Journal of International Economics 100 (2016) 220–232

Contents lists available at ScienceDirect

Journal of International Economics

journal homepage: www.elsevier.com/locate/jie

Market structure, imperfect tariff pass-through, and household welfare in Urban China☆

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ARTICLE INFO

Article history:
Received 25 August 2014
Received in revised form 19 February 2016
Accepted 26 February 2016
Available online 13 March 2016

JEL classification:
D31
D40
F14
O12

Keywords:
Market structure
Trade liberalization
Pass-through
Welfare

ABSTRACT

This paper investigates the tariff pass-through mechanism and the distributional effects of trade liberalization in urban China. We study how market structure, specifically the size of the private sector, affects tariff pass-through, and how this mechanism influenced the extent to which households benefited from the trade liberalization. Our results suggest that a higher share of private sector in Chinese cities is associated with higher levels of tariff pass-through rates. This effect works both through the distribution sector, and through the production of final goods. By incorporating the changes in consumer prices of tradable and non-tradable goods, we next investigate the impact of WTO accession on household welfare through changes in the cost of consumption. The results show that WTO accession of China was associated with welfare gains to almost every household across the per capita expenditure spectrum, and that the distributional effect is strongly pro-poor. The average welfare gain of WTO accession on Chinese households is estimated to be 7.3%. The distributional effect through higher levels of privatization was also pro-poor, indicating that privatization enhanced the pro-poor impact of trade liberalization.

1. Introduction

Trade liberalization affects individual and household welfare through two main channels. Through the income channel, trade liberalization changes the wages and employment of individuals, while through the consumption channel, it influences the prices of goods consumed by households (Deaton, 1989; United Nations, 2012). An individual may experience a decrease in earnings, while simultaneously facing reductions in the prices of consumption items as a result of the trade liberalization. It is also possible that trade liberalization has a regressive distributional effect through the income channel, while having a progressive distributional effect through the consumption channel. Although the income effect has been intensively explored in the literature (i.e., Goldberg and Pavcnik, 2003; Zhu and Trefler, 2005; Hanson, 2007; Verhoogen, 2008; Topalova, 2010; Han et al., 2012), the consumption effect of trade liberalization through price changes is often overlooked.[1]

Recent studies have suggested, however, that the consumption effect might be essential in estimating the welfare gains of trade. Broda and Weinstein (2008) and Broda et al. (2009a) show that, contrary to common beliefs, adjusting income and poverty measures to account for the prices paid by each individual reveals that Americans in every income group are substantially better off than they were before.

☆ We thank Jiayun Xu for excellent research assistance. We also thank Jevan Cherniwchan, Barry Scholnick and the conference participants in 2013 Annual Meeting of Canadian Economics Association, 2014 and 2015 Midwest International Economics Meetings, 5th IZA/CIER Annual Workshop on Research in Labor Economics, as well as the seminar participants at Renmin University, Shanghai University of Finance and Economics, University of International Business and Economics, and Zhejiang University for their helpful comments and suggestions. Han acknowledges the partial financial support from National Natural Science Foundation of China (Project No. 71473132 and 71103097) and the Project of Humanities and Social Sciences (Project No. 10YJC790074). Liu acknowledges the funding from the China Institute at the University of Alberta.

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[1] The literature has examined the impact of trade liberalization on labor income (Hanson, 2007), on wage inequality (Zhu and Trefler, 2005; Verhoogen, 2008; Han et al., 2012; Helpman et al., 2013), on poverty (Hasan et al., 2007; McCaig, 2011; Topalova, 2010), and on employment (Goldberg and Pavcnik, 2003). See Winters et al. (2004) and Goldberg and Pavcnik (2007) for surveys of the literature.

http://dx.doi.org/10.1016/j.jinteco.2016.02.006
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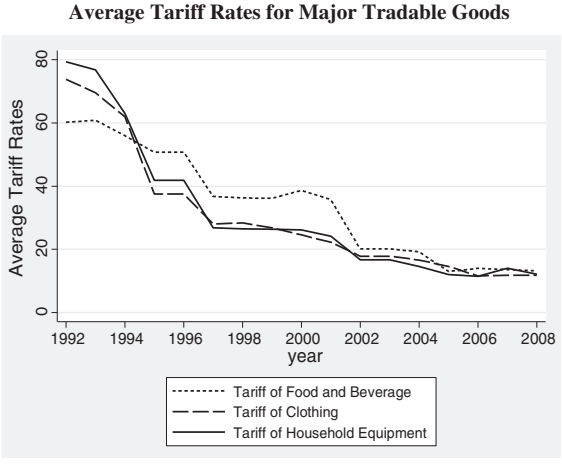
Faber (2012) finds that access to cheap U.S. inputs reduces the relative price of higher quality products, and thus, leads to a significant increase in Mexican real income inequality. It is therefore crucial to understand the consumption effect of trade liberalization through changes in domestic prices.

