JAPANESE IMMIGRATION AS A DETERMINANT OF FOREIGN DIRECT INVESTMENT:
LATIN AMERICA AND THE CARIBBEAN REGION

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ABSTRACT

People and capital movements between Japan and Latin America have been noticeable over the years. Nonetheless, little attention has been paid to their relationship. A considerable number of studies have found that immigration is positively related to foreign investments, for example Britain in the US, yet none of them have analyzed the role of immigrants in Latin America. Most of the studies have shown economic and political variables as the determinants of foreign investments in the region. The present paper fills this gap and examines specifically whether immigration, as a social variable, is conducive to the contemporary Japanese direct investment in Latin America and the Caribbean. Based on the empirical analysis using cross-sectional regression model in 39 countries, this study finds that Japanese immigration is positively correlated with Japanese direct investments. The results continue to hold even for investments adjusted for inflation and for the immigration waves normalized by host country population. It adds to the recent findings that ethnic migrant networks may have a role in attracting foreign direct investments in Latin American and Caribbean countries.
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1. INTRODUCTION

Japanese outward labor mobility and contemporary transfer of Japanese capital to Latin America and the Caribbean (LAC) region have been significant in the twentieth century. Japan has traditionally been the largest source of foreign direct investment (FDI) among Asian countries in the region (OECD, 2013, 31; Yamada, 2013; ECLAC, 2014), while approximately 1.8 million Japanese immigrants and descendants live in the region, playing prominent roles in a wide range of industries (Kuwayama, 2015; Meyers and Kuwayama, 2016).

In addition, FDI is defined by the International Monetary Fund (IMF) as an investment made by a foreign entity to acquire part of the control or a significant degree of influence in the management of a company operating in the host country (UNCTAD; Wacker 2013, 4). According to the Japanese External Trade Organization data source, Japanese Foreign Direct Investment (J-FDI) into LAC during the period 1965–2004 represented 12% of the total share per region, accounting for approximately $114 trillion in accumulated flow, and it has increasingly targeted a technologically intensive range of sectors in response to growing income levels of Latin American countries (Jetro, 2015; Kuwayama, 2015). It has evolved from the focus on resource acquisition from the 1960s (J-FDI was focused on raw materials; IDB, 2013, 19) to the manufacturing sector in the 1970s and 1980s, owing to the import-substitution

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1. The ECLAC estimates indicate that China is increasingly investing in Latin America, at approximately $10 billion per year since 2010 throughout the region; however, FDI from China is difficult to track in official statistics.
2. According to Mr. Yasushi Takase, Director General of the Latin American and Caribbean Affairs Bureau in the Ministry of Foreign Affairs of Japan, out of total descendants 88% live in Brazil, 5% in Peru, 3% in Argentina and the remaining share among other LAC countries (“Japan-Latin America Relations: Then and Now Dialogue,” at Inter-American Dialogue, Washington, DC, on September 16, 2015).
3. Throughout this paper, J-FDI stands for Japanese foreign direct investment, and FDI for foreign direct investments, unless stated otherwise.
4. See Figure 2, page 7.
industrialization in most of the Latin American countries, and more recently to a diversified mix of manufacturing and services (IDB, 2013, 20). The composition of J-FDI to LAC in 2012 was 35% in the services sector (wholesale, retailing, etc.), 34% in the manufacturing sector (steelmaking, vehicles, food products, etc.), 28% in the primary sector (mainly mining and petroleum) and the remaining percentage in other areas (IDB, 2013, 22–23).

From the labor movement perspective, Japanese immigration into LAC is the most significant aspect of both regions’ relations beginning in the last quarter of the nineteenth century. Moreover, LAC has received 244,946 Japanese immigrants between 1900 and 1945, and 67,034 people from 1946 to 1993, according to the cumulative numbers of immigrants registered in the Kaigai Ijuu Toukei (Immigration Statistics of JICA, 1994). For the purpose of this paper, the first and second waves refer to the Japanese people who immigrated during the first period, or pre-WWII, from 1900 to 1945, and second period, post-WWII from 1946 to 1993, even though there is a complete suspension of immigration before the outbreak of the conflict until 1952, when diplomatic relations were resumed. The second wave of immigration is much smaller and depicts 27% of the first wave. After signing the peace treaty, Japan became a sovereign state in 1952, and a few countries, such as Brazil, Paraguay, Dominican Republic, Bolivia, and Argentina, authorized the entry of Japanese emigrants. Later, other countries also began to accept

5. From the perspective of consumer goods, industrialization through import substitution (ISI) in Japan advanced with textile industries, which were the largest item in imports during 1876–1896. The idea was to replace imports with homemade textiles to minimize the problems in the balance of payments (Baba and Tatemoto, 1998, 6–14). By 1960, textile technology had grown sufficiently in Japan to have a comparative advantage in the world market and that explains these investments abroad. The period between 1960 and 1970 is exactly when LAC countries made a big push in promoting ISI (J-FDI went in the sectors of textile, steel, shipyards, and vehicles, among others) (Horisaka, 1993; Ozawa, 1979). A case in point is Toyobo, a labor-intensive textile industry, that relocated in El Salvador in the end of 1960s that still endures (Industrias Unidas SA, Toyobo company) (Farrell, 2008; IUSA website, nd.).

6. JICA data are used in this paper to maintain consistency. I also have noticed that some LAC countries have deemed it as their primary source in their statistics of Japanese immigrants. Further, overall, Japanese immigration receded by the mid-1970s; yet, given the fact that Argentina, Brazil, Bolivia, Peru, Colombia, and Paraguay have scarcely received immigrants until 1993, I have considered the second wave as far as 1993.
immigrants, but the Japanese economic prospect was gradually improving by the end of the 1950s, greatly reducing the incentives to emigrate (Kunimoto, 1993, 112–116).

The mobility of labor has generally been part of the human experience, and this phenomenon of leaving the native country, voluntarily or not, and entering and settling in the host country is not new (United Nations, 2015; Choucri, 2002, 97–122). It became more pronounced during the 1840s with the lessening of serfdom everywhere as well as with the reduction of restrictive emigration laws and the influence of economic liberalism (Davie, 1949). In Japan, specifically, emigration began with its legalization in 1885 (Tigner, 1981, 458). Japanese citizens were encouraged to move to the US, New Zealand, Latin America, and other countries under contractual agreements, either between the sending country and host country governments and/or between private organizations on both sides (Shimpo, 1995; 48, Sakurai, 1999, 202).

Notwithstanding the importance and considerable number of people and volume of capital movements, studies combining these two core features, immigration and FDI, emerged as a subject of empirical investigation more effectively in the last decade regarding the worldwide increasing movement of capital and people from contemporary times (Clemens and Williamson, 2000; Gao, 2003; Groznik and Bhattacharya, 2008; Javorcik et al., 2011, among others). For example, Clemens and Williamson (2000) found that British investments prior to World War I

7. The categorization of immigrants is not straightforward. The United Nations (2015) adopted the definition of immigrant as someone living outside one’s own country for a year or more. It is much more intricate. For example, there are categorizations of voluntary and forced migrants (refugees, for example, who are forced to leave their own country due to conflict, persecution, etc.) or immigrants who move for political or economic reasons. The former is also related to refugees, while the latter is related to labor migration. These categorizations simplify reality because most voluntary migrants are also economic migrants, and few are purely voluntary. For instance, employees moving within a firm may have no option if they want to keep their jobs within that company. A refugee has other choices, for instance, move within their own country, take a risk staying, or take sides in the conflict, if not being forced to leave their country. As Choucri (2002) suggested, the term “immigrant” has an epistemological challenge due to its subjective nature; the concept depends on how we see it, who defines it and how and why, and who benefits from it.
went to the labor-scarce New World (North America), and the simplest explanation is that “it chased after European emigrants” (1).

The study of the determinants of FDI into Latin America is also extensive. Most of them have found macroeconomic and political variables as explanatory variables, such as lower risk of expropriation (Biglaiser and DeRouen, 2006), past performance on current accounts (Montero, 2008), trade openness (Liargovas and Skandalis, 2012; Sanchez-Martin et al., 2014), market size (Tuman and Emmert, 1999; Tonooka, 2001), degree of openness as a proxy for economic freedom (Bengoa and Sanchez-Robles, 2003), structural reforms and privatization (Campos and Kinoshita, 2008), and stock on infrastructure (Williams, 2015), among others, yet none of them have introduced immigration, a social variable, as an explanation.

Following Clemens and Williamson (2000), Ghao (2003), and other authors who have empirically found the relationship of FDI and immigration in other parts of the globe, this paper attempts to empirically answer whether Japanese immigrants have played any role in the inflow of J-FDI in Latin America. Controlling for some political and macroeconomic variables, using a cross-sectional regression model in 39 countries, I examine whether immigration is conducive to greater J-FDI flows. Although not the focus of the study, North America is included in the analysis as a comparison given the similarities in the total numbers of immigrants, or the sum of first and second wave official numbers of migrants. Including or excluding North America in the analysis, the results suggest that Japanese immigrants in Latin American countries have influenced J-FDI. The data further indicate that the relationship between J-FDI and migration is stronger for the first wave of immigrants when the boom of relocation occurred compared to the second wave.
The paper consists of six main sections. I begin the second section with the motivations, mostly a historical narrative, while Section III provides the literature review of the FDI determinants. Section IV illustrates the data and methodology, and Section V presents empirical findings. Section VI presents the concluding remarks.

2. MOTIVATION

My main motivation is to assess the relationship of Japanese immigrants and the Japanese direct investments in the LAC region. Japanese immigration in the region is familiar but the number of these immigrants as a fraction of the country’s population is quite small. In addition, their contribution to the region is not straightforward due to the complexities of defining and measuring it. Even so, given the data availability of J-FDI to the region as well as the number of the first immigrants’ track record, I will empirically evaluate the relationship of these two variables by means of the ordinary least squares (OLS) regression analysis. Thereby, I can assess whether Japanese immigration as a social variable was conducive to J-FDI inflows. Before proceeding into the evaluation specifics, I will briefly recapitulate the increasing flow of J-FDI during 1965 to 2004 and the chronicle of immigration into the region in the next paragraphs.

