

# A Summary of Studies on Consumption Inequality

Lei Xu

School of Economics and Management  
Nanjing University of Science and Technology  
Nanjing, China

**Abstract**—With the development of China's economy, the problem of consumption inequality has become increasingly serious. This paper sorts out the important literatures of consumer inequality, summarizes the four aspects of the measurement methods of consumption inequality, sub-study, harm and causes, and gives some suggestions for further research at the end of the paper.

**Keywords**—consumption inequality; measurement method; sub-study; harm; cause

## I. INTRODUCTION

Inequality has always been the focus of philosophers, economists, statisticians, political scientists, and sociologists. Since the reform and opening up, China's economy has developed rapidly and has made remarkable achievements in the areas of economy, science and education, humanities and environment. However, China's inequality in income distribution and personal wealth is more prominent, and it is a huge challenge in the process of China's further development. The report of the 19th National Congress has also clearly pointed out that there is currently a "gap between urban and rural areas and the income distribution gap is still large", "...the main contradictions in our society have been transformed into the Contradictions between people's growing needs for a better life and the development of inadequate imbalances." The report of the 19th National Congress further pointed out that "the development imbalance is not sufficient... it has become the main constraint to meet the people's growing needs for a better life".

For more than a decade, the Chinese government has guaranteed various policies to protect people's livelihood, from minimum living security systems to pensions, medical care, unemployment, work-related injuries, and maternity insurance, as well as a series of industrial support policies such as poverty alleviation and benefit farming. At the same time, however, the issue of social inequality and the gap between the rich and the poor has become increasingly serious. According to a research report published by the University of Michigan on April 29, 2014, Xie Yu as the main author, China's Gini coefficient in 2010 was about 0.55, and the US was 0.45. The income gap in China has exceeded The United States has become one of the countries with the largest gap between the rich and the poor in the world (Wang Weidan, 2014). According to the "China Family Income Inequality Report" published by the China

Center for Family Finance Research and Research in Southwestern University of Finance and Economics in December 2012, the Gini coefficient of China's household income in 2010 has reached 0.61 (Southwestern University of Finance and Economics China Family Finance) Research and Research Center, 2012), this figure is much higher than the officially announced Gini coefficient of national income in 2013, officially announced as 0.473 (National Bureau of Statistics, 2013).

At the economic level, inequality is mainly manifested in wealth inequality, income inequality and consumption inequality (Atanasio, Pistaferri, 2016). Compared with income inequality and wealth inequality, consumption inequality has a better performance shape, which can directly and comprehensively reflect the persistent income and lifelong welfare, which can better measure economic inequality and contribute more to income, and scientific formulation of policies such as distribution, anti-poverty, consumer demand and economic growth (Sun Hao et al., 2017). Therefore, consumption inequality has become the focus of research in the field of economic inequality. This paper will summarize the four methods of measuring the inequality of consumption, sub-study, the harm and the causes.

## II. METHOD OF MEASURING CONSUMPTION INEQUALITY

Most domestic and foreign scholars measure the inequality of consumption based on the standard methods and indicators for measuring income inequality.

The measurement indicators used in foreign research on consumer inequality are: Most studies use commonly used inequality measures, including standard deviation (Lise and Seitz, 2011); variance (Tsakloglou, 1993; Deaton & Paxson, 1997; Primiceri & Van Rens, 2009); Gini coefficient (Cutler et al., 1991; Anwar, 2009; Chatterjee et al., 2016); Theil index (Tsakloglou, 1993); ratio of 90% to 10% quantile (Meyer & Sullivan, 2013); 50% to 10% quantile ratio (Schündeln et al., 2010); Family owned cars (Atanasio et al., 2012). In addition, some studies use measurement methods to indirectly measure consumption inequality, including the use of regression equation residuals (Deaton & Paxson, 1994; Aguiar & Hurst, 2013) and high-income and low-income consumption on luxury goods and necessities. Ratio transfer (Aguiar & Bils, 2015) and so on. In fact, most studies do not simply use a measure of consumption inequality, but use multiple measures of consumption inequality. Blundell &

Etheridge (2010) and Brzozowski et al. (2010) used variance, Gini, 50/10, and 90/50 quantiles to study consumer inequality in UK and Canadian households. Asad & Ahmad (2011) used the Gini coefficient, Theil index, mean log deviation, Atkinson index, and coefficient of variation, decile ratio and quintile ratio to study consumer inequality in Pakistan. (Liu Hong, 2016).

