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### Title

A Decade of Rising Poverty in Urban China: Who Are More Likely to Fall Under?

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Rising inequality has been one of the most profound social consequences during China's dual transitions from an agrarian and socialist planned economy to an industrial and market based economy. In the last two and half decades, along with spectacular economic growth that has increased the standard of living of the Chinese population and moved hundreds of millions people out of absolute poverty, new economic and social inequality and polarization have also emerged (Ravallion and Chen 2004).<sup>1</sup> Once considered one of the most egalitarian societies on earth, China has now joined the ranks of the most unequal countries in the world. In slightly over a decade's time, income inequality measured by Gini coefficient nearly doubled, from about 0.2 in the mid 1980s to 0.4 by the late 1990s (Khan and Riskin 1998, 2005, Riskin, Zhao, and Li 2001). Much of the rising inequality can be attributed to the enlarging gaps between China's urban and rural populations and to the gaps among Chinese provinces and cities. Within each of China's sectors, however, inequality and poverty have also risen.

This paper focuses on a small portion of the overall picture of rising inequality in China; the emerging trend and underlying patterns of poverty in Chinese cities. We ask and then attempt to answer the question of "who are more likely to fall under the poverty line." Studying poverty or those located at the bottom of the income distribution amounts to more than simply studying income inequality. In any given society, there are always those who fall below the average income line, and those who occupy the extremes of the income distribution. Unlike income distribution that can be fluid, however, poverty may associate with it a nature of permanency. If those at the bottom of the income distribution form a distinctive social class, not only deprived economically but also excluded socially and politically, poverty then matters much more than simple economic inequality. By examining the prevalence of poverty and especially the characteristics of those who fall within this group, we intend to gain some insights about the capabilities of those falling into the poor category, and about the durability of inequality. Falling under the lowest end of income distribution itself is significant, but the characteristics of those who fall into the poor category provide useful hints about the production and the reproduction of poverty.

We begin in following with a brief review of the concepts of poverty, and a brief discussion of three different perspectives on the underlying causes of poverty. That

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<sup>1</sup> Ravallion and Chen (2004) estimated that in the 20 year period after 1981, the proportion of Chinese population living below poverty line constructed by them fell from 53% to 8%. Most of the success in poverty alleviation took place in rural China, where the majority of Chinese population lived and standard of living was very low prior to China's rural economic reforms in the late 1970s.

section is then followed by a description of the data and the method we use for our study, and then followed by a presentation of the results of our analyses. In the conclusion section, we address the implications of our study findings for the formation of an underprivileged social class in urban China.

## **Poverty and Its Underlying Causes**

### **Conceptualizing Poverty**

Two different notions of poverty are generally used for studying poverty. The first is better known as abject poverty. Most would agree that acute and prolonged hunger, severe undernourishment, lack of basic clothing and shelter define the concept of poverty. Poverty is viewed in such a conception as a state of suffering, deprivation, extreme economic hardship, and lack of resources to acquire goods to meet basic needs.

More often, however, poverty is also viewed in broader terms, with regard to a minimal level of resources needed for a socially acceptable living. Poverty is seen as a status by which an individual or a group of individuals are unable to achieve certain basic functionings or to acquire corresponding capabilities for a socially acceptable living (Sen 1992, 109). Such a failure would include the lack of food and shelter, but by no means limited to them. Political economists from Adam Smith to Amartya Sen have long noted the importance of this conception of poverty. To Sen, “the measurement of poverty must be seen as an exercise of description assessing the predicament of people in terms of prevailing standards of necessities.” Such necessities go beyond the material means for maintaining a biological existence, as observed by Smith: “Under necessities, therefore I comprehend not only those things which nature, but those things which the established rules of decency have rendered necessary to the lowest rank of people” (Hagenaarts 1991). In this study, we adopt a measure based on this second and the broader notion of poverty.

### **Three Hypotheses/Interpretations**

Poverty is an outcome of complex, multi-causal, social and economic processes. Among the explanations of poverty generally offered, three are commonly seen. These three hypotheses each focuses on a particular set of factors: an individual's personal characteristics, one's position in the social and economic configurations of the society, and one's household demographic composition. In our study, we attempt to understand the patterns of poverty in urban China by examining evidence for these three alternative, though not mutually exclusive, hypotheses or interpretations.

The first of these three hypotheses assigns the responsibility of falling under poverty primarily to the individual person. An individual is poor, according to this interpretation, mainly because the individual lacks the ability, physical or mental, to garner a good income in the society. The person could be new to the job market, without much experience, too old and weak to work long hours, or without much formal education, otherwise also known as lacking human capital. Such individualistic characteristics make one more vulnerable than others with higher abilities and therefore more likely to fall under the poverty line. In the Chinese setting, China's move toward a

market economy is supposed to reward human capital more than under a state socialist planned economy, and such a hypothesis also implies that over time, a greater effect of the individualistic characteristics on poverty is expected.

The second hypothesis or interpretation of an individual's economic failure gives more weight to structural factors believed to define the arena of an individual's actions and to constrain an individual's abilities. Such an interpretation postulates that in any society, inequality is not primarily a product of individual volition and actions, but an outcome of the structural forces. Structural forces of inequality are especially salient in societies experiencing rapid transformations in social and economic systems, such as the case in China. In urban China, a major group of the new urban poor are those who migrated from rural to urban China, who work in low-pay jobs and receive few if any state-provided benefits (Solinger 2005). Another group is the laid-off workers and their family members. As recently as in the beginning of the 1990s, the overwhelming majority of the urban Chinese labor force (70 percent) were still working in the state-owned work organizations, an employment decision not made by the individuals themselves. It was during the 1990s that non-state employment increased rapidly, and at the same time, a major economic reform measure in the late 1990s resulted in a large-scale lay off and forced early retirement of many Chinese urban workers. Urban employment in the state-owned sector declined to 54 percent by 2000. Following this structural hypothesis, one would expect that not only are structural factors important in understanding poverty in urban China, the importance of the structural factors should also have increased as China's reforms proceeded.

The third hypothesis adds another important dimension to the understanding of poverty. While not in dispute with the first two hypotheses above, this hypothesis or interpretation focuses on the role of the demographic or household life cycle factors in affecting poverty outcomes. The argument is based on the observation that most individuals live in households, and households are composed of net producers -- those whose income exceeds consumption -- and net consumers -- those who consume more than they earn. Whether an individual falls under poverty could in part be affected by the household demographic composition at a particular time of the household life cycle. Households with more net consumers than net producers, regardless of a particular member's personal characteristics and structural positions, may still end up with a low per capita income for its members and therefore a smaller likelihood of falling under poverty.