Despite Japan’s industrialization occurred less than one hundred years ago, the J-FDI into Latin America has increased from 1965 to 2004. The J-FDI inflow to the LAC region increased by more than a factor of 4 in 2001, between 1965 and 2004, as indicated in the right axis index (1982 = 100) in Figure 1. The left side of the same figure indicates the cumulative flow in millions of USD. Cumulatively, LAC is the fourth largest recipient of J-FDI worldwide during 1965–2004, as shown in Figure 2, while the Cayman Islands, Panama, Brazil, and Mexico are the
top four recipients of J-FDI during this period, as presented in Figure 3. The large share of Cayman Islands reflects its importance as a hub of the largest direct investments in the finance and insurance industries (Fichtner, 2016). The share in Panama in the logistic and sea transportation sectors reflects its geographical location (Embassy of Panama in Japan, 2010; Stallings and Szekely, 1993, 38), while the shares in Mexico and Brazil reflect manufacturing, such as vehicle and auto parts, fishery, forestry, farming, and mining, among other sectors. Irrespective of the fluctuations and sectors, the increasing trend of J-FDI into LAC is undeniable and a meaningful indicator of Japan and Latin America capital interaction.

Figure 1: Japanese Foreign Direct Investment (J-FDI) to Latin America and the Caribbean (LAC) (1965-2004).

Source: Author’s elaboration based on Jetro.
Figure 2: Percentage of Japanese Foreign Direct Investment (J-FDI) World Flow (1965–2004).

Source: Author’s elaboration based on Jetro.

Figure 3: Japanese Foreign Direct Investment (J-FDI) to Latin American and the Caribbean (LAC) (1965–2004) by Country.

Source: Author’s elaboration based on JICA.
Yet, if we go back only about 100 years from 1965, Japan was a closed nation in 1850 and was not investing abroad. In 1854, Perry’s American “Black Ships” visit in Japan was instrumental in opening an agrarian country from almost 200 years of national seclusion, which cleared the path to its modernization (Tigner, 1981, 457–482). During the latter half of the nineteenth century, Japan was adjusting its economy from a complete autarky (of the Tokugawa feudal order) to free trade, while experiencing deficits in its balance of payments and inflation and was still opposing inflows of FDI until the late 1890s (Hugh, 1965, 173–175). The Meiji government had to heavily rely on new high land tax revenues to initiate its industrialization in a large variety of industrial activities, mostly in cotton and woolen textiles because imports of these two items reached an average of 70% of country imports from 1859–1867 (Baba and Tatemoto, 1998, 6). The country’s economic and social landscape evolved from a closed nation to an Asian power by the 1970s, but the changes for ordinary people were slow and painful. By 1872, the freedom of the peasantry from the feudal order brought them burdens of paying the cost of modernization through the newly imposed land taxes (Masterson and Sayaka, 2004, 6–8). “In the mid-1880’s, 10 percent of farmers lost their lands because they could not pay the taxes, and in 1895 alone, 108,000 farms went bankrupt and 400,000 peasants lost their means of living” (Masterson and Sayaka, 2004, 8). Thus, the peasantry was unable to support the burden of taxation and fell into deep poverty. Massey (1990) argued that development inevitably comes with displacement of people. Indeed, the destruction of the peasant political economy provided a mass population movement and the source for both internal and international emigration, first to North America and then to Latin America (Endoh, 2009; Yoshida, 1909). Figure 4 outlines a brief timeline of

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8. Per capita income in Japan in the mid-1950s was similar to many LAC countries; by the 1980s, it increased to three to four times that of LAC (Stallings and Szekely, 1993, 8). Globally, by 1975, it was elected a member of the Group of Seven (Berrios, 2001, 147).
both movements; the top left side indicates labor movements and the bottom right depicts J-FDI inflow into LAC.\(^9\)

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**Figure 4: Overview Timeline of People and Capital Movement.**

Source: Author’s elaboration based on Baba and Tatemoto (1998), Masterson and Sayaka (2004), Endoh (2009), etc.

The earlier Japanese emigrants have given priority to relocate in the US, where the opportunities were better, while Latin America was their second or third choice given the distance and the varied level of development of the countries (Endoh, 2009, 18–19).\(^{10}\) Moreover, Latin America was a region that preferred European labor entry. The US was the Japanese workers’ preferred destination when the government restricted the entry of immigrants through a series of

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9. According to Endoh, the Malthusian explanation of overpopulation was the official rationale to explain overseas migration both in the pre- and post-war eras, and scholars broadly supported this explanation. For instance, Yoshida (1909) conjectured that the density of population of the country and the size of the average farm land per capita were causes of emigration. In fact, the modernization process brought by the “substitution of capital for labor, the privatization and consolidation of landholding, and the creation of markets…creating a pool of socially and economically displaced people” (Massey, 1990, 66) combined with other factors, such as the high population growth rates mentioned by Yoshida, might have heightened the pressures for labor outflow.

10. Figure 4 (left) depicts a secluded Japan for more than 200 years with the Tokugawa Shogunate. The visit of Commodore Perry in 1854 was instrumental to open the country to foreign trade. Since then, the influx of imported products brought problems in the balance of payments of Japan given that the government revenues were not enough to cover all the country’s expenses. A new land tax was imposed in 1873 to cover most of these expenditures. Concurrently, Japan began its industrialization process in the semi-manufactured good exports as a springboard for growth. The Meiji government ventured in a variety of industrial activities in which the country had comparative advantages (such as cotton textiles), promoting the import substitution (Baba and Tatemoto, 1998, 9–18). In a predominantly agricultural country, farmers were the engine of the economy, and they were displaced when they could not pay the newly imposed land tax. Displaced people began to move first to North America and then to Latin America (Masterson and Sayaka, 2004; Endoh, 2009). By the 1960s with better Japanese economic prospects, Japanese investors began to invest abroad, and one of the target regions was Latin America, depicted in the bottom right of the figure.

11. Argentina was relatively more prosperous than Peru, Brazil, Mexico, Bolivia, and Paraguay, among other countries in LAC. In fact, Hosono and Ssavedra indicated that Japan was behind Argentina in the industrialization race earlier than the 1950s (Berrios, 2001, 148–149). Nonetheless, unfamiliarity given the distance with LAC was a big barrier.
agreements and accords with Japan in 1907, Italy ended subsidized immigration of its citizens, and Brazilian plantation owners were compelled to hire laborers from Japan (Endoh, 2009; Figure 5).12

![Figure 5: Pull and Push Factor Interaction.](image)

Source: Author’s elaboration based on Tigner (1981), Masterson and Sayaka (2004), Endoh (2009), etc.

According to the JICA (1994) official statistics, 244,946 people emigrated to Latin America during the first wave (1900–1945; JICA, 1994). During the hostilities of the Second World War, the diplomatic relations between Japan and Latin America were suspended and were resumed in 1948. The US and Japan reached an agreement called the Gentlemen’s Act to limit immigrants to the US. The LAC countries, on the other hand (e.g., Brazil, a country moving from slave to free labor composed by white immigrants mainly of Italians from 1880 to 1920s) was compelled to fulfill its labor needs from Japan when Italy ended the immigration subsidy program with the “Prinetti decree” of March 1902 due to reports of Italian immigrants’ mistreatments in plantations (OECD, 2006, 75–77; Endoh, 11–27), and WWI discouraged European immigrants to LAC (Kunimoto, 1993, 108–109). This is a very abridged version of a much more intricate narrative, given the fact that Mexico, Peru, Paraguay, and other countries have their own narratives of attracting and/or preventing Japanese migration.

12. The US and Japan reached an agreement called the Gentlemen’s Act to limit immigrants to the US. The LAC countries, on the other hand (e.g., Brazil, a country moving from slave to free labor composed by white immigrants mainly of Italians from 1880 to 1920s) was compelled to fulfill its labor needs from Japan when Italy ended the immigration subsidy program with the “Prinetti decree” of March 1902 due to reports of Italian immigrants’ mistreatments in plantations (OECD, 2006, 75–77; Endoh, 11–27), and WWI discouraged European immigrants to LAC (Kunimoto, 1993, 108–109). This is a very abridged version of a much more intricate narrative, given the fact that Mexico, Peru, Paraguay, and other countries have their own narratives of attracting and/or preventing Japanese migration.

13. Figure 5 briefly depicts the interaction of pull and push factors in each region; the large displacement of peasantry in Japan pushed the Japanese citizens abroad with the legalization of emigration in 1885. By 1886, the US pull factor was the country’s need for cheap labor, while the push factor began in 1907 with the restrictions in the entry of these immigrants. Japanese immigrants needed to look for another destination. European countries began to curtail emigration of their people to Latin America due to several factors, one of them being the military expansion of Portugal, Italy, and Spain owing to World War I. Still in need of labor, the LAC countries, represented in the bottom of the figure, began to accept Japanese immigrants (pull factor in LAC). This occurred mainly in Brazil, a country that accepted them in both waves, as workers in the coffee plantations during the first wave and as a frontier pioneers to develop the hinterlands during the second wave. In Bolivia, Japanese immigrants were sent to the Amazon region to develop the jungle. In the Dominican Republic, workers were sent to the Haiti border to develop that area and as a shield in the conflict between these two countries. Each country has its own narrative, which are all detailed by Masterson and Sayaka (2004) and Endoh (2009).
the 1950s (Kagami, 2001). A much smaller number (67,036) of people emigrated during the second wave (1946–1993), totaling approximately 312,000 immigrants from both waves (Figure 7). From the total (first and second waves) numbers, 78% moved to Brazil, 11% to Peru, 5% to Mexico, 3% to Argentina and Paraguay, and the remaining to other host countries of the region (Masterson and Sayaka, 2004, 25). Even though the cumulative numbers of both waves seem large, the percentage of these immigrants as a fraction of the population in LAC countries is very small, with Paraguay hitting the highest share at 0.22%, followed by Brazil (0.19%) and Peru (0.18%), as shown in the left axis of Figure 8. In the US, 252,954 entered in the first wave and 388 in the second wave—a total of 253,352 immigrants in the same timeframe (JICA, 1994).\textsuperscript{14} Japanese immigration to Latin America reached its peak during 1935 (Figure 6) and to some extent, in comparison with the US, LAC received almost the same number of immigrants in the two waves combined (Figure 7).

