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Mapping inequality in transforming China

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1 Introduction

1.1 Introduction

China has experienced an amazing growth rate since 1978 when reforms towards a more market-oriented economy started to increase in China. According to official statistics the average growth rate in the Chinese economy has been nine percent a year between 1978 and 2004. Even if some researchers have doubts about this and claim that the growth rate has been around four percent it is still a very rapid growth for a developing country. (See for example Todaro, Smith, 2006:174)

During this time of high growth China has also managed to reduce the incidence of poverty. Here too, there are different numbers estimated. In any case there are millions of people who no longer live in poverty. According to China the number of poor has decreased from 260 million in 1978 to 42 million in 1998. (See for example Todaro, Smith, 2006:174)

The growth experienced by China is important for the reduction of poverty. Poverty can be reduced in at least two ways, by growth given the same distribution and by redistribution given the same income. It has often been said that inequality in China has risen during this period of economic reform. This thesis is going to focus on the pattern of inequality in China during the years of transition from a socialist to a more market orientated society, from 1978 until present time.

The question of equality is important and interesting in a number of ways. Equality issues are vital for understanding and reducing poverty. Reducing poverty and increasing well-being is one of the essential aims of economic development.

Equality is on one hand a question of justice. Everyone should have the same opportunity to create the life they desire. On the other hand, equality is a question of effectiveness which affects the economic development. If people are restrained to fully use their potential, then the society will not utilise all their capacities. High inequality is associated with lower rates of savings. Savings is associated with economic growth. High inequality gives unequal bargaining power and facilitates rent seeking behaviour. If resources are allocated to rent seeking they are taken away from other productive initiatives.

Viewed from the other side inequality is bad not just because high inequality can keep more people in poverty but also because inequality can lead to social instability. Equality and social justice is an issue of growing importance for the Chinese government. (Songyan, 2004) The question of equality might be extra interesting in the case of China. The idea of equality was important both for the revolution and socialist state in China. It is interesting to see how the pattern of inequality changes with the economic transition.

1.2 Aim and question

The aim of this thesis is to answer the following question:

“What has happened to the inequality in China and is it possible to see any linkage to economic reforms?”

To answer this question it is necessary to form a concept of inequality and a framework with which to measure it. This will be the secondary task of this thesis.

1.3 Limitations

When measuring inequality in this thesis the attempt has been to capture what possibilities people have to create the life they desire. I have tried to choose dimensions generally agreed to be important as well as possible to measure. This excludes many aspects. The research on rights is limited. China is a one party state with limited political rights and limited possibilities to make your voice heard. Freedom of speech and other rights are important to be able to be and do what you want. However, these dimensions lack data and might be too complicated and complex to be incorporated in this thesis.

All the data in this thesis come from the Chinese Statistical Yearbooks. The statistical yearbooks from 1996 to 2006 have been available on the homepage of the National Bureau of Statistics of China. For earlier data I have been restricted to the Statistical Yearbooks of China that I have been able to find in libraries. All the yearbooks do not have the same tables of data and hence data for some years are lacking. The lack of data before 1996, especially with regard to health and floating population, makes it hard to make a good analysis over time. I have not been able to find data on health disaggregated by rural and urban areas, nor have I been able to find income data disaggregated by sex. Because of this previous research in these areas are left out.

1.4 Disposition

In part 1 you will find introduction to the thesis, aim of the thesis. In part 2 economic reforms in China will be reviewed. The impact of economic reforms in China might have been extra visible regarding regional inequality and inequality between urban and rural areas. Policies regarding openness and trade, which have created economic growth, have not targeted all of China, but mainly the southern and coastal provinces. Rural and urban China have been divided during the socialist era and the economic policies have not always been the same in urban and rural areas. Socialist China declared that men and women should be equal but the economic reforms might have made the implementation weaker.

In part 3 the dimension chosen to measure inequality will be discussed. Most research done on inequality and economic reform in China has focused on one or a few issues.¹ This is interesting in itself but does not answer the broader question of inequality – what people are able to do and be. This thesis tries to have a broader concept of inequality with the aim to capture not just the outcome of inequality, but the capabilities people have to fulfil their desires and take a productive part in society.²

In part 4 earlier researches on inequality and economic reforms in China will be reviewed. Here the focus will be on the same aspects that later will be analysed in the data part, inequality in health, education and income.

In part 5 first the reliability of the data will be discussed, then the data collected will be presented and the connection between data and economic policies analysed.

In part 6 you will find the concluding remarks.

¹ Examples of studies of income inequalities: Donggen Wang and Li Zhang (2003) have made a study of knowledge disparity and regional income inequality and economic reforms in China, Okushima and Hiroko Uchimura (2006) have made a study of urban income inequality between regions, Azizur Rahman Khan, Keith Griffin and Carl Riskin (1999) have examined urban income inequality between household in relationship to poverty and economic reforms, Kai-yuen Tsui (1995) have been studying interprovincial income inequality and economic reforms.

Example of studies of health and inequality: Mei-Yu Yu and Rosemary Sarri (1997) have made a study of women's health and gender inequality that more or less cover the period from 1930s to 1990s and John S Akin, William H Dow, Peter M Lance and Chung-Ping A Loh (2005) have made a study of the access to health care related to economic reform.

² A work with a broad view of (gender) inequality in the transition of China's economy is made of Elisabeth J. Croll (1998). The study examines Human Development through female education, women's health and income, female employment in rural and urban areas and female empowerment through women's rights, political representation and women's organisation. But the research is 10 years old and the figures are seldom divided by region.

2 China

2.1 Economic transition

When the Chinese Communist Party (CCP) declared the People's Republic of China, it gained control over large parts of the industry. High investments in heavy industries were financed by a price bias, where the state owned industrial output had a relatively high price and the agricultural output had a relatively low price. The investments were capital intensive, the creation of job opportunities limited and the techniques advanced. Healthcare, education and other social consumption were made available also to people with low income. (Naughton, 2007)

The economic reforms in China started in 1978. From this time China has had the longest time of rapid economic growth in history. Different accounts have given different figures, but the growth rate from 1978 and onward has been estimated to 7 percent annually. (Naughton, 2007:142-143) In the beginning reforms were mostly concentrated to rural areas. The policy makers decided to relax the burden of the farmers. The compulsory procurement of agricultural products was lowered and the price was set higher. Also the regulation on the organisation of farm workers was relaxed. This resulted in reappearing family farming and an increase in the agricultural output as well as in other kinds of production from the countryside. (Naughton, 2007:88-90,142-43)

During the first time of transition China followed a dual track. The primary goal was not a market economy but economic development. The fixed prices and quantities were not taken away overnight. Instead if the production exceeded the quotas it could be sold on the market. This encouraged effectiveness and the market could more smoothly get used to increased competition. (See for examples Todaro, Smith, 2006:176-177)

In rural areas town and village enterprises (TVE) played an important role in the development. From the beginning the TVEs were collectively owned industries. During the reforms the TVEs were allowed to have production in areas that previously had been monopolised by the state and areas missed out in the collective planning. (Naughton, 2007:272-276) The TVEs played an important part in the economic growth of China during this period just as the TVEs distributed the growth and income to rural areas. (See for examples Todaro, Smith, 2006:177) Until the mid 1990s the TVEs were growing rapidly and

were extremely profitable. In the mid 1990s the profits for the TVEs had decreased as the competition on the market increased and many TVEs were privatised. (Naughton, 2007:272-276)

The successful rural reform also had a drawback. Rural social services were declining. Previously basic health care, education and insurance had been provided by the collective. The family farming, however economically successful, reduced the possibilities for local government to collect funds for social service. (Naughton, 2007:240-246)

The Chinese government tries to control the population growth in China. In 1971 the first programs for family planning were implemented. In 1980 the “One-Child Policy” was adopted. The policy was implemented with coercion. Sterilisation, abortion and large penalties were used by the government to control birth rates. In 1984 the government abandoned the use of forced abortion and sterilisation and the policy was relaxed. The policy was locally implemented. This has meant that the policy has been followed to different degrees in different regions. Generally, the policy has been stricter in urban areas. One of the effects of the policy has been a “lack” of girls, since many Chinese families prefer sons to daughters. (Naughton, 2007:167-172)

After 1984 the centre of attention for the reforms was shifted to the urban areas. The economic reforms had macroeconomic growth as their first priority. The idea expressed by Deng Xiaoping was to “Allow some people and areas to get rich first”. In 1992 the reforms accelerated and so did the transition from redistributive allocation to market based. (Shinichiro Okushima, Hiroko Uchimura 2006:36)

From 1992 and onward the transition went into a second phase. During the 1990s the economic policies were more concentrated on creating a “level play ground” for different economic actors. In the beginning of 1994 a new tax system was introduced which had as its principle to be equal in relation to different actors, earlier the state revenues had come from enterprise specific contracts or agreements. This broadened the base of revenues which led to increased income for the government. (Naughton, 2007:428-436)

Economic decision was recentralised to create a more stable relation between local and central governments. In the new tax system of 1994 the central government collected the taxes and

then redistributed funds to local governments. In the beginning of the transition the opposite was true, local governments transferred funds to the centre. In the 1980s this changed and the flows between local and central government were fairly equal. (Naughton, 2007:143,153,435)

In the 1990s the Stated Owned Enterprises (SOE) were facing increasing competition as well as no longer having the same easy access to cheap government funding. In the 1980s and also in the 1990s the banks were lending out money to SOEs which the SOEs could not pay back. In this way the early period of “reforms without losers” were sustained, but the banks were also caught up with non-performing loans. The importance of the SOE was also decreasing for the local and central governments since their profits had decreased. In the 1990s the SOEs started to lay off workers. The employment in the state owned sector was decreasing with more than 40 percent. Many of the laid off workers were women. Compared to previous decade’s social security and lifetime employment, this meant big losses for big groups of the population. (Naughton, 2007)

Local governments have been increasing their finance for example by taking out fees on public institutions and contributions to social insurance. This behaviour can increase the inequalities between different regions within China since different regions have different possibility to take out extra fees. (Naughton, 2007:438-439)

The Chinese economy has had a strict policy of self-reliance. There were two different systems to control trade, a foreign trade monopoly and the exchange system. The first steps of liberalisation were bypassing these two systems by allowing export processing contracts in the south coast, in Guangdong and Fujian. These contracts were allowing foreign firms to subcontract Chinese firms while the foreign firms owned the material. In this way the import were duty free as long as it was used to produce exports. (Naughton, 2007:379-382)

In 1994, at the same time as the tax reforms, the access to foreign currency was liberalised. In principle anyone who was authorised to import could buy foreign exchange. (Naughton, 2007:388-389) The gradual opening up of China and the membership in the WTO in 2001 have created a price ceiling for agricultural output, which can not surpass the world market price.

In the beginning of the reforms China started to open up for foreign direct investment, but it was not until the early 1990s the FDI exceeded 1 percent of the GDP. The FDI peaked in the mid 1990s. The large increase in the early 1990s could be explained by over one decade of liberalisation, of building credibility with foreign investors and the fact that China from 1992 started to open up the domestic market. FDI's bring in experience and technology that could have spillover effects. (Naughton, 2007:402-406)

Since the year 2003 new leaders in China have increased the attention to the rising inequalities that followed with the transition and policies have been made to help farmers. From 2000 and onward there have been attempts by the central government to reduce the local fees and instead transfer funds geographically, however these funds often failed to address the rural-urban bias. There was no overall plan and transfers did not really target poor regions. Local governments did not have the initiative to improve this because of the risk of losing funds. (Naughton, 2007)

2.2 The hukou system - a base for inequality?

The hukou system divides the citizenship of the people in China in different hukous depending on geographical area. The system gives a set of rights and responsibilities which are linked to a person's geographical area. In the beginning the hukou system was imposed to monitor population movements, but changed to restrict them, and in that way determinant people's possibilities. It has been extremely hard to change your hukou. This means that many people that have emigrated to the cities does not have a hukou where they live. To not have a hukou in the city affects your possibilities to get work, social service and your possibilities to influence the society. (Songyan, 2004) Until the end of the 20th century you belonged to the same hukou as your mother. This rule restricted the possibility for mobility given the tradition that the wife move to her husband's family. (Naughton, 2007:124) The hukou system created a hierarchy with people belonging to the big cities in the top and the rural areas in the bottom. (Songyan, 2004)

There have been increased possibilities to change your hukou however. In the 1980s you could change your hukou if you had a job and a place to live in a town. In the 1990s you could get an urban hukou if you were investing or buying a house at over a certain minimum value. This means that a citizenship to a city more or less could be bought. (Songyan, 2004) A study has found that around three million urban hukous were bought in 1993. However this

possibility is of limited importance to most of the people in China, since they can not afford it. The floating population (people who do not live where they have their registration) has increased rapidly from 7 million in 1982 through 22 million in 1990 to 79 millions in the year 2000. This is 6 percent of the total population. (Naughton, 2007:124-125, 130)

Large immigrations to some areas have had the implication that the population in some communities have been changing a lot. This has to some extent propelled communities to be more open. (Songyan 2004:78) One example is that people that have lived for more than one year on the same place in Beijing, but without having a local hukou, can register as voters. Another example is that immigrants were elected members of residential committees in both 2002 and 2003. (Songyan 2004:681) According to Songyan the restrictions on migration have become less rigid. Songyan mean that the move to equality has begun but that the hukou system still is an obstacle to overcome. Increasing mobility and immigration inside China (Naughton, 2007:127) might therefore imply a risk for increasing inequality in rights between immigrants to urban areas and native urban citizens.

2.3 Rural – Urban bias

Before the Revolution in 1949 there were few barriers between the urban and rural societies in China. During the years of socialism the barriers and inequalities increased. In rural China people became members of the village collectives. The collectives were not included in the central administrative hierarchy. Collectives did not have any access to national resources. They were providing social services out of their own resources. In the urban areas the state owned the land. Here people were organised according to their work unit, “danwei”. The work unit was included in an organisational hierarchy and was also given national resources. From the mid 1960s until the 1990s the urban residents had employment security, access to low-price food and other commodities, health care, pension and other benefits, primary and middle school education for their children, and low cost housing. The inequality between rural and urban areas was upheld by the low prices of agricultural products and by the hukou system that restricted immigration to urban areas. (Naughton, 2007:113-117)

From the end of 1970s to 1984 nearly all collective farming ended in China, but the land was still owned by the collectives and could still be redistributed. This has had the effect that there are very few landless in China. To have access to land is like a social insurance for rural citizens. But the lack of ownership of land has also diminished the initiative of long term

investments in the land as well as it imposes an extra cost for urban immigration. Urban citizens had the possibility to take over their housing. (Naughton, 2007)

With the end of collective farming the providing of public goods disappeared and the government did not support the rural collectives. This resulted in the consequence that the rural collectives no longer could continue deliver the same services. In the cities the privileges associated with the danwei remained until there were social programs that could more or less take over the social security.

2.4 Gender inequalities

China has since 1949 declared that men and women have equal rights in politics, economy, family and social life as well as equal pay for equal work. Since the People's Republic of China was founded, the laws have been following this principle. Even though China has a legal framework that stress women's equal rights it does not always work in practise. (Mingxia, 1999)

Both legislation and administrative, economic and educational intervention have been used to reach equality. Except from promoting laws to protect pregnant and childbearing women the state also tried to increase the job opportunities for women and increase the number of jobs that were seen as suitable for women. The laws and policies in China have resulted in a high level of labour force participation for women. (Cooke, 2001)

During the 1980s and 1990s China adopted many new laws to protect women, but the enforcement of the law is weak. (Mingxia, 1999; Cooke, 2001) Traditionally the legal enforcement was to a large degree administrative. Conflicts between workers and management were viewed as internal conflicts since the country was "ruled by the workers". In the mid 1980s, when state control over employers decreased, the law enforcement became weaker. The trade unions are supposed to control that employers fulfil their obligations. But the trade unions often do not have the capability to fulfil this task and all workplaces do not have labour unions even if they are obligated to have according to the law. (Cooke, 2001)

In many areas the laws only consist of abstract principles and there is a lack of rules and regulations. This leads to difficulties in the law enforcement. (Mingxia, 1999) To discriminate (childbearing) women is forbidden. But what practise that is discriminative is not specified,

nor is a procedure how do deal with discrimination. To exclude women from the recruitment process can result in financial penalties which are comparatively low. But to receive penalties does not necessarily mean that you have to pay them. (Cooke, 2001) Also the staffs working with enforcement of the law are a problem since they not always agree on women's equal rights. (Mingxia, 1999)

There is a lack of education and knowledge about the laws and the legal system. (Mingxia, 1999) A study showed that only a minority of the female labour force could tell if the labour laws were followed correctly or not. Also the management had lack of knowledge about the correct procedures. (Cooke, 2001) This means that even if the 1980s and 1990s saw a lot of laws promoting women and equal rights, there might be reasons to reflect over to what extent the laws have made the Chinese society more equal.

