

## Is Indian Trade Policy Pro-Poor?

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The neoclassical trade theory predicts that international trade reduces income inequality in developing countries. These countries export products that use unskilled labor more intensively, and the wages of unskilled labor increases as these sectors expand their production. Households, however, are complex establishments that contribute to the economy not only as producers, but also as consumers. The members of the households who participate in the labor market earn wages, and these wage incomes partially or fully determine the budget constraint of the households. A change in the trade policy influences household welfare through its effect on (1) wage incomes and (2) its effect on the cost of the consumption basket. While there is an extensive literature on wages, the effect on consumption is often overlooked (Han et al., 2016; Goldberg and Hellerstein, 2013). This is a crucial component, as it represents one of the two main components of household welfare. Trade policy may have pro-poor impact through consumption, pro-rich impact through wages, and the combined effect would depend on the relative magnitude of these two channels (Ural Marchand, 2012).

In this paper, I will study the existing structure of protection in India, and determine whether it is protecting poor individuals more than the rich individuals through these two channels. I will study the wage component of the welfare by estimating the impact of tariff removals on wages of workers with different skill levels. I will use the NSSO Employment and Unemployment Survey, which provides household incomes as well as productive activities of household members. It thus allows for the use of differential skill levels across the income distribution. Additionally, I will estimate the impact on household consumption by assessing how much domestic prices would change if the existing protection was eliminated entirely, and how this would affect household budget across the income distribution. For this part, I will use the NSSO Consumer Expenditure Survey. This is a very rich survey that records quantities and costs for more than 500 consumption items for each household.

Poor households have a very different budget structure than households that are relatively better off. Specifically, poor households tend to allocate a large portion of their budget to food related expenditures, and a small share to manufacturing items, such as clothing and household durables. On the other hand, households that are on the right end of the distribution tend to allocate a higher share on services such as health and education. This is important to determine the distributional effects of international trade. Agriculture and manufacturing commodities are internationally traded goods, and their prices are directly affected by trade policy. For that reason, it is reasonable to expect that a protectionist trade policy that is biased towards agricultural products would be pro-rich.

The paper aims to answer the question: What would be the impact of eliminating the existing

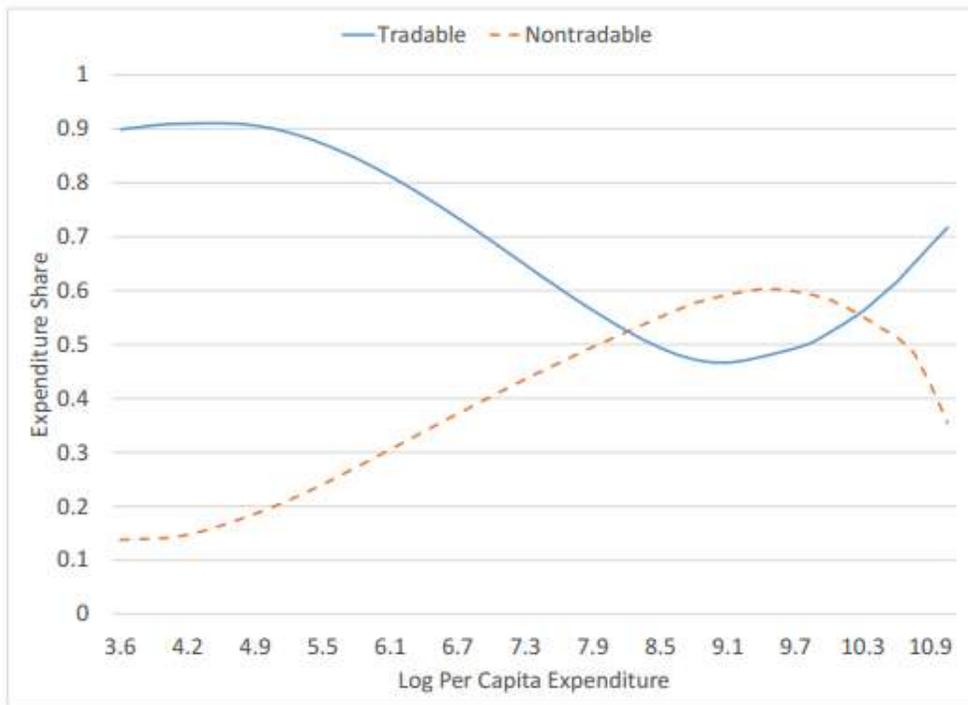
trade protection structure on poverty and inequality? An increase in inequality and/or poverty would indicate that the existing structure is pro-poor, or vice versa. The impact on poverty will be estimated using a method similar to De Janvry (2010). A removal of trade protection would shift the poverty line due to the price changes. At the same time, the entire income distribution would disproportionately shift since household incomes are differentially affected. If there are substantial income gains or losses for households that are near the poverty line, they may fall into poverty or escape poverty, as a result of the income change. The total impact on poverty will then be determined as a combination of these two changes. I also plan to estimate the effect on income inequality and consumption inequality. Since the distributions change as a result of trade, I plan to compare several inequality measures such as Gini Coefficient, Atkinson's index and Theil's index before and after the removal of existing protection structure.

