

**Research Unit for Statistical
and Empirical Analysis in Social Sciences (Hi-Stat)**

**An Empirical Analysis of Income Inequality between
a Minority and the Majority in Urban China:
The Case of Ningxia Hui Autonomous Region**

Li Shi
Ding Sai

January 2009

**An Empirical Analysis of Income Inequality between a Minority
and the Majority in Urban China: The Case of
Ningxia Hui Autonomous Region***

Li Shi
Beijing Normal University
and
Ding Sai
Institute of Ethnology and Anthropology
Chinese Academy of Social Sciences

Abstract: Based on the urban survey data of Ningxia Hui Autonomous Region in 2006, this paper studies the impact of ethnic characteristics on the income determination mechanism in the same economic region. Using the decomposition methods of Blinder and Oaxaca, Fields, and Morduch and Sicular, we analyze income gap between employed Hui and Han as well as income inequality within the two ethnic groups. The main conclusions are, first, that there is almost no income gap between Han and Hui in Ningxia. But different ethnic characteristics have effects on the income determination mechanism. Ethnic factors such as religion and social capital have no obvious effect on the income determination.

Key words: Minority, Majority, Income Inequality

JEL Classification: D33, J15

* This research was partially supported by the National Philosophy and Social Sciences Foundation under its program of Research on Minority Migrant Labor in Western Rural China (grant no. 06CMZ013). Financial supports for the preparation of this paper from the following research programs are also gratefully acknowledged: Need-based Program for Area Studies “The Middle East within Asia: Law and Economics”, Hitotsubashi University; Heiwa Nakajima Foundation; Fukino Project, Hitotsubashi University. We also thank Mr. Alan Thwaites for his great help in preparing English manuscript. Data for this study was collected in 2007 by the Ningxia Survey Team of the National Bureau of Statistics, under commission from the Institute of Ethnology and Anthropology Chinese Academy of Social Sciences.

1. Introduction

Over the past 30 years, income inequality has greatly expanded along many dimensions in China. Relevant research has shown that in comparison with the past, income inequality has greatly increased between urban and rural areas, among regions, within urban areas, and within rural areas (Li Shi and Zhao Renwei 2007). At the same time, people have taken increasing notice of large and small disparities in income among different classes of people. China is a multiethnic nation, and this diversity of ethnic backgrounds is a basic national characteristic. Each ethnicity has its own culture, historical tradition, lifestyle, and modes of social interaction. These distinct characteristics form to some extent what the New Institutional Economics calls informal institutions. They can also be understood as ethnically colored social capital. If we look at income distribution, income inequality among ethnic groups has already become an undeniable fact, but such income inequality is attributable more to differences in the levels of economic development of different regions. Especially when one compares the income inequality of two ethnic regions, one finds that different levels of economic development account for most of the differences in income between the ethnic groups. Yet to paint a more complete picture, even when one sees that the level of economic development of a region is lacking, one still ought to examine the effect that the informal institutions of an ethnic group have on the income determination system and on income distribution.

Theoretically, ethnic characteristics can have an effect on labor income at three different levels. First is the effect on wage rates or income levels, second is the effect on the income determination mechanism, and third is the effect on income inequality. Most research, limiting itself to the first effect, compares income inequality across ethnic groups and offers explanations on the causal factors. This paper, in addition to focusing on income differences between the Han and Hui ethnic groups in the Ningxia Hui Autonomous Region, also analyzes the second and third effects, that is, analyzes and explains the Han and Hui income determination mechanisms and the size of income differences within ethnic groups.

To analyze the influence of ethnic characteristics on income of the employed by examining the three effects mentioned above, the research presented here selected the Ningxia Hui Autonomous Region and analyzed income differences between the Han and Hui ethnic groups in this area. One of the reasons for doing so was to control the influence of the level of economic development so as to analyze more effectively the effects of ethnic characteristics on income differences. In addition, data of the 2000 census show that the population of Hui nonagricultural registered households (*feinongye hukou*) comprises 35.17 percent of the entire Hui population, eighth among China's fifty-five ethnic minorities in terms of portion, but first in terms of absolute numbers. Hence, comparing the income of urban-dwelling Hui and Han will produce quite representative results.

This paper is structured as follows: The first section presents the background of this research and the sources of our data. The second section gives a statistical description and discusses the research methodology. The third section compares the income determination mechanisms within the Hui and Han ethnic groups and explains the formulas for estimating incomes of the employed in the two ethnic groups. The fourth section assesses the factors leading to income inequality within the two ethnic groups and compares the effects of these factors between the two ethnic groups. The fifth section presents the conclusions of this paper.

2. Background of the Research and Sources of the Data

As is well known, in comparison with the Han ethnic group, many of the ethnic minorities of China have their distinctive ethnic cultures and traditions. Especially in the five minority autonomous regions, ethnic populations are relatively concentrated, and ethnic cultures and traditions receive their due respect and protection. Take, for example, the Hui of Ningxia, who are the focus of this paper. Though they do not have their own language, most of them believe in Islam, and they greatly differ from the Han majority on many points of culture, such as customs and value orientation. In the labor force of the Ningxia Hui

Autonomous Region, the distinctive customs and cultural background of the Hui can have an effect on labor income and the income determination mechanism.

