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Abstract

This paper measures the income inequality among Beijing households, including both rural migrant households, who had been overlooked in previous studies, and urban-registered households. Furthermore, it estimates the influence of migrant households on the overall income inequality by decomposing the Theil index of overall inequality into three components: the share of inequality within urban-registered households, the share of inequality within migrant households, and the share of inequality between these two types of households. The result shows that the income inequality within migrant households has become the largest component of the overall income inequality in Beijing.

JEL classification: O15, O53.

Keywords: Urban China; Beijing; income inequality; migrant households; influence

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1. Introduction

China has been very successful at growing its economy since the late 1970's. However, this rapid growth has also brought problems to the country. Urban income inequality, like inter-regional income disparity, is one of the most notable problems.

Although there is a growing volume of studies on China's urban income distribution, until recently, the income distribution of rural migrant households living in urban areas, has been ignored in previous studies. This is partially due to the lack of statistics on the income of rural migrants who have no urban registration status and have not attracted enough attention from the government and the society. Under China's urban registration system, migrants from rural areas almost have no chance to get urban registration status (i.e. urban citizenship). Instead, they are treated as temporary residents[1], no matter how long they have been living in the cities. However, with the gradual deregulation of rural-urban migration in recent years, rural laborers are rushing into cities and merging into the urban society. As a result, migrant households have increasing their influence on overall urban income distribution. Thus, if migrant households were overlooked in the studies of urban income inequality, the real situation in urban China could not be reflected.

This paper is a case study of Beijing. Two types of household income data, the official data of the yearly survey by the National Bureau of Statistics of China (NBS or NBSC) on urban households and the *1999 CASS* (Chinese Academy of Social Sciences) *survey* data, are used in this paper. The official data includes long-time information but describes only income distribution among permanent resident households (i.e. urban-registered households). In contrast, the 1999 *CASS survey* investigated the income distribution of both permanent

[1] The temporary residents in the urban areas include domestic and foreign migrants who have no urban registration status (i.e. permanent resident status). The rural migrants constitute the absolute majority of the temporary resident population in urban China.

resident households and rural migrant households in urban China for the first time. Using these two types of data, we want to answer the following questions.

1) What is the general trend and real level of income inequality in China's large cities such as Beijing?
2) How much do rural migrant households influence the overall income inequality in Beijing?

The remainder of this paper is organized as follows. Section 2 surveys the previous studies. Section 3 explains the data source and the income inequality measures used in the study. Section 4 examines the trend of income inequality among permanent resident households in Beijing for the period 1985-2003, using the official survey data. Section 5 measures the income inequality among permanent resident households and among migrant households separately, using the *1999 CASS survey* data. Section 6 measures the overall income inequality among all households, and decomposes the overall inequality into three components, the share of inequality within permanent resident households, the share of inequality within migrant households, and the share of inequality between the two types of households. Section 7 summarizes the findings.

2. Survey of the previous studies

As described in some previous studies (World Bank 1997, Nakagane 2000), income inequality in China can be divided into four types: rural-urban gap, inter-regional disparity, intra-urban inequality (i.e. urban inequality), and intra-rural inequality (i.e. rural inequality). Because of the availability of aggregated data on provinces and urban/rural regions from official publications, as well as concerns with China's regional development issues, there have been many studies on the rural-urban gap and inter-regional disparity. In contrast, the

number of studies on the urban inequality and the rural inequality is relatively small. As for the contents of the previous studies, we can divide the studies on urban inequality into two groups: one consists of studies based on official household incomes surveys conducted by the NBS (the NBS Survey), and the other consists of studies based on the survey by the CASS (the CASS Survey). The NBS has been annually conducting sampling surveys on incomes and expenditures of rural and urban households since the early 1980s. The average income and population data by income-level group (5-7 groups) are published in the *China Statistical Yearbook* and some provincial level statistical yearbooks annually. Based on the data of the NBS Survey and other official statistics, the World Bank (1997) measured rural-urban gap, inter-regional disparity, intra-urban inequality, intra-rural inequality and their trends in the period 1981-1995. The findings on intra-urban inequality are as follows:

(1) The Gini coefficient for intra-urban income inequality has been smaller than intra-rural inequality for the period 1981-1995. However, the Gini coefficient for intra-urban inequality has increased from 0.18 in 1981 to 0.28 in 1995, while intra-rural inequality increased from 0.24 in 1981 to 0.33 in 1995.

