises this in a similar way, through the terms core and periphery. According to these perspectives, dynamics within the expanding market economy is expected to further increase the income inequality between urban and rural residents.

When studying the context of transitional China, an additional factor is institutionalised boundaries between urban and rural areas. The market-oriented reform caused the decline of public services in rural areas, and the disadvantaged social positions for rural citizens. Based on these perspectives, my hypothesis is:

Hypothesis 4: The higher degree of privatisation, the higher degree of income inequality between rural and urban citizens.

3.6.5 Migration

I have reviewed migration theories related to the neoclassical perspective, segmented labour market theory, and historical-structural/neo-Marxist approach. Privatisation and growth of the private sector seems to create increased motives for mobility and thus contributes to migration, because it opens up for more job possibilities, less restrictions, and increased demand for cheap labour force in cities. Segmented labour market theory emphasises that the growth of the private sector has created many jobs in the informal, low-paid secondary segments of the labour market, especially in urban areas. Many migrants find work in this sector, since the wages are higher than what they could earn in their rural locality. The inflow of low-paid work force contributes to create a more stratified wage structure, and more income inequality in urban areas between residents and migrants.

The structuralist/neo-Marxist perspectives maintains that the migration should be conceptualised as urban capitalist interests exploiting rural workers, or the core exploiting the periphery in dependency theory terms. This dynamics have negative effects on rural areas, through drain of valuable human capital and labour-force. When it comes to income inequality, migration is viewed to cause more inequality between migrants and residents because urban residents are better integrated into the economic system in the urban core areas, while migrants are generally excluded and discriminated. They get the worst jobs, and are exploited as a cheap and flexible labour force.

Neo-Marxism also maintains, in contrast to neoclassical migration theory, that migration will not lead to decreased inequality in rural areas.

Labour market theory and structuralism/neo-Marxism emphasises that migration contributes to increased income inequality between migrants and residents, between urban and rural areas, and within urban and within rural areas. The neoclassical perspective, on the other hand, argues that migration leads to growth, development and overall decreased inequality. However, the neoclassical understanding of wage and income for migrants is based on the determination of the relationship between supply and demand. The wage and income structure is more complicated, affected by for example external social structure as labour market institution, political interests as supporting capitalistic expansion and economic growth, social groups as urban residents and rural migrants compete for jobs in a more unsecure privatised labour market, and institutional boundaries as the household registration system.

I will examine the impact of privatisation on income inequality between migrants and residents, by the following hypothesis:

Hypothesis 5: The higher degree of privatisation, the higher degree of income inequality between migrants and residents.

Chapter Four. Data, Measurements and Methods

4.1 Data

The study uses data from the survey *Monitoring Social and Economic Development of Western China* (MEDOW), a large living condition survey for households, gathered in 2004 and 2005. In total 167,000 individuals in 44,738 households participated in this survey, and it covers 11 provinces, divided into 128 prefectures, in Western China. The survey project was headed by the Fafo Institute for Applied International Studies in Norway in cooperation with the National Research Center of Science and Technology of Development (NCRSTD) in China.[8] The Medow survey gives rich information about many issues including population composition, health conditions and medical system, household economy, work force, employment and labour market, education, migration, living condition, environment, infrastructure, and agriculture.

The Western Region of China is often divided into two main areas, which are the northwest area, consisting of Inner Mongolia, Shaanxi, Gansu, Qinghai, Ningxia, and Xinjiang, and the southwest area, which includes Guangxi, Chongqing, Sichuan, Guizhou, and Yunnan. Tibet is also in the area of South West China, but is not included in the survey. The provinces included in the Medow survey cover 5.6 million square kilometres, 58 percent of the total country area, and have a population of 368 million people, 28 percent of the national total.

4.1.1 Questionnaire

The data in Medow were collected through the use of four questionnaires with different focus: A main household questionnaire, a questionnaire for adult female participants, a randomly selected individual questionnaire for household members, and a community questionnaire.

The main household questionnaire focused on the household and individuals in the household. It was answered by an adult member who had good overview of the household situation and the situations of household members. Topics covered were the household economy, household infrastructure, housing conditions, agricultural activities and environmental threats. The household

[8] NCRSTD was reorganised and renamed in 2007, and became ”Chinese Academy of Science and Technology for Development” (CASTED).

questionnaire also contained information about individuals in the household: Their gender, age, hukou status, marital status, ethnicity, place of residence, migration status, education level, health condition and employment status. My subsequent data analysis is mostly based on data about individual information from this household questionnaire, combined with data about the household economy from the same questionnaire.

4.1.2 Sample

The sample size for the Medow survey is 44,000 households, and each of the 11 provinces in Western China were assigned with an equal sample size of about 4,000 households. The underlying framework for the sample is listed neighbourhood committees and townships, based on the Chinese Census in 2000 by the National Bureau of Statistics of China. The neighbourhood committees are the second lowest administrative level in urban China, while the townships are the corresponding level units in rural areas. The last and smallest administrative units in urban and rural areas are respectively called residence committee and administrative village. The size of the chosen administrative units varies from a population of 491 to 260,535 individuals, and from 144 to 76,628 households.

The sampling process was done through several steps. Each of the 11 provinces were divided into 18 replicate samples areas, and each of these replicate samples was further divided into 14 primary sampling units based on lists from the neighbourhood committees and townships. In each of these 14 primary sampling units, the number of chosen households was 16 in rural areas and 20 in urban. This resulted in an ideal 4,032 households in each province, and a total of 44,352 households in all of Western China. The actual number differed somewhat from this because of non-response and oversampling. Primary sampling units were selected by a probability sampling with inclusion probabilities proportional to the population. The first step of dividing into primary sample units was based on neighbourhood committees and townships. Furthermore, secondary sample units on the level of residence committee or administrative village were drawn by the same method of probability proportionate to size, based on the size of the primary samples. The following step was to divide the sampling into two categories, by whether the neighbourhood committee or township selection had to be divided into smaller groups (segmented) or not. Under each category the last stages of sampling was performed, by selecting household units and randomly selected individual samples. Even though the sampling uses three to four to reach the household, it performs similarly to a two-stage sample, since only one-third (or fourth) stage unit is selected per first stage unit.

Of totally 44,738 households selected for interviews, there were 41,695 households that were able to participate; and 41,222 households of the selected households completed the interviews. This is a very high participation rate – of the households that were sampled, 94 percent were interviewed. Less than one percent (0.96 percent) refused to participate, and the reasons for non-response or incomplete interviews were that the interviewer could not find the household location, or that no household members were home, or that the interview was interrupted. Some of the absence is because of confused or obviously wrong answers. The sample can therefore be assumed to be representative for households and individuals in Western-China.

4.2 Measures

4.2.1 Geographic Indicator

The variable *geographic indicator* uses the prefecture level when dividing between areas. Medow includes 11 provinces, and these provinces can further be divided into 128 prefectures. Provinces are the first level administrative units in China's political and administrative structure. Prefecture-level units are the second level, under provinces, and the county-level administrations are below prefectures. The population in prefectures in Western China varies much, from about 73,000 in the Ali-Prefecture in Tibet, to over 10 million in Chengdu. The sample size at the individual-level is 167,456, and varies from 51 to 7,677 at the level of prefecture, with a mean of 1,308 and median of 1,064. Only two prefectures have less than 100 corresponds.

Using data on the prefecture-level gives much more detailed information compared to province level. It makes it possible to study the issue of urban-rural diversity in more local areas, and to separate administrative and institutional factors of prefectures from geographical factors (Herrman-Pillath et al. 2002: 961). It is also possible to view the greater variation concerning degree of privatisation when comparing different prefectures, than when looking at the province as a whole.

An alternative would be to base the study on the county level instead of prefectures. However, Herrmann-Pillath et al. have argued that the county-level is best suited when studying local development, or when there is only large prefectures become of a relatively small local population (Herrman-Pillath et al. 2002: 961). They also argue that when studying consequences of political

co-ordination and flow of funds, the prefecture level is better suited than lower levels because important political decisions are made on higher administration levels than county-level (Herrman-Pillath et al. 2002: 962). The amount of privatisation in prefectures can be conceptualised as being connected to political decisions, since the growth of this sector in China is closely connected to permits and regulations issued by political decision-makers.

4.2.2 Privatisation

Data available in Medow makes it possible to measure the degree of *labour privatisation* in each prefecture by calculating the ratio of labour in private sectors in relation to the total labour situation. However, the Medow data concerning individual work relations suffer from the short timeframe in the questionnaire, since people were only asked what their work had been in the last seven days. This approach can exclude valuable information as for example temporary and flexible work arrangements. Another point concerning seasonal work is that the interviews were performed in the time period between July 2004 and February 2005. Information about individual's employment situation from March to June is therefore not covered. The data can thus have a seasonal bias, by excluding work done in this period. This especially concerns work in the agricultural sector, which risks being systemically underestimated, since the missing months in some areas can be important periods for cultivation and other agricultural activities. On the other hand, work in state and private sector can be overestimated because of similar mechanisms.

An alternative way to approach privatisation is to measure the degree of *capital privatisation*. The indicator of capital privatisation can be constructed by the ratio of private investments to the prefecture's total investments in fixed assets in 2005. This indicator can be constructed by using data from Chinese Statistical Yearbook 2006, and it can be tagged as degree of capital privatisation. These private investments include joint ownership units, shareholding units, foreign funded units and units with funds from Hong Kong, Macao and Taiwan. This measure of capital privatisation is based on a macro social condition, which directs the focus towards capital and investment funds on a general level in each province as a top-down process.

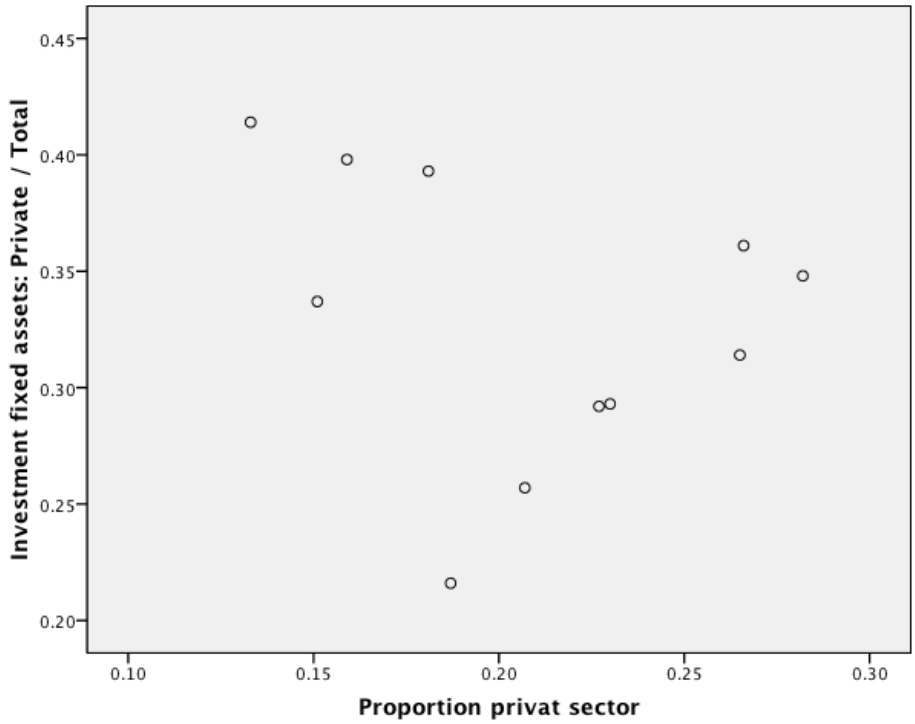
My focus is on individual income inequality, and how this is affected by different social structures, such as an individual's employment in different sectors, educational level, occupation, etc. These factors can also have connections between each other. In other words, this project is a study of how income inequality between individuals in different social positions and with different social

backgrounds is affected by privatisation processes. Therefore information about individuals presented in a unified dataset is ideal, and Medow provides this individual level data.

However, social and economic processes in a macro-level perspective can also have a great significance on individuals' income levels, and further influence income inequality between different social groups. An example of such a process is the activity of private investments in an area. This can generate more competition in product and labour market. This can in turn create pressure on the wage level as well as increase demands of employees' educational and experience-based competence. But to include such macro level data as a privatisation variable, together with the data about individuals, can be problematic. First of all, it can be difficult to unite the variables of two different dataset, which have basically different research samples on macro and individual level. Secondly, the study may run into problems of ecological fallacy, which means to draw conclusions about individuals based on findings in the macro-level data. They are not necessarily connected to individual level attributes (Hellevik 2006: 356). Finally, it can be difficult to combine these two alternatives, because the effect of capital investment on labour market can be slow in affecting employment patterns, and the number of private employees might grow after some years of private investment.

Nevertheless, to demonstrate the last point, I examined the correlation between these different privatisation indicators on province level, since province level data was easier available for both datasets. On the province level, I found a weak and negative correlation between amount of private capital in a province, and the amount of employed persons in the private sector. This is mainly caused by the interesting phenomena that provinces with the highest degree of private capital privatisation (provinces with much private investments), have the lowest labour employment in private sectors. The tendency is shown clearly in Xinjiang (with the indicator for capital privatisation being 0.41 and labour privatisation 0.13), Qinghai (0.40, 0.16), Inner Mongolia (0.39, 0.18) and Yunnan (0.34, 0.15). However, if these deviations are taken away, the correlation between these two indicators is showing to be positive and significant in the other provinces.

Figure 4.1. Correlation between capital and labour privatisation.



On one hand, the indicator for labour privatisation has problematic issues in terms of the seasonal bias and by the fact that the geographic variation between provinces can be difficult to include in the analysis. On the other hand, the indicator for capital privatisation can have a delayed effect on the labour market, patterns of employment and maybe further on income inequality. To include both of them in further analysis work as independent variables could be beneficial in terms of grasping different important aspects of privatisation, as one indicator with its weaknesses may be complimented and strengthened by the other indicator.

Medow provides rich information about labour privatisation on the local level and individual level, which makes it possible to study different social conditions in depth. When studying the degree of privatisation ranged by prefectures, the seasonal bias discussed earlier would not play an important role. Although there are geographical differences related to cultivation, the pattern of seasonal work affecting employment in different sectors would be the same. Therefore, the indicator of labour privatisation can still be a valid measure. It is practically more straightforward because it is connected with individual variables, and it corresponds directly to individual income levels. The indicator of labour privatisation may contribute to carry out more direct and easier data processing in forthcoming analysis, and I decided to construct this indicator from Medow in this project of studying income inequality. However, this variable can lead to ecological fallacy, in which I try to

draw individual character from aggregated data. In the later sections, I'm going to discuss more about this problem in method use and the construction of inequality variable, which may contribute to reduce the harm of the ecological fallacy.

The degree of privatisation is defined as the ratio of the number of employees in the private sector to the total number of employees in the prefecture. In other words, the degree of privatisation is the share of the total labour force located in the private sector. The degrees of privatisation in the 128 prefectures vary from zero to 0.45, with a mean value of 0.24, and standard deviation of 0.08. Standard deviation shows how much variation there is between degrees of privatisation, and the average mean level of privatisation.

Table 4.1 Descriptive Statistics for Privatisation.

Definition of Privatisation	**Mean (SD)**	**Range**	**N**
Labour force in private sector as ratio of total labour force	0.24 (0.08)	0-0.45	128

The values of privatisation are proportional numbers. For the practice of interpretation, these values have been multiplied with 10. Therefore, when interpreting the coefficient of privatisation, it should be held in mind that this variable ascends with 10 per cent between each interval.