\textsuperscript{14} In this sum, the numbers of emigrants previous to 1900 are not included.
Figure 6: Japanese Immigration Flow to North America and Latin America and the Caribbean (LAC) (1900–1993).

Source: Author’s elaboration based on JICA.

Figure 7: North America and Latin America and the Caribbean (LAC) First, Second, and Both Waves of Immigrants (1900–1993).

Source: Author’s elaboration based on JICA.
Immigration requires significant efforts of adaptation, and this process is slow. In the case of Japanese immigration, it was combined with unexpected vicissitudes. At a certain point of the integration process, the Japanese immigrants gained a reputation of diligence, respect for the law, and trustworthiness in the host country; however, the imperialistic objectives of Japan as well as the growth of nationalism in LAC countries undermined this perception in the late 1930s (Tigner 1981, 459). Nonetheless, some of those who moved to Latin America had contributed to regional development by, for example, turning the unproductive hinterlands into dynamic agricultural platforms, for example, black pepper in the Amazon region or soybeans in the Cerrado region (Endoh, 2009, 170–180, 199). The latter crop is now in the export basket and still plays
significant role in Brazilian international trade. Particularly the second and following generations absorbed many local elements, as shown by Cardoso (1995, 177) in her anthropological study of immigrants. In the long-run historical perspective, the immigrants resolutely integrated the innumerable influences of the host countries, keeping the old elements of their home country and absorbing the new elements of the unfamiliar context (Ohno, 2006, 1–8).

From the LAC countries’ perspective, the population expansion through immigration was essential to develop the economy since immigrants, in general, provided the labor necessary to develop the “roads, railways, and airbases that served to integrate national resources and were the primary labor force in the agro-export and mining industries,” linking the region to the global economy (Foote, 2014, 287). Foote also suggested that skilled and unskilled immigrants in Latin America introduced workforce and technical knowledge necessary to engender industrial development in the LAC region. Furthermore, an immigrant was considered a convenient asset because immigrants produced as soon as they arrived (Avila, 1954, 61). The author indicated that the immigrants arrive in a host country in condition to produce, given the fact that the cost of formation is not carried out by the host countries. Avila estimated that the increase of population in Brazil through approximately 3.5 million immigrants would have cost, in terms of formation until a child turns 20 years old, Crs. 49 billion (Brazilian Cruzeiros) in 1939, while the national

15. Similarly, Handa (1987) stated that the integration of Japanese immigrants is considered a certain and almost complete path, given the fact that their descendants consider themselves Brazilian patriots, as there is no way to live in eternal conflict and contradiction of identity.
16. Such integration is in line with Japan’s social development over the years. Ohno stated that every country’s history proceeds as an interaction of domestic and foreign forces. Even though considered traditionalist, Japan has absorbed successive external influence, such as the introduction of rice in their culture around the third century BC from the Eurasian continent, Buddhism from China, through Korea in the sixth century AD, guns and Christianity in the sixteenth century AD, and Western influence in the nineteenth century with the Meiji Revolution. All these external influences are introduced into the culture as a multi-layered structure where the old and new elements co-exist in the country.
17. For instance, Japanese workers were sent to the railway construction in Durango and Colina in Mexico from 1901–1907 (Kunimoto, 1993, 106).
income in the same year was Crs. 40 billion (61). Additionally, the immigrant is also a consumer: by expanding the demand, it is likely to open possibilities of employment (65). The author suggested that immigrants were the conduit of the economic development in Brazil. Likewise, Kunimoto (1993) indicated that the demand of Japanese immigrant labor in Mexico, Brazil, and Peru can be associated with the development quest of these economies (104).

From Japan’s perspective, the country had gone through various stages of development from poverty, which triggered the above-mentioned migratory process, to growing economic power. Consequently, the country’s international position also changed in terms of investments overseas. As the country grew pursuant its own development process, Japanese multinationals generating competitive advantages domestically began to locate their value-added activities outside Japan (Dunning, 2001). During this process, Japan showed a propensity to engage in outward FDI toward LAC for “direct investment became the major interest of the Japanese business community” (Horisaka, 1993, 51).

In summary, Kunimoto (1993) stated that Japanese immigration constituted the most important aspect of LAC-Japan economic relationship, adding that immigration and investments are not unrelated (99). I will examine whether that association holds true empirically.

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18. According to the author, Brazil received approximately 3.5 million immigrants between 1854 and 1954 (Avila, 1954). Most came from Italy, Spain, Portugal, Germany, and Japan, although there were also migratory flows from Russia, Lebanon, Austria, Poland, Hungary, Switzerland, and Lithuania, among other countries from 1872 to 1972 (Demartini, 2010, 410).

19. Dunning hypothesized that investments have development stages. The first stage is pre-industrialization, in which there is no inflow or outflow of investments because there are no ownership advantages or sufficient locational advantages. The second phase is when the country develops its own infrastructure, human resources, and other locational advantages and upgrades its own competitive advantages. This is when Japan began to invest abroad seeking natural resources. The path goes to the next phase where companies no longer seek only natural resources, such as in the late 1980s when Japan sought restructuring and invested outwards to upgrade its domestic industry (Dunning, 2001, 182).
3. LITERATURE REVIEW

Empirical studies attempt to identify the determinants of capital flows or the relationship between people and capital movements based on existing theories. In this section, I will briefly address the theoretical approach of reasons capital moves abroad and then present varied empirical findings of a set of studies that examine the linkage of both immigration and overseas direct investments.

Plausibly, investors would be devoted to countries located closer to their home countries. Nevertheless, the cumulative flow of Figure 2 provides data that Japanese investments in Latin America and Asia are not substantially different during the period under analysis. Why is this, given that Latin America is on the opposite side of the globe? I will try to answer this question by briefly addressing Dunning’s theory that frames the question “why do companies invest abroad?” as it offers a more systematized way of thinking, while comprising the social aspect for overseas investments.

Why do companies invest abroad?

Dunning (2001) traced the evolution of the eclectic (OLI) paradigm considering the changes in FDI and the global economic activities, and stated that “no single theory can be expected to satisfactorily explain all forms of cross-border transaction in goods and service” (176). He indeed redefined the theory to account for the continuous changes in the global economy. Yet, 20 I considered Dunning’s theory, given his methodized way of thinking, while the author adopts the changes in the global economic relations beyond the fact that there is no comprehensive theory about FDI under classical and neoclassical paradigms (Whitman, 1981). The emphasis in the present paper is tied to the social benefit of Dunning’s OLI theory. 21 The OLI paradigm was developed in the mid-1950s when Dunning wrote about the differences in productivity of US companies in the UK. If productivity was only management related, then they should perform similarly. If there were no differences in performance, it was related to the ownership-specific effect. If US companies performed worse than the UK
the foundation of his proposition consists of three sets of simultaneous conditions explaining investments overseas: (1) ownership advantage, (2) locational advantages, and (3) intra-firm commercial benefits, which he shortened to OLI (Dunning, 2001). The first condition, ownership (O), explains overseas investments and is considered endogenous to the multinational investor because it depends on the company’s capabilities (Vintila, 2010; Campos and Kinoshita, 2008), for instance, advantages of new technology, greater access to financial capital, differentiated products, etc. (Dunning, 2001, 184; Denisia, 2010; Eden and Dai, 2010). The second condition, location (L), explains where regarding foreign investments and is an exogenous determinant to the foreign investor, as it depends on external factors. It is a key factor in determining the host country location according to the advantages relating to economic, political, and social benefits. Economic benefits relate to market size and low production, labor, and transport costs, etc., while political benefits include government policies and openness to trade, among others. Social advantages include cultural and social diversity or ethnic networks and the like. Dunning’s third condition (I) indicates how these companies organize their international activities, whether investors prefer to offer the right of production under license or franchising given the intellectual property rights issues (Denisia, 2010, 108; Eden and Dai, 2010, 13–34). However, he stated that the OLI theory does not offer a complete explanation of foreign investment. Alternatively, he suggested a methodology and a set of variables that might explain overseas investment given the fact that the significance of each advantage and the arrangements are context specific and may

competitors, then it was due to the non-transferable characteristic of the US economy. He found that US companies in the UK performed more poorly than those in the US but better than similar UK companies. To explain such productivity differences, he identified the partial ownership effect (or transferable assets) and partial location effect. In 1975, he included the internalization advantages to explain why companies prefer to invest abroad rather than selling the rights of production through the open market. 22. It is considered exogenous because it relates to factors outside the control of the investor.
vary across industries, regions, and investors (Krugman and Obstfeld, 1988, 158–163; Eden and Dai, 2010; Denisia, 2010).23

Moreover, how does this theory relate to this research? Following Dunning’s hypothesis, I focus on the locational advantages, namely, on the immigrants as a proxy of the social benefits of the theory for Japanese direct investments in the LAC region.

**Empirical studies combining immigration and FDI**

Cross-border movement of capital is a complex concept considering the evolving circumstances as well as the context-specific advantages and arrangements to invest abroad. Nonetheless, empirical studies attempt to investigate and endorse theoretical frameworks to improve our understanding of factor movements and their relationships. In fact, the literature examining the association between FDI and immigration is large and expanding, yet the direction of the effect varies. Some suggest that immigration of the sending country \( f \) in the host country \( i \) determines the \( f \)-outward FDI or \( f \) direct investment into \( i \). For instance, Clemens and Williamson (2000) used panel data for 34 countries, where 90% of British capital entered the US between 1894 and 1913 and found that Great Britain immigration was one of the fundamentals that determined British FDI. Others have suggested that immigrants in the host countries \( i(s) \) influence direct investment outflows of \( i(s) \) into country \( f \). Gao (2003) examined the role of the Chinese living abroad in 57 countries with flows of FDI from abroad into China over 1984–1997.