(2) The level of inequality is influenced by the definition of income. Estimated at market prices, the average percentage of in-kind income as part of total income of urban households, including housing subsidies, pensions, medical care, education subsidies, communication subsidy and etc., is as large as 77.7% of the total in 1990 and 71.6% in 1995. The urban income inequality with the in-kind income included would be a little lower than that if the in-kind income were not included. In other words, in-kind income has the effect of equalizing urban income distribution.

On the other hand, the CASS carried out two nation–wide household income surveys before 2000, in 1988 and 1995. These surveys contain more question items and thus more

detailed information on individual households, though the number of households surveyed is smaller than that of NBS's. The main results of the studies based on these two surveys are reflected in Griffin and Zhao (1993), Zhao, Li, and Riskin (1999), Nakagane and Miwa (1999), Li and Zhang (2000), and Riskin and Li (2001). The trend of intra-urban income inequality described in the above studies is similar to that of the World Bank (1997) and other studies based on the NBS data. However, studies based on the CASS survey data are detailed with more analysis. For example, one study not only showed an increase of the Gini coefficient of intra-urban income inequality from 0.23 in 1988 to 0.29 in 1995, but also decomposed the overall inequality into several components by income source (Zhang, 1999). In conclusion, the study stated that the distribution of cash income of urban households (mainly wages) is the most important determinant increasing income inequality, and the effect of in-kind income, which contributed to the equalization of income distribution, fell greatly in the same period.

Although the CASS survey-based studies are much more detailed than other studies, there has been a common problem: the non-inclusion of migrant households. This is because the household samples in both the NBS survey and the 1988 and 1995 CASS surveys came from only urban-registered households. As the number of migrant households increase (reaching now about 20% of total urban population (Dai, 1997)), it is inappropriate to ignore the existence of migrant households.

On the influence of migrant households on intra-urban income distribution, some researchers argued that the influence is not large because the members of such households are mainly young laborers and their per capita income level is not lower than those of urban-registered households (Hussain et al., 1994). By contrast, the World Bank (1997) indicated that "the problem of this omission (of migrant households) is serious". However,

none of these statements is based on empirical analysis.

Fortunately, in order to solve the above problem, CASS conducted a new type of survey in 2000, the *1999 CASS survey*, in which migrant households were included for the first time (Xue and Wei, 2003). In this paper, in contrast to previous studies, we will focus on the influence of migrant households on the overall urban income inequality, selecting Beijing as a case study city.

3. Data and measures of income inequality

3.1 Data

As introduced in the first section, two types of data are used in this paper. The first one is household income data of official survey, which is published in the *Beijing Municipal Statistical Yearbook* (*BMSY*) and the *China Statistical Yearbook* (*CSY*). We use the aggregated data by income group of 5-7 levels published in *BMSY* and *CSY* for examining the trend of income inequality among permanent resident households in Beijing and urban China as a whole after the middle 1980s, when China started to focus its economic reform on the urban sector. The other type of data used in this paper is drawn from the *1999 CASS survey,* which was conducted by the Chinese Academy of Social Sciences in the spring of 2000 with assistance from the National Bureau of Statistics of China and an international joint-research team (Xue and Wei, 2003).

