

Garcia, Pablo M.; Rodríguez-Montemayor, Eduardo

Working Paper

A primer of international migration: The Latin American experience

IDB Working Paper Series, No. IDB-WP-146

Provided in Cooperation with:

Inter-American Development Bank (IDB), Washington, DC

Suggested Citation: Garcia, Pablo M.; Rodríguez-Montemayor, Eduardo (2009) : A primer of international migration: The Latin American experience, IDB Working Paper Series, No. IDB-WP-146, Inter-American Development Bank (IDB), Washington, DC, <https://hdl.handle.net/11319/2544>

This Version is available at:

<https://hdl.handle.net/10419/115382>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



IDB WORKING PAPER SERIES # IDB-WP-I46

A Primer of International Migration

The Latin American Experience

Pablo M. Garcia
Eduardo Rodríguez-Montemayor

Inter-American Development Bank
Vice Presidency for Sectors and Knowledge
Integration and Trade Sector

December / 2009

A Primer of International Migration:

The Latin American Experience

Pablo M. Garcia
Eduardo Rodríguez-Montemayor



Inter-American Development Bank
2009

**Cataloging-in-Publication data provided by the
Inter-American Development Bank
Felipe Herrera Library**

Garcia, Pablo M.

A primer of international migration: the Latin American experience / Pablo M. Garcia, Eduardo Rodriguez-Montemayor.
p. cm. (IDB working paper series ; 146)

Includes bibliographical references.

I. Latin America—Emigration and immigration. 2. Latin America—Emigration and immigration—Social aspects. 3. Latin America—Emigration and immigration—Government policy. 4. Latin America—Emigration and immigration—Research. I. Rodriguez-Montemayor, Eduardo. II. Inter-American Development Bank. Integration and Trade Sector. III. Title. IV. Series. JV7398.G37 2009
325.1 G212—dc22

© Inter-American Development Bank, 2009
www.iadb.org

Documents published in the IDB working paper series are of the highest academic and editorial quality. All have been peer reviewed by recognized experts in their field and professionally edited. The views and opinions presented in this working paper are entirely those of the author(s), and do not necessarily reflect those of the Inter-American Development Bank, its Board of Executive Directors or the countries they represent.

This paper may be freely reproduced provided credit is given to the Inter-American Development Bank.

Address for correspondence: Inter-American Development, Stop W0618, 1300 New York Avenue, NW, Washington, D.C. 20577, United States of America.

Pablo M. Garcia, e- mail: pgarcia@iadb.org, Tel.: +1 (202) 623-3199, Fax: +1 (202) 623-3781.

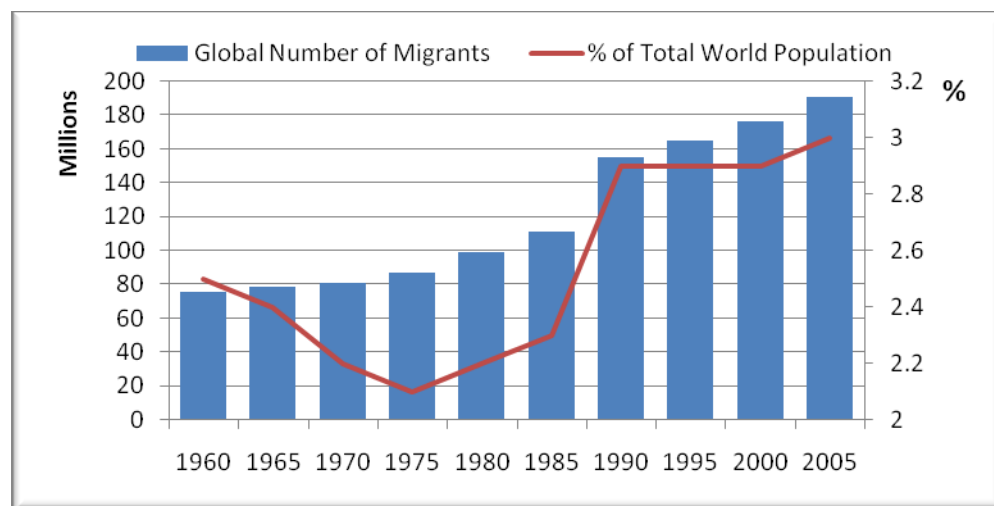
1. Introduction

Migration has recently taken an important place in the agenda of many governments around the world. But the phenomenon of international mobility of individuals is not new. Following Massey [2003], the modern history of international migration can be divided into four periods. During the *mercantile period*, from about 1500 to 1800, world immigration was dominated by flows out of Europe and stemmed from processes of colonization and economic growth under mercantile capitalism. Over the course of 300 years, Europeans came to inhabit large portions of the Americas, Africa, Asia, and Oceania. The second was the *industrial period* which began early in the 19th Century and stemmed from industrial development in Europe and the spread of capitalism to former colonies in the New World. The period from 1800 to 1929 represents the first period of economic globalization, characterized by massive flows of capital, raw materials, and goods back and forth between Europe, the Americas, Asia, and the Pacific. Associated with this expanding global economy was the large-scale movement of people, itself rooted in structural transformations that overtook successive European nations as they industrialized and were incorporated into the global trading regime. The United States by itself absorbed around 60% of Europe's total outflow, and another 25% of the emigrants were scattered among Argentina, Australia, Canada, and New Zealand.

Large-scale emigration from Europe faltered with the outbreak of World War I, which brought European emigration to an abrupt halt and ushered in a four-decade *period of limited migration*. Migration flows were also affected by the Great Depression, the Second World War, and the rise of autarkic economic nationalism in both Europe and the Americas. It is in the middle 1960s that there was a resurgence of large-scale international migration. As a result of a high international mobility without precedents throughout much of the world, the migrant population worldwide started increasing rapidly as percentage of the total world population (see Figure 1). This new era of *post-industrial migration* also constituted a sharp break with the past; rather than being dominated by outflows from Europe to a handful of settler societies, immigration became truly global in scope as the number and variety of both sending and receiving countries increased. The global supply of immigrants shifted from Europe to developing countries. The variety of destination countries has also grown. In addition to traditional immigrant-receiving nations in Oceania and the Americas, countries throughout

Western Europe now attract significant numbers of immigrants—notably Germany, France, Belgium, Switzerland, Sweden, and the Netherlands.

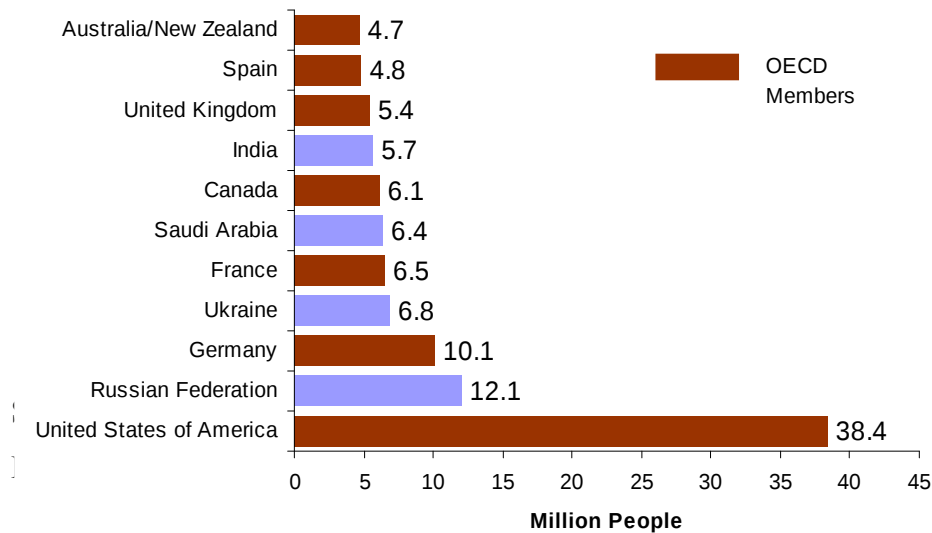
Figure 1. Immigrant Population Worldwide, Absolute Numbers and as % of Total Population



Source: United Nations, Population Division, World Migrant Stock: The 2005 Revision Population Database

According to the United Nations' Population Division, the number of international migrants has more than doubled since 1975 reaching 190 million people (2.9 % of the world population). Most of the world's migrants live in Europe (64 million), Asia (53 million) and North America (44 million). But if one takes the stock of migrants as a percentage of total population, then migration plays a more important role in North America, where foreigners represent 13.5% of total population, against 8.8% in Europe and only 1.4% in Asia. Although since the early 1990s *family-linked immigration* (family reunification) has proportionally increased in some countries, including the United States, the rise in *employment-related migration* has been the most salient feature in most of the receiving countries (OECD [2006]). These new tendencies in population flows have revived the debate over the social and economic consequences of international migration, and have thus motivated many academic researchers and policy makers to develop and estimate models designed to determine the causes of migration and to measure their impact.

Figure 2. Foreign Population in Selected Countries, 2005 (Millions)



In this paper we develop a ‘Primer’ that presents the ‘state of the art’ in the study of international migration and make special emphasis on how the Latin American experience fits in it. All of the theoretical developments are therefore complemented with a discussion relevant for the region. Given the magnitude of the migration numbers, Mexico, which according to Holzmann et al [2005] is the largest source of migrants in the world, has received more attention in the academic literature and policy publications. In fact, there is actually a shortage of studies and data on migration occurring in other Latin American countries. The Mexican case, therefore, frequently appears as an example throughout the document and some of the lessons from Mexico are surely relevant for other countries. Nevertheless, in Central America, where emigration represent a higher fraction of their labor force and the remittances they send back home account for a striking percentage of national income, the phenomenon is alarmingly understudied and given their differences with Mexico, especially in terms of size, the conclusions of current research cannot be always generalized. A more systemic exploration of the phenomenon in the whole region is, therefore, needed.