23. There are many other authors with partially similar or new theoretical approaches not mentioned in this paper. For example, Krugman and Obstfeld mentioned two sets of elements for the multinational corporation theory: location and internationalization. The former relates to the trade theory in which resources determine the location of production, whereas the latter is more likely related to technology transfer and vertical integration. Setting up a subsidiary might reduce problems of technological knowledge that are hard to measure and sell. A vertically integrated industry might have better coordination of demand and supply of the upstream and downstream firms, and less likelihood of price fluctuations. Hymer (1976) demonstrated that enterprises engage in vertical or horizontal integration overseas to maximize returns, but how they operate will depend on the market failure context. I have briefly summarized Dunning’s framework because it is broader and more organized than other theories and has organically absorbed the changes of the global economy.
in cross-sectional data and asserted that they are positively related. Alternative studies have found that immigrants in one country determine direct investment of the sending country in the immigrant’s country of origin. Groznik and Bhattacharya (2008) found in both panel and cross-sectional data tests for 64 countries that the size of the immigrant groups living in the US is positively related to the outward US FDI into the country of origin of these immigrant groups, in 1980, 1990, and 2000. Similarly, Javorcik et al. (2011) examined the association of migrants in the US and the US FDI in 56 countries in 1990 and 2000 and suggested that the presence of migrants in the US is positively correlated with US FDI outflows in the country of origin of those migrants.

As for the Latin American region specifically, previous research on the determinants of FDI into the region has identified macroeconomic and political variables aside from social ones. Sanchez and Martin (2014) found trade openness, low debt, and government stability as explanatory variables of FDI in Latin America in 1990–2010. Similarly, Bengoa and Sanchez-Robes (2003) suggested economic freedom as a key priority to policy makers in attracting FDI using panel data analysis for 18 Latin American countries. In another paper, Tonooka (2001) found that GDP as a proxy of market size, labor costs, etc., explains J-FDI into the region in the 1990s. Tuman and Emmert (1999) identified population as a proxy of market size, economic adjustment policies, and some other political variables as determinants of J-FDI in Latin America. Biglaiser and DeRouen (2006) examined the effect of economic reforms and other variables on FDI for 15 Latin American countries and suggested that countries that reduce risks of expropriation attract more foreign investment, given that the region has a long history of nationalization. Liargovas
and Skandalis (2012) examined 36 developing countries, including Latin America, and found that trade openness, measured as trade intensity, is important in attracting FDI.

From the perspective of the immigrants’ effect in economic relations, Gould (2001) empirically found that immigrants decrease barriers of incomplete information in several ways: introduction of a new language in the host country decreases communication barriers for investors, differentiated products increase information of immigrant’s preferences, and development of trust in the host country through immigrants may decrease negotiations and enforcement costs (303). He suggested that immigrant links play a key role in increasing bilateral trade relations with immigrants’ home countries. Likewise, knowledge of foreign markets may help to reduce such information gaps, particularly if the social and political institutions of the emigrant country and host country are distinct (Girma and Yu, 2002).

As mentioned previously, direct investment is a category of investment that requires “control or a significant degree of influence on the management of an enterprise” (Wacker, 2013, 4); hence, information-sharing ethnic migrants might have played a significant role to bridge the gap of incomplete information of investment decisions given the distinct social and political context of both regions (Wacker, 2013; Javorcik et al., 2011).

While previous authors found macroeconomic and political variables to be determinants of FDI in Latin America, as portrayed in Figure 9, the prospective effects of social aspects or ethnic networks as facilitators of investments has scarcely been investigated.

24. Trade intensity is measured as the ratio of exports, imports, and total trade to GDP.
25. Wacker refers to the FDI as a long-term relationship given its nature of entitlement. The multinational company directly or indirectly owns at least 10% of voting or ordinary shares, having a lasting interest and a significant degree of influence. In addition to indicating the long-term focus on FDI, Javorcik et al. suggested that immigrants may serve as channel of information transfer and of integration with the global economy through FDI.
In the following section, I focus on the social feature as a potential determinant, namely, Japanese immigrants, stemming from locational advantages of Dunning’s theory, in Figure 10.

Figure 9: Determinants of Foreign Direct Investment (FDI) in Latin America and the Caribbean (LAC).

Figure 10: Determinants of Foreign Direct Investment (FDI) in Other Parts of the World.
Research model and methodology

The basic question to be investigated is whether past Japanese emigration to LAC was conducive to J-FDI inflow into that region. The empirical analysis is based on cross-sectional data on 37 countries of LAC as well as two North American countries, the US and Canada, where most of the Japanese immigrants have relocated. The reasons for including the US and Canada are two-fold. First, both countries belong to the “New World” or European “settled” countries, just as Latin American countries and have received Japanese immigrants—Canada to a much lesser extent. Second, they were included to examine whether the size of the GDP or the absence of ODA in the North American countries had any effect on the determinants. The list of the countries and the data specificities are indicated in Appendix A.

The following research model will be used to estimate the relationship through OLS regression:

\[
\ln(J-FDI_{ji}) = \beta_1 + \beta_2 \ln(Im_{ji}) + \beta_3 \ln(POP_i) + \beta_4 \ln(GDP_i) + \beta_5 \ln(ODA_{ji}) + \beta_6 \ln(SFDI_s) + \\
\beta_6 \ln(USFDI_u) + \varepsilon,
\]

where subscripts \( j \) and \( i \) indicate Japan and the host country in the LAC region, respectively; \( s \) and \( u \) designate Spain and the US, respectively; \( J-FDI \) denotes total flow in millions USD over 1965–2004 from \( j \) to \( i \); \( Imm \) indicates the total number of immigrants from \( j \) to \( i \); \( POP \) is the population of \( i \) to account for host country population/country size in two periods (in the period between 1900 and 1945 and between 1945 and 2014); \( GDP \) is in millions USD as a proxy to market size of \( i \); \( ODA \) represents the total official development assistance flows in millions USD from \( j \) to \( i \), \( SFDI \) relates to the total inflow of Spanish direct investments in millions USD from \( s \) to \( i \), and \( US FDI \) shows the US direct investment flows in millions USD from \( u \) to \( i \). Appendix B
includes the descriptive statistics for all variables included in the regression. I used the arithmetic mean in all data for the estimations. Figure 11 depicts the present research model mechanics.

Figure 11: Mechanism of the Research Model.

**Dependent Variable: J-FDI**

The dependent variable is the *J-FDI* into the host countries in the period. A total of two variations will be analyzed: the nominal and the real *J-FDI* flows. Logarithm transformation was applied to *J-FDI* to correct the skewness from 4.22 to 0.7.\(^{26}\) The 10\(^{th}\) percentile of the values for the variables is zero; 10% of countries have not received *J-FDI* inflow. Hence, they are not randomly distributed, and the simple deletion may lead to sample selection bias and severe loss of statistical power. In this case, I follow Harding and Javorcik (2011), Benassy-Quere et al. (2007), and Osborne (2002) to circumvent this problem by adding 1 to all observations (i.e.,

---

\(^{26}\) Although it is not necessary for the variables to be normally distributed (only the errors are assumed to be normally distributed), when the variables are all near the normal distribution, the assumption of normally distributed errors is more plausible. Thus, the procedure is to correct skewness for the univariate distribution.
\[ \ln(fdi) + 1 \text{ instead of } \ln(fdi) \]. This transformation allows the use of all observations and accounts for some outliers, such as investments in Brazil, Mexico, and Panama in comparison with some other LAC countries. I have also added a smaller constant before applying logarithmic transformation as shown in Appendix C, Tables 4 and 5.

The second variation of the dependent variable is the real \( J-FDI \). The nominal \( J-FDI \) is deflated by the GDP deflator to account for the effect of inflation adjusted to the price series of 1990. This conversion may provide a consistent measurement across time for all countries given the fact that each country has its own price variations. The deflation was applied because the simple mechanics of \( J-FDI \) as a percentage of the GDP of the host countries resulted in heteroskedasticity according to the Breusch-Pagan test. This variable also enters the equation in the logarithmic form. The above two variations of \( J-FDI \) (nominal and real) are indicative of the size of the \( J-FDI \) into LAC countries during 1965–2004.

**Independent Variables: First and Second Wave and Total Immigrants**

The labor movement relates to the total stock of immigrants of both waves in the host country. As explained earlier, the immigration is divided in two waves: the first during 1900–1945 and the second during 1946–1993; likewise, I examine the relationship of each wave. In the alternative specification, the immigration of each wave is normalized by the host country population of each period. The means of normalization (immigrants to host country population

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27. Osborne (2002) recommended anchoring the minimum point at 1 for log transformation because of transformation across the number line. The effectiveness of the transformation decreases dramatically when it moves away from 1.
28. I follow Michalopoulos and Papaioannou (2012), who added 0.001 to account for the zeros in the variables. In their previous research, the authors added 1 and found similar results (11). I also found similar results in both grounds.
29. It could be deflated to the price series of any other year; I set the base year to 1990 and used the same base year for other variables of the estimation.
ratio) is a more reliable indicator of immigrant presence than the immigrant count per se, given the variability of countries’ size in terms of population. For example, Peru received 33,070 immigrants during the period 1900–1945. Brazil received a much larger number (188,985) in the same timeframe, while the average population of Peru and Brazil in the same period was 5.0 million and 29.8 million, respectively, generating a similar ratio of Japanese immigrants: 0.66% in Peru and 0.63% in Brazil. These variables are also logarithmically transformed after adding 1 into all datasets, given that some countries have no records of immigrants. By applying log transformation, the coefficient of skewness is adjusted from 4.0 to 0.90, and the coefficient of kurtosis decreases from 17 to 2, increasing the validity of the results (Sheppard, 2013). The same transformation was applied to each of the immigration waves.

The main hypothesis is that this variable is positively correlated with J-FDI since an increased ethnic network may increase opportunities for foreign investors.