Most of the domestic measurement indicators used in the study of consumption inequality are based on traditional income inequality measures, or a single indicator such as the Gini coefficient (Cai Hongbin et al., 2010; Li Tao, Mo Hailiang, 2013), quantile ( Yang Jidong, 2013) Conduct consumption inequality measures, or use variance, coefficient of variation, Theil index and other indicators to measure consumption inequality (Qu Zhaopeng, Zhao Zhong, 2008; Xie Bangchang, Mo Hailiang, 2013; Zou Hong et al. 2013); there are also non-parametric methods (Xie Bangchang, Mo Hailiang, 2013) and the use of new methods such as the extension of the Gini coefficient method (Dai Pingsheng, Lin Wenfang, 2012). (Liu Hong, 2016)

### III. A SUB-STUDY ON CONSUMPTION INEQUALITY

Based on the Gini coefficient component decomposition method proposed by Shorrocks (1982), Lerman & Yitzhaki (1985), the household specific sub-item consumption is decomposed, and the consumption unequal for consumption is discussed. Contribution status. Garner (1993) used the 1987 US Consumer Expenditure Survey (CEX) data to study the inequality of household consumption expenditures in the United States. Research shows that American households consume in terms of operations, clothing, family services and recreational activities. The Gini coefficient is relatively high, and increasing taxes on these goods and services can reduce the social impact of economic inequalities. Berri (2009) used data from the French household budget surveys of 1978, 1984, 1989, 1994 and 2000. The study found that the purchase of private cars was the main cause of inequality in household consumption. Idris & Ahmad (2010) used Pakistan's 1992-1993, 1998-1999 and 2004-2005 Family Comprehensive Economic Survey Data (HIES) to study household inequality in Pakistan. Studies have shown that during the period from 1992 to 2005, household consumption inequality in Pakistan increased slightly, and the inequality in household food consumption was significantly lower than that in non-food consumption projects. Bailey et al. (2010) studied the three household consumption survey data of France (1978-1979, 1989, 2000-2001), Denmark (1991, 2003) and Cyprus (1997, 2005). The unequal consumption of goods and services in European countries, the study found that the biggest contribution to the unequal consumption of household transportation is the purchase of private cars, followed by the consumption of vehicle use items (gasoline, spare parts, etc.) And the contribution of household public transport expenditure to consumption inequality is very low. Dai Pingsheng and Lin Wenfang (2012) used the data of China Statistical Yearbook 2010 to conduct a structural analysis of the food consumption data of urban and rural residents in China in 2009. The results show that from the inequality index, the

unequal food consumption expenditure of urban and rural residents is higher than that of urban areas. The food consumption expenditures of the two rural groups are unequal, and the food consumption expenditure of rural residents is more than the urban residents. Wang Zicheng and Guo Murong (2016) studied consumption inequality from the perspective of migrant workers' families. Research shows that migrant workers' consumption inequality is higher than income inequality, while family income and consumption inequality have obvious differences in flow patterns and intergenerational differences. . Lin Xiaoshan (2018) based on the 2012 China Family Tracking Survey data, studied the relationship between family aging, consumption structure and consumption stratification, and found that on the one hand, the proportion of elderly people over 60 years old in the family, the household consumption The faster the level declines; on the other hand, the more the households in the high-consumption class, the greater the stratification and inequality of consumption caused by the aging of the family.

