Impact of the Guest Worker System on Poverty and Wellbeing of Migrant workers in Urban China (Preliminary Draft)

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Abstract

China is, perhaps, the only country in the world which adopts the "guest worker" system for its own rural citizens. There are currently more than 120 million rural-to-urban migrants working in Chinese cities. Like all "guest workers" they have a temporary "visa" and no access to social benefits available to their urban counterparts. This paper examines three specific issues related to poverty and well-being of these workers. First, what proportion of "guest workers" is currently living in poverty? Second, what is the relationship between poverty and the long hours typically worked by migrants? Third, how do long work hours affect the future health of migrants? We find that more migrants live in poverty than urban residents. However, the difference in poverty incidence between the two groups is relatively small. Migrants work 50 per cent more hours per week than their urban counterparts and our estimates suggest that this reduces migrant poverty from 35 per cent to 15 per cent. We also investigate the relationship between working hours and long term health and find that extremely long work hours may adversely affect the migrant workers' long term health condition, and hence, hinder their future income earning ability. Our results raise many questions as to the relationships between poverty measures, hourly income and total work hours that have not received attention in the poverty literature.

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1 Introduction

Many countries adopt a "guest worker" system to help meet labour shortages. Guest workers normally have a temporary visa to work in the host country but have no political rights or rights to access social welfare or other government provided benefits. Under such a system, guest workers normally spend some part of their working life in the host country and return home when their work or family circumstances change. Their usual objective is to make and save as much money as they can before they return home.

China is, perhaps, the only country in the world which adopts the "guest worker" system for its own rural citizens (Roberts, 1997; Solinger, 1999; and Meng, 2000). There are currently more than 120 million rural-to-urban migrants working in Chinese cities and they contribute substantially to the recent unprecedented economic growth in China. Nevertheless, like all "guest workers" they have a temporary work "visa" and no access to social benefits which are available to their urban counterparts. There are no safety nets, no adequate access to health facilities and their children do not have equal access to schooling.

Migrants often earn lower incomes than natives, especially in the initial stage of migration. This is partly due to lack of knowledge of local labour markets and partly due to lack of local labour market specific human capital (see, for example, Chiswick, 1978 and Borjas, 1985, 1995). Lower incomes are also partly due to employer (or government) discrimination. In China, discrimination against rural migrants is usually institutionalised, whereby city governments prevent rural migrants from obtaining higher earning jobs which are reserved for urban citizens (Zhao, 2000, Meng and Zhang, 2001). Studies have continuously found that migrants often possess low income and 3D jobs (disgraceful, dirty, and dangerous) and that migrant earnings are much lower than their urban counterparts (Meng, 2000; Meng and Zhang, 2001; Zhao, 2002; and Cai, Du, and Wang, 2003).

Under such circumstances, questions naturally arise as to the kind of life migrants are living in the cities and how their short term objective of making and saving as much money as possible may affect their lives in the future.

The answers to these questions have important political and policy implications. First,

migrant workers currently account for one third of the Chinese urban labour force. In the next 10 to 20 years this figure is predicted to double. If many migrant workers are living under poverty, and concentrated in ghettos, the crowding and poverty conditions may lead to high crime rates and social and political instability. Second, China's current urban social safety net is only accessible to urban residents. This situation, however, is not sustainable. As the Chinese economy grows and more and more rural migrants come to the cities, a coherent social safety net which covers both urban residents and rural migrants will need to be established. Understanding the extent to which migrant workers currently live under poverty is a crucial piece of information to be used in designing an appropriate system and projecting its possible cost. Third, even if migrant workers and their families are not currently living under poverty, the short run objectives of making and saving as much money as they can by working exceptionally long hours may place them in an environment whereby, in the near future, their health, and hence, their earnings capacity may deteriorate. Any future health deterioration will not only adversely affect individual well-being but will also be of considerable social and political importance.

Using two recently available data sources, the China Income Distribution Survey 2002 (CIDS) and the China Urban Labour Survey 2001 (CULS), we examine three specific issues related to poverty and well-being of rural migrants. First, what proportion of migrant workers is currently living in poverty, as measured by the application of the usual income and expenditure poverty lines? Second, what is the relationship between these poverty levels and the long hours typically worked by migrants? And finally, how might the long hours worked and current work and living conditions affect the future health of migrants?

The paper is structured as follows. The next section provides background on rural-urban migration and describes the data. Section 3 assesses urban poverty using different poverty lines and examines how the urban poverty rate and poverty severity may change if we include a migrant sample. Section 4 discusses how extremely long hours worked by migrants enables them to live just above the poverty line and, had they worked "normal hours", what proportion of them would have lived under the poverty lines. Section 5 predicts the possible adverse impact of current long working hours on migrants' future health. Conclusions and policy implications are given in Section 6.

2 Background and data

China's internal rural-urban migration takes place within a "guest worker" system whereby migrant workers are restricted in the type of job they can obtain and restricted in terms of access to urban social services, such as education, health care, unemployment benefits, and pensions. These restrictions prevent migrant workers from staying in cities for a long period and from bringing their families to the cities. Thus, migrants often work in the cities for a few months to a few years, depending on their personal and family circumstances and then go back to their country home. Sometimes, they migrate back and forth.

When farmers migrate, their families are permitted to keep their land. In this way, land is a "safety net" for migrant workers. If they lose their jobs, and are unable to find another job in a short time, they may return to the countryside to work on the farm. Similarly, if they become sick in the cities they will have no other choice but to go back to the countryside. In the countryside there are family and relatives who can provide care, and cost of living is much lower, although health care is much worse in the countryside and health expenditure is not cheap.

Under the "guest worker" system, the effect of rural-urban migration on total urban poverty is unclear. On the one hand, as migrant workers can only obtain low income jobs, it is possible that a larger proportion of migrants are living under poverty than their urban resident counterparts. On the other hand, unsuccessful migrants are more likely to go back to countryside. Those who stay in cities are usually employed and are a relatively successful group. In other words, the "guest worker" system may act as a buffer which pushes unemployed and very poor migrants back to the countryside.[1] Under these circumstances migrants may not contribute to an increase in total urban poverty.

There is another issue. Poverty, measured in terms of current income, may not capture current living condition and the long term poverty of migrant workers. This is because migrants do not see their future in the cities. They come to earn and save as much as possible and to bring their savings home for their future prosperity. With such an objective in mind, they may

[1] We put aside any general equilibrium impact of migrants on the income levels of urban residents.

sacrifice current living conditions for their own and their families' future. They may voluntarily choose to work extremely hard and live in extremely poor conditions while working in the cities. Such short term behaviour may badly abuse their long term health condition, and hence, their long term earnings capacity and wealth.

To study these issues we employ data from two recent surveys. The first survey is the China Income Distribution Survey (CIDS), 2002, conducted in 12 provinces[2] by the Institute of Economics at the Chinese Academy of Social Sciences, while the second survey is the China Urban Labour Survey (CULS), 2001, conducted in five large capital cities (Shanghai, Wuhan, Shenyang, Xian, and Fuzhou) by the Institute of Population and Labour Economics at the Chinese Academy of Social Sciences. Both surveys include samples of urban residents and rural-urban migrants in the same cities or provinces. The CIDS comprises 6835 households and 20,632 individuals in the urban resident sample and 2000 households and 5327 individuals in the migrant sample while the CULS consists of 3499 households and 8109 individuals in the urban resident sample and 2400 migrants in the migrant sample.[3] In each survey, the questionnaires are largely comparable for urban residents and rural migrants. Each survey has advantages and disadvantages relative to the other.

CIDS has a larger sample than CULS and includes large (37 per cent of the sample individuals), medium, and small cities (63 per cent of the sample individuals). The survey has good records of individual income, including everybody in the household for both urban resident and migrant samples. In addition, there are detailed consumption expenditure data.

The CULS sample only includes five large cities.[4] The main advantage of the CULS survey is that it collects urban and migrants work histories and working hours at different stages of working life. Two shortcomings of CULS are: First, the migrant survey only ask questions about the main respondent of each household. Although information regarding age, education, working status, whether working in the same city, and the type of job of the respondents' spouse, parents, children, and siblings are also gathered, no earnings information is available for these

[2]The provinces include Beijing, Shanxi, Liaoning, Jiangsu, Anhui, Henan, Hubei, Guangdong, Chongqing, Sichuan, Yunan, and Gansu.