### **Data and Methods**

To examine urban poverty in China, we test hypotheses above with data from China's Urban Household Income and Expenditure Survey. Conducted by China's National Bureau of Statistics, this survey is the most authoritative longitudinal household survey in existence in China. We use data for three selected Chinese provinces that are made available to us, and choose three time points, 1992, 1996, and 2001 to examine the changing poverty patterns in the decade of the 1990s in urban China. The three provinces have a combined sample size of over 8,000 individuals for each time point, residing in approximately 3,000 households. Given the survey only includes long term urban residents with urban household registration, our study results do not reveal the full extent of urban poverty in China, as they do not include the increasingly larger number of

migrants in Chinese cities, who contribute in a major way to overall urban inequality and poverty (Solinger 2005).

### **Poverty Line and Equivalent Scale**

Among the various measures commonly employed in poverty studies, we use one that measures the degree of relative poverty. The poverty line is set up as income below 50% of the median disposable household income per adult equivalent. An equivalent scale is used to measure the relative living costs corresponding to different household sizes and compositions. Some international inequality studies use the scale of power 0.5 (e.g. poverty lines calculated by the Luxembourg Income Study). The present study follows the equivalent scale used in these international inequality studies. Due to the large income differences in the three provinces included in this study, a specific relative poverty line is also generated for each province. It should be noted that such a poverty measure only captures one aspect of measuring poverty, as it does not take into consideration of the income gap (depth of poverty) or distribution of income among those falling below the poverty line, two other important dimensions of poverty (Sen 1992).

### **Demographic and Socioeconomic Predictors**

Three major groups of predictors are utilized to investigate factors leading to individual and household poverty risk. They are individual characteristics, household characteristics, and the structure of the market. Predictors to illustrate individual characteristics include age, gender, and educational levels. Respondents are divided into six age groups, those younger than 28, those aged 28-34, 35-44, 45-54, 55-64, and 65+. Gender is dummy coded with female as 1. There are seven categories of educational levels in the original data and we recoded educational levels into three categories: less than high school, high school/technical school, and college or above. Respondents with unclassified educational attainments are excluded from the analysis. Household characteristics include household head's age, gender, educational levels, the number of children, and the number of elders. Household head's age, gender, and educational levels are recoded in the similar way as for individual variables. Household members younger than 18 years old are considered as dependent children and household members aged 65 or older are regarded as elders. Finally, the number of unemployed prime-age (25-54) workers in household, employment status, and occupations of both individuals and household heads are selected as predictors to examine the impact of the market structure on individual and household poverty risk. Employment status is recoded into seven categories: 1) state-owned enterprises, 2) collective-own enterprise, 3) foreign and joint venture enterprises, 4) self-employed or employed in private corporations and in other unclassified employment enterprises, 5) re-employed retirees, 6) retirees, and 7) other non-working cases (excluding retirees). The non-working cases include students, disabled workers, household workers, those waiting for jobs or job assignments, those waiting for higher education, and unclassified cases. Occupation is reclassified into six categories, and they are: 1) professionals or senior engineers, 2) technical workers, 3) cadres, 4) staff members, 5) ordinary workers, and 6) respondents without occupations. Technical workers consist of engineers, assistant engineers, and technicians. Cadres consist of three

hierarchical levels of cadres, above middle-level cadres, section chief cadres, and sub-section chief cadres. Staff members include staff members both in commerce and services. Ordinary workers are workers in agriculture, forestry, animal husbandry, sideline, fishery, production, and transportation, and unclassified workers.

We use logistic regression with generalized estimation equations (GEE) to examine the likelihood of an individual falling under the poverty line, controlling for intra-household correlation among members of the same household. We take a household perspective, using the characteristics of the household head to approximate individual level characteristics and an individual's structural positions, and use different measures of household demographic compositions.

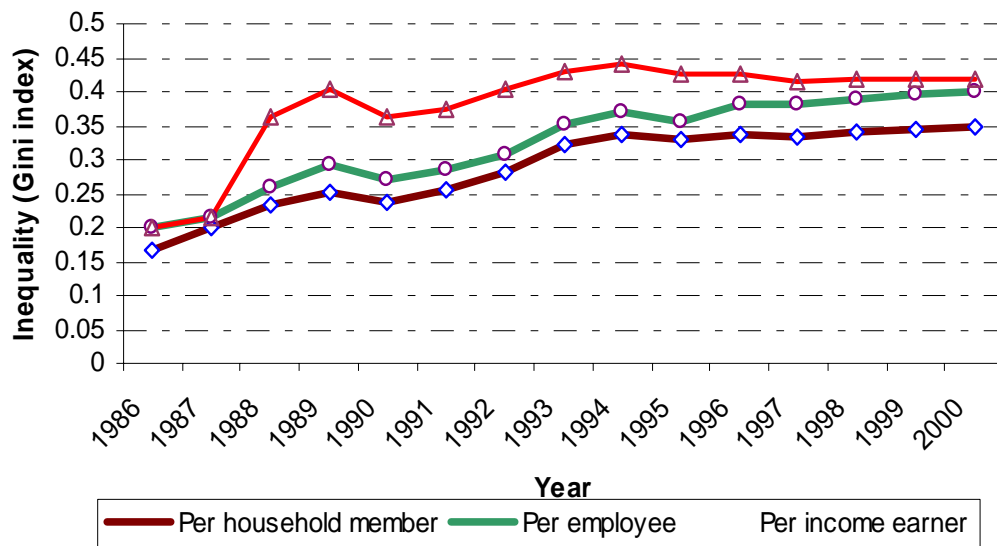
## A Decade of Rising Poverty and Its Patterns

### Rising Inequality and Poverty

China's economic transformation away from socialism was clearly accompanied by a rapid increase in economic inequalities. Overall income inequality for the urban population in the three Chinese provinces under study doubled in less than two-decade time. Gini coefficient for household income per capita increased from a low level of 0.17 in 1986 to 0.35 in 2000. Inequality among all income earners rose to an even higher level during this time period, from 0.20 to 0.40 (Figure 1). Such a rapid increase earned China the title of being one of the fastest inequality increasing countries in the world (World Bank 1997).