Section 2 presents an overview of migration patterns in the region. It highlights the importance of the United States as the prime destination of Latin American migrants. Section 3 is the core of the paper and reviews the different theories that have been proposed in the academic literature for explaining the occurrence of migration flows and their possible effects. We explore,

in particular, the contributions offered by economic theory, where individuals' decision-making plays a central role. Since migration is very unlikely to be a 'one-off' decision, we address the three main subjects in the study of migration behavior that emerge in a dynamic context:

- (i) The decision to migrate;
- (ii) The saving/consumption patterns of migrants, including the sending of remittances; and
- (iii) The decision to return home and the optimal length of stay abroad.

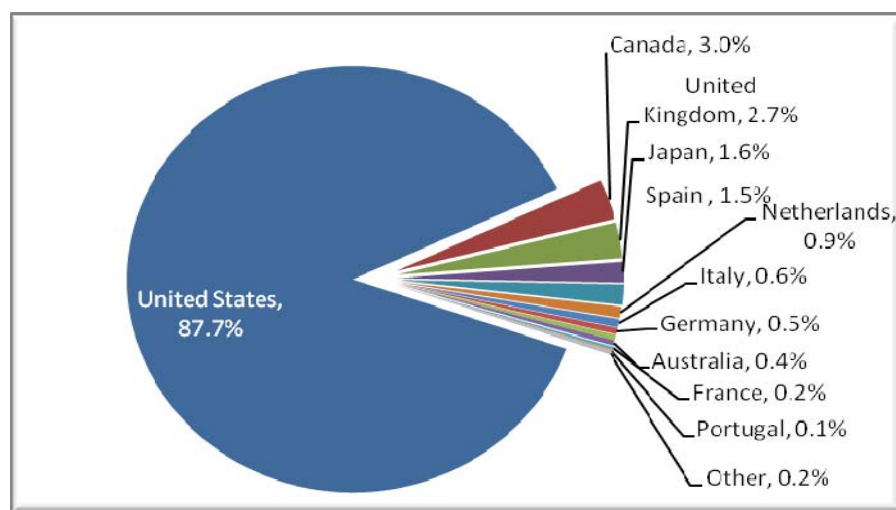
But the economic premise of individual self-interest, even in a full dynamic framework, is not capable on its own to explain some observed phenomena. This section is complemented by a discussion of the importance of institutions, networks and extended families in the process of migration. On the side of effects, we emphasize the importance of international remittances both as a direct consequence of international migration and as a vehicle causing itself further effects on home countries. The motives behind the process of remittances are closely related to the migration decision, the existence of extended families and, possibly more important, the decision to return home. These phenomena must, therefore, be studied together, and not as separate topics as frequently found in the literature. Finally, based on the current knowledge frontier in the subject, and taking account of the characteristics of migration patterns in the region, in Section 4 we propose a research agenda in order to fill some of the current shortages in the analysis of migration in Latin America. Our proposal place a special stress on Central America, where economies rely significantly on those flows and, given the current global economic trends, with the economic activity in the United States in recession, are more likely to be hit in terms of welfare.

2. Migration Trends in Latin America

The phenomenon of migration in Latin America had been in the past essentially one of net immigration, especially from individuals flowing in mass waves from Europe. The first wave occurred with European colonization which started in the 16th century. The second important wave took place between 1870 and 1940 involving mass movements of European labor, especially to Argentina, Brazil and Venezuela (Clark et al [2003]). After the 1960s, however, a very different history has taken place and Latin American countries have turned from net importers of migrants into net exporters. Although, they have started to explore new options,

such as Australia, Canada, Japan, and some European countries (Spain, Italy and the United Kingdom), the United States has never lost its importance as the principal destination for Latin American emigrants (see Figure 3).

Figure 3. Stock of Latin American Emigrants outside LA, 2000



Source: ECLAC, *Globalización y Desarrollo* and Clark et al [2003].

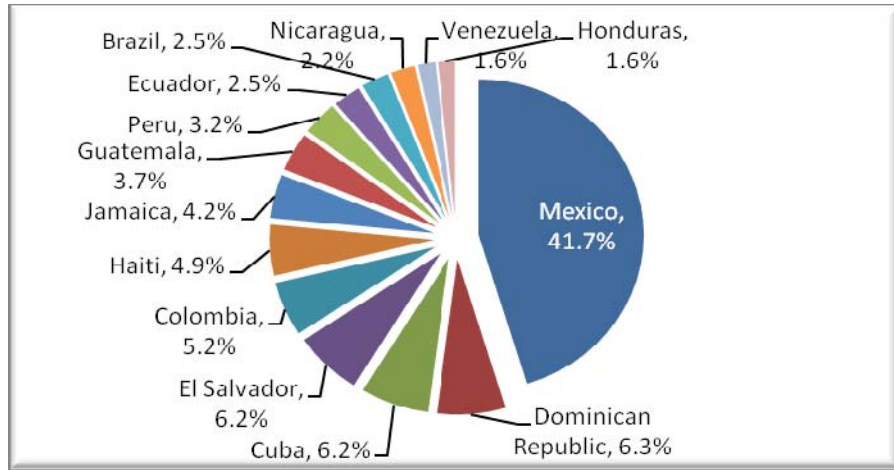
Migrants also move, although in a lower extent, to other countries within the region (see Martinez-Pizarro and Villa [2005]). Argentina has been the traditional host country of large contingents of Bolivians, Chileans, Paraguayans, and Uruguayans, as well as a significant number of Peruvians since the 1990s. Venezuela has received large flows of Colombians following the economic upturn triggered by the oil boom in the 1970s. In the 1990s Chile also registered an important immigration from other South American countries, especially from Peru. In Central America, Costa Rica is the host country of large contingents of Nicaraguans (who accounted for 83% of regional immigrants to this country in 2000), attracted by the demand of labor in the agricultural and service sectors. Mexico also became an important recipient of flows originating in Central America, especially in Guatemala and El Salvador.

Although the flow of Latin American workers abroad has then been around for some decades, it had never been as significant as in the last two. In a new wave of migration flows, which started in the 1990s and are present up to date, Latin American workers have started

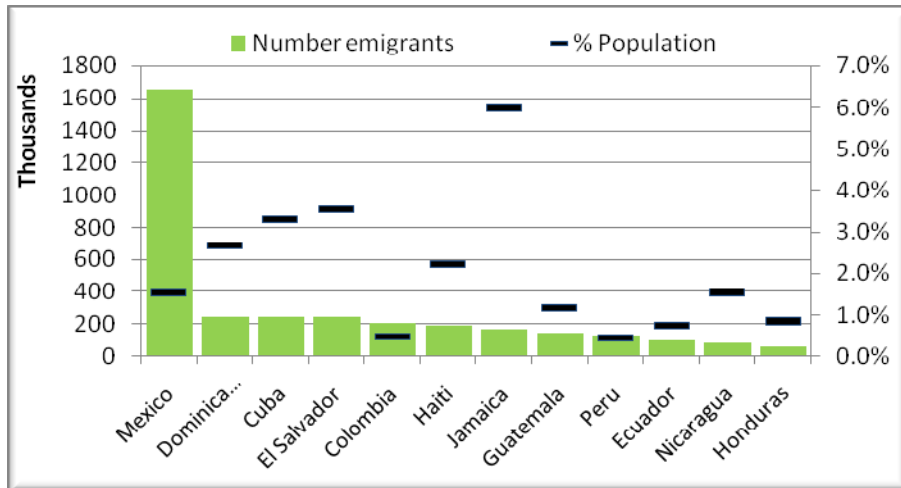
flowing in unprecedented numbers and have increasingly favored the United States as their prime destination. Therefore, despite the existence of other inter-regional and intra-regional movements, explaining emigration from Latin America is largely a matter of explaining emigration into the United States. By contrast, by 2000 more than 55% of all immigrants in the US were Latin Americans. The number of migrant workers leaving some countries, particularly in Central America and the Caribbean, is so high that this sole event, together with the consequent phenomenon of remittances, is capable of dictating the functioning of their whole economies.

Figure 4. Origin of Hispanic People Obtaining Legal Permanent Resident Status in the U.S., Period 1998-2007

1) Each country share:



2) Absolute number by country and as % of each nation's population, 2007:

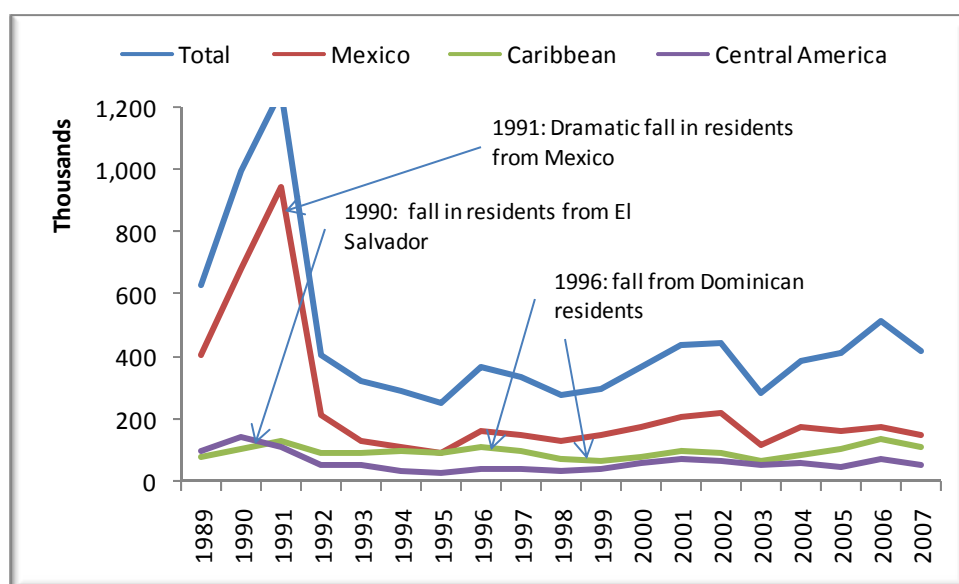


Source: US Department of Homeland Security, Yearbook of Immigration Statistics 2007 and US Census Bureau International database.

