

Digital Finance, Renewable Energy Consumption And Economic Development

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Abstract : This thesis examines the link between renewable energy (RE), digital finance, economic development of Pakistan and the least developed nations from 2000 to 2022. It conducted an empirical study of 35 least developed countries to evaluate how technological, economic, and financial aspects influence the adoption of renewable energy solutions. The panel data analysis that underpins the research comprises the variables GDP growth, Access to Electricity (ATE), Trade, Foreign direct Investment (FDI), Trade, Energy Use (EU). To make our research more pertinent, we have also included the GDP square (GDP²) in our thesis. Higher levels of economic activity may result in lower rates of adoption of renewable energy (RE), according to the Kuznets curve hypothesis, which finds that there is a positive relationship with square of GDP and a negative relation with GDP. This is an illustration of the alignment of diminishing returns in economic growth, where at a greater degree of development, the advantages of economic growth on the adoption of renewable energy (RE) may start to increase. Delivering financial services using desktop computers, mobile devices is referred to as "digital finance" in the technical sense. Banking services that are dependable, economical, and convenient might be offered through digital finance. Financial inclusion is made possible by digital finance, which benefits both parties. Examining how digital money has affected the world economy is the goal of this study. Additionally, this research uses fixed broadband (FB) and mobile subscriptions (MD) as proxies for digital finance. They are both in ln form. It has used the generalized method of moments Arellano-Bond approaches. The findings show that under the growth model, renewable energy (RE) has a strong and favorable link with fixed broadband and mobile subscribers. However, the FB and MD have a strong but negative association with the uptake of renewable energy (RE) in the average and simple model. Additionally, these findings suggest some significant policy changes, particularly for Pakistan and the least developed nations, who should take measures that would make it simpler to advance the digital financial system through the use of renewable energy (RE).

Keywords : digital finance, renewable energy, economic development, mobile subscription

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