A Study on the Causes and Measurement Indicators for Income Inequality in China

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ABSTRACT

China declared the total eradication of absolute poverty in the country in 2021. In this context, the situation of income inequality within China has come under renewed scrutiny and discussion. This article discusses the history of income inequality in China and the sources of the system. At the same time, the paper analyses the shortcomings of the Gini coefficient in depicting income inequality in China and the reasons for this. Finally, the paper proposes a model that may better describe the current state of income inequality in China. Since the Gini index is flawed in describing a sample as large and complex as China, introducing a model that takes more factors into account to describe income inequality in China can be a solution.

Keywords: *Income inequality, China, Gini coefficient, Happiness inequality*

1. INTRODUCTION

The phenomenon of income inequality has long attracted much scholarly research. Particularly in the context of the Covid-19 pandemic, it seems that income inequality is further increasing worldwide. And China's announcement in 2021 that it has completely eradicated absolute poverty within the country has raised eyebrows. In previous studies, post-reform and opening-up China has been portrayed as a country where the gap between rich and poor has gradually become wider. But when viewed in the context of China's real-life efforts to eradicate poverty, these studies and data indicators no longer seem to accurately describe the current state of income inequality in China. It is therefore important to find a new indicator to describe the situation of income inequality in a country. This paper will attempt to apply a new evaluation system to provide a more objective and comprehensive picture of income inequality in China. At the same time, the findings of this paper can also provide reference and inspiration for describing income inequality in other countries or regions around the world. Being able to accurately describe the extent of income inequality is also a prerequisite for people to further explore the issue of addressing income inequality.

2. THE CAUSES OF INCOME INEQUALITY IN CHINA

2.1 Historical Reasons

In the aftermath of the Second World War, almost all developing countries faced the difficulty of the enormous costs associated with extending social security coverage in a depressed economy[1]. However, China built an extensive welfare state during this period, thanks to the strong political power of the Communist government under Mao Zedong.

The distribution system established in China during this period has distinctive features.

Firstly, the Chinese Communist Party completed the socialist transformation of the capitalists. This action sets China apart from other countries, where welfare schemes were introduced with the involvement of the economic elite[2]. With no opposition from the capitalist side to thwart it, the welfare system established in China emphasised the preferential combination of the working class and capital. Such a system was built in a very efficient way to ensure distributive justice for most workers. Nevertheless, the Chinese peasants were not included in such a welfare system, leading to a rift in the alliance between the working class and the peasant class[3].

The second feature of this phase of China is the demise of the labour market[4]. This feature highlights the role of the mechanisms of distributive work in extending the coverage of the welfare system. The mechanism of distributive work is one of the main ways economic development influences welfare coverage. Although the new job placement bureaucracy sought to protect elite standards by assigning labour based on education and abilities, its judgments immediately became politicised due to their irregularity and inequity. Labor shortages in more established communist nations assured that bureaucratic labour distribution did not generate similar disputes. However, owing to the significant mismatch between supply and demand for jobs in China, the Chinese Communist Party exercised control over the populace through a household registration system, seeing this as a vehicle for establishing a welfare state. The above-mentioned strategy of forcefully lowering the urban population to a level that the state sector of the economy could maintain was a primitive but successful means of employment and welfare demand regulation[5].

A third peculiar feature of China's social reform is the shifting link between economic disparity and poverty. China's evidence is inconsistent. Workers exhibited excitement for redistribution and charity toward the welfare needs and worries of the jobless during the early years of the welfare state, when income disparity was significant. This trend of high inequality and cross-class collaboration in redistribution politics is consistent with research from developed nations. However, a decade later, the Great Leap Famine eliminated any class collaboration between workers and peasants due to enormous inequities in access to employment. During this era of crisis, workers became a de facto privileged class, with security rights that other classes did not have to ensure against unemployment[5].

To sum up, in Maoist China, there were significant inequalities between different units as the individual's identity was firmly tied to the organisation or unit to which they belonged, and industrial workers in the cities enjoyed the privilege of security from unemployment in times of economic turmoil. It shows that economic inequality is significant between different groups.