### IV. THE HARM OF CONSUMPTION INEQUALITY

Maintaining a certain degree of inequality, whether in the economic sphere or in life, helps to identify the direction of development for the latecomers and stimulates the latecomers to catch up and promote economic growth (Deaton, 2013). However, the degree of inequality is not as small as possible. Excessive egalitarianism is likely to cause free-riding problems, which is not conducive to stimulating production enthusiasm and resulting in reduced production efficiency. However, a higher degree of inequality, impacting the sustainability of economic development, threatens social stability and undermines the social welfare of all residents. First, when the gap between rich and poor is too large, the poor have consumption needs but lack the ability to pay. The rich have the ability to pay but the consumption needs are limited, resulting in insufficient consumer demand, affecting economic growth, and even causing economic crisis in serious cases (Yang Yang and Zhu Shizhen, 2007) . Scholars have found through research that the intensification of inequality will bring about a series of economic and social problems. Persson and Tabellini (1991) found that inequality is not conducive to economic growth through research; Zhou Guangsu, Li Shalang (2016) used the data of China Family Tracking Survey (CFPS) in 2012 to study the impact of consumer disparity on social trust and found The expansion of the consumption gap at the county level can significantly reduce the level of trust of Chinese residents. For every 0.1% increase in the consumption Gini coefficient, the level of social trust fell by 2.11 percentage points. Wodon and Yitzhaki (2002) argue that high levels of consumer inequality lead to increased poverty in three main ways. First, the higher the level of inequality is, the more obvious the poverty situation will be. The lowest level of the population can only get the least resource allocation. Second, the higher inequality will reduce the subsequent economic growth, and the poverty situation will be more difficult to alleviate. Third, higher economic inequality may reduce the share of income that the poor get in economic growth. Barro's (2000) study found that

inequality is an important cause of poor participation in crime, riots and other sabotage. Chen Chunliang and Yi Junjian (2009) empirical research based on Chinese provincial panel data shows that for every 1 percentage point increase in income gap, the criminal crime rate increases by about 0.38 percentage points. Conversely, a reduction in inequality contributes to the mitigation or resolution of economic and social problems. Oishi, Kesebir, and Diener (2011) used data from the 1972-2008 American Social Survey to find that Americans generally have greater happiness when consumption inequality is reduced.

#### V. CAUSES OF CONSUMPTION INEQUALITY

Krueger & Perri (2006) used the US Consumer Expenditure Survey (CEX) data from 1980 to 2003 to discuss the relationship between income inequality and consumption inequality in the United States. The study found that between 1980 and 2003 During this period, income inequality in American households increased significantly, while growth in consumption inequality was very slow. Heathcote et al. (2012) used the US Income Dynamics Panel Study (PSID) and Consumer Expenditure Survey (CEX) data from 1967 to 2006 to find that about 40% of the insurance models were created by creating a partial insurance model for trait wage shocks. Permanent wage shocks are transferred to consumption, which has an impact on consumption inequality. Deaton & Paxson (1994), using household survey data from the United States (1980-1990), the United Kingdom (1969-1990), and Taiwan (1976-1990), by decomposing overall consumption and income inequality into birth groups The intra-group effect (or age effect), the inter-group effect and the time effect of the birth group, respectively, observed the populations born in different countries in different ages, and the consumption and income inequality varied with age, and the results showed that the three countries People of different ages, their consumption and income inequality increase with their respective ages, and consumption inequality reflects the cumulative difference in people's consumption. Angus (2010) analyzes consumption by introducing wealth heterogeneity and flexible labor supply into the quality-ladder growth model and discussing the impact of patent protection on income inequality and consumption inequality. The relationship between intertemporal surrogate elasticity and consumption inequality, the study found that strengthening patent protection can increase the equilibrium growth rate by promoting the increase of R&D, thereby promoting the increase of real interest rate, thereby increasing the return on household assets. Abe & Yamada (2009) used the National Household Income and Expenditure Survey (NSFIE) data to discuss the impact of household debt on consumption inequality, and studies have shown that despite the income inequality in specific age groups during the sample period The level remains basically the same, but the level of consumption inequality increases, especially for young people, which may be related to the increase in housing loans during this period. The increase in liabilities has led young families to be more sensitive to income risks, thus making consumption Inequality increases. Edmond Berisha, John Meszaros (2018) found that income inequality and increased

consumption directly led to an increase in household debt. The results also show that we need to be cautious about debt-driven consumption, as the increase in household debt will reduce future consumption rates and increase consumer inequality.

