GLOBALIZATION OF LATIN AMERICA AND MIGRATION TO THE U.S.

by

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ABSTRACT

CONRAD KIM. Globalization of Latin America and Migration to the U.S. (Under the direction of Dr. STEPHANIE MOLLER)

Recently, the surging inflow of immigrants at the southern border of the United States has gathered political attention, questioning the long-term viability of receiving immigrants without any restrictions or limitations. Furthermore, U.S. citizens are increasingly dissatisfied with the government's current handling of immigration (Dunn 2023). Categorically denying immigrants' entrance into the U.S. by means of deportation of the undocumented, reinforcement of the border patrol, and construction of walls along the border may be seen as quick, intuitive solutions, but the massive increase in border enforcement and the exponential increase in deportations were not successful in preventing the entry of millions of unauthorized immigrants after 1965 (Redburn, Reuter, and Majmundar 2011; Massey and Pren 2012). Therefore, it is necessary to examine the causes of the huge influx of immigrants to address immigration issues ethically, effectively, and fundamentally. I examine how 1) industrialization, as measured by employment in agriculture, is associated with increasing numbers of incoming immigrants in the U.S., 2) globalization, as measured by Foreign Direct Investment (FDI) in Latin American countries, and 3) the level of Latin American countries' economic development, as measured by Gross Domestic Product (GDP) per capita, relate to Latin American immigration flow into the U.S. This paper uses the World Bank's World Development Indicators dataset and the Department of Homeland Security's Yearbook of Immigration Statistics to study how neoliberal practices, as manifested in the amount of FDI and transition from an agrarian to an industrial economic structure, create social instability conducive to migration from Latin America to the U.S.

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CHAPTER 1: INTRODUCTION

International immigration cannot be understood in regional isolation, as factors leading to immigration are often complex, interrelated, and both endogenous and exogenous to destination countries. In contrast, the prevailing, essentialized notion of state sovereignty, which coincided with the rise of the Western concept of modernity and the Enlightenment, is based on exclusionary principles that make a clear distinction between deserving nationals and undeserving nonnationals (Trouillot 2015; Wynter 2003). Postcolonial and feminist scholars alike call for relational ways of thinking about social problems and avoid analytic bifurcation characterized by a sharp separation between European metropoles and their former colonies (Said 1978; Go 2016; Spivak 1981; Ahmed 2017; Smith 1997). Taking a relational approach, I ask the following research questions: 1) How does industrialization in Latin America, as measured by employment in agriculture, affect the number of migrations (including expulsions) into the U.S.? 2) How is globalization in Latin America, as measured by Foreign Direct Investment (FDI), associated with the inflow of Latin American migrants into the U.S.? 3) How is the level of Latin American countries' economic development, as measured by Gross Domestic Product (GDP) per capita, related to Latin American migration flow into the U.S.?

Contemporary literature across history and social sciences agrees that both nation and race are socially constructed concepts (Harari 2015; Omi and Winant 2014). Racism and nationalism are closely interlinked social processes. In the context of United States history, Indigenous Studies acknowledge that the U.S. was founded on the violent displacement of Native Americans (McKay, Vinyeta, and Norgaard 2020). Perceiving migration as a means of decolonization, Achiume (2019:1510) argues that "economic migrants of a certain kind have compelling claims to national admission and inclusion in countries that today unethically insist

on a right to exclude them" and points out global interconnection through the colonial and neocolonial history of Europe.

Unlike colonialism, which involves direct seizure of foreign lands and human bodies, neocolonialism manifests itself through neoliberal practices. Neoliberal ideology emphasizes limited government interventions in the capitalist market and a minimized welfare state. Klein (2007) documents how the U.S. played a central role in fundamentally reshaping the economic system of developing countries in Latin America through neoliberal foreign policies in the 20th century. In this paper, I argue that the forced assimilation of weak, peripheral states into the world capitalist system through neoliberal practices resulted in social instability, eventually generating social environments conducive to migration. In the following paragraphs, I outline the current knowledge regarding the international flow of migration and present some background on emigration from Latin America to the U.S.

CHAPTER 2: LITERATURE REVIEW

2.1 Neoclassical Theory on Migration

Even when scholars investigate political constraints, individual beliefs, and cultural factors leading to migration, they still acknowledge the primary importance of the economic motivations of migrants (Ryo 2013). The neoclassical theory of migration delineates the economic factors that lead to migration. There are micro and macro approaches to the neoclassical theory of migration. The macro theory posits that geographical wage differences based on differing labor supply and demand cause the movement of both labor and capital. Such structural factors at the macro level affect how individuals make decisions to migrate (see Massey et al. 1993 for a comprehensive review of migration theory). The micro approach of neoclassical theory assumes that people are economically rational beings who make decisions to immigrate based on cost-benefit analysis (Borjas 1989).

Weaknesses of the neoclassical theory can be summarized as follows: 1) the unit of analysis is limited to individuals even when migration decisions can be made by larger units such as families, 2) it solely focuses on economic explanations while ignoring other relevant political and cultural factors such as the importance of social status in determining wages and government regulatory immigration policies, 3) it overlooks power imbalances and the history of exploitative relationships between strong core countries and weak peripheral states.

To complement the shortcomings of the neoclassical theory, the new economics theory on migration assumes that migration decisions are made by larger units of people whose actions are motivated not only by economic maximization but also by risk minimization. The lack of insurance and credit programs, which is associated with high risk in case of crop harvest failure due to natural disasters, in less-developed countries compels people living in those countries to diversify their income sources, and migrant remittance is one way of variegating income sources. The new economics theory mainly challenges the neoclassical theory's assumption that income is a homogenous entity.

The U.S. offers competitive wages compared to developing countries in Latin America, making it an ideal destination for migration. The Bracero Program (1943-1964) recruited a large number of Mexican laborers (about 10 million people), and the family reunion provision in the civil rights legislation of the 1960s led to chain migration. Such movement of people can be understood in the context of both neoclassical theory and the new economic theory that takes family as a unit of analysis in migration studies.

2.2 Dual Labor Market Theory

Focusing on economic processes as fundamental to ethnic antagonism, Bonacich (1972) hypothesizes that ethnic antagonism first germinates in a labor market split along ethnic lines. A labor market split involves some difference in labor price for at least two different groups, and the initial factors that affect labor price are resources (level of living, information, and political resources) and motives (fixed and supplementary income goals, and fortune seeking). There are two forces that determine the initial labor price difference: 1) the original wage agreement based on the labor group's point of origin and 2) different developments in employment motives and levels of resources across different nations. In a split labor market, conflicts arise between three key classes: business (mainly interested in minimizing labor price), higher-paid labor (whose wage standard is threatened by cheaper labor), and cheaper labor (used by business owners to undermine the position of higher-paid labor). Higher-paid labor's dominance is manifested through exclusion or a caste system.

Dual labor market theory argues that labor demand is inherent in modern industrial societies and that such demand primarily drives the international flow of migration. Advancing Bonacich's idea about the split labor market, Piore (1979) focuses on pull factors in host countries (a structurally embedded need for cheap, foreign labor in industrial societies) rather than push factors in sending countries such as low wages and high unemployment. Dual labor market theory focuses on 1) structural inflation, 2) motivational problems, 3) economic dualism, and 4) the demography of labor supply to explain international migration (Massey et al. 1993).

