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Uncertainty, inequality and consumption preferences in urban China

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ABSTRACT

In this paper we present an uncertainty–inequality–consumption model and empirically investigate the effect of uncertainty on the consumption behaviors of urban households with varying levels of socio-economic status in China. We observe that the condition of households that suffered from socio-economic inequality with respect to total consumption, educational expenditures, medical expenditures, and durable consumption worsened relative to other households when faced with income uncertainty. Income uncertainty did not affect the housing consumption of households that suffered from socio-economic inequality, but it substantially decreased their ability to consume other durables. As a result of the introduction of the modern enterprise system and the reform of the housing distribution system, households with a member employed in a management position suffer larger shocks of income uncertainty in total consumption, educational expenditures, medical expenditures, and housing consumption relative to household with all members employed in worker positions in 2002. Uncertainty with respect to medical and educational expenditures had more substantial effects on the non-durables consumption of low-income households than that of other households in 2002.

1. Introduction

The purpose of this paper is to investigate the impact of uncertainty and status inequality on the consumption behaviors of households with varying levels of socio-economic status. Consumption goods can be separated into non-durables (normal commodities and services) and durable goods. The life cycle hypothesis (Modigliani and Brumberg, 1954), permanent income hypothesis (Friedman, 1957), and precautionary saving hypothesis (Leland, 1968; Sandmo, 1970) collectively laid the foundation for consumption analysis four decades ago. Following the above theories, a number of studies discussed the effects of uncertainty on food consumption (Hall and Mishkin, 1982; Zeldes, 1989), medical expenditures (Picone et al., 1998), housing consumption (DeSalvo and Eeckhoudt, 1982; Diaz-Serrano, 2005; Fu, 1995; Haurin and Gill, 1987; Robst et al., 1999), and other durable goods consumption (Attanasio, 2000; Bertola et al., 2005; Eberly, 1994; Lam, 1991). In addition, the availability of a wide variety of goods causes consumers to increase their purchases, and the strategy of suppliers under imperfect production also affects consumption preferences (Sarkar, 2012; Sarkar and Moon, 2011; Sarkar et al., 2011). Regarding consumption inequality, the change in the distribution of earnings in the labor market is an important driver of recent changes in family income and consumption inequality (Cutler and Katz, 1992); income inequality has risen more rapidly than consumption inequality in recent years, especially for younger military personnel in Britain (Blundell and Preston, 1998). Using US consumer expenditure survey data, Storesletten et al. (2004) find that income and consumption inequality increase with age. Krueger and Perri (2006) use the consumer expenditure survey data to demonstrate that the increase in income inequality in the US over the last 25 years has not been accompanied by a substantial increase in consumption inequality due to improved credit and insurance markets. Blundell et al. (2008) find that income and consumption inequality diverged because of a change in the durability of income shocks between the late 1970s and early 1990s in the US.

Given the growing income gap in China, some scholars have begun concentrating on the effect of uncertainty on the consumption behaviors of Chinese households (Fan et al., 2007; Luo, 2004; Meng, 2003; Zhang and Wan, 2004). Among these studies, Meng (2003) finds that urban households have been able to smooth their total consumption and food consumption under existing transitory unemployment shocks and that consumption smoothing occurred relative to the number of unemployed household members before 2000. However, reforms in the medical, educational and housing distribution systems were underway during these years, so above results could not reflect the effects of uncertainties for urban households since 2000. Although Zhang and Wan (2004) suggest that increases in the proportion of liquidity-constrained consumers, and increased uncertainty in the post-reform period, are responsible for the patterns of extremely low consumption and high savings in China, these findings come from aggregate data and thus do not necessarily reveal the consumption behavior of individual households.

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Over the past 30 years, inequalities related to socio-economic status, such as income inequality, employment inequality, and unequal rights have emerged in urban China. Given the country's existing levels of inequality, the impact of uncertainty on consumption habits differs according to the varying statuses of urban residents. Nevertheless, in analyzing the relationship between uncertainty and consumption, the existing studies ignore the status inequalities among urban households. Following Meng (2003), this paper utilizes a Chinese urban survey data set conducted by the Institute of Economics of the Chinese Academy of Social Sciences to investigate how uncertainties affect the consumption preferences of urban households of varying socio-economic statuses. As expected, we have amassed a number of findings: The uncertainty of transitory income played a more important role in decisions regarding total consumption, educational expenditures, medical expenditures, and durable goods consumption. However, the negative effects of income uncertainty for low-income and unemployed households, which are vulnerable groups, are larger than for other household types in 2002, and implies when facing significant income shocks, vulnerable groups are forced to consume less due to their low risk sharing ability. As households with a member employed in a management position suffer larger shocks of income uncertainty in total consumption, educational expenditures, medical expenditures, and housing consumption relative to household with all members employed in a worker position in 2002, this indicates that status inequality was reduced after the introduction of the modern enterprise system and the reform of the housing distribution system.

