

Trade Liberalization, Profits and Wages in China: Are Processing Firms Different?

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Abstract

Since joining the WTO in 2001 it is well documented that China's economy benefited from lower tariff barriers and a massive increase in exports to the rest of the world. An important but little understood dimension of China's exports led growth is the role of processing firms that process imported intermediates within China for future export. In this paper we examine the relationship between tariff reductions and wages for Chinese firms, paying attention to the special tariff treatment given to processing firms which are often located in China's numerous special economic zones (SEZs). Using a detailed dataset matching manufacturing data with custom trade data for the period 2000-2006 we find that during periods of tariff liberalization, a reduction in output tariffs increases the wages of workers in processing firms relative to non-processing firms, an effect that is greater, the greater a firm's intensity in the use of intermediate imports. For input tariffs we find that wages fall for workers in the more traditional non-processing firms only. However, the impact of tariff reductions on firm profits is opposite. Both tariff reductions are found to contribute to firm profit growth.

1. Introduction

China is one of the world's best known export processors. Processing trade is also known as a duty drawback scheme, which means a firm receives a rebate for the tariffs paid on imported inputs if those inputs are then used for the manufacture of goods that are subsequently exported. Given China's large supply of unskilled labor relative to either physical or human capital, China has created a considerable export processing sector that is an intrinsic part of the global value chain. By this use of processing trade that employs vast numbers of workers it has enabled China to become the factory of the world and the world's largest exporter. Estimates suggest that processing trade accounts for over one half of China's entire international trade flows.

In this paper we investigate the impact of the processing trade sector on the wages of workers engaged in this specific part of the global value chain. Based on detailed Chinese manufacturing firm data and China's highly disaggregated customs transaction data we investigate how workers have benefitted from China's position in the global value chain that involved workers simply assembling components from various countries into a final product before it is exported to, for example, the US or EU consumer markets. A related topic is to what extent are the profits from processing trade shared with the workers and how this has changed with trade liberalization. We also examine the extent to which the intensity by which a firm engages in export processing influences wage differentials between trading firms. More specifically, we examine how tariff liberalization affects firm wages according to different degrees of processing engagement.

In the first stage we plot the trends in output and input tariffs, and average wage in both processing-import-using firms and trading firms without processing imports. As expected figure 1 shows that there is a downward trend in both types of tariffs because of China's accession into WTO and its commitment as part of this accession to reduce Chinese importing duties gradually. In contrast, both average wages in processing firms and non-processing firms have increased with the mean wage for workers at processing firms being higher than that for workers at non-processing firms. Hence, there may exist a connection between tariff reductions and wage growth, and we aim to explore the channels through which firms get wages growth after tariff liberalization.

There are a number of studies that have examined the impact of processing trade.

Koopman *et al.* (2012) demonstrated that foreign invested firms, including both wholly-owned foreign firms and Sino-foreign joint venture firms tend to have a relatively low share of domestic content in their exports as they tend to use more processing imports and take large shares in sectors that have a relatively low domestic value added share. Based on firm-level tariffs, Yu (2014) found that the impact of output tariff reduction is greater than that of input tariff reduction for large Chinese trading firms. More interestingly, the positive impact of a reduction in both types of tariffs on firm productivity is weaker as firm's processing import share grows. Manova and Yu (2014) stated that credit constraints influence the design of international trade contracts, restricting firms to low value-added stages of production which also influences the organization of GVCs across firm and country boundaries. Their work implies that strengthening financial markets in developing countries can be instrumental in increasing aggregate value added, profits and income. Most importantly, global supply networks may enable more firms in developing countries to share in the gains from trade.

Based on three major data sources (Chinese Industrial Firm dataset, Custom Trade dataset and Chinese applied tariffs data), we construct firm-level output and input tariffs and shed light on the workers gains from international trade in the context of global production chains through tariff liberalization. The rest of the paper is organized as follows. Section 2 introduces the background of processing trade in China. In section 3 we describe the data sources for our empirical work and the measurement for firm-specific output and input tariffs. Section 4 illustrates our estimation strategy and section 5 presents the empirical estimated results. Finally, in section 8 we conclude and make some policy implications.