According to statistics of the fifth national population census in 2000, the Hui ethnic group is the third largest ethnic minority after the Zhuang and Manchu minorities, comprising 9,816,805 individuals, 19 percent of whom live in the Ningxia Hui Autonomous Region. In 2006 the Hui population of Ningxia consisted of 2,140,000 individuals, who comprised 35.46 percent of the population of this autonomous region¹. In terms of economic development, Ningxia is a relatively backward area, with a per capita gross domestic product equal to 74 percent of the national average in 2006, giving it a rank of twenty-first of all thirty-two administrative regions². The per capita disposable income of urban residents is 22 percent below the national average, giving the autonomous region a rank of twenty-sixth³. We have not seen publicly published data on income inequality between Hui and Han urban residents in the autonomous region. According to the data used in this paper, in 2006 per capita disposable income was an average of RMB 7,765.71 for Hui urban households and RMB 9,646.67 for Han urban households, a difference of 24.22 percent. Because China has a relatively lenient birth-control policy for ethnic minorities, the number of dependent children is generally greater in Hui households than in Han households. Consequently, the difference in household gross income and the difference in the earnings of the employed are not as great between the two ethnic groups⁴.

Previous research has demonstrated that ethnic minorities in rural areas are economically relatively disadvantaged. Bjorn Gustafsson and Li Shi (2003) have shown that though the per capita income of rural ethnic minorities grew from 1988 to 1995, its growth rate was clearly slower than that of the rural Han majority, a circumstance that lead to

¹ Ningxia Hui Autonomous Region Bureau of Statistics and Ningxia Survey Team of the National Bureau of Statistics, ed. , *Ningxia Statistical Yearbook 2007* , Beijing: China Statistics Press, October 2007.

² See *China Statistical Abstract, 2007* p. 28.

³ See *China Statistical Abstract, 2007* p. 120

⁴ The data of our survey sample show the following: average disposable income of urban households was RMB 9,159.97. The average Han household population was 2.89 individuals, and the average Hui household population was 3.55 individuals. The average household gross income of Han households was RMB 26,104.67, and that of Hui households was RMB 25,471.12, a difference of 2.49 percent.

increasing income inequality between ethnic minorities and the Han majority⁵. The basic cause of this inequality was that the two groups were dispersed in widely different regions. If we compare the income levels of the Han majority and an ethnic majority within an ethnic region, then the inequality nearly disappears. Ding Sai (2006) discovered that 2002 per capita net income in a minority village was 37.1 percent lower than that in a Han village and 30.9 percent lower than the national average⁶. Carrying out this comparison in different regions, they found that inequality of per capita annual net income between an ethnic minority and the Han majority was smallest in the Northeast, followed by the Northwest and the Southwest, and in the worst region, South Central China, the Miao and other ethnic minorities in Hunan Province had a per capita income that was only 50.38 percent of the Han majority. We should point out that though some economic research on ethnic minorities touches on the issue of urban income in regions where ethnic minorities concentrate, none of it specifically analyzes income inequality of different ethnic groups⁷. Income inequality among ethnic groups is not unique to China. Even in some advanced countries, it is common for there to be income inequalities among races and ethnic groups and for this circumstance to give rise to social friction and conflict. For example, in the United States from the mid-1970s to the mid-1980s, the difference in annual income between black headed households and white headed households continued to increase, the ratio of the two falling from 0.63 in 1976 to 0.59 in 1986⁸.

It is easy to see that research on income inequality among ethnic groups in China has been directed mainly at rural areas, and that there is almost no research on the income of urban-dwelling ethnic minorities and their income inequality with the Han majority. And in

⁵ Bjorn Gustafsson and Li Shi, "The Ethnic Minority-Majority Income Gap in Rural China during Transition," *Economic Development and Cultural Change* 51 (2003): 805–822.

⁶ Ding Sai, "The Ethnic Minority-Majority Income Gap in Rural China", *China Labor Economics Vol. 3*, no. 4 (2006): 86–98.

⁷ See Li Junjie, "A Case Study of Economic Disparity in Ethnic Autonomous Regions and Its Countermeasures", *Journal of the Central University for Nationalities (Philosophy and Social Science Edition)* 2008, no. 1: 14–24; and Gao Xincan and Teng Tangwei, "An Analysis of the Economic Underdevelopment and Industry Economy of the Ethnic Region of the Northwest of China:", *Ethno-National Studies* 2006, no. 1: 21–30.

