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Production responses and tax evasion with limited state capacity

Evidence from India's tax reform



In brief:

- In India, indirect taxes represent 85% of state tax revenue. Historically, its highly decentralised system of commodity taxation has led to production inefficiencies.
- Our research is on the effect of India switching from a sales tax to a value added tax (VAT) in the 2000s. We focus on two margins of response: Output and tax evasion near registration thresholds.
- We reflect on the implementation challenges of the reform in light of India's limited state capacity and recommend future adjustments.
- The reform occurred gradually: Like the previous and highly criticised tax system, the VAT reform maintained its product and state-specific tax rates.
- The switch to VAT reduced tax cascading, lowered tax rates, and created enforcement opportunities and challenges for the government.
- The reform saw little evidence of bunching, except at the very largest tax thresholds. Large production efficiency gains were made in the manufacturing sector.
- Recent reforms saw the transition to a centralised goods and services tax (GST), but some features of the prior decentralised regime remain: The existing system remains more complex than other countries, has higher tax rates on some goods, and requires substantial compliance costs.
- Addressing these concerns is subject to the same political concerns that plagued prior reforms.
- The government needs to work toward standardising the system across states and products, while being mindful that persistent reforms increase compliance costs.

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Overview of the research

In India, indirect taxes (of which commodity taxes are the largest component) represent 85% of state tax revenue. Considering their prominence, understanding the effects of these taxes on efficiency and evasion is of paramount importance. Historically, India's highly decentralised system of commodity taxation has led to production inefficiencies. **The sales tax system historically featured:**

- Substantial tax cascading (double taxation),
- very high rates of taxation because of its first point of sale levy,
- incentives for manufacturers to shift production past the first point of sale, and
- hundreds of commodity specific tax rates and regulations that varied by Indian state.

During the 2000s, states replaced what a panel of Indian experts called an “archaic, irrational and complex” sales tax system with value added tax (VAT). Although this new tax system is not entirely similar to European-style VAT, many experts regarded it as an improvement on the prior structure. Although this reform reduced tax cascading, high rates of taxation, and incentives to shift production, VAT maintained its product and state-specific tax rates.

Against this backdrop, we ask: *What is the effect of switching from a sales tax to VAT in a country with limited tax capacity?* In particular, we focus on two margins of response: The response to output and tax evasion near registration thresholds.

Background: Institutional details and evidence

Here we highlight several key institutional features of tax under both the sales and VAT systems:

- By the late 1990s and early 2000s the sales tax system differed widely across states, based on a mixture of administrative convenience, ad hoc measures to increase tax revenues, and measures to attract firms to their state (or to particular areas within a state).
- Under the sales tax, taxation at the first point of sale required very high rates to raise the same amount of revenue as would be generated under an equivalent retail sales tax system.
- This also led many states to tax inputs in the production process, which in turn were denied credits against the manufacturing stage, resulting in the double taxation of industrial inputs and machinery, coupled with turnover taxes that were not deductible.
- As a result, policy advisors regarded the switch from a state sales tax to a state VAT regime as the most realistic first step towards a more efficient commodity tax system. However, as states were protective of their taxing powers, the central government reduced their demand for harmonisation of the state VAT systems.
- Thus, the switch to VAT occurred gradually and maintained many complexities present in the prior system, but substantially reduced the tax cascading aspects along with reductions in tax rates.

Research methodology and key findings

We study the effect of India's switch from a sales tax to a VAT on output and evasion:

- To do this, we digitise the commodity tax rates and registration thresholds for all 36 states and union territories. In the process, we standardise the tax rates across commodities and states from 2001 to 2016. Then, we merge these data to firm level survey data from the Annual Survey of Industries.
- To identify the effect of the reform on production, we exploit the staggered implementation of VAT across states by comparing early adopting states to late adopting states.
- We study the change in gross sales due to the transition and find *a 20% increase in production efficiency five years after the tax reform.*
- To identify tax evasion responses, we study whether it appears that an excessive number of firms bunch just below the tax registration threshold. We find *little evidence of bunching except at the very largest tax thresholds.*

- Combining these two analyses, we conclude that for the manufacturing sector, it is likely the case that *the production efficiency gains are large*.
- Eliminating tax cascading and reducing commodity tax rates spurs additional growth in manufacturing with *little evidence of encouraging tax evasion*.

Policy recommendations

The focus of our research is on the effect of switching from a sales tax to VAT. This switch reduced tax cascading, lowered tax rates, and created enforcement opportunities and challenges for the government. Given India's recent goods and services tax (GST) reforms, which centralise many of these aspects, we reach some conclusions that apply going forward:

- Tax cascading was a very large problem under the sales tax regime: **The government should be sure that loopholes do not arise under the new tax system that result in additional double taxation.**
- The prior system resulted in tax complexity due to tax rates on multiple products and across states with no economic justification for the pattern of these rates. Such **differentiation of tax rates should be eliminated unless there is an economic reason to do so** (i.e., the product has externalities; important efficiency or equity concerns for the rate on the product).
- Some products still have extremely high tax rates, while others have extremely low rates. Given that only small differences in products may move it across tax rate categories, these differences may distort what is produced. **Further product tax rate standardisation may be appropriate in the future.**
- Although the new system reduces complexity, initially it may create confusion. For this reason, the output effects of reducing complexity may be delayed. Thus, although further reforms may be needed, **the government should be careful not to amend and change the system too frequently.**

Conclusion: Tax reform implementation is complex and political

Successfully implementing commodity tax reform requires understanding the efficiency, equity, and enforcement effects of the reform. Such parameters and their implications are likely to be different in various institutional contexts, reflecting the importance of the informal economy, initial institutional details, and the extent of complexity. With respect to India, prior reforms to the commodity tax system have been long delayed by political factors, both by the state and central government.

Recent reforms in India resulted in the transition to centralised GST, but some features of the prior decentralised regime remain. In particular, the existing system remains more complex than other countries, has higher tax rates on some goods, and requires substantial compliance costs. Addressing these concerns is subject to the same political concerns that have plagued prior reforms. What's more, repeatedly updating and replacing technology may amplify compliance costs.