2.2 Institutional reasons

These characteristics, which began in the Mao era, have continued into post-reform and opening-up China. As a result, income inequality in China is linked to institutional stratification.

2.2.1 Urban-rural divide

The urban-rural divide is one of the most visible manifestations of this structural wealth disparity. Prior to market-based reforms, the Chinese government grew the economy by restricting rural investment[3]. The state exercised comprehensive control over grain prices via the centralised procurement and selling of grain. This device guaranteed that rural regions constantly provided food to cities at low prices, while also assisting the state in gaining and consolidating political support from urban populations. Additionally, "urban salaries may be reduced in comparison to industrial costs, with the substantial profits reinvested in the business."[6]. Such an institutional framework ultimately resulted in a significant disparity in living conditions between urban and rural areas. To prevent peasants from voting with their feet, the late 1950s developed the hukou or household registration system, which for decades "essentially anchored peasants to the land."[3]. Although there are now approximately 221 million internally mobile people in China[7], the hukou still exists as a legal status and remains a crucial determinant of life opportunities[8]. Migrants from rural regions who do not have a hukou in their city do not have the same access to housing, healthcare, education, and other public services as residents.

Additionally, a significant wage disparity exists between urban and rural areas. Li and Sicular indicate that "the urban-rural income ratio increased from less than 3.0 in the late 1990s to more than 3.3 in 2007-2009."[9]; “it has since declined slightly but remains above 3.0”. Milanovic (2014) observes that “the urban-rural gap in China is larger than in any other country in the world”[10].

2.2.2 Regional disparity

Apart from the urban-rural split, China also has tremendous regional differences. According to Khan et al. (1992: p. 1,050), in 1988, "Shanghai's per capita income had increased to 7.8 times that of Guizhou province in southwest China”[11]. In the 1980s and 1990s, China's market reforms accelerated economic development in the already wealthy coastal regions, aggravating regional inequities[9]. Fiscal decentralisation along with market reforms also allowed richer provinces to keep a greater part of their local tax income, allowing coastal areas to reinvest their residual tax resources in further industrial growth[12]. Studies consistently show that regional differences are among the most critical predictors of urban income in China[13].

2.2.3 Unit disparity

The "danwei," or discrepancy across units within the same city, is a third institutional cause of inequality. Every urban worker has a unit, which is never only a location of employment. According to Walder (1986: p. 29), these units "directly supply a broad variety of public goods, services, and even commodities that other economies would provide via the market and different institutions and government agencies"[14]. Different sorts of businesses provide varying job circumstances. For example, state-owned firm employees get superior pensions and other kinds of social security than collective sector employees[14]. Across the board, units near the top of the national administrative structure are more resourceful. "State-owned firms administered by state ministries, provinces, and big cities provide a broader range of advantages than smaller cities or counties located outside of metropolitan areas"[14]. Due to current job allocation systems and limited job mobility, "individuals are reliant on and bound by the specific unit to which they belong"[3].

The number of units represented by state-owned and collective companies has decreased significantly as a result of market-oriented reforms. According to Park and Cai (2011: p. 19), in 1978, state-owned and collective firms employed 78 percent and 22% of China's urban citizens, respectively. By 2005, these percentages had decreased to 24% and 3%, respectively. Individuals may also move away from dependency on the units in which they labour to achieve their fundamental requirements as a result of the development of marketplaces for commodities and services. The flat, however, continues to be an integral element of the urban social fabric[15].

In summary, China's long-standing and, to varying degrees, persistent inequalities are institutionalised via urban-rural, regional, and unit inequities.

3. INDICATORS FOR MEASURING INCOME INEQUALITY

3.1 The Gini Coefficient

The Gini coefficient, also known as the Gini index or Gini ratio, is a statistic used in economics to describe the statistical dispersion of income or wealth inequality within a country or society. Corrado Gini, a statistician and sociologist, invented the Gini coefficient.