⁸ William A. Darity Jr., Samuel L. Myers Jr., and Chanjin Chung, "Racial Earnings Disparities and Family Structure," *Southern Economic Journal* 65, no. 1 (July 1998): 20–41.

the literature on the urban labor force, there is very little research on income inequality between the Han majority and ethnic minorities and on its determining factors. The primary reason for this is that in comparison with the countryside, ethnic minorities dwelling in urban areas are rather dispersed, their portion of the population is low, and hence the sample of minority households in the data of an ordinary residential sampling survey is not sufficiently representative. Moreover, some research on urban ethnic minorities focuses on differences in ethnic groups in urbanization and participation in the labor force. For example, Deng Ai (2006) and Margaret Maurer-Fazio, James Hughes, and Dandan Zhang (2007) use data of the fifth national census in 2000 to analyze urbanization and the labor-force participation rate among ethnic-minority populations⁹. Neither of these research papers attempted any analysis of such related issues as the determination of labor-force wages or income inequality.

The research presented in this paper used data from a socioeconomic survey conducted in 2007 in the Ningxia Hui Autonomous Region by the Ningxia Survey Team of the National Bureau of Statistics for the Institute of Ethnology and Anthropology Chinese Academy of Social Sciences. The urban sample of this survey consisted of 800 households (a total of 2,445 individuals) selected from a large sample pool of the region, households located in five cities within the Ningxia Administrative Region: Yingchuan, Shizuishan, Wuzhong, Guyuan, and Zhongwei. To increase the representativeness of the Hui sample, we increased the sample weight of three cities in the southern part of Ningxia Hui Autonomous Region where Hui households were relatively concentrated: Wuzhong, Guyuan, and Zhongwei. Table 1 shows that the Hui sample made up 29.33 percent of the survey data, an increase of 8.57 percentage points over the portion represented by the Ningxia urban Hui population in the 2000 census (20.76%)¹⁰.

Table 1 about here

⁹ Deng Ai, "A Positive Analysis of the Diversity of Ethnic Urbanization in Western China", *Ethno-National Studies* 2006, no. 2: 30–38. Maurer-Fazio, Margaret, James Hughes, and Dandan Zhang, "Gender, Ethnicity and Labor Force Participation in Post-reform Urban China", *Feminist Economics* 2007 13(3/4):189-212

¹⁰ Department of Population, Social Science and Technology Statistics, National Bureau of Statistics, PRC and Department of Economic and Development, State Ethnic Affairs Commission, PRC ed. , "Tabulation on Nationalities of 2000 Population Census of China", Beijing: Ethnic Publishing House, September 2003.

3. A Basic Statistical Description and Methodology

Within the sample we collected of 800 Ningxia urban households, in 2006 there were 1,104 individuals gainfully employed, 45.2 percent of the total number of individuals in the sample. Of these employed individuals, nearly 27 percent were Hui, about 1 percent were Manchu, and 72 percent were Han. In comparison with the actual portion of the Hui ethnic minority in the Ningxia population, the portion in our sample was somewhat high. To eliminate the effect of sample bias on our analysis, when we calculated sample means and difference indices, we weighted our sample with the actual portion of Hui in the population.

Table 2 gives some basic characteristics and income indices of Ningxia urban employed Hui and Han. The table shows that the average income gap between employed Hui and Han is not large. The Hui income is somewhat lower than Han income, but the difference is only 2 percentage points. In income differences by gender, one can see that the income of Hui men is only somewhat higher than that of Han men by 3.2 percent, but the income of Hui women is clearly lower than that of Han women, and this is the primary reason for the income gap between Hui and Han. In education, it is worth noting that in the group with a postsecondary education, employed Han had clearly higher income than employed Hui, but at low levels of education the situation was reversed: the income of employed Hui was higher than that of employed Han. Such income variations across population groups require explanation. In addition, there are also structural variations among occupations and economic sectors. For example, Hui business owners and self-employed individuals earn more than their employed Han counterpart, yet as managers in government organs or enterprises, or as heads of departments, Han earn more than Hui. Again for example, in the wholesale, retail, restaurant, and transport industries, Hui earn somewhat more than Han, yet in the sectors of education, health, culture, and scientific research, Han earn considerably more than Hui. In the same way, there are also structural differences in income across enterprises with different ownerships. In state-owned enterprises, Hui

employees earn 19 percent less than Han employees, but in urban collective enterprises, Hui employees earn 17 percentage points more than Han employees (see table 2). But more worthy of attention are differences in income between ethnic groups in different areas. In the three county-level cities where the Hui ethnic group concentrates—Wuzhong, Guyuan, and Zhongwei—only in Guyuan is the income of employed Han somewhat higher than that of employed Hui. In the other two county-level cities, the income of Hui is clearly higher than that of Han. As shown in table 2, in Wuzhong the income of Hui is 6.4 percentage points higher than that of Han, and in Zhongwei the income of Hui is nearly 20 percentage points higher than that of Han.

