

The Impact of the Zero-COVID Policy on Income Inequality in China

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Abstract: As COVID-19 cases spread rapidly globally, the effects of the pandemic have been highly paid attention to. Among the numerous effects that the pandemic has left to the world, including economic recession, there have been arguments that COVID-19 has widened income inequality. Specifically, the policies implemented to combat the coronavirus have been pointed out as the cause. This paper will investigate the impact of Zero-COVID policy on income inequality that exists within and among different regions in China through the examination of different papers. This paper will be useful in the prediction of the effect of pandemic on income inequality in the future and will be helpful in evaluating the relevant policies implemented to prevent the spread. In conclusion, the implementation of the Zero-COVID policy has resulted in income disparities both within and among different regions, with the severity of impact depending on the intensity of the policies' effect on different regions.

Keywords: COVID-19, Zero-Covid Policy, income inequality, China

1. Introduction

Since the outbreak of COVID-19 in the year of 2019, there has been numerous different strategies adopted in different parts of the world to cope with the pandemic. China has implemented the Zero-covid policy, which targets to eradicate COVID-19 cases through prevention and control measures. The policy mainly includes three parts: First, timely identification of the source of infection. Second is to quickly adopt public health and social intervention measures, including epidemic control, close contact management, epidemiological investigation, and avoidance of population assembly and other measures; The third is an effective treatment of those who got the virus. China's fast and effective actions in the prevention of the spread of the pandemic, though controversial, have protected its citizens and minimized its economic loss. However, as time passes, China's Zero-covid policy turned out to be unsustainable in long term. Due to lockdowns in major cities such as Shanghai, it has incurred economic losses. Internally, the public was instructed to keep social distances and avoid going outside to stop the pandemic's spread. While people with high income were able to sustain themselves, especially if the work could be done through online meetings, those with lower income or blue-collar jobs are more susceptible to unemployment and thus may face greater threat. As a result, there are arguments that the policies targeting the pandemic have caused greater disparities in income. This paper will explore whether there is an impact of the Zero-covid policy on income inequality in China. As the COVID-19 has not officially ended, this paper would be helpful in predicting the future

trends of income inequality following the measures implemented to prevent the spread of the pandemic.

There have been studies that compare the income disparity in China before and after the COVID-19 outbreak. It has been established that the income gap between urban and rural areas has been a huge problem in the society and might have been widened as a result of urbanization [1]. According to Chen, Liu, and Lu's paper, some correlation may exist between metropolitan income disparity, city size, and migration [2]. The effect of China's zero-covid policy on regional income disparity was examined by Shen, Shum, Cheong, and Wang. They employed distribution dynamics to discover a trend in disposable income from before and after the outbreak of the COVID-19 period in their data, which comprised samples from 295 cities across 31 provinces. This allowed them to determine the amount to which the policies had an impact on income disparity [3]. Furthermore, research by Zhang, Cui, Cao, and He reveals that the COVID-19 rules have disproportionately hurt female employees, urban workers, and workers without high educational degrees [4].

This paper is structured as the following: Section 2 states the income inequality in China before the outbreak of COVID-19, Section 3 introduces the income inequality in China after the outbreak of COVID-19, and the implementation of the zero-covid policy. Section 4 concludes the paper with the significance of such a phenomenon as well as policy implications.

2. COVID-19 and Its Policies' Effects on Income Inequality

2.1. Comparison of Gini Coefficient in China Before and after COVID-19

In 2019, before the outbreak of COVID-19, China's Gini coefficient marked 0.465. In the year 2020, when COVID-19 first began to spread, China's Gini coefficient has risen to 0.468 according to Statista, which is a rise of 0.003. The Gini coefficient is a statistic that gauges how unequally distributed a country's income is. The Gini coefficient could be between from 0 and 1, and a Gini coefficient below the value of 0.4 is acceptable according to the UN. It is determined by first drawing the Lorenz curve for the population, which represents the wealth distribution in the economy. The area under the Lorenz curve is then divided by the space between the line of equality and the Lorenz curve.

2.2. Income Inequality in China Before COVID-19

Before COVID-19, China's income inequality was mainly driven by the reformation of the economy from an egalitarian to a market economy in the 1970s [3, 5]. Following China's participation in the WTO in 2001, the country's GDP was experiencing rapid growth of an annual increase of 8.5%, different people were affected differently [2]. Due to urbanization, regional income disparity became greater. This could be illustrated by the gini coefficient between 1978 to 2019. The income inequality ratio between urban and rural areas hiked up to 3.14 in 2007, which is extreme when compared to other developing nations averaging about 1.2 to 2.1 [3]. According to China's National Bureau of Statistics, 43% of rural families and 56% of metropolitan households respectively received their revenue from wages. Urban families had 9% of the income from property, while rural households had around 2%. The rural households, however, had 20% more in operating income. Both urban and rural households had around the same share of transfer income. More recently, rural households take less share of operating income than before as they transfer to non-agricultural jobs, which can be accounted for by urbanization.

However, income inequality inside the urban area is also a great problem in the pre-covid nation [2]. According to Chen, Liu, and Lu's article, there is a correlation between metropolitan income disparity, city size, and migration. The researchers extracted data from the National Bureau of Statistics, which included randomly selected individuals from each of China's counties, including

females and males aging from 18 to 53. Their income was determined by dividing their monthly income by their weekly working hours, and the Gini index was used to compute their income disparity. In 2005, the Gini coefficient in cities in China ranged from 0.23 to 0.48. Cities in Guangdong such as Shenzhen had a Gini coefficient of up to 0.48. Regional inequality followed a trend, with towns on the eastern shore being less equal than those in the north or west. The researchers observed between-group inequality, which is inequality across people with different observable characteristics, and within-group inequality, those within the group with the same observable characteristics [2]. They discovered a link between city size and wealth inequality within a metropolis that was favorable. One between-group characteristic of college premium versus high school premium showed that income inequality among those increased in bigger cities. Urbanization and migration could be held accountable for this trend. Due to fast economic growth, there was rapid growth in cities and a more concentrated population in more developed cities. This resulted in interregional migration from rural areas to urban areas, which led to gaps in education leading to income inequality.