I will build on my previous work on the distributional effects of trade in India (Hasan et al. 2007; Ural Marchand, 2012) and in China (Han et al. 2016). I already have access to the data sets required for this paper, which are six rounds of NSS Consumer Expenditure Surveys and NSS Employment and Unemployment Surveys from 1983 to 2010 (38th, 43rd, 50th, 55th, 61st, and 66th rounds). The multiple rounds of data are required to analyze how wages and prices respond to the trade policy. The poverty analysis requires a base year for estimation. I plan to use the 66th round as the base year, which was conducted in 2009-2011. However, if a more recent round is made available this year, I will use that round.

There are many potential contributions of this paper. First, this paper will estimate poverty effects of international trade that results from household welfare changes in the Deaton's household welfare framework. The previous papers estimate the household welfare, however, they do not take their analysis to the next step and assess the impacts on poverty and inequality (Nicita, 2009, Nicita et al., 2014, Porto, 2006, Ural Marchand, 2012, Han et al., 2016). In terms of poverty effects of global food crisis, De Janvry (2010) have used a similar framework to estimate the changes in poverty rates. However, his approach does not include the changes in wage incomes, which is an essential component of trade-induced effects on households. He also does not include changes in the household consumption basket as a result of trade and assumes that households continue to consume the same bundle.

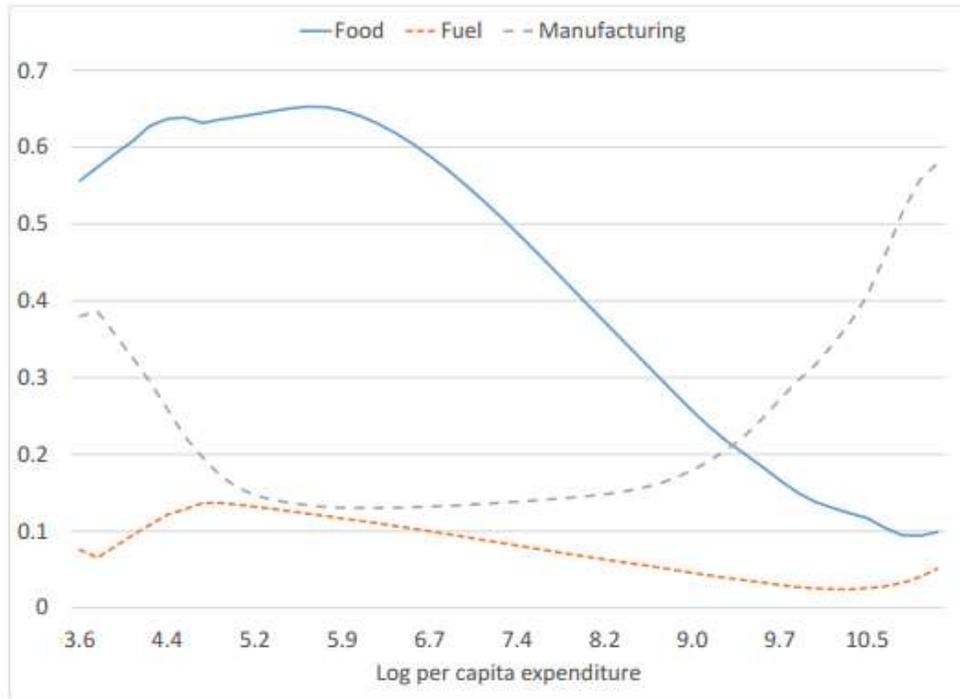
Second, the paper will provide evidence on the pro-poor bias of existing trade policy in India. The effect of India trade on poverty is a controversial topic. However, this literature focuses on the impact of trade liberalization that took place in 1991 (Hasan et al. 2007, Ural Marchand, 2012). This natural experiment is now 25 years old, and less relevant to contemporary changes in poverty and inequality. This paper will provide compelling evidence on the poverty impacts of existing trade policy, and determine whether this policy exacerbates or mitigates the level of poverty in India.