The Gini coefficient quantifies inequality between frequency distribution values, such as income levels. A Gini coefficient of 0 signifies complete equality, which occurs when all values are equal, for example, when everyone earns the same amount of money. A Gini coefficient of one (or one hundred percent) represents the greatest disparity between values. For instance, if there are a huge number of individuals and just one person has all income or consumption, the Gini coefficient will be close to one[16].

However, the Gini coefficient has limitations.

To begin, a small sample bias exists: less populated places are more likely to have small Gini coefficients.

The Gini index is skewed downward in the direction of small populations. Countries or areas with fewer inhabitants and a less diverse economy are likely to have lower Gini coefficients. For economically diverse broad population groupings, a substantially higher Gini coefficient may be predicted than for their individual areas. Regarding the global economy as a whole, several researchers estimate the global Gini index to be between 0.61 and 0.68, using the income distribution throughout humankind as an example[16]. China, with a population of 1.4 billion, will always be skewed by applying the Gini coefficient to calculate income disparity. When applied to individuals rather than families in the same economy and income distribution, the Gini coefficient yields distinct findings. When household statistics are utilised, the income Gini coefficient is defined differently depending on how the household is defined. When disparate groups of individuals are not defined consistently, comparisons are meaningless. Deininger and Squire (1996) demonstrate that income Gini coefficients are different when individual income is considered rather than household income[17]. In China, despite market-oriented reforms, hundreds of millions of people still work "within the system", i.e. in state institutions and state-owned enterprises[18]. Many of these institutions still provide their employees with unique benefits, such as housing subsidies and health insurance, which are much higher than in the private sector, as they did in the old days. This suggests that the Gini coefficient obtained by directly measuring individual income in China may be biased.

Second, the difficulty to quantify wages and income from the informal sector impairs the Gini coefficient's accuracy, and some nations distribute advantages that are difficult to quantify. Countries that offer subsidised housing, health care, education, or other similar services are difficult to evaluate since the benefit varies in terms of quality and scope. In the absence of a free market, it is subjective to classify these revenue transfers as family income. The Gini coefficient's theoretical model is confined to accepting subjective assumptions as true or false. People may earn large income in the subsistence and informal economies in ways other than money, such as via small-scale subsistence farming in China or through the welfare of state agencies and state-owned firms with a socialist character. The informal or underground economy's value and distribution are difficult to measure, making it impossible to assess the genuine Gini coefficient of income[19]. Different assumptions and quantification of these incomes will produce different Gini coefficients[20].

In summary, the Gini coefficient is flawed in describing income inequality in China.

3.2 A new indicator to describe income inequality in China

Simply describing income inequality in China by the Gini coefficient is flawed because of the country's enormous size and the complexity of the composition of its domestic economy, which far exceeds that of any other country or region. A model of happiness inequality that incorporates multiple factors may better reflect the current state of distributional inequality in China.

In this paper, the reference comes to some scholars who use the variance of happiness to reflect happiness inequality. They also use the Gini index of happiness as an indicator of inequality in robustness checks. These scholars use RIF regressions to build models with explanatory variables including gender, age dummy, education dummy, income variables (including the log of total household income, relative income represented by the "poor" and "rich" dummies), geographical dummy, marital status, homeownership dummy and employment status. In their study, inequality in China increased after 2009 because of the dramatic changes and developments in Chinese society, which caused the model's coefficients to change so that inequality in well-being in China increased in the data[21].

Such an explanation considers more specific variables than a simple Gini coefficient. Furthermore, after introducing the regression model, it is also possible to adjust the coefficients of the regression model as society evolves, allowing the model to keep up with the times. This feature is well suited to Chinese society, undergoing tremendous social development.

4. CONCLUSION

The inequalities that have arisen within contemporary China have historical and institutional causes. As a result of these historical and institutional causes, China has a complex economic composition within the country. At the same time, China's enormous size makes it possible to describe inequality in China differently from the vast majority of countries in the world. Therefore, simply using the Gini coefficient to portray inequality in China may be biased. In this context, building a RIF regression model to describe inequality in well-being is a way to take more factors into account than simply using the Gini coefficient, and to do so in a way that is up to date.

