

Title: Macroeconomic determinants of non-renewable and renewable energy consumption in India: The roles of international trade, innovative technologies, financial globalization, carbon emissions, financial development, and urbanization

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Abstract: Against scenarios of rising fossil fuel dependence and slow renewable energy adoption rates, this study appraises macroeconomic factors affecting non-renewable and renewable energy consumption in India. Additionally, this study makes a novel attempt to evaluate the determinants of divide between India's non-renewable and renewable energy consumption levels. Overall, the findings are three-fold. Firstly, it is found that in the short-run India's non-renewable energy consumption levels are positively and negatively determined by technological innovation and financial globalization, respectively. Besides, in the long-run, non-renewable energy consumption is positively influenced by international trade, financial globalization, carbon emission, and financial development; conversely, technological innovation reduces non-renewable energy consumption. Secondly, India's renewable energy consumption levels, in the short-run, are positively determined by international trade and technological innovation, while financial development impedes renewable energy consumption. Moreover, in the long-run, renewable energy consumption is positively and negatively impacted by technological innovation and financial globalization, respectively. Thirdly, the results confirm that financial globalization in the short-run and technological innovation in the long-run reduce the divide between India's non-renewable and renewable energy consumption levels. Contrarily, in the long-run, carbon emissions, international trade, financial globalization, and financial development widen this divide. Accordingly, policy suggestions are provided for the Indian government.

Keywords: Renewable energy consumption, Technological innovation, Financial globalization, International trade, Financial development, Carbon emissions, Energy transition

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