Structural inflation means that wages are not a mere reflection of labor supply and demand but encompass social status and prestige. As such, increasing wages at the bottom of the income hierarchy leads to structural inflation as people's perceptions about an occupation's social status remain mostly intact. Relatedly, motivational problems arise within industrialized societies' occupational hierarchies because workers at the bottom of the hierarchy have little motivation to maintain their social status. The problem is structural because the occupational hierarchy presupposes the existence of a bottom class of workers, and migrants are often the group of laborers who are willing to take the bottom class even when they receive low wages and minimum social status.

Economic dualism means a bifurcated labor market between the capital-intensive primary sector and the labor-intensive secondary sector. Whereas workers in the primary sector are more likely to be unionized and enjoy job stability along with workers' benefits, the secondary sector provides low wages and little stability to its workers. This economic dualism motivates native workers to join the primary sector, and migrant workers fill up the labor shortage in the secondary sector.

There has been an important shift in the demography of labor supply, leading to an increased reliance on migrant workers for industrial societies. Historically, women and teenagers met the labor demand for jobs that pay low wages. The expansion of the formal education system and declining birth rates, however, led to a declining supply of teenage workforce. In addition, the universal education system gave rise to female labor participation, and the increasing divorce rates transformed women's jobs into primary income rather than supplemental income. With such structural changes, the source of entry-level workers has shifted from female and teenage labor to migrant labor.

A country with low Gross Domestic Product (GDP) per capita signifies a less differentiated labor market, but a country with high GDP per capita is more likely to have a split labor market. As mentioned, a split labor market has a structurally embedded need for a migrant labor force. Therefore, my third hypothesis is that an increase in GDP is negatively associated with the incoming flow of migrants from Latin American countries to the U.S.

2.3 Domestic Factors Leading to Migration

The internal political and economic structures of sending countries may also generate social instability conducive to migration, although organizational field theory posits that shared norms and values largely dictate how nations adopt certain policies or practices in the global field (DiMaggio and Powell 1983; Go 2008). Huber et al. (2006) used an unbalanced, pooled time series data set for income distribution from 1970 to 2000 to show the impact that politics and policy have on inequality in Latin America and the Caribbean. Their findings indicate that countries with more democratic history and a left-leaning legislative partisan balance are associated with lower levels of inequality (Huber et al. 2006). A recent study by Clifton, Díaz-Fuentes, and Revuelta (2020) also shows that redistributive fiscal policy reduces income

inequality in 17 Latin American countries, confirming the similar pattern observed in more developed countries (Esping-Andersen and Myles 2008; Kenworthy 2011; Fischer et al. 1996). These studies, however, do not provide evidence for a direct link between internal political structures and the level of migration.

To control for the effects of domestic political structure on migration, I include the electoral democracy index. It captures the extent to which political leaders are elected under comprehensive voting rights in free and fair elections, and freedoms of association and expression are guaranteed. Repressive, authoritarian governments with low electoral democracy index scores are less likely to respond to people's demand for freedom of international movement than democratic governments with high electoral democracy index scores. The national economy that is tightly controlled by repressive governments also negatively affects labor migration.

2.4 World-System's Theory on Migration

Moving away from particularistic, atomized knowledge, Wallerstein (1979) takes a global perspective and uses world-systems theory to examine how the surplus value of labor from periphery states is exploited by semi-periphery and core states. He describes the mechanism of profit generation in the capitalist world system as follows: "[The search for profit] operates by creating legal protections for individual firms (which can range in size from individuals to quite large organizations, including parastatal agencies) to appropriate the surplus value created by the labor of the primary producers" (Wallerstein 1979:285). Many firms have their bases in well-developed core states and exploit cheap labor forces available in less-developed periphery states where labor unions and local government economic regulations are either weak or non-existent. In other words, the primary producers of the periphery states are not protected in terms of proper

labor compensation. Consequently, the surplus value of labor flows from weak periphery states to core states (Wallerstein 1979). In addition to labor value, the natural resources of weaker periphery states can be exploited by stronger core states. Such exploitation exacerbates the living conditions of people in periphery states, forcing the natives to migrate in search of better life prospects.

Building on the work of Wallerstein (1974), scholars developed migration theory by focusing on the structure of the world capitalist system that emerged in the sixteenth century along with the rise of colonialism. Overt colonialism originally instituted capitalist economic relations for the benefit of colonizing societies by directly seizing foreign territories and enslaving indigenous peoples, but today imperial relations are perpetuated through neocolonial governments and multinational firms (Go 2008; Massey et al. 1993). Capitalist economic relations transform the traditional use of land, lead to the exploitation of both raw materials and labor, and create new consumer markets, ultimately driving local populations abroad.

Primarily interested in profit maximization, capitalists consolidate landholding and eradicate traditional systems of land tenure that were handed down from the Middle Ages (Marx 1848). Colonization incorporates periphery states into the world capitalist system and, in the process, transforms land use throughout the world. Capitalists also mechanize the farming process and replace staples with cash crops using industrially produced chemicals and bioengineered seeds. Mechanization displaces much agrarian labor by reducing the need for manual labor. In addition, mass production of cash crops enabled by industrial technology drives non-capitalist farmers out of market competition by lowering crop prices while destroying the traditional use of land based on subsistence. Displaced agrarian workers become migrant laborers who move in search of work in cities and metropoles. The export of a country's goods and services represents an aspect of globalization or incorporation into the world capitalist system. A large amount of export means a high degree of incorporation into the world capitalist system, while a small amount of export indicates a low degree of incorporation into the world capitalist system. A country that is more assimilated into the capitalist system is more likely to be industrialized than a country that is less assimilated into the capitalist system. A high degree of globalization, in turn, results in the displacement of agrarian laborers, forcing them to move to big cities in search of jobs. I present my first hypothesis, which is that 1) a decrease in agricultural employment is positively associated with increasing numbers of incoming immigrants in the U.S.

2.5 Foreign Investment Dependency Theory

Sanderson and Kentor (2009) examine how globalization and consequent foreign direct investment (FDI) are associated with international migration, using a cross-national analysis. They found that FDI in the primary sector is positively associated with the level of net migration, but FDI in the secondary sector has a negative association with migration. Broadly considered, their findings confirm the migration transition hypothesis, which posits that emigration follows an inverted U-shape curve with increasing GDP per capita: emigration first increases and then decreases with the increasing level of GDP. In addition, Sanderson and Kentor (2009) also demonstrate the cumulative causation of migration. However, their findings do not examine which countries the migrants target as their destination.

Despite the lack of discussion about the association between foreign direct investment and internal development, Alderson and Nielsen (1999) use a comprehensive dataset to show the existence of the inverted-U relationship between income inequality and economic development postulated by Kuznets (1955). Kuznets proposes that the labor force shift from traditional agriculture to modern sectors results in an initial increase in income inequality, but as societies become more developed, redistributive fiscal policies and stable political structures lead to a decrease in income inequality.

In addition to exports, Foreign Direct Investment (FDI) can be understood as another measure of globalization or incorporation of periphery states into the world capitalist system. A large amount of FDI means a high degree of incorporation into the world capitalist system, while a small amount of FDI indicates a low degree of incorporation into the world capitalist system. The penetration of FDI may signify sufficient mechanization of farming processes and eradication of traditional systems of land tenure. This, in turn, results in the displacement of agrarian laborers, forcing them to move to big cities in search of jobs. My second hypothesis is that an increase in FDI is positively associated with the incoming flow of migrants from Latin American countries to the U.S.