If one look at the trends of people acquiring permanent residence in the United States, depicted in Figure 5, it would seem that migration annual flows have been relatively constant since the 1990's. However, following numbers extracted by Martinez-Pizarro and Villa [2005]

from the Current Population Survey, the stock of Latin American and Caribbean immigrants in the United States doubled between 1980 and 1990 and represented 43% of the total foreign population registered in the country in 1990. The Hispanic and Caribbean population reached an estimated 18 million people in 2004, which represents roughly a 100 % increase with respect to 1990. Much of the recent increase in migration flows is, therefore, estimated to come from a higher movement of undocumented migrants.

Figure 5. Trends of People Acquiring Legal Permanent Residence in the United States

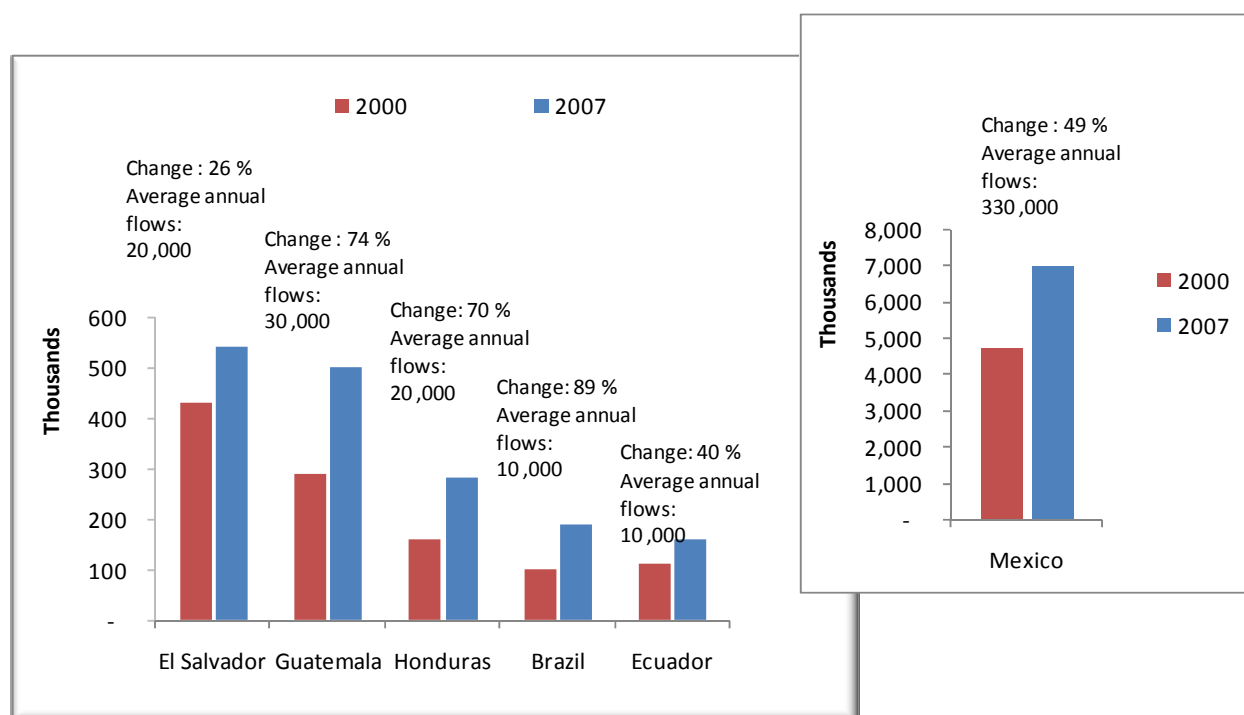


Source: US Department of Homeland Security, Yearbook of Immigration Statistics 2007.

Mexico accounts for more than 50% of the Latin American and Caribbean population in the United States. Caribbean's and Central Americans accounted for roughly 19% and 17%, respectively, in 2004. The accumulated population of Mexican immigrants in the U.S. constitutes about 10% of Mexico's total population and more than 15% of its labor force (Mishra [2007]) and the number of migrants departing annually is estimated to be almost equivalent to the annual increase of the labor force. According to the estimates of the US Department of Homeland Security, almost 7 million illegal Mexican workers resided in the United States in 2007. Migrants from Central America are also frequently illegal. Combining the estimation of the stock of undocumented immigrants, done by the US Department of Homeland Security, and the total

number of foreign-born population from Central America in the United States, which is obtained from the US Census Bureau, the result is that for countries such as El Salvador, Guatemala and Honduras the number of their people residing illegally in the United States in 2000 represented 52.6%, 60.3% and 56.6%, respectively, of the total immigrant population.

Figure 6. Estimations of the Stock of Undocumented Immigrants in the United States

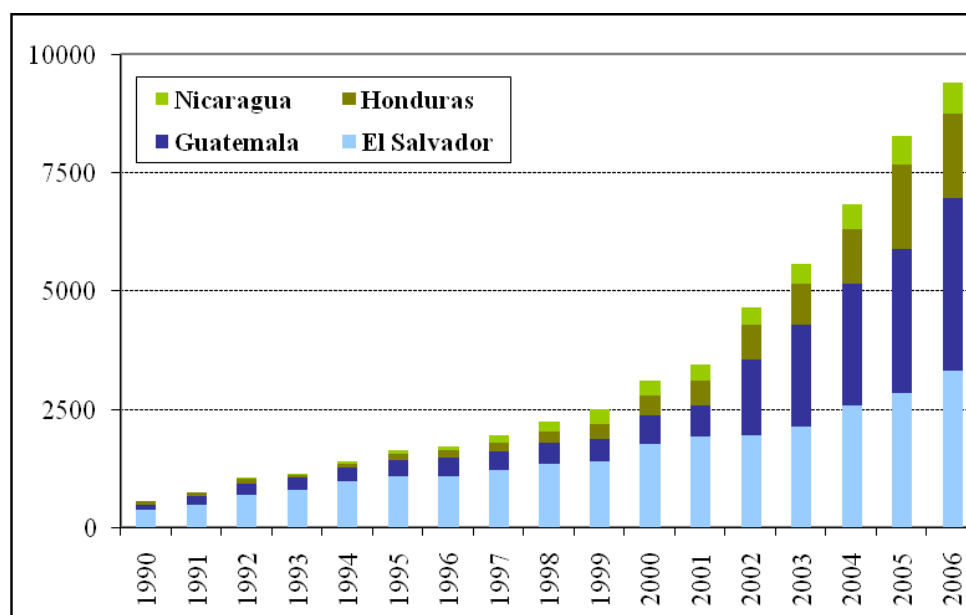


Source: US Department of Homeland Security, Population Estimates September 2008. Data for 2000 is Censual data from the 2000 Census. Data for 2007 comes from the 2007 American Community Survey. Both stocks of population include both legal and unauthorized population

The increase of the migrant population has been accompanied by a spectacular increase in international remittances. According to the World Bank [2005], migrant remittances to developing countries have grown rapidly reaching \$127 billion in 2004 and surpassing official development assistance. Following Acosta et al [2006], Latin America is the region that receives the largest amount (US\$45 billion in 2004, which represents 27% of all remittances to developing countries). Mexico, the Dominican Republic, El Salvador, Colombia, Brazil and Ecuador are among the top-20 country recipients of remittances globally. But seen as fraction of national income, it is for countries of Central America that remittances have doubtless had a vital

influence on their economies. In Honduras, for instance, individuals living overseas represent around 3.7% of the total population. But regarding remittances, the tendency has been an increase from less than 2% of GDP in 1990 to 21% in 2007. In another example, in Nicaragua remittances also started increasing since the mid-1990s reaching annual flows over 10% of GDP (sources like the Central Bank of Nicaragua estimated a figure of 13% of GDP in 2005). These figures are extremely high when compared against the fraction of remittances to GDP of 2.5% in the entire developing world.

Figure 7. Remittances Flowing to Central America, Million US\$

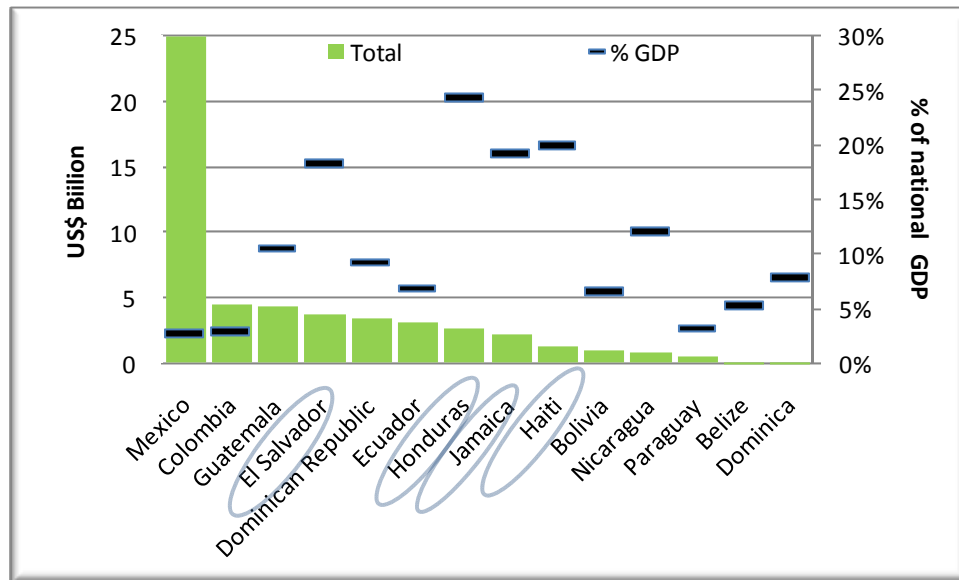


Source: World Bank and Inter-American Development Bank

The total amount of remittances in Central America grew 450% from 1996 to 2006 (see Figure 7) and these tendencies have important economic implications both at the macro and the micro level. The most important question is whether those flows of resources generate any benefit on the receiving country. One might expect a positive relationship between remittances and growth for countries with the complementary assets to take advantage of the infusion of capital. This would be the case when remittances are invested in new business back in the home

country.¹ But even in the case that remittances do not provide macroeconomic stimulus, at the microeconomic level of individuals they may alleviate poverty and insure households against economic downturns, taking a burden off fragile government institutions.