As already mentioned, comparison with the two earlier CASS surveys (1988 and 1995), one outstanding feature of the *1999 CASS survey* is that the migrant households who have lived in urban areas for over 6 months with a stable residency, employment, and income are included. The 5301 sample households in the survey are chosen from 13 cities in 6 provinces (including Beijing), giving consideration to city's population size and the share of migrants

in total city population (Table 1). In the case of Beijing, 100 rural migrant households, together with 670 permanent resident households, were investigated.

In the *1999 CASS survey*, there are dozens of question items, including those on income, expenditure, employment, housing, etc. Given the decreasing importance of in-kind income as China's economy system shifts to a market-oriented one (Zhang, 1999)[2], in this paper, we use per capita household cash income data to measure the income inequality among households, and estimate the influence of rural migrant households on the overall income inequality.

(Table 1 Regional distribution of samples in the *1999 CASS survey)*

3.2. Income inequality measures

Two indices of income inequality, the Gini coefficient and the Theil index, are used in this paper.

a. The Gini coefficient

The Gini coefficient, developed by Gini (1912), is an index usually used to measure income inequality. The value of Gini coefficient lies between 0 and 1, where 0 corresponds with perfect equality (where everyone has the same income) and 1 corresponds with perfect inequality (where one person has all the income, and everyone else has zero income). There are many forms of formula for calculating the Gini coefficient, although the basic principle is the same. In this paper, when we use the aggregated data by income group of various levels, Gini coefficients are measured as follows.

[2] With the transition of China's economic system, the share of in-kind income in total income of urban households decreased significantly in the late 1990s. We will examine the trend of in-kind income of urban households and its influence on income distribution in the future study.

$$G = 1 - \sum_{k=0}^{k=n-1} (X_{k+1} - X_k)(Y_{k+1} + Y_k) \quad (1)$$

Where,

G: Gini coefficient

X: cumulated proportion of the population (from lower income group)

Y: cumulated proportion of the income (from lower income group)

On the other hand, when we use the individual household income data, the Gini coefficients are measured as follows.

$$G = \left(\frac{2}{\mu n^2} \sum_{k=1}^{n} kw_k \right) - \frac{n+1}{n} \quad (2)$$

Where, W_k, being ranked in order from the lowest to the highest, stands for per capita income of the *k*-th household. μ is the average value of household income and *n* is the number of households (Economic Research Institute, 1998).

b. The Theil index

The Theil index, which is based on the information entropy concept, is defined by Theil (1967) as follows.

$$T_n(X) = \log n - \sum_{i=1}^{n} x_i \log \frac{1}{x_i} = \sum_{i=1}^{n} x_i \log n x_i \quad (3)$$

$$\left(x_i = E_i / \sum_{i=1}^{n} E_i \right)$$

Where, E_i stands for the average value of per capita income of household, and *n* is the number of households. The Theil index shares some characteristics with the Gini coefficient, and it ranges from 0, perfect equality, to *log n*, perfect inequality. However, the Theil index is relatively easy for decomposition (as below) so that the contribution of intra-group inequality

and inter-group inequality to total inequality can be identified.

If the households in a city, $X=(x_1,x_2,\cdots\cdots,x_h,x_{h+1},\cdots\cdots,x_n)$, are constituted by two groups, permanent resident households, $X_h=(x_1,x_2,\cdots\cdots,x_h)$, and migrant households, $X_{n-h}=(x_{h+1},\cdots\cdots,x_n)$, the Theil index $T_n(X)$ for X can be decomposed into three components as follows.

$$T_n(X)=h\mu_h T_h(X_h)+(n-h)\mu_{n-h}T_{n-h}(X_{n-h})+T_n(X_h,X_{n-h}) \quad (4)$$

Where, $T_h(X_h)$ and $T_{n-h}(X_{n-h})$ measures the income inequality in the two groups, X_h and X_{n-h} respectively, while $T_n(X_h,X_{n-h})$ measures the income inequality between the two groups, which have an assumed income distribution as $(\mu_h,\cdots\cdots,\mu_h,\mu_{n-h},\cdots\cdots,\mu_{n-h})$. μ_h and μ_{n-h} is the average value of X_h and X_{n-h} respectively.