Control Variables

I include economic and political variables from Dunning’s locational advantage as control variables. Previous studies on the determinants of FDI in Latin America have found GDP and population size to be significant variables; thus, I include them as proxies for economic benefits.\(^\text{30}\) From the political variants, I include J-ODA as well as Spain and US FDI in accordance with the rationale described below.

\[^{30}\] Other studies also found the significance of market size on FDI. In an econometric analysis for a set of 142 countries from 1980 to 1995, UNCTAD suggested that the country market size plays a determinant role in inward FDI (UNCTAD, 1998, 135-140). Moreover, Chiappini (2014) found that GDP as a proxy for market size is one of the determinants of Japanese outward FDI in the manufacturing sector.
**Population:** POP is given by the arithmetic mean of the host country population. I divide it in period 1 to get the arithmetic mean of the population between 1900 and 1945, and in period 2, I divide it to get the mean from 1946 to 2014. It is a proxy of country size and is also transformed in logarithm for skewness correction, given the fact that larger countries in South America, such as Brazil and Mexico are more populated than Caribbean countries like Belize and Aruba. In other words, country population tends to have a higher variance for large continental size; hence, the log transformation is reasonable to fit a linear regression model. As it intends to capture the demographic/country size of the host country, it is expected to be positively correlated; larger countries may attract more FDI according to Resmini’s (2000) previous study.

**Gross Domestic Product:** GDP is given by the arithmetic mean of the GDP level (in millions USD) to capture the potential of host country market size. Period 1 corresponds to the first wave, from 1900 to 1945, and the same rationale of ln(GDP+1) is applied due to unavailability of GDP data for many small Caribbean countries in this period. Period 2 covers 1946–2014, and the logarithmic transformation is applied. This variable is expected to have a positive sign since foreign investors expect to explore a larger market size (Chiappini, 2014, 11).

**ODA:** This variable concerns Japanese aid in the region and is also given in ln(ODA+1). The unit is in millions of USD, from 1969 to 2014. Foreign aid seems to be closely related to FDI since Japan has been supporting economic and social infrastructure development, human resource development, and institution building, to name a few, to contribute to the stability and ultimately enhance relations with foreign countries (MOFA, 2003). Japanese aid is intended to help the investment environment and foster direct investment where powerful actors pursue an economic agenda (Arase, 1994). As suggested by Arase (1994, 173), Japan’s ODA is “closely coordinated
with commercial agendas of private sector actors,” presumably a positive association between Japanese ODA and J-FDI is expected.

**Spain FDI:** I include average outward real direct investment from Spain into LAC in millions of USD, from 1993 to 2012 to account for capital account liberalization. Bengoa and Sanchez-Robles (2003) and Sanchez-Martin et al. (2014) found trade openness and economic freedom to be a measure of the degree of openness and government intervention, respectively, as determinants of FDI inflows in Latin America. Hence, to substantiate whether J-FDI is not driven by the political aspect of degree of openness and government intervention, I include FDI from Spain as a proxy to account for it. Given that some countries have not received FDI from Spain, this variable is given in ln(SFDI+1), and a positive association with J-FDI is expected.

**US FDI:** This variable is given in millions of USD from 1982 to 2014. It is also given in ln(UUSFDI+1) for some countries have not received direct investments, and it captures the degree of openness and liberalization of FDI policies in the LAC region under the same rationale of Spain FDI. For geopolitical reasons, the US has hegemonic dominance in the LAC region. Moreover, Japan relations with LAC could be related, given its “subordination”\(^\text{31}\) to the US interests; hence, a positive association is expected.

\(^{31}\) Since WWII, Japan has followed the US lead in a close economic, political, and military cooperation. The highest economic growth of Japan in economic history brought about debates and emphasis on Japanese aid. The US pushed Japan for more foreign aid equivalent to its growing economic power, and the country began to play a larger role in the developing countries, including Latin America (Stallings and Szekely, 1993, 7–9).
4. EMPIRICAL FINDINGS

The primary aim of this paper is to examine the association between Japanese immigrants and J-FDI in LAC. Econometric results of the log-log model using the OLS estimator presented in Tables 1 and 2 suggest that the relationship between these two factors is positive for the combined waves as well as for the first and second waves, and this result appears to be statistically significant in the two J-FDI variations (nominal and real).\textsuperscript{32} Because the variables are logarithmically transformed, the coefficients can be interpreted as elasticities.\textsuperscript{33}

Table 1 presents the results for nominal J-FDI as a measurement of average flow for the period in logarithm. Columns (1) and (2) show that the nominal J-FDI is positively related to the combined immigration, and both are statistically significant at the 5% level. Similarly, columns (3) and (4) confirm that the first wave of immigration is statistically significant at the 1% level, assuming that the null hypothesis corresponds to J-FDI having a zero-regression coefficient. Moreover, J-FDI is positively related and statistically significant at the 1% level for the first immigration wave normalized by the average host country population, as shown in columns (7) and (8). The second wave of immigration has a positive association, as indicated in columns (5) and (6) but is not significant except when it is normalized by the host country population in columns (9) and (10), where, contrary to the expectation, the coefficients are negative. The negative association is perhaps due to the much smaller number of immigrants either in Latin

\textsuperscript{32} Tables 4 and 5 show the results to which I added a smaller number (0.001) before applying the logarithm transformation. Both have presented similar results, differing mostly in terms of significance. I have thoroughly examined Tables 1 and 2 throughout the paper, as Osborne (2002) explained that, when log transformation is applied, the minimum point should be 1. This is because when we add a constant to a variable, only the mean changes, while the standard deviation, skewness, and kurtosis remain the same. However, the size of the constant we add affects any subsequent data transformation. When we use 1 as the minimum point, the variable will be anchored at a place where the subsequent transformation will have the optimal effect in the number line (4-5).

\textsuperscript{33} Elasticity refers to the ratio of the percentage change in one variable to the percentage change in another variable, that is, $\delta \log y / \delta \log x$ that have the units of percentage change.
America or North America, compared to the total immigration normalized by a much larger host
country population. Indeed, the host country population in LAC for the second period is much
larger than in the first period. For instance, from 1950 to 1955, the cumulated percentage
increase of population was 46.8% in Brazil, 58.4% in Mexico, and 75.3% in Colombia (United
Nations, 2015, 25). In numbers, from 1950 to 1955, which is part of the second period of this
study, this is an annual population increase of 1,736,000 in Brazil, 919,000 in Mexico, and
377,000 in Colombia (United Nations, 2015, 25). The result of a division of a much smaller
number of immigrants of the second wave in the numerator by the larger number of average host
country population in the denominator is greatly reduced.

Table 2 exhibits the results measuring the real J-FDI flows. Combined immigration has a positive
effect at the 5% level of significance in columns (1) and (2), while the first wave is also
positively related and significant at the 1% level, as shown in columns (3) and (4). The
coefficients of the second wave are also positive but not significant as per columns (5) and (6) as
well as when it is normalized by host countries indicated in columns (9) and (10). Columns (7)
and (8) indicate that the immigration of the first wave is positive and statistically significant at
the 1% level. To understand what this result means, for instance, column (4) suggests that if the
average immigrant number of the first wave increases by 1%, ceteris paribus, the average inward
real J-FDI in millions of USD is expected to increase by approximately 0.8%. Put in the context
of Mexico, as an illustration, this result indicates that the real J-FDI might increase an average of
USD 1.8 million with an average increase of three immigrants, holding all other factors constant
as well as after taking care of the transformations on both variables. Still, since this is an
outcome of a cross-sectional regression analysis of data of different countries at the same period, this is only predictive and does not imply a causal relationship.

Column 11 in both Tables 1 and 2 shows the estimation result when the two independent variables, the first and second wave immigrants, enter the model together. Given that this estimation could hide the true relationship of the first and second wave coefficients, I have analyzed the model with both waves separately so that the model could accurately predict each wave’s coefficients.

The upsurge in immigration happened between 1900 and 1945 (Figure 6), whereas the inflow of J-FDI began in the 1960s and became more prominent in the end of the 1980s (Figure 1). The historical order of the factors does not presuppose causality, but the empirical result indicates that immigration, what I regard as the social aspect of the OLI theory, was somewhat associated with J-FDI outflow to LAC. As per Gould’s (2001) empirical evidence that immigrants play a key role in fostering bilateral linkages, it indicates that Japanese immigration, or ethnic ties, can be a source of Japanese business connections. Horisaka (2003) articulated that they might have represented the basis of “exchange of information while promoting mutual understandings” (103–104). Horisaka (1993) further indicated that excluding some trading companies, most of the Japanese trade and investments in the region before World War II were linked to immigrant activities (51). The author also mentions Brazilians of Japanese immigrant descent creating small businesses in Japan and consequently prompting the interest of Japanese investors in the Brazilian market (Horisaka, 2003). By reversing this logic in the context of J-FDI and past Japanese immigration, the same can be assumed given the fact that human contact as a source of new information is the point at issue. Indeed, in the historical context of political and social
development, Armstrong (1976) suggested that ethnic networks imply “certain modernizing potential” (397) if “linguistic skills and network of personal relations were highly effective premodern devices for facilitating long-distance commerce” (396).

Hence, Japan’s approach of relocating its citizens in Latin America, through both sending and hosting countries’ agreements, was an essential device to leverage its future international economic relations with the region, as suggested by Endoh (2009) and other authors. These propositions combined with the results of the present study might further explain the significance of immigration in the context of J-FDI toward the LAC region.