Figure 8. Remittances in 2007, Absolute Numbers and as % of National GDP



Source: World Bank estimates based on the International Monetary Fund's Balance of Payments Statistics Yearbook 2008.

3. Theories of Migration

The economics of migration covers a broad variety of themes dealing with the determinants and effects of migration movements. Regarding the migration decision, there are different bodies of theory that address the determinants. The two more cited in economics are the neoclassical approach (influence mainly by the seminal work by Harris and Todaro [1970]) and the New Economics of Labor Migration (triggered by Stark [1978]). The key premise of the neoclassical perspective is the supremacy of rational individuals' self-interests and their reaction to differences in income levels between the origin and the destination countries. This theory can be approached in a Macro perspective, determining migration flows by changes in aggregate variables, or putting more emphasis in particular individual characteristics in order to understand

¹ See Fajnzylber and Lopez (2008), who point out that remittance, have a positive impact on growth, half of which is explained by raising investment.

the incentives of different types of people to move abroad. The NELM moves the unit of analysis from individuals to families, putting special emphasis on informal arrangements as the determinants of migration flows.

On the side of effects, there is a vast literature on the impact of these flows of migrant workers on the receiving country, which includes consequences on wages and the labor markets, public finances, and many other economic and social variables (Borjas [1994]). Although there have been recent attempts to study the migration/remittance phenomena from the viewpoint of the source country, a significant part of which has been published by the Journal of Economic Development, significantly fewer studies have been devoted to investigate what happens to economic opportunities in source countries when a selected subsample of their population moves elsewhere. Economic outcomes in source countries are shaped by three forces:

- (i) The migration flow itself that creates changes in labor markets and the population structure;
- (ii) The possibility of return migration, whose feedback effect makes the composition of population and labor more complex; and
- (iii) The existence of international remittances that affect, among other things, consumption possibilities of the receptor households as well as potential investments.

One should also consider multiplier effects of remittances through their spending on products and services produced by other community members, and other potential spillover and general equilibrium effects; this also includes the network effects of migration on the costs and benefits of migration for other community members (Mckenzie and Rapoport [2007]).

3.1 Determinants of Migration

3.1.1 Wages and Push-Pull Factors

Recent studies on migration have framed the problem under a labor economics perspective. The question of labor factor mobility had created, however, a long tradition on the international theory of trade. As pointed by Glover et al. [2001] “the migration of people is a factor being traded between countries: economic migration is normally a voluntary market transaction between a willing buyer (whoever is willing to employ the migrant) and a willing seller (the migrant), and is hence likely to be both economically efficient and beneficial to both parties. Like in trade of goods, migration generally is expected to yield welfare gains. “As long as the

marginal productivity of labor differs in various countries, the migration of labor is welfare improving”, say the authors.

That said, the basic premise underlying both approaches is the idea of individual optimizing behavior. One key difference between migration and trade is that – unlike goods or capital – migrants are economic and social agents themselves, with a degree of control over the migration decision. So unlike goods or capital, migrants are self-selected. Partly as a result, migration is most likely to occur precisely when it is most likely to be welfare-enhancing. Economic theory suggests that individuals behave in ways that maximize their well-being. Under this premise, potential migrants compare all feasible alternatives and choose a country which provides the best opportunities. If countries which are abundant in labor have lower wages than countries which are abundant in capital, then workers will, if labor is mobile, have an incentive to migrate from the poorer to the richer country.

Migrant flows to a chosen country depend, therefore, on a set of factors relevant to the source country (‘Push’ factors), host country (‘Pull’ factors) and the characteristics of the migrants themselves. Since the seminal work by Harris and Todaro [1970] it is common to hypothesize that the migration decision of an individual is determined by the economic differences between the source and the receiving region (country) in variables such as levels of income (or wages) and the expected unemployment rate. The theory of income differentials constitutes the base of the mainstream approach to migration. Additional variables that may influence the decision include the direct financial cost of migration, non-wage job characteristics workers may value such as access to social security and protection systems, safety, lack of stress, opportunities for advancement, prestige, housing or transportation. Factors related to ‘living conditions’ include crime rates, availability of schools for children, language spoken, and etcetera.

One general conclusion of the estimation of gravity equations in different studies, where aggregate flows of migration are determined by variables such as the size of population both in the source and the receiving countries, the size of national incomes or per capita incomes and unemployment rates, is that migration seems more responsive to movements of the relevant variables in the receiving country (the US in the case of great part of the Latin American experience) than to movements in the source country. The greater importance of ‘pull’ factors has also been found in the study of migration for other regions (e.g. Mayda [2007]).

The own Mayda [2007] proposes that the asymmetric effect between the ‘pull’ and ‘push’ factors may be explained by the demand side of international migration - namely, migration policies - and not by the supply side as is often assumed in the previous literature. Changes in mean income opportunities in the destination country not only affect migrants’ incentive to move there but also impact the political process behind the formation of migration policies. In periods of economic booms, policymakers are better able to overcome political opposition to increasing migration inflows. Institutions and policy may, therefore, be relevant players in the migration process.

3.1.2 Distribution of Skills, Inequality and Selection of Migrants

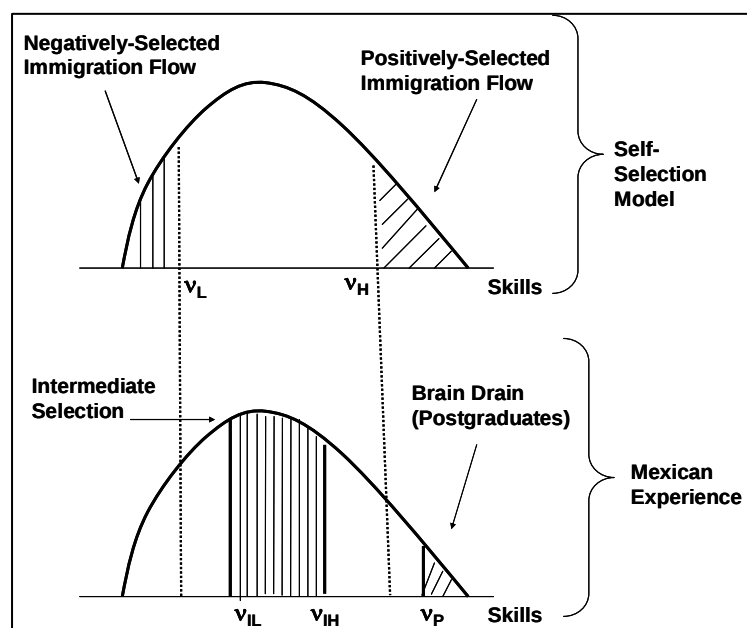
Note that the push-pull approach à la Harris-Todaro says nothing about the heterogeneity of individuals. In addition to the size and direction of migration flows, there are other equally important questions which can be analyzed in the context of the income maximization model. Which persons, for instance, find it worthwhile to migrate to the host country? Borjas [1987], followed by an important body of work, proposes that the magnitude and type of migration flows are also determined, besides the variables we have considered above, by the heterogeneity of migrants and the distribution of skills and income in both the source and the receiving countries. He theoretically predicts that in countries with high returns to skills and high wage dispersion, as in much of Latin America, there will be *negative selection* of immigrants: those with the greatest incentive to migrate will be individuals with below-average skill levels in their home countries. In countries with low returns to skill and lower wage dispersion, there will be *positive selection* of immigrants: those with above-average skill levels will have the greatest incentive to migrate.²

Stark [2005] further claims that, in the prevalence of relative deprivation at the source country, migration will be negatively selected, independently of the comparison of the degree of income inequality between the origin and destination countries. In other words, negative selectivity arises from the inequality of the income distribution at the origin country per se. The argument is that individuals care about their relative position, and household members undertake migration not necessarily to increase the household's absolute income but rather to improve the household's position (in terms of relative deprivation) with respect to a specific reference group. In this context, higher positioned individuals would be less willing to change to another relative

² The self-selection model has the limitation that it is only supply-sided. It does not explain the demand for immigrants of the host country.

income group than individuals at the bottom of the distribution. For the case of Mexico, Stark and Taylor [1991] had obtained evidence that, after controlling for initial absolute income and the expected income gains from migration, the propensity of households to participate in international migration was directly related to the households' initial relative deprivation.