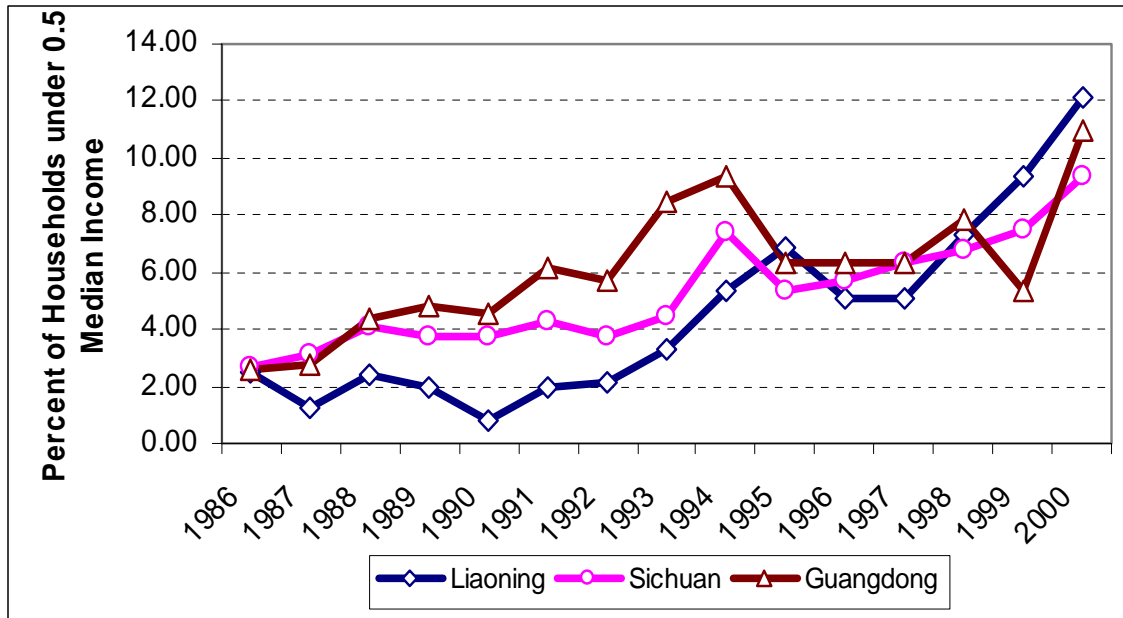
Rising income inequality in urban China in the last two decades of the twentieth century was also accompanied by a rising trend of social and economic polarization. At the start of China's economic reforms in the mid 1980s, urban poverty prevalence, relying on the relative poverty measure of 50% of the provincial median per capita household income, was extremely low, at 2-3% of the population.

Figure 1 Rising Income Inequality in Urban China, Three Provinces, 1986-2000



Two waves of escalating urban poverty soon followed, with the first in the early 1990s, and the second near the end of the same decade (Figure 2). By the end of the 1990s, urban poverty level in these three Chinese provinces more than quadrupled, reaching a level of between 9 and 12 percent of the population. During the decade of the 1990s alone, prevalence of poverty for the three provinces as a whole more than doubled, from 4.5 percent in 1992, to 7.7 in 1996, and to 11.8 in 2001.

Figure 2 Trends in Urban Poverty, China, Three Provinces, 1986-2000



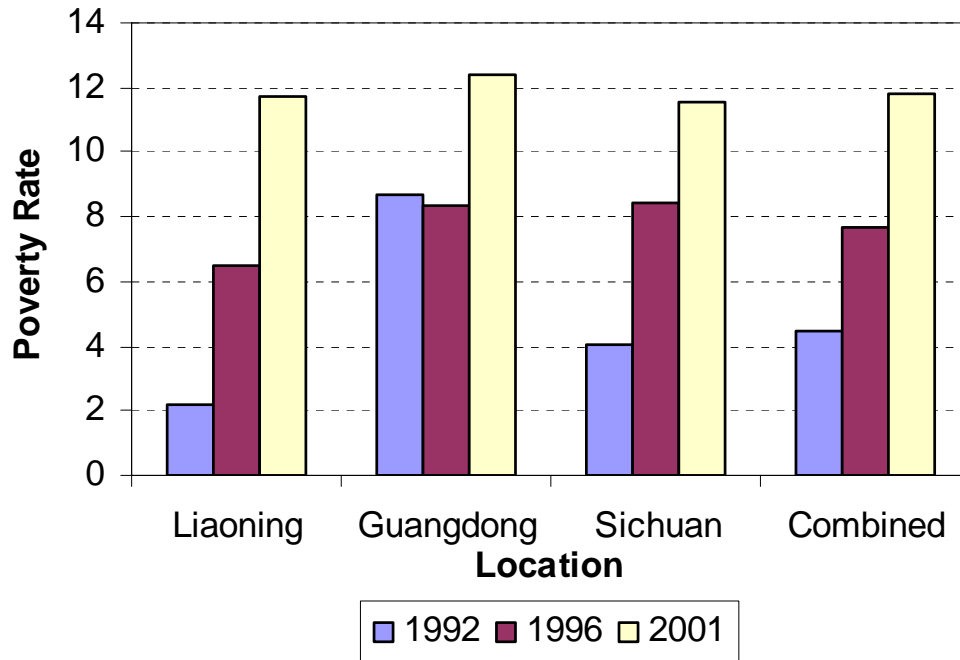
This estimated level of urban poverty using sample data from three provinces is higher than estimate using minimum income required method and survey data from six provinces collected in 1999 (5-6%, Li 2004, 50), and is almost identical to the level of 1.25 times the national general poverty line in 1998, estimated by staff members of China’s National Bureau of Statistics using required minimum income method (11.1%, Wang 2003).

Moreover, the increase in poverty level outpaced the overall change in income inequality and therefore suggests increasing economic polarization. Figure 3 gives the changes in urban poverty prevalence by province for the three time points during the 1990s.<sup>2</sup> Between 1992 and 2001 the Gini coefficient of per capita household income for the same population only rose 25 percent, from 0.28 to 0.35, while poverty level more than doubled. Much of the difference between the trajectories of income inequality and poverty was due a faster increase in the poverty level in the last few years of the 1990s. In contrast to the trend of income inequality, which seems to have stalled during the second half of the 1990s, urban poverty level shot up in the closing years of the 1990s. The government’s push for reforms of state-owned enterprises in 1997 resulted in massive lay-offs. The change is especially noticeable for Liaoning province, a heavy

<sup>2</sup> These figures are calculated by taking into consideration of weights for household members.

industrial base during the socialist planned economy era with a concentration of state owned enterprises, which were hardest hit by the reforms.

Figure 3 Urban Poverty in Three Provinces, China, Selected Years



Such a rapid increase in poverty has removed China from the group of most egalitarian countries in the world. Indeed, urban China's poverty level by the end of the 1990s was well above the Nordic countries (mostly below 7 percent), roughly the same as Canada (11.4) and Spain (10.4), and approaching that in Italy (13.9), the UK (13.2), but still below the U.S. (17.8) (Smeeding, Rainwater, and Burtless 2001, 186).<sup>3</sup> Whereas urban China's did not experience the kind of poverty rise as occurred in a large number of Eastern European countries due to income decrease in those countries (Milanovic 1998), its record of poverty containment in the context of rapid economic and income growth was by no means admirable. Urban China's poverty level at the end of the 1990s, using comparable measures, was only on par with what was found in Hungary (9.0), Slovakia (10.9), Bulgaria (12.6), and Poland (13.5) in the early 1990s (Emigh, Fodor, and Szelenyi 2001, 18).

