Globalisation and Wages in China: A Spatial Econometric Approach

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Abstract

Wage inequality in China is becoming an important topic for both academics and policymakers. In this paper we use advanced spatial econometric methods to estimate the direct and indirect spatial impact of foreign ownership and export participation on labour compensation in China. Our Spatial Durbin Model results show that foreign ownership positively affects wages paid to workers in that firm but also positively affects the wages of workers in nearby firms in same industry. Exporting has a similarly positive direct and indirect effect although both labour productivity and foreign ownership by ethnic Chinese have positive direct but negative indirect effects on labour compensation.

Keywords: Labour compensation, globalisation, education, China, firm level, spatial econometrics

JEL: J3, I2, F1, F2, O53, R0

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Acknowledgements:
1. Introduction

Income inequality in China is increasingly being recognised as a potentially serious destabilising factor in the otherwise successful China growth story. How the government is tackling income differentials across regions and sectors and the role of foreign firms in perpetuating existing wage differences is the subject of numerous academic studies. The majority of studies on income heterogeneity in China tend to concentrate on relatively aggregated regions and sectors (see e.g. Chen and Fleiher 1996, Demurger 2001, Yao and Zhang 2001, Demurger et al. 2002, Ravallion and Chen 2007 and Kanbur and Zhang 2009). Such province level results show that education, firm ownership, transportation links and the proximity to the coast are the main contributors to the differences in income and growth observed in the data. More recently, firm-level studies have begun to emerge that provide an insight into wage determination decisions and test the possible spillovers between foreign firms and domestic firms at the micro level (Chen et al. 2011).

This contribution of this paper is to examine the role of international trade and foreign direct investment (FDI) in determining the level of labour compensation in China and more importantly how income is influenced by spatial considerations and the location of foreign and exporting firms. Specifically we test for firm-level externalities using a Spatial Durbin Model (SDM) for a large number of competing spatial weight matrices for different industry (2 and 3-digit) and distance functions (Province, city or distance).

Although the originality of this paper is derived from our spatial approach the premise of the paper is based on the early work of Lipsey and Sjoholm (2004a, 2004b) who study the determinants of wage heterogeneity at the firm-level and applied to China by Chen et al. (2011). There is already a considerable literature that looks at the foreign wage premium and the evidence is so far mixed. For example, although Chen et al. (2005) using a household survey show that foreign firms pay higher wages in China, Heyman et al. (2007) using matched firm and employee data show that after controlling for firm and individual worker characteristics that foreign firm do not pay higher wages. Almeida (2007) and Girma and Gorg (2007) explain that the relatively higher wages paid by foreign firms may be endogenous and due to the foreign firm acquiring or merging with more productive (and hence higher wage paying) firms. However, Schank et al. (2007) also using matched firm-employee data do show that exporters pay higher wages even after controlling for individual characteristics.
There have also been a number of papers that have looked at China specifically. Hale and Long (2008) study the impact of FDI on wages in China using data from a World Bank survey of 1500 Chinese firms. They show that impact of FDI differs between private and state-owned enterprises (SOEs) with positive spillovers observed for private firms only whilst appearing to reduce labour quality in SOEs. This result in part is due to the rigid labour market in parts of China’s economy and the impact of wage segmentation (Knight and Li 2005). The role of SOEs in China has received considerable attention (see e.g. Hay et al. 1994, Woo et al. 1994, Perkins 1996, Bai et al. 1997, Li 1997, Bai et al. 2000 and Steinfeld 2000) and is addressed in this paper with SOEs being considered separately.

In terms of studies that consider the spatial impact of FDI and trade on domestic firms, Driffield and Girma (2003) show evidence of horizontal wage spillovers in the UK electronics sector whilst Girma et al. (2001) and Girma et al. (2002) estimate the foreign premium to be between 4 and 16 percent. However, these papers concentrate on absolute spillovers (i.e. whether foreign firms affect domestic firms) ignoring the impact of domestic firms on each other). In this paper we take into account relative spillovers (i.e. how much more foreign firms affect domestic firms relative to other domestic firms. For China, Long and Zhang (2011) demonstrate the importance of location and specifically the role of clusters on firm performance. Fu and Ross (2010) also provide evidence on the impact of firm clustering in China on wages.

More importantly for this paper is the previous wage and spatial econometrics literature. For the UK, Fingleton (2003, 2006) demonstrates that more economically active regions have higher wages and also find some evidence for spillovers. Barde (2011) finds similar results using French data. However, all three studies use aggregate regional data and use the economic activity per square area as their measure for agglomeration. However, as demonstrated by Anslin (2002), the aggregation of spatial weights by geographical unit is problematic and can often lead to inconsistent results. Specifically, the use of aggregated data to proxy individual level relationships could lead to an invalid interpretation of the results such that the relationship observed with aggregate data might not hold at the micro level.