4.2.3 Income

The *Income* variable is defined as total yearly income earned from all income activities of the respondent, both for individual wage earners and members of household economic units. This variable is constructed by the sum of three categories in Medow: Individual income, agricultural income and family income. Individual income is the only category that gives information about yearly income for individuals. For agricultural and family income, households are the basic units for income. To find individual income in each of these last two categories, I divide total household income with the number of household members who participated in respectively agricultural work and family business work.

In the category of individual income, I include wage earners' yearly income before tax, and in addition their assessment of the value of material goods they have received instead of monetary payment. The household income is a category for the yearly income that households have received

from small business activity, small sales or household enterprise. To construct agricultural income I assembled yearly income the households had received from cultivation, forestry, husbandry, breeding livestock, fishery, gathering and hunting, and pasture. Included in this sum is the market value of products the households make and use themselves, and the market value of informally exchanged farm products. These three categories are independent of and do not overlap with each other, and thus the sum of these categories gives a general view of the income level of individuals.

Since the focus in this project is to study the relationship between income inequality and degree of privatisation, and to identify alternative explanatory factors that may cause income inequality between individuals, I will emphasize individuals with income and job. Individuals who were unemployed or were out of work force will therefore be excluded in the analysis. This amounts to 3,235 individuals. This group consists mainly of people younger than 33 years, and most of them are agricultural workers.

4.2.4 Other Variables

Age

Age is an important factor relevant to work experience and income level. The age variable is based on individuals' current completed age, but since the focus in this analysis is on income inequality, it has little meaning to include people outside the workforce. Therefore, I have excluded individuals under 16 and over 65.

Gender

Gender is important in relation to income distribution and income inequality, and much research has been done related to gender issues in China (Entwisle & Henderson 2000). A person's gender has consequences for education possibilities, work opportunities and choice of profession, income level, issues related to pregnancy and health, and so on.

Education

The variable *education* is defined as highest completed education for individuals. This variable differentiates between six categories of educational attainment. 1) Persons who have never attended school, 2) persons who attended but did not finish primary school education, 3) persons who completed primary school, 4) persons with completed junior high school, 5) completed senior high school, and 6) people who have completed university or corresponding levels of higher education.

Economic Sector

Economic sector is defined as the ownership situation of the work place (also including farming activities) that has been a participant's main work activity in the last seven days before being interviewed.

The focus on privatisation in China during its reform period demands a measure of China's economic segmentation. The Chinese central government issued new laws and administrative regulations in order to lead the reforms of Chinese market and economic activities since 1979. Many studies of urban China referred to a three-sector economy formed since 1993, dividing between state sector, collective sector and private firms (Bian & Zhang 2002, Liu et al. 2006, Nee & Cao 2004).

When the research subject is urban and rural areas in Western-China, it is necessary to develop a different model of sector-classification. I have chosen to divide the different ownership types in west China into three sectors: *The state sector, the private sector and the agricultural sector*. The state sector includes state enterprises, urban collective, township and village collective, public service unit, government and Party organisation, administration of village committee, and residence committee. The private sector includes private enterprises, joint venture, foreign investment and individual businesses. The agricultural sector includes self-employed peasants and working activities in household economy: Cultivation, agriculture, forestry, husbandry, fisheries, gathering and hunting and pasturing household business activities.

The agricultural sector is central in Western China, since over half of the population is working with cultivation and family-run businesses in agriculture. The collective sector has been included in the state sector, because it is small compared to the other sectors and decreasing in importance. Other ownership types like peoples' organisations, women's federations, youth leagues and other nongovernmental organisations and foundations are small and marginal in terms of number of employees, and are therefore not included in the analysis.

A weakness of the sector classification is that the questionnaire was based on the information of working activities participants had in the last seven days. The analysis therefore loses information about the flexible and changing nature of the labout market in Western China, as for example seasonal farming, temporary work, and how people changes jobs that may be in different sectors.

Occupation

In Medow, the occupational variable is classified into seven occupational categories. They are cadre and other leader, technician, office worker, service industry worker, blue-collar worker, other non-agricultural worker, and agricultural workers. The term cadre refers to persons in leader and manager positions, usually in party or public government. He or she is more likely to be a party member, and this group only include one per cent of the labour force sample. Occupations such as technicians or office workers usually have a higher degree of human capital, in the form of higher education level. I simplify this by placing the seven occupational groups into three categories. These are service class, working class and agricultural workers. In the analysis I define and use three occupational groups: Service class, working class and agricultural class. The service class includes cadre and other leaders, technician and professions, and white-collar office workers. The working class includes service industry workers, blue-collar workers, and other non-agricultural workers, and the agricultural class includes agricultural workers.

Urban or Rural Status

The *Hukou*-system is the Chinese household registration system, which defines individuals with either urban or rural status. a The hukou system is a central divisionary principle in China, as it limits mobility between urban and rural areas, and gives different entitlements to welfare regimes and other rights. A person´s hukou status is registered at birth, and is usually inherited from the mother. This variable is used as an indicator to tell whether an individual is from an urban or rural district.

Migration

The migrant indicator divides between migrant workers and resident workers. Migration status refers to whether a person is registered in one place, but works in another, to describe it shortly. When making this variable, I defined *migrant workers* as the household members who live somewhere else, or normally live in the household, but are outside the prefecture for periods of time, because of work assignments or looking for work. At the same time, their registered hukou-statuses were in the same community where the interview had taken place. In other words, any respondent who works outside the community he or she is registered in is defined as a migrant. This gives a general picture of the total migration situation in Western-China, regardless if a person is from urban or rural areas.

The residents are defined as they usually live in the dwelling and work in the same community the household is placed in, and they are registered in the same prefecture they work and live. *Rural migrants* is a separate variable, and they are defined as migrants working in cities but with rural hukou-register. *Urban residents* are residents with urban hukou-register. The variables of rural migrants and urban residents can be used to study a particular rural migrant group working in cities. Urbanites with urban hukou but who moved to somewhere else to work, are defined as *urban migrants*. Further, *rural residents* refers to the category of permanent rural citizens in the rural areas, and the combination of rural residents and rural migrants can be used to study the income differences between households for rural populations.

4.2.5 Overview of Descriptive Statistics

Below I have included descriptive table 4.2, which gives an overview of the content of the variables I use in my data analyses. It shows the distributions of different groups in each of the variables I use, and average annual income per capita for each groups. I will only shortly present important aspects in the tables.

First, the distribution of school attainment is extremely skewed. More than 58 per cent of the selection has lower school attainment than junior high school, whereas 21 per cent never attended school, 16 per cent never finished primary school, and 21 per cent completed primary school. Few people attended higher education, as only about nine per cent of the sample completed senior high school education, and four percent completed university or higher education.

Second, there is a special pattern of distribution for economic sectors in Western China. The agricultural sector has a majority share of total labour distribution, with a mean value of 67 per cent. The size of the state sector is smaller than the private sector, with respectively 12 and 21 per cent of the whole ownership situation. People working in the state sector have the highest income level among all sectors, and agricultural workers have the lowest. In general, a state employee gains a yearly income of 10,542 yuan, almost twice as high as a person who works within the private sector (6,044), and four times higher than an agricultural worker (2,452).

The large agriculture sector is connected to the vast rural areas in China West. The theme of urban-rural differences in China is much studied. The huge gap between urban and rural income level has been seen as one main contributor to income inequality (Benjamin et al. 2005, Chan 1999, Dolar

2006, Li 2006, Shue & Wang 2007). The same pattern can be seen in the data I use, where 17 per cent of the total population with urban status has an average yearly income of almost 10,000 yuan, 3.5 times higher than their rural village neighbours. When considering the majority of the rural population (83 per cent), the annual income per capita is less than 3,000 yuan. When examining occupational differences, we can observe that 63 per cent among all occupations are agricultural workers. While annual income per capita in the service class varies from 11 to 16,000 yuan, agricultural workers on average earn 2,633 yuan.

The last thing I will mention is the variable of migration. It includes individuals who migrate from rural to urban areas (rural migrants), between cities (urban migrants), and between rural areas. In general, a migrant earns almost twice a much compared to the mean of residents, when including both rural and urban residents, which takes down the mean value. Urban migrants earn the most, a thousand yuan more than urban residents. Rural migrants earn less than urban residents, but much higher than rural residents. The sample size for migrant groups is small, with only 1,793 rural migrants and 1,749 urban migrants. This is because of some weaknesses in Medow's migration questionnaires.[9]

Table 4.2 Descriptive Data for Other Variables Included.

	%	Mean Income (Yuan)	N
Age	100	4399	84199
15-29	29	4425	25176
30-49	51	5224	42689
50-65	20	2958	16924
Gender	100	4200	88172
Men	55	4820	48395
Women	45	3447	39777
Education	100	4207	87633
Never attended school	21	1831	18686
Incomplete primary	16	2545	13649
Primary school	21	3204	18315
Junior high school	30	5006	26062
Senior high school	8	7613	7255
University+	4	15100	3666
Sector	100	4187	83994
State sector	12	10542	10319
Private sector	21	6044	17348
Agriculture sector	67	2452	56327
Occupation	100	4191	86539

[9] The part of migration questionnaire overlooked household members who don't live in the same dwelling.

Service class:	8	12050	7183
-Cadre/ Leader	1	16318	779
-Technician	5	12357	4154
-Office worker	3	11496	2337
Working class:	29	6348	24664
-Service industry	8	6395	7269
-Blue collar worker	19	6290	16615
-Others	1	7186	780
Agricultural worker	63	2633	54606
Urban/rural residency	100	3963	72497
Urban	17	9814	12391
Rural	83	2756	60106
Migration	100	3960	72448
Migrant:	5	8323	3542
-Rural migrant	3	5985	1793
-Urban migrant	2	10719	1749
Resident:	95	3736	68906
-Rural resident	81	2657	58291
-Urban resident	14	9664	10615
Total		4536	

4.3 Methods

4.3.1 Analytical Strategies: Multilevel Analysis

This paper aims to study whether a higher level of privatisation in a prefecture is connected to larger income differences, when comparing individuals with different social characteristics related to education, occupation, sectors, urban/rural, and migrants/non-migrants. The degree of privatisation and the outcome regarding income inequality is measured at the level of prefectures. The focus is not on what people earn individually, but the size of income inequalities that are measured at the level of prefecture. Therefore, instead of examining respondents' individual incomes, I intend to analyse income inequalities among individuals in a prefecture, and the association between privatisation and income inequality at the level of prefectures.

An ecological analysis is a study in which the analysis unit is a population, based on aggregate data for groups of individuals (Steel et al. 2006). Since I study both privatisation and income inequality at the ecological level, it should be relevant to use an ecological analysis. Privatisation is defined as the ratio of the labour force located in the private sector to the total labour situation in each

prefecture, and it has an ecological characteristic. A way to perform the ecological analysis would be to use ordinary least square (OLS) regression with the 128 prefectures as units, and to construct the variable of income inequality at the level of prefecture. One could use the Gini-index for each prefecture, or the ratio of the 90th to 10th percentile in the income distribution. These income inequality measures can thereafter be explained by the level of privatisation, adjusting for other prefecture variables such as average age and average educational level in a prefecture.

However, such analyses face the problem of making the ecological fallacy, which means to draw conclusions on individual level by using aggregate statistics on the structure level. Income inequality can to a large extent be determined by the composition of the population, such as individuals' age, sex, occupation, or other factors. In other words, there can be wrong estimates for the effects of privatisation on income inequality in the prefecture level. To avoid this problem, I choose to use the multilevel method.

Multilevel analysis is suitable to test variations and diversity based on both individual and structural level. The dataset contains information both at the individual-level and the prefecture-level. At the level of individual, we have education, sector, occupation, and *hukou* registration. In addition, there are also three individual control variables, namely age, age-square, and gender. On the level of prefecture, I have constructed the variable of labour privatisation in each prefecture. A multilevel approach demands adequate numbers of groups on the second level, and the sample sizes for the observations at both level one and level two are important. Snijders and Bosker (1999: 44) note that the amount of groups on the structure level is regarded to be good if more than 100 units. When considering the group size, if it is higher than one hundred, the multilevel analysis can estimate more precisely the group level residual (the difference between group means and the grand mean) (Bickel 2007: 278). Because of the large individual sample size and the considerable amount of groups, I assume that multilevel analysis based on Medow data is reliable and valid on both individual and prefecture level.

4.3.2 Multilevel Analysis: Level of Outcome Variable

Regarding the use of multilevel modelling in this project, there is a challenge related to the macro-micro situation in multilevel analysis. It is considered to be appropriate to use the multilevel approach when examining a dependent variable that is at the same level or lower than the explanatory variables (Snijder & Bosker 1999: 10-12). But when the outcome variable is on a

higher level than the explanatory variables, multilevel analysis can be difficult to use. In my case, when the outcome variable of income inequality is on the aggregate level, the multilevel analysis is difficult to perform. Although some scholars have found solutions to this problem (Croon & Veldhoven 2007), it is still complicated and requires complex mathematical and statistical techniques.

In trying to deal with this level-related problem, I have constructed inequality variables that combine the individual and aggregate level. The variable of inequality is constructed as the difference between an individual's income and the mean income of a particular reference group within each prefecture. In this way, both the outcome variable (inequality) and the independent variable (privatisation) are on the prefecture level.[10] By modelling income inequality as the deviation from specified reference groups, the analyses can reflect the level of income inequality within each prefecture, based on particular social structure such as education, sector, occupation, urban/rural diversity, and migration situations. The level-problem is then transformed into an analysis that can be solved with common statistical techniques. Another beneficial point of using multilevel analysis is that it can estimate more valid confidence intervals and p-values for the coefficient. If simply using the single-level OLS regression with privatisation as an individual characteristic, it may be followed by biased standard errors and confidential intervals. Multilevel techniques can estimate these values more validly.

In the following analysis, the study of privatisation and its association with income inequality will be performed in several steps. First, index variables for income inequality are constructed. These index variables are to be examined separately, while other explanatory factors will be taken into account. The first two hypotheses are examined by using two statistical techniques: OLS regressions and multilevel analysis. Multilevel analysis is the most important technique, and is used to estimate how effects on inequality from different structures change with prefecture-level measures of privatisation. By comparing OLS models with multilevel analyses, similarities and differences of these statistic techniques become visible.

4.3.3 Variables of Income Inequality

I choose to use deviation values to show the income inequalities, expressed as percentage numbers in relative terms. It is difficult to discuss whether relative differences can describe the situation of

[10] The specific reference groups are listed in table 4.3.

inequality better than using absolute income distances as the measure for inequality. The main reason for doing so is the huge differences between prefectures. Some prefectures have better economic situations and generally higher income level. The absolute income differences in these prefectures might therefore be higher than in prefectures with generally lower income level. Although low-income prefectures may appear to have lower inequality with the measure of absolute income differences, inequality for these prefectures can still be more important, especially when considering Western China. The absolute distance between rich and poor can usually be higher in a more developed prefecture, and maybe especially in cities. However, the most important economic activity in Western China is agriculture, and Western China mainly consists of rural areas. The rural sector is generally less developed than the urban, and the average income level is also lower. If using the absolute measure of income distances in Western China, rural areas can appear to be less unequal. This can lead the attention away from the underdeveloped and basically poor rural areas.

Therefore, I choose to use individual's income as a percentage of a particular reference group in a prefecture. An index-variable is constructed by calculating the annual income of individuals with lower social positions, as a percentage of the mean income level for the group with higher social positions in the prefecture. These groups are defined within each field in question, as for example occupational sector, education level, urban/rural status and occupation.