Table 2 about here

From these basic differences in Hui and Han incomes, how can we discover the different factors determining these income differences? To achieve this objective, we first estimated an income function for the entire sample, setting Hui and Han as dummy variables, and used this and other control variables to explain income differences among the employed. The results tell us whether under other identical circumstances there are marked differences in Hui and Han incomes. Next, to better understand whether, in the income-determining process, different influencing factors have different effects between the two ethnic groups, we estimated an income function for each of the two ethnic groups and, using the Blinder-Oaxaca method of decomposition and these results, decomposed the income gap into the effects that different explanatory variables have in determining income. Let y_1 and y_0 represent the average incomes of employed Han and Hui, let x_1 and x_0 represent the mean values of the explanatory variables in the Han and Hui income functions, and let f_1 and f_0 represent the estimated values of the coefficients of the explanatory variables. Then the formula for decomposing the difference in Han and Hui incomes can be written as follows:

$$\bar{y}_1 - \bar{y}_0 = f_1 \left(\bar{\mathbf{x}}_1 - \bar{\mathbf{x}}_0 \right) + (f_1 - f_0) \bar{\mathbf{x}}_0 \quad (1)$$

The first term on the right side of the equation reflects the difference between the mean

values of the explanatory variables (or determining factors), and the second term reflects the difference between the coefficients (or determination system). A variant of the decomposition formula is as follows:

$$\bar{y}_1 - \bar{y}_0 = f_0 \left(\bar{x}_1 - \bar{x}_0 \right) + (f_1 - f_0) \bar{x}_1$$

(2)

Finally, we compared income inequalities within Hui and Han. We separately calculated various indices of inequality in the incomes of employed individuals in the Hui and Han samples. At the same time, to compare the size of the influence of factors affecting the inequalities, we also decomposed the Gini coefficients. The method of decomposition used here has also been called “inequality-decomposition method based on regression analysis.” For detailed explanations on this method, see Fields 1998 and Morduch and Sicular 2002, and for an explanation of how to apply the method, see Deng Quheng et al. 2008¹¹.

4. Analysis on Income Gap between Han and Hui

From the above one can see that in terms of average income, there is hardly any income gap between employed Hui and Han. This is one of the important discoveries of this research. Yet to make the incomes of the two ethnic groups comparable, we also sought to find out whether income gap between the two groups was still insignificant when individuals’ characteristics were controlled. In addition to income inequality between the two ethnic groups, we also sought to understand differences between the two groups in the income determination mechanism. To answer the first question, we estimated the income function for the entire sample of the employed, into which we introduced two dummy variables for the Hui and Han ethnic groups, as well as control variables representing

¹¹ Fields, Gary, 1998, Accounting for Differences in Income Inequality, mimeo, Cornell University.

Morduch, Jonathan, and Terry Sicular, 2002, Rethinking Inequality Decomposition, with Evidence from Rural China, *Economic Journal*, 112: 93-106

Deng Quheng, Li Shi, Yue Ximing and Weizhong, “The Reasons for the Change of Employed Earning Inequality in Urban China: Based on the Regression Function Decomposition Analysis”, *Working paper*, 2008.

individual characteristics. To answer the second question, we estimated separate income functions for the Hui and Han ethnic groups. From differences in the estimated values of the coefficients of the income functions, we can discover differences in the income determination mechanisms for the two groups. See table 3 for details of the results.

The first column in the table gives the explanatory variables of the income equation. One can see that the explanatory variables include not only demographic and socioeconomic characteristics, but also a religiosity variable and a social-capital variable. The second column gives the earned-income for the sample of all employed individuals. In the equation we introduced an ethnicity dummy variable to test whether ethnic status brought about differences in income when other characteristics were the same. Our results showed that when other characteristics were the same, the value of the Hui dummy variable is significant at the 10 percent level. Then we can calculate from the estimated value of the coefficient that the earned income of employed Hui will be 10 percent higher than that of employed Han¹². This result has two implications: First, if individuals are endowed with the same demographic and socioeconomic characteristics and have equal employment and career opportunities, Hui labor is rewarded in the Ningxia urban labor market at a higher rate than Han labor. Second, Han human capital is higher, and hence there are more opportunities for Han individuals to select high-paying sectors and occupations. The simultaneous impact of these two factors creates a situation in which the average income of the employed in the two ethnic groups is virtually the same, as we saw.

Worth noting are several special features determining labor income of in urban Ningxia. First, the difference between men's and women's incomes is especially apparent, exceeding the general national level. As shown in table 3, the earned income of employed men was 35 percent higher than that of employed women. The next point is that returns to human capital favors work experience over education. This effect is reflected in the value of the coefficient for work experience being clearly higher than that for years of education. From the results in table 3 we can calculate that the rate of returns to education is about 3.8

¹² To convert the income-function coefficient value (C) to percentage (P), we can use the following formula:
 $P = \exp(C) - 1$.

percent, but the rate of returns to work experience is as high as 5.2 percent. Another point is that state-owned sector employees are privileged with high incomes. From the results one can see that when other conditions are the same, those working in state-owned enterprises earn 14 percent more than those working in enterprises with other forms of ownership. Finally, we found no influence of religious belief on income. Though the coefficients of the religiosity dummy variable in our analysis were negative, these results were not statistically significant. This is an issue that requires further empirical investigation.