### Patterns of Poverty

China's emerging urban poverty follows several clear social and demographic demarcations. In Table 1, we present calculated poverty prevalence by individual characteristics: age, gender, level of educational attainment, and employment. Among

<sup>3</sup> The numbers for the European and North American countries are based on the same method – 50 percent of median income – and are mostly for early to mid 1990s.



these individuals in our sample population, poverty rate exhibits a U-shape by age, with higher rates among the youngest and the oldest. There is no discernable difference between males and females. Poverty rate is the highest among individuals with low education, and especially among those not-working. Among currently employed individuals, three categories stand out to have the lowest chances of contributing to poverty: state-owned, joint-venture or foreign owned, and working after retirement. The benefit associated with the state-owned sector demonstrates the continued advantage and protection conferred by the state. Joint-venture and foreign owned companies recruit more educated employees and offer better pay and benefits. Employment after retirement reflects not just a need but a privilege, given China's rigid retirement system. Only those with political connections or skills have better chance to be re-employed (Wang, Xiao, and Zhan 2003). It is worth noting that urban retirees are doing relatively well, with a poverty rate among the lowest.

At the same time, three other sectors stand out as having the highest chance for an individual to fall into poverty: those employed in the collectively owned sector, as private or self-employed, or with no job or retirement benefit. The high prevalence of poverty among individuals in self-employed or private business sectors presents a puzzle, as China's emerging market economy is expected to benefit those in the private sector. Part of the puzzle in our results is due to the limitation in our data. In the survey we use for our work, private business owners and self-employed individuals are not differentiated. Whereas the former should do better than the average, the latter, self-employed, do not necessarily do so because a substantial share of them are laid-off workers who became small vendors. Among all occupational types, the category that had consistently the lowest occurrence of poverty is cadre, or Communist Party and government officials. This group is followed by those employed as senior engineers and technical personnel. Ordinary staff members and workers have among the highest poverty rates. In fact, by 2001, the difference between these two groups and the unemployed became very small.

Demographic and social characteristics of the household are also closely related to the patterns of poverty prevalence. In Table 2, we provide poverty rate by a person's household head's characteristics, as well as two household characteristics, number of unemployed and numbers of elderly and children in the household. For all three time points, individuals residing in households headed by older persons are more likely to be in the poverty group. Households headed by females are less likely than those headed by males to be in the poor group, an interesting finding that we shall examine in more detail later. The difference in poverty prevalence by household head's educational level is especially pronounced, with its impact increasing over time. Whereas the ratio in poverty prevalence between a household headed by someone with less than a high school education and with college or higher education stayed the same, at about 3 to 1, the absolute impact increased drastically over time. By 2001, urban residents in nearly one in five households headed by a low education household head were in the poverty group, whereas for the highest educated group, it was only one in twenty.

**Table 1: Poverty Prevalence By Individual Characteristics, Urban China, Selected Years**

| Year<br>Predictor     | 1992         |                 | 1996         |                 | 2001          |                 |
|-----------------------|--------------|-----------------|--------------|-----------------|---------------|-----------------|
|                       | Total N      | % of Being Poor | Total N      | % of Being Poor | Total N       | % of Being Poor |
| Age                   |              |                 |              |                 |               |                 |
| <28                   | 2763         | 5.57            | 2581         | 9.18            | 2200          | 13.14           |
| 28-34                 | 977          | 3.38            | 983          | 7.02            | 764           | 14.92           |
| 35-44                 | 2152         | 3.62            | 2070         | 6.47            | 1792          | 11.55           |
| 45-54                 | 1232         | 4.30            | 1342         | 6.78            | 1886          | 9.54            |
| 55-64                 | 834          | 3.48            | 806          | 6.45            | 748           | 10.03           |
| 65+                   | 463          | 6.70            | 487          | 11.09           | 634           | 13.41           |
| Chi-square/P-value    | 21.497/0.001 |                 | 24.223/0.000 |                 | 24.008/0.000  |                 |
| Gender                |              |                 |              |                 |               |                 |
| Male                  | 4178         | 4.31            | 4125         | 7.25            | 3946          | 11.35           |
| Female                | 4243         | 4.67            | 4144         | 8.16            | 4078          | 12.31           |
| Chi-square/P-value    | 0.630/0.427  |                 | 2.397/0.122  |                 | 1.759/0.185   |                 |
| Education             |              |                 |              |                 |               |                 |
| Less than High school | 4899         | 5.61            | 4300         | 9.72            | 3775          | 16.34           |
| High School           | 2509         | 3.67            | 2699         | 6.89            | 2765          | 9.98            |
| College or above      | 1013         | 1.09            | 1270         | 2.60            | 1484          | 3.84            |
| Chi-square            | 45.767/0.000 |                 | 73.670/0.000 |                 | 173.497/0.000 |                 |

**Table 1: (cont.)**

| Year<br>Predictor                        | 1992          |                 | 1996          |                 | 2001          |                 |
|--|---------------|-----------------|---------------|-----------------|---------------|-----------------|
|  | Total N       | % of Being Poor | Total N       | % of Being Poor | Total N       | % of Being Poor |
| Employment Status <sup>1</sup>           |               |                 |               |                 |               |                 |
| State-owned                              | 3783          | 2.67            | 3839          | 5.11            | 2895          | 7.25            |
| Collectively owned                       | 1226          | 4.73            | 859           | 12.34           | 565           | 17.52           |
| Joint/Foreign                            | 70            | 1.43            | 198           | 4.04            | 278           | 4.32            |
| Self/Private/Other                       | 123           | 17.07           | 147           | 11.56           | 568           | 20.42           |
| Working retirees                         | 144           | 1.39            | 120           | 2.50            | 136           | 3.68            |
| Retirees                                 | 861           | 3.72            | 969           | 7.12            | 1287          | 9.17            |
| Other Non-working                        | 2214          | 7.36            | 2137          | 11.14           | 2295          | 16.99           |
| Chi-square                               | 123.389/0.000 |                 | 109.702/0.000 |                 | 206.849/0.000 |                 |
| Occupation <sup>2</sup>                  |               |                 |               |                 |               |                 |
| Senior Engineers                         | 44            | 0.00            | 63            | 1.59            | 43            | 2.33            |
| Technical<br>(Engineers and technicians) | 1066          | 1.03            | 1152          | 3.82            | 736           | 3.94            |
| Cadre                                    | 382           | 1.31            | 342           | 2.34            | 314           | 2.55            |
| Staff                                    | 1589          | 5.10            | 1596          | 7.46            | 1769          | 11.70           |
| Ordinary Workers                         | 2266          | 3.80            | 2008          | 7.92            | 1576          | 12.50           |
| Non-working                              | 3074          | 6.34            | 3108          | 9.85            | 3586          | 14.17           |
| Chi-square                               | 69.372/0.000  |                 | 61.924/0.000  |                 | 92.991/0.000  |                 |

1. The classification of ownership is recoded. Self-employed, working in private firms and other employments are included in one category. The category of other non-working cases include disabled workers, household workers, those waiting for jobs or job assignments, students, those waiting for higher education, and others.
  2. The classification of occupations is recoded. Technical includes engineers, assistant engineers, and technicians. Cadre includes above middle-level cadres, section chief cadres, and sub-section cadres. Staff includes staff-members, staff members in commerce and services. Ordinary workers include workers in agriculture, animal husbandry, sideline, fishery, production, and transportation and unclassified workers.
  3. Sample size (N): 8421 in 1992, 8269 in 1996, and 8024 in 2001.
  4. Relative poverty line is calculated as: Household disposable income/(No of HH members<sup>0.5</sup>)
  5. The poverty line of Liaoning in 1992 is: **531.451**; Sichuan: **524.234**;Guangdong: **991.839**; in 1996, Liaoning: **1102.739**; Sichuan: **1179.815**; Guangdong: **2407.551**; in 2001, Liaoning: **1635.922**; Sichuan: **1586.27**; Guangdong: **3230.563**.
  6. Analysis Unit: person.
- Cases with education coded as 0 (unclassified) are deleted.