[3]CULS migrant survey does not include separate individual level survey for household members other than the respondent. Limited information on other family members are reported by the main respondent.

[4]For detailed sampling procedural, see http://www.msu.edu/~gilesj/Protocol.pdf

relatives. Thus, it is impossible to derive household per capita income for migrants. Second, many household level data, especially expenditure, are not available for migrants due to the individual nature of the survey.

Both CULS and CIDS have a large proportion of migrants working as self employed (around 51 to 53 per cent in both samples). Whether this reflects the population occupational distribution is unknown as even the census did not ask questions as to whether a migrant is working as a wage or salary earner or as self-employed. Nevertheless, the common belief is that the proportion of self-employed from these surveys is too high. The main reason for this is that workers who live on construction sites and in factory dormitories do not normally register with the urban community authorities.[5] To help offset any bias in the samples, the analyses below present results for total migrant sample and a sample of migrant wage and salary earners only.

Table 1 presents summary statistics.[6] Many interesting facts are revealed from this table. *First*, on average migrants are around 12 to 23 years younger and around 2 to 3 years less educated than their urban counterparts.

Second, the proportion of household members who are employed is very different between urban residents and migrants. Around 70 to 86 per cent of migrants in cities are working, while this ratio for the urban residents is between 40 and 50 per cent, suggesting that, as guest workers, migrants leave their non-working family members back in the rural villages.

Third, rural migrants earn less, spend less, and save more. On average, based on CIDS, migrants earnings per worker is 9142 yuan per annum and per capita income is 6486 yuan, while these figures for urban residents are 12,162 yuan and 8246 yuan, respectively. Urban resident earn 33 and 27 per cent more than their migrant counterparts. Migrant savings, however, are higher than urban residents. On average, migrants save 2214 per capita per annum—34 per cent of their per capita income—while the average saving rate for urban residents is 24 per cent. The low income and high saving rate indicate that migrant live in a much harsher condition than their urban counterparts. This can be shown from their housing conditions. Per capita

[5] The CULS claims that migrant workers who were registered by their work unit with local police stations are also included in the sample frame. This may to some extent be true but we still feel that the proportion of self-employed is too high.

[6] Summary statistics for self-employed and wage and salary earners separately are presented in Appendix A.

living area for migrants is around 11 square meters, while for urban residents is 19 to 23 square meters. Around 63 per cent migrant household living in a house without bathroom, while this ratio for urban residents is 16 per cent.

Fourth, migrants have limited access to social benefits. For example, while 65 per cent of urban employed individuals are eligible for public health insurance, this ratio is 4 per cent for migrants. Despite this migratns spend less on health. While per capita health expenditure is around 450 Yuan annually for urban resident, the figure for migrant households is 243 Yuan, almost half of that for the urban residents. Obviously, saving motivation contributes to the low health expenditure of migrant workers. As medical expenditure is very high in many cities,[7] when health problems arise migrants often try to avoid seeing doctors. As Xiang (2003) indicated, upon falling ill, migrants would typically wait and see in the beginning, hoping the illness would go away. If the situation got worse, they would go to small pharmacies to buy medicines according to their own medical knowledge. Only when the illness becomes unendurable would they visit doctors, by which time, the disease may have already become very serious.[8]

Fifth, migrants, on average, work 52 to 56 per cent more hours per month than their urban counterparts and rarely have access to benefits which are commonly available to urban residents.

Finally, in both surveys individuals were asked to rate their health condition against their age group. The rating ranges from 1 for excellent to 5 very ill. We group 4 (ill) and 5 (very ill) into a dummy variable indicating unhealthy and find that migrants, on average, are less likely than their urban counterparts to rate themselves as being unhealthy.

[7] According to Xiang (2003) one consultation for a minor health problem such as the cold in a big hospital in Beijing may cost 500 RMB, almost one month's salary for some migrants.

[8] Many case studies and newspaper articles have presented facts with regard to migrants refusing to receive treatment for their health problems due to financial difficulties. For example, fourteen migrant workers in a suitcase factory in Beijing were sent to a hospital by the local government when they were found to have severe benzene poisoning in 2002. But more than 10 checked out soon afterwards due to the lack of money (Xiao, 2002). Another example is that the department of external injuries in Guangdong Province People's Hospital receives about 200 migrant workers a year and more than one third of them cannot pay the bill after the treatment. Some hospitals now simply refuse to receive migrant patients (Cheng and Wen, 2002).

3 A simple poverty assessment

In China there is no official poverty line for each province or city. However, governments in each region publish the income level at which a household can receive the Minimum Living Allowances (Dibao Line). The Dibao Line reflects both local minimum living standards and local government budgetary situation as the Minimum Living Allowance is paid by the local governments. Thus, the Dibao line is often lower than other poverty lines.

The more widely used poverty line is often defined as US$1 or US$2 a day. However, this poverty line relies heavily on the purchasing power parity exchange rate, which is not available across differen regions within China. In this paper, we follow Ravallion (1994), CUPRG (2003), and Meng, Gregory, and Wang (2005) and use "the cost-of-basic-needs" (CBN) method. The CBN method defines the poverty line in four steps. The first step is to define the cost of acquiring "the minimum nutrition requirement" (MNR). The MNR used in this study is 2,100 calories per person per day, which is commonly used in many poverty studies (Ravallion, 1994; Pradhan, Suryahadi, Sumarto, and Pritchett, 2001) and accepted as the MNR by the Chinese Academy of Preventive Medicine (CAPM, 2001). The second step is to choose a reference group which purchases the MNR. Our reference group is the poorest 20 per cent of households. Third, we measure the cost of acquiring the MNR by the reference group. This is defined as the food poverty line. Finally, we calculate the non-food component of the cost of basic needs (CBN) as human beings not only need food to survive, they also need other things such as basic clothing and shelter.[9]

Earnings are not reported for non-respondents in the CULS migrant survey, and hence, it is impossible to obtain per capita income for migrant households. As a result, the simple poverty assessment presented in this section will not include the CULS sample.

To use the CBN method to calculate a local poverty line for different cities/provinces, we use the Urban Household Income and Expenditure Survey (UHIES) 2002. This survey

[9]The non-food component is obtained by the following procedure: First we estimate the food share in total expenditure against the total expenditure deflated by food poverty line and household size. Second, using the estimated coefficients for each province and each year we calculate the non-food component of the poverty line for each province and each year. For detailed discussion of how CBN poverty line is derived in this study, see Meng, Gregory, and Wang (2005).

samples households with Urban Household Registration for every province in the nation (29 provinces before 1990 and 30 after 1990 due to the newly established province 'Hainan' in 1990).[10] Households are expected to keep a diary of all expenditures (disaggregated for hundreds of product categories) for each day for a full year. Enumerators visit sample households once or twice each month to review the records, assist the household with their questions, and to collect the household records for data entry in the local Statistical Bureau office (Han, Wailes, and Cramer, 1995; Fang et al., 2002; and Gibson et al., 2003).

The Dibao and poverty lines calculated using the CBN method for the 15 provinces included in the CIDS are presented in Appendix B. Although the DiBao line is always lower than the upper CBN poverty line, we use both in our poverty calculation and analyses below.

Table 2 presents poverty headcount indices, poverty gap, and per capita income and expenditure for urban residents and migrants separately and for the total sample combined (including both urban residents and migrants). Focusing on the total sample first, the poverty rate measured using the DiBao and CBN lines and measured in terms of income for urban residents is 3.5 and 6.0 per cent, respectively, while for migrants it is 10.1 and 15.7 per cent respectively. On average, the poverty rate for migrants is more than double that for urban residents. In addition, there is a larger proportion of poor migrant households with high level of poverty severe than that of urban residents. The average poverty gap for urban residents and migrants is 0.09 and 0.13, respectively, using both Dibao line and CBN line.

When the poverty rate is measured in terms of expenditure, the poverty rates double for both urban residents and migrants. The proportion of urban household living under upper CBN poverty line increases to 12.5 per cent, and the proportion of migrant households increases to 32.4 per cent.