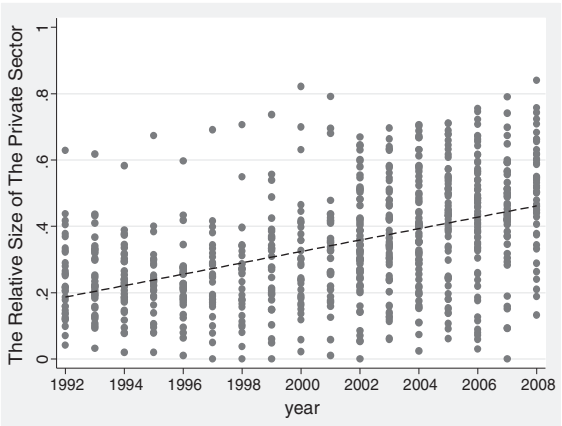
The extent to which households benefit from trade liberalization also depends on the structure and the efficiency of the product markets in which the consumption goods are being produced and sold. Reductions in import tariff rates may reduce domestic prices and improve consumer welfare only if markets are able to transmit the price changes from the border to consumers. If domestic industries are imperfectly competitive, changes in tariffs may be absorbed by profit margins or markups (Campa and Goldberg, 2002). In this case, consumer prices may not decrease to reflect the full extent of the tariff reductions, even in the absence of other frictions in the market. Atkin and Donaldson (2012) have further shown how the market power of intermediaries in domestic industries affects the markups, which results in different rates of tariff pass-through within sub-Saharan Africa. In the case of China, a more relevant market imperfection is the share of state-owned enterprises (SOEs) in the domestic industries. A heavily regulated domestic industry that is dominated by the state would have limited flexibility to adjust to the changing cost conditions (Szamosszegi and Kyle, 2011). In contrast, a rising private sector has created markets and accelerated competition in China (Naughton, 1994; Jin and Qian, 1998; Park et al., 2006), which is expected to improve the ability of domestic markets to transfer the tariff reductions to consumers.

China has been consistently opening up its economy since the early 1990s, as exemplified by its World Trade Organization (WTO) accession in 2001. Fig. 1 presents the trends in the average tariff rates for major tradable goods in China, namely, Food and Beverage, Clothing and Household Equipment. Each category is shown to have experienced profound tariff cuts from 1992 to 2008. Particularly, the average tariff reduction due to WTO membership was 38% from 2000 to 2002. In addition to trade liberalization, China has also been transforming itself from a centrally-planned economy to a market-oriented economy since the early 1990s (Fan and Wei, 2006; Brandt and Rawski, 2008). A unique feature of this transition process in China is the reallocation of resources from SOEs to enterprises outside of the state sector (Brandt et al., 2008; Zhu, 2012). Consequently, the relative size of the private sector in urban China has increased from 22% in 1992 to 50%



Notes: This figure presents the average Chinese effective tariff rates for three major tradable goods for years 1992-2008. Tariff rates at the 4-digit SITC level are extracted from WITS and aggregated to the three major categories of tradable goods using the concordance provided in Appendix Table 1. Import values are used as the weight for the aggregation.

Fig. 1. Average tariff rates for major tradable goods.



Notes: This figure presents the relative size of the private sector in urban China for years 1992-2008. The share of the private sector employment is calculated at the city-year level using the Chinese Urban Household Survey data. Scatter points represent the values for each city. The dashed line represents the linear fit over time.

Fig. 2. The relative size of the private sector in Chinese cities.

in 2008 (see Fig. 2). The substantial Chinese trade liberalization, accompanied by the reform of SOEs, provides a unique setting to analyze the role of the private sector in the tariff pass-through and to assess the welfare gains of trade liberalization through price changes.

This paper has several contributions to the literature. It is the first study that estimates welfare gains through changes in consumer prices in urban China using household survey data. The paper also aims to improve our understanding of the role of domestic markets in the price transmission mechanism. To this end, it adds to the literature by empirically analyzing how the change in market structure, specifically through the size of the private sector, influences tariff pass-through. This allows us to determine whether the rapid expansion in the private sector has enhanced or mitigated the welfare effects of trade liberalization by influencing the ease at which price changes transmit to the consumer. The paper also incorporates the non-tradable goods into the welfare analysis by assessing how the prices of non-tradables respond to the price changes of tradables in general equilibrium. The distributional effect of trade liberalization through these channels, namely through the size of the private sector, tradable goods and non-tradable goods, are then analyzed to assess their relative importance across the per capita expenditure spectrum.

This paper starts with examining how the prices of tradable goods are affected by changes in tariffs using household survey data, and the role of market structure in the tariff pass-through mechanism. The literature has emphasized imperfect competition among foreign exporters and a tariff-induced change in a country's terms of trade as the major reasons for imperfect tariff pass-through on import prices (Feenstra, 1989, 1995). There are only a few papers in the literature that have studied how domestic factors affect the pass-through of tariffs on consumer prices, which focus on the geographic characteristics of localities, such as the distance to the border (Nicita, 2009; Atkin and Donaldson, 2012), or the relative isolation of households from functioning product markets in rural versus urban areas (Ural Marchand, 2012). These papers that document the influence of trade policy upon households varies greatly across different regions, even though tariffs are reduced at the national level.[2] However, there are no studies that investigate

[2] Nicita (2009) finds that tariff pass-through was significantly higher in the Mexican states closest to the United States border, and thus, households living in these states benefited relatively more from the reductions in tariffs. Atkin and Donaldson (2012) find that intra-national trade costs in Africa are extremely high, which leads to welfare losses for isolated locations. Pass-through estimates for India suggest that reductions in tariffs increased domestic consumer welfare more in urban areas relative to rural areas (Ural Marchand, 2012).