Figure 9 - Distribution of Skills: Self-Selection Model vs. Hispanic Immigration into the United States



Empirical studies have, however, often rejected the predictions of the selection argument (Borjas [1994], Chiquiar and Hanson [2005]). The Mexico-US migration experience is useful to contrast those predictions. If one takes educational levels as a proxy for skill levels, then migrants into the US, while certainly much less educated than U.S. natives, are more educated than the average resident in Mexico. Individuals with 10–15 years of schooling form the most representative group of Mexican migrants in the United States. Whereas workers with low levels of education constitute the majority of the migrants in absolute terms, the greater relative loss occurs for higher educational groups.

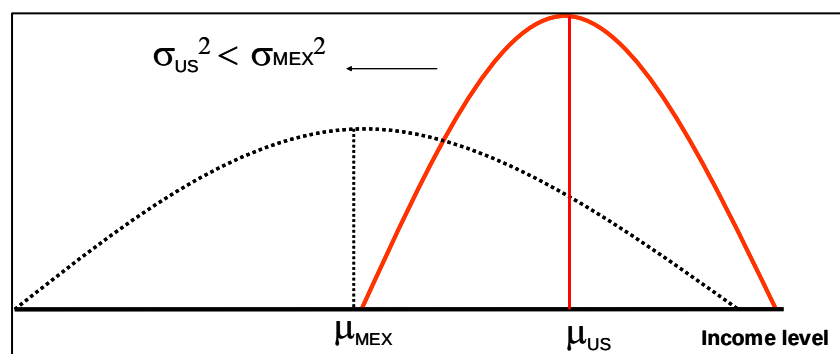
The own Borjas recognizes in further research that this is suggestive evidence against the hypothesis of negative selection of Mexican immigrants in terms of observable skill: “were Mexican immigrants in the United States paid according to Mexican skill prices, they would fall

disproportionately in the middle and upper portions of Mexico's wage distribution" (Borjas [1994]). Chiquiar and Hanson [2005] find the same result. According to Ross et al [2004], in 2000 55.8% of all Mexican immigrant men had not completed more than 9 years of school, compared to only 7.3% of U.S. natives. However, they compare favourably against residents of Mexico: 69.4% of male residents of Mexico had no more than 9 years of schooling. Beyond 9 years of education, Mexican immigrants outperform Mexican residents in every category except college graduates.

The fact that immigrants from Mexico appear to be relatively higher-skilled individuals (intermediate selection) would be in principle surprising: the estimated returns to education are higher in Mexico than in the US (Borjas [1994]), whereas wage dispersion is higher (Chiquiar and Hanson, [2005]). This suggests that low-wage individuals from Mexico would have the most to gain from crossing the border (as illustrated in Figure 9). Heterogeneity in migration costs is one way to reconcile these facts. People in the middle of the distribution (somewhat more educated) may be better able to cope with the migration process, they may have better access to migration networks in the U.S. or they may be less subject to credit constraints in financing migration. Also, besides greater migration costs, greater risk aversion among the low-skilled may make migration abroad relatively less attractive for this group.

Orrenius and Zavodny [2005] also support the idea that migrants are not negatively selected with regard to education. They further argue that improvements in U.S. and Mexican economic conditions are associated with a decline in the average education of undocumented immigrants, while stricter border enforcement is associated with higher average skill levels. All these findings may also apply to other Latin American countries, especially those sending migrants into the United States.

Figure 10. Hypothetical Income Distribution in Mexico and the U.S.



3.1.3 The Role of Extended Families and Networks

The neo-classical approaches to labor migration highlight the individual incentives to move abroad under the premise of individual utility maximization. The New Economics of Labor Migration (NELM), which was initiated by Stark [1978] and was formalized in Stark and Bloom [1985], put more emphasis on the family unit within the migration process. This alternative approach does not mean that income differentials of the push-pull fashion are not a key factor. The difference in the NELM is that income differentials may be necessary but not sufficient conditions. One of the Stark premises is that even though the entities that engage in migration are often individual agents, there is more to labor migration than individualistic optimization behavior. Following Mendola [2008], the NELM theory explains migration as an inter-temporal household strategy. The motivations behind migration are conceived in terms of imperfections in credit and risk markets, whereby having a migrant member working elsewhere is a family strategy to manage uncertainty, diversify the income portfolio and alleviate liquidity constraints through remittances. Accordingly, the migrant (both temporary and permanent) is part of a spatially extended household that acts collectively to reduce idiosyncratic risks by maintaining cooperation over long distances (examples of cooperation channels are the process of remittances and the possibility of inheritance left by people at the home country).

Determinants of Migration

Unit of Analysis		
Individual	Household/Family	Institutions
Harris –Todaro	Stark	Marxism
Push - Pull	New Economics of Migration	Structuralism

The familial implicit contract, according to this theory, aspires at increasing family income and reducing the exposure to risks by investing in migration. Moreover, migration is costly and, in a context of imperfect credit markets, liquidity constraints may be an obstacle for many single individuals to move abroad. This situation re-enforces the need of migration to be determined within the family unit, with the financial support to afford movement costs.

Authors like Ilahi and Jafarey [1999] explore how far family arrangements for the finance of costs of migration are altruistically motivated or if they should be seen as informal credit arrangements. Following the principles of the NELM, the family would finance the costs of migration in the expectation of receiving a benefit into the future, either in the form of higher income or in the form of protection against economic downturns, through the possible reception of remittances. The discussion of altruism versus self-interested motives is, therefore, also relevant in the literature on the determinants of remittances, which is not surprising given the strong inter-relationship between the processes of migration and remittance.

The authors also test whether the high initial costs of migration encourage the development of kin networks in source countries. The fact that individual migrants may borrow from the extended family in order to offset those costs could lead to greater obligations on the part of this migrant to help extended family members joining him overseas.

Social networks are likely to play an important role in mitigating the hazards of crossing the border, with friends and relatives with previous migrant experience often accompanying new immigrants across the border. Munshi [2003] finds that individuals with larger networks are more likely to be employed and to hold higher paying jobs. Net migration costs, as proposed by Carrington et al [1996], become hence endogenous to the migration process; regions with higher migration rates may form a migration network, which reduces the costs of future migration and eventually facilitate the movement of even more residents from this region. Migration is therefore likely to have different effects on inequality at different levels of a village's migration history. This has policy implications in national governments in source countries, especially regarding the focalization of anti-poverty programs. According to these possible scenarios, public cash transfers should be, under some circumstances, targeted to some regions with less access to networks and more probability of staying behind.

3.2 Return Migration and Optimal Duration Abroad

The emigration of workers from poor to rich countries is frequently regarded as a relief for labor markets in many developing economies. But given that an important share of that migration is temporal and not permanent (Dustmann [1997]), the return of those migrants to their home country poses further challenges to the home country economy.

Labor migration has traditionally been treated as a strategy to increase the individual level of income and that of the family. Under a neoclassical economic perspective, persisting

geographical differences in wage levels are the main drivers of migration flows. Simple neo-classical models cannot, therefore, provide an explanation for the persisting flows of return migration from high-income to low-income countries. Additional factors must therefore be considered.

Following Borjas and Bratsberg [1996], return migration can be either planned before migration or resolved once migrants reside abroad. The existence of an optimal location strategy is an example where return migration is contemplated since the first migration decision. According to the *target income hypothesis*, workers reside in the host country for a few years and then return after accumulating a target level of wealth. This explanation makes particularly sense in the case that liquidity-constrained individuals wish to invest in the source country but there are capital market imperfections (Lindstrom [1996,] Mesnard [2004]).

Spontaneous return decisions are, in contrast, driven by changing economic and social circumstances in both source and receiving countries. One first possibility is the *disappointment hypothesis*, in which return migration flows may result from mistakes in the initial migration decision (actual outcomes experienced in the host country's labor market may differ from the expected outcomes that guided the immigration decision). A more accepted premise in economics, though, is that workers act as rational economic agents and maximize life-cycle utility taking into account changes in diverse variables. They are often called in the literature 'neo-classical migrants'. In each period of time 'neo-classical migrants' decide to locate wherever benefits are higher. Models that seek to explain return migrations in a life-cycle context vary in their explanations. Djajic and Milbourne [1988] explain return migration by assuming that migrants have a stronger preference for consumption at home than abroad. They suggest that this assumption results in behavior that seems to be consistent with the fact that migrants have a higher savings rate while abroad and their rate of consumption rises upon returning to the homeland. Hill [1987] also shows that migration may be temporary and repetitive if the migrant has a preference for certain locations. This mobility pattern would allow, therefore, that some workers attain higher utility than if the migration decision was permanent. Dustmann [2003] bases also on location preferences, but he proposes two additional motives:

- (i) Accumulation of human capital abroad which is only earnings-effective back home;

- (ii) Higher purchasing power of savings at home. These motives are consistent with individual utility maximization where returning home is optimal, despite differences in absolute income levels.

Regarding the time spent abroad, distinguishing between ‘neo-classical’ and ‘target-income’ migrants makes a difference in the optimal length of stay. The first type of migrants choose the length of stay overseas that balances the marginal benefit from higher savings overseas (and thus higher lifetime consumption) against the marginal utility cost of overseas work (Dustmann [2003]). Target-income migrants, in contrast, stay abroad the time needed to accumulate a target wealth level. For these reasons, both types of migrants may respond very differently to changes in overseas economic conditions. For ‘neo-classical’ migrants, improved economic conditions in host countries, say, increased wages, can lead to longer overseas stays (as long as substitution effects dominate any income effects). For target-income agents, by contrast, improved economic conditions should lead to shorter overseas stays, as migrants reach their earnings goals more quickly.