Note that including migrants in the sample increases income measured poverty rate by 1.4 to 2.1 percentage points depending on the poverty line used. These results are largely consistent with the Asian Development Report (2000) estimates of poverty in urban China in 1998, where

[10] The sample is based on several stratifications at the regional, provincial, county, city, town, and neighbourhood community levels. Households are randomly selected within each chosen neighbourhood community. The UHIE Survey only includes households with Urban Household Registration. Rural migrants to urban cities are not included in the survey. For detailed description of the survey, see Meng, Gregory, and Wang (2005).

they reported a 50 per cent higher poverty rate for migrants than for urban residents.

In the second and third columns of each panel in Table 2 we report the poverty rate for households without any self employed and for households with at least one member self employed. The main difference in poverty rates between urban residents and migrants occurs among wage and salary earners, where we observe 20 per cent of migrants with per capita income below the upper CBN poverty line, while the proportion for urban residents is 5.5 per cent. For the self employed there is little difference in poverty rates between urban residents and migrant. If anything, self-employed urban residents are slightly more likely to be living under the poverty line. Note, though, there is only a very small proportion of urban residents who are self employed (5 per cent in CIDS, see Table 1).

4 Working your way above the poverty line

The key issue is why are migrants poor: is it because they cannot find jobs or is itbecause hourly earnings are too low? In addition, for those whose incomes are above the poverty line, is this due to their extremely long hours of work?

We first investigate the labour force status of migrants and urban residents (see the first panel of Table 3). For individuals age 16 to 65, around 86 per cent of migrants are working while this ratio is 64 per cent for urban residents in CIDS, and the ratio is as high as 95 per cent for male migrants and 76 per cent for female migrants. For their urban counter parts the ratio is 72 and 56 per cent for males and females, respectively. Similar results are found in CULS. Thus, perhaps, additional migrant poverty is not the result of lower employerment rates, it may be because hourly earnings for migrant workers are substantially lower than their urban counterparts. In other words, they are working poor.

We also examine the average hours worked for workers and for household members aged 16 to 65 by migration status, gender (middle panel in Table 3), and poverty status (last panel in Table 3). We find that on average an employed migrant worker works around 52 per cent more hours than his/her urban counterpart. In addition, while households which live under the poverty line work less hours, this situation is more so for urban residents than for migrants.

Migrants who live under the poverty line work 218 to 274 hours per month, which is almost 51 to 69 hours per week, while urban residents living under the poverty line only work 13 to 25 hours per week.

Figures 1 and 2 presents work hours per day, work days per month (per week in the case of CULS), and hours worked per month for household member aged 16 to 65. As our migrant sample may include too many self employed, who normally work longer hours, we present the figures for both the total sample and the sample excluding self employed. The striking feature of these figures is that the majority of urban workers work a normal 8 hours a day and five days a week, but most migrants work more than 8 hours a day and 7 days a week. This is true even when we exclude self employed individuals. It appears that migrant workers spend most of their life working while they are in the cities. An average of 9.7 hours a day and 7 days a week suggests that apart from sleeping (8 hours) and eating (3 hours), migrant workers only have around 3 hours per day left for themselves. Such extremely long hours, combined with high employment rates, should have pushed many above the poverty line.

The issue we are interested in is had migrants worked similar hours to those worked by urban residents with similar characteristics, how many migrants would have had an income below the poverty line?

4.1 If migrants were urban residents, how many hours would they have worked per month?

To answer this question, we estimate the following hours equation:

$$H_{iut} = W'_{iut}\beta + \delta Health_{iut} + \epsilon_{iut} \tag{1}$$

where H_{iu} indicates the hours worked for individual i with urban resident status u. W is a vector of control variables, including age, age squared, years of schooling, whether the individual is self employed, the proportion of household members aged 5 and below, and provincial dummy variables controlling for regional variation in hours worked (related to weather, or culture). $Health$ is a dummy variable generated from a self assessed health question. In the survey

each individual was asked to rate their health condition relative to individuals of their own age, ranging from 1 indicating very healthy, to 5, very ill. The dummy variable for unhealthy is set equal to 1 if an individual self rated as ill (4) or very ill (5). Note that there may be a relationship between current health and past hours worked, but in equation (1) we are interested in the relationship between current health and current hours worked, which should not suffer from the problem of reverse causality. Thus, we believe that $Health$ in equation (1) is an exogenous variable.

Equation (1) is estimated using a tobit model for urban resident aged 16 to 65 and for male and female samples separately. The results are presented in Table 4a. Age has an inverse U-shape effect on hours worked, more educated people work more, self-employed work extremely long, individuals with bad health work less, and people in large cities (Beijing in the case of CIDS and Shanghai in the case of CULS) work longer hours (the results on regional dummy variables are omitted from Table 4a). The effect of young children, however, does not seem to have consistent effect over the two surveys. In the case of CIDS, having young children increase male and female working hours, though the effect is marginally significant for females. In the case of CULS, the effect is negative for both males and females but not statistically significant for men. The reason for such a difference is not entirely clear. Perhaps, in large cities (CULS), where income level is high, women can afford to quit job when they have young children. Whereas this may not have been the case in medium and small cities (CIDS).

The results presented in Table 4a are then used to predict migrant hours worked,

$$\widehat{H}_{imt} = W'_{imt}\widehat{\beta}_u + \widehat{\delta}_u Health_{imt}. \tag{2}$$

Figure 3 shows the distribution of actual hours, H_{imt} and predicted hours, $\widehat{H}_{imt}$.[11] We find that had migrants behaved like urban residents, they would have worked around 50 to 100 per cent less hours on average than what they actually do (see also Table 4b). The results are consistent across the two survey samples.[12]

[11] Note that as CULS only surveyed migrant household main respondents regarding their working hours, the actual and predicted hours worked for migrants for CULS are for the main respondents only.

[12] The main actual number of hours worked presented in Table 5 is slightly different from that presented in Table 1. This is because only those who do not have missing values on all the variables used in equation (2) are

4.2 What has been the impact of these long hours on migrant poverty?

This question is examined by first estimating the following household income per capita equation for the migrant sample:

$$\ln Y_{jmt} = X'_{jmt}\beta + \delta H_{jmt} + e_{jmt} \tag{3}$$

where Y_{jm} is annual per capita income for migrant (m) household j, X is a vector of exogenous variables including age and age squared of the household head, years of schooling of the household head and his/her spouse, the gender of the household head, the proportion of the household member who are children (aged below 16), young adult (aged 16 to 20), and elderly (aged above 65), household size, and regional dummy variables. H is hours worked for the household head. Note that hours worked, H, may be endogenous in equation (3) as household per capita income may affect working hours of household head. We use current self assessed health condition (unhealthy) as the instrument to handle this possible endogeneity problem. We argue that it is unlikely that an individual's current health condition should affect current income through channels other than hours worked. Thus, the exclusion restriction should be satisfied.

After fitting equation (3), we calculate the predicted income level of migrant households as:

$$\widehat{\ln Y}_{jmt}^{\widehat{H}_{imt}} = X'_{jmt}\widehat{\beta} + \widehat{\delta}\widehat{H}_{jmt} + \widehat{e}_{jmt}, \tag{4}$$

assuming that the head of the household had worked like urban residents, $\widehat{H}_{jmt}$.[13] Based on this predicted income level, we re-assess the poverty rate of our migrant sample.

The results of estimated equation (3) using both OLS and IV-GMM for the CIDS total and wage and salary earner samples are reported in Table 5a. They are largely consistent across the two estimations. In general, age of household head have an inverse U-shape relationship with per capita household income, although it is only statistically significant in the case of OLS estimation. Effect of years of schooling of the household head is strong and positive in both

included in Table 5.

[13] Note that after predicting migrant household per capita income with $\widehat{H}_{jmt}$, we also give each household back their original error term, $\widehat{e}_{jmt}$, from equation (3).

surveys and for both estimation, while spouse years of schooling is not statistically significant in the total sample for the IV estimate but significant in any other cases. Household headed by males seem to earn less in the case of total sample, but this is not true for the sample of wage and salary earners, where the gender of the household head does not seem to have a strong effect. Household head's marital status does not seem to affect household per capita income. Proportion of household members who are children (aged 0 to 15) contribute negative and significantly to household per capita income levels, so does household size, while the proportion of teenagers and old people have no statistically significant effect.