4. Trend of income inequality in Beijing

4.1 The income level, population size, and population composition in Beijing

As the capital of China, Beijing has been the region (province) with the second highest income level in the country, next only to Shanghai, since 1949. Because of its higher income level and plentiful employment opportunities, Beijing is one of the main destinations of recent domestic migration (Sakamoto and Dai, 2004). Particularly after mid-1980s, when regulations on rural-urban migration were eased, rural migrants from all provinces in the country began to rush into Beijing as well as to Shanghai and other coastal large cities. Consequently, migrant population without urban registration status (i.e. without urban permanent residency) in Beijing increased from 0.32 million in 1985 to 1 million in 1995, and then 3.33 million in 2003 (Table 2). The increasing migrant population is exerting a huge influence on urban economy and society of Beijing, including income distribution.

(Table 2　Income level, population size, and population composition in Beijing)

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4.2　Trend of income inequality in Beijing

Table 3 shows the trends of income inequality among permanent resident households in Beijing and urban China as a whole for the period 1985-2003. The Gini coefficients in the table are measured using the official survey data, which are published in the Beijing Municipal Statistical Yearbook (BMSY) and the China Statistical Yearbook (CSY).

(Table 3　Trend of income inequality in Beijing and Urban China)

We note the following points from the Table 3:

(1) In both Beijing and overall urban China, the income inequality among permanent resident households is increasing. However, in case of overall urban China, which is composed of cities with various income levels throughout the whole country, the speed of increasing of income inequality is more rapid than that in Beijing.

(2) The Gini coefficients of income inequality measured using per capita disposable income are a little greater than those measured using per capita gross income, indicating that the income tax system in China probably does not have much effect on income distribution.

It should be remembered that migrants without registration status are completely overlooked in Table 3. Thus, the relatively low Gini coefficients in this table may do not reflect the real situation of overall income inequality in Beijing.

5.　Income inequality in Beijing including migrant households

In this section, we use the income data of the *1999 CASS survey*, instead of official data, to measure the income inequality in Beijing. Although this data set provides income distribution information of only one year, 1999, it can help us to understand the real situation of income inequality in Beijing and the influence of the migrant households.

5.1　Income inequality among permanent resident households

Table 4 shows the income distribution among 670 permanent resident households in

Beijing surveyed by the CASS, and the measurement results of income inequality.

(Table 4 Income distribution among Permanent Resident households (1999))

Comparing the Gini coefficients for 1999 in Table 3 and Table 4, we find that the coefficients based on the *1999 CASS survey* data are a little higher than those based on the official (BMSY) data. However, the difference between these results is small, indicating that the official data on income distribution among permanent resident households is generally acceptable.

Table 5 shows some features of PR (Permanent Resident) household heads by income level. We can find that the all factors listed in the table, namely household head's membership of China's Communist Party (CCP), education, age, and working years, have positive correlation with the household income level. However, more detailed analysis based on data from a longer time series are needed if we want to examine further the determinants of household income level in urban China and the changes in recent years. We will leave this work for another paper.

(Table 5 Features of head of PR households by income level)

5.2 Income inequality among migrant households

Table 6 shows the income distribution among 100 migrant households in Beijing surveyed by the CASS, and the income inequality measures. Since the migrant households are mainly composed of young laborers, and their average household size is smaller than that of the permanent resident households, the average per capita income of migrant households is a little higher than that of the permanent resident households. In other words, it is not

correct to view the rural migrant households as a poor group in the urban area. However, as the high values of the two Gini coefficients and the Theil index in Table 6 show, the income inequality among migrant households is much greater than that among permanent resident households.