2.6 From Latin America to U.S.

The U.S. laws prohibited large-scale migration to the U.S. in the 1920s. However, there was a radical change in migration laws during the Civil Rights Movement. The 1965 amendments to the Immigration and Nationality Act eliminated national-origins quota systems, which had racially discriminatory intents. The amendments allowed admission of people based on kinship, and "the result was a dramatic upsurge in migration from Latin America" (Castles and Miller 1998:75).

Although labor unions opposed migrant workers because of the decrease in wages, the agricultural industry in the U.S. recruited many male migrant workers from Mexico and the Caribbean. The employers in U.S. agribusiness resisted government sanctions against people

who employed undocumented workers. While some government policies, such as the Mexican Bracero Program, reinforced the flow of migrant workers, other polices, such as the 1952 amendments to the U.S. immigration rules (McCarren-Walter Act, also known as the Texas Proviso), formally prohibited the employment of undocumented workers.

The Immigration Reform and Control Act of 1986 (IRCA) granted amnesty and resident alien status to about 2.7 million people. Over 70 percent of them were Mexicans. The resident alien status came with the right to bring in family members from sending countries, and this triggered another migration chain from Latin America.

In 1990, Congress revised the Immigration Act of 1965. The 1990 Immigration Act was meant to increase the number of skilled immigrants by raising the ceiling for the number of people who could legally immigrate to the U.S. The number of undocumented residents was officially estimated at 5 million in 1996. The Immigration Act of 1996 approved the construction of fences along the southern border of the U.S and strengthened the border patrol. In 1996, another law was passed to deprive immigrants of welfare benefits such as Food Stamps and Supplemental Security Income. As a result, many eligible resident aliens (some 1.2 million people) were naturalized.

The Central America Free Trade Agreement (CAFTA) is similar to the North American Free Trade Agreement (NAFTA) but involves six Latin American nations: Guatemala, El Salvador, Honduras, Costa Rica, Nicaragua, and the Dominican Republic. It was passed in the U.S. House in 2005, facilitating the flow of trades and peoples between the U.S. and the Central American countries. Zolberg, Suhrke and Aguao (1989) argue that refugee was not a product of poverty or underdevelopment, but rather a legacy of colonial history. Weak, decentralized governments, and generalized, persistent violence resulted from rapid decolonization (quick withdrawal of occupied forces) under conditions determined by imperial states. This has been the context for ethnic conflicts and struggles over the social order, leading to impoverishment and denial of human rights (Castles and Miller 1998:88). Refugee entry into the U.S. was largely determined by foreign policy and international relations. During the early Cold War period, prior to 1980, anyone from a communist country such as Cuba was regarded as a refugee. The Refugee Act of 1980 outlined the definition of refugees in accordance with the United Nations Convention on Refugees.

The U.S. began to take increasing number of refugees from Central America and the Caribbean in the early 1990s because of regional instability. People from Haiti and Cuba reached the southern coastal areas through boats and claimed political asylum. This resulted in a crisis in U.S. refugee policy. Both the Bush and the Clinton Administrations strengthened coastal patrols and blocked the Haitian boats although Cuban refugees were welcomed by the U.S. There was inconsistency in receiving refuges in the U.S., even though both Haitians and Cubans experienced dictatorship and poverty. In 1994, the U.S. led a multinational military operation, brought down the Haitian dictator Raoul Cédras, and reinstituted Jean-Bertrand Aristidea in order to stop the mass flow of refugees and migrants. The U.S. and Cuba made an agreement to stop spontaneous migration, with the U.S. guaranteeing entry to at least 20,000 Cubans per year (Castles and Miller 1998).

The U.S. is the largest destination country for migrants, and the history of migration is closely tied to the neocolonial relations between the U.S. and Latin America and the Caribbean

(Durand 2022). During the nineteenth century, the U.S. seized a large part of Mexico's territory to the south. This includes Florida, Puerto Rico, and other islands to the east. Such territorial expansion is tied to U.S.'s economic, political, and military controls over Latin America and the Caribbean as manifested in the Monroe Doctrine of 1823. The migratory system should be understood in the context of the history of control and domination. The annexation of southwestern states through the Mexican-American war and the establishment of labor recruiting processes such as the Bracero Program laid the foundation for creating migration corridors (Durand 2022).

Previous studies on Central American migration focused on the economic and political factors leading to migration (Lundquist and Massey 2005; Morrison 1993). They also examined the impact that the U.S. had in destabilizing the Latin American region. According to Durand (2022:35), the U.S. "directly or indirectly contributes to the emergence of political and institutional violence and leads to a migration pattern in which the United States—which contributed to the destabilization in the first place—is the preferred destination for Central American migrants." The political involvement of the U.S. in Latin American region can be understood as an attempt to incorporate non-capitalist markets into the world capitalist system. The number of Central American migrant flowing into the U.S. notably increased in the 1980s, following U.S. intervention in the region encompassing El Salvador, Guatemala, Honduras, and Nicaragua. This is in line with the world-systems theory on migration.

The number of unauthorized Central Americans in the U.S. continued to rise between 2000 and 2018. Venezuela saw the fastest growing number of the unauthorized migrants that rose from 65,000 to 172,000 between 2010 and 2018, a 165 percent increase closely related to the collapse of the nation's political economy (Massey 2022).

Present-day immigration to and from Latin America shows that Costa Rica and Panama, the economically prosperous nations in Central America, send out relatively few international migrants compared to their less affluent counterparts. Colombia and Venezuela send out the most migrants in South America. Both experienced substantial increases in migration during the period 1990-2019, with the stock of migrants from Colombia nearly doubling from 1.0 to 1.9 million and that from Venezuela increasing 13.5 times from 185,000 to 2.5 million. The exodus from Colombia was tied to rising civil and political violence after 1990 (Silva and Massey 2014), whereas migration from Venezuela stemmed from the disintegration of the nation-state and its political economy during the presidencies of Hugo Chavez from 1999 to 2013 and Nicolas Maduro (Massey 2022:23).

CHAPTER 3: METHODS

3.1 Data Source

Time-series cross-sectional data are drawn from the World Bank's *World Development Indicator* dataset over the 1993-2022 period. Following Sanderson and Kentor's model (2008, 2009), I study the 5-year lagged effect of employment in agriculture (% of total employment) on the number of migrations (including expulsions) into the U.S. to collect as many data points as possible. While Sanderson and Kentor (2009) focused on the net migration of developing countries, this study specifically looks at the number of migrations (including expulsions) into the U.S. For my dependent variable, I use the Yearbook of Immigration Statistics published by the Department of Homeland Security. I comprehensively look at migrations into the U.S. by including people who experienced expulsion.

3.2 Countries Included in the Analysis

Focusing on Latin American countries as the major source of migrant flow into the U.S., this study includes data that satisfy three conditions: 1) data are available for the dependent variable (number of migrations into the U.S., including expulsions) at time t; 2) data are available on all of the independent variables at time t-5; and 3) data on the variables satisfying the two previous conditions are available at two time points. In other words, I included a country if its data on the dependent variable is available at time t (measured in 1998, 1999, or 2000), and if the country's data on independent variables are available at time t-5 (1993, 1994, or 1995). Using data available at least two different time points is necessary to estimate change not only within countries but also change between countries over time. As such, I utilize country-level, cross-sectional longitudinal data to examine both endogenous and exogenous factors (or variation between and within countries). This data selection results in unbalanced panel data,

meaning that countries do not have the same number of observations because their data availability is not constant over time. Unbalanced panel data structure is commonly used in cross-national studies (Beckfield 2006; Huber et al. 2006).