The equation to calculate the values for each of the inequality variables can be expressed like this:

$$Inequality_i' = (Income_i \,/\, \overline{Income}_H) \times 100$$

$Inequality_i'$ is the value of income inequality for individual *i* in the new constructed inequality variable. $\overline{Income}_H$ is the mean income of the reference group in the prefecture; and $Income_i$ is the income of individual *i* in the original income variable. *i* is a lower ranked individual who does not belong to the reference group. The value of $Inequality_i'$ expresses the difference in income between individual *i* and the reference group in a prefecture. It shows the income of individual *i,* in percent of the average income value for the hierarchically high ranged social group. The higher this value of $Inequality_i'$ is, the lower income inequality there is.

I will show an example on how this is calculated. First, I want to make an index variable of income inequality that incorporates degrees of education and income differences. This can be done by

subtracting the income of the individual in question from the mean income of persons with senior high school education or university education. It can be formulated like this:

$$Inequality(education)_i' = (Income_i \,/\, \overline{Income}_{high.education}) \times 100.$$

$\overline{Income}_{high.education}$ is the average annual income for people with higher education level, i.e. persons who have completed senior high school or university level degrees. The reason that I merge these two educational levels is that there are so few people with university level. The average annual income for these high-educated groups is 7169.22 yuan in Baiyin Prefecture, Gansu Province. From this we subtract the income of a random individual from the same local and with lower educational level than senior high school, for example 2000 yuan. The calculation is then:

$$Inequality(education)_i' = (2000 \,/\, 7169.22) \times 100 = 27.9$$

The number shows the yearly income difference between the person without higher education and the persons with higher education. The annual income of this randomly selected individual is 27.9 percent of the average income for a higher educated person in Baiyin Prefecture.

4.3.4 Descriptive Statistics: Income Inequality

Table 4.3 presents descriptive statistics on the variables of income inequalities. There are seven variables of income inequality, based on the five social structures. These variables are constructed independently in each of the five social structures, and expressed in the form of individuals' income as percentages of mean value in certain reference categories in prefectures, defined in 4.3.3. The mean values of the outcome variables vary much, from the mean of occupation-based income inequality of 34 per cent, to rural/rural inequality of 70 per cent. The higher the mean value is, the less relative inequality for this category. Based on the descriptive statistics, we can observe that income inequality based on migration status is relatively low. Rural/urban inequality, occupation inequality, and inequality between agricultural sector and other sectors are relatively high. This may give a general picture of the situation in Western China, based on different social factors that may affect income inequality.

Table 4.3 Descriptive Statistics for Variables of Income Inequality.

Social structure	**Definition of variable**	**Object of study (N)**	**Mean (SD)**	**Mean (SD)**
Education	Respondents' income as a percentage of mean income of individuals completed senior high-school or university: (Income for individuals with 1-4 level education / Mean income for 5-6 level education) * 100	Respondents with lower than senior high-school educational attainment. (76,712)	42.1 (51.7)	3.2 (1.0)
Sector *(i)*	Income for agricultural workers as a percentage of mean income of individuals working in private and state sectors: (Income agricultural workers / Mean income state and private employees) * 100	Respondents working in agricultural sector. (56,327)	38.1 (46.9)	3.2 (0.9)
(ii)	Income for respondents working in private sector as a percentage of mean income of individuals working in state sector: (Income private employees / Mean income state employees) * 100	Respondents working in private sector. (17,348)	65.1 (72.4)	3.8 (1.0)
Occupation	Respondents' income as a percentage of mean income of individuals in service class: (Income for working class and agricultural class / Mean income for service class) * 100	Respondents in working class and in agricultural class. (79,270)	33.7 (45.7)	3.0 (1.0)
Rural/Urban	Rural citizen's income as a percentage of mean income of urbanites: (Respondents with rural registration / Mean income for respondents with urban registration) * 100	Rural respondents. (60,106)	37.1 (64.1)	3.1 (1.0)
Migration *(i)*	Non-Migrants' income as a percentage of mean income of migrants: (Residents / Mean income for migrants) * 100	Non-migrants. (68,906)	62.6 (86.1)	3.6 (1.1)
(ii)	Rural migrants' income as a percentage of mean income of urban residents: (Rural migrants / Mean income for urban residents) * 100	Rural migrants. (1,793)	70.1 (108.1)	3.6 (1.2)

The standard deviations are large, and this means that the data is spread out over a large range of values. This reflects the large variation between individuals' income in Western China. The largest values of these inequality variables can be over 1,000, but there are few of them. For instance, when examining the frequencies for education-based inequality, approximately 92 per cent of the values are under 100. For both sector- and urban/rural inequality, only five per cent of the values are over 100. However, the huge values may cause skewness. I therefore introduce the natural logarithm of these variables to reduce this tendency. This will be discussed in the following section.

4.3.5 Natural Logarithm: Outcome Variables for Multilevel Analyses

Income inequality is expressed as deviations calculated as percentage, and the outcome variable in my analysis is the natural logarithm of the corresponding proportional values for income inequality. There are several reasons why income inequality is not used directly as the dependent variable.

First of all, one of the assumptions of the ordinary least square regression model is that the errors are normally distributed, and when the sample is large, this assumption can imply that the distribution of the dependent variable is distributed normally as well. When I checked the distribution of the errors (residuals) and the density of the index-variable of income inequality, I found that they do not follow the normal distribution, and in fact, that the distribution is very skewed. The residuals get bigger for higher values. This is because the change in the value of an inequality variable is constructed as a percentage value, rather than an absolute value. In the case of percentage values, variables with higher values often have higher absolute errors, as well as higher residuals.

Secondly, the estimated models can be heteroscedastic, which means that the variation around the regression line would not be equally distributed for all values of the independent variable.
One possible reason is that in the income variable, all zero-values were taken away. The inequality variables are limited from zero and can therefore not range freely. When examining the scatter plots, the residual plots show the residuals are not normally distributed, but pulled out towards the top of the plot.

To deal with this problem, I use natural logarithms of the values of the inequality variables in my analyses. The error of a dependent variable is often a percentage. After the logarithm transformation, the percent error is transferred from a multiplicative factor to the same additive

error.[11] In this way, log-transformation tends to reduce the residuals for the higher values. When I control the natural logarithm of inequality-variable (based on education), the residuals and density for the outcome variable are more normally distributed. However, the residual plots show some skewness towards the bottom of the plots.

4.3.6 How to Interpret Coefficients

When interpreting the result of a coefficient, it should be held in mind that the outcome variable is the natural logarithm of income inequality. Income inequality is thus related to the exponential value of the coefficients. When a coefficient is positive, the corresponding exponential value is higher than 1. Therefore, when moving from lower to higher value in the corresponding independent variable, the inequality-variable will increase. However, an increased inequality-variable means that there is a smaller income distance between individuals and the reference group. On the other hand, when a coefficient is negative, the exponential value is somewhere between 0 and 1. When the value of the corresponding independent variable increases, the value of the inequality-variable will decrease, resulting in higher income inequality.

To conclude, when a coefficient has a positive value, the corresponding independent variable is related to lower income inequality. When a coefficient has a negative value, the corresponding independent variable is related to higher income inequality. Changes or differences are often expressed as percentages, and the logarithm-transformed analysis can provide more precise estimates of the percent change. The coefficients can often be interpreted as a percentage when it is multiplied by 100 (Wooldridge 2008: 42-45).[12]

[11] Since $ln\ (y\ .\ \varepsilon) = ln\ (y) + ln\ (\varepsilon)$, the percent error ε becomes the same additive error.

[12] To say it more correctly, for the coefficients with small values and being at least on 0.05 significant level, the interpretation can be simplified as being approximately equal to a percentage, multipling by 100. For coefficients with much higher values, the exact percent difference is $100(e^b - 1)$, where e^b means the exponential value of the difference, provided by the logarithm-transformed variable. For details, see Hopkins (2009).

Chapter Five. Results

5.1 Education

I will begin the data analysis by focusing on the first hypothesis, namely whether the income differences between people with high- or low educational level increases when the degree of privatisation is higher. To repeat, my hypothesis states that the higher degree of privatisation, the wider income inequality there is between individuals with different education. The sample in this part of analysis is only individuals with lower educational attainment, while the group with higher education serves as reference group with a calculated mean. The degree of income inequality is measured by the income of lower-educated individuals as a percentage of the mean income of higher-educated people in the prefectures. The higher educated reference group includes individuals with completed senior high-school or university education. Other control variables are gender, age, education, sector, occupational dummies, and urban/rural residency. Education is also included as a control variable, since the income distance to the high-educated reference group may vary significantly for different educational degrees. Income inequality is expressed by percentage values, and the outcome variable is the natural logarithm of income inequality.

5.1.1 The OLS- models

The first step of studying income inequality is to map out the general situation of relationships between variables. At this stage, I use the method of preliminary ordinary least square regression analysis (OLS). These analyses do not take the hierarchical data into account. Therefore, in the first phase of regression analysis, individuals are not treated as nested in different groups as in prefectures. The nesting structure is not in focus, and in this case, we assume that the impact of privatisation is the same across different geographic locations.

The results of OLS regressions are summarised in Model 1 and 2 in Table 5.1. In Model 2 the variable of privatisation is added. The linear regression in Model 2 shows that there is a statistically significant connection between privatisation and income inequality.

Table 5.1. Single- and Multilevel Regression Analysis: The Effect of Privatisation on Income Inequality between Lower-Educated Individuals and the Mean Income of the Reference Group with High Educational level (Deviation in Percentage). N = 76,712.

	Linear Regression: OLS-models		Multilevel Analysis: Random Intercept Models		
	Model 1	Model 2	Model 3	Model 4	Model 5
Gender (women = 0, men = 1)	.164 (.008) ***	.146 (.008) ***		.155 (.008) ***	.154 (.008) ***
Age (16 year = 0)	.038 (.001) ***	.042 (.001) ***		.039 (.001) ***	.039 (.001) ***
Age squared	-.001 (.000) ***	-.001 (.000) ***		-.001 (.000) ***	-.001 (.000) ***
Education (never attended school)	.142 (.004) ***	.155 (.004) ***		.116 (.004) ***	.116 (.004) ***
Occupation (ref: agriculture)					
Working class	.361 (.012) ***	.407 (.012) ***		.422 (.011) ***	.422 (.011) ***
Service class	.821 (.026) ***	.846 (.026) ***		.898 (.024) ***	.898 (.024) ***
Urban/rural registration (rural = 0)	.295 (.015) ***	.295 (.015) ***		.282 (.014) ***	.282 (.014) ***
Privatisation		-.174 (.005) ***			-.142 (.038) ***
Intercept	2.405 (.015) ***	2.714 (.018) ***	3.391 (.037) ***	2.528 (.040) ***	2.845 (.092) ***
R-square	0.152	0.168			
Adjusted R-Square	0.152	0.168			
Sigma u			.173 (.022)	.168 (.022)	.150 (.020)
Sigma e			.978 (.005)	.777 (.005)	.777 (.005)
ICC (intraclass correlation)			.150	.177	.162
-2LL			199,381.2	152,385.7	152,372.5
-2LL change				46,995.5	13.2

Note:
a. Significant levels for coefficients: ^ $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
b. Dependent variable: ln ($Income_i$ / $\overline{Income}_{high.education}$)
c. Sample: Respondents with lower than senior high-school educational attainment.
d. The education-variable is divided in intervals.

To repeat, the value of variable privatisation has been multiplied with 10, so this variable increase by 10 per cent between each interval. A positive coefficient corresponds to lower inequality, while a negative coefficient shows the variable is connected to higher income inequality (as I discussed in 4.3.6). The coefficient for privatisation is -0.174. The coefficient is negative, and this means that privatisation is related to increased income inequality. When other variables are held constant, for each ten per cent higher privatisation, income distance will increase by 1-0.174 = 82.6 per cent. It supports the hypothesis that the higher degree of privatisation in a prefecture, the higher income inequality there is between people with low and high educational attainment.

All control variables have significant effect on income inequality. The two OLS-models share similar coefficients. To summarise in short: There is a larger income distance between women's income and the reference group, than the income deviation between men and the reference group. The higher education a person achieved, the smaller the income distance is when comparing his income with the average income of the reference group. When studying occupation, we observe that income for the service class is closest to the reference group, while the agricultural workers have the largest income distance to the high-educated group. Finally, the income inequality is higher for rural citizen than for urban citizens.

5.1.2 From OLS to Multilevel Regression

The OLS regression is single-levelled. Therefore, these analyses do not permit coefficients to vary from group to group, and this excludes divisions between geographical groups. I intend to examine whether income inequality varies with the degree privatisation in different prefectures, and therefore, individuals are clustered in geographical groups. In this second phase of statistic analysis, I use multilevel regression, and add the contextual variable of prefecture. The results of multilevel analysis are presented in Model 3 to 5 in Table 5.1.

The use of random intercept models in multilevel analysis is supposed to be sufficient when the numbers of structural groups on the second level are large, as well as when having large enough group sample sizes (Snijder & Bosker 1999: 44). The data I use meets these conditions, with 128 prefectures and a mean of over 1,300 correspondents in each prefecture. Thus, the data contains enough information about both the residual between group means for one specific prefecture, and the grand mean for the whole sample, and the group dependent parameters are estimated more precisely with small standard errors. In this case, the random intercept models are adequate.

When comparing OLS models with multilevel regression, it is expected that the estimated coefficients differ in these two techniques, and that there are larger standard errors for the multilevel regression. The significance of variable effects is also expected to be higher in the OLS-models (Bickel 2007: 12). We can observe that the coefficients for the same variable are different in these two different analytic procedures. In the multilevel analysis, the prefecture-level indicator is added, and this technique takes the geographical differences into account. There is very little difference between the standard errors for the same individual variables, but the standard errors are different for the prefecture-level variable (privatisation) in the two analytic techniques. The differences between coefficients are caused by the impact of prefecture, and multilevel analysis is therefore advantageous.

In Model 5, on the level of prefecture, we observe that the effect of privatisation is stronger in the multilevel regression than in the OLS regression in Model 2, and the standard error for the variable of privatisation has increased. In the OLS model, the coefficient of privatisation is estimated without contextual effects, and treated as an individual characteristic. But in the multilevel model, this variable has an aggregated characteristic on the level of prefecture. The contextual effects are included. Therefore, there is a specification error in the OLS-models, resulting in lower absolute value for the effect of privatisation.

5.1.3 Multilevel Analysis

Models 3 to 5 examine education-based income inequality in the prefecture, using multilevel technique. Model 3 is an empty model before independent variables are added. In Model 4, multilevel analysis tests the variables on the individual level. In Model 5, the variable of privatisation is included as a prefecture level indicator. The expected statistical significance of variables on individual and prefecture level can be different, because of the huge difference between analytical entities on these two levels. The sample size in this analysis is over 130,000, while the mean group size is somewhere over 1,000. For a multilevel statistical analysis, the coefficients on the structural level can be discussed and interpreted to be significant when the p-value is around 0.10 (Strabac 2007: 187). In the multilevel analyses of education-based inequality, the coefficients for privatisation and all other control variables are clearly significant.