(Table 6 Income distribution among migrant households)

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The greater income inequality among rural migrant households is largely due to the specific income source and employment status of migrant householders. As Table 7 shows, the income sources of migrant householders seem to be quite different from those of permanent resident householders who depend largely on wages (usually from urban formal sectors). Among the 100 migrant households surveyed, half of them have income from private business, including operation of stores, restaurants, other private enterprises, and activities such as street sales. A very small portion of migrant households who succeeded in their business seem much richer than most permanent resident households. On the other hand, the majority of rural migrant laborers in Beijing are usually employed in the urban informal sectors with short-term work contracts and low wages, which are sometimes below the minimum wage level set by the local government[3].

(Table 7 Features of migrant households by group of income level)

6. The influence of migrant households on the overall income inequality

6.1. The overall income inequality in Beijing

Table 8 shows the measurement results on the overall income inequality among all households surveyed by the CASS, including both permanent resident households and rural

[3] Almost all the large cities in China have issued regulations on the minimum wage level. However, these regulations are not well implemented in the urban informal sectors.

migrant households. We can see that the value of the Gini coefficient measured using the *1999 CASS survey* data is much higher (0.33) than that (about 0.20) measured using the official data, which includes only permanent resident households. In other words, with migrant households taken into account, the income inequality in Beijing is much greater than that reflected by the official data.

Some may think that the value of the Gini coefficient of, 0.33, is still under the line that should lead to high concerns from the government and society. Actually, if compared with some international cities such as Hong Kong, where the Gini coefficient of income inequality is over 0.40 in recent years (United Nations, various years), the income inequality in Beijing does not look particularly high. However, if we remember that China is a transition economy, changing from a socialist system that was grounded on equality, and the fact that the value of the Gini coefficient was around 0.15 in urban China before 1985 (Table 2), we should understand why the urban people in urban China are so concerned about the rising trend of the income inequality.

(Table 8　　The overall income inequality in Beijing)

6.2. Decomposition of the overall income inequality in Beijing

In order to clarify the influence of migrant households on overall income inequality, we decompose the Theil index of inequality among all households into three components: the share of inequality within permanent resident households, the share of inequality within rural migrant households, and the share of inequality between the two groups. The decomposition results are shown in Table 9.

(Table 9　Decomposition results of overall income inequality in Beijing)

Table 9 tells us that the income inequality within the permanent resident households or the inequality between two types of households is not the largest component of the overall income inequality in Beijing. Instead, the income inequality within migrant households has become the largest contributor to the overall income inequality in Beijing.

It should be noted that the above result is based on a small-sample survey. Thus, there is a possibility that the shares of each of the three components in the overall income inequality were over-estimated or underestimated. However, there is no doubt that the increase in migrant households with great income difference among themselves are becoming a very important, if not the largest, factor of income inequality in Beijing.

7. Conclusions

Using data of the *1999 CASS survey* and official survey data, this paper measures and decomposes income inequality in Beijing. The findings can be summarized as follows.

(1) After China started to focus its economic reform on the urban sector since the mid-1980s, income inequality among permanent resident households in Beijing has undergone considerable increase, with the Gini coefficient rising from 0.15 in 1985 to over 0.22 in 2003.

(2) With the advance of China's reform towards a market-oriented economy and deregulation of rural-urban, the share of rural migrants in Beijing's total population has been increasing. The income inequality among rural migrant households in Beijing is much greater than that among permanent resident households.

(3) Measured by the Theil index, income inequality within migrant households has become the largest contributor to the overall income inequality among all households in Beijing.

The above findings have some policy implications.

First, although income inequality among permanent resident households in urban China is not yet very high (as compared with other international cities), the government should pay more attention to its rapid increase. The influence of on–going state owned enterprises reform, which will surely increase the unemployment rate among urban permanent residents, must be considered from this point of views.

Second, since rural migrant households has become an important factor in the rise of urban income inequality, migrants must be immediately taken into account when conducting official surveys and forming policies. The minimum-wage regulation and other related laws or policies should be implemented for protecting the basic rights of rural migrants, who usually work in the informal sectors of urban China and lack protection by law.

