Investigating the effect of the Covid-19 crisis on income inequality: Some Evidences from Developed and Developing Countries

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Abstract

The shock caused by the Covid-19 crisis has had various impacts on the economic situation of countries around the world. Income inequality is one of the most important areas affected by the crisis. Hence, the aim of this study is to investigate the effect of the shock caused by this crisis on income inequality for 22 developed countries and 46 developing countries during the years 2020 to 2022 using a seasonal panel vector autoregression model. The results indicate that the Covid-19 crisis has increased income inequality in both developed and developing countries. What can be inferred from the results of the impact reaction functions is that with the onset of the crisis, the effects of the direct tax shock, the degree of trade openness, the strictness index and the rate of covid-19 infection on the Gini coefficient in both groups of countries have led to an increase in income inequality. Also, in developed countries, the effect of the human development index shock on the Gini coefficient is negative, but in developing countries, the effect is positive and has increased income inequality. The results of variance analysis of prediction error for both groups of countries show that the strictness index is the dominant factor in explaining the variance analysis of Gini coefficient prediction error.

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1. Introduction

The outbreak of the new corona virus since December 2019 in Wuhan, China, caused many negative effects on countries around the world. In the beginning, the Covid-19 crisis was only recognized as a threat to public health; But with the epidemic and its spread in most countries of the world, it became a serious crisis for the global economy. The pandemic has been the worst recession since the Great Depression (1929). Due to the extent of the epidemic and mortality, the Covid-19 disease has become the most important threat to health and economy around the world, and so far many studies have been conducted to investigate the effects of this disease on the economic and social conditions of countries. Although the impact of this crisis on the economy of different countries has not been the same, it has caused heavy damage to the foreign trade of the countries, the closure of many businesses, followed by an increase in unemployment in the world, a decrease in per capita income and consumption, and an increase in expenses in addition to the budget deficit of the governments. and the increase in household health expenses have all been negative effects of this crisis on the global economy, hence one of the most important effects that this disease has brought with it is the increase in income inequality on a global scale.

2. Theoretical framework

The epidemic of the Covid-19 virus is like other epidemics that the world has seen so far; In addition to human safety and public health, it has had many economic effects on the countries of the world, both developed and developing countries, directly and indirectly. The epidemic of Covid-19 has caused an increase in health expenses, a decrease in per capita income due to the closure of economic activities, a decrease in productivity and labor supply, and so on. Under these conditions, one of the most important economic effects of this crisis is the effect on income distribution. Quarantine and physical and social distancing along with the closure of many businesses and educational centers has caused the distribution of income to be severely affected.

3. Methodology

This research seeks to investigate the effect of the shock caused by the Covid-19 crisis on income inequality in developed and developing countries. Therefore, the present study uses the panel vector autoregression (PVAR) model to investigate the effects of this shock. In addition to this, the estimated model includes 22 developed countries and 46 developing countries, seasonally during the Covid-19 pandemic (2020 to 2022 AD).

4. Discussion

The results of shock response functions for both developed and developing countries show; Direct taxes have increased the Gini coefficient. Also, the results of variance analysis of forecast error for developed and developing countries show that the strictness index for both groups is the main factor in explaining the variance analysis of Gini coefficient forecast error. With the difference that in developed countries, the momentum of the austerity index has explained more than 14% of the changes in the Gini coefficient, and in developing countries, it has been able to explain only 0.64% of the changes in the Gini coefficient.

5. Conclusion and Suggestions

What can be inferred from the results of shock response functions in developed and developing countries; It is that with the beginning of the epidemic of this crisis, the direct tax shock effect on the Gini coefficient has increased income inequality in both developed and developing countries. What has caused the difference between the two groups of countries; The lack of compliance of the tax system of developing countries with the new conditions during the crisis period is what has caused; The effect of the shock has not disappeared and continues. Therefore, reforming the tax system in developing countries is one of the important necessities to reduce income inequality in these countries. Also, the results of shock reaction functions show that the shock effect of trade openness degree, strictness index and the rate of covid-19 on the Gini coefficient in both groups of countries has led to an increase in the Gini coefficient. Also, in developed countries, the effect of the shock of the human development index on the Gini coefficient is negative, and in developing countries, this effect is positive and has increased income inequality. The results of forecast error variance analysis for developed and developing countries show that the strictness index is the dominant factor in explaining the variance analysis of Gini coefficient forecast error. Therefore, in order to compensate for the income inequality caused by the austerity index, governments are suggested to stimulate total demand and increase government spending (G) through various monetary and financial channels, such as reducing interest rates, providing packages and support facilities, and reducing taxes.

6. Ethical Considerations
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The present study has followed the scientific principles of research.

6.2. Funding

6.3. Authors contribution
The author of the article declares that all aspects of this research have been conducted by them.

6.4. Conflict of interest
The authors of the article declare that there is no conflict of interest in this research.

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