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The Impact of Electricity Subsidies on Groundwater Extraction and Agricultural Production

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Description / Abstract

In this paper, we estimate the environmental and agricultural effects of agricultural electricity subsidies in India. To isolate the causal effect of the subsidy, we evaluate the differential impact of annual state electricity prices in districts with different hydrogeological characteristics. Electricity subsidies increase groundwater extraction, where the estimated elasticity is -0.13, and the production of water intensive crops, particularly rice. We find that they operate through the extensive margin by expanding the area on which water intensive crops are cultivated. And while these subsidies are estimated to have small deadweight costs, with roughly 88 percent of expenditure transferred to agricultural producers, they increase the output of water intensive crops and the probability of groundwater exploitation, suggesting potential long-term costs

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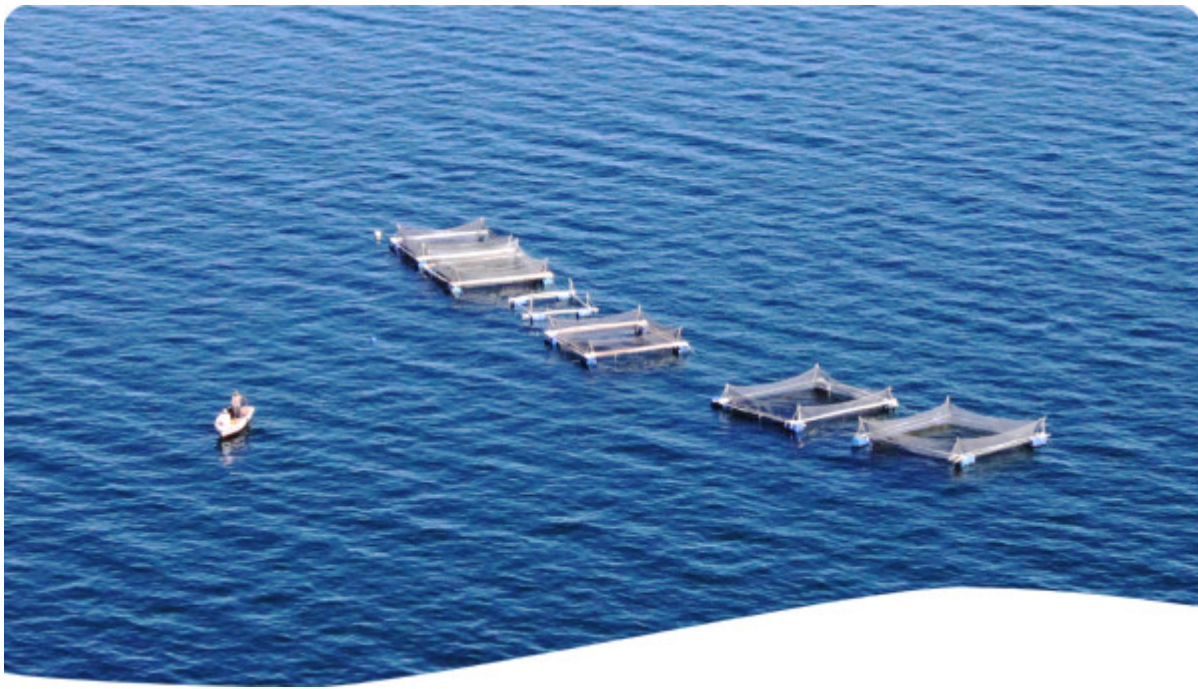
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Subsidies

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