3.3 Measures Overview

The countries and their corresponding years used in this study are listed in Table 1 toward the end of this section. The total number of Latin American countries is 21, with years ranging from 1993 to 2022, and the number of observations is 764. In this section, I define my variables and provide a justification for including the variables in this study.

3.4 Dependent Variable

3.4.1 Migrations into the U.S. (including expulsion). This study's main dependent variable is the number of migrations (including expulsions) into the U.S. Spanning from 1993 to 2022, this data is publicly available on the website of the Department of Homeland Security's Yearbook of Immigration Statistics. It shows which Latin American countries immigrants (those who are granted legal permanent residence and those who are naturalized) come from. In addition to immigrants, the Yearbook of Immigration Statistics also contains information regarding the number of expulsions, refugees, and both affirmative and defensive asylum seekers. This number is again broken down by the people's country of origin. According to the United Nations High Commissioner for Refugees, a refugee is "someone who has been compelled to leave their country and cannot return because of a serious threat to their life, physical integrity, or freedom as a result of persecution, armed conflict, violence, or serious public disorder. It is a legal status that provides an individual with certain rights and protections." In contrast, an asylum seeker is "someone who has or intends to apply to be recognized as a refugee, but their application has yet to be processed." Affirmative asylum seekers are not in removal proceedings, but defensive

asylum seekers are already in removal proceedings. Including the number of asylum seekers and deported people can enhance the dependent variable's measure as social instability of sending countries, which is understood as a subsequent process of industrial transition from agrarian society.

3.5 Independent Variables

3.5.1 Intra-National Variables

Employment in Agriculture (% of total employment). This study's main independent variable is the percentage of the agrarian labor force. Through globalization and incorporation into the world capitalist system, societies go through an economic transition from agrarian to industrial. As a result, farmers are displaced from their traditional work and become migrant workers in search of newly created jobs in growing cities. However, this movement of the labor force occurs during the early phase of industrialization or globalization. As a country becomes economically developed, it begins to attract immigrants from other countries. Employment in agriculture is a measure of the agrarian economy's prevalence within a country.

GDP per capita. From the World Bank's World Development Indicators, I use GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP at purchaser's prices is the sum of gross value added by all resident producers in the country plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2017 international dollars (World Bank 2024). According

to the migration transition hypothesis, emigration follows an inverted U-shape curve with increasing GDP per capita: emigration first increases and then decreases with the increasing level of GDP. Therefore, I also include a quadratic term for GDP per capita.

Secondary school enrollment (% gross). Gross enrollment is the ratio of total enrollment, regardless of age, to the population of the secondary school's official age group. The gross enrollment ratio for secondary school is calculated by dividing the number of students enrolled in secondary education regardless of age by the population of the age group which officially corresponds to secondary education and multiplying by 100 (World Bank 2024). The gross enrollment rate is widely used to show the general level of participation in and capacity of primary education (United Nations Statistical Institute for Asia and the Pacific). Although globalization and subsequent penetration of FDI initially displace local agrarian labor and ultimately reshape its labor market during the early phase, migration becomes a selective process that attracts a highly educated labor force from sending countries (Massey et al. 1993). Thus, it is necessary to include the gross secondary school enrollment rate to control for the effect of the education level.

Teenage population (% of total). Williamson (1988) examines an age-selectivity bias among young adults that affects the demographics of migrants from the countryside to the cities in Europe during the 19th and 20th centuries. His findings show that cities have a larger share of young immigrants in their 20s and 30s than the countryside. Because I examine the 5-year lagged effect of FDI stock on net migration, I include a measure of the percentage of the total population in the teenage group to control for the age composition of the population.

Total population. Countries that have many citizens are more likely to send out greater numbers of migrants compared to countries with small populations. Therefore, I include the total population of each country as my control variable.

Electoral democracy index. The electoral democracy index is based on the expert estimates made by the Varieties of Democracy project (Coppedge et al. 2024). It captures the extent to which political leaders are elected under comprehensive voting rights in free and fair elections, and freedoms of association and expression are guaranteed. It ranges from 0 (least democratic) to 1 (most democratic). Internal political structures and policies affect social inequality and migration (Huber et al. 2006; Meyers 2000). Repressive, authoritarian governments are less likely to respond to people's demand for freedom of international movement than democratic governments. The national economy that is tightly controlled by repressive governments also affects labor migration. Thus, I include a measure of the electoral democracy index to control for the effect of internal political structure and migration policies.

3.5.2 Inter-National Variables

Foreign Direct Investment. This study's independent variable is Foreign Direct Investment. FDI is the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. FDI shows net inflows in the reporting economy from foreign investors and is divided by gross domestic product (GDP). FDI reflects the dominance and penetration of foreign capital in the economy. These data are also taken from the World Bank's *World Development Indicators*.

Exports of goods and services (% of GDP). Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income, formerly called factor services, and transfer payments. Export production is closely related to the level of migration as it reshapes labor markets (Sanderson and Kentor 2006; Ghosh 1992; Martin and Taylor 1996). Although FDI and exports may have similar effects on migration, Sanderson and Kentor (2006:311) note that "it is important to analytically distinguish between the effects of trade integration and foreign capital when examining international migration" because each represents a distinct component of globalization.

Distance from the center of each country to El Paso, Texas. Geographical proximity to the U.S. also affects Latin American people's decision to migrate. Countries that are closer to the U.S. are more likely to send greater numbers of migrants than countries that are farther away from the U.S.

Country	Year	Country	Year	Country	Year	Country	Year
Argentina	1994	Colombia	2007	Guatemala	1994	Paraguay	1995
Argentina	1996	Colombia	2008	Guatemala	1995	Paraguay	1996
Argentina	1997	Colombia	2009	Guatemala	1996	Paraguay	1997
Argentina	1998	Colombia	2010	Guatemala	1997	Paraguay	1998
Argentina	1999	Colombia	2011	Guatemala	1998	Paraguay	1999
Argentina	2000	Colombia	2012	Guatemala	1999	Paraguay	2000
Argentina	2001	Colombia	2013	Guatemala	2000	Paraguay	2001
Argentina	2002	Colombia	2014	Guatemala	2001	Paraguay	2002
Argentina	2003	Colombia	2015	Guatemala	2002	Paraguay	2003
Argentina	2004	Colombia	2016	Guatemala	2003	Paraguay	2004
Argentina	2005	Colombia	2017	Guatemala	2004	Paraguay	2005