Table 3 about here

The last two columns of table 3 shows the results of regression analyses separately carried out on the incomes of employed Hui and Han. From a comparison of the coefficients of the two different income equations, one can see several features that determine the incomes of the two ethnic groups. First, the gender difference in income was clearly larger among employed Hui than among employed Han. Even after controlling for other determining factors, the income of employed Hui males was higher than that of employed Hui females by 37 percent, whereas the difference by sex among employed Han was 34 percent. Second, among the human-capital variables, the rate of returns to education, was higher for Han than for Hui, that for the former being 4.3 percent and that for the latter being 3.1 percent. But the rate of returns to the work-experience was lower for Han than for Hui, the difference being 1 percentage point. The causes require further analysis. Is the rate of returns to education lower among the Hui because they receive a lower-quality education? Or does it stem from the selection process of the labor market? From the present data it is impossible to give a definitive answer to these questions. Third, in the selection of sectors of employment, employed Hui who work in the real-estate, finance, and insurance sectors have a higher income, while employed Han who work in the sectors of education, healthcare, culture, and science and technology earn a higher income. Because real estate, finance, and insurance sectors are somewhat monopolistic, entering these sectors requires more social connections, that is, more social capital. This perhaps confers an advantage on Hui who grew

up in this region. Working in the sectors of education, healthcare, culture, and science and technology requires more and higher-quality human capital. Employed Han are more competitive in this area. This point resonates with the higher rate of returns to education among Han, as mentioned above.

The explanatory variables used above to explain income inequality within ethnic groups can also be used to explain income inequality between ethnic groups of the employed. To make the influence of various explanatory variables more distinct, we used the Blinder-Oaxaca method of decomposition to decompose income gap between employed Han and Hui into each explanatory variable. See table 4 for the results of the decomposition¹³. Comparatively speaking, the differences between employed Han and Hui are not that conspicuous in years of education, occupation, sector, and type of enterprise ownership, but there are comparatively clear differences in their location, and employed Han have more years of work experience. Worth emphasizing are the following implications of the decomposition results. First, a negative value for the intercept term means that in general, Hui status confers the advantage of higher income, not the opposite. This point is connected with policies toward ethnic minorities at various levels of government. Preferential policies for minorities to obtain employment, start a business, and be promoted in the bureaucracy are all reflected to some extent in our results. Next, the main factor leading to income gap between the Han and Hui ethnic groups is the different rates of returns to education between the two ethnic groups. The cause of this difference is worth further study. There is no denying that one cause is a difference in the quality of education, which results in cases of the same number of years of education being compensated at widely different rates. Another factor leading to the income gap between the two ethnic groups is that they received different compensation in enterprises with different ownership structures. The main expression of this fact is that employed Han received much higher incomes than employed Hui received in state-owned enterprises. This point is also worthy of further study. Finally,

¹³ Because coefficient of the religiosity variable and the human capital variable were both insignificant, we deleted these two variables from the decomposition analysis; that is, the estimates of the model do not include them.

another important factor explaining income inequality is the location variation of employed members of the two ethnic groups. As table 2 shows, average income was highest in Yinchuan among the several cities in Ningxia. The Han portion of the Yinchuan sample is nearly three times higher than the Hui portion.

Table 4 about here

5. A Comparison of Income Inequality within the Hui and Han Ethnic Groups

In Ningxia Hui Autonomous Region, the difference between Hui and Han incomes is not conspicuous, but income inequality within the ethnic groups is noticeable and easy to discern. As shown in table 5, according to our survey sample, the distribution of income among employed Hui in Ningxia had a Gini coefficient of 0.296, and that for employed Han was somewhat higher, 0.313. Except for coefficients of variation, other indices of inequality also show that income inequality within the Han ethnic group is greater than that within the Hui ethnic group. For example, if we compare the average income of the highest decile with that of the lowest decile, the Hui ratio is 7.6 times, and the Han ratio is 9.3 times.

Table 5 about here

To compare and explain the special characteristics of income inequality within the two ethnic groups, we used two methods for decomposing the Gini coefficients of income inequality within the two employed ethnic groups. Table 6 gives the results of decomposing the income inequality of the employed within the entire sample and the two ethnic groups. One can see that the size of the effect of the various influential factors obtained from the Fields decomposition method and from the Morduch-Sicular decomposition method is roughly the same. Consequently, in explaining the results, we focused on the decomposition results derived from the Fields method. Some of the decomposition results were as we expected. For example, the ethnic-group dummy variable accounted for almost none of the

income inequality of the entire sample. This means that the income difference between the two ethnic groups produced almost none of the income inequality among the employed in the Ningxia region. Some of the results were consistent with our analysis, discussed above. For example, gender difference in income explains a greater portion of income inequality among employed Hui, accounting for nearly 10 percent of the Gini coefficient of income inequality within the Hui ethnic group, whereas the corresponding figure for the Han ethnic group is no more than-even 6 percent. To give another example, years of work experience affected income inequality among employed Hui to a greater extent than that among employed Han. And some decomposition results were unexpected. For example, the effect of the years-of-education variable on income inequality among the employed was nearly the same for the two ethnic groups. But in our analysis above we discovered that the rate of returns to education was considerably higher for the Han ethnic group than for the Hui ethnic group. Consequently, we expected that the education variable would explain more of the income inequality within Han ethnic group than it did. Moreover, though the occupation variables were an important factor influencing income inequality within each of the two ethnic groups, it was not noticeably different between them. And the effects of the sector and ownership variables were very limited. We should also note that the religious belief and social capital were not major factors explaining income inequality within either the Han or Hui ethnic group. This finding was highly unexpected.