2.5 Openness and trade – a reason for regional inequality?

The southern regions of China, especially Guangdong and Fujian, have been in the front of the trade liberalisation and have benefited greatly from that. The Southeast were in 1978 producing 16 percent of Chinas export. In the 1990s this share had increased to 46 percent. In the same time the Lower Yangtze area were decreasing its share from 34 to 21 percent of the export. In the mid 1990s the trade related growth in Lower Yangtze started to increase with big inflows of investments. In 2005 the Lower Yangtze had a slightly larger share of the export (38 percent) than the Southeast (36 percent). During this process the Northeast and North coastal share of the export has decreased from 39 percent in 1978 to 19 percent in 2005. (Naughton, 2007:396-397)

One part of the liberalisation process in China has been the Special Economic Zones. The zones were set up with similar rules as the export processing contracts, duty free, as long as the products were exported. In this way it was bypassing the original rules of foreign trade and created incitements for investment. The first zones came in the late 1970s in the south and coastal part of China. In 1986 China launched a “Coastal Development Strategy” to take advantage of the relocation in production networks in Asia at this time. This meant that all types of firms in the coastal provinces could arrange more flexible contract for export processing. In the early 1990s there was a new wave of zones created. The zones moved north and inland as well as a zone in one of China's most developed region was created. The zones also played the role to be an experiment for the market and a move away from the planned

economy. In the beginning the zones might have been a bit of a disappointment but the investments started to find the ways out of the zones to the surrounding areas (Naughton, 2007)

3 Equality and the capabilities approach

3.1 Equality, inequality and the capability approach

To examine the patterns of inequality one needs definitions of the concepts *inequality* and *equality*, and find ways to measure them. Equality in one area does not automatically mean equality in other areas. People are different, have different geographical and social surroundings, age, sex, abilities, class, ethnicity, sexuality etc. This means equal rights do not always coexist with equal income, wealth or well-being. Equal income does not necessarily mean equal fulfilment of needs, and equal fulfilment of needs does not automatically result in equal happiness. (Sen 1992)

Sen (1992) argues that the question “equality of what?” is more important than the question “why equality?”. He means that all theories about social arrangement include equality in at least one area. Some theories demand equal income, wealth or happiness, others demand equality of rights. Equality in one area can be used to justify inequalities in other areas. For example, equal rights may result in unequal income, but since there is equality in rights this can be used to justify the unequal income. Since practically all theories imply equality in some area, the question is not why equality, but equality of what.

In this thesis the concept inequality is used (as opposed to the concept of equality). The reason for this is that inequality more clearly states what the thesis is about. Equality is a word with a positive meaning but the aim of the thesis is to make a map of the lack of equality. Therefore, inequality is a more accurate word since it directly put a name on the lack of equality. Inequality is when the features of equality are missing.

Equality can be measured through human rights. One problem with this approach is that it does not state who - if anyone - has the duty to promote the right. For example, if citizens have the right of political participation, does that also imply that the country has the duty to take away constraints to political participation? Is it the government’s duty to eliminate illiteracy in order to allow all people to participate in the political process? Only the rights are

not enough to create a free choice, you also need resources to be truly able to choose. (See for example World Bank, 2001:114 and Nussbaum, 2000)

When measuring inequalities through resources one has to define what resources actually are. According to the World Bank (2001), equality implies that people have the right and the possibility to choose. This means that there is a disadvantage with comparing outcomes since people may have different preferences which lead to different outcomes.

To understand equality as equality of outcome we should bear in mind the important fact that people are different. This is important, since equality in one area does not imply equality in another area. (Sen, 1992) For example, women have biologically longer life expectancy than men. This means that equality in outcome, in this case equal life expectancy, does not have to imply equality. In this example it can imply that women are disadvantaged, since they biologically should have longer life expectancy. (See for example World Bank, 2001:35)

To get around the theoretical problems with measuring equality by outcome one can try to measure “ ‘human capabilities’, i.e. what people are actually able to do and to be” (Nussbaum, 2000:222). One way to understand economic development and equality is through the capability approach, developed by Amartya Sen. He means that economic development should not be understood in itself but through how it helps people to achieve a better life. The important thing is not what we have but what we can do, be or achieve. This is what Sen calls functioning. The idea behind the approach is that there are functions that are central in human life and that we as human beings should have the dignity to be free and to shape our own lives. The functions create capabilities. (See for example Todaro, Smith, 2006:17-20)

A person needs a set of capabilities to be able to be and do what one want to be and do. In this context equality gets the meaning of having equal possibility to be and do what you want, having the capability to function. For example, a person has some rice. The rice has the characteristic to give calories to the person eating it, this characteristic gives the owner the capability to function without being malnourished. The value is in the capability to function, not in the ownership of the rice. (Sen 1993) Equality should then be measured in capabilities to function. People do not always need the same amount of resources to reach the same level. For example a person who can not use her or his legs needs more resources to be mobile than person that have fully functioning legs. (Nussbaum, 2000:228) Sen (1993) argues that

measure equality through resources is conceptually wrong since the resources are not something good in them self, but are instrument to achieve other things. In relation to other people and the society, you might need different resources. (See for example Todaro, Smith, 2006:17-20) This means outcome does not have to be equal since people can have different needs and preferences.

But the capabilities approach is also problematic. There is a risk that the researcher uses her or his own values of what is good. One way to get around this is to measure if people are satisfied compared to their preferences. This approach is also problematic since preferences are shaped by social tradition. It is hard to desire something you don't know you can have or no one you identify yourself with has achieved. This means that the preference-based approach actually can reinforce inequalities. A person can have desires that limit the possibilities for others to get satisfaction. For example a husband can have the preference that his wife should perform tasks that force her to ignore her own preferences. (Nussbaum, 2000)

3.2 To see every person as an end – provincial, gender and rural/urban divided

An implication of the capability approach is the attempt to see every person as an end in their selves. This means that every person is important in their own right, not just as an instrument to satisfy others. (Nussbaum, 2000:227) The degree of aggregation in this thesis will largely depend on the available data. China is one of the largest countries both according to area and population. To divide China into provinces is a first step to be able to see everyone as an end. China is divided in 31 administrative units. (Naughton, 2007) Here they will all be called provinces for simplicity. But everyone in a province does not have the same capabilities. Gender disaggregated data is needed since women and men often do not live under the same conditions. According to Nussbaum “Women are especially likely to be the losers when the good of a group is promoted as such, without asking about hierarchies of power and opportunity internal to the group.” (2000:34) Another exposed group is people that live in rural areas. In Asia around 80% of target poverty groups are in rural areas. (See for example Todaro, Smith, 2006) These three divisions might be extra interesting with regard to inequality and economic reforms. (See part 2)

3.3 Problems with measuring capabilities

A problem with the capabilities approach is that it is hard to measure. For example access to resources can be seen as a source to be able to function but they can also be view as an

outcome. (Malhotra, A. et al, 2002:10) It is hard to make structural limitations of what to measure. (Robeyns, 2005:42) There are many aspects affecting a person's ability to function. All of them can not be measured. Different capabilities may not have the same value. For example the capability to move about might be more important than the capability to play football. (Sen, 1992:45-46) There might be a lack of agreement of relative values of capabilities, but it can be easier to find a consensus on which capabilities to measure if they are general. (Alkire, 2002:31) This could imply that there is a fundamental incompleteness in the approach. This should not be seen as a too big problem since it could be theoretically wrong to give a complete answer to a concept as equality, since the concept of equality might not be complete. (Sen, 1992:49)

3.4 What dimensions to measure?

There have been made more than one attempt to create a list of capabilities. Sabina Alkire presents a table of 39 different dimensions of human development in her book *Valuing Freedoms* (2002). A problem with many of the lists is that they may have clear theoretical motives but that there is no framework of how to measure them. The choice of dimensions to measure in this thesis is influenced by Sen's capability approach, by Nussbaum and by the World Bank.

Nussbaum (2000) has created a list with ten capabilities to enable people to function in a truly human way. She emphasises that it is an open ended list and that the content can be discussed. One important part of the list is its diversity. The trade off between different capabilities is limited. Her list contains of life; bodily health; bodily integrity; senses, imagination and thought; emotions; practical reason; affiliation; other species; play; and control over one's environment.

A disadvantage with Nussbaum's list is that it is hard to find good measurement to all of her dimensions. Alkire (2002:36-43) criticise Nussbaum for not having a clear method for choosing her capabilities, they are hard to compare between countries and that who has the power of choosing and implementing capabilities is not defined.

In the World Bank Policy research report *Engendering Development* they suggest a framework measuring rights, resources and voice. Advantages with this approach is that it is

multidimensional, possible to measure and affect people's ability to be and do what they want to.

The chosen dimensions do not give a complete picture of what a person can do or be. But this does not necessarily have to be viewed as big disadvantage. Sen (1992:48) means that "Both well-being and inequality are broad and partly opaque concepts. Trying to reflect them in the form of totally complete and clear-cut orderings can do less than justice to the nature of these concepts."

3.4.1 Rights – throughout the hokou system

To be able to do and be what you want to, you need the right to do it. Equality in rights is a development goal in it self, but it does also make it possible to attain a basic quality in life, participate in society in a productive way and to take advantage of opportunities. Equality of rights is associated with both economic development and with equality in other areas. (See for examples World Bank 2001) The research of inequalities in rights in this thesis is not complete. The purpose is not to dig deep down into the Chinese legislation.

However there is one indicator of equality in rights that can be found in the Chinese Statistical Yearbook which is related to the hokou system. Nussbaum's capability *bodily integrity* includes the ability to move freely. Now movement and migration in China is freer, but not having your hokou where you live means less access to and control over your local society. To measure how many people that do not live where they have their hokou gives some indication of the capabilities *bodily integrity* and *control over one's environment*.

3.4.2 Education

Education is an important resource since basic education makes the foundation to take part in society and participate in the development process. (See for example World Bank 2001) Education is an end in it self. Nussbaum (2000) identifies education as important for the capability of *sense, imagination and thought*. For the capabilities *practical reason* and *control over one's environment* education is also important. Through education people gain skills that are important in a democracy. If you can read and acquire knowledge by yourself you can question the power. (Rong and Shi, 2001:110-111)

Education gives more productive labour, creating work opportunities for teachers and others, providing educated leaders, encouraging modern values, literacy and basic skills. Better

education can improve returns to investment in health. Many health programs are built upon skills gained at school, like literacy. Women's rate of return to education is generally higher than the rate of return for men. Increases in women's education result in higher labour force participation, lower fertility, improved child nutrition and health. Since women are the majority of the poor, increased education for women can help to break the poverty cycle. (See for example Todaro, Smith, 2006 and World Bank 2001)

The highest return from investment in education for the society is from primary education. The social cost of education increases more than the society's returns for secondary and tertiary education. For the individual the structure of cost and returns are usually the other way around, with higher private returns to higher education and lower private costs. (See for example Todaro, Smith, 2006:388-391) Therefore education in this thesis will be measured both from illiteracy rates and secondary education.

3.4.3 Health – child mortality, sex ratio and life expectancy

Health is an important goal of development itself but also an instrument. *Life* and *bodily health* are the two first of Nussbaum's capabilities. Better health can improve the returns to investments in education. A longer life increases the returns to education by more possible years of work. People with good health generally earn more and may be more productive. Individual expenditure on health does not account for externalities such as reduced risk of infection of others. (See for example Todaro, Smith, 2006: Baldacci et al 2005)

Liu et al (1999) mean that to measure equality in health outcome is unreasonable. At least so long as factors that are not changeable, like genetic make-up, are neglected. Liu et al (1999) mean that equality in health status could be measured as indicators for equal access to health care. But seeing equality from a capabilities approach health outcome is interesting to measure in it self. The health of a person largely affects the person's possibilities.

One way to measure health is through life expectancy. Life expectancy can also be a proxy discrimination in other areas, for example access to health care or food. (See for example World Bank 2001) A disadvantage with measuring life expectancy is that it does not tell anything about the quality of life. One additional year with good health is not the same as one additional year of poor health. The infant survival rate might be a better measure but it does not tell anything about the health status of the older population. (See for example Todaro,

Smith, 2006) In the statistical yearbooks of China, data on child mortality and sex ratio at birth is more common than data on life expectancy. All these three measures will be used to complement each other.

3.4.4 Income

To have financial resources clearly affect your possibilities. In this way earnings affect many of Nussbaum's capabilities. Reduction of poverty and economic growth often take place simultaneously. Poor people tend to have more children as an old age insurance since they have less access to credit and other financial services. This can decrease the per capita growth. The consumption and investment of rich in developing countries do not always contribute to their domestic economy, since they tend to buy more luxuries and imported goods. A higher income level of the poor can contribute to an increased demand of necessary goods on local markets hence also increase the demand for local production, investment and employment which creates good conditions for high growth. (See for example Todaro, Smith, 2006) Income is an important determinant of health. (Liu et al 1999).

Here income is measured, not consumption, because income probably gives a better picture of what a household is able to do. If one compares consumption a household could borrow for the consumption, or save some part of the income that will then not be measured. Consumption might give a better picture of the level a person lives on, but not a better picture of what a person is able to do. The data for both rural and urban income is given in current prices. The effect on inflation is more or less affecting different groups equal and hence a comparison between rural and urban areas and different provinces is still possible.

3.5 Measure of equality

There are different measures that could be used to describe inequality in the data. Here the quota between males and females, urban and rural is going to be used. The quota will be used to compare the difference between provinces. For this the quota is not a precise measure of the inequality since it does not say anything about the value of the middle provinces, but it makes it possible to compare the results. Even if a more precise measure was used it would still not tell the whole truth since the provinces have different sizes of their populations. The relative position of the provinces can also, to some extent, be seen in the diagram that present the data.

4 Inequality in China

4.1 Gender and rural-urban bias in education

At the beginning of the reforms China had relatively high attendance to basic education compared to other low income countries. On the other hand China had a low level of people with higher education. During the reforms, restructuring of the education system was done and the number of people with higher education increased. From the mid 1990s the government was giving increased attention to basic education. Programs were adopted to eliminate illiteracy among young people and make 9 years of school compulsory. (Naughton, 2007)

Rong and Shi (2001) found that the illiteracy had decreased from 1990 to 1996 but that the overall level of education in China was lower than in many other Asian countries. In all levels of education women were underrepresented and 72% of the illiterate were women. Poor families in rural areas were most likely to favour their sons' education than their daughters. In traditionally male dominated areas it is common that women need higher grades to be accepted than men, because of the belief that the women's ability will be reduced. (Rong and Shi, 2001) In female dominated areas males are accepted with lower grades to reduce the gender imbalance. (Cooke, 2001)

Ethnic minorities have higher rates of illiteracy and lower levels of education than the Han population. Rong and Shi have also calculated and compared the places for handicapped children in education with the number of handicapped children. They find that, gender, disabilities, province and rural/urban areas are important. Female, handicapped rural people in periphery provinces are the ones worst off. There are also studies showing that children of immigrated families have problems with enrolling in school. (Rong and Shi, 2001:119)

The illiteracy is decreasing with decreasing age. This could give the picture that the illiteracy will grow away. The illiteracy rate of people between 45 and 49 years is 20%; 30,7 % for females and 10,2 % for males, but for this generation the official statistics show school enrolment of 90% without any gender gap. Rong and Shi mean that this is an indication that many children drop out of school and/or lose their ability to read and write when they grow older. (2001:123) Among people over 65 years old 55% of the males and 95% of the females were illiterate or semi-literate. (Yu and Sarri, 1997)

Rong and Shi mean that there is political disagreement about educational policy and that the education lately has become less prioritised. They conclude that long-term investment in education and special programs for females, disabled people in rural and poor areas should be conducted. Otherwise, they mean, China could face difficulties with economic development and stability both politically and economically. (2001:112-113, 121-124)

4.2 Regional inequalities in education

Wang and Li (2003) have made a study of knowledge disparity, regional inequality and economic reforms in China. They find that the public spending on knowledge have increased from 1990 to 1998, as well as the regional disparity of the spending. They found that economic reform and decentralising have increased the inequality between regions. The fiscal decentralisation had the consequence that local governments had to finance their spending from revenues. This means that economically successful provinces can spend more on their education. This pattern was reinforced by the “let some get rich first” strategy, there the eastern coastal provinces benefited from central policies. In 1990 the western provinces had the highest public per capita spending while the eastern coastal provinces had the highest spending in 1998. Wang and Li found that public spending was a statistically significant factor that contributed to economic inequality between regions. (Wang and Li, 2003:393-394)

Rong and Shi (2001) find in their study that education in China is unequally distributed. They mean that China spends too little on education, only around 2,5% of the GDP in 1990. The amount spent per child is very different in different provinces; on average ranging from 422 to 2786 year 1996. The lack of education makes females, ethnical minorities, people over 40 years old and disabled people discriminated on the labour market, with difficulties in finding and keeping there jobs. (2001:120-121)

From 1990 until 1998 the educational attainment have increased and the regional disparities have decrease, according to Wang and Li. Both in 1990 and 1998 the western provinces had the lowest attainment. The highest attainment changed from the coastal provinces in 1990 to the central in 1998. Wang and Li explain this pattern from the re-emerging labour markets and the increased mobility of labour due to economic reforms and private initiative for education. The coastal provinces have had a high inflow of migrants and the rapid growth in the coastal regions have been increased both high- and low-skilled job opportunities. Even

though the public spending on education in the western provinces have been relatively high, it is not only the public spending that determinates educational attendance. Private opportunity cost can be high, especially in poorer areas. (Wang and Li, 2003:393, 395-396)

4.3 Inequalities in health

According to Liu et al (1999) the average health status in China has increased during the reform era, but the increase has been smaller than the increase before the reforms. The infant mortality rate has gone down from 49 per 1000 born in the 1970s to 42 per 1000 in 1995. But in the average figures big inequalities are hidden. Liu et al (1999) have found an increasing inequality between urban and rural areas in data from year 1985, 1986 and 1993. One study even shows increasing infant mortality in rural areas from the 1970s to the 1980s.

Yu and Sarri (1997) have compared infant mortality rates from official sources and adjusted mortality rates for all years from 1975 to 1990 (except for 1988). The adjusted rates are used since the official statistics are suspected to underreport the mortality rates especially for females. The major difference between the data is that in the adjusted mortality rates the rates of female mortality is higher than the male mortality for all years. Also the gender inequality is increasing from year to year until 1984. In the official statistics the male mortality rate is higher than the female rate for all years except 1986, 1989 and 1990.