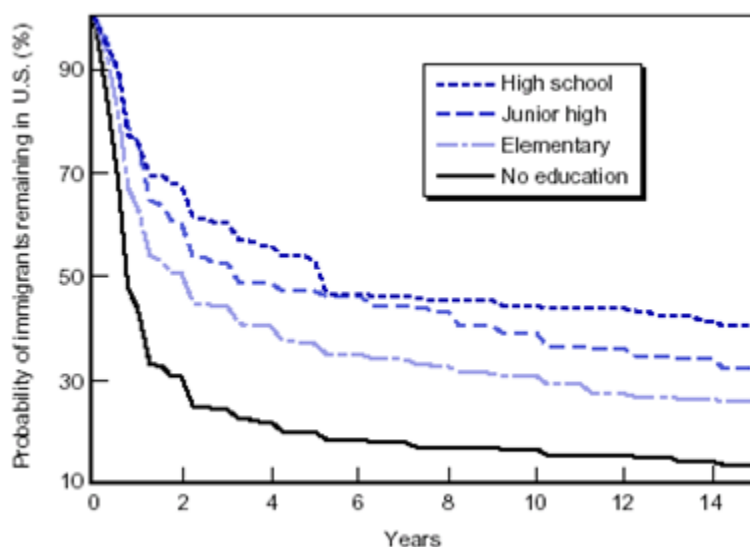
Return migration may also be influenced more by networks than by economic considerations. In addition to its influence in increasing the probability of migration by reducing its cost, social networks may increase the probability of permanent settlement (Reyes [1997]). Prospective immigrants can count on earlier migrants for information, transportation, housing, and in some cases even employment. Every new migrant expands the social network and reduces the risk for all other potential migrants. The maturation of migration networks is often associated with longer stays.

It is, therefore, important to determine the motives to return for different types of people, since the diverse explanations frequently yield contradictory predictions. Under the disappointment theory, for instance, those who fail to meet their expectations return. Under the target-income theory, those who save enough funds return, which suggests people who fail are the ones who stay. Policy actions are, as a consequence, likely to yield unexpected results if one does not keep in mind such variety of individual motivations.

Borjas and Bratsberg [1996] complemented the return migration literature by linking this process to the initial migration decision and the heterogeneity of individuals in terms of skills. They argue that the initial selectivity in the process of migration is re-enforced with return migration. If migration flows are initially positively-selected (i.e. composed of workers with

higher –than-average skills), then the return migration flow is composed of the least skilled immigrants. The whole premise is based on the returns to skills. Intuitively, it is the highly skilled who gain the most by residing abroad and will stay there even if economic conditions improve in the home country. If migration was instead initially negatively-selected, and considering that the rate of return to skills is higher in the source country, then the most skilled have little incentive to migrate abroad. And even though the immigrant flow is relatively unskilled, it is the most skilled in this self-selected sample who find it optimal to become return migrants. According to the authors, since it is the marginal immigrants who leave, the immigrants who remain in the United States are the ‘best of the best’ if there is initially positive selection, and the ‘worst of the worst’ if the selection is negative.

Figure 11. Probability of Remaining Over Time, by Education



Source: Reyes (1997) using data from the Mexican Migration Project

For the case of Mexico, for instance, Reyes [1997] reports that the rate of return was higher for the poorly educated, for low-wage earners, and for undocumented immigrants. If we consider that diverse authors, like the own Borjas in previous studies, have suggested that migration from Mexico into the United States is relatively positively-selected (or intermediately-selected, which is another classification they use for implying that Mexican migrants are relatively a bit more skilled with respect to their co-nationals who stay at home), then the two

findings combined would imply that return migrants are, in any case, what I would define as the ‘worst of the relatively higher skilled’.

The problem with the results of Borjas and Bartsberg [1996] is that they are highly dependent on the assumption of fixed skills. It disregards the fact that migrants may accumulate skills while residing abroad and a small increase in those skills may represent a bigger return at home. In such a case, it would be interesting to document what types of individuals acquire more skills and whether relatively unskilled migrants eventually close the gap with more skilled fellows. It would be interesting to get more in depth into the return migration of workers from Central America and get equivalent figures.

3.2.1 Return Migration and Development

The probability of returning has implications in some key variables. Galor and Stark [1990], for instance, argue theoretically that the existence of a positive probability of getting back home results in migrants saving more than comparable native born. Part of those resources are saved at the destination country whereas the rest may be remitted back home. It is important to determine the nature of those savings, whether they serve for precautionary motives, in case of risks like unemployment, or if they are part of a life-cycle accumulation for future consumption and investment.

One must also take account of the potential problems of endogeneity. Mesnard [2004], for instance, have documented from the African migration experience that migrants who invest after returning to their country have accumulated more savings and stayed longer abroad than salaried return migrants. A central question is the causality of the relationship, this is, whether higher savings induce afterwards to the involvement in self-employment in own business or if individuals with a preference for self-employment, but credit-constrained, self-select for longer stays abroad to accumulate enough wealth. Depending on which hypothesis is accurate, different policy measures may be optimal.

In particular, Latin American governments, especially in small Central American and Caribbean countries, may be interested in detonating the entrepreneurship capacity of those individuals that due to credit constraints decided to migrate. If it is the case that a higher accumulation of assets and the time spent abroad detonate the entrepreneurial spirit of individuals and increase their willingness of investing in the home country, then the governments may have the interest to encourage longer stays abroad. Poverty alleviation programs that relax

credit constraints and give individuals the chance to move temporarily abroad do not seem such a bad idea in this case. Also, if the causality implies that higher savings (maybe in the form of remittances) lead to higher prospects of starting up new business, another possibility is a policy that encourages the establishment of financial instruments for increasing savings derived from remittances.

If, on the contrary, more business-prone individuals are self-selected, then governments would have the incentive to repatriate them. In principle, policy measures that overcome credit market constraints in the home country could be expected to reduce migratory flows of the most entrepreneurial people, as well as reducing the average length of migration for those who do leave and have the intention of starting new business in the home country. Moreover, Mesnard suggests the possibility of further reactions to policy: if credit market imperfections are reduced, migrant workers that initially contemplated salaried work at their return may change their intended occupation from wage-employment to self-employment, which would encourage the reception of remittances aimed at productive investments.

In such scenario, programs aimed at overcoming credit market imperfections may be a better bet than anti-poverty transfers. Public loans or assistance funds conditioned on investment projects may be better suited for economic growth. The only drawback of micro-financing is that it may benefit the better-off and marginalize the poor.

3.2.2 Life-Cycle, Retirement and Return Migration

Since return migration is a dynamic problem embedded within the life-cycle of migrants, it necessarily raises inquiries regarding migrants' future consumption possibilities, take these place in the host country or at home, and the possibility of leaving the labor market at some stage. According to the life-cycle theory, each individual with perfect foresight will save during working life in order to finance consumption once she is no longer working. However, this simply rarely happens in reality either because the future is uncertain (i.e. wages, unemployment or disability status) or because individuals face difficulties in the process of planning. In any case, people might prefer to trade resources between contingent states of nature than across time. In other words, individuals in many countries insure against those risks, either through private insurance or through social arrangements. Each individual retirement will then be determined either by disability or by an optimizing behavior, i.e., when the benefits of retirement, which may

come in the form of pension benefits and/or a higher preference for leisure, offset the opportunity cost of leaving the labor force.

One salient characteristic of migrants from Latin America is that they are frequently informal workers and thus not covered by any sort of formal protection scheme, either at home or in the receiving country. Migration may act, on the one hand, as a form of insurance against undeveloped markets and economic downturns in the home country. Also, the possibility of being entitled to insurance schemes and protection systems abroad may shape migration and return migration. A high degree of mobility, on the other hand, may be at the same time the responsible for the lack of eligibility to welfare benefits in either country. Whether the lack of protection against risks is a cause or a consequence of migration is not yet clear. Even if migrant workers do value the access to, say, pension schemes and health care coverage, it is not straightforward that it is relevant in their decision to move abroad or to return home.

Migrants may be of different types:

- (i) Myopic migrants may be driven by current differences in levels of income, with no concern about the future;
- (ii) Strategic migrants may be driven by the probable gains in the accumulation of savings/assets, either for precautionary purposes or in the form of life-cycle savings for future consumption.

Among strategic migrants, those with an income target will seek to accumulate enough wealth for financing retirement consumption or for financing new business at home capable of expanding consumption possibilities into the future. They are less likely to be particularly concerned with protection schemes in their migration decision. Life-cycle migrants, or ‘neo-classical’ migrants, in contrast, will locate wherever the benefits are greater than costs, including the retirement phase. Those benefits may include the access to protection schemes. Life-cycle migrants may settle permanently abroad if their purchasing power, including also the retirement period, is greater abroad than in the home country (and big enough to offset any location preference).

Determining the sorts of motivations that drive migrants is a key factor for the design of public policies, especially regarding the development of financial instruments for the investment of remittances in productive projects and for pension and health care protection schemes. For some types of individuals institutions may play a more central role and their effects on the initial

migration decision, the time spend overseas, the decision to return home, may rely on specific institutional characteristics such as entitlements to social benefits.

3.3 Institutions and Public Policies

According to Haan [1999], not all migration decisions should be expect to be a result of economic-thinking decisions of individuals, or even families. In a critical survey, the author argues that insufficient attention has been paid to the institutions that determine migration. Orthodox theories assume that migrants act individually according to a rationality of economic self interest. In Harris-Todaro's framework, the decision to migrate would be determined by wage differences (plus the expected probability of employment at the destination). But economic models tend to isolate economic decision-making, and consequently do not analyze the political and social context in which these decisions are made. Neoclassical models frequently lack institutional content.

3.3.1 Immigration Policy

We have commented above about the empirical evidence that flows of migrants into the United States may be driven more by 'pull' factors (i.e. by economic variables in the destination country). Mayda [2007] suggest that the importance of pull factors is determined by the demand side of migration, this is, immigration policy. However, although part of the increase in immigration in recent decades can be attributable to changes in U.S. immigration policy, such policy has been virtually unchanged in the last twenty years, which is the period that has witnessed the greatest increase in migration inflows.

