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Benefits of foreign ownership: Evidence from foreign direct investment in China☆

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ABSTRACT

To examine the effect of foreign direct investment, this paper compares the post-acquisition performance changes of foreign- and domestic-acquired firms in China. Unlike previous studies, we investigate the purified effect of foreign ownership by using domestic-acquired firms as the control group. After controlling for the acquisition effect that exists in domestic acquisitions, we find no evidence that foreign ownership can bring additional productivity gains to target firms, though both foreign and domestic acquisitions bring productivity improvements to target firms. In contrast, a strong and robust finding is that foreign ownership significantly improves target firms' financial conditions and exports relative to domestic-acquired firms. Foreign acquisition is also found to improve output, employment and wages for target firms. These findings conflict with the conventional view of productivity-driven FDI and highlight the financial channel through which FDI benefits the host countries.

1. Introduction

Conventional wisdom follows that FDI can increase host countries' productivity and such wisdom is supported by numerous empirical studies documenting the superior performance of FDI-involved firms in the host countries and the technology spillovers from these firms to their local counterparts.[2] FDI is also considered safer than other types of capital inflows and became the favorite form of foreign investment for emerging markets following the financial crises in the 1980s and 1990s.[3] As a result, many emerging markets provide tax and other incentives to attract FDI, and the past three decades have observed dramatic FDI inflows to these countries.

However, policies designed to promote FDI can be counterproductive if policymakers do not understand the mechanisms through which FDI benefits host countries. The positive correlation between firm productivity and FDI may simply reflect endogenous FDI decisions: foreign investors choose to acquire or start business with more productive domestic firms. For instance, Fons-Rosen et al. (2013) find that FDI has a very small effect on target firms' productivity in their sample of advanced European economies after controlling for unobservable factors that influence ex-ante acquisition decisions.

To control for the endogeneity issue, we employ the difference-in-differences method combined with propensity score matching (e.g., Arnold and Javorcik, 2009). However, we depart from the literature by examining purified performance gains from foreign ownership after controlling for gains existing in domestic mergers and acquisitions.

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[2] For instance, see Javorcik (2004) for Lithuania, Yasar et al. (2007) for Turkey and Keller and Yeaple (2009) for the US, among others. However, Aitken and Harrison (1999) and Haddad and Harrison (1993) find no or even negative evidence for such technology spillovers in Morocco and Venezuela.

[3] For instance, Krugman (2001) and Aguiar and Gopinath (2005) document that FDI is counter-cyclical and also less volatile than portfolio investment.

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Some previous studies find that foreign acquisitions can improve the performance of target firms even after taking into account selection bias.[4] However, numerous empirical studies document that domestic mergers and acquisitions are also followed by substantial changes in the performance of target firms (e.g., Maksimovic and Phillips, 2001). In particular, Fons-Rosen et al. (2014) find that even negative changes in foreign ownership are associated with firm productivity improvements, consistent with productivity improvements coming from a general change in ownership rather than an increase in foreign ownership. Therefore, even though previous studies evidently documented performance gains following foreign acquisitions, it remains unclear whether foreign ownership is crucial for the detected gains.

Our main dataset is obtained from the firm-level data collected through China's Annual Surveys of Industrial Production from 2000 to 2007. Every firm in China has a registration type that indicates its main ownership and we use such information to identify domestic and foreign mergers and acquisitions. Each foreign-acquired firm is first paired with a domestic-acquired firm with similar pre-acquisition characteristics by propensity-score matching. Then the post-acquisition performance changes of these two groups of firms are compared using the difference-in-differences method.

We find no evidence that foreign acquisitions can improve target firms' productivity relative to domestic acquisitions, which conflicts with the conventional view of productivity driven FDI.[5] Foreign acquisitions in our data do not perform differently from domestic acquisitions in improving target firms' productivity, and the result is robust under different measures of productivity. Although both foreign and domestic acquisitions can improve target firms' productivity relative to domestic firms that experienced no change in their ownership, the productivity improvement for the two types of acquisitions is comparable, leaving no additional gains from foreign ownership relative to domestic acquisitions.

Next, we document robustly that foreign ownership significantly improved the financial conditions (as measured by the leverage and liquidity ratios) of target firms relative to domestic acquisitions, highlighting the financial benefits of FDI. Most previous studies mainly focus on the productivity benefits of FDI to host countries. FDI firms' advantages of easy credit access have been largely neglected in empirical studies until recently. FDI firms are less financially constrained than domestic firms due to their access to international financial markets and foreign parent companies for credit, which is particularly true in emerging countries. For instance, Song et al. (2011) and Dollar and Wei (2007) show that private firms in China are subject to strong discrimination in obtaining credit from state-owned banks. Desai et al. (2008) document that US multinational affiliates in emerging markets are financially less constrained during currency crises than local firms. These studies inspire us to examine whether foreign acquisitions can improve financial conditions of target firms.