The sex ratios at birth in China also have a gender bias. The ratio was rising during the 1980s and the “one child”-policy. Traditionally in China males have been given a higher value than females and the desire to have a son is strong. Accounts have been made that about 12 % of the females are not counted each year. The reasons for this can be selective abortion, infanticide, underreporting and abandonment. The mortality rate for infant aged one to four is also higher for girls than for boys and higher in rural areas compared to urban areas. (Yu and Sarri, 1997)

Inequality in life expectancy has risen between urban and rural areas for some age and gender groups. (Liu et al 1999) The average life expectancy for women is a couple of years higher than that for men in the official statistics. Also in the adjusted statistics the female life expectancy is generally higher but not as much. (Yu and Sarri, 1997) During the time of reforms the life expectancy in China has steadily increased. (Naughton, 2007:222)

There is a regional inequality in health figures between the different provinces in China. The health status is better in Beijing, Shanghai, Tianjing and the north eastern and eastern provinces compared to the southern provinces. (Yu, Sarri 1997:1893)

4.4 Inequalities in access to health

Since the social security shifted away from the work-unit, the social security has been decreased. Reforms in the health insurance did not start until the year 2000, and it gives a lower coverage than the work-unit system. More funds also have to come from the individual workers. (Naughton, 2007:205-206)

Akin et al (2005) have made a study about the equality in access to health care. They have used data from 1989 and 1997 from China Health and Nutrition Survey from 9 provinces in China. In this data they have measured a community's distance to the nearest clinic and hospital, the price of the health care, how long the waiting time is and the probability to see a (western) trained doctor.

Akin et al (2005) have found that the distance to clinics have decreased for cities, suburbs and rich as well as poor villages between 1989 and 1997. In contrast to Akin et al's founding, Liu et al (1999) found that the number of township clinics had decreased from 1980 to 1989. The different findings might be explained by the different time span. Akin et al. (2005) found that the distance to the closest hospital had generally increased. The increase was largest for suburbs and poor villages, in poorer provinces. Between 1980 and 1995 the number of hospitals was increasing. (Liu et al., 1999)

The explanation for this pattern Akin et al (2005) seek in the funding system of the health care. Until the mid 1980s the price of health care was set by the Central Price Commission to prices under the cost of providing the service. The change resulted in a lack of funding especially for poorer provinces and communities. One way to solve this problem was through user fees and unofficial price increases. Hospitals in poorer areas could not follow this practice to the same extent as richer areas. The lack of funding in poorer areas resulted in that both high skilled workers and equipment moved to richer areas. On the other hand departures from hospitals in poor areas could leave more room for clinics with lower cost and lower quality health care. (Akin et al, 2005)

4.5 The division between urban and rural income

During the socialistic era in China there were quite a lot of inequality between urban and rural citizens. When the reforms started in China equality was rising since rural areas were developing. Naughton (2007) means that the most equal time at all in China was during the beginning of the 1980s. At this time the urban-rural gap had decreased, but there were also to a large extent equality within urban and rural areas. In 1983 the Gini coefficient for China was 0,28, which made China one of the worlds most equal societies. Since then the inequality and the Gini coefficient have been rising. This is due to both the total inequality, but also to the rural and to the urban inequality respectively. The rural inequality is larger than the urban. One of the reasons for the increased inequality in rural areas is the town and village enterprises, which have created opportunities for incomes in mostly suburban areas. (Naughton, 2000) A study of Kai-yuen Tsui (1995) found that the inequality between provinces was lowest in mid 1980s. The data cover the years 1978 to 1989. The study finds that the inequality between provinces decreased until the mid 1980s and then started to increase.

Shinichiro Okushima and Hiroko Uchimura (2006) have made a study where they compare inequality in income in urban China 1988 and 1995 with economic reform. They found that the income inequality has risen from 1988 to 1995. The income gap between the ten provinces that are included in Okushima's and Uchimura's study and the inequality inside each province increased from 1988 to 1995. The income gap was also getting fixed since the provinces with high income 1988 were the ones with more growth until 1995, while the provinces with lower income were more stagnated. (Okushima and Uchimura, 2006:39-40).

Yang (1999) has made a study about income inequality between rural and urban areas in two provinces in 1986, 1988, 1992 and 1994. He finds that the income inequality have risen between both in general and between rural and urban areas. The rise in income inequality between rural and urban areas was the major reason for the total increase in inequality. Also Liu et all (1999) have found an increasing income gap between rural and urban China from the late 1980s.

Yang (1999) explains the increasing inequality between urban and rural areas with urban biased policies. Before 1978 the rural to urban migration were largely restricted even though the income and productivity were greater in urban areas then in rural areas. Policies were

made to reduce the inequality, the restriction on migration was relaxed and the prices for agriculture products were increased. This resulted in a decreased urban-rural income ratio from 2.9 in 1978 to 2.2 in 1985. The increased income inequality later on, Yang (1999) argues, are dependent on welfare privilege for urban citizens, inflation that was mostly driven by the urban areas and unequal investment of the government. The policies to reduce the inflation were also hitting the rural areas harder. Naughton (2007:219) means the market reforms have contributed to increased inequality since the reforms have helped the fast economic growth in urban areas.

4.6 Returns to human capital

Education is often seen as the most important human capital. According Naughton (2007) the literature of private returns to investment in education is relatively consistent. During the socialist era and in the beginning of the reforms private returns to education were scares. If people will receive returns from their investments in education, like higher wages, they will have more incentive to invest. The returns from investments in education were increasing from the early 1990s and have continued to increase. (Naughton, 2007:192-195)

Okushima and Uchimura have made a study where they analyse two groups of factors that may influence the wage – personal and the nature of the job. The personal factors include age, gender, education and membership of the Communist Party of China. The nature of the job includes ownership, sector and occupation. In 1988 the most important factor for income inequality was age followed by ownership. In 1995 age and ownership was still important but also sex (that nearly did not affect wage at all in 1988) and education became significant in explaining inequality. Also the studies that Naughton (2007:198) mention in his book has found decreased importance of age on wage. Okushima and Uchimura find that the shift in factors determining the wage is a result of economic reforms. In the old system wage was centrally determined, largely based on age. In 1995 the employers where freer to set the wage. In Guangdong, which has been at a front position of economic reforms, the importance of education is greater then in Anhui, which has had less reform. (Okushima and Uchimura, 2006:41-44) Wang and Li (2003) found that increased education was not automatically linked to higher personal returns. Wang and Li conclude that if one believe that an improved level of education leads to economic growth one should diverse the personal income in correspondence with education. (Wang and Li, 2003:393, 396-397)

Okushima and Uchimura (2006) make a contradictory conclusion compared to Wang and Li. They have found an increased importance of education on wage. The problem is people can not make free choices of how much education they want. Opportunities to attain education are linked to what region one comes from, what social class one belongs to, family background and the parent's education. Okushima and Uchimura (2006:49) conclude "These results indicate that income distribution has become increasingly unequal with less equality of opportunity in China."

5 Data analysis

5.1 Reliability of data

In the 1950s China started a household registration system. Prior to that only some data was collected. During 30 years from 1949 demography was a forbidden field and demographic data was seldom released. In 1979 China started to release demographic data both from present and previous periods. This data is said to be the best data concerning demography in China ever available. (Yu and Sarri, 1997)

The mortality rate from 1982 and 1990 censuses are said to be reliable for the 1980s, except for 1989 where underreport of death rates is suspected especially among infants and women. (Yu and Sarri, 1997) One contributing reason for handling the official demographic data with caution is the effect of the "One-Child Policy". The policy has created incentives to underreport the birth rates, especially for girls. In this way families could avoid penalties and local politicians could reach the goals of a slow population growth. In the year 2000, 12 percent more 10 year old children were reported than the number of new-born children in year 1990. (Naughton, 2007: 172, 177)

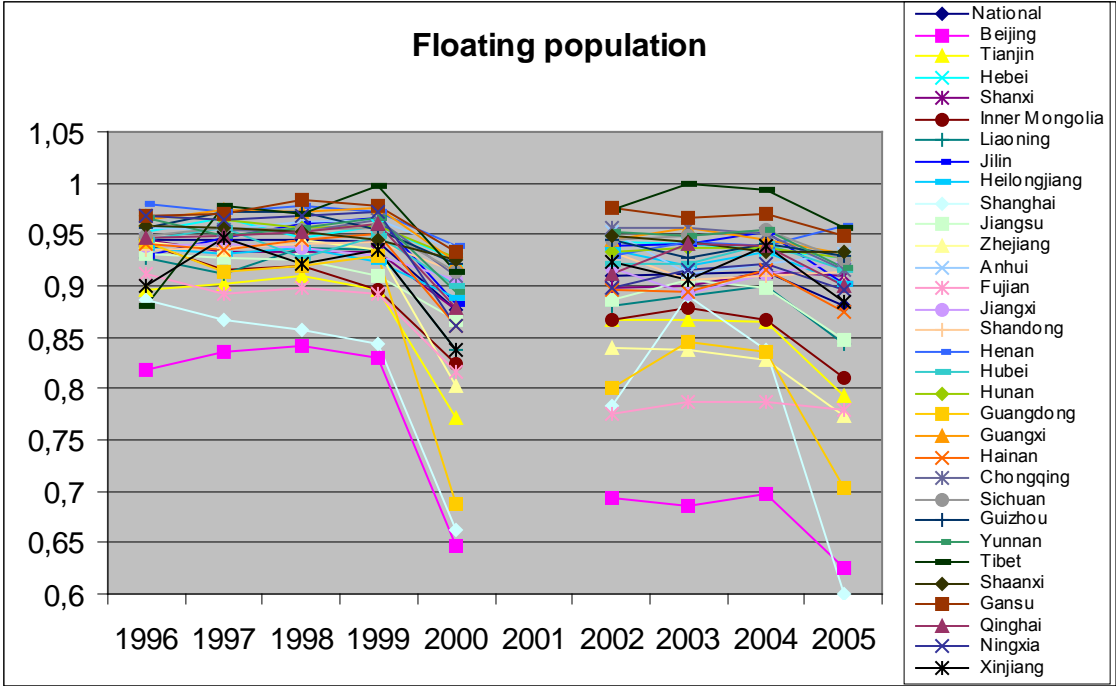
Also in the area of economic growth China's official data are the best data available. Never the less, the data should be used with caution. The official statistics have been criticised for undervaluing the impact of inflation. According to this critic that might mean that the growth rate in China has been overestimated by 1,6 percentage points per year for 1978 to 1998. A second problem with the statistics is to correctly calculate the contribution of products with changing prices, both new products, like computers, but also old products, like agricultural output and housing, that previous were under priced. A third source of uncertainty regarding the figures is that they might be influenced by politicians. The National Bureau of Statistics has monopoly on the collection of statistics. Data from 1998 and 1999 should be viewed with

extra caution since the data collecting method was changed to incorporate the increasing share of small and medium sized firms. (Naughton, 2007:141)

The official data on income of urban and rural households is also biased. The early data from 1978 until 1985 overestimate the rate of growth of rural households. During this time the data says that the rural income was growing with the double rate of the urban income. It is probable that the rural income was growing faster than the urban in this period, but the rate is overestimated. This is because of the lack of reliable consumer price index for rural areas. However, the later the data the more reliable it is. The data on income is collected from households that have their residence at the same place as they are registered. This leaves out immigration groups from the calculations. Another thought to keep in mind when comparing urban and rural income in China is that the income measures rarely include benefits and subsidised services that urban residents receive. The amount of these benefits has been varying over time depending on the reforms. (Naughton, 2007)

5.2 Floating population

The definition of floating population has been varying in China’s statistics. This means that it could be hard to compare data, since different definitions have generated different estimates of the floating population over time. (Naughton 2007:129)



5.1 Share of people living where they have their registration.

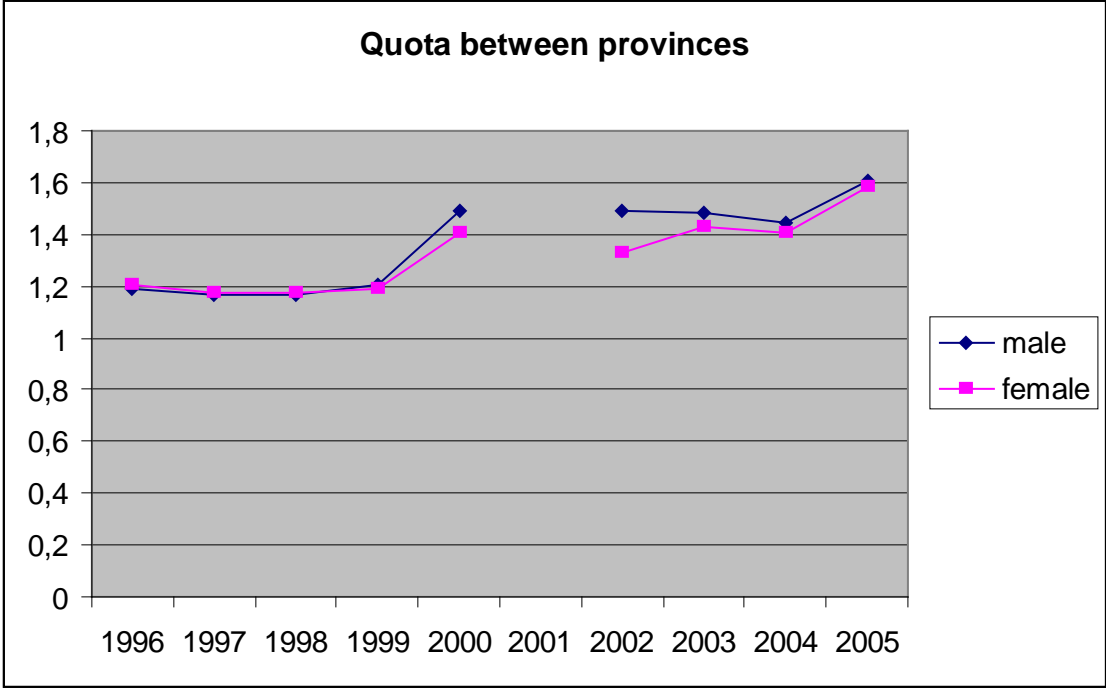
In diagram 5.1 you can see the share of people that have their registered residence there they live. This is calculated from absolute numbers of people living in an area and that are registered there. According to the data, between 94 and 95 percent were living where they had their registration from 1996-1999, nation wide. In the year 2000 there was a big decline to less than 88 percent. The next available observation is from the year 2002, when slightly less than 91 percent lived where they were registered. In 2003 and 2004 it was a bit above 91 percent, only to decline in 2005 to just above 88 percent. This means that the number of people living where they do not have their registration has been increasing.

However, the effects of living where you do not have your registration, *hokou*, might be less severe in the new millennium compared to earlier. Songyan (2004) means that the society has become more open for immigrants lately. It might be hard to find the causality, if more including policies for people without the right registration increased the incentive to immigrate or if the larger immigration were generating pressure on the society to be more inclusive to immigrants.

The increased level of people not living where they have their registration might also be explained by increased difference between urban and rural income. From 1999 to 2003 the urban to rural income quota rose from 2,6 to 3,2. One reason to move from rural to urban areas might be better economic opportunities. One should also bear in mind that migration was harder earlier, and the increased inequality in rights still might mean more equality of opportunities.

During both the 1990s and after the year 2000 Beijing had one of the lowest rate of people registered where they lived, 81 to 84 in the end of the 1990. Between 2000 and 2005 the corresponding percentage was 62 to 70 percent. Shanghai had fewer than 90 percent of the people living where they had registration for all of the period. Other provinces with low rates of people living where they had residence, at least from year 2000 and onward, are Fujian, Guangdong, Zhejiang and Tianjin. Beijing, Shanghai and Tianjin are to great extent urban areas. Urban areas generally offer more economic opportunities. Immigration to urban areas can explain why more people do not have a local registration in Beijing, Shanghai and Tianjin. The reason for the increased level of people living where they do not have a registration in the new millennium in Guangdong and Fujian would probably be connected to the economic reforms that increased the economic opportunities in these provinces. Tibet and Gansu had among the

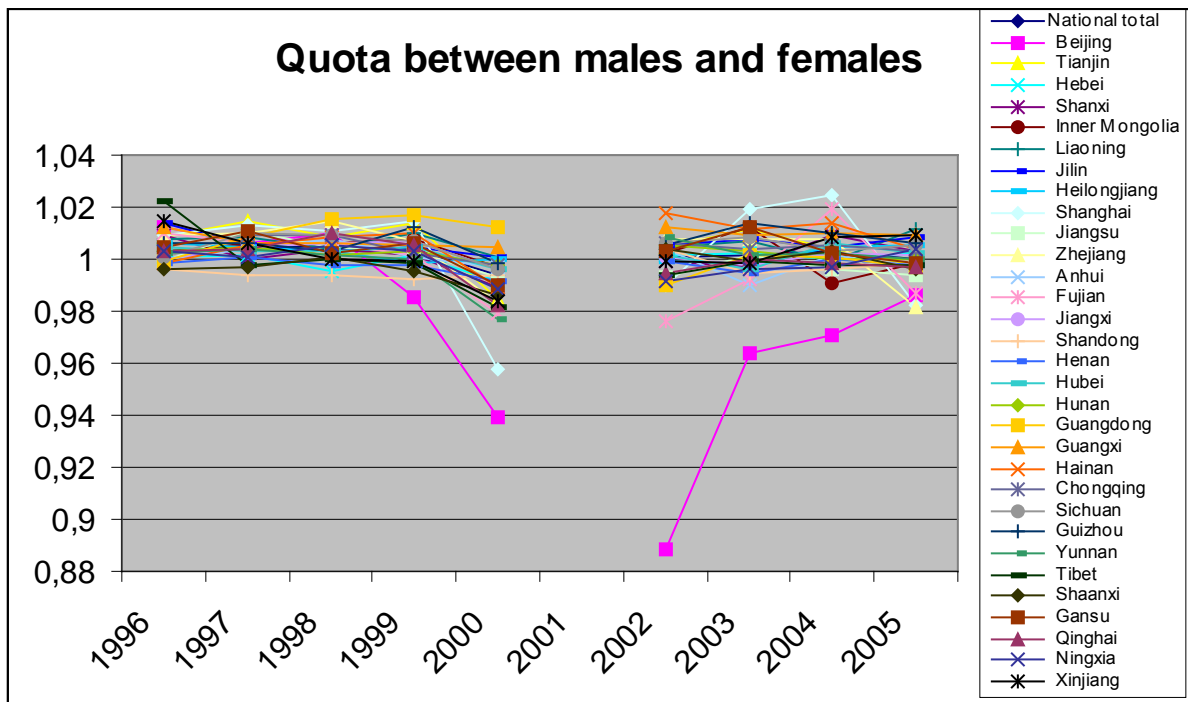
fewest people not living where they were registered, which might be explained by that they are rural areas.



