

The relationship between energy accessibility and income inequality in Latin America and Caribbean countries

Abstract

Access to modern energy services is crucial for well-being, health, and economic development, yet it remains out of reach for many marginalized communities. This article explores the relationship between access to modern energy services and income inequality within Latin America and the Caribbean (LAC), a region marked by pronounced income disparities and significant variations in energy access. Employing an econometric approach with Granger causality analysis over the years 2000 to 2019, the results suggest that enhancing access to electricity and clean cooking fuels can significantly reduce income inequality within the LAC region. However, the magnitude and direction of these effects are found to be country-specific, underscoring the complexity of the energy-inequality nexus. Particularly, the case of Costa Rica is highlighted for its unique bidirectional causality between energy access and income inequality, fostering a virtuous cycle where development becomes endogenous. Conversely, in Bolivia, Brazil, and Honduras, this endogeneity does not occur, indicating a greater need for government policy intervention. Additionally, in El Salvador, while increased electricity access positively affects access to clean cooking fuels, no direct link between energy access and income inequality is observed. Highlighting the connection between energy access and income inequality underscores the need for policy interventions specifically designed for the unique socio-economic and energy landscape of each country. These strategies must leverage energy access as a powerful means to combat income disparity effectively. While the study focuses on the LAC region, its implications extend far beyond, offering insights relevant to other middle-income nations facing similar challenges.