We find that following acquisitions, foreign-acquired firms rely less on external short-term debt and more on internal capital than domestic-acquired firms, highlighting the advantages of foreign ownership in relaxing credit constraints faced by target firms. The improvement of financial conditions is both statistically significant and quantitatively meaningful. For instance, the liquidity ratio of foreign-acquired firms increased over 4 percentage points two years following the acquisition relative to domestic-acquired firms, which is a substantial increase relative to its pre-acquisition mean of 11%. We also find that FDI from Hong Kong, Macau and Taiwan improves target firms' financial conditions more strongly than FDI from other sources, indicating that the effect of FDI varies with its sources of origin.

In addition, we evaluate firms' other performance, which includes exports, capital per worker, real wages, output, employment and real profits. Combined with our careful distinction between gains from foreign ownership and domestic acquisition, our study offers a comprehensive, balanced and accurate description of the advantages of FDI acquisitions relative to domestic acquisitions.

FDI is found to improve target firms' exports, supporting the financial channel of FDI in promoting international trade as documented in Manova et al. (2015). Our results show that such a channel remains at work even after we exclude the effect of domestic acquisition. In addition, we check the robustness of these findings across different sources of origin for FDI and the pre-acquisition export status of target firms, taking advantage of our panel data. Manova and Zhang (2009) document that relative to domestic firms, FDI firms in China trade more and import more products from more source countries but export fewer products to fewer destinations. While their study documents the difference in exporting behaviors between domestic and FDI firms, we identify the causal effect of FDI on target firms' exports following the acquisition.[6]

Foreign ownership is also found to increase output, employment and wages of target firms relative to domestic-acquired firms. This may be because that the improvements of financial conditions can help firms increase sales and market shares relative to their rivals, as suggested in previous empirical studies. All in all, our empirical results suggest the following channels through which foreign ownership benefits the host countries: foreign ownership can strongly ease target firms' financial constraints and promote their participation in export activities, resulting in increases in output, employment and labor incomes. However, we do not find strong evidence that foreign ownership increases firm productivity relative to domestic acquisitions.

Although we use Chinese data, our findings are likely to hold in other emerging markets too. Abundant empirical evidence shows that local firms in emerging markets are more financially constrained than FDI firms (e.g., Harrison and McMillan, 2003). Financial markets in developing countries usually have many frictions due to the status of development and/or market distortions imposed by the government. Therefore, FDI's financial benefits documented in our Chinese data are very likely to exist in other emerging markets. Recently, Alquist et al. (2014) document evidence of liquidity-driven FDI in the manufacturing sector of fifteen emerging economies.

Our paper contributes to the literature that explores other motivations for FDI and their effects on host countries. Nocke and Yeaple (2007) show that cross-border mergers and acquisitions can be driven by the complementarities between internationally mobile and non-mobile capacities rather than productivity differentials. Blonigen et al. (2014) argue that FDI can be driven by the existing export networks of local firms and they find empirical evidence in French manufacturing firms. This paper emphasizes the role of financial factors in foreign acquisitions. Our empirical findings conflict with the conventional view of productivity-driven FDI and highlight the financial channel through which FDI benefits the host countries.

Although some previous empirical studies question the productivity benefits of FDI to advanced economies, it may remain reasonable to believe the productivity gains for FDI to emerging markets because these countries lag far behind advanced economies in technology. However, we document that even foreign acquisitions in China, an emerging market, do not improve target firms' productivity relative to domestic acquisitions. Our results question the policies that intend to catch up to the technological frontier by providing tax and financial benefits to FDI.

Our paper also contributes to the recent literature that examines the effect of firms' financial constraints on trade and FDI. Manova et al.

[4] For instance, see Arnold and Javorcik (2009) for plant-level evidence for Indonesia and Guadalupe et al. (2012) for a study on manufacturing firms in Spain.

[5] Chen (2011) also compares foreign- and domestic-acquired US firms, but her study focuses on the effect of FDI's source of origin on the performance of target firms.

[6] Besides FDI, monetary policy may also influence international trade through financial channels. For instance, Ju et al. (2014) recently document that changes in monetary policy can affect exports through their effect on financial constraints of trade sectors, on top of the effect through the real exchange rate and aggregate demand.