2.3. Income Inequality in China During and after the Outbreak of COVID-19

Among all the nations globally, China was the first to implement a restrictive policy when COVID-19 cases were first discovered, including lockdowns and strict quarantines. In 2021 December, the Chinese government first introduced the zero-covid policy to the crowd. While its policy has been successful in keeping infection rates extremely low, which many countries could not have done, the tremendous economic losses and impact on income inequality could not be ignored [6]. China, as the greatest manufacturer and supplier was unable to send supply ships abroad, which meant a significant loss in the Chinese economy as well as a disruption in the global supply chain. While one may believe that the zero-covid policy in China has led to an even loss of income in the nation, it is not so.

2.3.1. Regional Income Inequality

COVID-19 and its policies had intensified the regional income disparity. While the overall economy has shrunk, they had different effects on regional levels, reducing the income of an individual household in a rural area by 8.75% while urban households face a decrease of 6.13% [7]. Shen, Shum, Cheong, and Wang looked into how China's zero-covid regulation affected regional wealth inequality. They used the distribution dynamics method to assess the extent of the impacts of policies on income disparity by identifying a trend of disposable income from the pre-covid era to the post-covid period in their data from 295 cities in 31 provinces.

The relationship between the length of the Level I Emergency Response Situation, the number of cities, mean GDP growth, and average GDP per person are shown in Table 1 below [7].

Table 1: GDP variation based on short, medium, and long duration of Level I Emergency Response Situation [7].

Group	No. of cities	2019 GDP growth	2019 GDP percapita	Eastern (%)	Central (%)	Western (%)	Northeastern (%)
Short duration	141	6.80%	61,804	26.24%	19.15%	39.01%	15.60%
Medium duration	71	7.41%	64,845	28.17%	0.00%	54.93%	16.90%
Long duration	84	8.07%	65,066	35.71%	63.10%	1.19%	0.00%

The research showed that the COVID-19 policies have resulted in negative economic impacts to the extent that the continuous current trend would result in a lower disposable income even lower than the income during the pre-pandemic period. Moreover, income inequality among regions has been heightened as a result of the difference in the duration of Level I Emergency Response Situation, a social distancing policy [3]. However, the difference in income that have arisen before the pandemic was believed to have diminished due to the chance of multiple cities moving upwards in terms of income. Moreover, the study shows that the countries have mostly recovered from the loss incurred during the pandemic. However, it is shown that the recovery in the rural areas is much slower than the recovery in the urban areas, and is not guaranteed. This would lead to greater income inequality in the less developed cities, especially those that have experienced a longer period of Level I Emergency Response Situation [7].

2.3.2. Within-region Income Inequality

Not only did the COVID-19 policies have effects on city levels, but they also heavily influenced the individual household's income inequality inside a region. The pandemic, along with the policies implemented, had heterogeneous impacts on different types of workers. While the income disparity increased between urban and rural residents, there has also been an increase in income inequality among these people. Pre-pandemic gini coefficients for urban areas marked a 0.35 and rural areas a 0.39, while the post-pandemic period experienced an increase in gini coefficient with 0.36 and 0.41. This is due to the fact that the pandemic has a more striking effect on the lower income families rather than higher income families, even within the region they are living in. Moreover, a study done by Zhang, Cui, Cao, and He shows that the COVID-19 policies have hit urban workers, uneducated workers, and female workers the most. Employment in urban areas would fall by 6.60% while employment in rural areas falls by 6.16%, exhibiting a slightly better situation than in urban areas. This is due to the fact that production sites in urban areas were damaged during the pandemic and the fact that urban workers compose the input laborers of the production sites, which have been damaged more than the output laborers that workers in rural areas take. Less educated workers would find themselves unemployed or with a lower income than their counterparts. Female workers who have low education would be in worse employment and receive significantly less income compared to their male counterparts [4].

2.4. Results

To sum up, the policies implemented in China known as the zero-covid policy have had a tremendous impact on the economy, not only driving down the GDP on the national level but also at a regional level, deepening the income inequality between and among the regions. As results show, there are certain groups of people who are more vulnerable, and thus affected more by the policy, which has led to an increase in income inequality. Results show that there indeed has been an increased income inequality since the pre-pandemic period, and that the zero-covid policy has had different effects on different regions, with those in rural regions being affected the most, with the lowest recovery speed and highest income inequality [8]. There were also different effects among the regions, showing the effects on different types of workers. Among those were urban workers, uneducated workers, and female workers. These disparities in the effect of income have been reflected in the increased Gini coefficient [9-10].

3. Conclusions

This study reviewed the growing income disparity between urban and rural areas and also within cities prior to as well as following the COVID-19 pandemic and the adoption of measures to halt its

spread. When comparing the income inequality before and after the implementation of the policy, the findings were that the zero-covid policy adopted in China has had a significant influence on the Chinese economy, lowering both the national and regional GDPs and widening economic disparities within and between regions. The findings demonstrate that some demographic groups are more susceptible to the effects of the program, which has increased income disparity. To relieve such income disparity, policymakers could make policies considering the different impacts a policy may bring to different stakeholders. The policymakers provide unemployment insurance specifically to those who have lost jobs as a result of the policy implemented, thus compensating the potential loss that has been incurred to the parties. Especially the blue collar workers who have earned little income and have been fired or were unable to work during lockdowns as outdoor activities were restricted.

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