As a concrete example of this association, the most popular country among the region to attract Japanese enterprises was Brazil. In response to the import-substitution policy pursued by the country by the 1960s, Japanese companies began to invest in the iron and steel, shipbuilding, machinery, and textile sectors in the country (Ozawa, 1974, 13). Following common sense, there are plenty of indications that foreign investment decisions are primarily economic: investors will seek ventures that yield the largest profit. Yet, as Clemens and Williamson (2000) quoted “it is often difficult to judge the quality of a possible investment in a distant land, especially when that land is inhabited by a different race of men, possessing different institutions, and speaking a strange tongue” (23). Then, in addition to the favorable policy environment and government mutual understandings, the presence of many Japanese immigrants and their descendants in Brazil might have served as an effective attraction to Japanese investors at that time. Such a magnetic force is also mentioned by Torres (1993) when he identified that the immigrants served as intermediaries for prospective investors (132) or by Ozawa (1974) who said that the immigrants “provided a basis for psychological security” for Japanese investors (128). Likewise,
Goldhamer (1972) remarked that immigrants’ contributions to Brazil are mostly in the areas of economic development and culture, while the political aspect has been little affected (98). This is because the Japanese immigration occurred for economic reasons rather than political motivations. Most immigrants in Brazil arrived as indentured laborers longing for a piece of land to produce. They began to develop profitable commercial farming of vegetables, fruits, pepper, and jute, among other produce suitable to the tropical climate after many trials and errors, meaning there were many narratives of both success and failure. Nevertheless, they also brought the experience of agricultural cooperatives, such as Cooperativa Agricola de Cotia (CAC) that grew into the largest and most successful cooperative in Latin America (Torres, 1993, 127). By becoming gradually independent from the indentured labor, these immigrants have developed their own means of living. During 1940–1960, there were several companies founded by Japanese immigrants: Coopercotia, Banco America do Sul, Cooperativa Sul Brasil, Moeda, Matsubara, Cotia Credito Rural, Takenaka, Oleos Pacaembu, Samsuy, Nakata, Motoradio, among others in various sectors, evidencing ample business opportunities in the domestic market (Exame Selecoes Economicas). Reasonably, these companies also encouraged Japanese direct investment in the country. A detailed anecdote is given by an immigrant who founded a food manufacturing company in 1963 in Brazil and sold the company to an American giant food company in 1997. In 2010, he launched a book in Japan called Gokiburi Keiei Hou Gekidou no Burajiru Shakai de Ikinokotta Shibutosha (Cockroach Management Law: Surviving Persistently in the Turbulent Brazilian Society). The book is a tutorial document describing his practical and vivid management experiences in Brazil, offering insights of measures and countermeasures for.

34. It bankrupted in 1994 due to excessive political interference as well as macroeconomic factors and management misalignment (Antonialli, 2000).
small and medium enterprises seeking to invest there. The author contended that, to live in a developing country where the law suddenly changes, bribes and tax evasion are common, and investors repeatedly suffer setbacks such as inflation and market upheavals, among others, entrepreneurs are required to have a life force like cockroaches that survive globally in any environment (Fukada, 2010).

From the evidence-based perspective, the association of immigration and FDI is consonant with the previously mentioned empirical findings of Foad (2012), Clemens and Williamson (2000), Buch et al. (2006), Tomohara (2015), and Bhattacharya and Groznik (2008), albeit the receiving and sending countries, analyzed period, and estimation strategy vary. Regarding specifically J-FDI, Hayase (2001) argued that there is a positive association between J-FDI and immigrant employment opportunities in East Asian countries, albeit it was not empirically tested.
Table 1: Coefficients of the ordinary least square (OLS) specifications for nominal Japanese foreign direct investment (J-FDI)

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<th>Independent Variables (ln)</th>
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<td>1st+2nd waves immig</td>
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<td>1st wave immig</td>
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<td>0.565***</td>
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<td>2nd wave immig</td>
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<td>0.0892</td>
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<td>1st wave immig/host pop</td>
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<td>1.267***</td>
<td>1.307***</td>
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<td>2nd wave immig/host pop</td>
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<td>OLI: Economic Variables</td>
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</tr>
<tr>
<td>Host pop period1</td>
<td>-0.807</td>
<td>-0.771</td>
<td>-1.118*</td>
<td>-1.218*</td>
<td>-0.618</td>
<td>-0.541</td>
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<td></td>
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<td>-1.263**</td>
</tr>
<tr>
<td>Host pop period2</td>
<td>-0.843</td>
<td>-0.820</td>
<td>-0.393</td>
<td>-0.191</td>
<td>-1.147*</td>
<td>-1.191</td>
<td></td>
<td></td>
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<td></td>
<td>(0.576)</td>
</tr>
<tr>
<td>GDP period1</td>
<td>0.195*</td>
<td>0.197*</td>
<td>0.159</td>
<td>0.157</td>
<td>0.192*</td>
<td>0.170</td>
<td>-0.0710</td>
<td>-0.0477</td>
<td>-0.0925</td>
<td>-0.0816</td>
<td>0.132</td>
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<tr>
<td>GDP period2</td>
<td>1.526***</td>
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<td>1.195***</td>
<td>1.836***</td>
<td>1.863***</td>
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<tr>
<td>J-ODA</td>
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<td>-0.233</td>
<td>-0.167</td>
<td>-0.274</td>
<td>-0.0316</td>
<td>-0.0506</td>
<td>-0.619**</td>
<td>-0.723**</td>
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<td>-0.0392</td>
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<td>0.0131</td>
<td>0.00813</td>
<td>-0.100</td>
<td>0.0207</td>
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<td>US real FDI</td>
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<td>-0.00421</td>
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<tr>
<td>Constant</td>
<td>9.966***</td>
<td>10.45***</td>
<td>9.333***</td>
<td>9.788***</td>
<td>9.061***</td>
<td>8.867***</td>
<td>0.646</td>
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<td>-2.778</td>
<td>-1.965</td>
<td>8.583***</td>
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<td>38</td>
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<td>R-squared</td>
<td>0.784</td>
<td>0.815</td>
<td>0.806</td>
<td>0.849</td>
<td>0.754</td>
<td>0.774</td>
<td>0.556</td>
<td>0.633</td>
<td>0.442</td>
<td>0.503</td>
<td>0.814</td>
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</table>

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1. All variables are in logarithmic format. FDI: foreign direct investment; Immig: immigration; OLI: (1) ownership advantage, (2) locational advantages, and (3) intra-firm commercial benefits; GDP: gross domestic product.
Table 2: Coefficients of the ordinary least square (OLS) specifications for the real Japanese foreign direct investment (J-FDI)

<table>
<thead>
<tr>
<th>Independent Variables (ln)</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
<th>(11)</th>
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<tr>
<td>OLI: Social Variables</td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>1\textsuperscript{st}+2\textsuperscript{nd} waves immig</td>
<td>0.320**</td>
<td>0.563**</td>
<td>(0.149)</td>
<td>(0.239)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1\textsuperscript{st} wave immig</td>
<td>0.720***</td>
<td>0.827***</td>
<td>(0.238)</td>
<td>(0.238)</td>
<td>0.822***</td>
<td>(0.286)</td>
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<tr>
<td>2\textsuperscript{nd} wave immig</td>
<td>0.236</td>
<td>0.184</td>
<td>(0.247)</td>
<td>(0.267)</td>
<td>-0.175</td>
<td>(0.264)</td>
<td></td>
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</tr>
<tr>
<td>1\textsuperscript{st} wave immig/host pop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.111***</td>
<td>(0.595)</td>
<td>2.222***</td>
<td>(0.599)</td>
<td>0.0387</td>
<td>0.00893</td>
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</tr>
<tr>
<td>2\textsuperscript{nd} wave immig/host pop</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>(1.322)</td>
<td>(1.409)</td>
</tr>
<tr>
<td>OLI: Economic Variables</td>
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<tr>
<td>Host pop period1</td>
<td>-0.807</td>
<td>-0.954</td>
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<td>-1.662</td>
<td>-0.578</td>
<td>-0.578</td>
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<td></td>
<td>-1.517*</td>
<td>(0.891)</td>
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<tr>
<td>(0.573)</td>
<td>(1.062)</td>
<td>(0.861)</td>
<td>(0.998)</td>
<td>(0.925)</td>
<td>(1.159)</td>
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<td></td>
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</tr>
<tr>
<td>Host pop period2</td>
<td>-0.843</td>
<td>-1.220</td>
<td>-0.544</td>
<td>-0.222</td>
<td>-1.744*</td>
<td>-1.810</td>
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<td>-0.373</td>
<td>(0.997)</td>
</tr>
<tr>
<td>(0.616)</td>
<td>(1.139)</td>
<td>(0.954)</td>
<td>(1.102)</td>
<td>(0.977)</td>
<td>(1.224)</td>
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</tr>
<tr>
<td>GDP period1</td>
<td>0.195*</td>
<td>0.184</td>
<td>0.106</td>
<td>0.120</td>
<td>0.169</td>
<td>0.159</td>
<td>-0.189</td>
<td>-0.156</td>
<td>-0.216</td>
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<td>(0.0983)</td>
<td>(0.165)</td>
<td>(0.143)</td>
<td>(0.148)</td>
<td>(0.162)</td>
<td>(0.184)</td>
<td>(0.167)</td>
<td>(0.181)</td>
<td>(0.198)</td>
<td>(0.228)</td>
<td>(0.149)</td>
<td></td>
</tr>
<tr>
<td>GDP period2</td>
<td>1.526***</td>
<td>1.441**</td>
<td>1.305**</td>
<td>1.079*</td>
<td>1.991***</td>
<td>2.033***</td>
<td>0.177</td>
<td>0.0257</td>
<td>0.559</td>
<td>0.491</td>
<td>1.316**</td>
</tr>
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<td>(0.324)</td>
<td>(0.562)</td>
<td>(0.487)</td>
<td>(0.526)</td>
<td>(0.482)</td>
<td>(0.558)</td>
<td>(0.389)</td>
<td>(0.421)</td>
<td>(0.451)</td>
<td>(0.515)</td>
<td>(0.492)</td>
<td></td>
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<tr>
<td>OLI: Political Variables</td>
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<td></td>
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<tr>
<td>J-ODA</td>
<td>-0.146</td>
<td>-0.321</td>
<td>-0.228</td>
<td>-0.382</td>
<td>-0.0514</td>
<td>-0.0836</td>
<td>-0.817**</td>
<td>-0.995**</td>
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<tr>
<td>(0.214)</td>
<td>(0.384)</td>
<td>(0.306)</td>
<td>(0.342)</td>
<td>(0.345)</td>
<td>(0.414)</td>
<td>(0.356)</td>
<td>(0.401)</td>
<td>(0.427)</td>
<td>(0.511)</td>
<td>(0.313)</td>
<td></td>
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<tr>
<td>Spain real FDI</td>
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<td>0.346*</td>
<td>0.258*</td>
<td>0.310*</td>
<td>0.403**</td>
<td>0.425*</td>
<td>0.222</td>
<td>0.425*</td>
<td>0.358</td>
<td>0.501*</td>
<td>0.242</td>
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<tr>
<td>(0.104)</td>
<td>(0.193)</td>
<td>(0.152)</td>
<td>(0.175)</td>
<td>(0.162)</td>
<td>(0.210)</td>
<td>(0.186)</td>
<td>(0.229)</td>
<td>(0.215)</td>
<td>(0.285)</td>
<td>(0.155)</td>
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<td>US real FDI</td>
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<td>-0.0859</td>
<td>-0.0288</td>
<td>-0.245</td>
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</tr>
<tr>
<td>(0.135)</td>
<td>(0.123)</td>
<td>(0.123)</td>
<td>(0.149)</td>
<td>(0.155)</td>
<td>(0.192)</td>
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<td></td>
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</tr>
<tr>
<td>Constant</td>
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<td>17.88***</td>
<td>14.90***</td>
<td>16.79***</td>
<td>14.92***</td>
<td>16.06***</td>
<td>1.949</td>
<td>4.708</td>
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<td>38</td>
<td>32</td>
<td>38</td>
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<tr>
<td>R-squared</td>
<td>0.784</td>
<td>0.755</td>
<td>0.747</td>
<td>0.800</td>
<td>0.679</td>
<td>0.702</td>
<td>0.545</td>
<td>0.616</td>
<td>0.366</td>
<td>0.405</td>
<td>0.751</td>
</tr>
</tbody>
</table>