5.2 Quota between the provinces where the most and the fewest people live where they are registered.

In diagram 5.2 you can see the quota between the provinces where most and fewest people live where they are registered. The difference between the provinces is smaller in the 1990s than in the new millennium. This could be due to the increased economic opportunities created in urban areas and export producing industries. The difference for males are larger then the difference for females after the year 2000.

Diagram 5.3 shows the quota of the percent males divided by the percent female living where they have there registration. The quota is essentially one on a national level for all the years indicating that there is no big difference between males and females. However the quotas for all years, except year the 2000, are a bit higher than one indicating that more males live without registration. The difference is much bigger between provinces than between males and females. From the end of the 1990s Beijing has a quota under one, much lower than the other provinces indicating that more females than males lives in Beijing without correct registration. This may indicate that more females than males immigrate to Beijing.

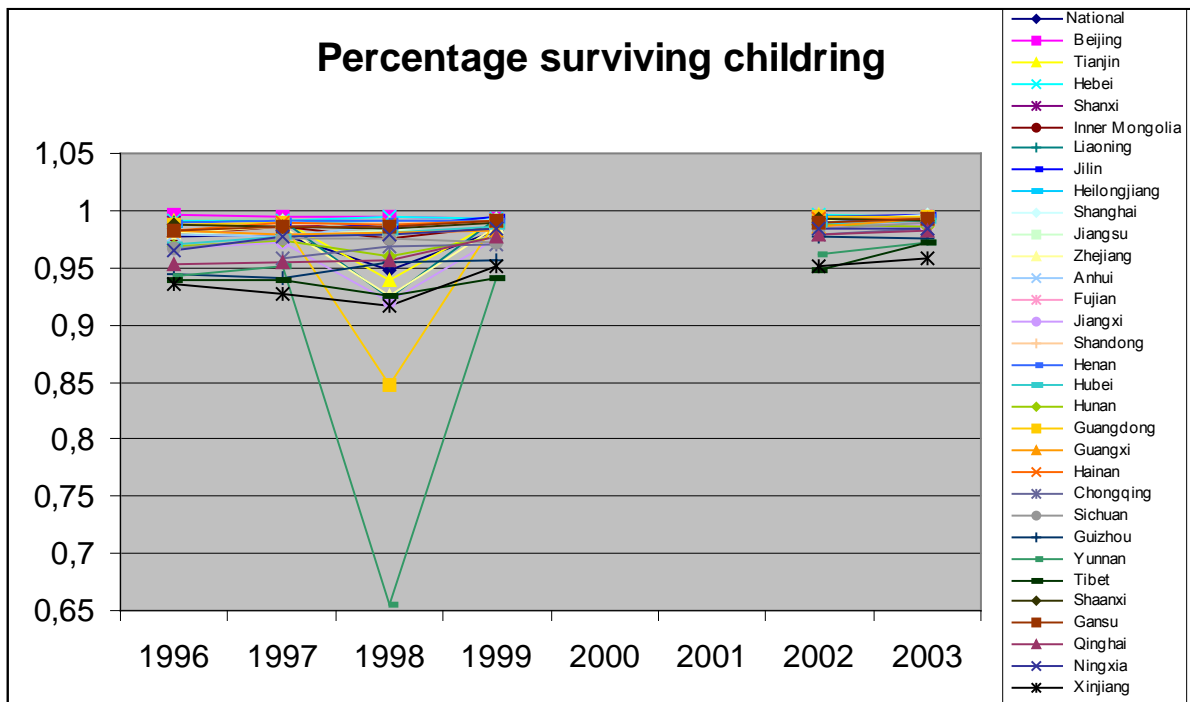


5.3 Quota between males and females.

5.3 Health

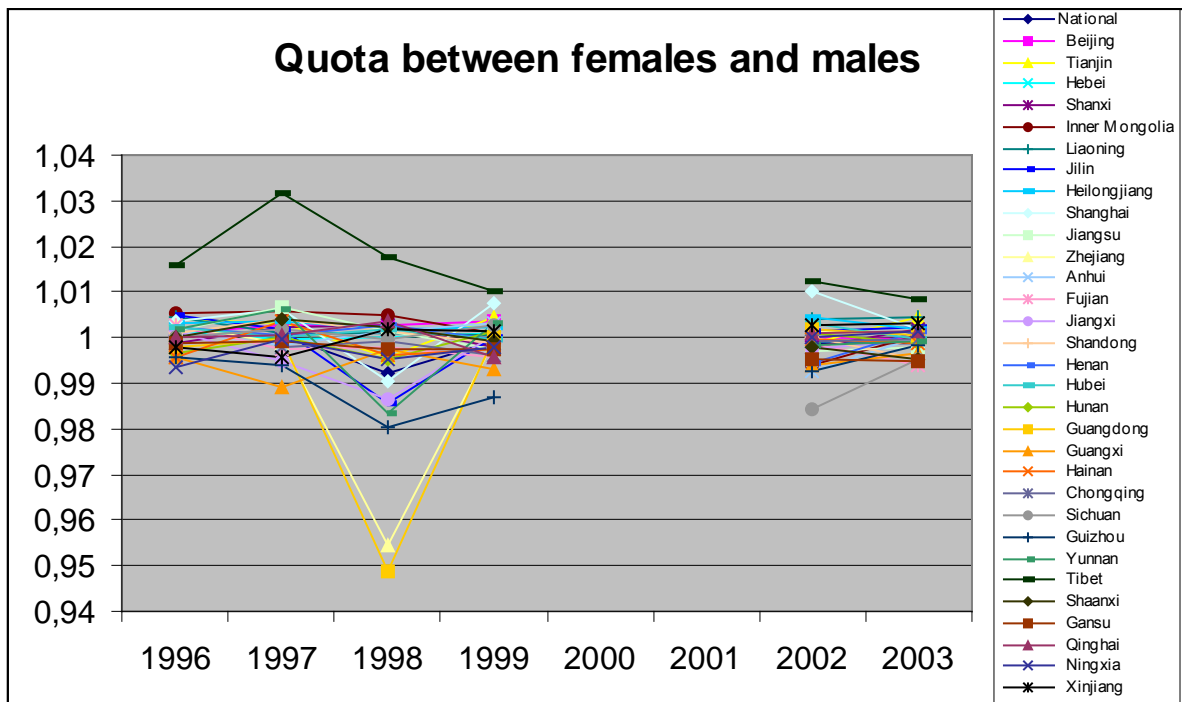
5.3.1 Child mortality and sex ratio at birth

The Statistic Yearbook of China gives information about the number of total live births, in total and disaggregated sex, and data on living children. From this data the percentage of surviving children has been calculated, by dividing the number of living children with number of live birth. The data differ year from year in the sense that some year's the data is for live birth of women aged 15-64 and in other years 15-49. However if the percentage of surviving children do not differ so much with the age of the mother, or if the number of children born by women aged 49-64 is rather small, the difference in measurement between the years should not bias the data to much.



5.4 Share surviving children.

On a national level the rate of surviving children has increased from under 98 percent in 1996 to nearly 99 percent in year 2003. Xinjiang, Tibet, Yunnan and Guizhou had less than 95 percent surviving children in 1996, all of the provinces had more than 95 percent surviving children in 2003. As shown in diagram 5.4 something happened in 1998. The national total of surviving children declined from 97,9 percent in 1997 to 94,7 in 1998 and were then rising to 98,2 in 1999. The rate of surviving children decreased most in Yunnan, to 65,5 percent and Guangdong, to 84,8 percent. Other provinces did not see any decrease in 1998. Beijing, Hebei and Henan stayed at high survival rates, and in Hunan and Jiangxi the rate of survival actually increased. The provinces with highest survival rate were Beijing in 1996 and 1997, Hebei in 1998 and 2002, and Jilin in 1999 and 2003. Also Tianjin and Liaoning had relative high rate of survival. The higher survival rate in are in north east correspond with that this area was relatively good off even before the reforms, while the provinces with low survival rate were less developed.

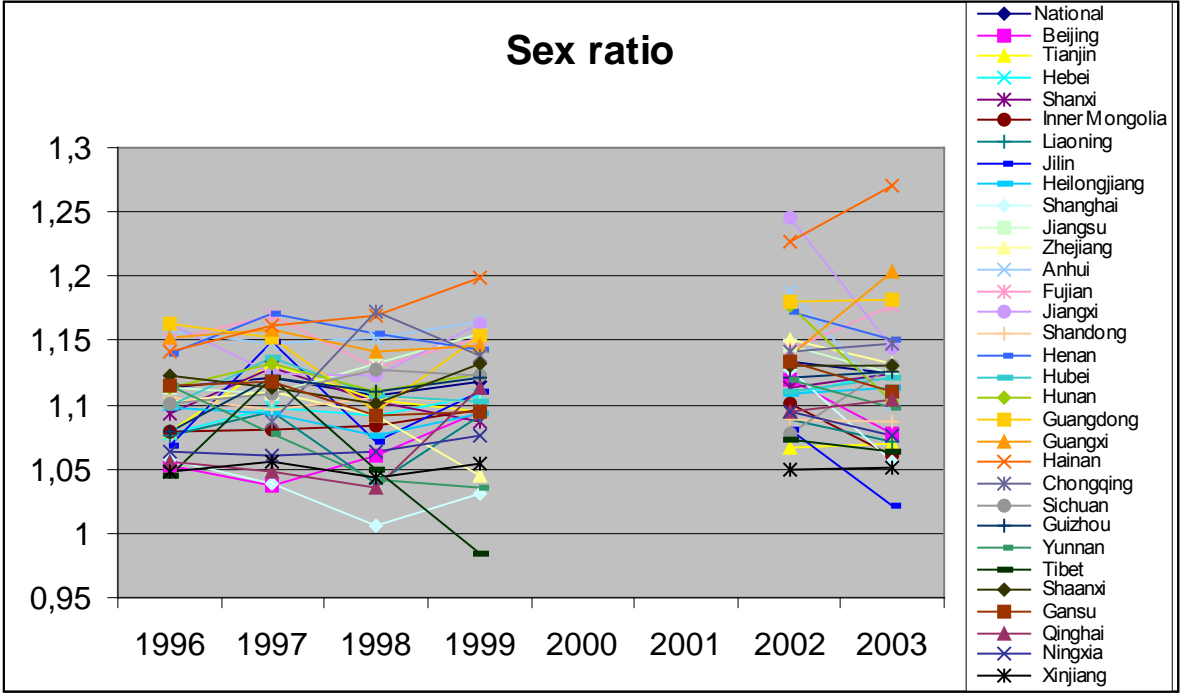


5.5 Quota between surviving females and males.

Diagram 5.5 shows the quota of surviving females divided by surviving males. Nation wide the quota was slightly over 1 in 1996 and 1997, indicating that the survival rate among females was a bit higher. In 1998, the same year as the survival rate generally decreased the female to male quota was decreasing. In 2002 and 2003 the quota stayed just under one. The higher survival rates for females for the mid 1990s should be regarded with some caution since data is known to be reported with to low female mortality. Even the data for the other years that indicate a slightly higher male survival rate, might underestimate the female mortality.

Also in diagram 5.5 it visible that something happens in 1998. In Guangdong the quota of surviving females decreased to 0,949 and in Zhejiang to 0,955. In Guizhou the quota decreased but not as drastically since it already was on a low level. Both Shanghai and Yunnan had a quota over one in 1997 and 1999 but below one in 1998. It seems to be more or less the same provinces that saw the general decrease in survival rates in 1998 as the ones with lower female to male quota of survival (Guangdong, Yunnan, Jiangxi and Zhejiang). This indicates that the lower survival rate affected female children harder than the males. It is hard to explain why the survival rate decreased as much as it did in 1998. It is hard to believe that the survival rate just dropped for that year. Maybe the change in the data could also be explained by a different method of collecting the data. The big shifts in the data remind us that the data might not be fully reliable.

In 1996-1999 Tibet has a quota higher than the other provinces. In 2002 and 2003 Tibet still had a higher quota than the others but not as much as in the 1990s. Liaoning and Heilongjiang in the northwest have higher female survival for all years. Guagxi, Guizhou, Chongqing and Gansu have higher male survival rates for all years. This means that the female survival rate is higher in areas that are generally better off.

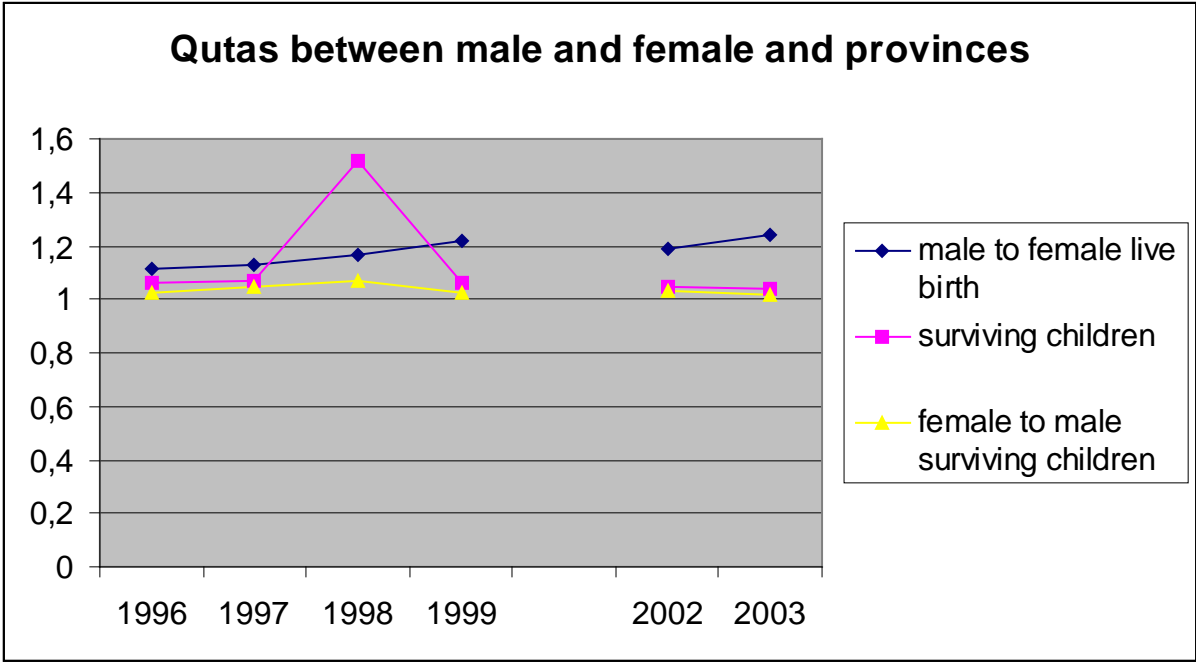


5.6 Sex ratio.

In diagram 5.6 we can see the quota of the number of male live births divided by the number of female live births, also called the sex ratio at birth. The quota was lower in the end of the 1990s than in the new millennium, but still more males than what is considered as naturally was born. The one child policy, the cultural desire for sons, and underreporting of females could probably explain the unnatural high sex ratio.

Hainan had one of the higher quotas in 1996 and the quota increased and became as high as 1,27 in 2003. Fujian, Jiangxi and Guangxi have relatively high quotas for all the data. Xinjiang, Shanghai and Beijing had some of the lowest quotas in the end of the 1990s, and Xinjiang also after the year 2000. In 1996 Tibet had a quite low quota but it was increasing to a relatively high quota of 1,12 in 1997 and then started to decrease. In 1999 Tibet had the only sex ratio under one. Maybe the relatively low sex ratio in Xingjiang and Tibet could be explained by the fact that the “one child”-policy was not implemented as strictly in rural areas. The possibility of having more children may make the acceptance of a daughter bigger.

The relatively low, but still on the upper limit of what is normal, sex ratio in Beijing and Shanghai, might have something to do with the need of a son, for the support of the parents old days, could be smaller in cities since the social security generally is better in the cities.



5.7 Quotas between male and female and provinces.

Diagram 5.7 shows the difference between provinces with highest and lowest rate of survival, highest and lowest female to male quota of survival and highest and lowest sex ratio at birth. The sex ratio at birth is differing the most between provinces and is also increasing. The quota of the female to male surviving children differ the least between the provinces. The difference between provinces regarding surviving children and the female to male quota of surviving children seem to be rather constant over time or possibly slightly decreasing. The difference between the provinces are quite small, but still larger than the difference between males and females. It is a bit surprising that the difference between the provinces is as small as it is. Since the price system of healthcare was decentralised one would expect the difference in health between regions to increase in response to different economic situations. If there was data disaggregated on rural and urban areas maybe this data would show bigger inequalities.

