Journal of Development Economics 94 (2011) 231–241

Contents lists available at ScienceDirect

Journal of Development Economics

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

Migrant networks and foreign direct investment

Beata S. Javorcik [a,b,*], Çağlar Özden [c], Mariana Spatareanu [d], Cristina Neagu [c]

[a] Department of Economics, University of Oxford, Oxford OX1 3UQ, United Kingdom
[b] CEPR, London, United Kingdom
[c] Development Economics Research Group (DECRG), The World Bank, MC3-303, 1818 H Street, NW, Washington, DC 20433, United States
[d] Department of Economics, Rutgers University, 801 Hill Hall, Newark, NJ 07102, United States

ARTICLE INFO

Article history:
Received 27 September 2006
Received in revised form 18 January 2010
Accepted 28 January 2010

JEL classification:
F21
F22
F23

Keywords:
Migration
Foreign direct investment
Brain drain

ABSTRACT

Although there exists a sizeable literature documenting the importance of ethnic networks for international trade, little attention has been devoted to studying the effects of migrants on foreign direct investment (FDI). The presence of migrants can stimulate FDI by promoting information flows across international borders and by serving as a contract enforcement mechanism. This paper investigates the link between the presence of migrants in the US and US FDI in the migrants' countries of origin, taking into account the potential endogeneity concerns. The results suggest that US FDI abroad is positively correlated with the presence of migrants from the host country. The data further indicate that the relationship between FDI and migration is stronger for migrants with tertiary education.

1. Introduction

The decline in transportation and communications costs and the reduction in policy induced barriers have led to a rapid increase in the flow of goods, capital, people and knowledge across international boundaries. Although an extensive literature has explored the effects of these forces, little attention has been paid to the more subtle linkages and feedback mechanisms that have been shaping the global economy. One of such linkages is the influence of migration on foreign direct investment (FDI), which is the focus of this paper.

A growing body of research has documented a positive association between the presence of ethnic networks and international trade. In contrast, the link between migration and FDI remains relatively unexplored. The main premise of the literature is that international transactions are plagued with informal trade barriers, in addition to formal trade barriers such as transportation costs and tariffs. Among these barriers are the difficulties associated with provision of information on many issues, including potential market opportunities, and with enforcing contracts across national boundaries. As argued by Gould (1994), Head and Ries (1998), Rauch and Trindade (2002) and Combes et al. (2005), the presence of people with the same ethnic or national background on both sides of a border may alleviate these problems. Their language skills and familiarity with a foreign country can significantly lower communication costs. The information they possess about the market structure, consumer preferences, business ethics and commercial codes in both economies can be invaluable in identifying new business opportunities. Their social links, networking skills and knowledge of the local legal regime decrease the costs of negotiating and enforcing contracts. In short, business and social networks that span national borders can help overcome many contractual and informational barriers and stimulate mutually beneficial international transactions.

Foreign direct investment activities face even larger information asymmetries than international trade transactions. Direct investment generally requires a long-term focus and interactions with diverse group of economic agents from suppliers, workers and consumers to government officials. The investor needs to have detailed knowledge of retail, labor and input markets as well as the legal and regulatory regimes in the host country.[1] Contractual and informational problems can be quite severe and that is why variables related to governance and

* Corresponding author.
E-mail addresses: beata.javorcik@economics.ox.ac.uk (B.S. Javorcik), cozden@worldbank.org, ineagu@worldbank.org (Ç. Özden), marianas@andromeda.rutgers.edu (M. Spatareanu).

0304-3878/$ – see front matter © 2010 Elsevier B.V. All rights reserved.
doi:10.1016/j.jdeveco.2010.01.012

[1] Gordon and Bovenberg (1996, p. 1059) argue that "When foreigners try to acquire a firm in the [host] country, they can easily end up being overcharged by domestic owners, who have access to better information not only about that specific firm, but also about future government policies affecting the firm... Foreigners' lack of knowledge can result also in a less efficient use of real resources, due for example to their poorer ability to forecast market demand in a new setting or to deal with idiosyncratic aspects of the domestic contract law, the local distribution system and supply network, and local customs governing labor relations."

legal regimes are found to be among the most important determinants of FDI flows into a country.[2] For all these reasons, it is natural to expect a positive relationship between migration and FDI, yet surprisingly the link between the two is a relatively unexplored area.[3] The handful of studies that examine the link between migration and FDI, discussed in detail in the next section, usually find a positive relationship between the two variables.

This paper contributes to the existing literature by explicitly taking into account the endogeneity problem that has been ignored in the previous studies. Endogeneity arises since migration and FDI flows can influence each other. On the one hand, FDI inflows bring capital, new technology and know-how and in this way stimulate economic growth in host countries (provided some conditions are fulfilled, as pointed out by Alfaro et al., 2004). Entry of multinationals can also produce better employment opportunities and higher paying jobs. Therefore, FDI inflows can lower the incentives to migrate. On the other hand, the presence of FDI can have a positive effect on migration as local employees can be transferred by their foreign employer to the company headquarters or its other subsidiaries abroad. Their experience of working for a multinational can also ease the employees' move to other countries. The presence of multinational firms in a country can encourage workers to acquire skills appropriate for the global economy — such as learning foreign languages — which would facilitate their migration. These effects are likely to be stronger for highly educated workers who possess the skills required by foreign multinationals. Yet none of the existing studies (reviewed in the next section) have addressed the potentially critical issue of endogeneity.

