Journal of Business Research 66 (2013) 439–447

Contents lists available at SciVerse ScienceDirect

Journal of Business Research

# Macroeconomic antecedents to U.S. investment in Latin America ☆

Harvey Arbeláez [a,*], Isabel Ruiz [b,1]

[a] Monterey Institute of International Studies, United States
[b] Sam Houston State University, United States

ARTICLE INFO

*Article history:*
Received 1 July 2010
Received in revised form 1 January 2012
Accepted 1 January 2012
Available online 8 May 2012

*Keywords:*
Foreign direct investment
Trade agreements
Trade
Latin America

ABSTRACT

The last decade witnessed a significant increase in the flows of foreign direct investment (FDI) into developing countries, particularly in Latin America. This increase is likely to continue as multinational corporations look for new markets and profitable opportunities to serve or produce abroad. The growth of FDI in the region calls for a search of the different antecedents of U.S. FDI inflows into Latin America. Knowing the different antecedents of FDI in the region is beneficial at a time a diversity of trade agreements are taking place while others wait for official signatures. A movement towards bilateral and multilateral trade agreements includes the U.S. The U.S. has come to play an important role in terms of expanding the horizon of what would constitute the free trade area of the Americas (FTAA). This study investigates the antecedents of U.S. FDI into Latin American countries, while paying special attention to the relationship between trade agreements and FDI inflows. This study also investigates concern for the foreign exchange market as a source of uncertainty to FDI. The empirical investigation uses a fixed effects panel data model to maximize degrees of freedom and to control for cross-country and inter-temporal heterogeneity.



## 1. Introduction

The increasing openness of the world economy leads not only to expanded trade, but also to significant increases in foreign direct investment (FDI) in both developed and developing countries. The last decade is a case in point of a significant increase in the flows of FDI into developing countries, particularly in Latin America. Moreover, the increase is likely to continue as multinational corporations look for new markets and profitable opportunities to serve or produce abroad. In general, while Europe and Japan play an important role in terms of their share in FDI inflows into Latin America, the U.S. is still by far the main source with 37% of the total of this type of capital inflows (ECLAC, 2009).

The literature on growth (Bénassy-Quéré, Fontagné & Lahrèche-Révil, 2001; Goldberg & Klein, 1997; Urata & Kawai, 2000) emphasizes the role of FDI in augmenting capital stock, employment, productivity and technological transfers. Also policy makers and analysts across the globe (see World Investment Prospects to 2010: *Boom or Backlash?* 2006, and World Investment Prospects to 2011: *Foreign Direct Investment and the Challenge of Political Risk*, 2007) acknowledge such a role of FDI. Since FDI motivates in a firm's prospects for making profits in production activities over the long run, FDI also implies a long-run commitment because it results in a more stable source of financing than portfolio investment. Along these lines, identifying strategies for attracting FDI becomes a priority for many Latin American countries.

Prior studies show the impact of FDI on growth. For example, Calderón and Schmidt-Hebbel (2003) provide evidence that portfolio equity and debt flows do not impact growth while FDI is the only major category of capital inflows that is relevant for long-term growth in Latin America. In addition, Borensztein, De Gregorio and Lee (1999) find that FDI flows into developing countries contribute to economic growth in a proportion greater than domestic investment.

Despite the growing interest in attracting FDI to the region, there is no information about the different antecedents of U.S. FDI inflows into Latin America. This lack of understanding is particularly troubling given the diversity of trade agreements that are taking place and that are waiting for official signatures. Historically, Latin American countries try to create common markets by signing into regional blocs. Examples of these are the Latin American Economic Association, MERCOSUR, and the Group of Three (G3). A recent movement towards bilateral and

☆ The authors acknowledge and are grateful for the cooperation provided by the Business Association of Latin American Studies (BALAS) for having selected our paper for publication in a special issue of the *Journal of Business Research* devoted to Latin America. Comments by Luis Sanz, INCAE Business School, two anonymous reviewers, and *JBR* Editor in Chief, Arch Woodside, Boston College, to earlier drafts were helpful in revising this article. The authors alone are responsible for all limitations and errors that may relate to the study and the paper.

* Corresponding author at: Monterey Institute of International Studies, Graduate School of International Policy and Management, Fisher MBA International Program, 460 Pierce Street, Monterey, CA 93940, United States. Tel.: +1 831 647 4176.
*E-mail addresses:* harvey.arbelaez@miis.edu (H. Arbeláez), ixr004@shsu.edu (I. Ruiz).
[1] Sam Houston State University, College of Business Administration, Economics and International Business Department, 237 A Smith-Hutson Building 1821 Avenue I Huntsville, TX 77341, United States.

0148-2963/$ – see front matter 
doi:10.1016/j.jbusres.2012.04.011

multilateral trade agreements includes the U.S. The U.S. also plays an important role in terms of expanding the horizon of what would constitute the free trade area of the Americas (FTAA).

An example is the Central American Free Trade Agreement (CAFTA), which US legislators approved in July 2005 and signed into law on August 2, 2005. It is a comprehensive trade agreement between Central American countries and the United States. Currently discussions of bilateral agreements between the U.S. and Panama, the U.S. and Colombia, and the U.S. and Ecuador are under way in the U.S. Congress. The implementation of this new form of trade agreements offers enormous opportunities for expanded trade and commerce between the U.S. and Latin American countries. At the same time, this situation raises questions, and creates new challenges for both the U.S. and Latin American countries.