5.3.2 Life expectancy

The available data on life expectancy is rarer than the data on live births and living children. The life expectancy nation wide has increased from 67,9 in 1981 to 68,55 in 1990 and to 71,4 in 2000. From 1978 and 1980 there is available data on life expectancy from some selected areas. The data from 1981 are from the whole country and is probably more reliable. The data

from 1978 predicts a 3,4 years longer life for people living in cities compared to people living in counties.

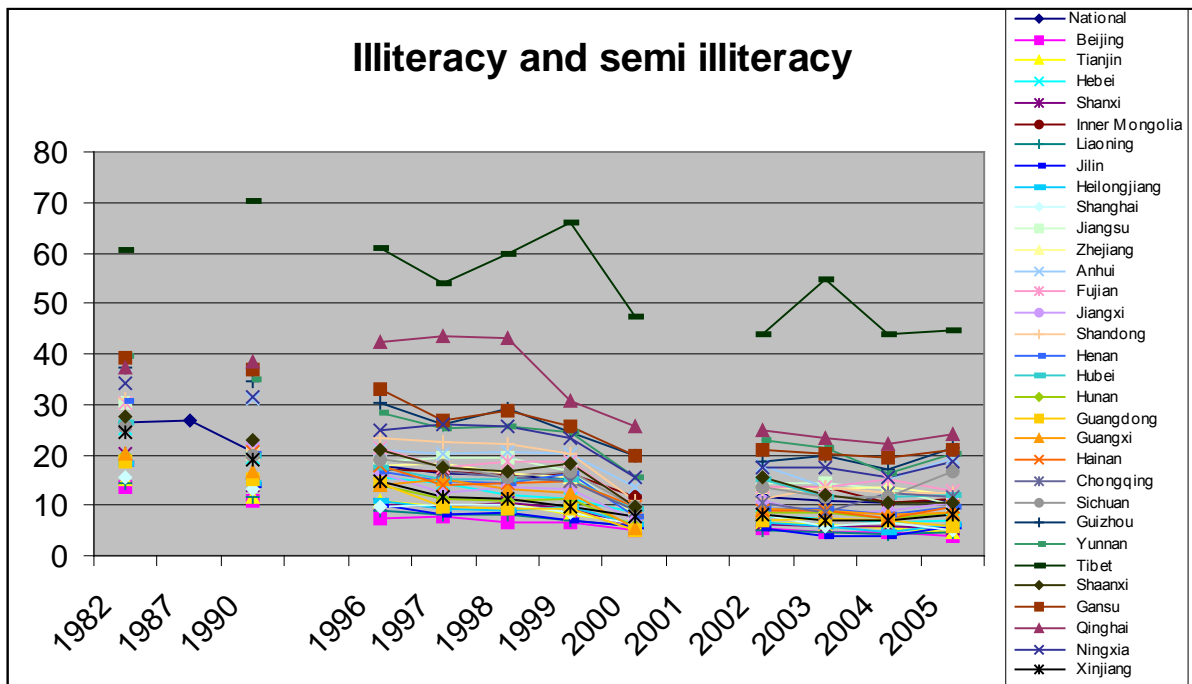
On average the females have 3 years longer life expectancy in 1978, 3,8 in cities and 2,5 in counties. In 1980 females are reported to have 2,3 years longer life expectancy and in 1981 2,9 years. The advantage of the females increased to 3,6 years in 1990 and then to nearly 4 years in year 2000. This indicates that females have gotten better off. The lowest difference in life expectancy between male and female in 1990 was in Xinjiang and the highest in Hainan. In the year 2000 Jiangxi had the lowest difference between male and female and Guangdong the highest. Gansu had the second lowest difference for both years. The difference between provinces regarding female to male life expectancy was greater in 1990 then in 2000.

The difference between the highest life expectancy (Shanghai 74,9 year) and the lowest (Tibet 59,64 years) life expectancy was a bit more than 15 years in 1990 and a bit less than 14 years in year 2000 (Shanghai 78,14 and Tibet 64,37). This indicates that the province is more important than if a person lives in a city or in a county, both for males and females. It also indicates that the life expectancy is lower in counties and that females are relatively worse off in counties since the difference between male and female life expectancy are lower in the counties.

5.4 Education

5.4.1 Illiteracy rate

There are relatively good availability of data on illiteracy rates disaggregated on females and males. This data comes from statistics on illiteracy and semi-literacy on the population aged 15 and above. The percentage of illiterates and semi-illiterates is given in the data source for all years except for 1982 and 1990. For these two years the illiteracy rate is calculated from the numbers of illiterate and semi-literate divided on the total population. For 1982 the illiteracy rate are for 12 years old and above, for 1990 the data source does not say the age of the illiterate. Nation wide the illiterates were around 26-27 percent in 1980s. From this level the illiteracy rate decreased to 20 percent in 1990 and then continued to decrease from just below 18 percent in 1996 to just above 15 in 1999. In the year 2000 the rate falls down to 9 percent. The next available observation is from 2002 and shows an illiteracy rate of 11,6 percent. After this the rate decreased to a new bottom level at 10,3 percent in 2004 and then increased to just above 11 percent in 2004.



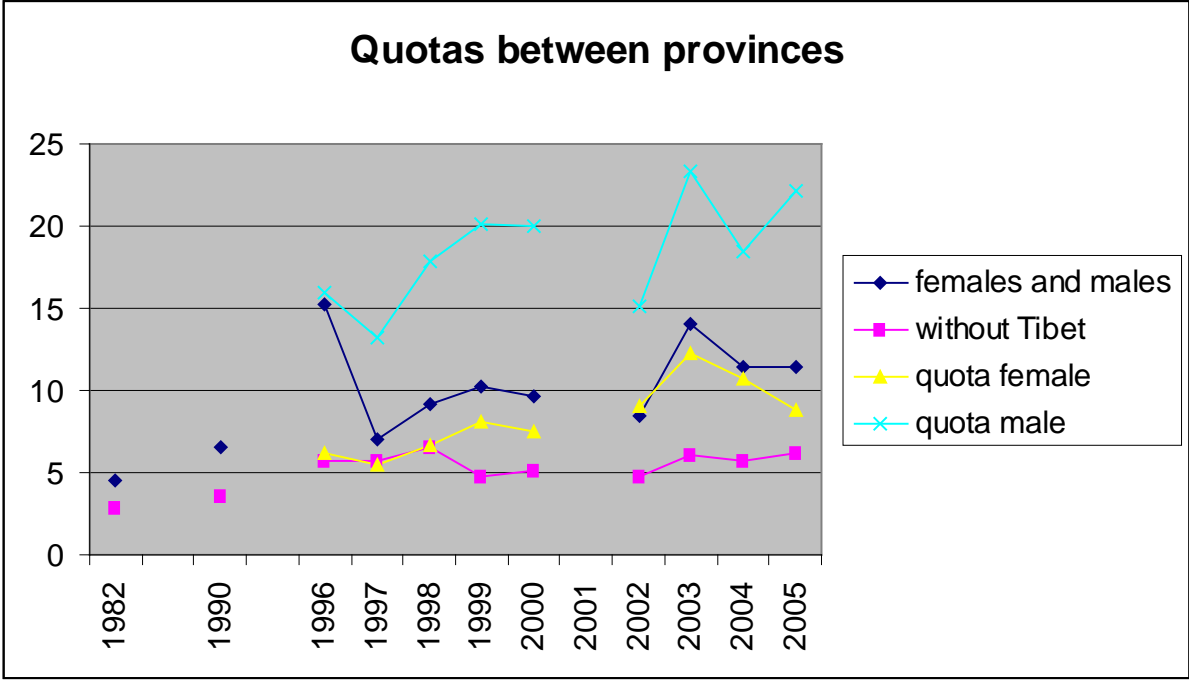
5.8 Percent of illiteracy and semi-illiteracy.

Tibet has the highest illiteracy rate in all the data. If one looks at the data from 1999 and 2000, in diagram 5.8, it looks like the illiteracy rate decreased 20 percentage points from one year to another. This data might be hard to believe. The higher illiteracy rate and lower life expectancy in Tibet may be connected to that the majority in Tibet are Tibetans, an ethnic minority. China took control over Tibet in 1950 using military force. Since then Tibet has been under the rule of the CCP with little autonomy. (Davis, 2007)

Qinghai has the second highest illiteracy rates from 1990. According to the data the illiteracy rate rose from 37 percent in 1983 to 38 in 1990 to 42 in 1996, after that the illiteracy rate followed the more general picture and was declining. Gansu and Guizhou have relatively high rates of illiteracy in all the data, as well as Yunnan. For most of the years Beijing, Liaoning and Jilin have the lowest illiteracy rates. Heilongjiang, Tianjin, Shanghai and Shanxi also have low illiteracy rates. The provinces with the highest and lowest levels seem to be quite the same over time.

In diagram 5.9 you can see the quota between the province with the highest and the lowest illiteracy rate. The difference between provinces with regard to illiteracy is higher than regard to health and rights (measured as floating population). Tibet has a much higher illiteracy rate than the other provinces. Because of that a quota between the highest and lowest illiteracy excluding Tibet has also been calculated. The quota “females and males” shows the difference

in total illiteracy for both females and males. The quota “without Tibet” shows the quota between provinces regarding total illiteracy rate excluding Tibet. Excluding Tibet the quota was nearly 3 in 1982 and increased to 3,6 in 1990. From the mid 1990s the quota was around 6, but a bit lower around the millennium. The difference in illiteracy rates is bigger among males (see “quota male”) than between females (see “quota female”).

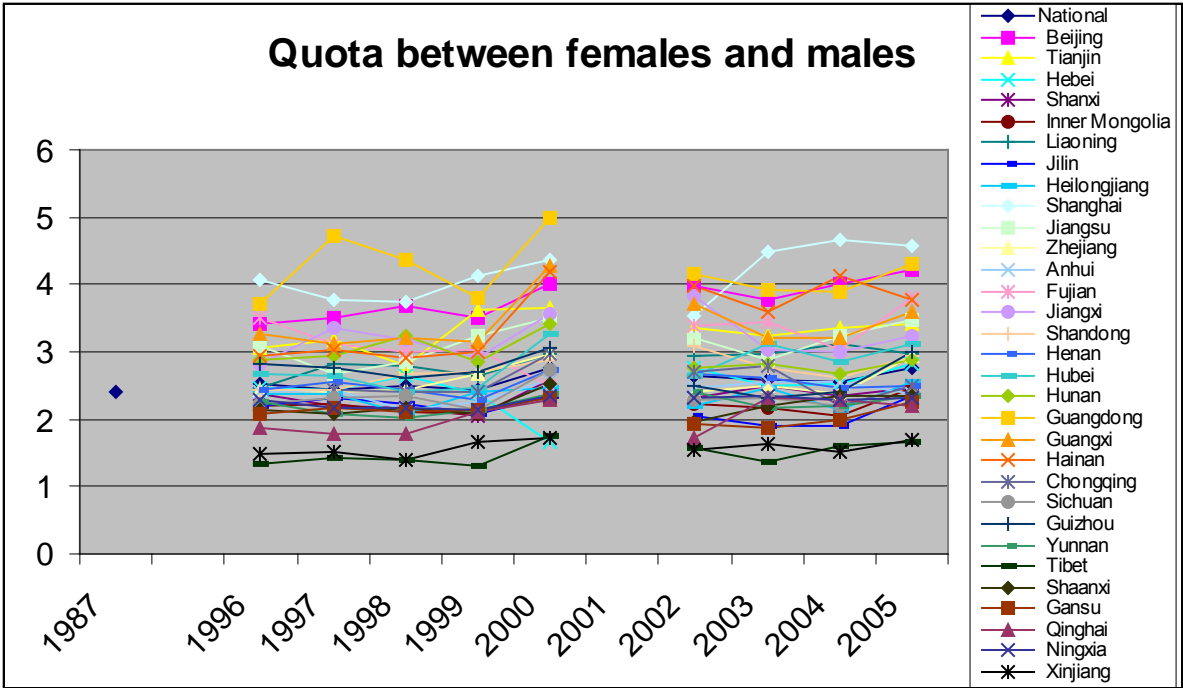


5.9 Quotas between the provinces with highest and lowest illiteracy and semi-illiteracy rates.

The inequality between provinces in illiteracy rate has increased from the 1980s and early 1990s. Wang and Li (2003) explain the increasing difference in funds for education in different areas between 1990 and 1998 to the increasing degree of decentralisation in China. However Naughton (2007) describes that the funds in the beginning of the transition were coming from different regions to the centre, then in the 1980s the funds were going as much out from the centre as in to it, and then with the new tax reforms from the mid 1990s that the funds were going directly to the centre and then transferred out. Those two pictures are a bit contradictory. The increased attempt from the central government to distribute more equally in the new millennium is hard to see in the data. The difference between the provinces was lower in year 1999 and 2000 and then increased to the year 2003.

In diagram 5.10 you see the quota of female to male illiteracy. The inequality in education between males and females are bigger than the inequality regarding health and rights. Nation wide the quota was around 2,4 in 1987. In the mid 1990s it was around 2,5. There are two

peaks in the years 2000 and 2005 where the quota is above 2,75. Generally the quota is lower in the 1990s (between 2,4 and 2,6) and higher after the year 2000 (from 2,6 and up). The disparities between the provinces are quite large from quotas around 1,5 to quotas approaching 5. Tibet and Xinjiang have the lowest quotas but also Gansu, Jilin and Qinghai have relatively low quotas. It seems like provinces with high illiteracy rates have lower difference between females and males. Guangdong, Shanghai, Beijing and Hainan are among the provinces with the highest quotas. It seems like provinces with lower illiteracy rates have bigger female to male quotas with the exception of Jilin.



5.10 Quota between female and male illiteracy and semi-illiteracy.

The general decrease of illiteracy is positive but the increasing difference between males and females is not. This might be even more worrying because of the tendency that the provinces with low illiteracy have higher gender inequality. If this pattern will continue, decreased illiteracy will lead to even higher gender inequalities, even if both groups would get better off. If this trend is compared to the increasing importance of education as a determinant of wage it can also generate an increased income gap.

Data on illiteracy rates for urban and rural areas have only been available for the year 2000. On a national level the illiteracy in rural areas are a bit above 8 percent and in urban areas just above 4 percent. Tibet, Qinghai, Gansu and Ningxia in the inland parts of China has the highest rural illiteracy, all over 17 percent, in Tibet the rate is as high as 35,9. The highest

urban illiteracy rates are found in Tibet, Qinghai, Anhui and Guizhou. Of these provinces only Tibet has over 17 percent urban illiteracy rate. This data is found in China Statistical yearbook of 2001. In the yearbook of 2002 illiteracy rates for the year 2000 are also given. However these two data sources do not match each other. The total illiteracy rate for Tibet in 2000 is over 47 percent according to the yearbook of 2002. This is not consistent with the illiteracy rates for both urban and rural areas being under 35,9 percent in the yearbook of 2001. This once again shows that one has to be careful when interpreting the data.

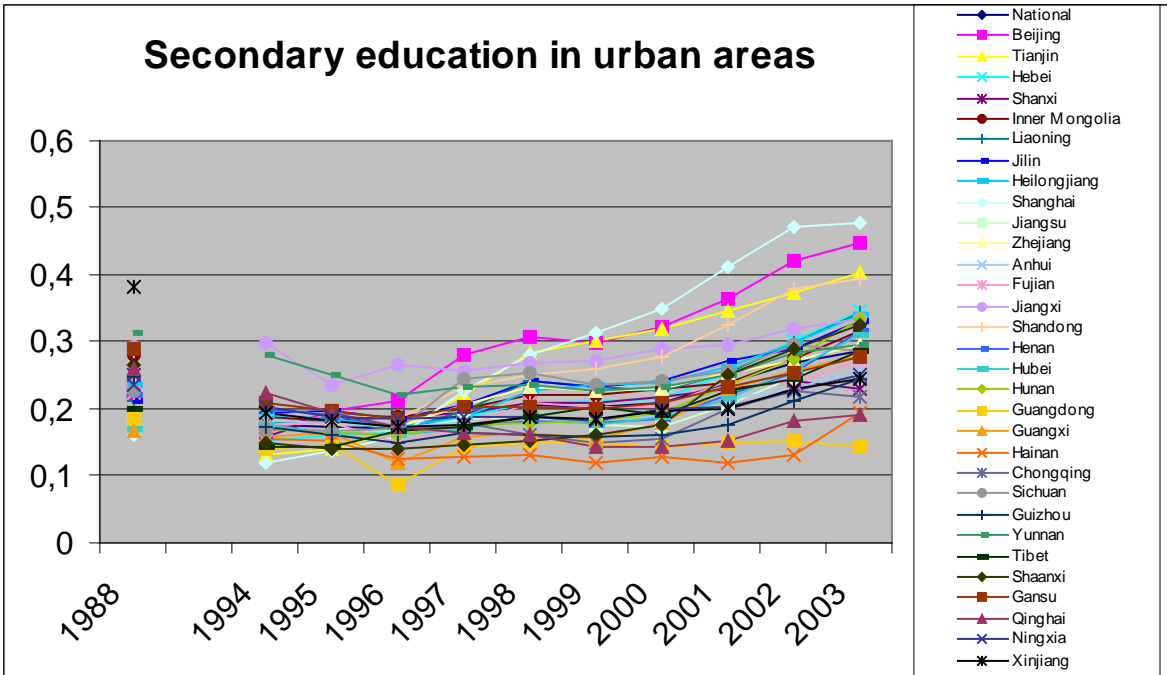
The lowest rural illiteracy rates are in Guangxi, Shanxi, Guangdong and Hunan and the lowest urban in Hebei, Hunan, Guangxi and Guangdong. The data from 2000 on total illiteracy shows that Beijing, Guangdong, Gungxi and Shanxi has the lowest rates. At a first look this can seem like a contradiction but considering that the different provinces have different levels of urbanisation the data is more understandable.