Turning to the most important variable of our estimation, household head monthly hour worked, we find that it has positive and statistically significant effect on household per capita income. The effect is larger while using IV-GMM estimate.[14] Using the IV estimate the coefficient indicate that every additional hour worked per month by the household head increases household per capita annual income by 0.5 per cent in both samples. Thus, if migrants work 100 hours less per month, which is about the difference in actual and predicted hours worked for migrants (see Table 5a), their per capita annual income would reduce by 50 per cent.

The distribution of the predicted and actual incomes are presented in Figure 4. The top panel of Figure 4 are graphs with and without including the residual term from the CIDS total sample, while the bottom panel presents the same graphs from the wage and salary earner sample. It is quite clear from these figures that the distribution of migrant per capital household income would have shifted to the left significantly. The mean and median income reduced by around 33 to 49 per cent (see Table 5b).

Finally, in the bottom panel of Table 5b we present the actual and predicted poverty headcount indices and poverty gaps. Not surprisingly, with predicted income, poverty headcount index increased from 16 per cent to 41 per cent in CIDS total sample, and from 20 per cent to 56 per cent in the sub-sample of wage and salary earners, an increase of 25 to 36 percentage points. Poverty severity also increased in both cases.

The above analyses suggest that below average hourly income for migrants, relative to

[14] To test the strength of our instrument, the F-test for excluding the instrument from the first stage estimation is presented at the bottom of Table 7. We believe that our instrument is strong in both samples.

urban residents, is largely offset by above average hours worked. In this way migrant poverty as typically measured is considerably reduced. Once the difference in hours worked between migrants and urban residents is taken into account, we find that migrants would have suffered considerably more from poverty had they worked the same hours as their urban counterparts. Our findings raise many questions as to the relationships between poverty measures, hourly income and total work hours that have not received very much attention in the poverty literature.

5 The health impact of long work hours

Guest workers come with very clear short run objectives: earn and save as much money as possible in the limited time they have in the cities. As a result, they work extremely long hours. Such long working hours clearly have pushed many of them to earn an income which is above the poverty line. But at what cost? Perhaps the long working hours have long term adverse impacts on their health. If we believe in Goodman's (1972) model, where health is regarded as part of human capital, extremely long hours work may reduce health human capital and future earnings.

To analyse this issue, we need information on current health condition, $Health_t$, and previous hours worked, H_{t-n}, for rural migrants to eliminate the possible problem of hours worked being an endogenous variable. Fortunately, CULS collected hours worked at the beginning of the current job, if the individual is working, and at the beginning of the last job if the individual is not currently working. There is, however, a problem. Under the guest worker system, migrants who are not healthy are more likely to go back to their home villages because they have no access to health insurance,[15] unemployment benefit, or a basic safety net in the cities. This is likely to generate a selection bias and make the observed relationship between hours worked previously and current health not meaningful.

To resolve this problem, we estimate the previous work-hours/health relationship for urban residents and assume that on average, (1) migrants have a similar level of inherited health, (2) have a similar level of nutrition intakes, (3) have a similar level of access to the similar quality

[15] While around 53 per cent of urban residents have public health insurance, only less than 2 per cent of migrants have such a benefit.

of health care, and (4) the type of jobs they take have similar effect on their health stock as their urban counterparts. Under these assumptions, we can predict health conditions for rural residents as a result of their long working hours using estimated results for urban sample. We acknowledge that these are strong assumptions. However, we believe that the direction of the violation of these assumptions is more likely to bias our predictions downwards. For example, migrants are more likely to have worse nutrition intake, and less access to good health care, and the type of jobs they take may have more adverse effects on health than jobs taken by urban residents. The first assumption, however, is difficult to judge. Assuming urban and rural people have the same distribution of genetic health, it is not clear whether those with better or worse genes are more likely to migrate. If we assume the former, the violation of this assumption may bias our result upward, but this upward bias may be offset by the violation of the other three assumptions.

The health equation may be written as follow:

$$Health_{it} = W'_{it}\beta + \delta H_{it-n} + \epsilon_{it} \tag{5}$$

where $Health_{it}$ is individual i's self assessed health measure. To estimate equation (5) we use two health measures, one is from the question "Relative to last year, is your health worse off?" and the second is from the question "Relative to your own age group, how do you rate your health?". As presented before, we create a dummy variable indicating ill or very ill. W is a vector of exogenous variables which may affect the individuals' health condition, including, age, years of schooling (knowledge of health care and proxy for income), height (proxy for genetic health), whether an individual has a disability, whether an individual is working, and how long has the individual been working in the current/last job. H_{t-n} is hours worked at the beginning of the current job if the individual is working and at the beginning of the last job if the individual is not working.

To estimate equation (5), there are three issues that need particular attention. First, hours worked at the beginning of the current/last job may not adequately measure the hours worked since the beginning of the job. If this is the case, our main variable, H_{t-n}, may not capture our

point of interest, which is the impact of continued long hours working on health. To test whether hours worked in a job have continuity, we correlated the hours worked at the beginning and the end of the current/last job and the correlation coefficient is 0.95, suggesting a consistency in hours worked over a duration of a job. Second, the timing of the beginning of the current/last job differs significantly among different individuals. Some people started the job 20 years ago, and others started one year ago. To capture this variation, we include a variable "how long has the individual been working in the current/last job". In addition, we restrict our sample to a certain starting year.[16] Third, age is a very important health factor. As the age distribution of urban residents differs considerably from that of migrants (see Figure 5)—migrants are much younger—we restrict our sample to those who are younger than 51 years of age at the time of survey.

Equation (5) is estimated using a probit model and the results are presented in Table 6a. The left and right panels present results for whether an individual's health is worse off relative to last year, and whether an individual is unhealthy relative to individuals of their own age. For the first dependent variable, the only statistically significant independent variables are age and hours worked at the beginning of the current/last job. That is, older individuals are more likely to think that their health is deteriorating, and the more hours worked previously, the more likely they think that their health is worse.

Turning to whether an individuals rate themselves as unhealthy relative to individuals of their own age, we find more statistically significant coefficients. Age has a strong positive impact on both being worse off than last year and being unhealthy relative to an individual's own age group.[17] There is no effect of gender, education, or height on health condition, which is quite unusual. Perhaps this is due to the sample restrictions. We find that without our restrictions on age and hours worked, and excluding hours worked variable (that is including people who never

[16] Table 8 presents results for different restrictions. The first column for each of the two dependent variables shows the results for the sample of individuals which do not restrict the earliest starting year of the current/last job, but restrict the latest starting year to year 2000, so that everybody has to be in the job for at least one year as the survey was conducted at the end of 2001. The second column presents the results for individuals whose earliest starting year was 1990, while the third column is restricted to individuals whose earliest starting year was 1995. As majority of our migrant sample (62 per cent) started the current/last job between 1995 and 2000, results from the third column may be more relevant (see appendix C for the distribution of starting year).

[17] The effect is linear due to the age restriction, once the squared term is included both age and age squared become insignificant. Thus, the squared term is excluded.

worked) age has an inverse U-shape relationship with being unhealthy, and years of schooling and height both contribute negatively to being unhealthy. Whether an individual is currently working has no effect on whether he/she feels worse health-wise, relative to last year, but those who are working are significantly less likely to feel unhealthy. While duration of current/last job has no effect on feeling worse or unhealthy, those who have a disability are more likely to state that they are unhealthy.

Our main variable of interest is "hours worked at the beginning of the current/last job". This variable has a consistent and significantly positive effect on rating as being unhealthy. Every additional hour worked per month increases the probability of feeling unhealthy by 0.02 per cent. The magnitude is smaller for estimation with less restrictions on earliest starting year of the job, but they are still statistically significant at the 10 per cent level.

Using this estimated marginal effects, we then predict the effect of the extremely long hours worked by migrants on their health. The results are presented in Table 6b. The first and second rows present the actual proportion of people who stated that their health is worse than last year or they are unhealthy compared to their own age group for urban residents and migrants, respectively. The proportion of urban residents who stated that their health was worse than last year is more than double that of migrants, while for being unhealthy, the difference is more than three times. These differences, perhaps, are due to the selection effect on migrants as discussed earlier. That is those who are sick to start with do not come to the city and those who become sick leave. If we assume that the distribution of genetic health between those who stayed in the countryside and those who migrate to cities are similar, the major selection effect should be those who have left for rural home due to sickness developed in the cities.