Third, with the accelerated urbanization in China and economic globalization in the world, some large cities such as Beijing and Shanghai will become increasingly attractive destinations to both domestic migrants and international migrants (e.g. foreign investors, managers, and other skilled laborers). The latter were not included in the study. With the growing influx of low-income migrants from inland provinces and high-income migrants from around the world, the income inequality problem in these cities may become particularly serious in the future. Thus, special attention should be paid to these internationalized large cities.

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Table 1: Regional distribution of samples in the *1999 CASS survey*

Province	City	Number of Registered Households	Number of Migrant Households	Total Number of Households	Share of Migrant Households (%)
Beijing	Beijing	670	100	770	14.9
Gansu	Lanzhou	440	60	500	13.6
Gansu	Pingliang	230	50	280	21.7
Henan	Zhengzhou	340	60	400	17.6
Henan	Kaifeng	230	50	280	21.7
Henan	Pingdingshan	230	50	280	21.7
Jiangsu	Nanjing	490	71	561	14.5
Jiangsu	Xuzhou	240	60	300	25.0
Liaonin	Shengyang	490	70	560	14.3
Liaonin	Jinzhou	240	60	300	25.0
Sichuan	Chengdu	440	70	510	15.9
Sichuan	Zigong	230	50	280	21.7
Sichuan	Nanchong	230	50	280	21.7

Source: CASS

Note: Chengdu, Lanzhou, Nanjing, Shengyang, Zhengzhou are 5 provincial capitals and Beijing is China's capital. Provinces underlined are coastal regions.

Table 2: Income level, population size, and population composition in Beijing

Year	Per Capita GDP (yuan)		Population size (million)		Population composition in Beijing (million)	
	China	Beijing	China	Beijing	PR	TR
1978	379	1290	956.17	8.72	8.50	0.22
1985	853	2704	1051.04	9.89	9.58	0.31
1989	1512	4496	1127.04	10.86	10.21	0.65
1991	1879	5781	1158.23	11.16	10.40	0.76
1992	2287	6805	1171.71	11.25	10.45	0.80
1993	2939	8240	1185.17	11.37	10.51	0.86
1994	3923	10265	1198.50	11.64	10.62	1.03
1995	4854	13073	1211.21	11.71	10.70	1.00
1996	5576	15044	1223.89	11.84	10.78	1.06
1997	6054	16735	1236.26	12.17	10.86	1.31
1998	6308	18427	1247.61	12.23	10.92	1.32
1999	6551	19771	1257.86	12.50	11.00	1.50
2000	7086	22382	1267.43	12.78	11.08	1.71
2001	7651	25361	1276.27	13.67	11.22	2.44
2002	8214	28273	1284.53	14.95	11.36	3.59
2003	9101	31886	1292.27	14.81	11.49	3.33

Source: calculated from the data in CSY (various years), BMSY (various years) .

Note: PR population means the Permanent Resident population in Beijing; TR population is the number of persons who hold Beijing Temporary Resident Card but have no Beijing citizenship (i.e. registration status). The majority of TR population is made up of rural migrants.

Table 3: Trend of income inequality in Beijing and Urban China

Year	Gini coefficient				Number of urban households surveyed	
	Per capita gross Income		Per capita disposable income			
	Beijing	China	Beijing	China	Beijing	China
1985	0.15	0.16	0.16	0.16	1000	17143
1989	0.15	0.18	0.16	0.18	1000	35235
1991	0.14	0.16	0.15	0.17	1000	36730
1992	0.15	0.18	0.15	0.18	1000	36290
1993	0.17	0.20	0.17	0.20	1000	35390
1994	0.19	0.21	0.20	0.23	1000	34940
1995	0.19	0.20	0.20	0.21	1000	35520
1996	0.19	0.20	0.19	0.21	1000	36370
1997	0.19	0.22	0.19	0.22	1000	37890
1998	0.22	0.23	0.20	0.23	1000	39080
1999	0.20	0.23	0.20	0.23	1000	40044
2000	0.22	0.24	0.21	0.25	1000	42220
2001	0.22	0.26	0.23	0.26	1000	43840
2002	0.24	0.31	0.25	0.31	1000	45610
2003	0.22	0.32	0.23	0.32	1000	48028

Source: The Gini coefficients are calculated from the yearly survey data with 7 income levels in CSY (various years), and data with 5 levels in BMSY (various years).