Figure 1: Expenditure Share of Internationally Traded Merchandise



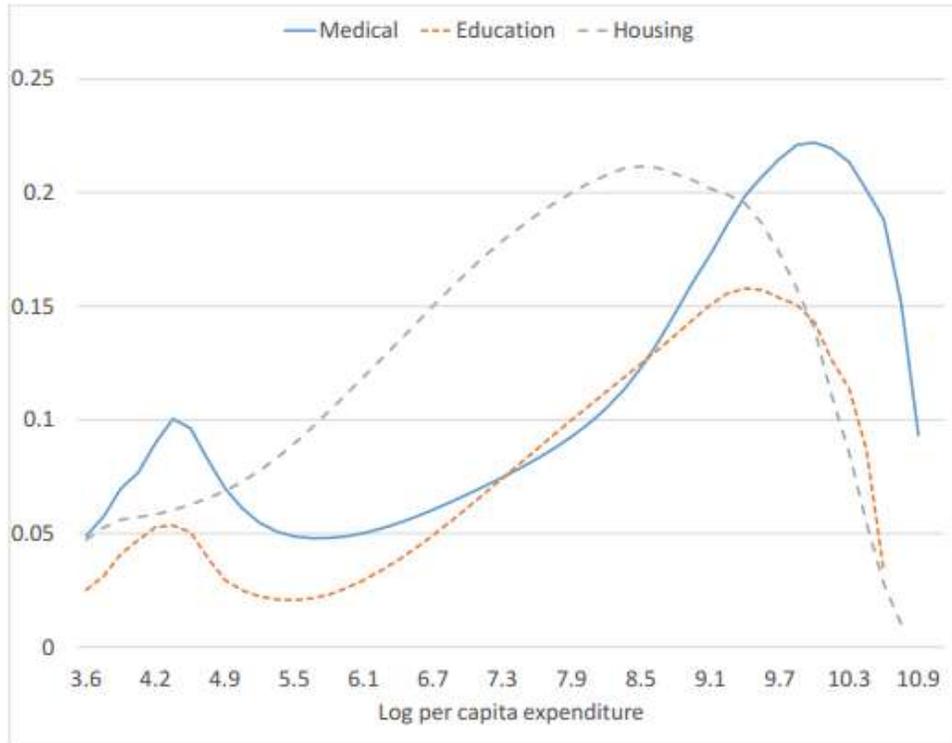
*Notes:* Traded goods include food, fuel and manufactured items. Nontraded goods include education, housing, medical services, and other services. Source: Government of India National Sample Organization. 2010. Employment and Unemployment Survey, 66th Round.

Figure 2: Brake-up of Traded Goods Budget Shares in India



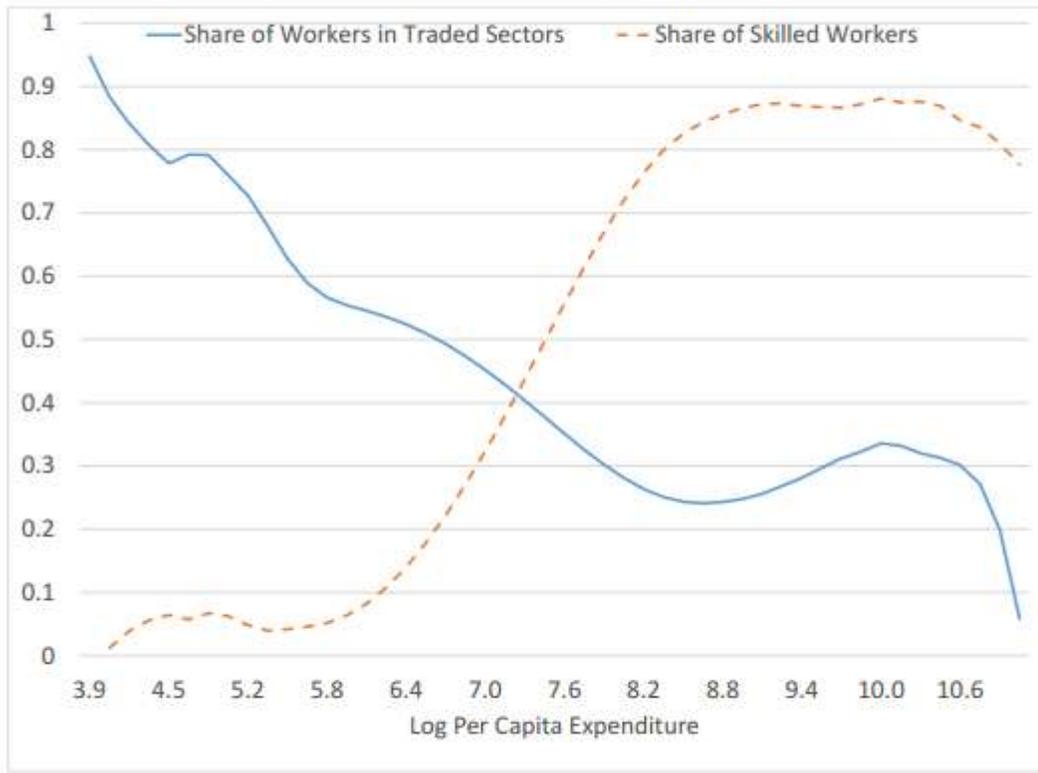
Notes: Government of India National Sample Organization. 2010. Employment and Unemployment Survey, 66th Round.