The same is with unemployment, a new phenomenon in urban China and a major contributing factor for poverty (Li 2004). In 1992, only 14 percent of all individuals in our sample lived in households with one or more household members of working age who were unemployed. By 2001, the share more than doubled, to 32 percent. The stake associated with unemployment also became much higher. In 1992, 10 percent of individuals living in a household with one unemployed and 16 percent in households with two unemployed were classified into the poor group. A decade later, the prevalence increased to 17 and 25 percent. Having more children and more elderly persons in the household is also associated with a higher likelihood of falling into poverty. A special note is needed here for the high poverty occurrence among individuals residing in households with more than one child. China's has implemented a strict one-child per couple policy in urban China for the last two decades, and urban employees violating the policy were subject to severe sanctions, from demotion at to dismissal from the workplace (Wang 1996). The extremely high occurrence of poverty for those in households with two children in 2001, 44 percent, could be due to penalties resulting from violating the policy.

With poverty as an outcome of multiple forces, many of the factors examined above operate together and moreover, several factors often having overlapping effects. For instance, those working in the joint-venture or foreign owned companies may also have higher educational attainment, and those with unemployed household members may also more likely to be in households with heads of lower educational attainment. To separate the independent roles of each factor, we carried out multi-variate analyses utilizing generalized estimation equation method. These multivariate analyses also allow us to test the relative importance of the three different hypotheses stated earlier. In Table 3 and Table 4, we provide results based on multivariate analyses. Results in Table 3 are for all households, and results in Table 4 are only for households with a currently employed household head. The latter allows the examination of household head's occupation as a contributing factor to poverty.

Both individual characteristics of the household heads and household demographic conditions have significant influence on the risks of falling under poverty. The most devastating risk factor for urban Chinese to fall under poverty is unemployment. Households with one unemployed member have 3 to 5 times the likelihood of falling under poverty than households with no unemployed members. Having two or more unemployed in the household increases the likelihood of poverty by as much as 10 times (Table 3). Controlling for other factors, urban Chinese residents living in female-headed households are about 30 percent less likely to fall under poverty compared with those headed by males, a finding that we examine in more detail below. The effect of household head's educational attainment is not only consistent throughout the decade; its effect has also increased over time. Urban residents in households headed by those with less than high school education were 2.5 times as likely to fall under poverty in 1992, compared with those of college education.

**Table 2: Poverty Prevalence By Household Characteristics, Urban China, Selected Years**

| Year<br>Predictor     | 1992         |                 | 1996          |                 | 2001          |                 |
|-----------------------|--------------|-----------------|---------------|-----------------|---------------|-----------------|
|                       | Total N      | % of Being Poor | Total N       | % of Being Poor | Total N       | % of Being Poor |
| Household Head's Age  |              |                 |               |                 |               |                 |
| <28                   | 144          | 0.00            | 171           | 5.26            | 92            | 8.70            |
| 28-34                 | 1226         | 2.28            | 1248          | 6.65            | 873           | 12.26           |
| 35-44                 | 3472         | 4.52            | 3198          | 7.10            | 2695          | 11.69           |
| 45-54                 | 2271         | 6.03            | 2273          | 8.45            | 2832          | 11.30           |
| 55-64                 | 1335         | 4.27            | 1308          | 7.80            | 1090          | 12.39           |
| 65+                   | 387          | 5.17            | 403           | 12.41           | 711           | 15.33           |
| Chi-square/P-value    | 33.659/0.000 |                 | 19.337/0.002  |                 | 10.200/0.070  |                 |
| Head's Gender         |              |                 |               |                 |               |                 |
| Male                  | 6189         | 5.07            | 5332          | 8.93            | 5268          | 13.40           |
| Female                | 2646         | 3.21            | 3269          | 5.72            | 3025          | 9.52            |
| Chi-square/P-value    | 14.889/0.000 |                 | 29.294/0.000  |                 | 27.436/0.000  |                 |
| Head's Education      |              |                 |               |                 |               |                 |
| Less than High school | 4396         | 6.12            | 3626          | 10.95           | 3151          | 18.95           |
| High School           | 2809         | 3.56            | 3158          | 6.55            | 3191          | 9.21            |
| College or above      | 1630         | 1.84            | 1817          | 3.25            | 1951          | 5.28            |
| Chi-square            | 59.214/0.000 |                 | 110.256/0.000 |                 | 251.143/0.000 |                 |

**Table 2: (cont.)**

| Year                               | 1992          |                 | 1996          |                 | 2001          |                 |
|------------------------------------|---------------|-----------------|---------------|-----------------|---------------|-----------------|
| Predictor                          | Total N       | % of Being Poor | Total N       | % of Being Poor | Total N       | % of Being Poor |
| No. of Unemployed Work-age Members |               |                 |               |                 |               |                 |
| None                               | 7743          | 3.59            | 7246          | 6.11            | 5731          | 9.11            |
| One                                | 953           | 10.39           | 1133          | 14.12           | 2088          | 16.91           |
| Two and More                       | 139           | 15.83           | 222           | 27.03           | 474           | 25.11           |
| Chi-square/P-value                 | 132.837/0.000 |                 | 207.868/0.000 |                 | 170.236/0.000 |                 |
| No. of Children                    |               |                 |               |                 |               |                 |
| Zero                               | 2492          | 1.73            | 2601          | 5.42            | 3516          | 7.82            |
| One                                | 5563          | 3.52            | 5627          | 7.09            | 4489          | 13.14           |
| Two                                | 758           | 18.21           | 362           | 32.32           | 277           | 44.40           |
| Three                              | 16            | 100.00          | 6             | 54.55           | 11            | 54.55           |
| Four                               | 6             | 100.00          | ---           | ---             | ---           | ---             |
| Chi-square/P-value                 | 852.291/0.000 |                 | 364.297/0.000 |                 | 358.344/0.000 |                 |
| No. of elders                      |               |                 |               |                 |               |                 |
| Zero                               | 7492          | 3.90            | 6255          | 6.77            | 6725          | 10.54           |
| One                                | 1038          | 6.94            | 1007          | 11.22           | 1034          | 18.38           |
| Two                                | 305           | 11.48           | 330           | 16.06           | 518           | 17.37           |
| Three                              | ---           | ---             | 9             | 66.67           | 16            | 31.25           |
| Chi-square                         | 55.005/0.000  |                 | 102.826/0.000 |                 | 73.177/0.000  |                 |

