



The higher costs of doing business in China: Minimum wages and firms' export behavior[☆]



Li Gan^a, Manuel A. Hernandez^b, Shuang Ma^{c,*}

^a Southwestern University of Finance and Economics, China and Texas A&M University, USA

^b International Food Policy Research Institute, USA

^c Southwestern University of Finance and Economics, China

ARTICLE INFO

Article history:

Received 23 January 2015

Received in revised form 23 February 2016

Accepted 29 February 2016

Available online 8 March 2016

JEL classification:

J3

F16

Keywords:

Minimum wage

Exports

Manufacturing

China

ABSTRACT

This paper examines the relationship between changes in the minimum wage and firms' export behavior in China using detailed firm-level data of medium and large manufacturing enterprises between 1998 and 2007. We find that a 10% increase in the minimum wage is associated with a 0.9 percentage-points decrease in the probability of exporting goods and a 0.9% decline in export sales, conditional on exporting. These findings are generally robust to alternative estimation methods and data sources. We further observe a larger decline among firms with lower average wages and a lower capital–labor ratio. The results suggest that Chinese exports and comparative advantage in international markets are not negligibly affected by higher local labor costs and regulations measured through raises in minimum wage standards.

© 2016 Elsevier B.V. All rights reserved.

1. Introduction

Over the past years, Chinese labor costs have significantly increased and there is an ongoing discussion on how these higher costs are affecting the exports of Chinese enterprises.¹ As shown in Fig. 1, average urban wages in China increased by about 195% from 2002 to 2010 or by 261% after adjusting for the exchange rate.² Yet, China's exports to the US, its major (country) trade partner, also increased during the last decade. The exports from China to the US raised by 136% from

2002 to 2007; after a decline in 2008–2009 due to the financial crisis, exports went up again in 2010 to levels similar to 2007.³ This apparent positive correlation between wages and exports at the aggregate level seems, however, inconsistent with the well documented comparative labor advantage of China in international markets (see, e.g., Lin et al., 2003). It motivates a more detailed analysis using micro data, which permits to better account for changes in other factors that may affect the relationship between labor costs and export behavior such as firms' characteristics and performance.

We use in this paper an extensive firm-level dataset of medium and large manufacturing enterprises in China to formally examine the sensitivity of firms' exports to increasing labor costs and regulations measured through changes in minimum wage standards over time and across regions. The period of analysis is 1998 through 2007. We exploit the significant variation in local minimum wages across different cities in China over the past years to analyze the relationship between firms' export behavior and labor costs. The focus on the manufacturing sector

[☆] We thank the valuable comments of Rodrigo Salcedo and Danilo Trupkin. We would also like to thank Chengsheng Cai and Lingjie Mao for their valuable help in collecting the data. Finally, we would like to thank Stephen Yeaple and two anonymous referees for their many useful comments. We gratefully acknowledge financial support from the Private Enterprise Research Center (PERC) of Texas A&M University.

* Corresponding author at: 55 Guanghuaucun St, Chengdu, Sichuan Province, China, 610074. Tel.: +86 28 8735 2095.

E-mail addresses: gan@econ.tamu.edu (L. Gan), m.a.hernandez@cgiar.org (M.A. Hernandez), shuangma@swufe.edu.cn (S. Ma).

¹ An article in the *New York Times* (2010) indicated that with rising wages in China, export prices would follow with a consequent decrease in Chinese exports; yet, an article in the *New York Times* (2014) argued that even as wage rises, China exports would continue growing as Chinese manufacturers have had become more productive.

² See Ge and Yang (2014) for a detailed analysis of changes in China's wages over the past years. The authors find that most of the wage growth in China between 1992 and 2007 is attributable to a higher pay for basic labor, rising returns to human capital and increases in the state-sector wage premium. Li et al. (2012) also note that China's wages have increased faster than productivity since the late 90s.

³ It is frequently argued that one of the reasons of the increasing Chinese exports to the US (and the large trade imbalance between these two countries) is the under-valuation of the Yuan relative to the US dollar. Yet, the Yuan has been appreciating against the US dollar since 2005, after the Chinese government allowed its (limited) floatation, but China keeps maintaining an increasing trade surplus with the US and the rest of the world. The rising Chinese import competition and its negative effects on local US labor markets has also received significant attention in the past years (see Autor et al., 2013).

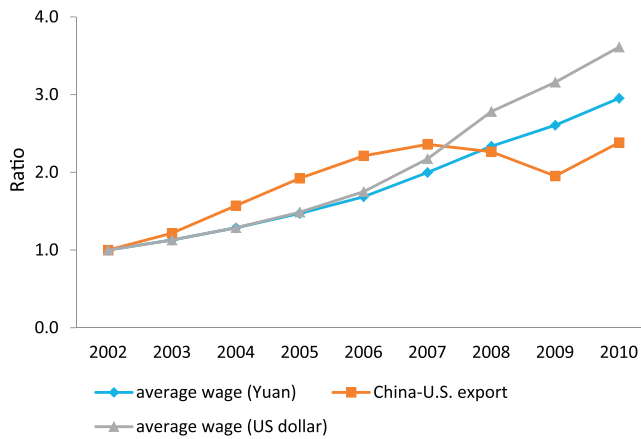


Fig. 1. Change in Chinese labor costs and China–US exports, 2002–2010. Source: National Bureau of Statistics, several years.

is of special interest given its importance on the Chinese economy and exports, and the recurrent debates regarding the pressure exerted by the minimum wage policy on this sector (Huang et al., 2014). Our detailed dataset permits us to control in the analysis for firm-level variables, macroeconomic conditions, time effects and unobserved firm heterogeneity. Similarly, we account for prior changes in different local economic and labor indicators to control for this potential source of variation of minimum wages, which is observed in advance by firms.

