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The impact of renewable energy consumption on social development in OECD countries

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EXTENDED ABSTRACT

INTRODUCTION

Energy has always played an important role as a production input and a final commodity. Considering the harms caused by the consumption of fossil fuels, it seems that turning to the use of renewable energy is inevitable. According to the latest reports, indicators of social development in most parts of the world are in poor condition. The need to use renewable energy instead of fossil fuels, as well as the increasing use and attention to this type of energy and social underdevelopment in a large part of the world, research on these issues is inevitable.

Therefore, this study examines the impact of renewable energy consumption on social development in OECD countries and with the help of econometric tools that have been used less so far, seeks to obtain solutions from the experiences of these countries and make recommendations To improve social development.

METHODOLOGY

In this study, considering the nature of the data and to control the simultaneous effects of social development and renewable energy consumption, the experimental model of the research has been estimated using panel data vector autoregression (P-VAR). The variables in the model include renewable energy consumption, health expenditures, educational expenditures, gender inequality, income inequality and life expectancy at birth. Allied as well as the standard global income inequality database are obtained. It should be noted that the proposed method based on the calculation of social development index with the aggregation of the effects of several indicators has been introduced.

FINDINGS

Renewable energy consumption has a negative effect on income and gender inequality, has a positive effect on governments' health and education expenditures and life expectancy at birth, and as a result, has a positive effect on social development.

CONCLUSION

Given the impact of increased consumption of renewable energy on factors such as income and gender inequality in OECD member countries, other nations can also learn from the experiences of this group regarding renewable energy usage. Increased investment in renewable energy can serve as a key driver for reducing poverty and social inequalities in various countries. This investment not only creates new job opportunities but also contributes to a fairer distribution of income. Especially by providing equal opportunities for both women and men, it can strengthen the role of women in the economy and social decision-making. The successful experiences of OECD countries demonstrate that by adopting appropriate policies and utilizing innovative technologies, positive and sustainable outcomes in the field of renewable energy can be achieved. These models can serve as a foundation for developing countries to benefit from the economic and social advantages of this type of energy. Ultimately, investing in renewable energy not only aids in improving economic conditions but can also lead to changing mindsets and enhancing the quality of life in various communities. This approach is particularly essential in the current context, where environmental and social challenges are increasingly on the rise.

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