 Table 1. Countries and Years Included in the Analysis

2006	Colombia	2018	Guatemala	2005	Paraguay	2006
2007	Colombia	2019	Guatemala	2006	Paraguay	2007
2008	Colombia	2020	Guatemala	2007	Paraguay	2008
2009	Colombia	2021	Guatemala	2008	Paraguay	2009
2010	Colombia	2022	Guatemala	2009	Paraguay	2010
2011	Costa Rica	1993	Guatemala	2010	Paraguay	2011
2012	Costa Rica	1994	Guatemala	2011	Paraguay	2012
2013	Costa Rica	1995	Guatemala	2012	Paraguay	2013
2014	Costa Rica	1996	Guatemala	2013	Paraguay	2014
2015	Costa Rica	1997	Guatemala	2014	Paraguay	2015
2016	Costa Rica	1998	Guatemala	2015	Paraguay	2016
2017	Costa Rica	1999	Guatemala	2016	Paraguay	2017
2018	Costa Rica	2000	Guatemala	2017	Paraguay	2018
2019	Costa Rica	2001	Guatemala	2018	Paraguay	2021
2020	Costa Rica	2002	Guatemala	2019	Peru	1993
2021	Costa Rica	2003	Guatemala	2020	Peru	1994
2022	Costa Rica	2004	Guatemala	2021	Peru	1995
1999	Costa Rica	2005	Guatemala	2022	Peru	1996
2000	Costa Rica	2006	Guyana	1999	Peru	1997
2001	Costa Rica	2007	Guyana	2001	Peru	1998
2002	Costa Rica	2008	Guyana	2003	Peru	1999
2003	Costa Rica	2009	Guyana	2004	Peru	2000
2004	Costa Rica	2010	Guyana	2005	Peru	2001
2005	Costa Rica	2011	Guyana	2006	Peru	2002
2006	Costa Rica	2012	Guyana	2008	Peru	2003
2007	Costa Rica	2013	Guyana	2010	Peru	2004
2008	Costa Rica	2014	Honduras	1993	Peru	2005
2009	Costa Rica	2015	Honduras	1998	Peru	2006
2010	Costa Rica	2016	Honduras	2006	Peru	2007
2011	Costa Rica	2017	Honduras	2007	Peru	2008
2012	Costa Rica	2018	Honduras	2008	Peru	2009
2013	Costa Rica	2019	Honduras	2010	Peru	2010
2014	Costa Rica	2020	Honduras	2011	Peru	2011
2015	Costa Rica	2021	Honduras	2012	Peru	2012
2016	Costa Rica	2022	Honduras	2013	Peru	2013
	Dominican				_	
2017	Republic	1994	Honduras	2015	Peru	2014
2010	Dominican	1005	Honduras	2016	Deru	2015
2019	Dominican	1773	rionuuras	2010	1 01 0	2013
2020	Republic	1998	Honduras	2017	Peru	2016
	2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 1999 2000 2021 2022 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2022 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2009 2010 2011 2022 2003 2004 2005 2006 2007 2008 2009 2010 2011 2022 2003 2004 2005 2006 2007 2008 2009 2010 2011 2022 2003 2004 2005 2006 2007 2008 2009 2010 2011 2022 2003 2004 2005 2006 2007 2008 2009 2010 2011 2020 2011 2020 2011 2020 2011 2020 2011 2020 2011 2022 2003 2004 2005 2006 2007 2008 2007 2000 2001 2002 2003 2004 2007 2006 2007 2008 2007 2000 2001 2002 2003 2004 2007 2000 2001 2002 2001 2002 2001 2002 2003 2004 2007 2006 2007 2008 2007 2000 2001 2002 2003 2004 2007 2006 2007 2008 2007 2000 2001 2002 2003 2004 2007 2008 2007 2008 2007 2010 2010 2010 2010 2001 2010 2001 2002 2003 2004 2007 2008 2009 2010 2011 2012 2011 2012 2013 2014 2017 2013 2014 2017 2010 2011 2012 2013 2014 2017 2012 2013 2014 2017 2010 2011 2012 2010 2011 2012 2011 2012 2011 2012 2011 2012 2011 2012 2011 2012 2011 2012 2011 2012 2011 2011 2012 2011 2012 2011 2011 2011 2012 2013 2014 2015 2016 2017 2010 2011 2012 2013 2014 2015 2016 2017 2016 2017 2010 2010 2011 2012 2010 2010 2011 2012 2010 2010 2011 2012 2010 2011 2012 2010 2010 2011 2012 2010 2000 2000 2000 2000 2000 20000 2000 2000 2000 2000 2000 2000 20000	2006Colombia2007Colombia2008Colombia2009Colombia2010Colombia2011Costa Rica2012Costa Rica2013Costa Rica2014Costa Rica2015Costa Rica2016Costa Rica2017Costa Rica2018Costa Rica2019Costa Rica2020Costa Rica2021Costa Rica2022Costa Rica2020Costa Rica2021Costa Rica2022Costa Rica2003Costa Rica2004Costa Rica2005Costa Rica2006Costa Rica2007Costa Rica2008Costa Rica2009Costa Rica2001Costa Rica2010Costa Rica2011Costa Rica2012Costa Rica2013Costa Rica2014Costa Rica2015Costa Rica2014Costa Rica2015Costa Rica2014Costa Rica2015Costa Rica2016Costa Rica2017Republic2018Costa Rica2019Republic2010Costa Rica2011Costa Rica2012Costa Rica2013Costa Rica2014Costa Rica2015Costa Rica2016Costa Rica2017Republic	2006 Colombia 2018 2007 Colombia 2019 2008 Colombia 2020 2009 Colombia 2021 2010 Colombia 2022 2011 Costa Rica 1993 2012 Costa Rica 1994 2013 Costa Rica 1995 2014 Costa Rica 1996 2015 Costa Rica 1997 2016 Costa Rica 1998 2017 Costa Rica 2000 2019 Costa Rica 2001 2020 Costa Rica 2001 2021 Costa Rica 2002 2021 Costa Rica 2003 2022 Costa Rica 2006 2001 Costa Rica 2007 2002 Costa Rica 2007 2003 Costa Rica 2017 2004 Costa Rica 2011 2005 Costa Rica 2011 2006 Costa Ric	2006Colombia2018Guatemala2007Colombia2019Guatemala2008Colombia2020Guatemala2009Colombia2021Guatemala2010Colombia2022Guatemala2011Costa Rica1993Guatemala2012Costa Rica1994Guatemala2013Costa Rica1995Guatemala2014Costa Rica1996Guatemala2015Costa Rica1997Guatemala2016Costa Rica1999Guatemala2017Costa Rica2000Guatemala2018Costa Rica2000Guatemala2020Costa Rica2001Guatemala2021Costa Rica2003Guatemala2022Costa Rica2004Guatemala2020Costa Rica2005Guatemala2021Costa Rica2006Guyana2002Costa Rica2007Guyana2003Costa Rica2007Guyana2004Costa Rica2011Guyana2005Costa Rica2013Guyana2006Costa Rica2014Honduras2007Costa Rica2015Honduras2008Costa Rica2017Honduras2009Costa Rica2017Honduras2010Costa Rica2017Honduras2011Costa Rica2018Honduras2011Costa Rica2017	2006Colombia2018Guatemala20052007Colombia2019Guatemala20062008Colombia2020Guatemala20072009Colombia2021Guatemala20092010Colombia2022Guatemala20092011Costa Rica1993Guatemala20112012Costa Rica1994Guatemala20112013Costa Rica1995Guatemala20112014Costa Rica1996Guatemala20132015Costa Rica1997Guatemala20142016Costa Rica1997Guatemala20162017Costa Rica1999Guatemala20162018Costa Rica2000Guatemala20172019Costa Rica2000Guatemala20182020Costa Rica2002Guatemala20192021Costa Rica2003Guatemala20222022Costa Rica2004Guatemala20212020Costa Rica2005Guatamala20222000Costa Rica2006Guyana20032001Costa Rica2007Guyana20042002Costa Rica2010Guyana20052003Costa Rica2010Guyana20062004Costa Rica2011Guyana20062005Costa Rica2012Guyana20062006Costa	2006Colombia2018Guatemala2005Paraguay2007Colombia2019Guatemala2006Paraguay2008Colombia2021Guatemala2007Paraguay2009Colombia2021Guatemala2008Paraguay2010Colombia2022Guatemala2009Paraguay2011Costa Rica1993Guatemala2011Paraguay2012Costa Rica1994Guatemala2011Paraguay2013Costa Rica1995Guatemala2012Paraguay2014Costa Rica1996Guatemala2013Paraguay2015Costa Rica1997Guatemala2014Paraguay2016Costa Rica1997Guatemala2017Paraguay2017Costa Rica2000Guatemala2017Paraguay2018Costa Rica2000Guatemala2018Paraguay2019Costa Rica2000Guatemala2019Peru2020Costa Rica2003Guatemala2021Peru2021Costa Rica2004Guatemala2022Peru2022Costa Rica2005Guatemala2022Peru2020Costa Rica2006Guyana2003Peru2021Costa Rica2007Guyana2001Peru2002Costa Rica2016Guyana2005Peru2003Costa Rica2016<