Standard errors in parenthesis, *** p<0.01, ** p<0.05, * p<0.1. All variables are in logarithmic format. FDI: foreign direct investment; Immig: immigration; OLI: (1) ownership advantage, (2) locational advantages, and (3) intra-firm commercial benefits; GDP: gross domestic product.
There were no significant differences between the standard and robust errors in the regression results; thus, the variance is implied to be homoscedastic. For instance, the chi-square from the Breusch-Pagan test was low: 0.01 for the fitted values of FDI flow with the p-value of the F-test at 0.93; therefore, the null hypothesis of homoscedastic variance is accepted.\textsuperscript{35} Similarly, the chi-square for fitted values of average nominal J-FDI was 0.34 with a p-value of 0.56, and the chi-square for fitted values of real J-FDI was 1.60 with a p-value of 0.20. In addition, the log transformation of the dependent and independent variables reduces heteroscedasticity (Wei, 2000, 4).

Examining the control variables, the \textit{GDP} of the second period as a proxy of market size is positively correlated and significant in all columns except in columns (7) and (9) in Figure 5A, and columns (7), (8), (9), and (10) in Figure 5B. The positive association and significance is consistent with Chiappini (2014), who found that GDP strongly increases J-FDI in the manufacturing industry (11). Host country population presents significance in few specifications, and contrary to what was expected, the coefficients are negative. The result is inconsistent with that of Resmini (2000) who found that population as a proxy of absolute market size is statistically significant in determining FDI in Central and Eastern Europe. The inconsistency might be because a significant share of J-FDI in the present study is also distributed in various small Caribbean countries with fewer populations than other larger South American countries. For instance, Argentina has much larger population than Curacao, but both countries have received equivalent volumes of J-FDI. Similarly, Colombia’s population is much larger than

\textsuperscript{35} In the Breusch-Pagan test, a low chi-square and correspondingly high \textit{p}-value imply that the error variance is not heteroscedastic enough to cause problems with test statistics.
Barbados, yet the average amount of J-FDI received is comparable. Hence, in the aggregate of several small Caribbean countries, the size of population is not necessarily positively associated with J-FDI. I also estimate the model excluding the variables with high likelihood of collinearity, and the results do not substantially change (see Table 6).36 The regression results also evidence that J-ODA is negatively correlated and shows a 5% significance level in columns (7) and (9) in both nominal and real J-FDI variations. Notwithstanding, the result is not consistent with those of the US Congress (1997) and Arase (1994); however, this may be in line with Tuman et al.’s (2009) empirical findings covering 86 developing countries including Latin America for 1979–2002, who argued that Japanese ODA disbursements have little relationship with mercantilist interests. Their results show that J-ODA concentrates in countries that lack oil and do not trade with Japan. Hence, the negative correlation between J-ODA and J-FDI might be explained by the many countries in the Caribbean that have received J-ODA and no J-FDI. Additionally, regarding the findings by Selaya and Sunesen (2012), J-ODA might have replaced investments that private Japanese investors would have taken in competing areas, such as tourism, agriculture, manufacturing, and banking. According to the authors, complementarity with FDI happens when aid is toward social and economic infrastructure, such as education, health, energy, transportation, and communication (Selaya and Sunesen, 2012). The economic return of such public goods is uncertain; therefore, private investors are unwilling to provide it or would supply it at a high interest rate, resulting in the substitutability of foreign aid for private investment (The Congress

36. I follow Berry and Feldman (1985, 43) to test for multicollinearity, regressing one independent variable on all other independent variables, and checked the R²’s for these regressions. Most resulted in low R²’s (the largest at 0.54), except for population periods 1 and 2, which resulted in an R² of 0.97 and a moderate-to-high R² when I regressed GDP period 1 on population, which produced an R² of 0.78. Accordingly, I estimated the model with and without the most highly correlated variables and presented one of the results in the Appendix C, Table 6. The estimations are mostly consonant with those presented in Tables 1 and 2; thus, I am confident that the results are not seriously biased by multicollinearity.
of the US, 1997). Nonetheless, further analysis on the association of J-FDI and J-ODA is suggested for LAC countries.

Overall, the main findings suggest that the stock of immigrants or ethnic network group ties played a role in attracting J-FDI into LAC countries if one considers that such a small percentage of immigrants have had such a significant effect in terms of investment in the region. A corresponding role has also been theoretically suggested by the United Nations when the organization conveys that international migration could possibly be a positive force for economic and social development, as it offers readjustments of labor market forces as well as accelerates the knowledge transfer (new ideas and technologies); (United Nations, 2015, 6).

Robustness checks

To check the robustness of the results, I included Spain FDI and US FDI in the regression. Both countries’ FDIs were included as a proxy of economic freedom in the host country because, historically, LAC restricted foreign companies to participate in sectors considered strategic to the economy, while placing control on the profit remittances (Edwards, 1995, 179, 246).

During the 1990s, which was a period of newly liberalized markets, privatizations were the main mechanism of attracting FDI, and Spain heavily invested in the LAC region in the service sectors: telecommunications, finance, and energy (ECLAC, 1998, 18–23). Hence, Spain FDI measures the extent to which immigration still matters when adding a competing force engaging in activities in the host country influenced by the same set of factors: economic freedom or country openness. Contrary to expectation, this variable presents a negative association in most of the nominal J-FDI variations, and it is not significant. It presents a positive coefficient with
real J-FDI and significance at the 5% level in column (5) and 10% significance in most of the columns. Nevertheless, this variable does not change the coefficients of the regression.

The US, on the other hand, is traditionally the largest foreign investor in LAC. In the 1970s and 1980s, US investments were concentrated in the manufacturing sector (food and beverage processing, chemicals, machinery, and equipment) mostly to fulfill the domestic demand. Further, the US may have exerted some influence in the relationship of Japan and LAC countries, given the US-LAC geographical and historical relations (Stallings and Szekely, 1993, 3–5). Surprisingly, US FDI is negatively associated and does not present any significance in all variations, offsetting the arguments of Japan’s subordination to the US and likely association of Japanese multinationals with the US over LAC.

My concern about including US FDI is that it could have generated the problem of overfitting, given the fact that I am supporting the model based on least squares by increasing the variables without incrementing the number of observations. Nevertheless, the coefficients of the results have not changed from the original model, and this may support that the outcome of the model is not driven by the openness of the country.

It was impossible to perform a fixed effect of cross-sectional time series due to the unbalanced panel variables, namely, the J-FDI inflow started in 1964, while the immigrants of the second wave are available for few countries only in a very few years. In Argentina and Brazil, the data are complete until the 1970s, but there are interruptions of immigrant entry in Chile, Colombia, Peru, Paraguay, Uruguay, Mexico, Venezuela, Dominican Republic, and Costa Rica, while there is no entry of immigrants in the remaining 28 countries, generating various missing numbers.
Hence, all countries do not have data for all years. Moreover, the big upsurge of immigration occurred in the first wave, as shown in Figure 6. The extremely unbalanced panel variable unfortunately prevented exploring the fixed effects.

5. CONCLUSION

Given the significant factor movements from Japan to Latin America, I present evidence that J-FDI in LAC region is positively related to Japanese immigrants, and the result is robust in several OLS regression specifications with significance especially for the combined immigration, or when the first and second waves are merged, the first wave of immigrants as well as for the first wave of immigration normalized by the host country population. The second wave is also positively correlated. The positive association is consonant with the main hypothesis that ethnic networks increase opportunities for foreign investors. It provides empirical support for Goldhamer (1972), Ozawa (1979), Kunimoto (1993), Horisaka (1993), and Endoh 2009), among other authors who implied positive inter-relations between these two variables. It provides partial evidence to the locational benefits of the OLI paradigm, particularly, the social aspect of immigrants. Furthermore, it is likewise consistent with Gould’s empirical findings that immigrant links have historically been significant in increasing international economic relations.

Overall, FDI involves investors’ long-term commitment in a foreign country. It encompasses a significant amount of coordinated assets and resources between countries to satisfy multinational requirements. As indicated by Dunning, it involves a complex set of a company’s own capabilities and the host country political, economic, and social advantages; hence, it is difficult to precisely determine the most decisive determinant. Nonetheless, this paper supports studies on
the role of immigrants as a contributory variable in FDIs, as did Clemens and Williamson (2000), Gao (2003), Groznik and Bhattacharya (2008), Javorcik et al. (2011), and others.

Japanese immigration has happened in the span of 50 years, mostly from the 1900s to late 1950s, whereas J-FDI inflow into LAC ensued subsequently during contemporary times in the 1960s. Yet, J-FDI evolved to contemporary times according to the specific context of host countries, but somewhat followed where Japanese immigrants had settled. Retrospectively, J-FDI was a long-term commitment and has unfolded from natural resource extraction to manufacturing and services, pursuant to the changes in the global market as well as Japanese investment development stages. This empirical analysis contributes to the evidence that people and capital movements are related and suggests that, historically, both variables have fused and evolved.