**Table 2: (cont.)**

| Year<br>Predictor                        | 1992          |                 | 1996          |                 | 2001          |                 |
|--|---------------|-----------------|---------------|-----------------|---------------|-----------------|
|  | Total N       | % of Being Poor | Total N       | % of Being Poor | Total N       | % of Being Poor |
| Head's Employment Status <sup>1</sup>    |               |                 |               |                 |               |                 |
| State-owned                              | 5829          | 3.89            | 5897          | 6.56            | 4554          | 8.85            |
| Collectively owned                       | 1517          | 5.67            | 1058          | 12.85           | 663           | 18.85           |
| Joint/Foreign                            | 56            | 0.00            | 219           | 5.48            | 378           | 5.56            |
| Self/Private/Other                       | 94            | 24.47           | 82            | 14.63           | 569           | 21.09           |
| Working retirees                         | 245           | 2.45            | 201           | 3.98            | 196           | 4.08            |
| Retirees                                 | 1047          | 4.49            | 1102          | 8.53            | 1711          | 14.26           |
| Other Non-working                        | 47            | 21.28           | 42            | 33.33           | 222           | 32.88           |
| Chi-square                               | 132.376/0.000 |                 | 101.061/0.000 |                 | 243.525/0.000 |                 |
| Head's Occupation <sup>2</sup>           |               |                 |               |                 |               |                 |
| Senior Engineers                         | 87            | 0.00            | 112           | 4.46            | 77            | 6.49            |
| Technical<br>(Engineers and technicians) | 1787          | 1.34            | 1856          | 6.09            | 1103          | 5.17            |
| Cadre                                    | 800           | 2.00            | 647           | 3.40            | 527           | 1.52            |
| Staff                                    | 2219          | 6.99            | 2301          | 7.52            | 2485          | 13.12           |
| Ordinary Workers                         | 2850          | 5.16            | 2536          | 9.54            | 2168          | 12.96           |
| Non-working                              | 1092          | 5.22            | 1149          | 9.40            | 1933          | 16.40           |
| Chi-square                               | 92.930/0.000  |                 | 42.111/0.000  |                 | 146.217/0.000 |                 |

**Table 2: (cont.)**

| Year<br>Predictor  | 1992          |                 | 1996         |                 | 2001        |                 |
|--------------------|---------------|-----------------|--------------|-----------------|-------------|-----------------|
|                    | Total N       | % of Being Poor | Total N      | % of Being Poor | Total N     | % of Being Poor |
| Province           |               |                 |              |                 |             |                 |
| Liaoning           | 3231          | 2.23            | 3177         | 6.45            | 3027        | 11.83           |
| Guangdong          | 2135          | 8.71            | 2080         | 8.27            | 1993        | 12.44           |
| Sichuan            | 3469          | 4.06            | 3344         | 8.55            | 3273        | 11.85           |
| Chi-square/P-value | 128.018/0.000 |                 | 11.312/0.003 |                 | 0.522/0.770 |                 |

1. The classification of ownership is recoded. Self-employed, working in private firms and other ownership are included in one category. The category of other non-working cases include disabled workers, household workers, those waiting for jobs or job assignments, students, those waiting for higher education, and others.
2. The classification of occupations is recoded. Technical includes engineers, assistant engineers, and technicians. Cadre includes above middle-level cadres, section chief cadres, and sub-section cadres. Staff includes staff-members, staff members in commerce and services. Ordinary workers include workers in agriculture, animal husbandry, sideline, fishery, production, and transportation and unclassified workers.
3. Sample size (N): 8835 in 1992, 8601 in 1996, and 8293 in 2001.
4. Relative poverty line is calculated as: Household disposable income/(No of HH members<sup>0.5</sup>)
5. The poverty line of Liaoning in 1992 is: **528.5**; Sichuan: **523.66**; Guangdong: **991.47**; in 1996, Liaoning: **1098**; Sichuan: **1178.372**; Guangdong: **2401.921**; in 2001, Liaoning: **1633.901**; Sichuan: **1579.342**; Guangdong: **3218.728**.



**Table 3: Effects of Household Characteristics on Poverty  
Urban China, Selected Years ( I )**

| Year   | 1992              | 1996      | 2001      |
|--|-------------------|-----------|-----------|
| <b>Predictor/Odds Ratio</b>                          |                   |           |           |
| <b>Household Head's Age</b>                          |                   |           |           |
| <28  | ---- <sup>1</sup> | 0.790     | 0.541     |
| 28-34  | 0.430             | 0.639     | 0.832     |
| 35-44  | 0.544             | 0.547+    | 0.675     |
| 45-54  | 0.884             | 0.765     | 0.751     |
| 65+  | 0.620             | 0.768     | 0.508     |
| 55-64 (reference)                                    |                   |           |           |
| <b>Head's Gender</b>                                 |                   |           |           |
| Female   | 0.668             | 0.706+    | 0.696*    |
| Male (reference)                                     |                   |           |           |
| <b>Head's Education</b>                              |                   |           |           |
| Lt Secondary   | 2.521*            | 2.895**   | 3.876***  |
| Secondary  | 1.823             | 1.841+    | 1.614+    |
| Tertiary (reference)                                 |                   |           |           |
| No. of Children                                      | 5.553***          | 4.161***  | 4.049***  |
| No. of Elders  | 2.542**           | 2.200***  | 2.026***  |
| <b>No. of Unemployed Work-age Adults<sup>2</sup></b> |                   |           |           |
| One  | 4.731***          | 3.547***  | 2.691***  |
| Two or more  | 8.020**           | 11.065*** | 7.483***  |
| None (reference)                                     |                   |           |           |
| <b>Head's Employment Status<sup>3</sup></b>          |                   |           |           |
| State-owned (reference)                              |                   |           |           |
| Collectively owned                                   | 1.481             | 2.067**   | 2.099**   |
| Foreign/Joint Venture                                | ---- <sup>4</sup> | 0.571     | 0.562     |
| Private/Self/Others                                  | 3.238             | 1.071     | 1.642+    |
| Reworking Retirees                                   | 0.626             | 0.480     | 0.369     |
| Retirees   | 0.736             | 0.665     | 0.944     |
| Other Non-working                                    | 1.033             | 4.661*    | 2.096*    |
| Log-likelihood                                       | -1273.010         | -1987.924 | -2538.321 |
| Pseudo-R2  | 0.21              | 0.15      | 0.17      |
| Sample Size  | 8635              | 8601      | 8293      |

1. Respondents with household heads younger than 28 are automatically dropped because none of them are under the poverty line in 1992.

2. Work-age Adults refer to adults aged between 20 and 54.

3. The classification of ownership is recoded. Self-employed, working in private firms and other employments are included in one category. The category of other non-working cases include disabled workers, household workers, those waiting for jobs or job assignments, students, those waiting for higher education, and others.