		Dominican					
Barbados	2021	Republic	1999	Jamaica	1993	Peru	2017
	_ •	Dominican					
Barbados	2022	Republic	2000	Jamaica	1998	Peru	2018
		Dominican					
Bolivia	1998	Republic	2002	Jamaica	1999	Peru	2019
		Dominican					
Bolivia	1999	Republic	2003	Jamaica	2000	Peru	2020
		Dominican					
Bolivia	2000	Republic	2004	Jamaica	2001	Peru	2021
		Dominican				_	
Bolivia	2001	Republic	2005	Jamaica	2002	Peru	2022
D 1' '	2002	Dominican	2007	т ·	2002	а ·	2006
Bolivia	2002	Republic	2007	Jamaica	2003	Suriname	2006
Dolivio	2002	Dominican	2008	Iomoioo	2004	Surinomo	2007
Donvia	2003	Dominican	2008	Jamaica	2004	Sumame	2007
Bolivia	2004	Republic	2009	Iamaica	2005	Suriname	2008
Donvia	2004	Dominican	2007	Jamaica	2005	Sumane	2000
Bolivia	2005	Republic	2010	Jamaica	2006	Suriname	2009
2011/14	2000	Dominican	2010	• ••••••	2000	2	2007
Bolivia	2006	Republic	2011	Jamaica	2007	Suriname	2010
		Dominican					
Bolivia	2007	Republic	2012	Jamaica	2008	Suriname	2011
		Dominican					
Bolivia	2008	Republic	2013	Jamaica	2009	Suriname	2012
		Dominican					
Bolivia	2009	Republic	2014	Jamaica	2010	Suriname	2013
	2010	Dominican	2015	. .	2011	a .	2014
Bolivia	2010	Republic	2015	Jamaica	2011	Suriname	2014
Dalizzia	2011	Dominican	2016	Inmaine	2012	Curring and a	2015
DOIIVIA	2011	Dominican	2010	Jamaica	2012	Surmaine	2013
Bolivia	2012	Republic	2017	Iamaica	2013	Uruquay	1993
Donvia	2012	Dominican	2017	Jamaica	2013	Oluguay	1775
Bolivia	2013	Republic	2018	Iamaica	2014	Urngnav	1994
Donvia	2015	Dominican	2010	Juillalea	2011	oruguuy	1771
Bolivia	2014	Republic	2019	Jamaica	2015	Uruguav	1995
	-	Dominican				- 8,	
Bolivia	2015	Republic	2020	Jamaica	2016	Uruguay	1996
		Dominican					
Bolivia	2016	Republic	2021	Jamaica	2017	Uruguay	1998
		Dominican					
Bolivia	2017	Republic	2022	Jamaica	2018	Uruguay	1999
Bolivia	2018	Ecuador	1993	Jamaica	2019	Uruguay	2000
Bolivia	2019	Ecuador	1996	Jamaica	2020	Uruguay	2001

Bolivia	2020	Ecuador	1998	Jamaica	2021	Uruguay	2002
Bolivia	2021	Ecuador	1999	Jamaica	2022	Uruguay	2003
Bolivia	2022	Ecuador	2000	Nicaragua	1993	Uruguay	2004
Brazil	2012	Ecuador	2001	Nicaragua	1994	Uruguay	2005
Brazil	2013	Ecuador	2002	Nicaragua	1995	Uruguay	2006
Brazil	2014	Ecuador	2003	Nicaragua	1998	Uruguay	2007
Brazil	2015	Ecuador	2004	Nicaragua	1999	Uruguay	2008
Brazil	2016	Ecuador	2005	Nicaragua	2000	Uruguay	2009
Brazil	2017	Ecuador	2006	Nicaragua	2001	Uruguay	2010
Brazil	2018	Ecuador	2007	Nicaragua	2002	Uruguay	2011
Brazil	2019	Ecuador	2008	Nicaragua	2003	Uruguay	2012
Brazil	2020	Ecuador	2009	Nicaragua	2004	Uruguay	2013
Brazil	2021	Ecuador	2010	Nicaragua	2005	Uruguay	2014
Brazil	2022	Ecuador	2011	Nicaragua	2006	Uruguay	2015
Chile	1993	Ecuador	2012	Nicaragua	2007	Uruguay	2016
Chile	1998	Ecuador	2013	Nicaragua	2008	Uruguay	2017
Chile	1999	Ecuador	2014	Nicaragua	2009	Uruguay	2018
Chile	2000	Ecuador	2015	Nicaragua	2010	Uruguay	2019
Chile	2002	Ecuador	2016	Nicaragua	2011	Uruguay	2020
Chile	2003	Ecuador	2017	Nicaragua	2012	Uruguay	2021
Chile	2004	Ecuador	2018	Nicaragua	2013	Uruguay	2022
Chile	2005	Ecuador	2019	Nicaragua	2015		
Chile	2006	Ecuador	2020	Panama	1993		
Chile	2007	Ecuador	2021	Panama	1994		
Chile	2008	Ecuador	2022	Panama	1995		
Chile	2009	El Salvador	1993	Panama	1996		
Chile	2010	El Salvador	1998	Panama	1998		
Chile	2011	El Salvador	1999	Panama	1999		
Chile	2012	El Salvador	2000	Panama	2000		
Chile	2013	El Salvador	2001	Panama	2001		
Chile	2014	El Salvador	2002	Panama	2002		
Chile	2015	El Salvador	2003	Panama	2004		
Chile	2016	El Salvador	2004	Panama	2005		
Chile	2017	El Salvador	2005	Panama	2006		
Chile	2018	El Salvador	2006	Panama	2007		
Chile	2019	El Salvador	2007	Panama	2008		
Chile	2020	El Salvador	2008	Panama	2009		
Chile	2021	El Salvador	2009	Panama	2010		
Chile	2022	El Salvador	2010	Panama	2011		
Colombia	1993	El Salvador	2011	Panama	2012		
Colombia	1994	El Salvador	2012	Panama	2013		

Colombia	1995	El Salvador	2013	Panama	2014
Colombia	1996	El Salvador	2014	Panama	2015
Colombia	1998	El Salvador	2015	Panama	2016
Colombia	1999	El Salvador	2016	Panama	2017
Colombia	2000	El Salvador	2017	Panama	2018
Colombia	2001	El Salvador	2018	Panama	2019
Colombia	2002	El Salvador	2019	Panama	2020
Colombia	2003	El Salvador	2020	Panama	2021
Colombia	2004	El Salvador	2021	Panama	2022
Colombia	2005	El Salvador	2022	Paraguay	1993
Colombia	2006	Guatemala	1993	Paraguay	1994

3.6 Analytical Strategy

I present the following model to study the association between my variables: Generalized Least Squares (GLS)–Fixed Effects Model (FEM). I include justification for using the GLS model in this section.