Table 6 about here

6. Conclusions

Income inequality between ethnic minorities and the Han majority has continuously received people's attention, but for different reasons. This research carried out a sample survey on Ningxia urban residents in 2006 and performed a detailed analysis on income inequality between employed Han and Hui in this Hui region using the data from the survey. Out of this research came some results worth noting. First, there was almost no income gap

between the Han majority and the Hui ethnic minority in this minority region. The results of our analysis presented in this paper offer strong support for this conclusion. This means that the ethnic division of the labor force in this region has not brought about significant income gap between the ethnic groups. If there is income gap between ethnic groups within a larger region, especially gap consisting of higher income for the Han majority than for the Hui minority, such gap stems mainly from the geographical distribution of different ethnic groups in different areas, and not from ethnic factors. Moreover, long-standing government policies of giving various preferences to minorities have created a situation where Hui status not only does not give rise to discrimination in income but even confers higher income on these people.

Next, the special characteristics of different ethnic groups had a significant effect on income determination mechanisms. In comparison with the Han ethnic group, sex clearly had a somewhat high effect on the income of employed Hui. This shows to a certain extent that Hui women have rather low economic status. We also discovered that the returns work experience was clearly greater among Hui than among Han, and that the returns to education was clearly lower. This result has two implications. One is that in determining wages, Hui attach more importance to experience and seniority, rather than education. The other is that—owing to the influence of language, culture, religion, and customs—the quality of education of employed Hui is clearly lower than that of employed Han. Consequently, with the same number of years of education, Hui receive lower returns to education in the labor market.

In addition, some variables of individual characteristics show that the type of ownership of the employing firm and the geographical distribution of employed individuals conferred higher income on employed Han, while the distribution of sectors of employment among the employed favored Hui with higher income. Moreover, in the selection of sectors, employed Hui tended to enter high-paying monopolistic sectors, while employed Han more readily entered sectors requiring more human capital. Furthermore, ethnicity did not clearly

influence income through the factors of religion and social capital.

Finally, we discovered that income inequality within the Hui ethnic group was somewhat lower than that within the Han ethnic group. This is perhaps because the Hui of Ningxia are rather homogeneous. Though the variables of sex, human capital, occupation, geographical location all are important in explaining income inequality within both the Han and Hui ethnic groups, these variables exerted more influence within the Hui ethnic group.

References

- Gustafsson, Bjorn and Li Shi. 2003. "The Ethnic Minority-Majority Income Gap in Rural China during Transition," *Economic Development and Cultural Change* 51: 805–822.
- Deng, Ai. 2006. "A Positive Analysis of the Diversity of Ethnic Urbanization in Western China", *Ethno-National Studies* 2006, No. 2: 30–38.
- Deng, Quheng, Li Shi, Yue Ximing and Wei zhong. 2008. "The Reasons for the Change of Employed Earning Inequality in Urban China: Based on the Regression Function Decomposition Analysis," working paper.
- Department of Population, Social Science and Technology Statistics, National Bureau of Statistics, PRC and Department of Economic and Development, State Ethnic Affairs Commission, PRC (eds.) 2003. *Tabulation on Nationalities of 2000 Population Census of China*, Beijing; Ethnic Publishing House.
- Ding, Sai. 2006. "The Ethnic Minority-Majority Income Gap in Rural China," *China Labor Economics*, Vol. 3, No. 4: 86–98.
- Fields, Gary, 1998. "Accounting for Differences in Income Inequality," mimeo, Cornell University.
- Gao, Xincan and Teng Tangwei. 2006. "An Analysis of the Economic Underdevelopment and Industry Economy of the Ethnic Region of the Northwest of China," *Ethno-National Studies*, No. 1: 21–30.
- Li, Junjie. 2008. "A Case Study of Economic Disparity in Ethnic Autonomous Regions and Its Countermeasures," *Journal of the Central University for Nationalities (Philosophy and Social Science Edition)*, No. 1: 14–24.
- Maurer-Fazio, Margaret, James Hughes, and Dandan Zhang. 2007. "Gender, Ethnicity and Labor Force Participation in Post-reform Urban China," *Feminist Economics* , Vol.13, No.3/4:189-212
- Morduch, Jonathan, and Terry Sicular. 2002. "Rethinking Inequality Decomposition, with Evidence from Rural China," *Economic Journal*, Vol. 112: 93-106
- National Bureau of Statistics. 2008. *China Statistical Abstract 2007*. Beijing: China Statistics Press.
- Ningxia Hui Autonomous Region Bureau of Statistics and Ningxia Survey Team of the National Bureau of Statistics (eds.) 2007. *Ningxia Statistical Yearbook 2007*.

