

Effects of Intermediate Input Tariff Reduction on Innovations in China

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Summary

Innovation plays a key role in economic growth. Most existing studies based on final goods trade confirm that trade is one of the most important factors that drive innovation. However, a growing share of international trade is in capital goods and intermediate inputs. Accordingly, using Chinese firm-level data, in this paper we investigate the effects of intermediate input tariff reduction on the innovation activities of domestic firms. Input tariff reduction has two opposite effects on the innovation decision of a firm: it may promote innovation because the cost of innovation activities decreases, but it may also result in a decrease in innovation because foreign technologies become cheaper. We use Chinese firm-level data from 1998 to 2007, which features a drastic input tariff cut in 2002 because of China's WTO accession, and find that input tariff cut results in less innovation undertaken by Chinese firms. We measure innovations using firms' patent filings. The negative effect is both statistically significant and economically important: a one-percentage point cut in input tariff rate results in about 0.15% to 0.28% drop in innovations. The finding is obtained using the difference-in-differences

technique and is robust to various specifications checks and concerns of the model. This finding is also interesting because it is neither obvious nor expected. We also provide a theoretical framework to generate insights to the empirical findings.