

AIPS Summer Research Grant – Narrative

Electrification, Urban and Rural, in Pakistan (new title)

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Households in Pakistan usually face one of two problems with electricity supply. Either they are connected to the grid but face load-shedding due to the overall gap between supply and demand, or they live in disconnected, off-grid areas. My research provides explanations for the variance in the level of electrification in more developed areas and looks for sustainable solutions to electrification in rural areas. I discuss my progress on each in turn.

Research on the political economy of load-shedding in Pakistan is quite difficult. It requires the cooperation of the distribution companies in Pakistan, which provides a barrier that even senior economists in Pakistan have struggled to surmount. However, due to the availability of satellite imagery that measures that level of electrification through night-time luminosity, several options persist. This grant has enabled me to develop relationships with Dr. Ali Cheema and Dr. Farooq Naseer, economists who are based at the Lahore University of Management Sciences. Together, we are exploring how trends in electrification can be explained by the types of politicians and the access they have to the bureaucratic levers of government which drive development. In particular, we are exploring how rates of electrification, along with other development indicators, are caused by the political connections and dynastic status of ruling politicians. Understanding how political connections mediate development in Pakistan is crucial to understanding how the future of Pakistani development is mediated by political factors.

However, this grant has chiefly permitted my exploration of the off-grid energy sector in Pakistan, and has led to a promising collaboration with the Pakistani Poverty Alleviation Fund (PPAF). PPAF has been responsible for the electrification of over 38,000 rural households with more projects coming in the near future, all of which rely on renewable energy. The energy shortfall in Pakistan, although present via loadshedding in urban areas, is greatest when the lack of rural electrification is considered. Rural households without power face constraints on the amount of time they can allocate to productive behavior, live without power, and dedicate substantial sums of money to purchasing kerosene gas. Together with PPAF, I am designing a randomized controlled trial to study how management and privatization of renewable energy micro-grids can contribute to their sustainability, economic feasibility, and provide the necessary conditions for income-generating activities inside and outside of the household. We hope to learn how different kinds of local energy champions, provided with training and authority to make financial decisions about the earnings from energy tariffs, along with privatization of the micro-grids can affect household behavior and community satisfaction and utilization of the micro-grids.