Beijing: China Statistics Press, October 2007.

Darity, William Jr., Samuel L. Myers Jr., and Chanjin Chung. 1998. "Racial Earnings Disparities and Family Structure," *Southern Economic Journal* Vol. 65, No. 1: 20–41.

Table 1: The distribution of sample in Ningxia Hui Autonomous Region

	Number of households	Proportion	Number of individual	Proportion	Number of individual	Hui %
Yinchuan city	200	25.00	534	21.84	59	11.05
Shuizuishan city	150	18.75	433	17.71	31	7.16
Wuzhong city	200	25.00	649	26.54	326	50.23
Guyuan city	150	18.75	506	20.70	220	43.48
Zhongwei city	100	12.50	323	13.21	81	25.08
Sum	800	100.00	2445	100.00	717	29.33

Sources: the data are from a socioeconomic survey conducted in 2007 in the Ningxia Hui Autonomous Region by the Ningxia Survey Team of the National Bureau of Statistics for the Institute of Ethnology and Anthropology Chinese Academy of Social Sciences.

Table 2: The characteristics and earnings of the employed in Ningxia Hui Autonomous Region in 2006

	Han		Hui		Total	
	Percentage (%)	Average earnings in 2006 (Yuan)	percentage (%)	Average earnings in 2006 (Yuan)	percentage (%)	Average weighted earnings in 2006 (Yuan)
Total sample	100	15562.42	100	15229.56	100	15494.63
Male	56.23	17346.63	59.46	17902.09	57.16	17491.30
Female	43.77	13225.57	40.54	11334	42.84	12795.21
Education level						
College or above	38.83	18945.27	44.14	16656.44	40.33	18326.09
Upper middle school or middle level professional technical or vocational school	34.74	14097.24	22.76	14230.44	31.49	14115.22
Lower middle school	23.75	12688.39	24.48	13280.55	23.94	12842.19
Primary school and below	2.68	10912.86	8.62	16096.8	4.24	13730.33
Occupational category for employment						
Owner of private or individual enterprise	9.36	17678.61	11.91	18276.97	9.92	17866.68
Head of division in institution or the institution	7.41	22497.14	9.75	20596.11	7.93	21886.15
professional or technical worker	23.80	18278.25	18.41	17146.1	22.47	18096.26
Office worker	17.30	15697.69	31.05	15508.51	20.87	15692.73
Worker, commercial service worker or others	42.13	12418.53	28.88	11281.23	38.81	11999.09
Economic sector for the work unit						
Industry	19.92	12972.47	4.66	12514.77	16.00	13176.89
Commerce and trade, restaurants & catering, materials supply, marketing, warehousing and transportation	21.64	14457.98	27.96	14785.6	23.24	14530.27
Realty business, finance and insurance	13.06	16744.91	11.47	15894.09	12.67	16559.03
Education, health, culture and scientific research	17.02	18362.15	22.94	15013.31	18.67	17240.508
government and Party organs, social	12.27	16448.92	23.66	17051.74	15.14	16699.151

organizations						
Other	16.09	15640.86	9.32	13668.24	14.29	15222.145
Ownership of the work place						
State-owned units	41.59	17011.46	39.13	14341.56	41.44	16654.00
Collective units	28.32	12738.09	27.17	14922.68	28.29	13100.21
Others	30.09	15753.19	33.70	15402.66	30.27	15637.02
Area						
Yinchuan city	27.84	18211.33	8.97	17477.38	22.84	18146.90
Shizuishan city	24.14	14212.82	5.17	12119.47	18.97	14155.36
Wuzhong city	18.01	13556.13	44.48	14427.55	25.32	13982.99
Guyuan city	15.84	15900.19	33.10	15552.39	20.35	15727.06
Zhongwei city	14.18	14829.19	8.28	17757.71	12.52	15363.62

Note: the data in brackets are ratios for Han, Hui and total sample (%).

Sources: the data are from a socioeconomic survey conducted in 2007 in the Ningxia Hui Autonomous Region by the Ningxia Survey Team of the National Bureau of Statistics for the Institute of Ethnology and Anthropology Chinese Academy of Social Sciences.

Table 3: Earning function of the employed in Ningxia Hui Autonomous Region in 2006