If one compare the rural to urban illiteracy rate quota on a national level it is just above 2. The biggest difference between rural and urban areas can be found in Gansu, Hebei, Ningxia and Qinghai with quotas around 3. Hence the biggest difference between rural and urban areas can be found in provinces which are among those with the highest illiteracy rates, with the exception of Hebei. The lowest differences can be found in Heilongjiang, Guangxi, Jiangsu and Xinjiang with quotas around 1,5. The quota between the highest and lowest illiteracy rates in urban areas are around 7,3 and in rural areas 8,3. The biggest difference in illiteracy rates are between provinces, not within them.

5.4.2 Enrolment rates, secondary education and the urban rural divide

It is hard to find data to compare enrolment rates between urban and rural areas. In yearbooks it is possible to find the number of enrolled people by province and urban areas and rural areas. The problem is to find data on how many people that live in urban and rural areas and hence to calculate the enrolment rates. However the number of enrolled people can still be used to understand the inequality. What you can see in diagram 5.12 is how many people that graduated from secondary school compared to how many that are enrolled in primary school. Secondary education are said to give high personal returns. In this way a degree from secondary education should influence what a person is able to do and be. This measure does not give any information about how high the enrolment rates are but it gives a proxy of how likely it is that people enrolled in primary education graduates from secondary education. The

enrolment rates from primary education are chosen because it probably gives the highest number of people, it does not exclude people that drop out of school or never graduates from primary school. The enrolment rates are also reported to be high for China.

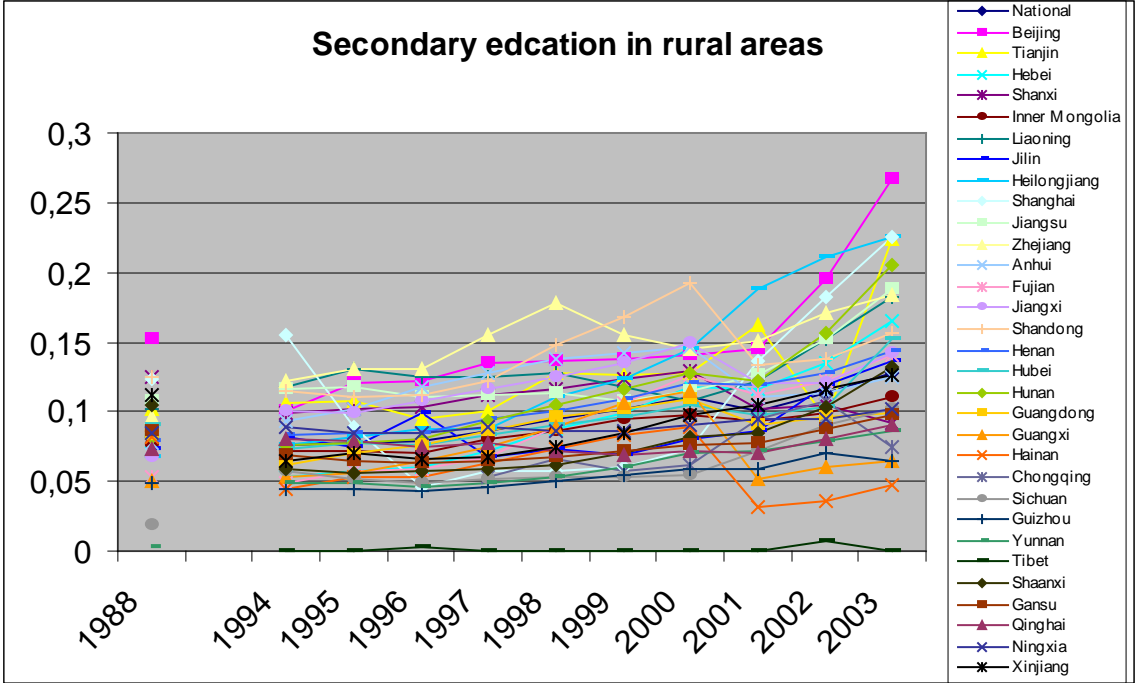


5.12 Number of graduates from secondary education divided with number of people enrolled in primary education in urban areas.

In diagram 5.12 you can see the number of graduates from secondary education divided with number of people enrolled in primary education in urban areas. Nation wide the quota has first decreased from 0,217 in 1988 to 0,176 in 1994 and then increased to 0,287 in 2003. In the mid 1990s the quota was decreasing slightly from 0,176 in 1994 to 0,174 in 1996. In the late 1990s the rate was increasing to around 0,2 and was staying on that level until the year 2000. In the new millennium the quota started to increase to 0,287 in 2003. This indicates that more people of the ones which are once enrolled in primary education also graduates from secondary education in urban areas.

The provinces which have had the highest quota as well as the provinces with the lowest quota have been changing over time. Shanghai had the lowest quota in 1988, 1994 and 1995, after that the quota started to increase both absolute and relative to the other provinces and became the third highest in 1998. From 1999 to 2003 Shanghai had the highest quota. Tianjin and Beijing had a similar pattern as Shanghai. Hainan changed its relative position but in the opposite way. In 1988 Hainan had a quota above the average, but then the quota was decreasing both absolute and relative until 1996. From 1997 to 2002 Hainan had the lowest

quota. The quotas of Xinjiang and Qinghai have similar patterns as Hainan. Yunnan had one of the highest quotas until 1997 when the quota was relative decreasing but still stayed over the average. Guangdong has one of the lowest quotas for all of the years. Jiangxi has one of the higher quotas for all of the years.

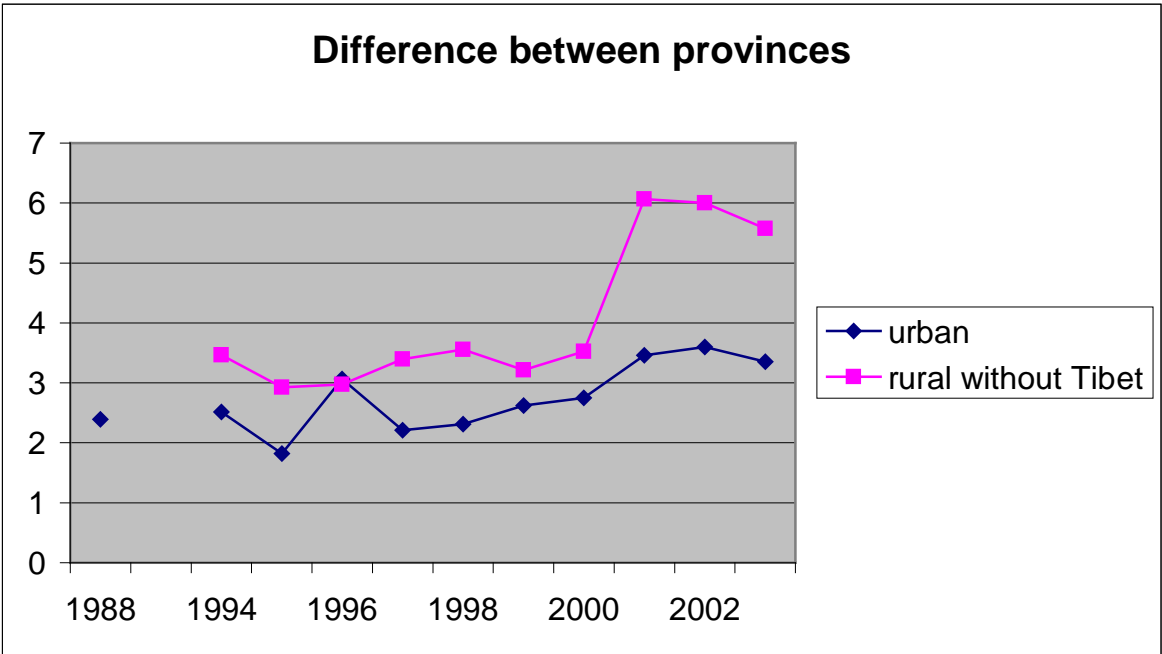


5.13 Number of graduates from secondary education divided with number of people enrolled in primary education in rural areas.

Diagram 5.13 shows the quota of graduates divided by enrolled persons in rural areas. The national average of the quota is much lower for urban areas, ranging from 0,076 in 1994 to 0,128 in 2003. The trend in rural areas seems to be that the relative numbers of graduates from secondary education increase from the 1990s to the new millennium. The quota was 0,082 in year 1988, higher than 1994. This pattern is similar to the one of the quota for urban areas and if the data is correct means that less people once enrolled in primary education graduates from secondary education in the mid 1990s than in the late 1980s. This could both mean that less people graduate from secondary education but also that the people enrolled in primary education increase. However if one looks at the level of people with secondary education there is no sign of decrease from the 1980s to the 1990s. This, as well as the increasing literacy, might indicate that there was no real decrease in secondary graduates but an increase in enrolment to primary education.

The data for Tibet is far below the others. The highest level for rural areas in Tibet are in 2002, but the quota is still very low, only 0,007. Except Tibet, Guizhou, Sichuan and Yunnan,

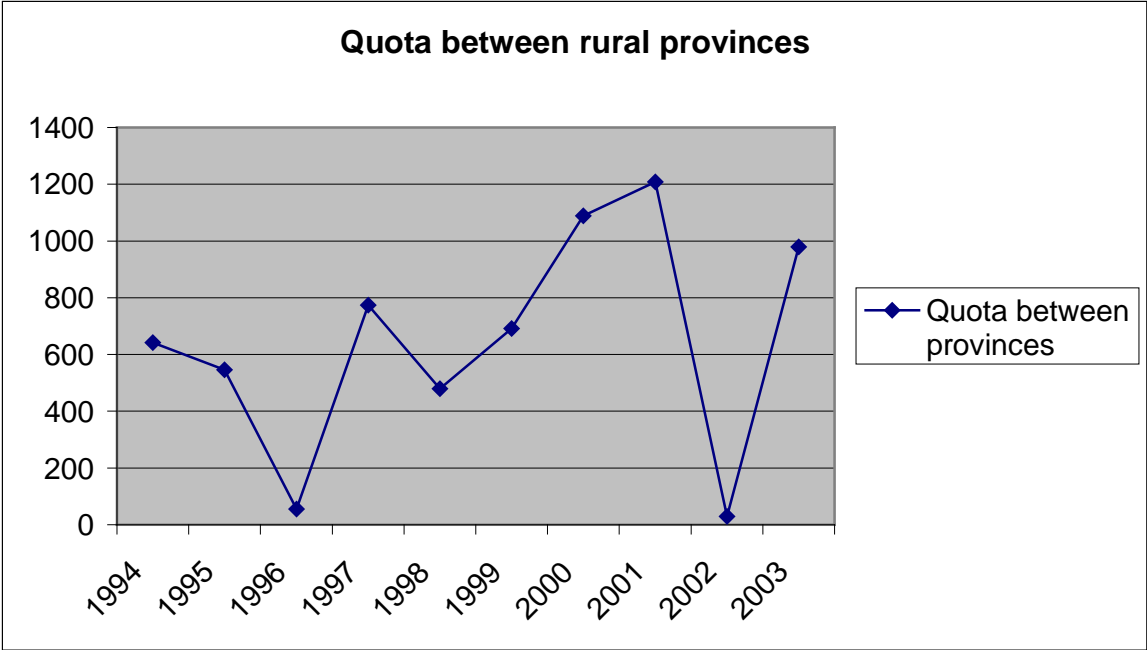
in the south east, have some of the lowest levels all years. Guangxi and Hainan have in the mid 1990s some of the lowest levels, but increased until the year 2000 when they had average levels. In the new millennium their levels were decreasing and became among the lowest. Beijing, Zhejiang and Shangdong have high quotas, even if Shandong's quota relative gets lower after the new millennium. Heilongjiang had one of the lowest quotas in 1988 but the quota was increasing and in 2001 and 2002 Heilongjiang had the highest quota. Shanghai's quota was one of the highest in 1988 and 1994 and then become one of the lowest from 1996 until 2000. Then, in the new millennium, Shanghai again had one of the highest quotas. Maybe the changing relative position of the provinces can be explained by a first increase in primary enrolment and later increase of the number of secondary graduates. The provinces with the u-shaped pattern are among the most developed.



5.14 Quota between provinces with the highest and the lowest rates of graduates from secondary education compared with enrolled students in primary education for urban areas and rural areas, excluding Tibet.

Diagram 5.14 shows the quota between provinces with the highest urban level divided by the lowest urban level. In 1988 this new quota was around 2,4. In the mid 1990s the quota was changing from the lowest level of 1,8 to over 3. From 1997 the quota has been steadily increasing from 2,2 in 1997 to 3,6 in 2002 and then decreased to 3.4 in 2003. Diagram 5.14 also shows the difference between provinces in rural secondary education excluding Tibet. The data for rural areas in 1988 is left out to make the diagram clearer. The quota in 1988 was above 44. The difference between the provinces was much larger in the late 1980s than in the

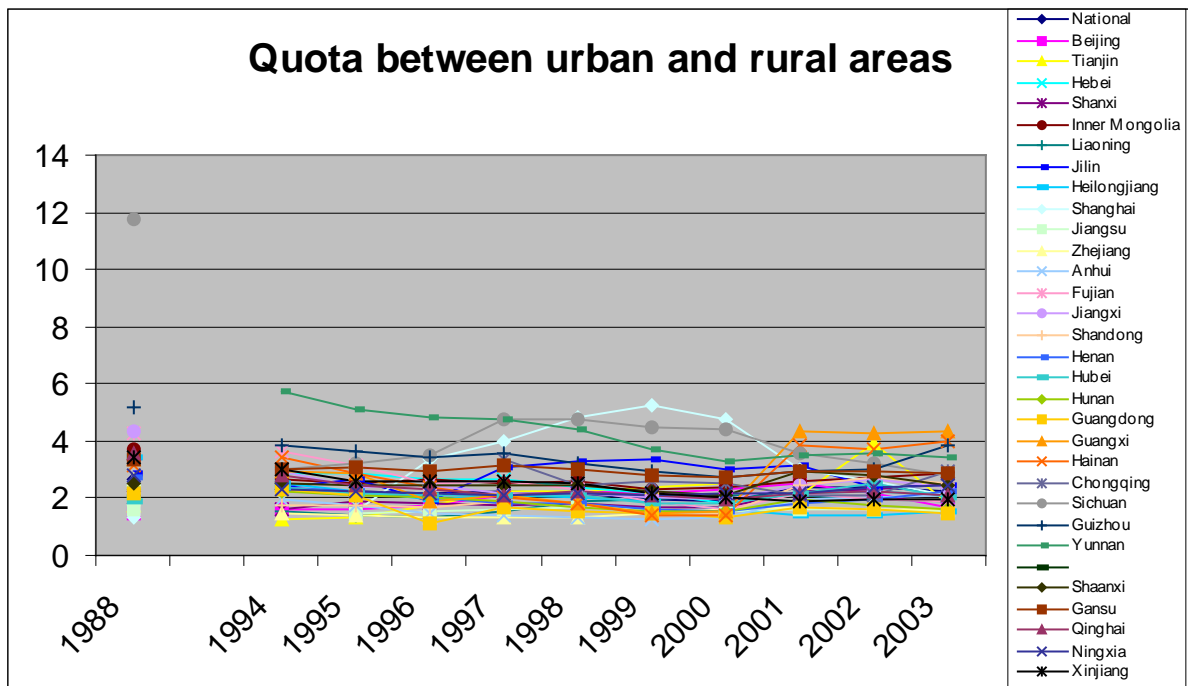
1990s then the same quota was between 3 and 3,5. In the new millennium the difference increased to a quota around 6.



5.15 Quota between provinces with the highest and the lowest rates of graduates from secondary education compared with enrolled students in primary education for rural areas.

Diagram 5.15 shows the quota including Tibet. In the diagram the data from year 1988 is left out because there is no data for Tibet that year. Both diagrams 5.14 and 5.15 show that the difference between the provinces was highest in 2001 and then decreased to 2003. The trend in rural areas is similar to the trend in urban areas, but the difference between the provinces in rural areas is bigger than the difference between urban areas.

In diagram 5.16 you can see the quota of graduates in urban areas divided by the quota of graduates in rural areas. This could be understood as a proxy for how much bigger the chances to graduate from secondary school is for persons from urban areas compared persons from rural areas. The chances to graduate are bigger in urban than rural areas. On the national level the quota decreased from 2,7 in 1988 to 1,9 in 2000. The relative chances for rural areas compared to urban areas have increased during this period. Maybe this could be explained by that the TVEs brought in resources to rural areas in the 1990s. But if one compares the income inequality between rural and urban areas it was raising slightly in the beginning of the 1990s. In the new millennium the quota was around 2,4. This shows that the political attempts to reduce geographical inequalities in the new millennium were not successful. Chinas membership in the WTO in 2001 might also have restricted the rural income, since world prices now created and price ceiling for the agricultural products.