GLS – *Fixed Effects model*. The GLS model is appropriate for analyzing panel data or time-series cross-sectional data, where the observations are collected over time for the same variables. This model is designed to handle data with both cross-sectional and time-series dimensions while accounting for potential correlation and heterogeneity across variables. The GLS accounts for the fact that observations within the same country may be correlated and adjusts for the structure of the error terms, leading to more efficient and unbiased parameter estimates compared to OLS when the assumptions of OLS are violated. I conducted the Breusch-Pagan Lagrange multiplier test to see if a simple OLS regression model is sufficient. The test result shows that there is evidence of significant differences across countries, indicating that it is proper to use the GLS model.

In a random effects model, the individual-specific effects are assumed to be random and uncorrelated with the independent variables. In contrast, the unobserved effect is assumed to be correlated with the independent variables in a fixed effects model. I conducted the Hausman test to see whether I should use REM or FEM. The test result shows that FEM is more appropriate. The basic structure of a GLS-FEM can be written as follows:

$$y_{it} = \beta_0 + \beta_k x_{k,it} + a_i + u_{it},$$

where y_{it} is the dependent variable for country *i* at time *t*, $x_{k,it}$ represents independent variables for country *i* at time *t*, β_k represents the coefficients to be estimated, a_i is the unobserved effect assumed to be correlated with one or more of the $x_{k,it}$ term in fixed effect model, and u_{it} is the idiosyncratic error term assumed to be normally distributed with mean zero and variance σ_{ϵ}^2 . I tested for serial correlation using the Breusch-Godfrey test and concluded that autocorrelation is present in the residuals. It is necessary to introduce a correction (an AR1).

R code that I wrote for this study is available at the following website: https://github.com/kimconrad2/kimconrad/blob/main/mathesis.

CHAPTER 4: RESULTS

4.1 Summary Statistics

Table 2 below lists descriptive statistics, and I excluded Mexico from the analysis because it is identified as an outlier. I will point out a few things that stand out in Table 2. Foreign Direct Investment (FDI, % of GDP) can be a negative number because it includes debt. FDI can also exceed 100% if its amount surpasses the level of GDP. The electoral democracy index ranges from 0.242 to 0.914, meaning that there are significant variations between Latin American countries' political systems. The electoral democracy index can be understood as a measure of how well a country is incorporated into the global, democratic system. This highlights some of the complexities of globalization. Modernization or industrialization may initially uproot the stability of traditional agrarian society, but a well-planted democratic political system can eventually bring social stability, affecting the movement of people across international borders. The percentage of the agrarian labor force also shows a wide range, starting from 2.4% to 44.2%. This may reflect both differences between countries and changes brought by industrialization over time. Secondary school enrollment can exceed 100% because it is the ratio of total enrollment, regardless of age, to the population of the secondary school's official age group.

	S.D.	Minimum	Mean	Maximum
Migrations to U.S. (expulsion included)	29444	1	9121	293954
Employment in Agriculture (% of total employment)	10.06	2.38	19.99	44.20
Foreign Direct Investment (FDI, % of GDP)	3.15	-8.40	3.75	16.23
GDP per capita	6876	3839	14746	33790

Table 2. Descriptive Statistics

GDP per capita – squared	2.42e+8	14735869	2.65e+8	1.14e+9
Secondary School Enrollment (% gross)	21.59	24.88	81.44	141.20
Teenage Population (% of total)	3.16	12.43	19.37	25.81
Total Population	32329870	264170	17509280	2.15e+8
Electoral Democracy Index	.145	.242	.694	.914
Exports (% of GDP)	14.58	7.53	31.35	96.51
Distance (km, from center of each country to El Paso, TX)	1729	1712	3673	8971

Table 3 shows the correlation matrix of the variables used in this study. There is a significantly high correlation, 0.978, between GDP per capita and squared GDP per capita variables. Although multicollinearity in this case is not a problem, I squared GDP first and then centered GDP around its mean in order to run the GLS model using plm in R.

Table 3. Correlation Matrix

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
(a) Migrations to U.S. (expulsion included)	1.00										
(b) Foreign Direct Investment (FDI, % of GDP)	096	1.00									
(c) Employment in Agriculture(% of total employment)	.165	190	1.00								
(d) GDP per capita	155	.127	735	1.00							
(e) GDP per capita (squared)	158	.139	654	.978	1.00						
(f) Exports (% of GDP)	117	.275	022	045	048	1.00					
(g) Electoral Democracy Index	235	.200	598	.619	.559	.017	1.00				
(h) Distance (from center of each country to El Paso, TX)	243	087	356	.565	.563	179	.402	1.00			
(i) Secondary School Enrollment(% gross)	217	.216	566	.584	.537	094	.56	.406	1.00		
(j) Teenage Population (% of total)	.159	22	.81	78	707	.053	665	416	820	1.00	
(k) Total Population	.052	071	135	.128	.088	383	.061	.247	.225	211	1.00

Following Sanderson and Kentor's study (2009), I took the natural log of the dependent variable, which is, in this study, the number of migrations (including expulsions) into the U.S. Table 4 is based on GLS-FEM. I provide three models, each with a different number of independent variables. The first model starts with intranational independent variables: secondary school enrollment, teenage population, electoral democracy index, employment in agriculture, GDP per capita, and the total population of each country. The results show that the electoral democracy index, total population, and employment in the agricultural industry have significant positive effects on the number of migrations (including expulsions) into the U.S. The unstandardized regression coefficient of the employment in agriculture variable is relatively small (0.0370) compared to that of the total population (5.350) and the electoral democracy index (1.359).

In the second model, I added the GDP per capita squared term in addition to the variables included in the first model. There are no notable differences between the first and the second models. As before, the electoral democracy index, total population, and employment in the agricultural industry have significant positive effects on the number of migrations. Both GDP and its squared term do not have a statistically significant association with the number of migrations (including expulsions) into the U.S.

The third model is a full model containing both intra- and international factors. I add FDI, exports (% of GDP), and the distance between the center of each country and El Paso, Texas. El Paso is the city where many Latino migrants use as their entry point into the U.S. The results of the third model are different from the previous two models. Contrary to what I expected, FDI did not have significant effects on the number of migrations (including expulsions) into the U.S. Longer distance had negative effects on the number of migrations as expected. Although exports had significant effects on the number of migrations, its unstandardized regression coefficient is relatively small (0.0380) compared to GDP (-1.701) and its squared term (1.177).

The secondary school enrollment variable has a p-value that is less than 0.01, and the teenage population variable has a p-value that is less than 0.001. This is against what I expected based on age-selectivity bias in migration. In developing countries that send migrants, the education level is expected to be low. However, a larger population is positively associated with the number of migrations into the U.S. as expected. The electoral democracy index is negatively associated with the number of migrations (including expulsions) into the U.S., contrary to my expectation. I predicted that less authoritarian governments would put fewer restrictions on the movement of capital, including the labor force. GDP per capita has a negative association with the number of migrations (including expulsions) into the U.S. According to the migration transition hypothesis, emigration follows an inverted U-shape curve with increasing GDP per capita. Emigration first increases and then decreases with the increasing level of GDP.