4. Cases in the Foreign/Joint Venture category are automatically dropped because none of them are under the poverty line in 1992.

5. Relative poverty line is calculated as: Household disposable income/(No of HH members<sup>0.5</sup>)

The poverty line of Liaoning in 1992 is: **528.5**; Sichuan: **523.66**; Guangdong: **991.47**; in 1996, Liaoning: **1098**; Sichuan: **1178.372**; Guangdong: **2401.921**; in 2001, Liaoning: **1633.901**; Sichuan: **1579.342**; Guangdong: **3218.728**

**Table 4: Effects of Household Characteristics on Poverty  
Urban China, Selected Years ( II )**

| Year   | 1992              | 1996              | 2001              |
|--|-------------------|-------------------|-------------------|
| <b>Predictor/Odds Ratio</b>                          |                   |                   |                   |
| <b>Household Head's Age</b>                          |                   |                   |                   |
| <28  | ---- <sup>1</sup> | 0.965             | 0.753             |
| 28-34  | 0.586             | 0.753             | 0.759             |
| 35-44  | 0.885             | 0.630             | 0.574             |
| 45-54  | 1.671             | 1.019             | 0.686             |
| 65+  | ---- <sup>2</sup> | ---- <sup>5</sup> | ---- <sup>6</sup> |
| 55-64 (reference)                                    |                   |                   |                   |
| <b>Head's Gender</b>                                 |                   |                   |                   |
| Female   | 0.771             | 0.705             | 0.630*            |
| <b>Head's Education</b>                              |                   |                   |                   |
| Lt Secondary   | 1.354             | 3.048**           | 2.936***          |
| Secondary  | 1.290             | 1.951+            | 1.275             |
| Tertiary (reference)                                 |                   |                   |                   |
| No. of Children                                      | 6.981***          | 4.833***          | 3.761***          |
| No. of Elders  | 2.674**           | 2.322***          | 2.126***          |
| <b>No. of Unemployed Work-age Adults<sup>7</sup></b> |                   |                   |                   |
| One  | 5.553***          | 3.337***          | 2.239***          |
| Two or more  | 38.466***         | 12.873***         | 5.051***          |
| None (reference)                                     |                   |                   |                   |
| <b>Head's Employment Status<sup>8</sup></b>          |                   |                   |                   |
| State-owned (reference)                              |                   |                   |                   |
| Collectively owned                                   | 1.241             | 2.024**           | 2.172***          |
| Foreign/Joint Venture                                | ---- <sup>3</sup> | 0.769             | 0.653             |
| Private/Self/Others                                  | 2.168             | 1.044             | 1.399             |
| Reworking Retirees                                   | 0.976             | 0.769             | 0.344             |
| <b>Head's Occupation<sup>9</sup></b>                 |                   |                   |                   |
| Senior Engineers                                     | ---- <sup>4</sup> | 1.787             | 1.749             |
| Engineers/Technicians                                | 0.153*            | 1.146             | 0.525*            |
| Cadre  | 0.378             | 0.627             | 0.247*            |
| Staff  | 1.212             | 1.002             | 1.190             |
| Ordinary Workers (reference)                         |                   |                   |                   |
| Log-likelihood                                       | -1036.920         | -1683.330         | -1870.848         |
| Pseudo-R2  | 0.26              | 0.15              | 0.16              |
| Sample Size  | 7402              | 7420              | 6330              |

6. through 6: cases are automatically dropped because none of them are under the poverty line.

7 Work-age Adults refer to adults aged between 20 and 54.

8 The classification of ownership is recoded. Self-employed, working in private firms and other employments are included in one category. The category of other non-working cases include disabled workers, household workers, those waiting for jobs or job assignments, students, those waiting for higher education, and others.

9 The classification of occupations is recoded. Technical includes engineers, assistant engineers, and technicians. Cadre includes above middle-level cadres, section chief cadres, and sub-section cadres. Staff includes staff-members, staff members in commerce and services. Ordinary workers include workers in agriculture, animal husbandry, sideline, fishery, production, and transportation and unclassified workers.

10 Relative poverty line is calculated as: Household disposable income/(No of HH members<sup>0.5</sup>).

11 The poverty line of Liaoning in 1992 is: **529**; Sichuan: **519.37**;Guangdong: **994.17**; in 1996, Liaoning: **1091.625**; Sichuan: **1179.815**; Guangdong: **2443.815**; in 2001, Liaoning: **1678.25**; Sichuan: **1599.838**; Guangdong: **3273.143**.

12 Cases with currently not working heads are dropped.

By 2001, the difference increased to nearly 4 times. Having more children and elderly persons in the household also elevates poverty risks. These effects were largely consistent throughout the decade. After controlling for other factors, household head's age no longer has a statistically significant effect on poverty risks, nor does the occupation of household head in most cases. The few exceptions are for engineers or technicians (1992, 2001) and cadres (2001). Households headed by these individuals have only half or a sixth of the chances of falling under poverty compared with those headed by ordinary workers (Table 4).

### **Female Headship and Lower Poverty**

One interesting result emerged in our analyses is the association between female headship and poverty. A large share of urban Chinese in the three provinces under our study live in households headed by a woman: 30 percent in 1992, 38 percent in 1996, and 36 percent in 2001 (Table 2). For the three time points, especially 2001, urban Chinese residing in female headed households were less likely to fall under poverty. Why is this the case? We attempt to find clues to understanding this pattern in the following.

Our investigation begins with the question: who are the female household heads? Household headship in the survey data was based on self-reporting when a household was selected to be included in the survey. Such a self-identification, in addition to other considerations, could well be based the intra-household power, economic as well as social. This seems to be the case as shown by the results in Table 5, where we compare household heads and their spouses' characteristics by the gender of the household heads. Among male headed households, male heads have clear social and economic advantages over their spouses: they are not just older, but also have a much higher share in highly educated category (college and above), more currently employed and with substantially higher income. This is not quite the case for couples where the female is the household head.

Female heads are still younger than their husbands on average, but their lag in higher education is much smaller, and their income is as high as or higher than their male spouses'. So part of the answer to our question of why female-headed households are less likely to be in poverty is that these households are not only headed by women (by definition), but also by more capable women compared with their husbands. The fact that the female-head advantage persists after controlling for household head's characteristics as shown in Table 3 and Table 4, however, begs for further examination and others' explanations.

There are two further possible explanations for the female-head advantage. First, these female household heads are simply on average better and more capable household heads than males. In household headed by females, everything else being equal, activities involving income earning and consumption are better organized than those headed by male heads. We call this explanation the "ability explanation," asserting women are better household heads. Second, the female-head advantage is not all caused by female heads being more capable than male heads in managing household economy, but by a compositional effect, due to the fact that there are more *single-person* households among females than males, and these female single-person household heads

have higher incomes than their male counterparts. We call this the “compositional explanation.” The reality is, however, there is no way to test the first hypothesis, as intrinsic ability cannot be measured directly and easily in a survey. We can only examine the possibility of the second hypothesis. In Table 5, we compare the characteristics of female heads in single-person and multiple-person households.