The third row uses the estimated coefficients from the urban equation to predict what would have been the proportion of migrants whose health was worse than last year, or who were unhealthy, had they had the same genetic health distribution, same nutrition intake, same health care, and same occupation distribution as urban residents. The fourth row indicates the difference between the actual and predicted proportions.

For the sample of migrants who started the current/last job no earlier than 1995 (third column of each panel in Table 6b), the difference between the predicted and actual proportions

of those who state that his/her health is worse than last year is 4.1 percentage points and the difference between the predicted and actual proportions of those who think that they are unhealthy is 3.23 percentage points. These numbers are 61 and 202 per cent larger than the actual occurrences for migrant workers, suggesting, perhaps, that the majority of those who are not healthy have gone home. This is the upper bound of the proportion of the people who are sick and has gone home. Relative to urban residents, these percentages are 31 and 46 per cent of their urban resident actual occurrences. This gives the lower bound of the measure of the proportion of people who are sick and has gone home.[18]

Another way to predict the effect of long working hours on health is to use the average additional monthly hours worked by migrant workers times the marginal effect of the monthly hours worked on the probability of being worse off health-wise or being unhealthy. On average, migrants in CULS sample work 103 hours more per month than urban residents. This can translate to 3.1 percentage points more workers feeling worse off and 2.1 percentage points more workers feeling unhealthy, which is an increase of 50 and 130 per cent of the stated health conditions for migrant workers.

6 Conclusions

In this paper we have examined poverty and well-being of migrant workers in urban China. As guest workers, migrants have very short run objectives and these objectives push them to work extremely hard in the cities. We have found that although a simple income assessment results in a not very high poverty rate measured in terms of income for migrant workers relative to their urban resident counterparts, this is mainly due to their long working hours. Had they worked the same hours as urban workers the poverty rate of the migrants would have increased from 15 per cent to 35 per cent.

Our finding that poverty among migrant workers in China is not related to unemployment in the cities is different from migrant poverty in other countries. Unlike migrant groups in other countries, Chinese rural migrants have very high employment rates – presumably because those

[18] Here we assume that nutrition intake, health care, and occupational distribution are all the same for migrants and urban workers and that those rural workers who have bad genetic health did not come to the cities.

who lose jobs are pushed back to the country side by the "Guest Worker" system and those who cnnot find jobs are prevented from coming to cities in the first place.

The extraordinary long hours worked by guest workers are not usually factored into poverty analysis and focusing on weekly or annual income as is usual in poverty studies disguises how low is the hourly wages. The large difference in hours worked between city people and rural migrants raises a host of questions as to how to adequately incorporate hours worked into a poverty analysis. Obviously a given income generated by 300 hours work per month produces a lower level of well being and a higher rate of "poverty" than the same income produced by 160 hours work per month.

In addition, in most poverty studies a move from an income to an expenditure focus reduces the incidence of poverty, as in most countries the poor spend more than they earn. This is not true in China. Poor rural migrants have high saving rates and, indeed, save proportionately more than their city counterparts. If we examine poverty measured in terms of expenditure, the migrant poverty rate is as high as 32 per cent! The tension between poverty as usually measured in income and a high savings rate by the "poor" has a number of important implications. For example, the high savings rate suggests that some of the indicators of current poverty – poor housing in the city and low health expenditure - are partly the result of the decision to save as much as possible while in the city. The high savings rate also raises complex inter-temporal issues about lower living standards now for higher living standards in the future.

Our study also raises important questions regarding the Chinese "guest worker" system. It appears that the system acts as a buffer to reduce urban poverty and urban unemployment. Extreme poverty which is often generated by urban unemployment, and the associated development of urban slums, is largely avoided in China as unsuccessful workers are pushed back to villages if they lose their city jobs and those unable to find city jobs are usually prevented from coming to cities in the first place. The system can be thought of as one which minimizes urban poverty and the social, economic and political tensions in cities. However, pushing unsuccessful, unhealthy, and poor people back to the villages is not a long-term optimal solution to overall poverty reduction. The guest worker system reduces the outflow of labour from the village and thus keeps rural poverty higher than otherwise. It restricts city employment opportunities and

prevents migrants from investing in city skills and thus prevents them from building a long run income base. In addition, one of our important findings is that the long work hours undertaken by guest workers, to increase their short run income and savings, may damage their future health and hinder their long term earning capacity.

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Table 1: Summary statistics

	China Income Distrib. Survey, 2002 (CIDS)		China Urban Labour Survey, 2001 (CULS)	
Households	Urban	Migrants	Urban	Migrants
Age of the household head	48	36	53	30
Age of employed	41	35	41	31
% of the household head are males	0.67	0.80	0.71	0.61
Years of schooling of the HH	10.7	8.1	10.1	8.1
Years of schooling of spouse	10.2	7.2[a]	9.0	7.9
Household size	2.99	2.69	2.89	1.82
% of aged 0 to 5	0.02	0.06	0.00	0.03
% of aged above 65	0.07	0.01	0.16	0.00
Number of employed in the HH	1.49	1.72	1.16	1.41
% of HH member employed	0.50	0.70	0.39	0.86
% of total employed who are self-employed	0.05	0.51	0.10	0.54
Employed annual earnings	12162	9142	13900	11158[b]
Employed monthly hours worked	191	291	195	306
Employed hourly earnings	5.74	3.01	na	na
% employed who are eligible for health benefit	0.65	0.04	0.67	na
% employed who are eligible for housing benefit	na	0.06	0.47	na
% employed who are white collor worker	0.52	0.06		
% employed who are unhealthy	0.04	0.02	0.06	0.01
Per capita income	8246	6486	8690	na
Per capita total expenditure	6294	4272	6224	na
Per capita saved	1952	2214	2466	na
Saving rate	0.24	0.34	0.28	na
annual remitances	nr	1072	nr	1337
Per capita living area	18.82	11.25	23.24	11.58
Per capita expenditure on housing	643	1178	na	na
Annual rent for those who are renting	560	2624	na	3431
% of HH living in a housing w/tout bathroom	0.16	0.63	na	na
% of expenditure on food	0.43	0.45	na	na
Per capita health expenditure	448	243	na	na
Per capita public health expenditure	408	nr	na	na
Number of observations (employed)	6781	1947	3458	2262
Number of observations (Household)	10135	3357	4010	3394

Note: nr stands for "not relevant", and na stands for "not available".

a. only those whose spouse are present in the same cities are counted

b. only the main respondents are inquired this question, thus, it is the mean of the main respondents.

Table 2: Poverty rate, poverty gap, and per capita income/expenditure, CIDS

Headcount index	Income measure			Expenditure measure		
Dibao line	Total	W/S Earners	Self-Emp	Total	W/S Earners	Self-Emp
Total	0.05	0.04	0.08	0.11	0.10	0.14
Urban Residents	0.03	0.03	0.08	0.07	0.07	0.14
Migrants	0.10	0.13	0.08	0.22	0.31	0.14
Upper line						
Total	0.08	0.07	0.12	0.17	0.16	0.22
Urban Residents	0.06	0.05	0.13	0.12	0.12	0.22
Migrants	0.16	0.20	0.12	0.32	0.45	0.22
Poverty gap						
Dibao line	Total	W/S Earners	Self-Emp	Total	W/S Earners	Self-Emp
Total	0.11	0.10	0.14	0.10	0.11	0.07
Urban Residents	0.09	0.09	0.08	0.07	0.06	0.08
Migrants	0.13	0.10	0.17	0.14	0.18	0.07
Upper line						
Total	0.10	0.09	0.13	0.10	0.10	0.09
Urban Residents	0.09	0.09	0.08	0.08	0.07	0.10
Migrants	0.13	0.11	0.15	0.13	0.16	0.08
Per capita income/expenditure	Total	W/S Earners	Self-Emp	Total	W/S Earners	Self-Emp
Total	7850	7977	7237	5839	6008	5022
Urban Residents	8246	8325	7119	6294	6354	5441
Migrants	6486	5558	7287	4272	3607	4847

Table 3: Working status and working hours of migrants and urban residents

	CIDS			CULS		
Proportion of age 16-65 working	Urban	Migrants	((M/U)-1)*100	Urban	Migrants	((M/U)-1)*100
Total	63.24	85.66	35.45	59.41	91.80	54.52
Males	71.46	95.16	33.17	70.29	95.83	36.34
Females	55.35	75.64	36.66	49.41	86.59	75.25
Monthly hours worked per employed	Urban	Migrants	((M/U)-1)*100	Urban	Migrants	((M/U)-1)*100
Total	192	291	51.56	195	306	56.94
Males	194	288	48.45	197	301	52.45
Females	189	294	55.56	192	315	64.09
Age 16-65 per person monthly hours worked	Urban	Migrants	((M/U)-1)*100	Urban	Migrants	((M/U)-1)*100
Above poverty	125	256	104.80	104	294	182.69
Below poverty	106	218	105.66	57	274	380.70
Total	124	250	101.61	100	293	193.00

.