The estimation results indicate a statistically significant correlation between changes in the minimum wage and the export behavior of firms. A 10% increase in minimum wages is associated with a 0.9 percentage-points decrease in the probability of exporting goods and a 0.9% decline in export sales, conditional on exporting. These results are generally robust to alternative estimation methods and data sources. In particular, we find a similar negative relation between minimum wages and the decision to export when implementing a difference-in-difference (DID) approach that exploits major differentiated variations in minimum wages from 2006 to 2007 between adjacent areas in China. We also find similar results when using customs-level transaction data from 2004 to 2006. We further observe that firms with lower average wages and a lower capital-labor ratio exhibit a larger decline in their exports after a raise in the minimum wage.

Our paper ties into several literatures. The analysis is related to the extensive theoretical work on minimum wages and trade, which started more than four decades ago. Most of these studies assume firm homogeneity and show that the effect of minimum wages on exports will depend on a combination of factors, including the economic scale, industry and trade structure, and the ease of factor mobility in a country (e.g., Bhagwati and Ramaswami, 1963; Brecher, 1974a, 1974b, 1980; Srinivasan and Bhagwati, 1975; Magee, 1976; Neary, 1985; Flug and Galor, 1986). Brecher (1974a, 1974b), for instance considers a model with two goods, two input factors, wage distortions and constant returns-to-scale production technologies. The author shows that a rise in the minimum wage in labor-intensive countries leads to a decrease in the price of capital, which increases (decreases) the exports of capital-intensive (labor-intensive) products. Neary (1985) finds similar results when extending the analysis to a setting with more input factors than goods, while Brecher (1980) shows that both capital- and labor-intensive exports will increase if the country specializes incompletely. Flug and Galor (1986) account for human capital accumulation in a model with two goods and skilled and unskilled labor. They find that for a large country exporting unskilled labor-intensive goods, an increase in minimum wages for unskilled labor may eventually reverse the trade structure of the country.

More recently, Egger et al. (2012) is one of the few studies that formally incorporate minimum wages in a trade model with heterogeneous firms. In particular, the authors formulate a model with a single factor (labor), heterogeneity in firm productivity, multiple tradable intermediate goods and a final good. They find that a rise in the minimum wage in a country will force inefficient intermediate good suppliers to exit the market, leading to a decline in exports. Their analysis, however, excludes self-selection into exports of both intermediate and final goods and assumes that all intermediate goods producers are exporters.

The study is also related to the general literature on trade and firm heterogeneity, which more closely resembles the well documented intra-industry differences between exporters and non-exporters in terms of, for example, size, productivity and wages.⁴ In his seminal paper, Melitz (2003) shows that when entry into export markets is costly, exposure to trade will offer new profit opportunities only to the more productive firms and will also induce prospective firms, which respond to higher potential returns, to enter the market. The higher labor demand by the more productive firms and new entrants will increase wages and eventually force least productive firms to exit. Bernard et al. (2007) extends Melitz's framework by incorporating factor intensity (abundance) differences across sectors (countries) and finds that exposure to costly trade leads to a larger increase in the labor demand by exporters in the comparative advantage industry.⁵ Hence, considering that changes in minimum wages also reflect changes in local labor conditions, we would expect then a negative correlation between minimum wages and firms' exports, especially in industries where China exhibits a relative comparative advantage.

Our study also contributes to the empirical literature assessing the effects of higher labor costs in China. Based on these studies, it is not clear that higher minimum wages affect Chinese manufacturers and exporters. Li (2006) argues that labor costs are still proportionally low in China so raises in minimum wages will have a modest effect on firms' export behavior. The author further indicates that China's comparative advantage in international markets is not necessarily only driven by low labor costs while foreign investors in China are not only attracted by cheap labor. Huang and Ren (2008), Chao and Liming (2007), and Yang and Zhang (2007) sustain that China's comparative advantage relies on labor costs per unit of output rather than on absolute labor costs; hence, as long as productivity growth is higher than the growth of wages, the competitiveness of Chinese exports will not be much affected. On this matter, Zheng (2004) points out that the comparative advantage of China's labor costs has been offset by low productivity; thus, exports may be more affected by a low firm productivity than by raises in wages. In contrast to these studies, our analysis is based on a detailed firm-level dataset of manufacturing enterprises in China. These data allows us to examine the association between firms' exports and minimum wages while controlling for unobserved firm heterogeneity and other firm and market controls.

Overall, this paper is to our knowledge the first study that uses micro-level data to deepen our understanding of the relationship between minimum wages and Chinese manufacturing exports, particularly in a context where the direction of the relationship is not fully clear. We combine firm-level data with hand-collected minimum wage standards for a wide set of cities across the country over a period of eleven years. The study is particularly relevant considering the

⁴ Empirical studies documenting these differences include Bernard and Jensen (1997, 1999), Tybout (2003), Wagner (2007) and Roberts et al. (2012).

⁵ Other trade models that discuss production and export behavior under firm heterogeneity include Bernard et al. (2003), Yeaple (2005), Sutton (2007) and Melitz and Ottaviano (2008). Similar to Melitz (2003) and Bernard et al. (2007), Bernard et al. (2003) and Melitz and Ottaviano (2008) allow for heterogeneity in firm productivity, which is randomly determined; in Yeaple (2005), firm heterogeneity results from firms endogenously selecting different production technologies; Sutton (2007), in turn, allows for firm heterogeneity along the cost and demand (product quality) dimension.

Download English Version:

<https://daneshyari.com/en/article/962423>

Download Persian Version:

<https://daneshyari.com/article/962423>

[Daneshyari.com](https://daneshyari.com)