Figure 3: Brake-up of Non-Traded Goods Budget Shares in India



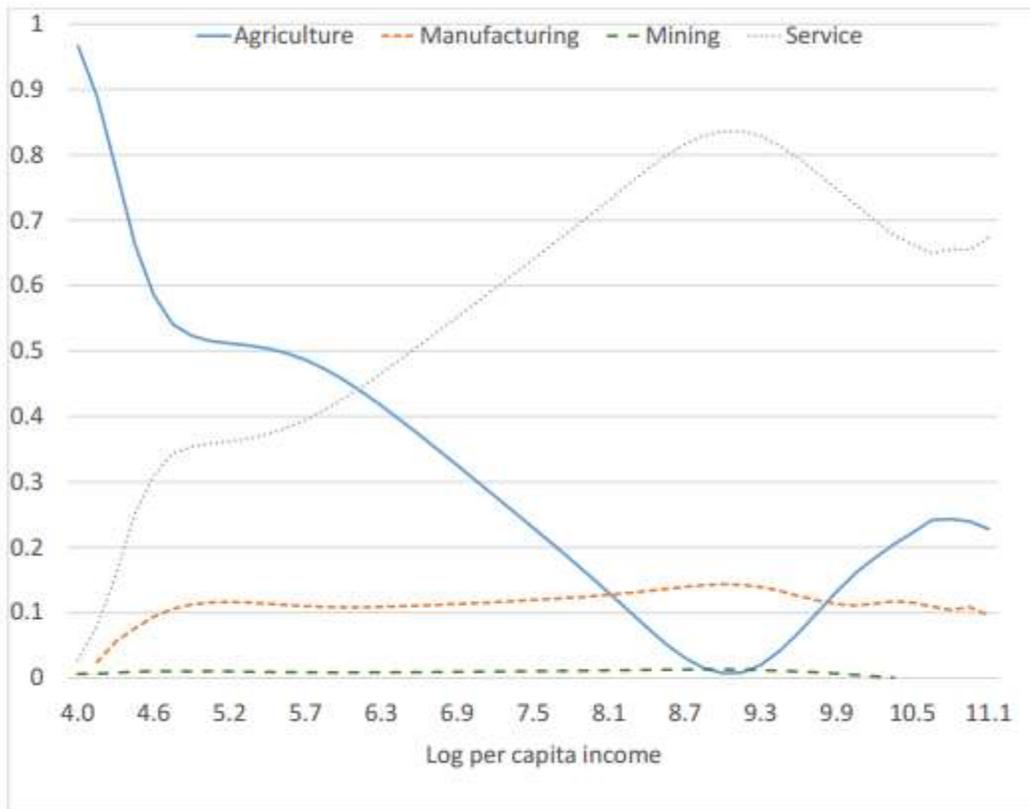
Notes: Government of India National Sample Organization. 2010. Employment and Unemployment Survey, 66th Round.

Figure 4: Share of Workers in the Tradable Sectors



*Notes:* Traded sectors include agriculture, manufacturing and mining sectors. A skilled worker is defined as a worker with at least a secondary education. Source: Government of India National Sample Organization. 2010. Employment and Unemployment Survey, 66th Round.

Figure 5: Brake-up of Workers Across Sectors



Notes: Government of India National Sample Organization. 2010. Employment and Unemployment Survey, 66th Round.