Prior to 1965, immigration was guided by the national-origins quota system, based on the censual number of foreign-born residents of each nationality. The 1965 Amendments to the Immigration and Nationality Act (and subsequent revisions) repealed the national origin restrictions, increased the number of available visas, and made family ties to U.S. residents the key factor that determines whether an applicant is admitted into the country. As a consequence of both the 1965 Amendments and of major changes in economic and political conditions in the source countries relative to the United States, the national origin mix of the immigrant flow changed substantially.

There were two additional major pieces of legislation. The 1986 Immigration Reform and Control Act (IRCA) gave amnesty to three million illegal immigrants but introduced two of the main policies aimed at limiting the flow of additional illegal workers:

- (i) A system of sanctions to employers accepting illegal immigrants; and
- (ii) The intensification of border patrols. With the 1990 Immigration Act, the entry of an additional 150,000 legal immigrants annually was permitted and family reunification was retained as the main immigration criteria, although with significant increases in employment-related immigration.

Thus, in theory the demand for illegal workers was officially eliminated since 1986. The flow of undocumented migrants increased, though, in unprecedented numbers thereafter. This suggests either that the supply side, i.e. the incentives of migrants, is more powerful than the demand side, or that the demand side is still positive and the United States tolerates a certain number of foreign workers. Nowadays that the economic conditions may put more pressure for the government to restrict migration, the demand side may decline even without any change in policy, only by the enforcement of the current law. More powerful than immigration policy, however, may be welfare policy (i.e. the access of migrants to public benefits) insofar it affects migrants' economic incentives.

3.3.2 Welfare Policy

In 1996 immigration and social welfare policies were fused in the United States. The 1996 Welfare Reform Act limited the eligibility of immigrant households to receive financial support from the Government and set time limits on the receipt of transfer payments. Authors like Borjas have described in several papers the particularities of this reform, and some that followed thereafter, and have explored their impacts in a series of variables (see Borjas [1999], [2002], [2003]). Access to welfare benefits and protection schemes may be at the core of the decision to migrate, the duration of stay abroad, and to determine the amount of remittances.

The initial reform adversely affected an important share of migrant workers and the conditions were gradually softened. In August of 1997 Congress restored the eligibility of most immigrants who were already present in 1996 to receive certain disability payments. At the same time, individual States, which had been granted with this initiative a new authority to deny public benefits to legal immigrants, generally chose not to, and continued to extend medical assistance and welfare benefits to immigrants. In June of 1998, moreover, Congress voted to restore eligibility for food subsidies to those immigrants who were elderly, disabled, or under 18 and were in the U.S. when the law passed.

The initiative initially barred most immigrants, those already in the United States at the time the law was enacted and future immigrants, from receiving cash assistance from the Supplemental Security Income³ and federal food stamps, as a subsidy for poor families. Eligibility was later restored for the elderly, disabled and legal migrants under 18 years old. The law also barred new migrants for 5 years from receiving any “federal means-tested benefits,” including Medicaid (which covers essential health care costs care for people otherwise unable to pay). Illegal migrants were disqualified from all “federal public benefits”. At the State level, however, all current immigrants, including those illegal, were later entitled to specific substitutive programs.

Despite these efforts to blunt welfare reform's effects, many immigrants still lost eligibility for public benefits. Only a small fraction of the immigrants who lost eligibility for federal food stamps by August 1997 had their eligibility restored by the States. Like the federal restorations, many State programs left out working age adults. Since SSI is a program for the elderly and disabled, nearly all current immigrants regained their eligibility for SSI. But by following the SSI population “model,” the Government left out the largest group of needy immigrant food stamp recipients: working age adults. The 5-year bar on means-tested benefits restricts immigrants' access to the programs they need most at the time their need is greatest.⁴ It also left out a significant subset of the elderly non-disabled population: those aged 60–65 years and those who turned 65 after August 22, 1996.

Perhaps, the clearest line drawn by welfare reform is not the one separating legal immigrants from citizens, but that dividing noncitizens in the United States as of August 22, 1996 from those arriving afterward, the latter being barred from receiving benefits such as Medicaid (for a period of 5 years since they arrive) and from SSI and federal food stamps until they naturalize. In contrast to their relatively generous treatment of current immigrants, most States followed the federal government's lead and did not provide substitute benefits to new immigrants. By limiting the access of non-citizens to benefits, welfare reform introduced a strong new incentive to naturalize. The power of this incentive was especially strongly felt among working age immigrants ineligible for food stamps and new immigrants arriving after

³ The program is aimed at helping the aged, blind, and disabled.

⁴ Immigrants' incomes are lower during their first years after arrival than they are after being in the U.S. for 5 or 10 years (See Borjas [1999]). Although new immigrants' sponsors have pledged to support them, paying for health care for an uninsured immigrant who falls ill can be very expensive.

August 22, 1996, whose eligibility for all major benefit programs was suddenly conditioned on naturalization.

3.3.3 Portability of Social Benefits

An additional policy in the area of access to welfare benefits is the portability of entitlements. Take the experience of Mexican migrants in the United States; about a half is illegal but workers do frequently pay social security taxes. Moreover, under the Social Security Act, all earnings from covered employment in the United States had typically counted towards earning social security benefits, regardless of the lawful presence of the worker, his or her citizenship status, or country of residence. Moreover, the U.S. allows the export of pensions. Immigrants became entitled to benefits from unauthorized work if they can prove that the earnings and related contributions belong to them (and as long as they met the coverage credit threshold of 10 years). However, they could not collect such benefits unless they are either legally present in the U.S. or living in a country where SSA is authorized to pay them their benefits. Mexico is such a country. Although unclaimed social security contributions in the US are significant (Holzman et al [2005] estimate that US\$35 billion have been contributed by or on behalf of undocumented Mexican migrants), many Mexican workers disqualified from receiving benefits in the U.S. have been doing so in Mexico for many years (according to Ross [2005], among migrants who receive a pension, more than 30% earn US social security). This may have encouraged return migration. This scenario may also have affected migrants from other Latin America countries, depending on the type of arrangements the SSA had with the corresponding source country. In 2003, however, the Social Security Protection Act explicitly prohibits foreigners from applying for Social Security benefits from abroad on or after January 1, 2004, based on work they did while in the US illegally. This will surely bring new behavioral changes in the patterns of return migration among illegal workers.

A separate policy that is specifically relevant for Mexican-born migrants in the United States is the sign in June 2004 of a totalization agreement of pensions between both countries (Bovbjerg [2004]).⁵ Under a totalization agreement countries recognize each other's pension credits. Such an agreement would allow to sum years worked in the US and Mexico. This would allow more migrant workers to qualify for pension benefits: still today a migrant who worked for

⁵ The agreement is awaiting the U.S. President's signature. Once signed the agreement, which would be done without congressional vote.

less than 10 years in Mexico and less than 10 years in the U.S. does not have an entitlement to a pension in either country. With the new proposed law the minimum requirements are 52 weeks of contribution into the Mexican system, six quarters into the U.S. system, 500 weeks of combined contributions for the Mexican part of the pension, and 10 years of combined contribution for the U.S. pension. Each country only pays the pro rata share of the pension and benefits will be available only to workers who obtained legal status before returning to Mexico.

This type of policy would entice migrants to remain in the U.S. for the 10 years it takes to vest for U.S. Social Security (versus 24 in Mexico) should they be agents who seek to maximize life-time - and retirement income. Whether migrants would then settle permanently or not has yet to be investigated. The portability of pensions for legal workers together with the law limiting access to claiming pensions to illegal ones is likely to change the composition of workers who return to Mexico, with higher proportions of legal workers returning home. This seems in principle good news to the Mexican State; illegal migrants, who are no longer entitled to any pension benefit, would probably demand resources from Mexican safety programs after returning.

Enhancing portability of long-term social security benefits may also be a useful tool for host countries to encourage migrants to participate in the formal sector (and pay taxes) and discourage irregular migration. A migrant worker who is certain of returning to her home country at some point but who will not be able to keep her benefits faces high incentives to avoid paying social security contributions during her stay in the host country.

Access to health care is also a relevant factor. In addition to its probable effect on migrants' decisions to stay and return home it also has important fiscal implications. Consider again the Mexican experience. Returning Mexican migrants from the US are reported to be a burden for the Mexican health system as these people have paid few taxes and contributions into the Mexican public coffers during the course of their career, but enjoy free access to first-level health services like emergency treatment while in Mexico. The Mexican Social Security Institute (IMSS) has responded, however, by offering health insurance policies for Mexicans who live and work abroad to insure them and their family members while staying in Mexico, or family members who live in Mexico. The rates are age dependent and the policies can be bought for every family member, independent of their status (migrant or not, legal or undocumented). The government response to the fiscal challenges is likely to affect migrants' behaviour. Will

migrants save more? Will they buy such insurance at all? Will private health care expenditure increase?

Return migrants might qualify for Medicare in the US, and stay covered regardless of the country of residence (as long as they continue to contribute to the system). The problem is that few migrants satisfy the requirement of 40 quarters to qualify for Medicare either because they return before 10 years or because they are illegal. A proposal for establishing an agreement for the portability of health care benefits does not in principle look beneficial for the home country. Following Holzmann [2005], such a policy would imply important actuarial considerations: migrant workers, who are typically young (and healthy), would pay a significant amount of contributions to the public health system of the host country. This makes migrants on average net contributors to the public health system of the host country. After returning home, when older and with a higher need of health care coverage, migrants may contribute to the public health system of the home country for some time before retiring and spending the rest of life as net beneficiaries of the home country's health system. Migration flows are clearly asymmetric, with developing countries sending more young net contributors abroad than they receive, and receiving more net beneficiaries than they send abroad. This "youth drain" may result, as we will show in the sections about the effects of migration below, on a burden for the public health systems of migrant-sending developing countries.