Domestic scholars mainly discuss the impact of income inequality on China's consumption inequality, such as income inequality, aging, urban and rural population migration, education level, economic growth, government intervention, production support level and loan level. Qu Zhaopeng and Zhao Zhong (2008) used the micro data of CHIP in 1988, 1995 and 2002, and found that the gap between urban and rural households in China's low-cost consumption is very large. The price effect is the determinant of the consumption gap between urban and rural households.. Wang Yuxu (2015) shows that population aging has a significant negative effect on the consumption gap between urban and rural residents. The aging of urban and rural populations has a positive impact on the consumption rate of urban and rural residents, but the degree of rural population aging is higher than that of urban areas. The aging of rural population is the key to narrowing the urban-rural consumption gap; Qu Zhaopeng and Zhao Zhong ( The article from 2008) starts from the life cycle theory framework and uses the three-year microdata of CHIP in 1988, 1995 and 2002 to use the method of variance decomposition and regression decomposition to examine the rural consumption and income inequality between China and age and population aging. The relationship between the study found that consumption inequality in rural China is lower than income inequality. Lin Yifu and Chen Binkai (2009) used a time series sample of 27 provinces in China from 1978 to 2004 to test the relationship between development strategy and urban-rural gap. The study found that the greater the catch-up, the greater the gap between urban and rural consumption. Yang Jidong (2012) used the survey data of urban residents from 1991 to 2010 to investigate the causes of consumption inequality. The study found that income inequality has a significant impact on consumption inequality; through the decomposition of income gap, the temporary income gap It has a significant impact on the composition and growth rate of consumption inequality; at the same time, permanent income inequality is also an important factor leading to the deepening of consumption inequality. Moreover, consumption inequality also has strong regional differences. Sun Hao, Mao Zhonggen (2017) found that the difference in Chinese residents' consumption in 2005-2014 tends to converge as a whole; the level of inequality in household consumption is higher, and urban and rural inequality However, regional inequality and inter-provincial inequality are relatively low; the degree of urban inequality in consumption is higher in rural, urban, rural, regional, and inter-provincial areas than in rural areas. Lv Xiaokang, Fu Xinpeng, Wu Di (2018) used the data analysis of China Family Tracking Survey (CFPS) in 2014 and found that the mediating effect of the social status of residents and families is significant. The consumption gap affects the level of social trust by reducing social status. . Wei-MinZhao (2018) compared the insurance coverage of households with different levels of consumption and income. The results

show that major illness insurance (CII) mainly promotes the consumption of wealthy families in rural areas and has no incentive effect on poor families. On the contrary, it has led to the deterioration of rural household consumption inequality.

## VI. CONCLUSION

Through the above papers, we can easily find the research trend of consumption inequality. Most of the previous researches focus on the harm of consumption inequality and the research methods of measurement methods. In the latter stage, the main research and formation reasons of consumption inequality are mainly. The measurement method of consumption inequality has been relatively perfect at present. The Gini coefficient, the Thail index and the Atkinson index are the three mainstream indicators. The current empirical aspects also focus on the decomposition of the inequality index, so as to tap the consumption. It can be said that the update of mathematical methods provides more impetus for the study of consumption inequality. However, if we look at the sub-study of consumption inequality, there are still some shortcomings, which are reflected in the following aspects: First, for the inequality in household consumption, because the sample is restrictive, most of the research is based on the family. Units, while ignoring consumer inequality within the family; second, the study of structural inequality in consumption is not comprehensive, for example, part of the reason for the inequality in consumption may be due to differences in household consumption structure, and this difference it is difficult to reflect in the empirical model.

Finally, with regard to the future research direction of consumption inequality, this paper gives the following suggestions: First, pay attention to the study of consumption inequality caused by consumption structure; Second, according to microeconomic theory, the main factor affecting consumption is the price of products. And income, we can use these two points as the starting point to study the causes behind consumption inequality; third, when selecting samples, try to select micro-data based on individuals, which can make the research data more relevant to the facts, and the empirical results are more trustworthy.

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