But there are drawbacks to such an approach. While inequality in well-being can be seen as a response to income inequality at the level of society as a whole, it is clear that inequality in well-being cannot simply be equated with income inequality. In other words, this approach can be used to describe inequality, but not in a strict sense as a way of describing income inequality.

In subsequent research, finding a model or indicator that more closely describes distributional inequality within an economy of China's size and complexity could provide a reference and a prerequisite for subsequent work on how to mitigate income inequality.

REFERENCES

[1] I. Brattbakk and T. Hansen, 'Post-war large housing estates in Norway–Well-kept residential areas still stigmatised?', Journal of Housing and the Built Environment, vol. 19, no. 3, pp. 311–332, 2004.

[2] Z. Zhenqing, 'An Interactive Evolution Between Capitalism and Statism in Modern China: Political Economic Practices from the Guomindang to the Chinese Communist Party', Chinese Studies in History, vol. 47, no. 2, pp. 21–39, 2013.

[3] M. Whyte, 'Rethinking Equality and Inequality in the PRC', 2005.

[4] S. Sargeson, 'The Demise of China's Peasantry as a Class', 2016.

[5] N. Dillon, Radical inequalities: China's revolutionary welfare state in comparative perspective. Brill, 2020.

[6] J. C. Oi and D. Little, 'State and Peasant in Contemporary China: The Political Economy of Village Government', Economic Development and Cultural Change, vol. 42, no. 3, pp. 663–666, 1994.

[7] Z. Liang, Z. Li, and Z. Ma, 'Changing patterns of the floating population in China, 2000–2010', Population and development review, vol. 40, no. 4, pp. 695–716, 2014.

[8] J. Knight and L. Song, 'The rural-urban divide: Economic disparities and interactions in China', OUP Catalogue, 1999.

[9] S. Li and T. Sicular, 'The distribution of household income in China: Inequality, poverty and policies', The China Quarterly, vol. 217, pp. 1–41, 2014.

[10] B. Milanovic, 'Inequality in the United States and China', Harvard Business Review, vol. 1, 2014.

[11] A. R. Khan, K. Griffin, C. Riskin, and Z. Renwei, 'Household income and its distribution in China', The China Quarterly, vol. 132, pp. 1029–1061, 1992.

[12] R. Kanbur and X. Zhang, 'Fifty years of regional inequality in China: a journey through central planning, reform, and openness', Review of development Economics, vol. 9, no. 1, pp. 87–106, 2005.

[13] S. M. Hauser and Y. Xie, 'Temporal and regional variation in earnings inequality: Urban China in transition between 1988 and 1995', Social Science Research, vol. 34, no. 1, pp. 44–79, 2005.

[14] A. G. Wälder, 'Communist Neo-Traditionalism: Work and Authority in Chinese Industry. Berkeley', 1986.

[15] A. Park and F. Cai, ‘2. The Informalization of the Chinese Labor Market’, in From iron rice bowl to informalization, Cornell University Press, 2011, pp. 17–35.

[16] ‘Gini coefficient’, Wikipedia. Jan. 17, 2022. Accessed: Jan. 23, 2022. [Online]. Available: https://en.wikipedia.org/w/index.php?title=Gini_coefficient&oldid=1066254302.

[17] K. Deininger and L. Squire, ‘A new data set measuring income inequality’, The World Bank Economic Review, vol. 10, no. 3, pp. 565–591, 1996.

[18] P. Monfort, Convergence of EU regions: Measures and evolution. European Commission, Regional Policy Brussels, 2008.

[19] F. Quesnay et al., ‘Gini coefficient’.

[20] G. Krstić and P. Sanfey, ‘Earnings inequality and the informal economy: evidence from Serbia’, wiiw Balkan Observatory Working Papers, 2008.

[21] J. Yang, K. Liu, and Y. Zhang, ‘Happiness Inequality in China’, J Happiness Stud, vol. 20, no. 8, pp. 2747–2771, 2019, doi: 10.1007/s10902-018-0067-z.