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Why cash transfers to farmers could unlock reliable electricity for India's wider economy

India has suffered some of the most significant economic damage worldwide from Covid-19 -- the country entered a technical recession, with the government reporting an 8 percent contraction in GDP over 2020-21. However, warning lights were flashing well before the pandemic. In June 2019, former Chief Economic Advisor Arvind Subramanian argued that official statistics were significantly overestimating India's true GDP growth rate. Low foreign investment, a stagnant manufacturing sector, and disappointing agricultural growth likely combined to create real growth rates of about 4.5 percent between 2012-2017, a period over which government data reported average growth as high as 7 percent. These structural weaknesses raise the question: Is the rapid growth needed to quickly recover from Covid-19 realistically within reach for India?

The answer depends in large part on whether India can create a more vibrant manufacturing sector. Without this, it would take a minor miracle to achieve a V-shaped recovery, grow the economy from about $2.87 trillion in 2019 to the government's $5 trillion target for 2024, or even lift the millions of people who have fallen below the poverty line back up. Unfortunately, expanding manufacturing and building new factories will require India to deliver significantly more reliable and affordable electricity, something that is currently in short supply.

Electricity costs may be too high to support rapid industrial growth

In 2018, the International Energy Agency (IEA) estimated that India's industrial electricity prices stood at roughly $416 per MWh in purchasing power parity (PPP) terms, a staggering 6 times higher than in the US ($69 PPP per MWh) and about 2.5 times higher than in China ($167 PPP per MWh). In addition to these inflated prices, India's factories also face persistent outages, which can have substantial economic impacts. In the 2014 World Bank Enterprise Survey, over 55 percent of Indian firms reported facing an average of 14 outages per month, with a mean duration of 2 hours.

Why are industrial tariffs so high, and why is supply so poor? One reason is the relationship between electricity, water, and agriculture.

Subsidies to agriculture come at a high cost

Farmers in India use electricity to pump groundwater for irrigation. India has subsidized the electricity needed to do so since the Green Revolution in the 1960s and 70s, when Indian policymakers recognized the importance of water for growing more food using high-yielding varieties of seeds. States set nominal or zero prices for electricity as a subsidy to encourage groundwater use. These subsidies still exist, both politically near-impossible to remove and all but essential for many subsistence farmers. India is now the largest user of groundwater in the world, extracting more each year than the United States and China combined. Unfortunately, as groundwater levels fall each year, the energy needed to extract water grows and is becoming unsustainably high. In the 2020 financial year, India's most important agricultural

state, Punjab, owed over $1 billion to electricity utilities to cover the cost of subsidized electricity for groundwater extraction. To put this in perspective, this is about twice as much as the state health budget, and four times as much as spending on transportation, critical to the broader growth of non-agricultural sectors of the economy.

The negative spillovers from pricing distortions do not show up only on the balance sheet. To control the costs of providing power to agriculture, state governments across India both ration electricity and cross-subsidize from other sectors.

Rationing subjects large parts of rural India to perennial outages - making it harder for other productive economic activities to occur. Small manufacturing businesses cannot survive if electricity is heavily rationed, shops cannot stock frozen goods if the power does not stay on, and medical clinics cannot provide incubators or safely store vaccines. Cross-subsidies have meant that other sectors – especially industry – end up paying for agricultural use. Industrial tariffs in India are extraordinarily high, with energy costs acting as a dead weight holding back manufacturing growth.

The equilibrium described here is difficult to break. Simply removing agricultural electricity subsidies is not a realistic option. Politics aside, a large proportion of India's farmers produce so little that staying in agriculture would be impossible without free water. Unleashing the free market and forcing them to exit the sector would come at too high a humanitarian cost.

Replace subsides with direct cash

One solution would be replacing free electricity with unconditional cash transfers. The Indian government spends a large amount of money buying power for farmers, but these funds could be transferred in cash instead, remaining budget neutral, but supporting farmers while raising electricity prices to a sustainable market rate.

Farmers could still use the cash to pay for power, but they would also face market pressures to reduce electricity consumption where possible and use the money for other purposes. For instance, unconditional cash transfers could provide the capital infusion needed to set up small household businesses, encourage investment in efficiency enhancing agricultural inputs, or other expenditures that an individual values more than electricity.

If farmers reduce their electricity consumption the state saves money, in part because the unconsumed electricity does not incur any distribution losses, and distribution companies have more incentive to provide more power to rural India, confident that they will be paid for whatever is consumed. Both cross-subsidies and rationing could be removed.

Conclusion: Enabling both agriculture and manufacturing is key to India's development.
Indian economic ambitions cannot be realized without cheap and reliable electricity for sectors other than agriculture. This will require ending price distortion, which in turn would lower industrial tariffs and improve supply. Getting the prices right is possible were India to redesign how it supports poor farmers, helping them without crippling long-term growth.