When studying model changes, -2LL can be used to measure how well the model represents the sample. The lower value, the better one's model is (Strabac 2007: 191). Looking at the model fits (-

2LL changes), I find that the -2LL values in the last two models are much lower and change significantly from the empty model (model 3). The changes between all three models are significant when testing with Chi-square test: The deviation of -2LL values between Model 3 and Model 4 is 46,995.5, much higher than the critical value (24.3) for seven degrees of freedom at 0.1 per cent significant level. In Model 4 and 5, the deviation between -2LL values is 13.2, which is higher than the critical value (10.8) at 0.1 per cent level. These likelihood ratio tests show that the model fits are improving, and that there is a statistically significant variation of privatisation's effect between prefectures in this sample.

The intra-class correlation coefficient (ICC) for model 3 is estimated to be 0.15. This component of the variance estimates that 15 per cent of the total variance is on level-2. In other words, about 15 per cent of the variability in income inequality occurs between prefectures, with the remaining 85 per cent occurres within prefectures. The intra-class correlation is high, and this means that the structural factor plays an important role when studying income inequality, supporting that the use of a multilevel model is appropriate. Model 3 to 5 show that the within prefecture-variance, *sigma e*, is much greater than the between prefecture-variance, *sigma u*. This points to that the unexplained variance in income inequality within a prefecture is much higher than the variance between prefectures. At the same time, we can observe that the values of unexplained variances are changing across the models. When individual variables in model 4 are added, both individual (*sigma e*) and structural level variances (*sigma u*) are dramatically reduced compared to the empty model (model 3). The unexplained individual variance is reduced because the additive individual variables are included. When concerning the reduced structural level variance in model 4, we can expect that some of the variations of income inequality between different prefectures can be associated to, and explained by, the individual compositions. When the structural variable of privatisation is added in model 5, the individual variance (*sigma e*) is not reduced, but there is a significant reduction of structural variance (*sigma u*).

5.1.4 Interpretation of Coefficients in the Multilevel Analysis

Model 3 to 5 show results from the multilevel analysis. Model 3 shows that, in general, income for lower educated individuals is 29.7 per cent of the reference group with high education. This model does not include any of the independent variables, and the estimated value of the intercept is the grand means for all individuals in the sample, not considering prefecture differences.

Further, the variables on individual level are added in model 4, and in model 5, the variable of privatisation is included as a level-two indicator. The effects of all included variables are shown to be statistically significant. When looking at the intercept in model 4, it is equivalent to the estimated average value of income inequality of the respondents with zero- value for all independent variables. An ideal zero-value individual is a sixteen-year-old peasant woman with rural hukou and work inside agricultural sectors, who never attended school. The income distance between this group and the referent group is huge: their income is only 12.5 per cent of the reference income.

In model 5, the multilevel regression shows that there is a statistically significant connection between privatisation and income inequality. When all other variables are held constant, ten per cent higher privatisation in a prefecture corresponds to 14.2 per cent higher income inequality. The analysis supports hypothesis 1: With a 0.1 per cent level of significance, when there is a higher degree of privatisation in a prefecture, there will be a higher degree of income inequality for people with different educational attainment.

When compared to the reference group, the income distance is revealed to be 15.4 per cent higher for women than for men, when keeping other variables constant. It is also revealed that the higher education a person has achieved, the less income difference there is when comparing her income with the average income of the higher educated social group. Ranged from never attended school to finished junior high school, the predicated value of income inequality is reduced with 11.6 per cent points for each increased educational level, when controlled for other variables. The income distance to the reference group is 1.9 (= 1 + 0.898) times higher for agricultural class than the service class; and 1.4 times higher (1 + 0.422) for agricultural class than for the working class. Finally, there is larger income difference between rural citizens and the reference group, than for urban citizens. This effect is also significant.

5.2 Sector

There are three sectors in the analyses: state, private, and agricultural sector. When studying the relationship between prefectures with various degrees of privatisation, and income inequality between sectors, two separate analyses are performed. First, I look at the income difference between agricultural sectors and the other two sectors. Second, I examine the difference between the state and the private sector. Both OLS-models and multilevel analyses were used in the analyses.

5.2.1 Agricultural Sector in Focus

The dependent variable here is the natural logarithm of the sector-based index-variable for income inequality. The sample is the agricultural sector, while the state and private sectors in a prefecture are merged together, with their mean income used as a reference for comparison. The index-variable for sector-based income inequality is the relative income of people working in the agricultural sector. It shows the income of people working in the agricultural sector as a percentage of the mean income for individuals working in state and private sectors. The reason that I chose to merge state and private sectors is basically because of the interest of studying how privatisation influences the huge agricultural sector in the mainly rural Western China.

Table 5.2.1 represents two different analytical procedures for income inequality based on sector differences. Model 1 and 2 show results from the OLS regressions, and model 3 to 5 show results of multilevel analysis. Again, the differences between coefficients, and between standard errors for privatisation in these two statistic procedures show that the multilevel analysis is beneficial. Model 3 in multilevel analysis is improved significantly when the individual variables are added, and the -2LL change between model 3 and 4 is significant at 0.1 per cent. When the structure-level variable is added in model 4, the model improvement is significant at 0.5 per cent level. This shows the relevance of studying individuals nested in groups, with a focus on both individual and prefecture level factors.

Model 3 shows that the income of agricultural workers amounts to 27.5 ($=e^{3.314}$) per cent of the income of individuals working in the state or private sectors. This model doesn't include any control variables, and the prefecture-level is not taken into account. The coefficient of privatisation in model 5 is -0.117, significant at 5 per cent. When controlled for other variables, for each 10 per cent increment of privatisation, there is a statistical tendency that the income distance between individuals working in agricultural sector and the reference mean increases by 11.7 per cent in a prefecture. All individual variables, except the *hukou*-registration variable, are statistically significant. Controlled for other variables, income inequality is 13.7 times higher for women then for men, compared to the average income in the reference group. Each higher level of education corresponds to 9.7 times lower income distance between individuals and the reference group.

Table 5.2.1 Single- and Multilevel Regression Analysis: The Effect of Privatisation on Income Inequality between Individuals Working in Agricultural Sector and Other Sector (Deviation in Percentage). N = 56,327.

	OLS		Multilevel Analysis: Random Intercept Models		
	Model 1	Model 2	Model 3	Model 4	Model 5
Gender (women)	.148 (.009) ***	.133 (.008) ***		.137 (.008) ***	.137 (.008) ***
Age (16 year)	.035 (.001) ***	.038 (.001) ***		.036 (.001) ***	.036 (.001) ***
Age squared	-.001 (.000) ***	-.001 (.000) ***		-.001 (.000) ***	-.001 (.000) ***
Education (never attended school)	.116 (.004) ***	.125 (.004) ***		.097 (.003) ***	.097 (.003) ***
Occupation (agriculture)					
Working class	.245 (.022) ***	.264 (.022) ***		.276 (.021) ***	.276 (.021) ***
Service class	.662 (.101) ***	.685 (.100) ***		.763 (.094) ***	.763 (.094) ***
Urban/rural registration (rural)	.045 (.022) *	.052 (.022) *		.039 (.021) ^	.039 (.021) ^
Privatisation		-.141 (.005) ***			-.117 (.038) *
Intercept	2.678 (.016) ***	2.922 (.018) ***	3.314 (.036) ***	2.756 (.038) ***	3.019 (.092) ***
R-square	0.067	0.080			
Adjusted R-Square	0.067	0.079			
Sigma u			.157 (.021)	.151 (.020)	.136 (.019)
Sigma e			.792 (.005)	.722 (.004)	.722 (.005)
ICC (intraclass correlation)			.165	.173	.159
-2LL			135,087.9	124,181.2	124,172.1
-2LL change				10,906.7	9.1

Note:

a. Significant levels for coefficients: ^ $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

b. Dependent variable: ln ($Income_i$ / $\overline{Income}_{State\&\ private}$)

c. Sample: Respondents working in agricultural sector.

d. The education-variable is divided in intervals

e. The p-values for variable urban/rural registration are equal to 0.68 in both model 4 and 5.

The impact of occupation is substantial. Income inequality for people with higher occupational status is dramatically lower than for those who have lower occupational position. Controlling for other variables, the income distance between agricultural workers and the reference mean is 1.3 times higher than the income difference between working class and the reference, and 1.8 times higher than the income distance between the service class and the reference group.

5.2.2 Inequality Between State and Private Sector

In this section, I examine the income diversity between individuals working in the state and the private sector. The index-variable for income inequality expresses income for private employees as a percentage of the mean income of the state sector in a prefecture. The dependent variable is the natural logarithm of the corresponding proportions of the index-variable, and the sample is people working in the private sector.

The main finding is that a higher degree of privatisation is related to lower income inequality between state and private employees. When looking at Model 2 and Model 5, we can observe that the coefficients for privatisation are positive, and correspond to lower inequality. In model 5, the coefficient for privatisation is equal to 0.088, which means that controlled for other variables, when privatisation in a prefecture increases with 10 per cent, the income distance between private and state sector becomes 8.8 per cent lower. This effect is relatively weak, but statistically significant at the level of 5 per cent. Hypothesis two, which contends that privatisation is related to higher income distance between sectors, is therefore shown to not be correct when it comes to income distance between the state and private sector.

When looking at other variables in this analysis, we can observe that income inequality between private and state sectors is higher among women than men, for younger people than older people, for lower educated than higher educated individuals, and for rural residents than for urban. One finding that stands out is sector-based income inequality among occupational status. The focus is on the income distance between state and private sectors, and in these two sectors we have agricultural occupations, working class, and service class occupations. The coefficient for working class is -0.077, which means that income distance between the working class and the reference group is 7.7 per cent higher than the income difference between agricultural labourers and the reference mean. However, this result is not statistically significant, and cannot be generalised to encompass the whole situation in Western China.

Table 5.2.2. Single- and Multilevel Regression Analysis: The Effect of Privatisation on Income Inequality between Individuals Working in State and Private Sectors (Deviation in Percentage). N = 17,348.

	OLS		Multilevel Analysis: Random Intercept Models		
	Model 1	Model 2	Model 3	Model 4	Model 5
Gender (women)	.292 (.024) ***	.298 (.024) ***		.309 (.023) ***	.310 (.023) ***
Age (16 year)	.065 (.004) ***	.064 (.004) ***		.061 (.004) ***	.061 (.004) ***
Age squared	-.001 (.000) ***	-.001 (.000) ***		-.001 (.000) ***	-.001 (.000) ***
Education (never attended school)	.198 (.011) ***	.194 (.011) ***		.187 (.011) ***	.186 (.011) ***
Occupation (agriculture)					
Working class	-.067 (.052)	-.074 (.052)		-.075 (.051)	-.077 (.051)
Service class	.320 (.065) ***	.312 (.065) ***		.333 (.064) ***	.331 (.064) ***
Urban/rural registration (rural)	.300 (.026) ***	.301 (.026) ***		.296 (.026) ***	.296 (.026) ***
Privatisation		.058 (.015) ***			.088 (.038) *
Intercept	2.278 (.065) ***	2.155 (.072) ***	3.794 (.035) ***	2.404 (.070) ***	2.200 (.112) ***
R-square	0.403	0.405			
Adjusted R-Square	0.162	0.164			
Sigma u			.134 (.021)	.099 (.014)	.091 (.017)
Sigma e			.868 (.010)	.882 (.017)	.883 (.014)
ICC (intraclass correlation)			.134	.101	.093
-2LL			44,229.5	21,697.7	21,692.5
-2LL change				22,531.8	7.2

Note:
a. Significant levels for coefficients: ^ $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
b. Dependent variable: ln ($Income_i$ / $\overline{Income_{State}}$).
c. Sample: Respondents working in private sector.
d. The education-variable is divided in intervals

5.3 Occupation

In the analysis I have three occupational groups: Service class, working class and agricultural class. Service class is the contrast group here, and I show the income for individuals in working- and agricultural class as a percentage of the service class mean income. The sample here is the working class individuals and agricultural workers, and the dependent variable is the natural logarithm of the inequality variable. Multilevel models in table 5.3 present the results.

Table 5.3. Single- and Multilevel Regression Analysis: The Effect of Privatisation on Income Inequality between Service Class and Others (Deviation in Percentage). N = 79,270.

Fixed effects	Model 0 Coefficient (SE)	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)
Gender (women)		.150 (.008) ***	.151 (.008) ***
Age (16 year)		.039 (.001) ***	.039 (.001) ***
Age squared		-.001 (.000) ***	-.001 (.000) ***
Education (never attended school)		.111 (.003) ***	.111 (.003) ***
Occupation (agriculture)			
Working class		.421 (.011) ***	.422 (.012) ***
Urban/rural registration (rural)		.190 (.016) ***	.190 (.016) ***
Privatisation			-.104 (.044) *
Random effects	Parameter (SE)	Parameter (SE)	Parameter (SE)
Intercept	3.162 (.041) ***	2.349 (.043) ***	2.582 (.108) ***
Sigma u	.208 (.027)	.208 (.027)	.199 (.026)
Sigma e	.956 (.005)	.765 (.005)	.765 (.005)
ICC (intraclass correlation)	.179	.214	.306
-2LL	190,277.8	147,469.6	147,464.2
-2LL change		42,808.2	5.4

Note:
a. Significant levels for coefficients: ^ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001
b. Dependent variable: ln ($Income_i$ / $\overline{Income}_{service}$)
c. Respondents in working class and in agricultural class.
d. The education-variable is divided in intervals

Privatisation has a positive and significant effect on income inequality between occupations. For a 10 per cent ascending degree of privatisation, the income inequality increases with 10.4 per cent, when comparing the working class and agricultural worker class to the referent category of service

class. This supports the hypothesis that different occupations receives more unequal wages in a prefecture where there is a higher degree of privatisation, on a 5 per cent significance level.

Income distance between the referent occupational class and women is 15.1 per cent higher than when comparing male with the reference group. Each higher level of education corresponds to 11.1 per cent lower inequality. The income distance to the average income level of the service class is 42.2 per cent lower for the working class than for agricultural workers. Finally, for urban citizens, the level of income inequality is 19 per cent lower than for rural registered citizens.

5.4 Urban and Rural Registration

The study object in this section is people with rural hukou status, and the income difference between these persons and those who are registered as urban citizens. Income inequality for hukou registration is constructed by the deviation between rural citizens' income and the mean income for urban citizens in the prefecture. Urban citizens are used as the reference group, and the rural-hukou holders are the samples in this study. The dependent variable is the natural logarithm of the index-variable for inequality.

A similar tendency is repeated in these models as in the previous tables. The economic and social position of women, younger people, lower educated individuals, and persons with low occupational status, are contributing to higher income inequality. The coefficient for privatisation is -0.138, which means that for each 10 per cent higher degree of privatisation, there is 13.8 per cent higher income inequality. The effect of privatisation is considered to be important for the increasing income inequality between urban and rural citizens in Western China. Again, the income distance to the reference group is higher for women than for men, for lower educated than for higher, and higher for the agricultural class than for working and service class.

Table 5.4. Single- and Multilevel Regression Analysis: Preliminary OLS- and Random Intercept Models. The Effect of Privatisation on Income Inequality between Urban and Rural People (Deviation in Percentage). N = 60,106.