While the result indicates the importance of immigration in the study of FDI, performing a panel data analysis was impossible due to differences in sources of the cross-sectional data. Notwithstanding this shortcoming, it holds important implications for further investigation. First, it suggests that past human movement may be a pertinent variable for capital movements. Second, it contributes to the debate on the effect of labor movement over capital flows, more specifically, Japanese immigration over J-FDI. Third, it partially endorses the social benefit derived from locational variables of Dunning’s OLI paradigm.
APPENDIX A: DATA

Countries:

Latin America and the Caribbean (in alphabetical order): Antigua and Barbuda, Argentina, Aruba, Bahamas, Barbados, Belize, Bolivia, British Virgin Islands, Brazil, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Curacao, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Dominican Republic, St. Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad Tobago, Uruguay, and Venezuela.

North America: Canada and the USA.

Foreign Direct Investment:


Direct investment is a category of international investment that reflects the objective of a resident in one economy (the direct investor) obtaining a lasting interest in an enterprise resident in another economy (the direct investment enterprise)...an ownership criterion of 10 percent of the ordinary or voting shares of the direct investment enterprise is used to define or establish a direct investment relationship. (Patterson et al., 2004, 19)

Once the direct investment is established, the equity capital, reinvested dividends, and intercompany debt are recorded on a net basis, roughly as asset for the investor country and as liability for the hosting country. Thus, the global sum of Japanese outward flow recorded by the direct investor government should correspond to the global sum of FDI inflow in the statistics of the host countries in Latin America, since the debit of Japan is the credit of the host countries. However, there are asymmetries, not only because of coverage in gaps and distinct definitions
but also differences in accounting procedures and legal constraints, among other (Carson, 2003, 20–21; Patterson et al., 2004, 14). Considering these constraints and the availability of long-term data from Jetro, I have used Japanese outflow data rather than individual host countries’ FDI inflow data. Moreover, when stock data are missing, cumulative FDI flows can be used to fill this gap, being aware that price changes, exchange rates changes, and other adjustments, such as reclassifications, are not considered (Patterson et al., 2004, 23; Wacker, 2013, 5).

I used real J-FDI or nominal J-FDI deflated to make them comparable across countries. The conversion from nominal FDI to real FDI was operated using the price index for inflation from the World Bank national accounts data. The index gives the rate of price change in the economy. According to the World Bank, the GDP implicit deflator is the ratio of GDP in current local currency to GDP in constant local currency. Hence, I re-indexed the price index (GDP deflator) by dividing all GDP deflators by the price index of 1990 and multiplied by 100. Next, I calculated the decimal form of the price index and divided the nominal FDI by the price index in decimal form to get the real FDI.

Nominal data are used for the Cayman Islands, British Virgin Islands, and Curacao, as there were no GDP deflator data in any of the years. Moreover, Aruba is indexed to 1995, and Haiti is indexed to 1997, the first years in which the GDP deflator was available for these two countries.

**Total Immigration Cumulative Count of First Wave (Period 1900–1945):**

Data come from “Kaigai Ijuu Toukei” from JICA, based on the Empire Statistical Yearbook; number of passports subscribed and immigration statistics, from the Ministry of Foreign Affairs and Trade Bureau; Overseas travelers and Japanese overseas resident statistics, from the Ministry of Foreign Affairs and Trade Bureau; Emigration Statistics, from the Colonization Bureau of the Ministry of Colonial Affairs; Colonization Statistics, from the Colonization Bureau of the
Ministry of Colonial Affairs; and Immigrant visitors Statistics, from the Ministry of Foreign Affairs of the United States Bureau.\(^{37}\)

**Total Immigration Cumulative Count of Second Wave (Period 1946–1993):**

Data come from “*Kaigai Ijuu Toukei,*” JICA, which is based on Migrant Statistics, Immigration Consultation Statistics, Overseas Development Youth Statistics. It records the number of overseas emigrants between 1947 and 1993 and summarizes statistics on overseas migration. Migrant statistics are based on the aggregate number of migrant counting basis handled by JICA. Emigrants to South America were sent overseas by ship starting with the “Santos Maru” on December 28, 1952 and ending with the “Nippon Maru” on July 1973. From July 1973, emigrants went overseas by air transportation. South American migrants are those who immigrated receiving the issuance of eligibility notification by JICA. Canadians immigrants are those who received the card of immigration (with provisional eligibility pass) (JICA 1993).

**Population:**

Host country population for Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay, Venezuela, Bolivia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Puerto Rico, and Trinidad and Tobago is in thousands of persons from 1900 to 2009 and comes from Angus Maddison (2010). Population data between 2010 and 2014 comes from ECLAC. The primary source for Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay, Venezuela, Bolivia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama, and Paraguay is CELADE: Latin American and Caribbean Demographic Centre, ECLAC Population Division - Population database, the 2015 revision [http://www.eclac.cl/celade/proyecciones/basedatos_BD.htm](http://www.eclac.cl/celade/proyecciones/basedatos_BD.htm). For Jamaica, Puerto Rico, and Trinidad and Tobago, UN - Population Division of the Department of Economic and Social

\(^{37}\) JICA. 1994. “Overseas Migration Statistics 1952-1993” provides that the Ministry of Colonial Affairs endured from 1929 to 1942 and only provided advice and cooperated with private emigration sponsorship companies.

Population of Barbados, Cayman Islands, Bahamas, British Virgin Islands, Belize, Curacao, Aruba, Guyana, Suriname, Antigua and Barbuda, Grenada, St. Kitts and Nevis, St. Vincent and the Grenadines, and St. Lucia from 1950 to 2014 is in thousands of persons and comes from ECLAC, updated on October 19, 2015. The primary source of ECLAC data is from UN – Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2015 Revision

ODA:

Official development assistance relates to the net expenditure in millions of USD from the Ministry of Foreign Affairs of Japan. The data come from the Ministry of Foreign Affairs (MOFA). The consultation for each country was available at:

I consider the net expenditure of ODA, which includes the grant aid, technical cooperation, total government gift, and government lending. The amounts of loans and grants are the majority based on the exchange notes, after deducting the repayment amount, if any, and thus net expenditures.

GDP:

Period 1 GDP (1900–1945) is in million (1990) USD from Angus Maddison’s Historical Statistics of the World Economy: 1-2008 AD. Complete data was available for Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay, and Venezuela. The data is available from 1920 onwards for Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua. Cuba has data from 1929; Jamaica has data from 1938, Ecuador and Paraguay from 1939, and Bolivia, Panama, and Haiti from 1945. The primary source of Angus Maddison is referred as follows:

Period 2 GDP data is from the World Bank Statistics, at current millions of USD, given that Angus Maddison is not complete for many Caribbean countries. It was retrieved from http://databank.worldbank.org/data/reports.aspx?source=2&series=NY.GDP.MKTP.CD&country. Only two countries, the British Virgin Islands and Curacao, come from UNDP statistics given the unavailability of World Bank data. The issue is that it is given in 2005 millions of USD, instead of current millions of USD. Nonetheless, both data are included, as it makes more sense than zeroing GDP levels of those countries.

**Spanish FDI:**

Inward FDI into Latin America and North America was obtained from DataInvex, \textit{Estadisticas de inversion espanola en el exterior}, from Gobierno de Espana, Ministerio de Economia, \textit{Industria y Competitividad}, from the website: http://datainvex.comercio.es/CabeceraPersonalizada.aspx?action=drilldown&eje=Filas&valor=LATINOAMERICA&unvalor=%5BPa%C3%ADs%20Inmediato%5D.%5BLATINOAMERICA%5D&nivel=0&otroValor=total&otroNivel=0&id=1

The data obtained was in thousands of euros for: Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, St. Kitts and Nevis, Suriname, Uruguay, Venezuela, the US, and Canada from 1993 to 2012. Hence, they were converted into current USD in millions using the official exchange rate from World Bank World Development Indicators. Then, the data were converted to real values using the price index for inflation using the same methodology I used for J-FDI, setting the year basis in 1990.

**US FDI:**

Inward US FDI comes from the Bureau of Economic Analysis of the US Department of Commerce in millions of USD from 1982 to 2014. The data type is US direct investment abroad, US direct investment position abroad on a historical cost basis, and aggregate totals in million dollars, retrieved from the website https://www.bea.gov/iTable/index_MNC.cfm. The data were
converted to real values using the price index for inflation according to the same methodology I used for J-FDI, setting the year basis in 1990.
APPENDIX B: DESCRIPTIVE STATISTICS

Table 3: Descriptive Statistics

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<th>SD</th>
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<th>Max</th>
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APPENDIX C: OLS REGRESSION RESULTS

Table 4: OLS regression results adding 0.001 as constant for Japanese Foreign Direct Investment (J-FDI) Nominal Flow

Table 5: OLS regression results adding 0.001 as constant for J-FDI Real Flow

Table 6: OLS regression results periods 1 and 2 separately.
**Table 4: Coefficients of the ordinary least square (OLS) specifications for the nominal Japanese foreign direct investment (J-FDI)**

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<th>Independent variables (ln)</th>
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<td>0.147</td>
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<td>0.202*</td>
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<td>-0.475*</td>
<td>-0.472**</td>
<td>-0.538**</td>
<td>-0.436*</td>
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Standard errors in parenthesis, *** p<0.01, ** p<0.05, * p<0.1. All variables are in logarithmic format. FDI: foreign direct investment; Immig: immigration; OLI: (1) ownership advantage, (2) locational advantages, and (3) intra-firm commercial benefits; GDP: gross domestic product.
Table 5: Coefficients of the ordinary least square (OLS) specifications for the real Japanese foreign direct investment (J-FDI)

<table>
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<tr>
<th>Independent variables (ln)</th>
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Standard errors in parenthesis, *** p<0.01, ** p<0.05, * p<0.1. All variables are in logarithmic format. FDI: foreign direct investment; Immig: immigration; OLI: (1) ownership advantage, (2) locational advantages, and (3) intra-firm commercial benefits; GDP: gross domestic product.
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Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1, All variables are in logarithmic format. FDI: foreign direct investment; Immig: immigration; OLI: (1) ownership advantage, (2) locational advantages, and (3) intra-firm commercial benefits; GDP: gross domestic product.
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