	Dependent variable: log personal earning of the employed		
	Total sample	Hui sample	Han sample
Hui	0.097*	---	---
Han	----	---	---
Male	0.303***	0.314***	0.293***
Female	----	---	---
Education year	0.037***	0.031***	0.042***
Work experience	0.051***	0.058***	0.049***
Square of work experience	-0.001***	-0.001***	-0.001***
Communist party member	-0.003	0.096	-0.043
Non communist party member	----	---	---
Owner of private or individual enterprise	0.115	0.196	0.101
Head of division in institution or the institution professional or technical worker	0.194***	0.064	0.239***
Office worker	----	---	---
Worker, commercial service worker or others	-0.194***	-0.220**	-0.174***
Industry	0.012	0.144	-0.005
Commerce and trade, restaurants & catering, materials supply, marketing, warehousing and transportation	0.017	0.121	-0.018
Realty business, finance and insurance	0.194	0.289**	0.064
Education, health, culture and scientific research	0.119*	0.027	0.183**
government and Party organs, social organizations	-0.008	-0.033	0.013
Other	----	---	---
State-owned units	0.130**	-0.156	0.179***
Collective units	----	---	---
Others	0.045	-0.055	0.057
Yinchuan city	----	---	---
Shizuishan city	-0.159***	-0.330**	-0.162***
Wuzhong city	-0.232***	-0.155	-0.268***
Guyuan city	-0.117**	0.028	-0.149**
Zhongwei city	-0.139**	-0.020	-0.167**
Religion beliefs	-0.058	-0.066	-0.058
Nullifidian	----	----	----
The best three friends are in same ethnic group	0.031	0.098	0.028
The best three friends are not only in the same ethnic group but also in other ethnic group	----	----	----
Constants	8.393***	8.44***	8.362***
Adj. R ²	0.313		0.295
F-Value	22.10		15.80
Obs.	1067	289	778

Note: the omitted variables are female, non communist party member, professional or technical worker, others in economic sectors for the work unit, collective units and Yinchuan city. * Denotes significance at 10 percent level; ** denotes significance at 5 percent level; *** denotes significance at 1 percent level.

Sources: the data are from a socioeconomic survey conducted in 2007 in the Ningxia Hui Autonomous Region by the Ningxia Survey Team of the National Bureau of Statistics for the Institute of Ethnology and Anthropology Chinese Academy of Social Sciences.

Table 4: The results of earning gap decomposition between Han and Hui

	Simulation I		Simulation II	
	$f1(x1-x0)$	$x0(f1-f0)$	$f0(x1-x0)$	$x1(f1-f0)$
Sex	-40.91	-152.45	-47.99	-145.37
Education year	78.72	2199.85	26.22	2252.35
Work years	184.64	-541.9	270.73	-627.99
Communist party member	7.51	-276.35	-15.43	-253.42
Occupational category	-110.69	252.98	-117.37	259.65
Economic sectors	-53.48	-458.04	-112.62	-398.89
Ownership of the work place	42.74	1058.21	-37.91	1138.85
Areas	407.63	-577.59	65.61	-235.46
Constants	0	-1920.97	0	-1920.97
Sum	516.16	-416.26	31.24	68.75

Note: the high earning group is Han and the low earning group is Hui. Each item accounts for the Han and Hui average earning gap.

Sources: the data are from a socioeconomic survey conducted in 2007 in the Ningxia Hui Autonomous Region by the Ningxia Survey Team of the National Bureau of Statistics for the Institute of Ethnology and Anthropology Chinese Academy of Social Sciences.

Table 5: Inequality index of the employed in Ningxia Hui Autonomous Region in 2006

	Total employed sample	Hui	Han
Gini index	0.308	0.296	0.314
Theil index	0.166	0.162	0.169
MLD	0.179	0.168	0.184
Coefficient of variation	0.629	0.641	0.627
Ratio of top group/bottom group in deciles	7.96	7.62	9.26

Sources: the data are from a socioeconomic survey conducted in 2007 in the Ningxia Hui Autonomous Region by the Ningxia Survey Team of the National Bureau of Statistics for the Institute of Ethnology and Anthropology Chinese Academy of Social Sciences.

Table 6: The decomposition of the employed in Ningxia Hui Autonomous Region in 2006

Unit: %

	Fields method			Morduch-Sicular method		
	Total	Han	Hui	Total	Han	Hui
Hui	-0.03	----	----	-0.04	----	----
Male	6.79	5.69	9.92	7.62	6.54	10.50
Education year	5.68	5.94	5.84	6.41	6.70	6.55
Work experience	20.68	18.55	27.87	24.26	20.99	34.95
Square of work experience	-11.44	-10.49	-14.73	-13.86	-12.25	-20.08
Communist party member	-0.04	-0.57	2.23	-0.05	-0.68	2.89
Occupational category	7.74	7.15	8.30	7.79	7.60	8.98
Economic sectors	0.76	2.00	-1.06	1.09	2.34	-1.93
Ownership of the work plac	0.72	1.34	0.04	1.03	1.88	0.06
Areas	1.90	1.99	3.23	1.80	1.64	4.06
Religion belief	0.14	0.11	0.21	0.12	0.04	0.26
The best three friends are in same ethnic group	0.09	0.05	0.68	0.11	0.04	1.05
Residual	67.01	68.24	57.46	62.63	64.18	51.40
Constants				1.19	1.08	1.30
Sum	100	100	100	100	100	100

Sources: the data are from a socioeconomic survey conducted in 2007 in the Ningxia Hui Autonomous Region by the Ningxia Survey Team of the National Bureau of Statistics for the Institute of Ethnology and Anthropology Chinese Academy of Social Sciences.