Table 4a: Selected results from tobit estimation of hours worked for urban residents and actual and predicted hours for migrants

	CIDS Survey, 2002		CULS Survey, 2001	
Hours worked, urban residents	Males	Females	Males	Females
Constant	-675.55***	-883.45***	-327.36***	-336.78***
	(15.17)	(22.73)	(30.26)	(41.18)
Age	41.63***	50.47***	23.11***	18.25***
	(0.71)	(1.11)	(1.39)	(1.90)
Age^2	-0.51***	-0.67***	-0.31***	-0.29***
	(0.01)	(0.01)	(0.02)	(0.02)
Years of schooling	2.39***	10.17***	5.86***	15.95***
	(0.41)	(0.58)	(0.74)	(1.10)
Proportion of HH member aged 0-5	91.07***	36.55*	-36.05	-179.88***
	(15.17)	(19.93)	(30.82)	(38.814)
Dummy for self employed	101.90***	154.32***	154.88***	262.07***
	(6.03)	(8.88)	(7.68)	(11.377)
Dummy for bad health	-57.74***	-36.08***	-68.66***	-60.98***
	(6.31)	(7.58)	(8.08)	(9.68)
Regional effect (province/city)	Yes	Yes		
Number of observations	7836	8144	3181	3459
Pseudo R2	0.06	0.06	0.04	0.06

Table 4b: Actual and predicted work hours for rural migrants

	CIDS Survey, 2002		CULS Survey, 2001	
	Mean	Median	Mean	Median
Actual hours worked	278	294	285	301
Predicted hours worked	186	188	171	152
(Actual/Predicted)-1	49.46	56.38	66.67	98.03

Table 5a: Selected results from per capita household income equation

	CIDS, total sample		CIDS, wage and salary earners	
	OLS	IV-GMM	OLS	IV-GMM
Constant	8.044***	7.339***	8.401***	7.463***
	(0.250)	(0.523)	(0.294)	(0.672)
Household head hours worked	0.001*	0.005*	0.0002	0.005**
	(0.000)	(0.003)	(0.000)	(0.002)
Household head age	0.049***	0.018	0.030**	0.004
	(0.012)	(0.024)	(0.014)	(0.026)
Household head age^2	-0.001***	-0.000	-0.000**	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Household head gender, male==1	-0.092**	-0.081*	0.029	0.069
	(0.036)	(0.046)	(0.047)	(0.065)
Household head years of schooling	0.028***	0.036***	0.020***	0.037***
	(0.006)	(0.009)	(0.007)	(0.014)
Spouse years of schooling	0.008*	0.004	0.014**	0.015*
	(0.005)	(0.006)	(0.006)	(0.008)
Household head married	0.033	-0.015	-0.098	-0.228
	(0.080)	(0.106)	(0.089)	(0.143)
% of children aged 0-15	-0.663***	-0.573***	-0.629***	-0.709***
	(0.099)	(0.131)	(0.125)	(0.172)
% member aged 16-20	-0.168	-0.152	-0.043	-0.020
	(0.105)	(0.121)	(0.101)	(0.127)
% of member aged above 65	-0.112	-0.184	-0.226	-0.225
	(0.230)	(0.362)	(0.222)	(0.384)
Household size	-0.144***	-0.139***	-0.196***	-0.141***
	(0.021)	(0.028)	(0.026)	(0.046)
Region	Yes	Yes	Yes	Yes
Number of observations	1874	1873	897	897
Adjusted R^2	0.22		0.30	
F tests for the stregth of the instrument		14.44		21.05

Table 5b: Actual and predicted per capital income and poverty rates

Actual and predicted per capita income	Mean	Median	Mean	Median
Actual per capita HH income (C1)	6385	5000	5556	4800
Predicted per capita HH income (no residual) (C2)	3723	3374	2774	2505
Predicted per capita HH income (incl. residual) (C3)	4810	3437	3445	2544
(C1)/(C3)-1	32.74	45.48	61.28	88.68
	Poverty rate	Poverty gap	Poverty rate	Poverty gap
Actual income	0.16	0.16	0.20	0.11
Predicted income (no residual)	0.36	0.11	0.59	0.14
Predicted income (incl. residual)	0.41	0.22	0.56	0.26

Table 6a: Marginal effects from probit estimation of equation 5

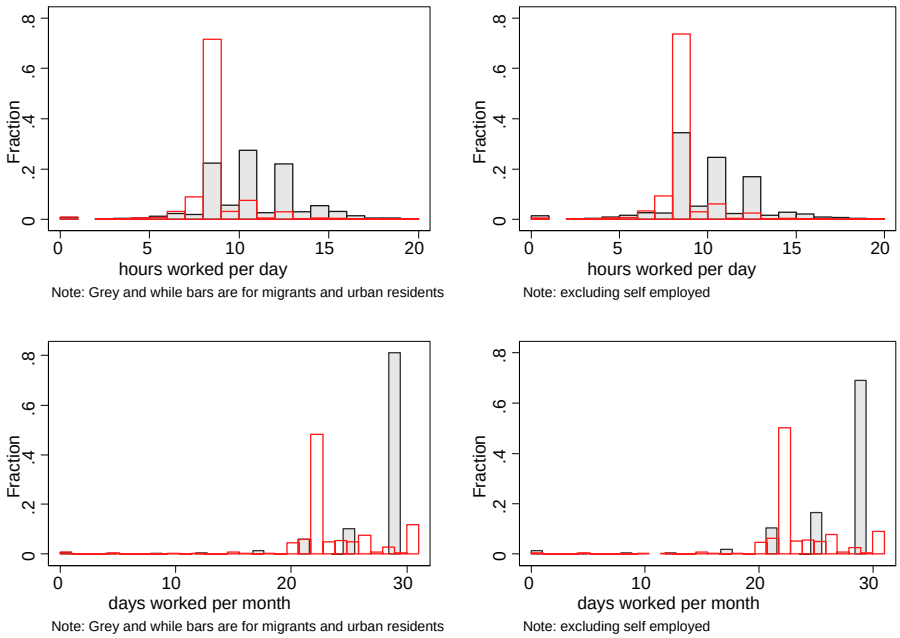
	Is your health worse off compare to last year?			Are you unhealthy compare to your own age group?		
	(t-n)=earliest possible to 2000	(t-n)=1990 to 2000	(t-n)=1994 to 2000	(t-n)=earliest possible to 2000	(t-n)=1990 to 2001	(t-n)=1994 to 2001
Hours worked at the b/g of current/last job	0.0002*	0.0002*	0.0003**	0.0001**	0.0001*	0.0002**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age	0.008***	0.007***	0.007***	0.004***	0.004***	0.005***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Years of schooling	0.000	0.000	0.002	-0.002	-0.000	0.000
	(0.003)	(0.003)	(0.004)	(0.002)	(0.002)	(0.003)
Dummy for males	-0.018	-0.050*	-0.046	-0.019	-0.023	-0.036
	(0.021)	(0.028)	(0.033)	(0.013)	(0.017)	(0.022)
Dummy for currently working	-0.023	0.021	0.026	-0.061***	-0.034*	-0.039*
	(0.033)	(0.029)	(0.032)	(0.026)	(0.023)	(0.028)
Duration of your current/last job	0.000	-0.001	-0.002	-0.001	-0.004**	-0.001
	(0.001)	(0.003)	(0.006)	(0.001)	(0.002)	(0.004)
Dummy for having deformity	0.031	0.008	-0.018	0.254***	0.309***	0.327***
	(0.066)	(0.079)	(0.089)	(0.083)	(0.124)	(0.161)
Height	-0.002*	-0.001	-0.001	-0.000	0.000	-0.000
	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
Number of observations	2497	1273	895	2497	1273	895
Pseudo R2	0.04	0.06	0.06	0.10	0.15	0.16