**Table 5: Characteristics of Household Head and Spouse**

| Predictor         | Male-headed Households |        | Female-Headed Households |        |
|-------------------|------------------------|--------|--------------------------|--------|
|                   | Self                   | Spouse | Self                     | Spouse |
| <b>1992</b>       |                        |        |                          |        |
| Age               | 45                     | 42     | 43                       | 45     |
| Highly-educated % | 20.31                  | 9.01   | 14.60                    | 23.92  |
| Working %         | 88.19                  | 78.91  | 82.63                    | 87.97  |
| Personal Income   | 4235                   | 2935   | 3580                     | 3643   |
| <b>1996</b>       |                        |        |                          |        |
| Age               | 47                     | 44     | 43                       | 46     |
| Highly-educated % | 23.32                  | 10.13  | 18.35                    | 29.13  |
| Working %         | 86.16                  | 73.87  | 85.17                    | 87.92  |
| Personal Income   | 9868                   | 6525   | 8526                     | 8522   |
| <b>2001</b>       |                        |        |                          |        |
| Age               | 49                     | 46     | 45                       | 47     |
| Highly-educated%  | 25.56                  | 13.02  | 20.30                    | 29.49  |
| Working %         | 77.44                  | 62.81  | 74.67                    | 78.55  |
| Personal Income   | 13532                  | 7492   | 13078                    | 11766  |

The female advantage is clearly more evident among single-person than in multiple-person households. There are not only more women in single-person households (by a ratio of 2 to 1 to 4 to 1), females in these single-person households are also more highly educated, and in general have higher incomes. So while we cannot eliminate the possibility of our first hypothesis above, that females are simply better household heads than males, results in Table 6 do show that at least some of the female-head advantage is due to a compositional effect, that there are more single women than single men, and these single women in general have a higher social and economic status than single man. So the female-head advantage contains at least in part the effect of the higher status of single women, the part that is not captured by the control variables such as age, education, and employment (Table 3).

**Table 6: Characteristics of Household Head By Gender and Marital Status**

| Predictor         | Households Headed by Single People |        | Households Headed by Coupled People |        |
|-------------------|------------------------------------|--------|-------------------------------------|--------|
|                   | Male                               | Female | Male                                | Female |
| <b>1992</b>       |                                    |        |                                     |        |
| N                 | 50                                 | 114    | 1821                                | 715    |
| Age               | 48                                 | 48     | 45                                  | 43     |
| Highly-educated % | 10.00                              | 11.40  | 20.59                               | 15.10  |
| Working %         | 80.00                              | 64.91  | 88.41                               | 85.45  |
| Personal Income   | 3216                               | 3586   | 4263                                | 3579   |
| <b>1996</b>       |                                    |        |                                     |        |
| N                 | 28                                 | 109    | 1619                                | 943    |
| Age               | 49                                 | 48     | 47                                  | 42     |
| Highly-educated % | 10.71                              | 13.76  | 23.53                               | 18.88  |
| Working %         | 64.29                              | 59.63  | 86.53                               | 88.12  |
| Personal Income   | 10693                              | 7654   | 9854                                | 8626   |
| <b>2001</b>       |                                    |        |                                     |        |
| N                 | 37                                 | 137    | 1665                                | 858    |
| Age               | 48                                 | 47     | 49                                  | 44     |
| Highly-educated%  | 13.51                              | 14.60  | 25.83                               | 21.21  |
| Working %         | 67.57                              | 62.77  | 77.66                               | 76.57  |
| Personal Income   | 9333                               | 11210  | 13626                               | 13377  |

### **Conclusion: Characteristics, Capabilities, and Durability of Poverty**

In the closing decade of the twentieth century, increasing inequality in urban China has taken a direction of further economic and social polarization. Prevalence of poverty, using a relative poverty measure, more than doubled in urban China in a decade, increasing at a pace faster than the overall increase in income inequality. At the turn of the twenty-first century, poverty level in China's cities is not that much different from many western capitalist societies. Poverty is not just a state of having low income, but also an indicator of life chances. We therefore are more interested in finding out the characteristics that contribute to China's emerging urban poverty, and the implications of these characteristics for the individuals falling under poverty in terms of their capabilities to live a socially acceptable life, and to move out of the poverty status.

Poverty in urban China is a multi-cause outcome. Individuals fall under poverty because of their personal characteristics, the characteristics of the households they are in, and the structural position they and their household heads are in. Similar to most other societies, individuals with lower educational attainment and hold low-status and low-pay manual labor jobs are most likely to be in poverty. The most important contributing factor, a new social reality in China in the 1990s, is unemployment or under-employment.

Individuals who were unemployed clearly faced much greater risk of being in poverty. Individuals in households headed by less educated, males, and with unemployed individuals and with more elderly or children also face elevated poverty risks. Moreover, poverty also relates closely to Chinese transitional social and economic structure. Controlling for individual and household head's personal characteristics, individuals who work themselves or having their households heads working in state-owned or foreign-invested companies face a much lower poverty risk compared with those in the less privileged collective or self-employed private sectors. China's urban retirees, at the same time, are also generally well-protected from falling under poverty.

Combined, what do these characteristics of poverty patterns inform us about the capabilities of individuals to live a decent life and to move out of poverty? To highlight the effects of the poverty-generating factors, we provide two simulated poverty risks: for those in the low-risk group and in the high-risk group. One is classified as in the low-risk group if he or she lives in a household with a female college-educated household head who works in the state-owned sector and has a professional job. The household has one child and no elderly person. One is classified as in the high-risk group if he or she lives in a household headed by a junior-school educated male who works in as an ordinary worker in the self-employed sector, and a household with one child and two elderly persons. Based on the poverty pattern in 2001, the probability of a person falling under poverty in the low-risk group is almost non-existent, at 0.02. In contrast, the probability of a person in the high-risk group falling under poverty is more than probable: at 0.64.<sup>4</sup>

Given that these poverty-generating characteristics do converge for a household, that individuals who work as ordinary workers are also more likely to be those with less education and less likely to be in a foreign invested company or even a state-owned company, and those with these economic characteristics are also more likely to have poorer housing conditions and more co-residing elderly persons, it is not unreasonable to describe a scenario where poverty is already highly concentrated in urban China. Moreover, for the foreseeable future, it is not clear at all that those currently in poverty will be able to move out, because the unemployed or those employed with low education, most of whom are in mid to early old age, will not be able to improve their educational attainment or to learn new skills. Their chances of getting a job in the state-owned or a foreign invested company are equally slim. Emerging poverty in urban China, as in many other societies, shows the characteristics that may well make poverty not only a permanent feature of the social scene, but also concentrate among a group of individuals and households, forming a new underclass and a component of durable inequality in that society.

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<sup>4</sup> We also assume for both groups the household head is currently employed and aged 35-44.

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