Fixed effects	Model 0 Coefficient (SE)	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)
Gender (female)		.157 (.008) ***	.157 (.008) ***
Age (16 year)		.037 (.001) ***	.037 (.001) ***
Age squared		-.001 (.000) ***	-.001 (.000) ***

Education (never attend school)		.108 (.004) ***	.108 (.004) ***
Occupation (agriculture)			
Working class		.382 (.012) ***	.383 (.012) ***
Service class		.697 (.031) ***	.697 (.031) ***
Privatisation			-.138 (.051) **
Random effects	Parameter (SE)	Parameter (SE)	Parameter (SE)
Intercept	3.246 (.045) ***	2.605 (.048) ***	2.921 (.126) ***
Sigma u	.248 (.032)	.246 (.032)	.231 (.030)
Sigma e	.856 (.005)	.769 (.005)	.769 (.005)
ICC	.225	.242	.231
-2LL	149,096.1	142,597.2	142,590.1
-2LL change		6,498.9	7.1

Note:
a. Significant levels for coefficients: ^ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001.
b. Dependent variable: ln ($Income_i$ / $\overline{Income_{urban}}$)
c. Sample: Rural respondents.
d. The education-variable is divided in intervals

5.5 Migration

Migration can play an important role for income inequality both in urban and rural areas. Table 5.5.1 examines the general income inequality between migrants and residents. Table 5.5.2 addresses the situation in urban areas, between urban residents and rural migrants, and table 5.5.3 studies the income inequality between rural resident population and rural migrants. These three analyses basically share the same pattern found in earlier sections, when studying the individual control variables of gender, age, education, occupation, and hukou-orientation in the last table.

5.5.1 The General Migration Situation

The main focus here is to study income differences between migrants and residents, independent of their hukou registration. Income for residents is calculated as percentages of migrants' mean income. The inequality variable based on the general migration situation is designed to express the income of residents as a percentage of migrants' mean income (Table 5.5.1). The sample is residents, and the dependent variable is the logarithm of the inequality-variable.

When looking at the descriptive data for the four values in the variable of migration, we can observe that the income level varies much between these groups: Urban migrants on average have

the highest income level, compared to urban residents, rural migrants, and at last, rural residents with the lowest income among all these categories. It shows in the zero-model that the mean income of migrants is about 30 per cent higher than residents.

Table 5.5.1. Single- and Multilevel Regression Analysis: The effect of privatisation on income inequality between migrants and residents (deviation in percentage). N = 68,906.

Fixed effects	Model 0 Coefficient (SE)	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)
Gender (female)		.153 (.007) ***	.153 (.007) ***
Age (16 year)		.041 (.001) ***	.041 (.001) ***
Age squared		-.001 (.000) ***	-.001 (.000) ***
Education (never attended school)		.127 (.003) ***	.127 (.003) ***
Occupation (agriculture)			
Working class		.398 (.011) ***	.398 (.011) ***
Service class		.904 (018) ***	.904 (018) ***
Urban/rural registration (rural)		.406 (.013) ***	.406 (.013) ***
Privatisation			-.147 (.051) **
Random effects	Parameter (SE)	Parameter (SE)	Parameter (SE)
Intercept	3.685 (.047) ***	2.762 (.049) ***	3.098 (.127) ***
Sigma u	.264 (.035)	.263 (.034)	.246 (.032)
Sigma e	1.021 (.006)	.759 (.004)	.759 (.004)
ICC (intraclass correlation)	.205	.257	.245
-2LL	182,075.5	162,541.3	162,533.4
-2LL change		19,534.2	7.9

Note:
a. Significant levels for coefficients: ^ $p < 0.1$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$
b. Dependent variable: ln ($Income_i$ / $\overline{Income}_{migrant}$)
c. Sample: Residents.
d. The education-variable is divided in intervals

All coefficients for control variables are significant. The explanatory strength is relatively high for all variables, pointing to that individual factors can explain much of the inequality. Especially for people in the service class, the income differences are dramatically reduced, compared with other occupational classes. Privatisation's effects on income inequality turned out to be significant at 1 per cent level. The income distance between migrants and residents is higher in a more privatised prefecture, compared with a less privatised prefecture. Income inequality increases with 14.7 per cent, which corresponds to each 10 per cent increased degree of privatisation. The variable of urban registration turns out to be significant. For urban migrants as a group there is a much smaller income distance to the reference group.

5.5.2 Rural Migrant and Urban Resident

This part of study focus on the income difference between rural migrants and urban residents, and the situation in urban areas. The dependent variable of income inequality is constructed as the natural logarithm of deviation between rural migrants and urban residents, and the income of rural migrants is represented as a percentage of urban residents' average income. The sample consists of rural migrants. All individual control variables have important effects on income differences, and privatisation seems to be connected to lower income differences between rural residents and the mean income for rural migrants. But the coefficient for privatisation is small and not significant (p-value is equal to 0.47). One reason for the insignificant result can be the limited sample size.

Table 5.5.2. Single- and Multilevel Regression Analysis: The effect of privatisation on income inequality between rural migrants and urban residents (deviation in percentage). N = 1,793.

Fixed effects	Model 0 Coefficient (SE)	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)
Gender (female)		.440 (.051) ***	.442 (.051) ***
Age (16 year)		.043 (.008) ***	.043 (.008) ***
Age squared		-.001 (.000) ***	-.001 (.000) ***
Education (never attend school)		.166 (.021) ***	.166 (.021) ***
Occupation (agriculture)			
Working class		.572 (.055) ***	.570 (.055) ***
Service class		.936 (.121) ***	.933 (.121) ***
Privatisation			.043 (.061)
Random effects	Parameter (SE)	Parameter (SE)	Parameter (SE)
Intercept	3.625 (.058) ***	2.341 (.097) ***	2.240 (.171) ***
Sigma u	.245 (.051)	.174 (.038)	.173 (.038)
Sigma e	1.194 (.042)	.904 (.032)	.904 (.032)
ICC	.170	.161	.161
-2LL	5,296.8	4,786.0	4,785.5
-2LL change		510.8	0.5

Note:
a. Significant levels for coefficients: ^ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001
b. Dependent variable: ln ($Income_i$ / $\overline{Income}_{urban.resident}$)
c. Sample: Rural migrants.
d. The p-value for privatisation variable is 0.47.
d. The education-variable is divided in intervals

For a multilevel statistical analysis, the coefficients on the structural level can be significant, when the p-value is near 0.10 (Strabac 2007: 187). In this case, the p-value is much higher than 0.10

(being 0.47), and it is clearly not significant. Therefore, we cannot draw a conclusion about the relationship between privatisation and income inequality and generalise to the whole population. Effects from other control variables correspond to the general tendency in other analyses. Women, and lower-educated rural migrants are suffering from higher income inequality when compared to the average income of urban residents. The lower occupational status an individual has, the higher income inequality there is.

5.5.3 Rural Migrant and Rural Resident

The last analysis studies income inequality between migrants and residents with rural hukou-registration (Table 5.5.3). The dependent variable is the deviation between these two groups of rural citizens, with a focus on rural residents. Their income is represented as a percentage of rural migrants' average income. The effect of privatisation is significant. For each 10 per cent higher degree of privatisation in a prefecture, income inequality becomes 20.2 per cent higher between rural migrants and rural citizens.

Table 5.5.3. Single- and Multilevel Regression Analysis: The effect of privatisation on income inequality between rural residents and rural migrants (deviation in per cent points). N = 58,291.

Fixed effects	Model 0 Coefficient (SE)	Model 1 Coefficient (SE)	Model 2 Coefficient (SE)
Gender (female)		.151 (.008) ***	.150 (.008) ***
Age (16 year)		.037 (.001) ***	.037 (.001) ***
Age squared		-.001 (.000) ***	-.001 (.000) ***
Education (never attend school)		.106 (.004) ***	.106 (.004) ***
Occupation (agriculture)			
Working class		.333 (.013) ***	.333 (.013) ***
Service class		.642 (.033) ***	.642 (.033) ***
Privatisation			-.202 (.056) ***
Random effects	Parameter (SE)	Parameter (SE)	Parameter (SE)
Intercept	3.826 (.050) ***	3.205 (.053) ***	3.664 (.137) ***
Sigma u	.281 (.038)	.287 (.039)	.257 (.035)
Sigma e	.835 (.005)	.760 (.005)	.760 (.005)
ICC	.252	.274	.253
-2LL	139,361.0	133,896.4	133,884.2
-2LL change		5,464.6	12.2

Note: a.Significant levels for coefficients: ^ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001
b. Dependent variable: ln ($Income_i$ / $\overline{Income}_{rural.migrant}$)
c. Sample: Rural residents. d. The education-variable is divided in intervals

Chapter Six. Discussions and Reflections

6.1. Hypotheses and Findings

In this project, I study the relationship between privatisation and income inequality between individuals with different characteristics, situated in different social positions. I have focused on five stratifying principles or social structures: individuals' educational attainment, economic sectors, occupational class, rural-urban household registration, and migration status. In the hypotheses, I assume that when there is a higher degree of privatisation, there will be higher income inequality between individuals with different education, between individuals in different sectors, between individuals with different occupations, between individuals registered in rural or urban areas, and between migrants and residents. I analyse how privatisation on prefecture level varies with income inequality through multilevel analysis. In this section, I analyse my findings in relation to the hypotheses.

Based on the first hypothesis, I expected that there would be higher income inequality related to educational attainment in prefectures with a higher degree of privatisation. A higher degree of privatisation means that a larger share of the employees works in the private sector. Through statistical analysis, I found that privatisation seems to be strongly related to income inequality between individuals with different educational attainment. Income inequality between lower educated individuals (a group which consists of people with educational levels ranging from never attended school to finished junior-high school) and higher educated individuals (including individuals who completed either senior-high school or university) is larger where there is a higher degree of privatisation. This confirms the hypothesis. Regarding the other control variables, education-based income inequality varies with individual and structural variables such as gender, age, occupation, etc. When comparing the income of individuals to the mean income of people with high education, this income distance is larger for women than for men, for older than for younger, for rural residents than urban residents, and for individuals in working and agricultural classes than for individuals in the service class.

Regarding the second hypothesis, I expected that income inequality between individuals working in different sectors of the labour market would rise, when there is higher degree of privatisation in a prefecture. According to the analyses, privatisation affects income inequality differently when

comparing between different sectors. I found that when comparing agricultural sector with other sectors in a prefecture, higher income inequality occurs when there is a higher degree of privatisation. In this way, the hypothesis is confirmed. However, when studying income differences between state and private sectors, the result indicates that privatisation is related to lower inter-sectoral income inequality. The effect of privatisation is weak but statistically significant, and therefore this finding contradicts my hypothesis. However, concerning income inequality related to the control variables characteristics, roughly the same tendencies can be seen for both sectoral relationships. The income difference to the reference group of high-income individuals is larger among women than men, for younger people than older, for less educated than higher educated, for work and agricultural classes than the service class, and for rural residents than for urban residents.

The third hypothesis assumed that when there is a higher degree of privatisation in a prefecture, there would be higher income inequality between individuals located in different occupational classes. The multilevel analyses of this hypothesis seem to support this hypothesis. Higher privatisation is related to increased income difference between the service class reference group on one side, and agricultural- and working class on the other.

The fourth hypothesis dealt with the relation of income differences between rural and urban individuals. Also here the analysis seems to be in accordance with the hypotheses, as the analysis indicate that in a prefecture with higher privatisation, it is also more likely that there are larger income differences between rural and urban citizens.

The fifth and last hypothesis postulated a positive relationship between privatisation and higher income inequality between migrants and residents. When studying income inequality for migrants in general, the analysis shows that a higher degree of privatisation contributes to increased income inequality between migrants and residents. Further, I separated migrants and residents with urban and rural household registration, to study income inequality between urban residents and rural migrants. Although the relationship is weak and statistically insignificant, the analysis showed that income differences between rural migrants and urban residents declined in a prefecture with higher privatisation.

Table 6.1. Overview of hypotheses and support from data analysis.

	Hypotheses	Support
H1	The higher privatisation, the higher income inequality between individuals with different educational attainment.	Yes
H2	The higher privatisation, the higher income inequality between individuals working in different sectors.	Partly
H3	The higher privatisation, the higher income inequality between individuals with different occupational positions.	Yes
H4	The higher privatisation, the higher income inequality between rural and urban citizens.	Yes
H5	The higher privatisation, the higher income inequality between migrants and residents.	Yes

6.2. Interpretation and Discussion

6.2.1. Education-Based Inequality and Privatisation

The results show that privatisation is related to higher income inequality between individuals with different educational attainment in Western China. This finding corresponds to some previous studies. Human capital theory and theory of skill-biased technological changes argue that individual with higher education is better rewarded in more market oriented and privatised societies, because of the need for higher-skilled labour in a modern society. Market transition theory emphasise increasing returns to human capital and decreased returns to political capital in the transitional Chinese society. The higher degree of market and private sectors, the higher return to education there is (Nee & Cao 2004: 47). Similarly, in an analysis of urban retrospective panel data, Zhou found that there are significant increasing returns to all levels of education in urban private sectors (Zhou 2000: 1163). Gustaffson et al. have found that increasing returns to education is one of the most important contributors to increased income inequality in China (Gustafsson et al. 2008: 112).

Western China is experiencing economic restructuring and transformation, from the old planned

economy and state socialism to market orientation and privatisation, and the higher return to and emphasis of educational attainment seems to be an important factor for increased income inequality. Li points out that the private sector rewards individuals with high education, and the return to education increases when there is a higher degree of marketisation, especially in the less-developed and low-income provinces (Li 2003: 326).

Perspectives related to neoclassical theory, skill-biased technological change and the human capital-concept, can be criticised for underestimating the importance of institutional and contextual issues. Although I can not test which of the theories works "best" to explain the connection between privatisation and education-based income inequality, it seems that there is a link between privatisation and higher degree of social closure through educational credentials and institutionalised boundaries, through which some groups are more protected, while others are blocked out.

In the multilevel analysis, the focus is on people with low education, and the measure of income inequality is the distance between their income and the mean income of the group of people with highest education. I observed that in some sectors and occupations, there are stricter demands which limit access. For example, when looking at individuals' education and occupational class, we can observe from the descriptive data that while 95.3 per cent of agricultural workers and 84.4 per cent of working class have lower education, only 35.3 per cent of the service class have low education. In higher occupational classes, there is a smaller proportion of low educational attainment. In other words, the higher educational attainment an individual has, the higher possibility there is for him or her to get a job with higher wage. In the statistical analysis, I observed that the impact of educational differences on income inequality is particularly strong for people with lower occupational status. This can point to the possible situation that when there is higher privatisation, it is more difficult to achieve equality, since education functions as a stratifying principle between different occupational statuses.

This is consistent with some earlier research. Based on empirical findings, Li et al. point to the fact that higher education attainment in China is used as a signal or symbol of an individual's high productivity and elitist position, independent of his or her school performance and academic achievements. In other words, higher education is in itself treated as an efficient signal that symbolise an individuals' ability and productivity (Li et al. 2009: 380). Hence, education functions as a meaningful, semiotic marker in labour market, and this can be seen as a mechanism of

exclusion, which contributes to higher inequality. Meanwhile, the underlying ideology of privatisation is to emphasise on different rewards connected to different individual abilities. The exclusive effect of education differences can be strengthened by privatisation, and therefore education-based inequality can vary with degree of privatisation.

In Western China, many economically disadvantaged families, especially rural families, experience the increasing economic burden to pay for schooling, because of withdrawal or lack of public support, and growth of school fees in both public and private schools. When there is more privatisation in an area, there can be more profound ideological and practical boundaries between different social groups, marked by educational differences. The patterns of educational distribution also vary much between rural and urban areas. In my sample, the numbers of rural labour participants is about 3.5 times higher than urban labour participants in Medow. However, 30.6 per cent of high-educated individuals live in urban areas, while only 3.5 per cent of rural people have high education. Higher education is related to higher income, and in a prefecture with higher degree of privatisation, there are even higher returns to education. Similarly, when educational level is clearly differentiated between rural and urban people, income inequality between urban and rural areas will increase.