In this paper, we examine the relationship between the presence of migrants in the US and the US foreign direct investment in 56 countries around the world. To address the potential endogeneity of migration with respect to FDI, we employ the instrumental variable approach. Our instruments include: the costs of acquiring a national passport in the migrants' country of origin, the total migrant stock from each source country present in the US 30 years earlier normalized by the total population size of the source country, distance to the European Union (EU), presence of a US military base in the migrant country of origin 20 years earlier, a dummy indicating whether the migrant's country of origin allows its citizens to hold dual citizenship.

Our results suggest that the presence of migrants in the US increases the volume of US FDI in their country of origin. The magnitude of the effect is economically meaningful, as a 1-percent increase in the migrant stock is associated with a 0.35–0.42% increase in the FDI stock. The effect appears to be stronger for skilled migrants, that is, those with at least a college education. A 1-percent increase in the number of migrants with tertiary education increases FDI by 0.41–0.52%. Furthermore, a 10-percent rise in the share of tertiary educated migrants (keeping total number of migrants constant) increases the FDI stock in their country of origin by an additional 0.3%.

Migration of educated people (the so-called brain drain), particularly from developing countries to developed ones, is generally perceived as having a negative effect on the home country. This effect may be somewhat mitigated by flows of remittances from migrants, which generate significant income for many developing countries. Our results suggest that there exists another positive effect of migration. The presence of a diaspora can serve as a channel of information transfer across international borders and thus contribute to greater integration of their home country with the global economy through larger presence of FDI.[4]

In addition to extending the literature on ethnic networks and FDI, our study contributes to the literature on the linkages between factor mobility and international trade. Factor mobility and trade emerge as substitutes or complements in various models, depending on the underlying assumptions on technology, factor endowments and mobility.[5] Our results suggest that interactions between the movements of the underlying factors of production — labor and capital in this case — also need to be taken into account.

This study is structured as follows. The next section briefly reviews the related literature. Section 3 describes the empirical strategy, while Section 4 presents the data used. The empirical results are discussed in Section 5. The final section presents the conclusions.

2. Related literature

The theoretical literature on multinational enterprises focuses on the trade-off between the fixed cost of setting up production facilities abroad and the benefit of avoiding trade costs (in the case of horizontal FDI) or the benefit of cheaper production factors (in the case of vertical FDI). Firms invest abroad when the gains from relocating production outweigh the costs of maintaining capacity in multiple markets.[6]

The fixed cost of setting up production capacity in a foreign location includes not only the cost of building physical production facilities but also the cost of gathering information on the prevailing business conditions, local regulations, labor relations, availability of suppliers, etc. The cost of gathering information can be quite substantial, as reflected in the finding that information asymmetries hinder international capital flows (Portes et al., 2001; Portes and Rey, 2005; Gelos and Wei, 2005). Moreover, FDI flows have been shown to be "substantially more sensitive to information frictions than investment in portfolio equity and debt securities" (Daude and Fratzscher, 2008). Similarly, the effectiveness of investment promotion efforts has been in part attributed to their ability to attenuate information asymmetries (Harding and Javorcik, 2008).

Ethnic networks, which serve as a conduit of information across national borders, can reduce the costs of obtaining information and thus lower the fixed cost of undertaking FDI. The role of ethnic networks in reducing information asymmetries has been first documented in the context of international trade. Gould (1994) found that both US exports and imports were positively correlated with the stock of migrants from the partner country present in the US. Head and Ries (1998) reached a similar conclusion when examining Canadian data, as did Combes et al. (2005) using information on intra-regional economic activity in France. Rauch and Trindade (2002) distinguished between the effect of networks as a conduit of information and a contract enforcement mechanism. They showed that the presence of ethnic Chinese networks mattered more for trade in differentiated products than for trade in homogenous commodities. Given that it is harder to assess the attributes of differentiated products, their findings suggests that in addition to serving as an information channel, ethnic networks may provide implicit contract guarantees and deter opportunistic behavior among its members.[7]

The literature on the link between ethnic networks and FDI is quite small. It includes studies by Bhattacharya and Groznik (2008) and Buch

[2] See for instance, Wei (2000) and Javorcik and Wei (2009).

[3] The importance of migrant networks for FDI flows is also reflected in anecdotal evidence. For instance, Singh (2006) reports: "Many times top management of Indian origin in the U.S. was asked to start up the offices in India, usually in emerging industrialized cities such as Bangalore and Hyderabad. For example, a return migrant who had worked for Yahoo office in the U.S. for five years set up Yahoo's development center in Bangalore." Similarly, China's leading maker of silicone chips, Semiconductor Manufacturing International Corporation (SMIC), "was founded in 2000 by Richard Chang, a Taiwan-born American citizen, who spent 20 years working for Texas Instruments. Having built chip foundries or "fabs" in Taiwan, Italy, Japan and elsewhere, he decided to do the same in China." (Cox, 2007, p.6). The results of a recent survey of Indian software industry show that 14% of firms received investment from Indians domiciled in a developed country and in a quarter of those cases, such investment accounted for over half of new investment (Commander et al., 2004).

[4] For a recent survey of the literature on the economic consequences of migration for sending countries see Hanson (2008).

[5] For example, Markusen (1986) argues that substitutability is a special case of factor proportions models.

[6] As the theory of the multinational enterprise is too vast to be reviewed here, we refer the reader to Markusen (2002) and Navaretti et al. (2004) for an overview as well as to the recent work by Helpman et al. (2004).

[7] See a survey of the literature by Rauch (2001) for more details.