

Bridging the Rural-Urban Gap in Electricity Access: The Effectiveness of the SAUBHAGYA Scheme in India

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Abstract

Access to reliable energy is an important prerequisite for the socio-economic development of a nation. The energy ladder and stacking hypothesis recognize the crucial role of households' access to cleaner and more convenient sources of energy for inclusive and sustainable development. Accordingly, the Government of India and the state governments have taken significant steps towards universal electrification in the country. However, rural households in different parts of the country still lack access to reliable electricity, revealing a persistent rural-urban gap. Given these backdrops, the present study explores the factors influencing households' electricity access in major states of India, following the National Family Health Survey data. Limited dependent binary models (logit and probit) were estimated based on the samples of 224,376 and 224,712 from NFHS's fourth and fifth rounds, respectively. The findings suggested that socio-economic status is imperative in electricity access, particularly the place of residence, wealth status, social categories of the household, and age, gender, and literacy level of the family head. These outcomes emphasize the importance of adaptation strategies to overcome the persistent disparities. Given that, to understand the effectiveness of the SAUBHAGYA scheme on overall electricity access, a difference in difference (DID) technique was applied, and the result indicates a positive impact of policy on the overall access to reliable electricity for rural and urban poor households. The findings also contribute significant insights to stakeholders and policymakers in designing effective strategies to achieve more reliable and equitable electricity access, ultimately contributing to the nation's overall development.

Keywords: Electricity Access; National Family Health Survey; Rural-Urban Gaps; SAUBHAGYA; India