6.2.2. Occupational Classes, Inequality, and Privatisation

The analysis shows that privatisation seems to be related to income distance when comparing the service class to working and agricultural classes. The higher degree of privatisation in a prefecture, the higher income inequality there is between occupational positions. It seems that privatisation is connected to income inequalities, based on stratifying principles that reward individuals and social groups differently based on the individual's occupational position, and that privatisation contributes to enlarge the wage differences between occupational positions. This finding can be conceptualised in terms of market segmentation theory. The primary segment consists of well-paid, high-skilled jobs, and the secondary segment consists of low-paid, low-skilled jobs. Jobs in the service class are typically located in the primary segment, while working class and agricultural jobs can be placed in the secondary segment. A larger private sector can contribute to increase wage stratification between different segments, partly because of rising returns to education, and increased use of bonus and rewards systems, especially in the private sector.

The finding is in accordance with several earlier studies. Bian and Logan have pointed out that

occupational licensing is a new phenomenon that did not exist in the planned economy. Both occupational position and organisation of work are important contributors to higher wage inequality in the Chinese market transition process. Occupations, no matter if defined as political or market oriented jobs, have significant effect on income inequality (Bian & Logan 1996: 752). Zhou have found that rising urban income inequality is connected to rising returns to education, and that the work organisations are central for the distribution of resources. Furthermore, he concludes that a growing private sector has had substantial impact on the income distribution in the reform period up to 1994 (Zhou 2000). Park et al. found that rising returns to skilled labour is one of the important factors for increased wage inequality in China (Park et al. 2003: 15). Blecher (2005: 7-8) points out that the working class and agricultural class in China has been facing larger inequality and disadvantages in the market oriented economic reform period. Knight and Song (1995: 105) have also found wage differences in urban China caused by occupational differences during China's economic reform. Moreover, Knight and Song found an important and strongly connected relationship between education and occupation, which means that education raises the income level both directly and indirectly as it improves an individual's chance of getting a well-paid occupation (Knight & Song 1999: 105).

I found as well that the occupational impact on income inequality is strengthened to a large extent when the degree of privatisation increases. Although it is difficult to directly compare which factor has the most important impact on income inequality, the multilevel analysis shows that class-based inequality is tightly connected to educational attainment, as assumed by Knight and Song. When comparing individuals with higher and lower education, the occupation-based inequality appears to decline. In other words, persons with higher education are facing less inequality when considering their occupational classes.

Once again, the occupation-based inequality affects some social groups and individuals with certain characteristics differently than it affects other groups or persons without the same qualities. When comparing an individual's income to the service class, factors that contribute to higher equality can for example include to be employed in higher occupations, or being urban resident, or to have higher educational attainment. Generally, there is also more equality for males than females. Individuals with one or several of these mentioned characteristics seems to be favoured across different social contexts, and they have less risk for income inequalities across all the social divisions I test in my analysis. These factors and certain characteristics connected to favoured social groups seem to function as boundaries between social groups, and point to important principles of

stratification, which contribute to the formation of income inequality in general.
Occupational classes and education seems to serve as social categories that create and maintain social inequality and boundaries, while dividing between different social groups. As recognised by Wang, "members in such social categories share a characteristic that allows them to have access to resources and opportunities without being confined to a common, local physical space. Examples…include gender, ethnicity, citizenship, religion, geographical origin of ancestors, occupation, education, and age" (Wang 2008: 17-18). Further, in the context of China in the process of privatisation, Wang identified that inequality was not only created by coercive physical forces or political powers, but also by social boundaries that could reach goods and benefits without explicit forms of exploitation and forces (Wang 2008: 18). Privatisation can have a function of reinforcing social boundaries and exclusion mechanisms in a more market-oriented China, based on the ideology that individuals with different abilities should be rewarded differently, and that education and occupation are symbols for individual productivity and ability. However, it is arbitrary to conclude that there is a causal relationship between privatisation and higher income inequality, and we can neither claim that privatisation has a main effect on, or has caused or led to social boundaries such as education and occupational divisions. Even when we can observe that there is correlation between these two factors, we cannot control for all other variables on the structural level, and of course, other factors than privatisation contribute to uphold social structures. In addition, it is difficult to answer the question of why there in some prefectures is a higher degree of privatisation than others, and how privatisation is concretely connected to the social policy, economic development, and income distribution.

6.2.3. Rural Sector and Agricultural Activities

In Western China, the rural sector is the most important sector, as it amounts to over half of the output of total economic activities. In this paper, several analyses involve the rural sector and agricultural activities. Through studies of rural-urban disparity, agricultural sector, and agricultural occupations, I find that increased income inequalities between rural sector and other sectors are more or less related to a higher degree of privatisation. In the analysis of sector-based income differences, I observe that a higher degree of privatisation co-exists with higher income inequality between the agricultural sector and other sectors. When studying rural-urban income inequality, the results points to that in a more privatised prefecture, there will be a larger income distance between rural and urban areas. Multilevel analyses which study occupation-based inequality also shows that

income differences between the agricultural class and other occupational classes are likely to be larger, when there is a higher degree of privatisation.
Some studies have concluded that the high inequality in China is mainly caused by disparity between rural and urban inequality, and within rural and urban entities there is relatively low inequality (Sicular et al. 2010, Gustafsson 2008). David Dollar argues that rural-urban disparity is caused by low economic development in rural areas, which are not sufficiently opened up for privatisation. Accordingly, to open up for more marketisation and privatisation is the best way to achieve common development and equality (Dollar 2007). However, my study of Western China points in another direction. Based on the statistical analysis, I observe that people in the rural sector, or people engaged in agricultural activities, basically have low income, and that the income distance between these people and other social groups seems to be even larger when there is a higher degree of privatisation, which can be seen as a marker for development towards a more open market economy. The development concerning income inequality therefore seems to go the opposite way compared to the view of Dollar, at least in the short-term perspective. Another factor that contributes to inequality is the differential organisation of social services in rural areas compared to urban. Rural citizens do not enjoy the same welfare treatment and social subsidies as urbanites, and therefore fall behind in terms of benefits and living conditions. With the state withdrawing from welfare obligations, private services fill the void with expensive services in rural areas. Furthermore, the ideology of privatisation contradicts the state's role as a regulating mechanism that is responsible for public services and welfare system. I have, however, not included analysis of welfare subsidies in my analysis, but to study it would be relevant in order to gain a wider understanding on differences between rural and urban living conditions, and how privatisation can influence welfare regimes differently.

Chinese peasants seem to be particularly disadvantaged in the market economy. Peasants have little experience with the market and little knowledge about how to efficiently improve production in a market economy. They also often lack information about markets, market demand, and have few bargaining options that could bring higher prices for their products. They are facing a more uncertain economic situation, where the previously secured income and protection from collectives are removed in the process of reform and privatisation (Oi 1999: 212). Market prices can be more floating in the local market, and peasants' income mainly depend on the market price of their products. Oi points out that some peasants choose to sell their products to state agencies at lower prices than in the open market, with the advantage of getting safer deals with increased stability and higher income security (Oi 1999: 213). Lack of market information is another problem. There are

information centres that gives information of market opportunities, but the traditional way of getting information, and the channel many peasants still use, is still to turn to local leaders. These leaders, however, may have self-interests, and gives advice that contributes to their own personal gain (Oi 1999: 213). In addition, many state buyers and companies do not deal with individual peasants, but villages as a unit. Villages contract with specialised farming households as brokers, and individual or household producers are not getting more paid than the low state price (Oi 1999: 214).

In the statistical analyses, I observe that when there is a higher degree of privatisation, the income difference increases between agricultural sector and other sectors, and between rural and urban citizens. Economic reform and privatisation put individuals involved in agricultural occupations in more uncertain situations, as individuals in the agricultural sector are more vulnerable in the market economy without the necessary network, knowledge, information, welfare and social security benefits. If the reform continues to only focus on economic development and privatisation, and ignore the fact that many people in rural areas are trapped in a disadvantaged position, then the current income inequality might increase.

6.2.4. Income Distance between State and Private Employees

The income distance between people working in state and private sectors decreases in a prefecture with a higher degree of privatisation. This finding is in contrast with my hypothesis about the relationship between higher privatisation and higher income inequality.

In the theory chapter, I argued that privatisation could be related to higher income inequality between state and private sector, based on sector-specific influences on for example wage arrangements and work organisations in the state and private sectors. I presumed that when there is a higher degree of privatisation and market orientation in Western China, the traditional work unit would decline, as well as the privileged wage levels from state enterprises. But state sector can still maintain its dominant role in economic life, while the weakening of *danwei* organisations as a mechanism of equalisation, can lead directly to increased income inequality, by reducing benefits for a large population. In a more privatised economy, the incentive and bonus system is developed, which can generate higher income inequality by contributing to a more stratified wage level for private employees.

However, the argument above did not take into account that the average wage level in the state sector is usually much higher than in the private sector in China. In the context of Western China, state institutions still have dominant power, both politically and economically. The wage structure seems still to be strongly influenced by state institutions established in the plan economy period. According to statistics from Medow, the average annual income per capita for state employees is 10,542 yuan, compared to 6,044 yuan in the private sector. This means that when the income level increases in private sector, and decreases in state sector, it would actually lead to a decline in overall income inequality. This result is in accordance to market transition theory. It maintains that when Chinese society transforms from plan to market economy, the income inequality between state and private sectors will first decline in the beginning stages, and then rise again in later phases. The reason is that entrepreneurs, businessmen and people with positions in the market sector gain economic powers, at the expense of people with positions linked to political power (Nee & Cao 1999, 2004). Inequality based on political power and political stratification is weakened when the Chinese society transforms from state socialism to market economy, and market logic replaces political mechanisms in distributing wealth and producing income inequality. In state socialism, the state sector controlled the distribution of wages, income, and goods. The advantaged position of being employed in the state sector seems to be reduced when there is a higher degree of privatisation, while the private sector seems to acquire a higher economic position in the market economy in Western China. The income distance between the prevalent state sector and the previously suppressed private sector seems to decrease, when the market sector process of privatisation is more widespread.

6.2.5. General Inequality Between Migrants and Residents

The study of migration analyse income inequality between migrants and residents, regardless of whether an individual has an urban or rural hukou registration. The result corresponds to my expectation that in a situation with a higher degree of privatisation, there will be higher income differences, on average, between migrants and residents. Furthermore, the migrant group has generally much higher income than residents, and this inequality increases in a more privatised prefecture.

There are two groups of migrants, respectively migrants with rural or urban household registration, and they have been merged together as a category of migration and represent the general situation of migrants. The same approach was used to create a congregation of the residents group,

representing both rural and urban residents. But in order to understand inequality between migrants and residents in Western China, we have to disassemble these parts. When looking at the descriptive statistics, we can observe that the average annual income differs much between these four groups. For both urban and rural citizens, the mobile population seems to be more economically advantaged. Migrants with urban hukou on average earn one thousand yuan more than urban residents in a year, while rural migrants earns averagely 2.3 times more than the rural residents.[13] With a higher degree of privatisation, the migrant-resident income inequality increases, especially for people with rural status. Furthermore, this inequality is especially clear for women, for lower educated individuals, and for individuals with lower occupational position.

This pattern of inequality in Western China reflects the perspective of selectivity of migration. People who migrate are often not the poorest in for example their village, since they can afford the expenses and insecurity connected to leaving home. Therefore, the family of migrants are often located in a lower-middle class position in the local society, and migrants have on average higher education than other residents (Ha et al. 2009: 7). To send some family members to work elsewhere with better-paid jobs can not only secure the household, but also be a rational investment that improves the households' economy. In turn, the remittance received from migrant family members can contribute substantially to the family budget. The process of privatisation opened up possibilities for labour mobility, and the number of migrants increased. This seems to contribute to reinforce income inequality in both rural and urban in the West, and can be used to understand increased inequality between migrants and residents when processes of privatisation spread further.

Some scholars have predicted that remittance from migrants boosts the local economy, and that inequality therefore should be reduced between urban and rural areas (Todaro 1969: 139, Keely & Tran 1989: 500, Beijer 1970: 102, Kindleberger 1965: 253). Such tendencies cannot be directly observed in Medow, as it is a cross-sectional survey and does not follow the time dimension of development. In my analysis, migration is positively correlated with privatisation, and thus, it contradicts the argument that privatisation can reduce inequality. Money sent by migrants to their household might not be enough to pull up the whole economy in the local society (de Haas 2008: 29). Chinese rural areas face many economic problems after economic reforms, and rural citizens have to spend much money on for example schooling and medical care. This situation is even more

[13] In the descriptive data, there is a hierarchical division of income level for these four groups: the urban migrants have the highest income level, with an average annual income of 10,719 yuan; the urban residents are on second place, with an average annual income of 9,664 yuan; the rural migrants have an average income of 5,985 yuan; and the rural residents have the lowest income of 2,657 yuan.

serious in the West. The process of de-collectivisation and privatisation has been important also in the rural West, but the economic conditions are poor, in addition to limited social welfare. Money sent from migrants is not enough to be invested in businesses, but much has been used for daily spending. It seems like income inequality between migrant and resident in Western China is not evened out by the development of private market and private job possibilities, and that the gap grows even more.

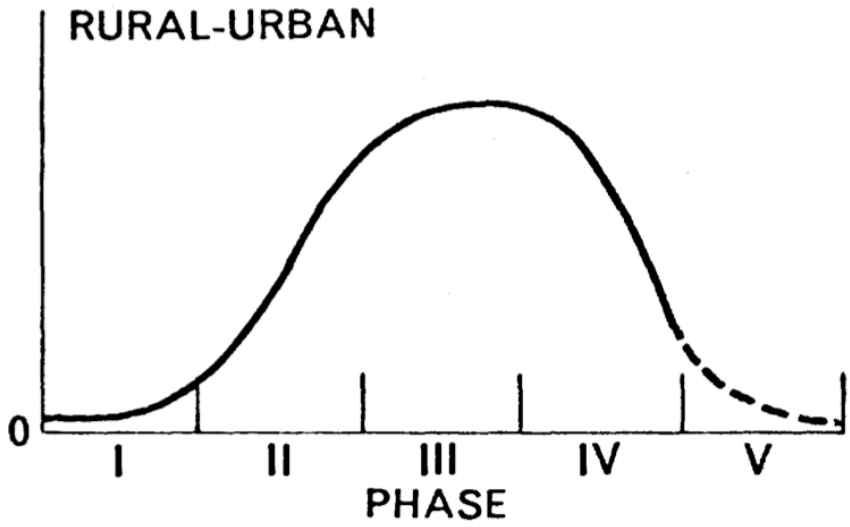
6.2.6. Rural Migrants and Urban Residents

Through multilevel analysis, I have found that privatisation has an insignificant but positive effect on equalising the income of rural migrants and urban residents. According to the theory chapter that the process of privatisation could bring with it openness and more migration, but at the same time create more channels for others to exploit migrant workers. The income distance between rural migrants and urban residents is large, and I expected it would increase when comparing it to locations with more privatisation. The data analysis does not correspond with my expectations, but the development trend is somehow in accordance with perspectives from the approach of neoclassical transitional migration theory, and the phases of development (de Haas 2008: 32). In the context of Western China, the private sector have more job possibilities for rural migrants, and meanwhile the migration policy is moving towards a more equal development, which benefits the migrants.