5.16 Quota between urban and rural areas.

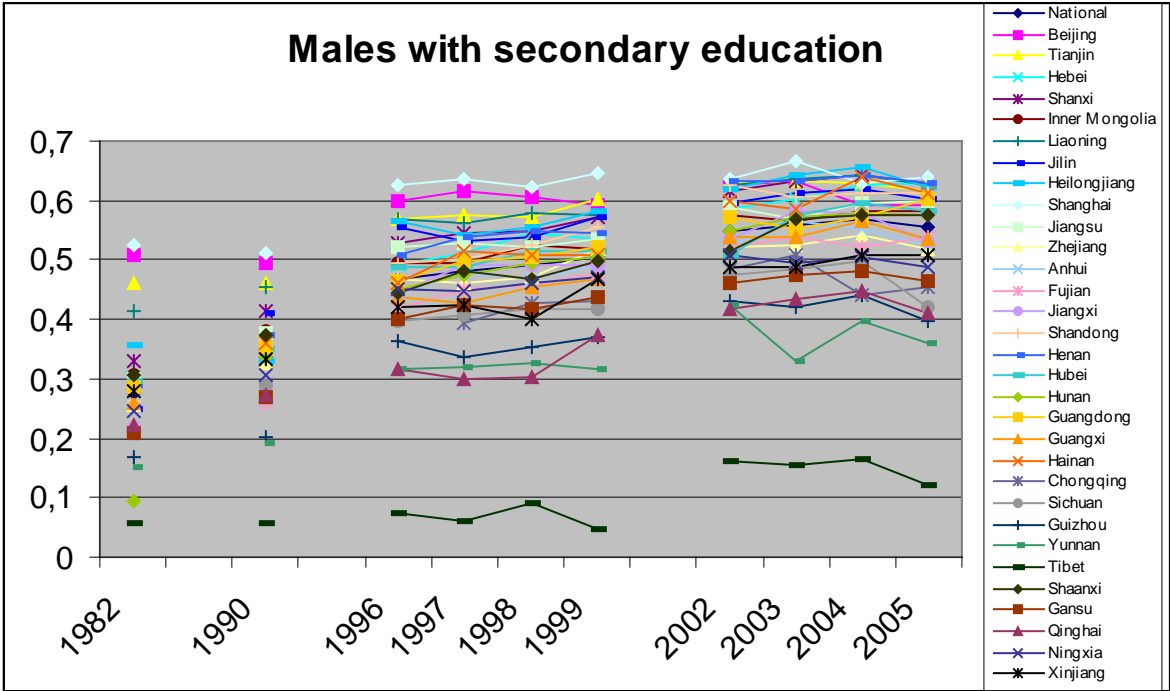
The difference between the provinces with regard to the urban to rural quota are quite large and have varied from a quota just over 1 to over 5. Shanghai has had an interesting pattern with the urban to rural quota taking the shape of an inverted u-curve over time. In 1995 Shanghai had one of the lowest quotas of 1,55. In 1999 Shanghai had the highest quota of 5,22 and in 2003 the quota had gone down to 2,12. Also Sichuan, and to some extent Jilin showed this inverted u-curve pattern. Maybe this inverted u-curve could be explained by the possibilities to graduate first increased in urban areas which increased the inequality and then increased in rural areas which decreased the inequality. Anhui and Zhejiang had some of the lowest urban to rural quotas in the data. In diagram 5.16 Tibet is left out because the urban to rural quota in Tibet is much higher then anywhere else. Tibet's quota is lowest in 2002 (33) and highest in 2001 then the quota was over 1450. Except Tibet the highest quotas was in Yunnan in the mid 1990s and in Guangxi and Hainan in 2002 and 2003. The quota for Yunnan in 1988 is also left out from the diagram. The quota was around 90 for Yunnan in 1988.

To summarise it can be said the difference between the provinces seems to increase with time in both rural and urban areas. The differences between provinces are greater than the differences between rural and urban areas, and the differences between rural areas are bigger then the differences between urban areas. The overall probability to graduate from secondary

school after being enrolled in primary school have increased, but are lower in rural than in urban areas.

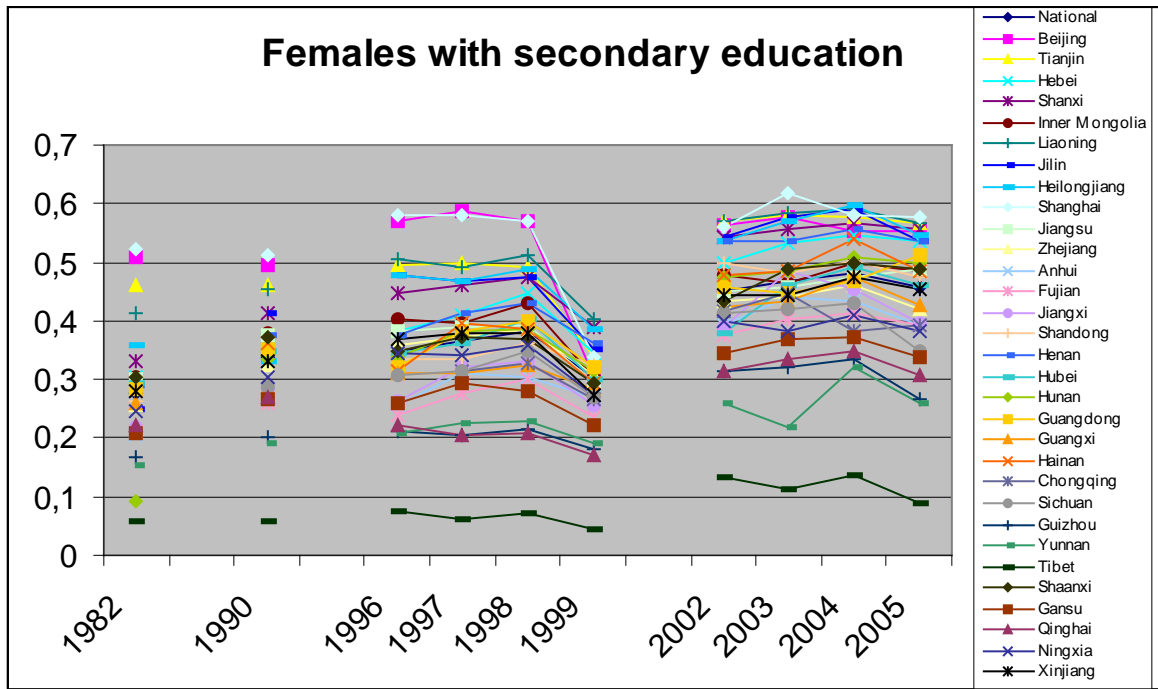
5.4.3 Secondary education and the gender gap

In the yearbooks it is possible to find data on the education level disaggregated on sex. In diagram 5.17 you can see the percentage of males, 6 years and above, with secondary education. The percentage is calculated by adding the number of junior secondary education and senior secondary education and then dividing by the male population of 6 years and older. The data for 1982 and 1990 have the total number of both male and female with secondary education, both junior and senior, divided by the population. Nearly 28 percent had secondary education in 1982 and nearly 34 percent had it in 1990. The percentage of males with secondary education has on the national data showed an even increase from nearly 47 percent in 1996 to 57 percent in 2004. In 2005 the level went down a bit to just under 56 percent.



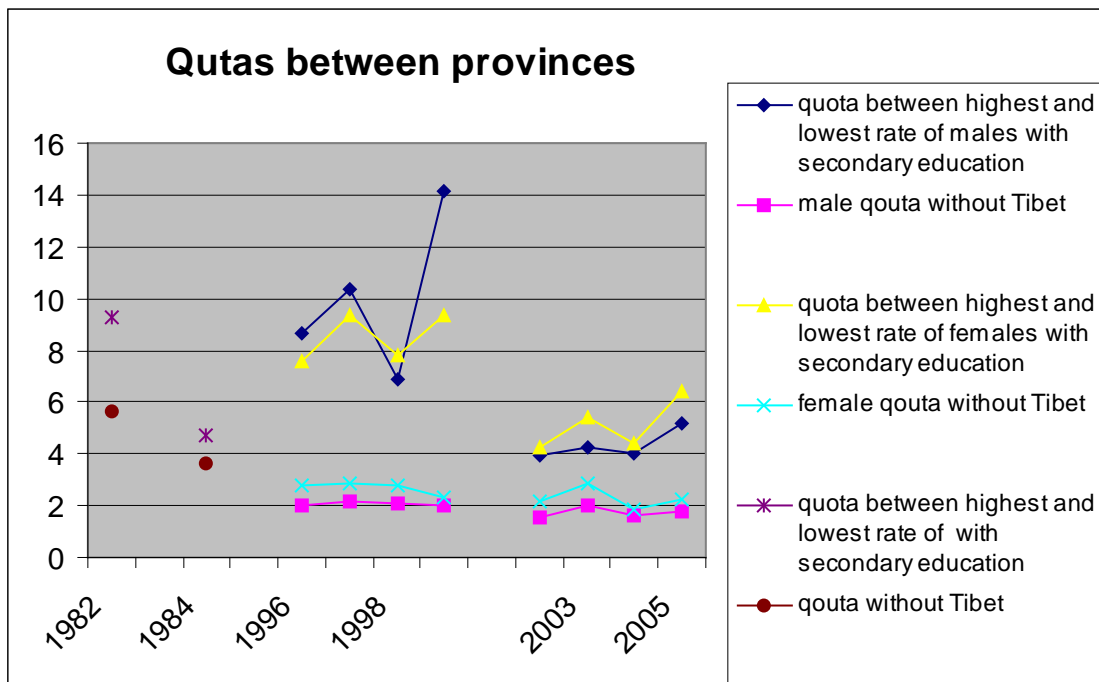
5.17 Males with secondary education.

Tibet has a much lower level of secondary education than the other provinces, under 10 percent during the 1990s. Qinghai, Yunnan and Guizhou also have low levels between 30 and 38 percent. In the new millennium the difference between the provinces was a bit smaller, only Tibet and Yunnan had below 20 percent. In the 1990s only Shanghai and Beijing had over 60 percent but in the new millennium quite many provinces had over 60 percent males with secondary education. Shanghai, Beijing, Liaoning and Tianjin are among the provinces with the highest rates of secondary education.



5.18 Females with secondary education.

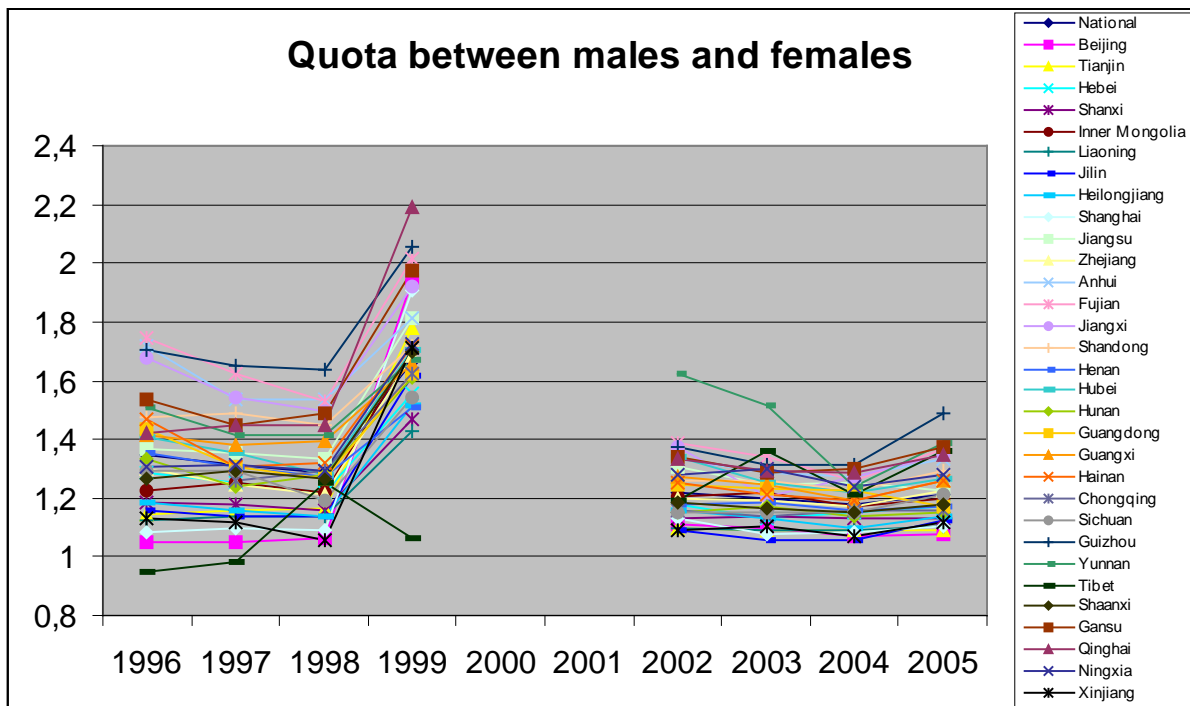
The trend is similar for percentage of females with secondary education, see diagram 5.18. The data from 1982 and 1990 are from the total population, including both males and females. On the national level the percentage increased from nearly 35 percent 1996 to just over 48 percent in 2004 and then decreased to less than 46 percent in 2005. In year 1999 the trend for females differed compared to the males. The percentage of females with secondary education decreased to 30 percent. More males had secondary education in the mid 1990s compared with the total (both females and males) with secondary education in 1982, 1990. More females had secondary education in the 1990s than earlier, but the percentage with secondary education was lower in 1999 than in 1990. The change in the data is so big that one can question if it only reflects the reality or if the way of collecting data was changed. The lowest percentage of females with secondary education was in Tibet, Qinghai, Yunnan and Guizhou. Shanghai, Beijing, Liaoning and Tiajing had among the highest levels of females with secondary education.



5.19 Quotas between provinces.

In diagram 5.19 you can see the quota between the province with the highest and the lowest rates of secondary education, both including and excluding Tibet, both for females, males and the total population. The difference seems to have been bigger in 1982 and 1990 (if Tibet is excluded). The difference was bigger in the 1990s than in the new millennium. The rate of female secondary education varies more among the provinces than the rate of males with secondary education. Excluding Tibet the quota for the male rate between the province with the highest and the lowest rates of secondary education vary between 1,5 and 2,1, for females the quota is between 1,9 and 2,9.

In diagram 5.20 the percentage of males with secondary education is divided by the percentage of females with secondary education. The quota is between 1,2 and 1,4 on the national level in the 1990s and a bit lower in the new millennium, around 1,2. The year 1999 differs from the other years as the quota is much higher: 1,66. The difference among the provinces is greater during the 1990s than in the new millennium. In 1996 and 1997 Tibet had a quota under 1, indicating that more females than males had secondary education. In these years very low numbers of people with secondary education was reported for Tibet, just 165 in total (both female and male) in 1996 and even lower numbers in 1997. Fujian, Guizhou, Gansu, Anhui have relatively high quotas all years and Yunnan in the beginning of the new millennium. Shanghai, Beijing, Liaoning and Jilin had relatively low quotas.



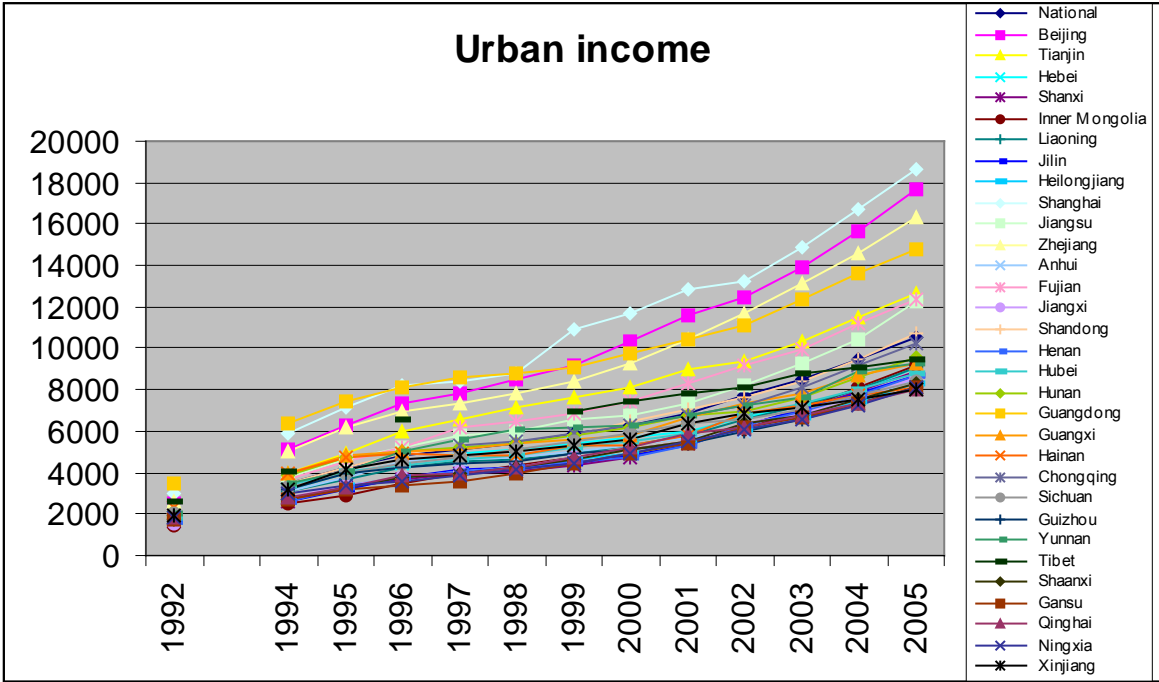
5.20 Quota between male and female.

If one compares the percentage with secondary education the inequality between provinces are bigger than the inequality between males and females. The percentage of males with secondary education is bigger than the percentage women. Regardless if Tibet is included or excluded the inequality between provinces are smaller in the new millennium than in the 1990s. This means that the pattern for secondary education for males and females is different compared to the illiteracy rate, there the inequality is higher and increasing. Also the gender gap in secondary education is decreasing in contrast to the gender gap in illiteracy. The data on percentage with secondary education indicates that the higher level of secondary education the less gender gap. This would also, if the trend of increasing level of secondary education continues, it would lead to decreased gender gap, in contrast to the data on illiteracy.

