

1. Introduction

Knowing the factors and variables influencing income inequality has been the goal of governments and economic policy makers of countries. Several variables are effective on income inequality, which can be mentioned as inflation rate, unemployment, government size, economic growth, education, etc., which directly and indirectly affect income inequality. Meanwhile, the role of education in reducing income inequality is of special importance.

Education has always been one of the concerns of governments in achieving a fair distribution of facilities and expertise. For this reason, it has been among the most important policies of the public sector economy. This point of view that the spending of financial resources by the government in the education sector is not associated with benefits, has created challenges and discussions that can point to the impact of education on income distribution. Public education in the labor market leads to the reduction of the income gap by improving the productivity of low-income people. Since the 1950s, skill has been recognized as an important factor in increasing productivity. In recent decades, education has been introduced as the most effective method in humanitarian investment. By improving the level of education in the society, the productivity of the labor force increases and may increase the production of the entire economy and lead to an increase in the level of income. Therefore, it can be concluded that education can reduce income inequality. In terms of education indicators, according to the statistical yearbook of 2019, the literacy rate of 6-year-old and older male and female population of the province was 89.8% and 79.3%, respectively. Compared to the whole country, it can be admitted that the average literate population in Lorestan province is lower than the national average. In the field of regional discussions of Iran's economy, Lorestan province has special and important economic, political and cultural characteristics, but unfortunately, the government's planning and policy processes in Lorestan province have not been resolved and remain with a lot of issues and problems. Therefore, the purpose of this research is to investigate the effect of education on income inequality in Lorestan province during the period of 1986-2019 using the autoregression model with distributional breaks (ARDL).

2. Theoretical framework

The best focus on the effect of education on reducing income inequality can be found in the work of Adam Smith, who believed that education can lead to an increase in individual abilities, so that the individual and society benefit from this situation. Adam Smith believed that educating people is actually a kind of investment with which people acquire more ability and leads to increased income.

Since the 1990s, education has gained importance in endogenous growth models and neoclassical growth models. In 1990, learning-based growth models were

proposed by Romer (1990), Grossman and Helpman (1991). Many economic growth models emphasize that education directly affects economic growth. Education can directly affect the improvement of the state of technology, economic growth and reduction of income inequality.

Recent economic developments indicate that education plays an important role in improving economic conditions. Educated people can earn more and reduce their income gap with high earners. In this way, education affects income inequality. In a situation where the distribution of income is fair, the level of education of people improves. In Iran, government education leads to the reduction of income inequality, the government leads to the reduction of income inequality through increasing public education expenditures.

3. Methodology

The autoregressive model with distributed lags (ARDL) presented by Pesaran et al. (2001) has several advantages compared to other cointegration measures: 1) The autoregressive model with distributed lags (ARDL) is not sensitive to sample size. Therefore, it is suitable for small volume samples and has the necessary efficiency. 2) In order to use other co-aggregation or co-accumulation methods, it is necessary to have the same degree of accumulation of variables, and in contrast, the self-regression method with distribution breaks is effective for variables with different degrees of co-accumulation. 3) In the self-regression model with distribution breaks, it is possible to use the optimal breaks of each variable during the estimation stages of the model. 4) There is a single equation in the self-regression model with distribution breaks in contrast to the systematic estimation of equations. 5) In estimating the self-regression model with distribution breaks, short-term and long-term relationships between the dependent variable and the explanatory variables can be estimated simultaneously. 6) Sons and Shin (1999) and Casa (2005) proved that if the convergence vector is obtained using the least squares method based on the self-regression model with well-defined distribution intervals, the estimator in addition to the minimum distribution Normal is less skewed and more efficient in small samples.

4. Discussion

According to the results of estimating the short-term model using the self-regression model method with wide breaks, the first break has not affected income inequality and its coefficient is equal to 0.156, which is not confirmed in the short term. The number of secondary and higher education graduates with their second break has had a negative and significant impact on income inequality. The number of technical and professional skills in the current time, along with its second break, has had a negative and significant impact on income inequality. Variables of current unemployment,

current gross national product and inflation in their first and second intervals, all have a negative and significant relationship, with an influence coefficient equal to -0.021, -5.382, -0.002 and -0.002 on income inequality, respectively.

In the long term, the number of secondary and higher education graduates, the number of technical and vocational training students, unemployment, inflation and gross domestic product have a negative impact on income inequality.

5. Conclusion and Suggestions

Therefore, based on the obtained results, it is recommended that the government invests in public education and equal educational facilities in Lorestan province to improve the literacy status of people in Lorestan province. Also, with the government's investment in higher education through scholarships, free education, financial aid and subsidies in higher education for low-income families in this province, it should pay attention to reducing income inequality in this province by employing university graduates.

6. Ethical Considerations

6.1. Funding

This article was written without financial support.

6.2. Authors' contribution

The authors of the article have participated in this article with the same contribution in compliance with the publication ethics.

6.3. Conflict of interest

The authors of the article declare that there is no conflict of interest.