	Model 1	Model 2	Model 3
Intra-national			
Employment in Agriculture (% of total employment)	.0370*	.0348~	.0410**
Secondary School Enrollment (% gross)	.000	.001	0150*
Teenage Population (% of total)	0347	0369	511***
Total Population (ln)	5.350***	5.402***	.636***
Electoral Democracy Index	1.359**	1.396**	-1.044
GDP per capita (mean-centered)	0150	209	-1.701**
GDP per capita (squared)		.147	1.177**
Inter-national			

 Table 4. Unstandardized Coefficients from Regression of Migrations (including expulsion)

 into the U.S. on Independent Variables without Mexico

	0.4
Distance (from center of each country to El Paso, Texas)	-5.341***
Exports (% of GDP)	.0380***
Foreign Direct Investment (FDI, % of GDP)	.0355

Note: *** for p <= 0.001, ** for p <= 0.01, * for p <= 0.05, ~ for p <= 0.1

Using the same models as above, Table 5 shows unstandardized regression coefficients with the data that includes Mexico. When Mexico is included in the analysis, most of the independent variables lose their statistical significance. The third model is not robust to outlier observations. The teenage population is marginally significant in predicting the number of migrations into the U.S. However, employment in agriculture, secondary school enrollment, the electoral democracy index, GDP per capita, and exports are not associated with the number of migrations into the U.S.

Table 5. Unstandardized Coefficients from Regression of Migrations (including expulsion)into the U.S. on Independent Variables with Mexico

	Model 1	Model 2	Model 3
Intra-national			
Employment in Agriculture (% of total employment)	.0370*	.0348~	.0083
Secondary School Enrollment (% gross)	.0000	.0007	0083
Teenage Population (% of total)	0347	0369	1556~
Total Population (ln)	5.3498***	5.4022***	.3100***
Electoral Democracy Index	1.3590**	1.3964**	.8282
GDP per capita (mean-centered)	0150	2094	8973
GDP per capita (squared)		.1474	5.5857
Inter-national			
Foreign Direct Investment (FDI, % of GDP)			.0822*

Exports (% of GDP)	0028
Distance (from center of each country to El Paso, Texas)	.0019***

Note: *** for p <= 0.001, ** for p <= 0.01, * for p <= 0.05, ~ for p <= 0.1

CHAPTER 5: DISCUSSION

I present the following research questions in this paper: 1) How does industrialization in Latin America, as measured by employment in agriculture, affect the number of migrations (including expulsions) into the U.S.? 2) How is globalization in Latin America, as measured by Foreign Direct Investment (FDI), associated with the inflow of Latin American immigrants into the U.S.? 3) How is the level of Latin American countries' economic development, as measured by Gross Domestic Product (GDP) per capita, related to Latin American immigration flow into the U.S.? I presented three hypotheses based on a literature review and will discuss each hypothesis in turn.

5.1 Hypothesis 1) A high percentage of employment in agriculture in sending countries of Latin America is negatively associated with the incoming flow of immigrants into the U.S.

A large agrarian labor force indicates that the country has not gone through industrialization yet. This means less movement of people from rural areas to metropoles and to well-developed countries. The GLS-Fixed Effects model 3 in Table 4 shows that employment in the agricultural industry is positively associated with the number of migrations (including expulsions) into the U.S. This is contrary to my expectation, and my hypothesis is not supported by the data and the analysis.

5.2 Hypothesis 2) An increase in FDI is positively associated with the incoming flow of immigrants from Latin American countries to the U.S.

FDI can be understood as a measure of globalization or incorporation of periphery states into the world capitalist system. Contrary to my expectation, the results of GLS-Fixed Effects model 3 in Table 4 show that FDI did not have a significant effect on the number of migrations (including expulsions) into the U.S. Two other international variables – exports and distance between the center of each country and El Paso, Texas – were statistically significant in the third GLS-Fixed Effects model.

5.3 Hypothesis 3: A high level of GDP per capita in Latin American countries is negatively associated with the inflow of migrants into the U.S.

If people are enjoying economic prosperity in their own countries, there is less incentive to cross borders in search of better life prospects. As predicted, the analysis shows that an increase in GDP per capita in Latin American countries is negatively associated with the number of Latin American migrants into the U.S. Although GDP and its squared term have a high correlation, the squared GDP term has negative effects on the number of migrants. The migration transition hypothesis might help to explain this. As mentioned, emigration follows an inverted U-shape curve with increasing GDP per capita. Emigration first increases and then decreases with the increasing level of GDP.

CHAPTER 6: LIMITATIONS

As with other studies, this study is not without limitations. First, I did not differentiate FDI flow into the primary or the secondary sector. The distinction between the primary and secondary labor sectors for FDI might turn out to be crucial for labor movement because a large secondary sector means high levels of economic instability. Second, I assumed in this study that most Latin American migrants would target the U.S. as their destination country because of the U.S.'s geographical proximity to Latin America compared to nations on other continents. Also, my assumption is based on previous literature, which shows that politically stable and economically well-developed metropoles and cities attract high volumes of international migrants. However, this assumption has not been empirically tested. It is possible that many Latin American migrants simply move within Central or South America, and the independent variables that I used in this study might suffer from omitted-variable bias if I left out some important independent variables. In addition, multilevel modeling might be more appropriate than the GLS-FEM to analyze the time-series, cross-sectional data.

This study also has some theoretical limitations. Specifically, this paper has not discussed the effects of social capital, or social networks, on people's decision to migrate, although Haug's (2008) study shows how social capital at receiving places positively affects emigration intentions.

The dependent variable, which is the number of migrants into the U.S., can be operationalized differently in future studies. In this study, the dependent variable is treated as the sum of naturalization, legal permanent residents, asylum seekers, refugees, and expulsions. Naturalization is the process by which U.S. citizenship is granted to a lawful permanent resident

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after meeting the requirements established by Congress. Because of the time delay in obtaining U.S. citizenship, the dependent variable might be better operationalized without the number of naturalizations and lawful permanent residents. In addition, the Department of Homeland Security might be unable to provide accurate statistics regarding the incoming flow of migrants in the 20th century. Also, the operationalization of independent variables can be more refined. As shown in Table 3, the correlation matrix reveals a high correlation among some independent variables: teenage population (% of total population), employment in agriculture (% of total employment), secondary school enrollment (% gross), and GDP. These variables can be combined into one composite measure of socioeconomic development.

CHAPTER 7: CONCLUSION

Political figures of far-right extremism actively stir up xenophobic sentiment combined with racism. This is evident in former President Trump's remark about "shithole countries" regarding Haiti, El Salvador, and African nations. Also, Congresswoman Marjorie Taylor Greene (2001) writes, "Joe Biden is rewarding human traffickers and coyotes who smuggle illegal aliens across the border." Instead of demonizing or criminalizing immigrants, it is necessary to tranquilly understand what factors lead to movements of people across borders. Relational and historical understanding of international migration is required to combat the spread of xenophobia and racism.

Despite some limitations, this paper attempted to show that the number of incoming Latin American migrants into the U.S. is associated with globalization and industrialization. If an increase in GDP in Latin American countries is associated with a low level of migration flow into the U.S., then foreign policies can be designed in a less exploitative but mutually profitable way. Future research might use a more refined method, such as multilevel modeling. Also, the scope of sending countries in future migration studies can be extended to African and Asian continents. Future studies can include some variables that account for the social network effect. While information sharing among migrants through their social networks can have a significant impact on people's decision to migrate, this paper did not address such factors.

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