



Analysis of Iran's income inequality with emphasis on economic growth and urbanization

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Abstract

Identifying economic and non-economic factors affecting income inequality in developing countries is important for achieving sustainable development. The impact of economic growth and urbanization, by creating employment, developing infrastructure, and distributing benefits fairly, is of great importance in reducing income inequality. The aim of the present study is to analyze income inequality in Iran with an emphasis on economic growth and urbanization during the period 1992-2022 using the autoregressive distribution lag (ARDL) model. The index used for income inequality is the Gini coefficient index and the variables used in the study are economic growth rate, urbanization rate, inflation, oil rent, and degree of trade openness. The results show that the economic growth rate variable has a negative and significant effect on income inequality in Iran with a lag; the urbanization rate variable also has a positive and significant effect on income inequality. The findings of the study also show that oil rent has a negative and significant effect on income inequality. The results indicate that oil rent can lead to a reduction in income inequality in Iran due to economic dependence on natural resources and lack of economic diversification. According to the estimated results, the variables of inflation and the degree of openness to trade also have a positive effect on income inequality. Given the positive effect of economic growth and urbanization on income inequality, it is suggested that the government should consider policies and programs to create sustainable and equitable economic growth, facilitate employment and education opportunities, and create appropriate social infrastructure. On the other hand, implement equitable distribution policies and regional development programs to reduce income inequality in Iran and promote sustainable and equitable development at the national level.

Keywords: Income Inequality, Economic Growth, Urbanization, Autoregressive Model with Distributional Lags.

JEL Classification: I32, O41, R39, C51.

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1. Introduction

The relationship between income inequality, urbanization, and economic growth is one of the challenging topics in the economic literature. The direction of the causal relationship between income inequality, economic growth, and urbanization remains unclear due to their influential nature, and there is no solid empirical argument regarding the direction of causality of these variables. Considering the above, the main objective of this study is to analyze income inequality in Iran with an emphasis on economic growth and urbanization during the period 1992 to 2022 using the ARDL approach. The structure of the study is as follows: first, the theoretical foundations are discussed, then the background of the study is discussed. The research method and findings are presented, and finally, conclusions and suggestions are presented.

2. Theoretical framework

The relationship between income inequality and economic growth dates back to the study of (Kuznets, 1955). He proposed the theory that countries initially face increasing income inequality in their economic development path and after remaining constant at a certain level, inequality gradually decreases. In his theory, Kuznets considers economic development as the process of transition from a traditional economy to a modern economy and concludes that in the early stages of economic growth and development, the income distribution situation worsens because a limited number of people have the ability to move from the traditional to the modern sector. As a result, the wage gap between the traditional and modern sectors increases and in the later stages of economic growth and development, income distribution improves. In this case, more people are attracted to the industrial and modern sectors of the economy and gradually, due to the scarcity of labor in the traditional sector, the wage level in the traditional sector also increases and approaches the wage level of the labor force in the modern sector.

3. Methodology

The main objective of this study is to analyze income inequality in Iran with an emphasis on economic growth and urbanization. The effects of explanatory variables in many economic and financial models will face significant lags. These lags may be due to the cautious reactions and behaviors of economic agents towards events and policies or may be due to the economic structure. The effects of explanatory variables in applied studies do not only occur at the instant, but also probably some of the immediate effects and the other part occur over time. Lagged effects indicate that if the value of a variable changes today, its effect will occur in the coming days. Statistical models used to examine lagged effects are known as models with distribution lags. One of these models is the autoregressive

distribution lag (ARDL) model, the general form of which is as follows:

$$Y_t = \mu + \sum_{j=1}^p \gamma Y_{t-j} + \sum_{j=0}^q \beta_j X_{t-j} + U_t$$

4. Discussion

Oil rent variables, degree of trade openness and economic growth rate variable have a negative effect and urbanization rate and inflation variables have a positive effect on income inequality. Also, according to the results of the model estimation, the coefficient of the economic growth rate variable with a lag is (-0.000577), which has a negative and significant effect on income inequality in Iran because the economic growth rate usually affects income inequality with a lag or a delay. Also, in the study of Ghaffar et al. (2011), they concluded that the initial level of economic growth is not susceptible to income inequality, while a positive change in economic growth is susceptible to income inequality, which can only continue and improve if certain policies are applied. Also, based on the results obtained, the urbanization rate has a positive and significant effect on income inequality in Iran with a coefficient of (0.089383), meaning that if the urbanization rate increases by one unit, income inequality increases by (0.089383). It can be concluded that the increase in urbanization rate in Iran can be an important factor in income inequality. Improving economic conditions and urban facilities and industrial and commercial development in cities can help the disadvantaged and create better opportunities to improve the economic situation and income inequality. Other results include the negative and significant effect of the oil rent variable on income inequality in Iran. The estimated coefficient for this variable is (-0.090660), which shows that the increase in oil rent leads to income inequality in Iran. Inflation is also considered one of the significant variables on income inequality in Iran, and according to the results, in the short term, inflation has a positive and significant effect on income inequality with a coefficient of (0.046381). The degree of trade openness in the current period has a positive and significant effect on income inequality with a coefficient of (0.307104), and after a lag, the effect of the degree of trade openness on income inequality has become negative.

5. Conclusion and Suggestions

The main objective of this study is to analyze income inequality in Iran with an emphasis on economic growth and urbanization during the period 1992-2022 using the autoregressive distribution lag (ARDL) model. It is worth noting that the Gini coefficient variable was used to measure income inequality. The results of estimating the autoregressive distribution lag model in the present study show that the economic growth rate during the period has a direct and significant relationship with the level of income inequality. It should be noted that the findings of the study indicate that in the

long run, the economic growth rate has not had a significant effect on income inequality. The results of estimating the long-term autoregressive distribution lag model in the present study show that the urbanization rate during the period 1992-2022 has a direct and significant relationship with the level of income inequality. It is suggested that the government should consider policies and programs to create sustainable and equitable economic growth, facilitate employment and education opportunities, and create appropriate social infrastructure to facilitate the improvement of economic conditions and poverty reduction in Iran.

6. Ethical Considerations

6.1. Compliance with ethical guidelines

The present study has followed the scientific principles of research.

6.2. Funding

This paper it does not have the financial support of any organization.

6.3. Author's Contribution

The authors, while observing the ethics of publication, declare that they participated equally in this research.

6.4. Conflict of interest

The authors declare that there is no conflict of interest in this research.