Table 6b: Actual and predicted proportion of migrants being unhealthy

		Is your health worse off compare to last year?			Are you unhealthy compare to your own age group?		
		(t-n)=earliest possible to 2000	(t-n)=1990 to 2000	(t-n)=1994 to 2000	(t-n)=earliest possible to 2000	(t-n)=1990 to 2001	(t-n)=1994 to 2001
Actual % unhealthy, urban residents	(1)	14.78	12.80	13.08	6.26	6.00	7.05
Actual % unhealthy, migrants	(2)	7.13	6.73	6.60	1.94	1.92	1.60
Predicted % unhealthy, migrants	(3)	11.20	10.88	10.66	5.42	4.45	4.82
Migrants, (3)-(2)	(4)	4.07	4.15	4.06	3.49	2.53	3.23
((4)/(2))*100	(5)	56.99	61.57	**61.49**	180.13	131.26	**202.18**
((4)/(1))*100	(6)	27.52	32.38	**31.03**	55.73	42.10	**45.72**
Additional 103 hours worked monthly		2.06	2.06	3.09	1.03	1.03	2.06

Figure 1: Hours worked per day and days worked per month/week

Panel 1: CIDS Sample, 2002



Panel 2: CULS Sample, 2001

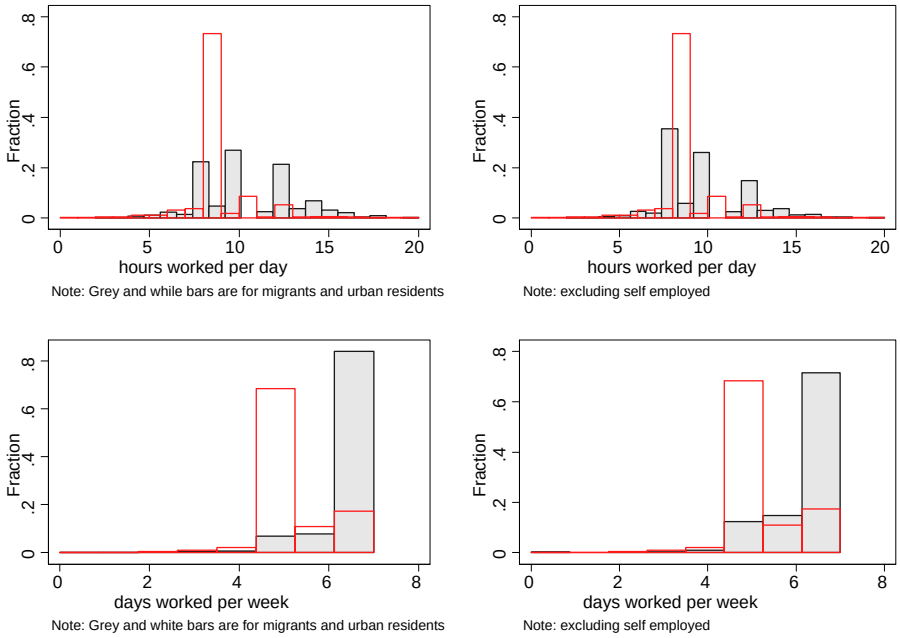
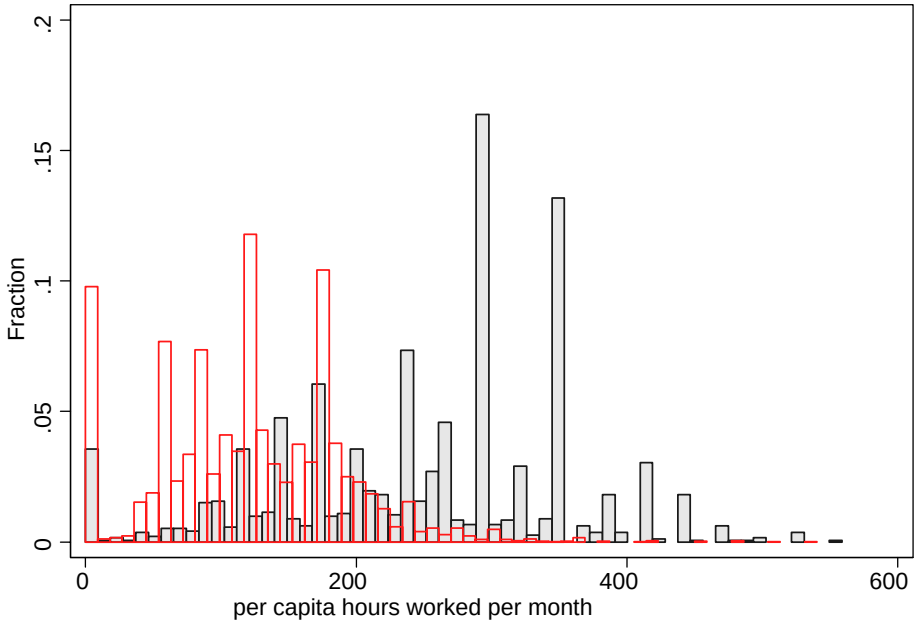


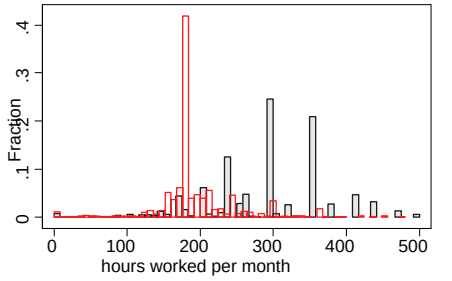
Figure 2: Hours worked per month

Panel 1: CIDS Sample, 2002

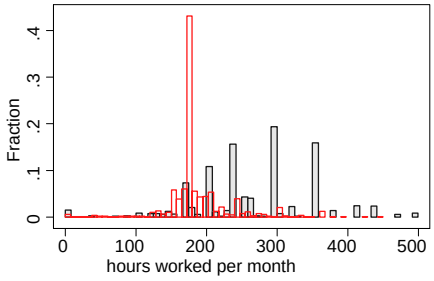


Note: Grey bars are for migrants and white bars are for urban residents

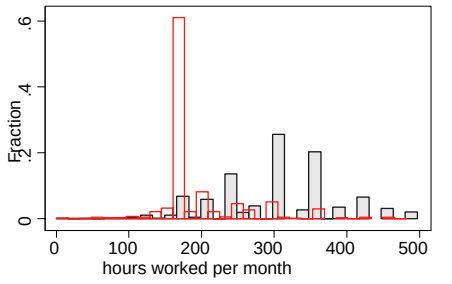
Panel 2: CULS Sample, 2001



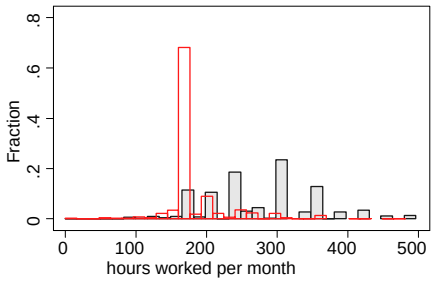
Note: CIDS, Grey and white bars are for migrants and urban resic



Note: CIDS, excluding self employed

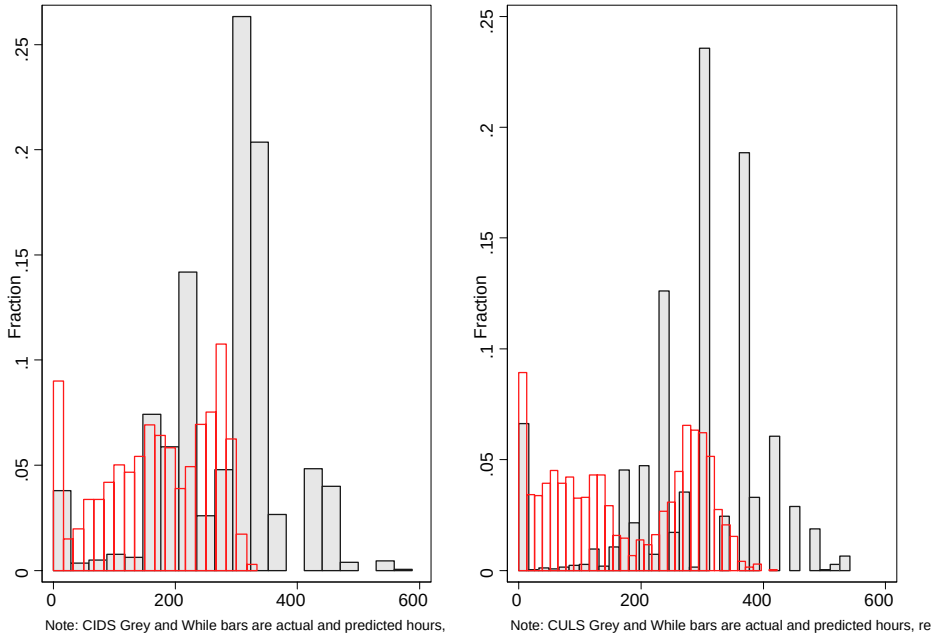


Note: CULS, Grey and white bars are for migrants and urban res



Note: CULS, excluding self employed

Figure 3: Actual and predicted hours worked per month
Panel 1: CIDS and CULS Total Samples



