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# Revenue Potential and Trading Volume Impact of Commodity Transaction Tax : Emerging Market Context[1]

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**Abstract**

This study examines the revenue potential and impact of imposing tax and develops a novel method to arrive at an optimal commodity transaction tax (CTT) in an emerging commodity market. Based on data on nine non-agricultural commodity futures contracts from 2009-2018, we estimate the demand elasticity (relative to changes in tax) using simultaneous equations model and arrive at the optimum transaction tax. We find that commodity transaction tax (CTT) has an inverse impact on trading volume and metals like silver, nickel and zinc are more sensitive to changes in taxation. We further develop a revenue model to determine the profits realized by the government post-taxation. Our model elucidates succinctly that the revenue earned from CTT does not offset the loss associated with the tax-induced reduction in traded volumes. We also estimate the ideal CTT rate for the Indian scenario and project the future growth of revenue.

**JEL Code :** G18, G17, G30,
**Keywords :** Commodity Market; Transaction Tax; Commodity Futures; Tax Revenues; Demand; Elasticity; Trading; Volume; CTT

## I. Introduction

THIS STUDY IS unique in terms of examining the revenue-generating capability of commodity transaction tax in an emerging market context and develops a unique model based on actual data to estimate the optimal transaction tax which is sustainable for the commodity futures markets in the long run. The growth of the commodity futures market is vital for a country as it helps to enhance price discovery process and risk-mitigation. Financial transaction tax (FTT) is a popular regulatory tool used by the government to curb speculative trades (Liu and Zhu 2009; Summers and Summers 1989) and generate revenue. Probably, imposing a commodity

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large trades are reported in a weekly manner to control speculation for non-commercial traders (speculative). However, mature markets are different compared to emerging economies. For an economy with a developing commodity futures market like India, a sustainable option is to defer the introduction of transaction tax until the markets exhibit sufficient depth to handle shocks to trading activity. While the revenue raising capability of CTT remains and attractive aspect to policymakers, the distortions caused by the tax to the costs perceived by the investor increases causing reduced trading volumes. Policymakers could consider a phased introduction of the tax in tandem with market maturity. This can be done in two ways; first method focuses on the tax base - such as introducing tax for contracts exhibiting large speculative volumes is desirable than uniformly taxing all commodity futures. This can be done using several conduits; market participants can be classified like US as commercial (hedgers) or non-commercial (speculators) to understand which players are speculating. Policymakers can use this to identify contracts which are speculated on the most and introduce a selective tax, similar to Taiwan which only taxes gold futures. This will enhance social welfare by driving away speculative volumes as well as generate revenue. Secondly, France taxes only High-Frequency Trades (HFT) rather than all trades, similar policy can also be employed in India. Hedgers go long in the markets while intraday traders going short to close positions in the futures market more frequently. As markets mature the tax base can be increased if required. But, it is pertinent to note that several developed markets abolished the transaction tax such as US and Japan, as deeper markets absorb shocks and speculative trades provide the required liquidity. Our discussions on CTT and the findings highlight the need for a better tax policy or a revised tax rate, which ensures stable positive government revenue as well as improve the traded volumes of non-agricultural commodity futures to sustainable levels accompanied by a steady overall market growth rate. Also, an understanding of the role of commodity futures markets is pertinent relative to stock futures. Commodity futures are predominantly for hedging and price discovery and hindering trade in these segments will have a cascading impact on the other activities as well. Thus, CTT provides us an interesting case to examine the impact of transaction taxes on commodity futures trading.

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