In this context, two issues emerge. First, a thorough understanding of the antecedents of U.S. investment in Latin America is necessary. By being aware of the antecedents of FDI, countries in the region could identify public policy-oriented reforms in order to improve the conditions for attracting more and better quality FDI. This study explores the macroeconomic antecedents of U.S. FDI into Latin America while paying special attention to the role of trade agreements.

Second, an accurate understanding the nature of foreign capital flows into these countries and the impact of trade agreements on FDI is necessary. Several theories argue that trade and FDI may be either substitutes or complements and few studies analyze this relation in terms of the implications of the recent U.S. bilateral negotiations and trade agreements with Latin American countries (see Levy-Yeyati, Daude & Stein, 2004; MacDermott, 2007). According to the literature, if FDI and trade are substitutes then trade agreements may undermine the efforts of Latin American countries in order to attract more and better quality FDI. In addition, complementarily between FDI and trade implies significant positive externalities for the existing trade agreements as well as for those pending of their approval. Depending on the motive for foreign investment, the relaxation of trade barriers implicit in trade agreements may have completely different implications for the location of FDI.

Following this introduction, Section 2 describes alternative hypotheses regarding the macroeconomic antecedents of FDI as well as the empirical evidence and theoretical assumptions. Section 3 offers an overview of the patterns of FDI to Latin America. Section 4 describes the data. Section 5 discusses the econometric methodology and empirical estimation. Section 6 analyzes the estimation results. Section 7 includes a summary, details of limitations of the study, suggestions for future research, and concluding remarks.

## 2. Macroeconomic antecedents of foreign direct investment

To understand the impact of trade agreements on FDI, one must first comprehend the motivations for multinational corporations (MNC) to invest abroad. In the literature of international trade, the OLI paradigm is the most known approach used to study cross-national patterns of FDI. OLI refers to "O" Ownership Advantages, "L" Location Advantages, and "I" Internalization. The framework explains why firms choose FDI as opposed to remaining in the home market or licensing a foreign company to produce abroad (see Dunning, 1980, 1988, 1995).

In general, the OLI paradigm argues that if a firm possesses specific or intangible assets, it may enjoy a potential ownership advantage over other companies operating in the foreign market. Given that attribute, the firm may consider to maximize the benefits of its ownership advantages by licensing a foreign company to produce its goods or services. However, a firm might prefer to invest abroad with its own subsidiary as opposed to licensing if transaction costs are high and if monitoring is difficult (see Caves, 1982; Dunning, 1995). Along these lines, the OLI paradigm sustains that the decision of investing abroad is prior to the decision about where to locate (Graham & Krugman, 1995).

According to the OLI framework, the motivations for a firm to locate in a particular country for direct investment refer to the "L" element, or in other words, to the location-specific conditions in the recipient country. Therefore, the macroeconomic environment of a country can influence FDI decisions (see Asiedu, 2003; Chakrabarti, 2001; Eaton & Akiko, 1992; Eaton & Tamura, 1994). Studies for the specific case of Latin America (see Chudnovsky & López, 2001; Treviño, Daniels & Arbeláez, 2002) provide the evidence of the attractiveness of an environment conducive to FDI. Both the theoretical and empirical literature on the determinants of FDI indicate that some of the economic variables that determine location-specific reasons for FDI include market potential, inflation, the real exchange rate, regional and free trade agreements and openness to trade as well as some other institutional factors (Treviño, Daniels & Arbeláez, 2002; Treviño, Daniels, Arbeláez & Upadhyaya, 2002). The following sections discuss these economic antecedents of FDI.

### 2.1. Market potential

The role of market potential refers to the idea that multinational corporations seek markets with strong potential for growth (Eaton & Tamura, 1994). In general, greater market potential makes the recipient country more attractive because it should allow a firm to generate higher sales and profits. Therefore, if FDI is horizontal or market seeking, it will flow to countries with higher growth in real GDP. However, market potential alone may not motivate FDI but production possibilities may also play a role. In such a case, FDI is resource seeking (vertical FDI). Vertical FDI refers to the type of foreign investment in which an industry abroad provides inputs for a firm's domestic production process. Higher growth in real GDP may not influence FDI of this nature but influence may instead come from the possibility of lower production costs. By contrast, horizontal FDI refers to foreign investment in the same industry that the firm operates at home. Given that Latin American countries receive both market seeking and resource seeking FDI, the impact of host country GDP growth on FDI is an empirical matter.

### 2.2. Inflation

Inflation is another important antecedent of FDI. Inflationary economies tend to diminish sales and therefore it means expectations that a market-oriented firm would avoid a country with high rates of inflation. Moreover, a high rate of inflation may be a signal of economic instability and of the host government's inability to conduct adequate monetary policy. FDI might not take place in high inflation countries because it creates additional uncertainty regarding the net present value of long-term investments (Asiedu, 2003; Treviño & Mixon, 2004).

### 2.3. Foreign exchange market

Given the nature of FDI, it is also natural to consider the exchange rate as one of its main antecedents. Some studies associate the OLI model with production costs in the recipient countries and which reflect also in the real exchange rate (see Goldberg & Klein, 1997). The real exchange rate could be an indicator of production costs abroad. There are two specific hypotheses regarding how FDI flows respond to variations in the exchange rate. In the so-called wealth position hypothesis, FDI is related to the foreign exchange markets through the impact of changes in the exchange rate on the relative wealth of two countries under consideration. The relative labor cost hypothesis, alternatively argues that depreciation of the foreign currency alters day-to-day production costs that in turn prompts changes in foreign investments.

Froot and Stein (1991) subscribe to 'relative wealth' as the link between FDI and the exchange rate. Depreciation of a currency increases