5.5 Income

In diagram 5.21 you can see the disposable income for urban households. On a national level the urban income has risen from just over 2000 yuan in 1992 to nearly 6300 yuan in year 2000. From year 2000 the increase was a bit faster. The per capita urban income was just under 10500 yuan in 2005. The urban income is highest in Shanghai, Beijing, Guangdong and Zhejiang in all the available data. The higher income in these provinces could probably partly be explained by the greater openness to trade and investments in the coastal regions. The provinces with the lowest income have varied a bit more over time. In the beginning of the 1990s Inner Mongolia had the lowest income, in the middle of the 1990s Gansu had the

lowest income and in the end of the 1990s Shanxi had the lowest income. In the 21st century Ningxia and Guizhou had some of the lowest urban income.

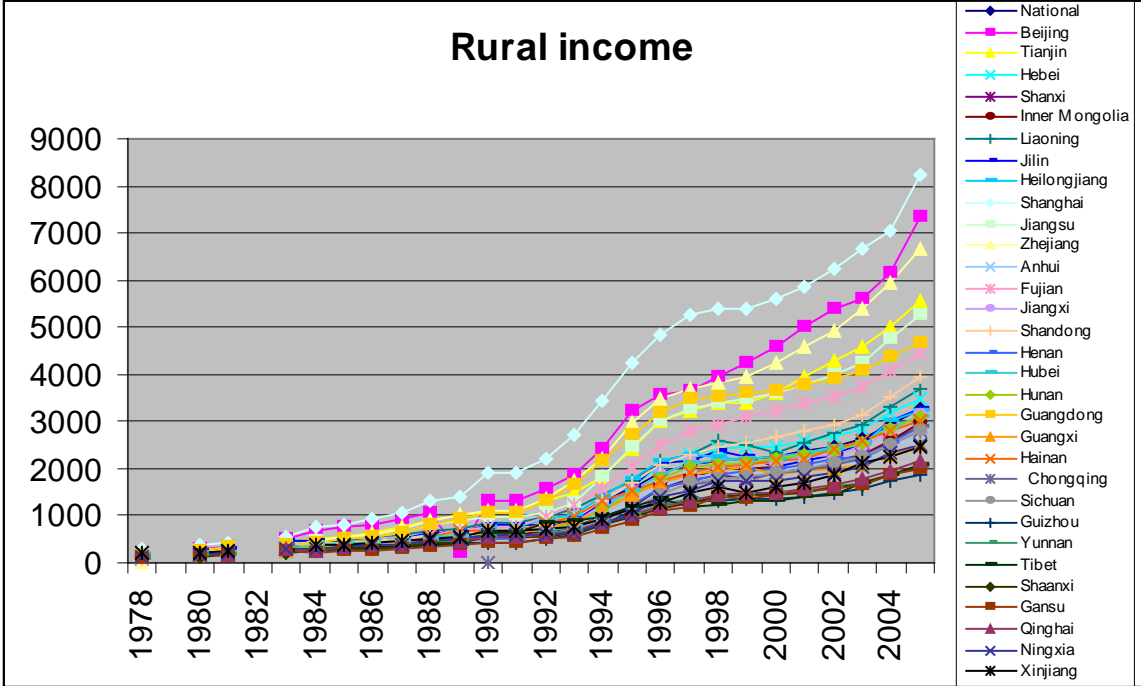


5.21 Urban income.

The average national rural income has increased from just above 130 yuan in 1978 to 3250 in year 2005, see diagram 5.22. The increase was biggest in the mid 1990s and in the end of the period. The rural income is highest in Shanghai for all the years. Beijing has the second highest rural income for nearly all the years. Zhejiang has more or less the third highest income since 1985. Guangdong, Tianjin and Jiangsu also have high rural income before 1985. The provinces with the lowest income have varied more. Hebei had the lowest rural income in 1978. The income rose to the average income in the early 1990s and has been over the national average since 1994. Shaanxi had the lowest income in 1980 and 1983 and income has stayed among the lowest also for the other years. Gansu had the lowest income between 1984 to 1996 and 2002-2005. Tibet had a low income in the 1980s but the income was rising in the late 1980s and was over the national average in the beginning of the 1990s. The income of Tibet was then decreasing and became the lowest 1997 to 2001. Guizhou and Yunnan had relative low income in all of the data.

Compared to their income level the north east provinces seems to have good health and educational levels compared with to Guangdong and Fujian, even if Guangdong have low illiteracy rates. The north east provinces had relative to the other provinces the highest income

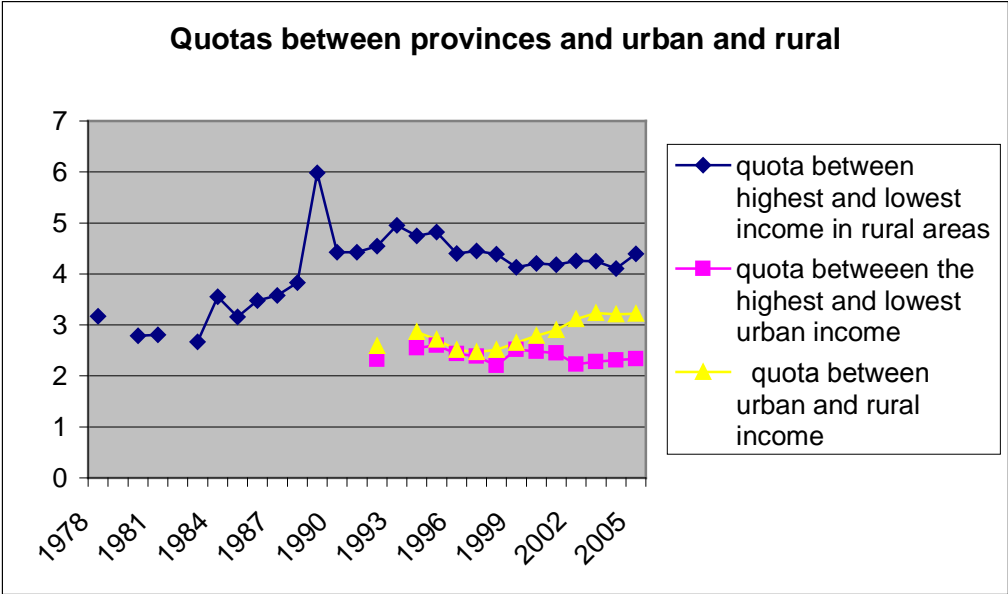
during the plan economy (Naughton, 2007). This might indicate that the economic wealth before the reforms improved the levels of health and education more.



5.22 Rural income.

In diagram 5.23 you can see the quota between the province with highest and lowest rural income, the quota between the highest and lowest urban income and the quota between average national urban and rural income. The difference among the provinces is largest for the rural income. The difference seems first to be decreasing from 1978 and have the lowest levels in the beginning of the 1980s, with a quota around 2,7. However data for some of the provinces are lacking for some of the first years, so the quota is not fully reliable. In the mid 1980s the quota started to rise. The biggest difference between rural incomes can be found in the 1990s. The difference then decrease a bit to a quota around 4,2 in the new millennium. Naughton explains the increased rural income inequality with the TVEs that created opportunities in mostly suburban areas. This conclusion fits well with the data. The rural income inequality was bigger in the 1990s than in the new millennium. In the new millennium the importance of the TVEs had decreased. The difference in urban income is lower, the quota is between 2,2 and 2,6. The quota was relatively high in the 1990s but was then starting to decrease. One possible explanation of the high regional inequality in the 1990s may be FDI. The amount of FDI to GDP peaked during the mid 1990s but was not evenly spread over the country.

Even if the measure and definition of income in the data are not the same for rural and urban areas it seems to be the best data available for a comparison. The urban disposable income refers to the income that can be used after taxes. The rural net income also shows the income that can be used, it includes money sent to the household from household members in other places as well as income in kind. The definitions on rural and urban income can be found in the statistical yearbooks.³

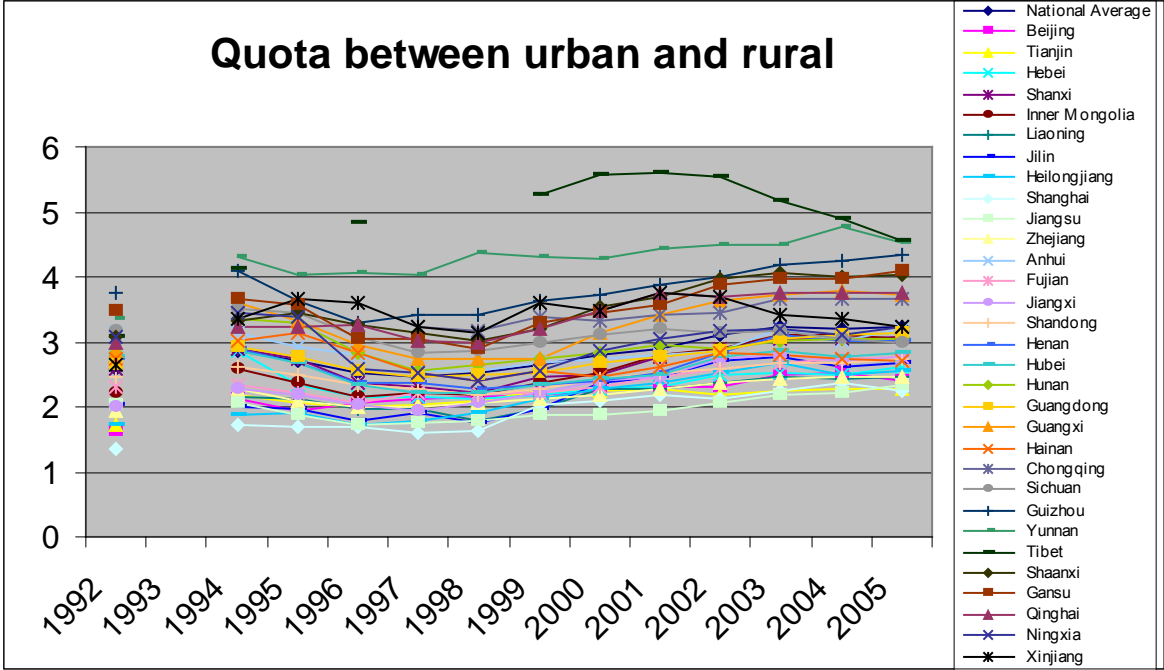


5.23 Quotas between provinces and rural and urban areas.

In diagram 5.24 you can see the quota of urban to rural income. On the national level the quota was lowest in the late 1990s, under 2,5 in 1997 and then rose to and stabilised around 3,2 some years after the new millennium. The low inequality in the late 1990s might be explained of that the rural income was growing much faster than the urban according to the data. A reason for the slower urban growth in the 1990s can be the restructuring of the SOE.

³ “**Total Income of Urban Households** refers to the total actual income of the sample households, including regular or fixed income and occasional income. The income of a circulating nature such as withdrawal from bank deposits, loans borrowed from relatives or friends, repayment of loans received and various temporary collection of money is excluded.
Disposable Income of Urban Households refers to the income of the sample households which can be used for daily expenses, i.e.. total income minus income tax, property tax and other current transfers.”
“Net Income of Rural Households refers to the total income of the permanent residents of the rural households during a year after the deduction of the expenses for productive and non-productive business operation, the payment for taxes and the payment for collective units for their contracted tasks, which can then be spent for investments in productive and non-productive construction, for consumption in daily life and for savings deposit. It is a comprehensive indicator to show the actual level of the income of the peasants’ household. The net income of the rural households includes not only the income from the productive and non-productive business operation, but also the income from the non-business operation, such as the money remitted or brought back by the members of the household who are in other places, the government relief payment and various subsidies. It includes not only the money income, but also the income in kind. But the income from borrowing from banks, friends and relatives is excluded.” National Bureau of Statistics of China, in the statistical yearbook of 1999. <http://www.stats.gov.cn/english/statisticaldata/yearlydata/YB1999e/zje.htm>

The increased inequality in the new millennium may be linked the WTO membership that created a prise ceiling for the agricultural output.



5.24 Urban to rural income.

The biggest difference between urban and rural areas is in Tibet. For some years (1995,1997 and 1998) data on urban incomes in Tibet is lacking and hence the line for Tibet is broken in the diagram. The high urban to rural income and educational inequalities in Tibet may have a connection to immigration policies to Tibet. The majority ethnicity, Han Chinese, has been encouraged to immigrate to urban Tibet. This can according to Davis (2007) be seen as an expression for the desire dominate the urban sector and assimilate the Tibetans. Also Yunnan and Guizhou have high quotas between urban and rural areas. Shanghais and Jiangsu have the lowest quotas, a bit below 2 in the 1990s and a bit above 2 in the new millennium. The difference between the provinces are quite the same over time however the quotas of Tibet and Yunnan are not as far away from the other in the end of the period. It seems like the inequality between rural and urban areas is bigger among provinces with lower income than with provinces with higher income.

6 Conclusion

The best way to understand inequality is by looking at what people are able to do and be. From looking at what capabilities that shape a person's possibilities, a range of dimensions to measure people's capabilities have been chosen. This has resulted in a multidimensional framework, where rights, health, education and income have been measured.

First it can be said that the data shows that people have increased possibilities created by higher income and better health and education. It is only one indicator where more people have got it worse. The number of people that do not live where they are registered has increased.

Of the three divisions, which are here used to understand inequality the regional division are most important one. This division is more detailed than the others. Instead of being divided into two different groups, the data has been disaggregated on 31 provinces. If one puts together rights, health, education and income one can see a pattern that Tibet, Guizhou, Yunnan, Qinghai and Gansu generally are among the provinces that are worse off. Shanghai and Beijing are often among the provinces best off, but also Tianjin and Zhejiang. Compared to the income level in the North East, the health and education levels are high. This may indicate that higher incomes in an area to a larger degree were transformed to increased health and education levels before the reforms started in 1978, than after.

On the contrary to the general pattern, more people are missing fundamental rights because of not living where they are registered in Beijing, Shanghai, Zhejiang and Tianjin. Probably the majority of people lacking these rights are migrated people. The difference between provinces increase as well as the people living where they are not registered. This increased inequality in rights should be considered against the background that, before the reforms, people might not have had the possibility to move at all. So even if this means increased inequality in rights it might mean more equality of the opportunities that urban and wealthier areas can offer. In addition the effects of living without a local hokou seem to be smaller in the new millennium than before.

The regional pattern is also most important to explain difference in health status. The difference between provinces in life expectancy is decreasing and the difference in surviving

children seems to be the quite the same over time. The sex ratio was over a normal in 1996 and has increased since then as well as the difference between provinces. The difference between provinces might be explained of that the implementation of the “one child”-policy was differently strict in different areas, mostly looser in rural areas and harder in urban areas. The lower sex ratio in Beijing and Shanghai might be explained by the need for a son as old age insurance are less in the cities where more formal social security exists.

Education is the area of biggest inequalities. The quota between the provinces best off and worst off are much higher for education, than for health, rights and income. The difference between the provinces are increasing regarding illiteracy rates and secondary graduates in urban and rural areas but decreasing for percentage with secondary education for females and males. Wang and Li (2003) state that the increased disparity in public spending on education in the 1990s is dependent on economic reforms, since local governments needed to create the funding by them self, as well as the strategy to “let some get rich first”. This might also explain the increased inequality in education, even if the national trend is positive with less illiteracy and more secondary education.

The rural income inequality is relatively large. The high rural income inequality in the mid 1990s might be explained by the TVEs. The rural income inequality decreased at the same time as the importance of the TVEs decreased. The slightly higher income inequality in both rural and urban areas in the mid 1990s may also have a connection to increased FDI that were not evenly spread over the country.

Tibet has more often than other provinces high levels of inequality between urban and rural areas. Jiangsu more often than the others low levels of inequality. This might be explained by that more Han Chinese live in the urban areas while the ethnic Tibetans live in the rural areas. The income inequality between urban and rural areas seems to have been biggest in the mid 1990s and then decreased. The inequality of graduates from secondary education has been decreasing from the late 1980s until the millennium shift. Both dimensions show a bit higher inequality between urban and rural areas in the new millennium. The increased urban to rural inequality happened at the same time as the WTO membership created an upper price ceiling for agricultural products.

If one compares gender inequality some provinces have higher rates of inequality more often than others. These are Gansu, Fujian, Guizhou and Jiangxi. Tibet on the other hand has more often than the other provinces low levels of gender inequality. Regarding people living where they do not have registration it is not possible to speak about a gender gap on the national level, since the difference between male and female is so small, even if data shows that males are a bit worse off for all the years except one.

The sex ratio is over the normal, more males than females are born, and the sex ratio is increasing. The high sex ratio at birth could probably be explained by a combination of cultural reasons, preference for sons, the “one child”-policy and underreporting of females. Also, with regard to the level of surviving children, the difference between the sexes is very low. The official data on child mortality is said to underestimate the mortality of females. If this is true it would mean that more female infants than males die. This could probably to some part be explained by the “one child”-policy in combination with the cultural and economic desire for sons, since they are expected to take care of their parents. The female life expectancy has become higher relative to males, indicating improved health for females.

The gender inequality in illiteracy is bigger than in secondary education. The inequality in secondary education has decreased since the mid 1990s but the inequality in illiteracy rates has increased to a relatively high quota around 2,6 in the new millennium. Inequalities in education are getting more important since the wage to an increasing degree is reflected.

In China people in inland provinces, rural areas and females generally have fewer capabilities measured by rights, health, education and income. The data shows that the inequality in China has both increased and decreased depending on which variables one looks at and between which groups. The pattern in the data can to some extent be understood by looking at economic reforms, others are harder to explain.

7 References

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7.2 Statistics

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7.2.2 Statistics from internet

National Bureau of Statistics of China

<http://www.stats.gov.cn/english/statisticaldata/yearlydata/>

7.3 Internet

Maps of World. Downloaded 2008-02-05.

<http://www.mapsofworld.com/china/maps/china.jpg>

Appendix 1: Map of China



Source: <http://www.mapsofworld.com/china/maps/china.jpg>