Note: The official urban household survey in China began in the early 1980s; Gross income refers to the total income of the sample households, including regular or fixed income and occasional income, while disposable income refers to the actual income of the sample households which can be used for daily expenses, i.e., gross income minus personal income tax, expenditure on household business operation, etc.

Table 4: Income distribution among Permanent Resident households (1999)

Group by income level	Number of Households surveyed	Per capita income (yuan)	Population (people)	Income inequality		
				Gini coefficient 1	Gini coefficient 2	Theil index
Low	134	4483	430			
Lower Middle	134	6786	420			
Middle	134	8423	428			
Upper Middle	134	10706	399			
High	134	16909	386			
Total	670	9298	2063	0.24	0.26	0.12

Note: Gini coefficient 1 is measured using income data of 5 PR household groups with various income levels; Gini coefficient 2 is measured using data of 670 individual PR households.

Table 5: Features of head of PR households by income level (1999)

Group by income level	Number of Households surveyed	Per capita income (yuan)	Head's features				
			income (yuan)	age (year)	education (year)	M of CCP (%)	working years (year)
Low	134	4483	6872	49.8	9.1	17.2	23.6
Lower Middle	134	6786	10121	51.3	9.4	30.6	26.9
Middle	134	8423	12142	51.0	11.0	38.1	27.8
Upper Middle	134	10706	13759	51.6	11.3	44.0	29.0
High	134	16909	20428	52.7	11.8	56.0	30.4
Total	670	9298	12664	51.3	10.5	37.2	27.5

Source: CASS.
Note: M of CCP refers to the Membership of China's Communist Party.

Table 6: Income distribution among migrant households (1999)

Group by income level	Number of Households surveyed	Per capita income (yuan)	Population (people)	Income inequality		
				Gini coefficient 1	Gini coefficient 2	Theil index
Low	20	2452	54			
Lower Middle	20	4485	41			
Middle	20	6880	44			
Upper Middle	20	10291	37			
High	20	34872	34			
Total	100	10407	210	0.49	0.59	0.74

Source: CASS.
Note: Gini coefficient 1 is measured using income data of 5 groups with various income levels; Gini coefficient 2 is measured using data of 100 individual rural migrant households.

Table 7: Features of migrant households by group of income level (1999)

Group by income level	Household number	Classified by income source			Total yearly wage income(yuan)	Total yearly business income(yuan)
		from wage	from business	both		
Low	20	14	4	2	72300	39500
Lower Middle	20	14	2	4	124450	32600
Middle	20	12	2	6	140756	151000
Upper Middle	20	5	9	6	126680	241000
High	20	5	6	9	395500	415950
Total	100	50	23	27	859686	880050

Source: CASS.

Table 8: The overall income inequality in Beijing (1999)

year	Based on the *1999 CASS survey* data		Based on the official data
	Gini coefficient	Theil index	Gini coefficient
1999	0.33	0.21	0.20

Source: Calculated from average household income data by group of 5 levels in BMSY and income data of 770 individual households from 1999 CASS survey, including permanent resident households and rural migrant households.

Table 9: Decomposition of overall income inequality in Beijing (1999)

	Overall Theil index	Three components		
		Within PR households	Within migrant households	Between two groups
Composition	0.21	0.10	0.11	0.002
Share (%)	100	45.9	53.0	1.2

Note: PR refers to Permanent Resident .