We also find uncertainty with respect to medical expenditures that had positive effects on total consumption, educational expenditures and medical expenditures in 2002, which indicates that households with larger predicted expenditures on medical services are inclined to consume more nondurable goods. In addition, uncertainty regarding educational expenditures had larger effects on low-income households' total consumption, educational expenditures, and medical expenditures than on other households in 2002. These results imply that increased future educational expenditures may increase the ability of low-income households to afford nondurable goods consumption. Unlike other consumption, durable expenditures are not an investment in future generations, thus uncertainty over medical and educational expenditures had negative effects on the durables consumption of low-income and unemployed households in 2002.

The remainder of the paper is structured as follows. In Section 2, we provide a brief summary of the factors determining uncertainty and status inequality in urban China. In Sections 3 and 4, we present an uncertainty–inequality–consumption model and an empirical framework. In Section 5, we describe our data set and variables. In Section 6, we document the effect of uncertainty on consumption preferences among various socio-economic groups using urban survey data. Section 7 concludes the paper.

2. Factors determining uncertainty and status inequality in urban China

Since economic reform began in China in 1978, urban residents have faced a series of uncertainties and status inequalities. The uncertainties derive from reforms to the country's income distribution system, medical system, and educational system. Nevertheless, status inequalities, including income inequality, employment inequality, and unequal rights, have been created by reforms to state-owned enterprises and administrative institution. The uncertainty and status inequalities vary across the three stages of Chinese economic reform.

The first stage was from 1978 to 1991. In the 1980s, the reform of state-owned enterprises was largely intended to expand the decision-making power of local enterprises by introducing a profits tax for state-owned enterprises[1] and a contract responsibility system. During this period, workers were able to receive stable wages from their work units. In addition, the reform of the medical system was still in a pilot stage and educational industrialization had yet to be proposed. There was thus less uncertainty regarding income, medical expenditures and educational expenditures during the 1980s. Due to the separation of ownership and management rights, managers gained greater rights in controlling enterprises. As a result, workers in state-owned enterprises began to face the problem of unequal rights. In 1985 and 1990, the Gini coefficient was 0.2 and 0.2, respectively, in Gansu province, located in western China; in the same years, the coefficient was 0.24 and 0.30, respectively, in Fujian province, located in eastern China. In 1990, the Gini coefficient was 0.22 in Anhui province, located in central China.[2] Based on these figures from representative areas, we observe that income inequality was low level the 1980s. Because the government did not initiate a policy of cutting payrolls to improve efficiency, the unemployment rate was lower before 1991. For example, the unemployment rate was between 1.8% and 2.6% in urban areas in 1985 and 1991. As a result, there was minimal employment inequality during this period.

The second stage was from 1992 to 1998. Since 1992, an emphasis of state-owned enterprise reform was the construction of free-market enterprises. With the completion of these new enterprise institutions, the wage gap among workers increased due to the practice of assigning wages according to workers' positions. In addition, under the modern enterprise institutions, there was intense competition among workers. Once certain workers had changed positions as a result of the intense competition, they were no longer competent in their new jobs due to the lack of proper training. This in turn meant that they were faced with unstable incomes. Starting in the early 1990s, local governments enlarged the number of pilot cities targeted in the country's program of medical insurance reform. The new policy used a combination of government insurance and individual out-of pocket programs instead of free medical services. Moreover, China's medical institutions increased the price of medicine and medical services, largely as a result of the absence of financial support from the government. Although the number of pilot cities was limited, the increase nevertheless exacerbated uncertainty regarding medical expenditures for urban residents. Because the country's educational industrialization had yet to emerge, expected educational expenditures remained similar to previous years. We can thus conclude that there was only uncertainty over income and medical expenditures between 1991 and 1998. Because the reform of the medical insurance system was still at an early stage, we can conclude that the effect of income uncertainty at this point was greater than uncertainty over medical expenditures.

The aims of building modern enterprise institutions are as follows: clearly established property rights, well-defined rights and responsibilities, the separation of enterprises from government, and scientific management. The transformation of state-owned enterprise into publically traded companies is a central strategy for achieving the above aims. Due to the absence of a perfectly functioning governance structure, there were serious insider control problems.[3] Insiders, such as managers, colluded to divide state-owned assets, while workers received no benefits. In addition, some state-owned enterprises were sold cheaply to insiders during the process of transforming state-owned enterprises. Under the circumstances, income inequality and rights inequality increased from their 1980s levels. Additionally, state-owned enterprises begin to smash the iron rice bowl by cutting payrolls to improve efficiency.[4] The total numbers of laid-off workers in 1996, 1997,

[1] The profits tax means that state-owned enterprises pay taxes instead of submitting their profits to the administration.

[2] Chinese west area statistics yearbook (2001), Fujian statistics yearbook (2007) and Anhui statistics yearbook (2007).

[3] The insider control problem refers to the situation in which a firm falls into the de facto or de jure control of insiders, i.e., managers and workers, without checks and balances from outsiders (Lee and Hahn, 2001).

[4] The "iron rice bowl" is a Chinese idiom referring to a now-defunct system of guaranteed job security, as well as steady income and benefits.