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Evaluating the foreign ownership wage premium using a difference-in-differences matching approach

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Abstract

This paper seeks to identify the causal effect of foreign acquisitions on wages of skilled and unskilled workers, using difference-in-differences propensity score matching estimators. Our results suggest that there is substantial heterogeneity in the post-acquisition wage effect depending on the nationality of the foreign acquirer and the skill group of workers. We find sizable post acquisition wage effects on skilled and unskilled wages following an acquisition by a US firm. No such impacts result from acquisitions by EU multinationals. Also we discern some positive wage effects for unskilled workers resulting from acquisitions by multinationals from the rest of the world.

Keywords: Multinationals; Acquisitions; Wages; Difference-in-differences; Matching estimator

JEL classification: F23; J31

1. Introduction

It is by now almost accepted as a stylised fact that foreign multinational enterprises (MNEs) perform better than domestic firms for a number of indicators. In particular, recent analyses of micro level data commonly find that MNEs pay higher wages than their domestic counterparts.[1]

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[1] See, for example, Feliciano and Lipsey (2006) for the US, Girma, Greenaway, and Wakelin (2001) for the UK and Lipsey and Sjöholm (2004) for Indonesia. These papers control for some observable firm and industry characteristics.

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This is an important finding, as studying the implications of multinationals on domestic workers is arguably of great consequence to the economy, not least from a policy maker's perspective.[2]

However, even when controlling for observable and time invariant unobservable characteristics (e.g., in a fixed effects estimation), there remains a fundamental problem in identifying the performance difference that is attributable to multinationality *per se*. As Tybout (2000), for example, points out, multinationals may be attracted to more technology intensive industries, which are also more productive and pay higher wages. Hence, there would be an endogeneity problem in the regressions and the wage differential between foreign and domestic firms would be difficult to interpret. The inclusion of some industry and firm characteristics might go some way towards reducing this bias, though the inclusion of all possible relevant control variables is a difficult if not impossible task.

In this paper we try to overcome this problem by analyzing the effects of an acquisition of a domestic establishment by a foreign multinational enterprise on wages for skilled and unskilled workers using establishment level data for the UK. Assuming that an acquisition does not change any of the main characteristics of the takeover target (at least in the short run) a possible effect of the foreign acquisition on wages in the domestic target can be attributed to the change in ownership from domestic to foreign. We use a difference-in-differences propensity score matching approach to identify the average effect of foreign acquisitions (the treatment) on wages in the domestic target.

There have been a couple of earlier empirical studies which are related to our paper. Lipsey and Sjöholm (2002) study the wage premium following a foreign acquisition using plant level data for Indonesia. They relate the average wage in a plant to a number of ownership and plant characteristics and conclude that foreign takeovers are associated with higher wages even when controlling for firm and industry characteristics. However, this can only be interpreted as the causal effect of ownership change on wages if the foreign takeover is exogenous to unobserved shocks to plant level average wages. While the authors' control for unobserved time invariant plant level effects in the model, exogeneity is still a strong assumption as there are a number of time varying facts that are plausibly correlated with average wages.

Conyon et al. (2002) study the effect of foreign acquisitions on wages in the domestic target using company level data for UK manufacturing. They find that foreign acquired firms pay 3.4% higher wages than non-acquired firms, controlling for firm size as well as fixed firm and industry specific effects.[3] They acknowledge the potential endogeneity of the acquisition decision and identify the acquisition wage effect based on a simple instrumental variable estimation, using the probability of acquisition (conditional on, inter alia, lagged wages) as an instrument. This approach is only valid under the (arguably strong) assumption that the probability is uncorrelated with contemporaneous wages. It should also be noted that their data identify acquisitions of whole companies rather than plants. Furthermore, acquisitions cannot be observed directly in the data, but only indirectly as firms that change their ownership status from being "independent" to being a subsidiary of another firm. This, thus, excludes possible acquisitions of companies or plants that were subsidiaries of other enterprises prior to takeover.

[2] Of course, productivity effects of multinationals are also important to the economy. These have been the subject of many recent studies, see, for example, Girma and Görg (in press) and Doms and Jensen (1998). Another related, yet different, research question is whether multinationals increase the demand for skilled labour. See, for example, Slaughter (2000) and Figini and Görg (1999) for such studies.

[3] However, this differential disappears when labour productivity is added as a regressor, indicating that the wage difference can be wholly attributed to productivity differences between foreign and domestic firms.