The political and institutional framework in China is changing. One of the most important reasons for the disadvantaged positions of migrants is that they are exposed to institutional discrimination, created by the hukou system. However, there have been attempts to ease up on the restrictions. In the late 1980s and mid-1990s, some cities sold expensive “blue stamp urban hukou” to migrants. In 1997, some towns and small cities gave urban hukou to rural migrants who had stable jobs and had lived more than two years permanently in the city (Fan 2008). In recent years, challenges related to finding solutions for people to cross the hukou-barriers are often solved by recruitment and human resource companies. Migrants have thus gained more possibilities for finding jobs. This development is parallel with the development of market transition and privatisation, which emphasise labour mobility. In addition, Chinese authorities have also implemented new rules in rural areas in order to reduce inequality, as for example releasing agricultural taxes and higher welfare support (Whyte 2010: 20). This can attract rural migrants to go back home, and lead to reduction of rural migrants in cities, and thus higher wages for desired employees.

The development corresponds to transitional migration theory, which divides between different phases of vital transition, and the different effect of migration in each phase. The development in Western China can be placed as situations for transitional societies (phase II and III in figure 6.1). In phase II, rural-to-urban migration increases, and in phase III rural migration first slows down but remains at high levels, and then decreases dramatically (Zelinsky 1971: 230-233). When the urban areas in Western China in the late transitional phase is characterised by a shortage of labour force, and there are more attractive circumstances to live in rural areas, the wage level for rural migrants would eventually increase in locations where more economic sectors expand, and thus reduce the income distances between migrants and residents. The development seems to be parallel to the process of privatisation. In cities where there is a higher degree of privatisation, there might be stronger ideological values connected to free labour movement, and thus rural to urban migration might be saturated and slowed down. Both later development phases and higher degrees of privatisation seems to be connected to lower income inequality, and it can therefore be used to understand why a higher degree of privatisation is related to reduced income inequality between rural migrants and urban residents.

Figure 6.1. The effect of development on rural-urban migration patterns according to transitional models. Adapted from Zelinsky 1971: 233.



6.2.7 Development and Inequality

One way to look at reform and privatisation is to view increased inequality as a price to pay for the economic growth, and that economic growth eventually will benefit the society as a whole. An important model in support of this view is the Kuznets curve, developed by the economist Simon Kuznets. The Curve has the shape of an inverted U, and the hypothesis states that economic inequality in developed societies will increase in the early phases of industrialization and modernisation, until it reaches a top level of inequality, and then declines. The model presumes that in a modernised economy, economic growth will be more evenly distributed in broad segments of the population (Kuznet 1955).

Although influential, there is scarce support for the Kuznets hypothesis when considering the history of the second half of the 20th century. Most industrialised countries have experienced increased income inequality after the 1970s, such as the United States, France, Italy, Japan, Sweden, the United Kingdom, and former West Germany (Wang 2008: 173). A research of inequality based on 73 countries, performed by the World Institute for Development Economics Research and the United Nations Development Program, shows that during 1950 and 1995, inequality increased in 48 countries, and remained constant in 16 countries. These 64 countries accounted for 92 per cent of the world GDP purchasing power parties (Wang 2008: 173).

The Kuznet hypothesis is also discussed in the context of China. Carl Riskin has researched if China can be viewed to have reached the top of the Kuznet's curve, and whether decreasing inequality proposed by the model is really the case. Using data from an income inequality survey conducted by the Chinese Academy of Social Sciences (CASS), he found that in the period 1995-2002 there was less income inequality within both rural and urban areas. Accordingly, the income inequality within rural areas was reduced because of the rise of labour market and policy of lower taxes, which have contributed to higher earnings for broader groups in rural areas (Riskin 2007: 32). But when looking at the macro level, inequality was reduced only to a small extent, because there was greater inequality between rural and urban regions. Riskin concludes that it is premature to say that China is about to become more egalitarian (Riskin 2007: 42). Wu and Perloff (2004) have concluded differently, when studying the same survey samples as Riskin. They found that inequality has increased for both rural and urban populations between 1995 and 2001, and that increased inequality within rural and urban areas has contributed to general inequality, as much as rural-urban inequality did. As Riskin has pointed out, the Kuznets curve focus purely on economic factors, and say little about other factors that can affect inequality. Economic inequality is also affected by social, political, and ideological conditions (Riskin 2007: 43). Therefore, it seems that

dynamics related to the economic structure and economic growth is not in itself enough to create a more equal society.

My findings indicate that in prefectures with higher degrees of privatisation, there are increased differences between individuals categorised in different social structures. These findings indicate that the dynamics related to privatisation in the market economy create more income inequality. This can be compatible with the Kuznet's curve, if Western China's market economy in 2005 was not yet mature enough to reach the falling side of the curve.

There is increased inequality in both rural and urban areas in Western China. In the rural areas, there are very limited possibilities for low-income peasants to improve their economic situation. People with relatively better-off situation move to cities as migrants, and the middle class is reduced in the rural areas. This leads to a polarisation of the class structure and increased inequality between the top and bottom groups of the income hierarchy, since the wealthy over-class and poor farmers tend to stay as residents. In urban areas, the rural migrant group often becomes an under-class, and this has led to increased inequality in urban China. The structural changes after the economic reforms are not promoting a more even income distribution.

The state has several alternatives. It can choose to continue with cheap industry supported by rural migrants by making agricultural activities unprofitable and unattractive by heavy agricultural taxes. Another alternative is to implement measures to improve the situation of the poor, and to reduce inequality between rural and urban areas. This would include more focus on the disadvantaged social groups such as peasants and rural migrants and reconfigured social structures, by for example better welfare arrangement and more support for local rural industry.

6.2.8 New Social Policies

When trying to understand various social phenomena, new development patterns in the labour market should be taken into account. At the time Medow was collected, it was not so long after the policy for Western China development was launched and set in process. We can believe that the expansion of industry and need for labour force was not at the same level as it is today; and in addition, the growth of labour rate in China has already slowed down in later years. Ever since the mid-1990s, the rate of employment growth in China began to turn negative (Hu 2003). The rate of working age population growth is speculated to turn negative from 2020 (Kwan 2002), and negative

population growth is expected in 2030 (Niu 2010). Western-China is experiencing significant changes in terms of labour market restructuring, various changes related to social and institutional circumstances, and changes in social policies.

Privatisation contributes to weaken the power of trade unions, increase unemployment, reduce social welfare, and increased income inequality. In addition, household registration system and migration policy lead to systematic discrimination against rural citizens. The Chinese leadership has recognised these problems, and have in the recent decade tried to make changes. The goal was to reduce inequality, and give higher priority to rural development. President Hu Jintao and Prime Minister Wen Jiabao launched a new vision of Chinese society entitled "harmonious society" at the 16th National Congress in 2002. They warned about the danger of social unrest, and proposed the goal to build a harmonious society with the middle class as the main body. The previous focus on economic growth was complemented with a new focus on overall social harmony (The Central People's Government 2006). There were also discussions to remove rural-urban hukou diversity, and give disadvantaged groups such as migrants and peasants the same social rights related to wages, social benefits, and education.

For migrants, some earlier exclusive restrictions and regulations have been eliminated, and in some cities new restrictions have affected urban citizens, in order to create better chances for migrants (Whyte 2010: 21). Since 2007, the governmental authorities have tested to abandon the rural-urban restrictions in 12 provinces; and in 2007, the new Labour Contract Law gave migrant workers better legal protection of written labour contracts, and security for long-term jobs (Cai et al. 2009). The pension system for migrant workers was also tried out in several test locations, where migrant workers enjoy the same right as urbanites. For peasants, the Chinese government has implemented new rules and regulations in rural areas to improve their economic condition. This includes for example to relax or phase out agricultural taxes, increase governmental and state financial support for rural schools, reduce and phase out educational tuitions, test new medical insurance systems, reduce medical fees in rural areas, and introduce minimum income systems in rural areas (Whyte 2010: 20).

6.3. Weaknesses and Limitations

This paper covers five social structures, namely education, sector, occupation, rural-urban diversity and migration. These aspects are all important when studying income inequality in Western China,

and they are sociologically interesting as important categories for dividing individuals and social groups. They can create and maintain social boundaries to include individuals characterised with certain qualities in more advantaged positions, while blocking others from access to important social and economic resources. Privatisation seems to be related to these social structures, which to some extent support or reinforce the effect of boundaries. I recognise that each of these five structures are complicated, and my strategy to include all five of them can result in a somewhat superficial and fragmented study. An alternative way to study income inequality and privatisation could be to choose one of these fields, and research it more deeply and detailed. However, my thesis can contribute to offer an overview of the general situation in Western China.

On the other side, there can be many other important social factors that are relevant to understand the relationship between income inequality and privatisation. However, my main interest has been the process of economic transition, and the following consequences of changed patterns for income distribution. Although I may loose sight of other important social issues, I believe that the selected five social structures can give basic but relevant information of the labour conditions in Western China, and how privatisation and income inequality is connected. The statement that privatisation is related to greater income differences can only be made when the intermediate mechanisms are taken into account. Even though I have found that privatisation is related to income inequality in Western China, it is difficult to draw a causal conclusion on whether privatisation had led to higher inequality.

6.3.1. Measurement and Interpretation of Privatisation

Several complexities related to privatisation should be discussed. First, my measure of privatisation is based on the sum of employed labour in the private sector. If there are more people working in the private sector, there will be a higher degree of privatisation in a prefecture. This definition can be problematic, because it does not differentiate between various types of private enterprises, and it does not say anything about the economic scale of the private companies, their turnover, profitability and activity in total, or the size of the private sector compared to other sectors of the economy, measured in for example share of GDP. An enterprise with more sophisticated technology and modern equipment can be more productive with fewer employees, than businesses with many employees but using more traditional technology. Moreover, there are many small-scale private enterprises in Western China, such as family or self-employment businesses. These are also included in the private sector in my measurement of private sector. These firms are small, and vary

from having only one to a dozen employees. Issues related to profit demands, wage systems, income level, institutional restraints, and efficiency are very different in such small organisations, compared to larger enterprises. Therefore, this definition of privatisation and private sector could confuse income level and occupational differences in the private sector. In addition, definitions of privatisation and private sector can often overlap each other, and they are therefore highly inter-correlated in statistic analyses. However, I chose to cover various types and sizes of private enterprises in the definition of private sector, in order to include a variety of private employment in Western China. The group of small-scale firms and self-employed individuals are also important parts of the Chinese economic transition, and to exclude these social groups can lead to bias and incomplete analysis.

Second, the effect of privatisation could be superficial. It is a general problem with my analysis that privatisation and income inequality does not have a certain causal relationship, and it is limited possibilities to find out the direction of causality. I can only state that a higher degree of privatisation is somehow related to greater income inequality, but privatisation does not necessarily *lead* to higher income inequality. The relationship between these two variables can be superficial, and there can be other underlying factors that are connected to development, which at the same time interrelate with privatisation. Furthermore, these factors can be differently configured in different prefectures. Focus on privatisation may divert attention away from other interesting and maybe more important factors.

A third problem related to privatisation and income inequality is that Medow is a cross-sectional survey, and there is little possibility to test development over time. Although there is a positive correlation between privatisation and income inequality in my finding, the conclusion of this relationship can only be drawn in the specific time of survey.

6.3.2. Definition of the Income Variable

The definition of the income variable in my paper also needs to be discussed. In my income variable, there are three components: people with individual wage and income, agricultural economy, and household economy. The last two categories consist of individuals within households with a common economy, and their individual income is calculated as the average income of the whole household income. Sometimes, it is difficult to divide individuals from their family or household economy activities, especially in the rural sector. A usual way for peasants to get income

is to divide different tasks between family members. For example, men mainly work in the farm with cultivation, and women work both in farm and household, with various household tasks such as cooking, child caring, feeding livestock, carrying water and gathering firewood, etc (Hu 2007). Their income is based on the family unit, in which family members contribute together to the household economy. Similar pattern applies to family economies, such as household-based private businesses and self-employment. Therefore, it is difficult to standardise income for each household member.

This measurement can be less problematic when studying for example urban-rural income inequality, sector inequality, and occupational inequality. But when considering income inequality within the rural sector, as for example between rural migrants and rural residents, the income variable can lead to confused understanding and interpretation. For example, a rural migrant is originally defined as a member of her household, and her income in my measure includes both average household income and earnings from her current work place. If she does not participate in the household economy, her income can be overestimated. At the same time, the income of the other family members can be underestimated, since she is counted as one of the household workers when calculating average household income. However, migrant workers who live more permanent in the place they work may not identify themselves as a part of the original household. There is also a situation where many rural migrants are seasonal workers, who participate in the household economy, and have other jobs when it is off-season agricultural activities.

Another discussion worth mentioning is how the income variable should be defined. It is much argued about whether other factors should be included, as for example welfare support and living costs. If regional differences in living costs are not taken into account, income inequality can be overestimated. This is because of the higher living costs in urban areas compared to rural. Accordingly, if household income is adjusted by controlling for regional living costs, the actual income gap between rural and urban areas should be smaller (Li & Luo 2010: 105, Sicular et al. 2010: 89). Another point is that if factors such as welfare subsidies to urban citizens are not included in the income variable, the rural-urban income gap can be underestimated, since rural people do not receive welfare benefits to the same extent. Therefore, the actual income gap between rural and urban China can be much larger when such public subsidies are included (Li & Luo 2010: 105-106).

There are great variations and complexities in Western China, which covers a huge geographic area

with social and political diversities. My definition of the income variable does not include welfare subsidies or consumption structure, and I chose to only look at the income for individuals and households to simplify the complexity. It can be problematically connected to how social policy and market consumption affects privatisation's impact on income inequality, but the focus in this paper is mainly on income inequality between individuals and their household. Due to the rich data in Medow and multilevel analysis that combines analysis on both individual and prefecture level, I believe that my definition of income can be valid and relevant for my research theme.

6.3.3. Simplified Variables for Sector and Occupation

The reform in China has made the sector differences more complex, so only dividing between state, private, and agricultural sector can be too simplistic. There can be more finely defined groups within each sector, and for different groups it could be different operating methods, wage structures, and income levels. In fact, the state sector includes both traditional state enterprises with traditional work unit systems and egalitarian wage structure, and more opened cooperative state firms that are market-oriented and in a competitive labour market. The state sector can also include urban collective enterprises and rural collective township and village enterprises. The private sector consists of large-scale private businesses as well as multinational companies, and self-employed small-scale family firms. At last, in the agricultural sector, there is both traditional household cultivation and large modern agricultural industry, with very different institutional organisation, different wage structures and income patterns. To divide all of these different types of enterprises and organisations into only three sectors, can be criticised to be an oversimplification, as it overlooks the diversity and heterogeneity found inside each group.

In the analysis I worked with a distinction of three occupational classes. The service class includes cadre and other leaders, technicians and professions, and white-collar office workers. The working class includes service industry workers, blue-collar workers, and other non-agricultural workers, and the agricultural class includes agricultural workers. The same problem of ignoring group heterogeneity applies to the definition of occupational classes. For example, agricultural workers can include several groups of people that can have different class positions: Peasants working with various agricultural activities such as cultivation, fishing, and foresting, and working class individuals employed in agricultural industries. To include all of these categories in the same class of agricultural occupation can lead to the problem of overlooking within-group diversity.

