

TALKINGPOINTS

ON ENERGY

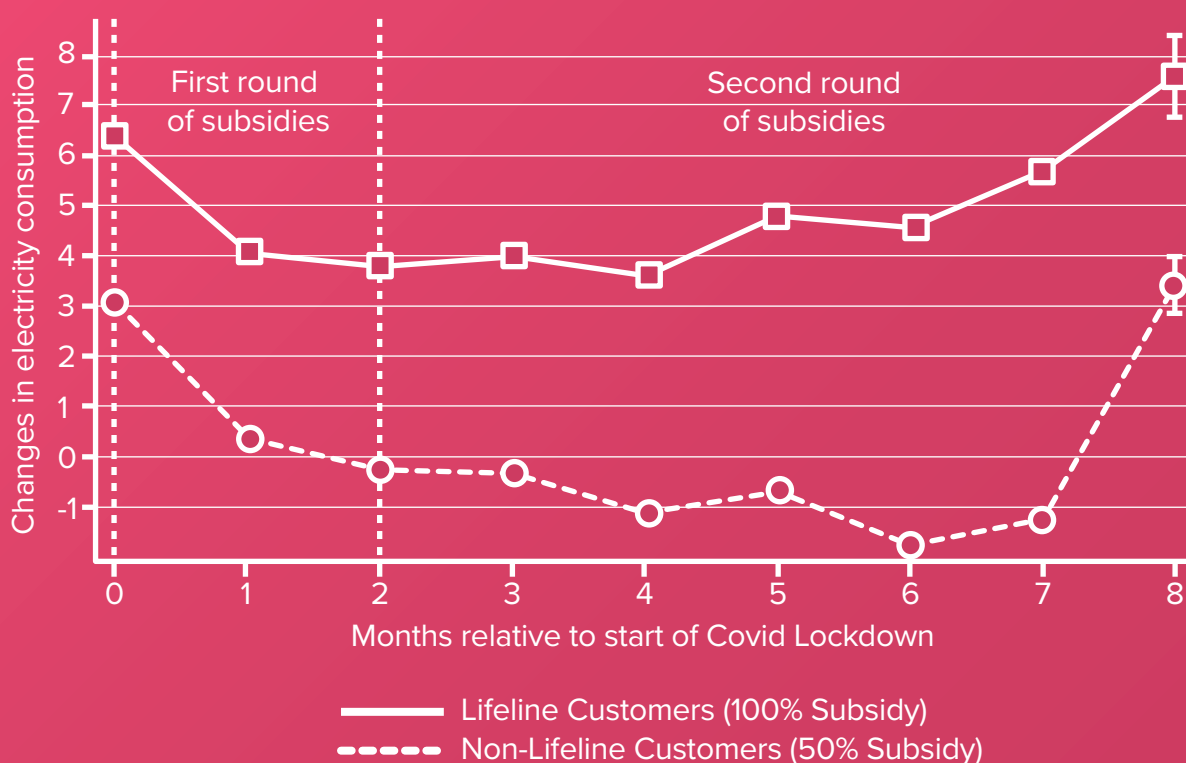
Nigeria's recent "bold" move on removal of subsidies on petroleum has reinvigorated policy discussions on energy subsidies in developing economies due to the associated high fiscal burden, and environment footprints resulting from excess consumption of the subsidized products. However, there is a dearth of evidence on the extent to which energy subsidies affect consumption.

A recent paper by Justice Tei Mensah and co-authors "**Energy Demand during a Pandemic: Evidence from Ghana and Rwanda,**" presents evidence on the extent to which electricity subsidies affect consumption, by leveraging administrative data on electricity billing records from Ghana and Rwanda: two countries with differing policies in the electricity sector in during the COVID-19 pandemic. Ghana offered electricity subsidies to households to cushion the effects of the pandemic on households while Rwanda did not.

The key findings from the paper include:

- Compared to the pre-covid period, average electricity consumption for the residential sector increased in both Ghana and Rwanda, albeit the rate of increase was significantly higher in the former than the latter. Specifically, average household consumption increased by about 23% in Ghana compared to 4% in Rwanda.
- The substantial increase in electricity consumption in the residential sector in Ghana was primarily driven by the electricity subsidies offered.

Fig A: Effects of electricity subsidies on consumption in Ghana



The figure shows the changes in electricity consumption in the respective months following the start of the COVID lockdown in Ghana (April 2020). The estimates are difference-in-difference estimate and their corresponding 95% confidence intervals are computed using the expression:

$$DID^{\omega} = \hat{\beta}_{2020}^{\omega} - \frac{1}{2} \sum_{k=2018}^{2019} \hat{\beta}_k^{\omega}$$

POLICY IMPLICATIONS

- While subsidies, particularly during periods of severe economic crunch, may be desirable, implementation and targeting of such subsidies is crucial in maximizing social welfare.
- Universal application of [electricity] subsidies, can lead to unintended consequences, including but not limited to high fiscal burden, excess consumption, and leakages. Instead, cash transfers to targeted households could yield optimal outcomes.