Panel 2: CIDS Wage/Salary Earners and Self-Employed Samples

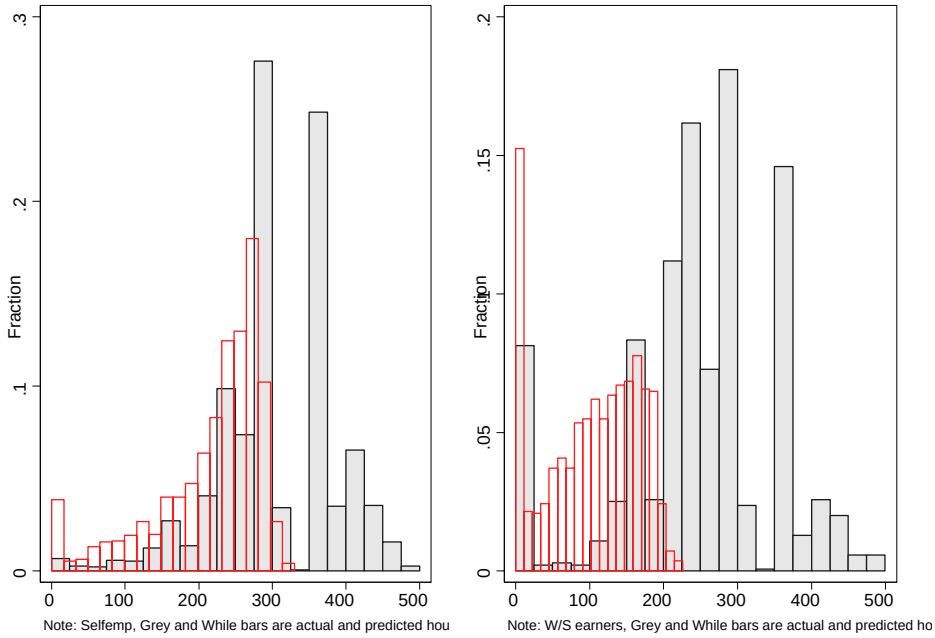


Figure 4: Actual and predicted per capita income

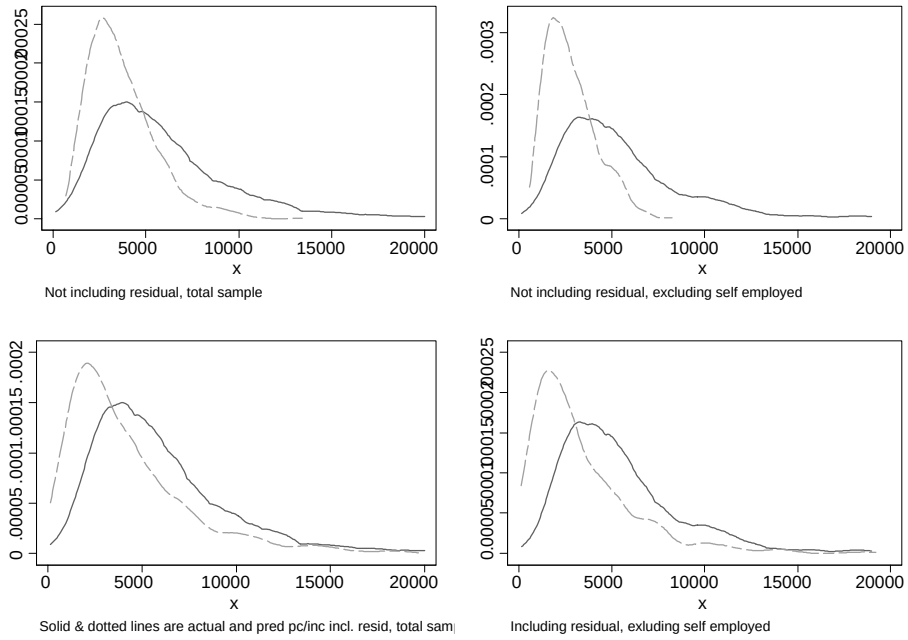
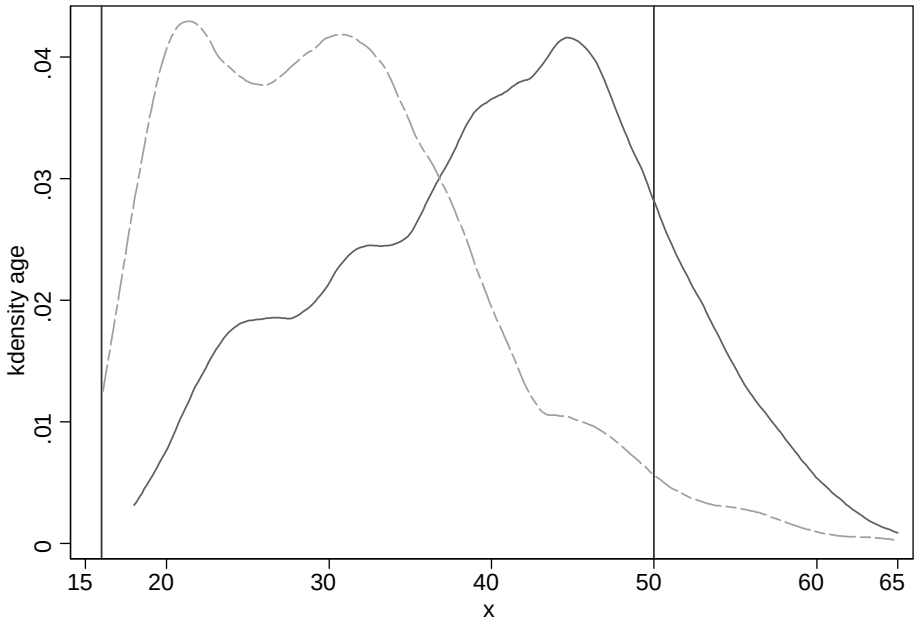


Figure 5: Age distribution of urban residents and migrants



Note: Solid and dotted lines are age distribution of urban residents and migrants, respectively

Appendix A:

Summary statistics for wage/salary earners and self-employed (CIDS)

	Urban		Migrants	
Variables	w/s earner	selfemp	w/s earner	selfemp
Age	41	40	34	35
Years of schooling	12	10	8	8
Individual annual income	12213	11168	7643	10562
Monthly hours worked	188	256	265	313
Hourly income	5.82	4.15	2.87	3.13
Number of observations	9643	492	1633	1724

Appendix B:

Dibao and CBN poverty lines by province, 2002

CIDS 2002	Dibao line (Yuan)	Lower line (Yuan)	upper line (Yuan)	(Up-DB)/Up
Beijing	3480	3286	4433	0.21
Shanxi	1872	1620	2345	0.20
Liaoning	2460	1861	2523	0.02
Jiansu	2640	2233	2874	0.08
Anhui	2028	1933	2502	0.19
Henan	2160	1809	2663	0.19
Hubei	2520	2039	2742	0.08
Guangdong	3600	2925	3790	0.05
Sichuan	2136	1836	2318	0.08
Congqing	2220	2318	3019	0.26
Yunnan	2280	2275	2841	0.20
Gansu	2064	2095	3012	0.31
Simple average	2460	2290	2996	0.18

Note: Dibao lines are for each capital city of the province apart from Beijing and Congqing.

Appendix C:

Figure 6: Distribution of starting year for the current job