6.3.4. Migration Variable

There are also some methodological problems concerning the migrant variables. Medow tried to cover migration from both urban and rural areas. The definition of migrant is of a person registered in one place, but who works in another. Rural migrants are rural household members who have rural hukou. Because of work assignment, they have to live somewhere else, or normally live in the household but being outside the commune for periods of time. This definition has a problem: Huge groups of rural migrants can be excluded from the sample, for example rural migrants who come originally from rural household but now have urban hukou. They are not defined as rural migrants, when they do not have a rural household registration. Another group that can be excluded is a migrant with rural hukou, but who do not define herself as a member of the original rural household. Maybe she prefers another place of residence, or maybe she gets married and has her own household in a city. In my sample, the total migration is less than six per cent, and rural migrant is only about three per cent. This might be one reason for the insignificant impact that privatisation has on income inequality between rural migrants and urban residents.

6.4. Concluding Remarks and Further Implications

Privatisation has been an important aspect of the economic reforms in China, and Western China has taken part in the general economic transition and development. The transformation has contributed to create massive economic growth, raised wages, and better living conditions. However, income inequality in China has increased rapidly since the reforms started.

Both market mechanisms and the phenomenon of inequality is complicated, and I have tried to focus on more limited aspects of these two social dynamics. Privatisation is an important characteristic of the market transition. By examining concrete levels of income inequality connected to various social structures that individuals are situated in, this study aims to answer a central question: Is there a relationship between privatisation and income inequality, through social structures such as education, sector, occupation, regional diversity and migration?

The labour market is a central focus point in this study. On one hand, income inequality is related differently to labour structure and wage distribution, through the selected social structures. On the

other hand, privatisation not only affects and changes the wage strategies directly in labour institutions, but also has important influences on the ideology behind rewarding logics and labour relationships. Market logics based on incentive and productivity becomes more important for income distribution, and it replaces the role of political power and central regulation. In the process of privatisation, social structures such as educational attainment and occupational position serve as measures for individual ability and productivity. However, these measures may function as social categories and boundaries that divide individuals into different groups, and which create and maintain both social and economic inequality. Individuals are included in or excluded from certain social groups with certain characteristics. In this way, higher privatisation is associated with greater income inequality.

My findings in this study point to that there is a relationship between privatisation and higher income inequality, based on analyses of 128 prefectures in Western China. However, there are uncertainties connected to development tendencies of the cross-sectional data. Although the analyses conclude that the income inequality regarding education, occupation, region, and migration characteristics increases with more privatisation, it may be concluded differently if development is studied over time. Similarly, although the income difference between the privileged state sector and the rising private sector is reducing, this may be a reflection of the market transition theory point that in the early phases of market transition, inequalities may be reduced between the state and private sectors, and that it will rise again in later stages when the private sector becomes more dominant.

To explore these issues further, research that studies development over time is needed. This also concerns the general debate of development and in what direction transitional China is going. Western China may be viewed as being under-developed, and in an earlier phase of economic transition compared to the Eastern provinces. Although my study contributes to establish a relationship between higher privatisation and higher income inequality (regarding most of the included social structures), there are many aspects of the development of income inequality that we do not know enough about, and which would be interesting to follow. Further research can give more insight into how these processes evolve. Further research on the impact of the Western development plan on income inequality would be relevant. It would also be interesting to compare uneven development both regionally and nationally in China, for example through studying how the relationship between privatisation, wage structures and income inequality has evolved in the eastern provinces.

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Word Count: 38,993.

All sources used in this paper are listed.

Appendix.

Figure 1. Distribution of the Residuals.

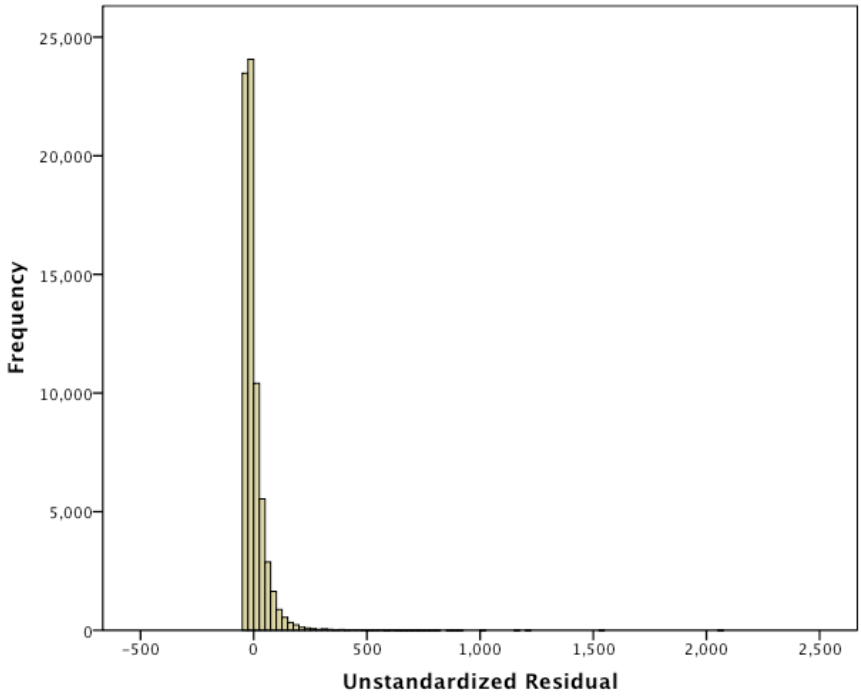

Figure 2. Distribution of the Residuals after Log-Transformation.

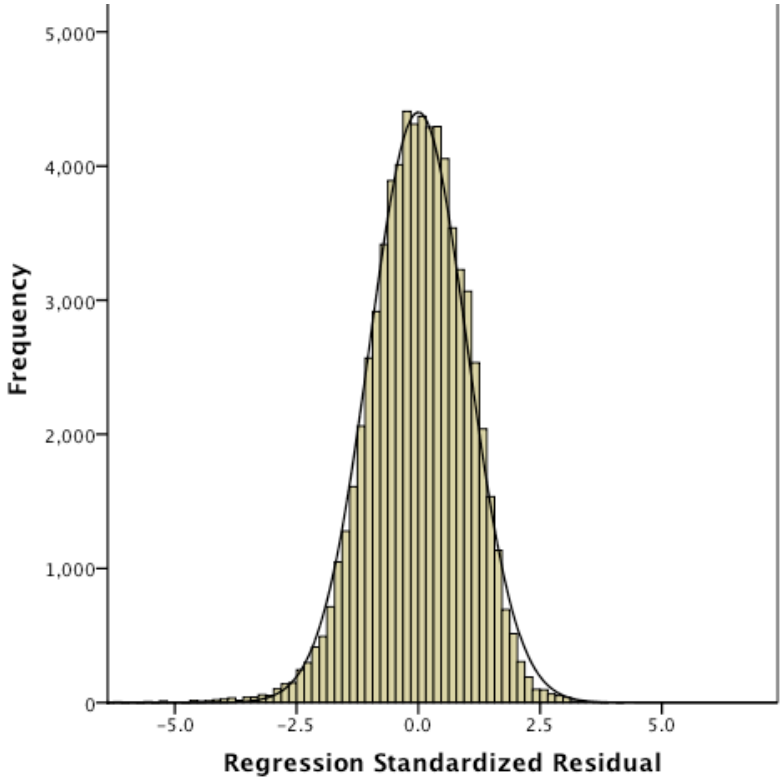

Figure 3. Distribution of Income Inequality.

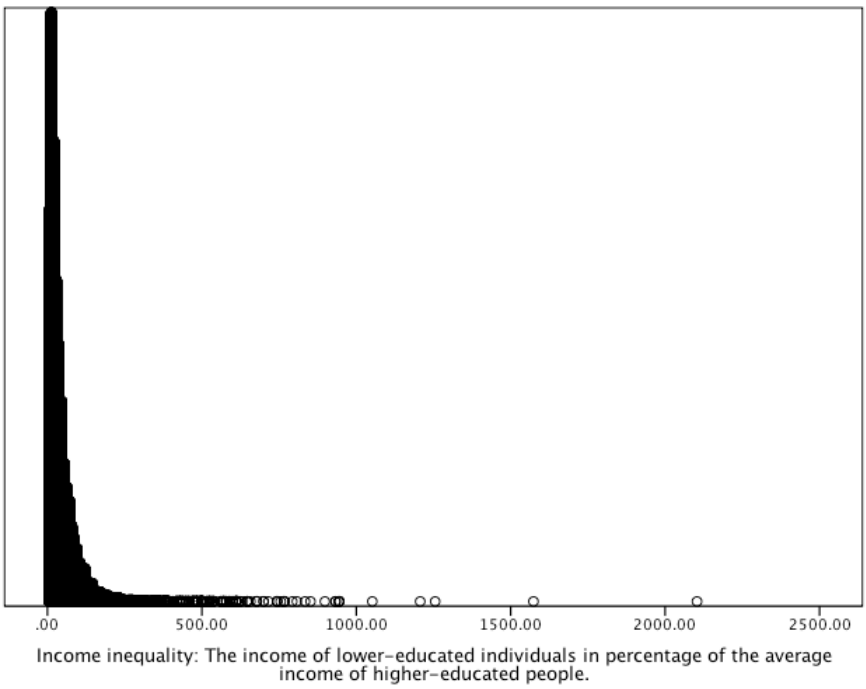

Figure 4. Distribution of the Outcome Variable after Log-Transformation.

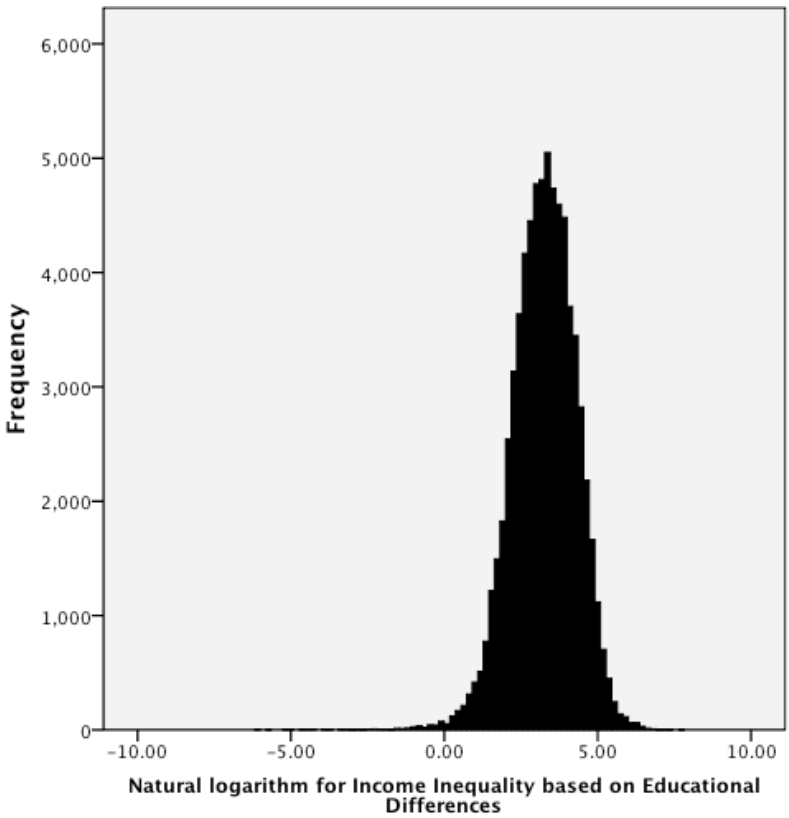

Figure 5. Scatter Plot of the residual.

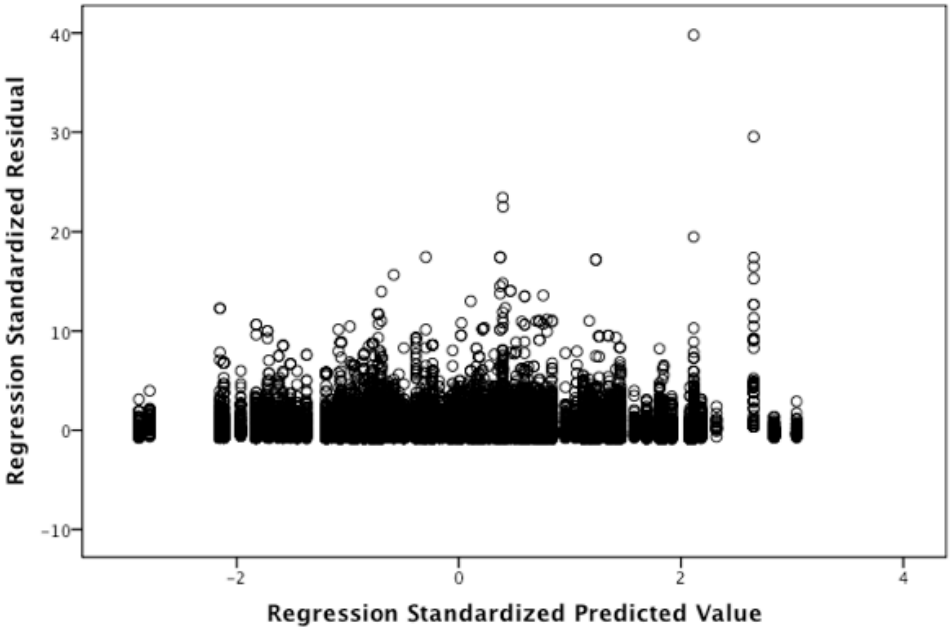
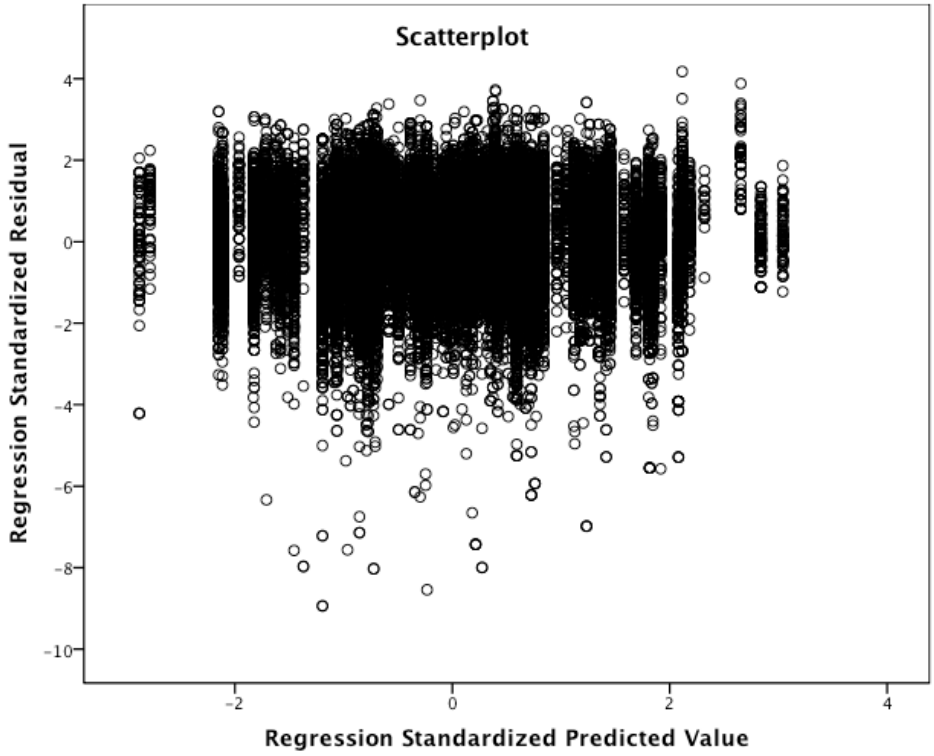
Figure 6. Scatter Plot after Log-Transformation.