3.4 Effects of Migration in Source Countries

A great part of the literature has concentrated on determining the effects of migration on destination countries. The more frequently studied topic is the effect of immigration on labor markets, through the possible depression of wages and the change in the composition of skills. Dustmann et al [2005] summarize what the literature has found on the effect of immigration on developed (host) countries: although immigration has strong effects on relative supplies of different skill groups, local labor market outcomes for low skilled natives are not much affected by these relative supply shocks. Another piece of the literature has focused on the access of immigrants to welfare benefits and the potential fiscal impacts. The common debate is whether the immigration of young workers, by reducing old-age dependency ratios, can play a role in overcoming the problems that an ageing population brings to welfare systems. Authors like Razin and Sadka [1999] and Storesletten [2000] show that in a dynamic framework the presence

of immigration is beneficial for the host country's public finances, even in the case where immigrants may be net beneficiaries of the welfare state in the long-run.

Much less studied is the effect on source countries. Variables affected include: wages, education, labor supply and employment patterns, inequality and public finances. These effects are transmitted by three channels:

- (i) The initial migration movement;
- (ii) The possibility of return migration; and
- (iii) Remittances.

Although the process of remitting money back home is itself one of the outcomes derived from international migration, it may generate, besides the direct repercussions of the own migration process, further separate impacts in home countries. In fact, it is actually impossible to talk about the development impacts of migration on source countries without touching its interrelation with remittances.

Today, there is not a consensus about the relationship between remittances and development. On the one hand, a group of scholars emphasize the negative role of remittances. This pessimistic view is associated with the idea that lucrative migration activities drain migrant sending areas of their human capital (brain drain). They also argue that remittances generate "Dutch Disease" problems, a disincentive to work and high social costs. On the other hand, some researchers highlighted the positive impact of remittances associated with the idea that remittances increase disposable income and demand for local goods and services and play a vital role in developing local capital markets and infrastructure. In addition remittances may have a positive impact over the balance of payments, poverty, income distribution and investment opportunities⁶.

Therefore, on one side of the debate, recent literature has emphasized the possible negative effects of an appreciation of the real exchange rate as a consequence of a high inflows of foreign currency that remittances generate (known as "Dutch disease" phenomenon). Several authors (including the World Bank, 2006) reckon that a higher real exchange rate will increase export prices of these countries and they will therefore lose competitiveness. The ultimate effect of this phenomenon would be a decrease in economic growth (and not an increase as has been

⁶ For a complete review of the debate between Migration and Development see Page J. & Plaza S. (2006) and for examples of Central American countries see Reklitis, George (2003).

suggested above). Others remittance and development critics argue that people with income coming from abroad simply will choose to withdraw from the labor market, and it will result in less investment in production as declining labor force participation drives up wages.

In this debate, an additional part of the literature emphasizes the social cost of international migration. These costs are associated with the excessive use of alcohol and drugs in immigrant's communities; the growth of immigrant's criminal activities when they return to their original countries (due to the difficulty of finding a job upon his return); and the social costs in the migration process (particularly when the migration is illegal).

On the other side of the debate, some scholars argue that we might expect a positive relationship between remittances and growth for countries with the complementary assets to take advantage of the infusion of capital. This would be the case when remittances are invested in new business back in the home country⁷.

But even where remittances do not provide macroeconomic stimulus, at the microeconomic level of individuals they may alleviate poverty and insure households against economic downturns, taking a burden off fragile government institutions. Indeed, remittances have been found to be an important vehicle against poverty in many countries. Remittances have the potential to contribute to economic development by reducing poverty and providing savings for capital accumulation in the country of origin (Osili [2007]). Moreover, the impact of remittances tends to be stronger in smaller countries, which allegedly are also poorer and have a less diversified productive structure.

Since there is an open debate about migration and remittances impact on development, the topic deserves, therefore, its own discussion. In the sections that follow we first address the current literature on the determinants of remittances. We then get into the effects of the interrelated migration/remittance phenomenon, including the possibility of return migration, on variables such as wages, labor supply, inequality and public finances.

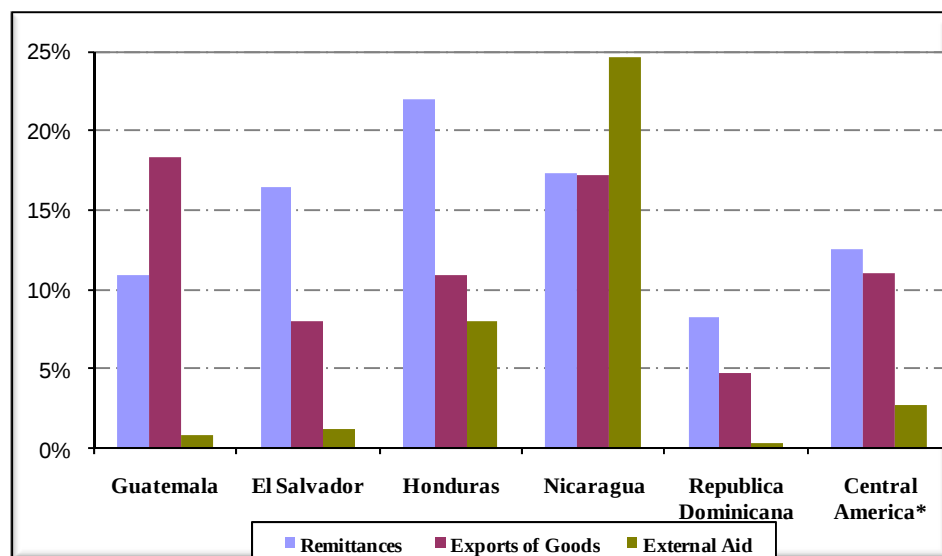
3.4.1 Determinants of Remittances

Workers' remittances have become a major source of external development finance, providing a convenient angle from which to approach the migration phenomenon. Migrants' remittances currently rank as the second-largest source of external inflows to developing countries after

⁷ Fajnzylber et al (2006) point out that remittances have a positive impact on growth, half of which is explained by raising investment.

foreign direct investment (FDI). As depicted in Figure 13, the role of remittances as a generator of external resources is particularly significant in some Central American economies. Despite their economic magnitude, transfers between international migrants and their households of origin remain a relatively understudied aspect of international resource flows.

Figure 12. Remittances, Exports and International Aid, % of GDP 2005



**Not including Costa Rica*

Source: Orozco, M (2006)

Much of the early work on migrants' remittances suggests that transfers are sent primarily to help meet the consumption needs of the origin household or to provide economic support during periods of income shocks (Okonkwo [2007]). However, recent evidence also reveals the significant economic potential of remittances that are invested in the origin community. In particular, migrants' remittances may finance investments in the country of origin in the form of land and housing acquisition, financial assets, and microenterprises (Dustmann and Kirchkamp[2002]; Mesnard [2004]; Woodruff and Zenteno [2007]). Because migrants' savings can contribute significantly to capital accumulation in the country of origin, both origin and host country governments have begun to show interest in this aspect of international remittances.

The first motivation to remit that comes to mind is simply that migrants care of those left behind: spouses, children, parents, and members of larger kinship and social circles. Since the seminal work by Lucas and Stark [1985], however, several authors have pointed out the

incapability of the pure altruism model to explain the pattern of remittances: whereas altruism predicts higher remittances flowing to lower-income households, evidence often show the opposite, i.e., more educated migrants with wealthier families are those who precisely remit more (although Amuedo-Dorantes et al [2005], find the opposite for the Mexican Case). Thereafter, a wide range of motives besides altruism have been proposed in the increasing literature (see Box 1).

Following the premises of the NELM, migration is now recognized to occur in the context of informal familial arrangements where self-interest prevails. Although remittances may be regarded, under this context, as a means to “buy” services from the family, such as taking care of the migrant’s assets and relatives at home (see Cox et al [1998]), more complex implicit “contracts” have been suggested in the literature and where remittances play a central role (Rapoport [2005]). Following Lucas and Stark [1985] remittances are part of an inter-temporal, mutually beneficial contractual arrangement between migrants and home. Two components underlie those arrangements: *investment* and *risk*, with benefits in the realms of risk-diversification, consumption smoothing, and intergenerational financing of investments. Examples of risks include price fluctuations, insecurity of land tenancy, unemployment, disability. The main argument is that the institution of the family provides individuals with risk-sharing opportunities which may not be available in the open insurance markets.

The household, on the one hand, may be willing to invest in the migration of a family member, say by covering migration costs, in the expectation of being insured against economic slumps via remittances. The migrant is, on the other hand, willing to give such support in exchange of future financial assistance in case of unemployment or other eventualities. One can view periodic payments to family members back home as the premia that insures that immigrants will receive support from their family should they return home. This is an example of a mutually beneficial family-provided insurance arrangement.⁸

Amuedo-Dorantes and Pozo [2006] envision, however, a separate avenue by which immigrants may insure against income risks. Migrant workers may decide to face future possible eventualities, including old-age consumption, with their own accumulated wealth. One vehicle is to send remittances for investment in fixed capital such as land or a house. The careful maintenance of those investments may be in charge of the family back home (where relatives act

⁸ Some level of mutual trust is required since elements of these arrangements are not legally enforceable.

as trust-worthy agents). Remittances may also be invested in new businesses. These are examples of migrants' self-insurance via the accumulation of resources during the life-cycle (in the form of physical or financial assets). Risks faced by migrants are therefore covered by a combination of family insurance and self-insurance, which consequently implies a mix of the insurance and the investment motives.⁹

Box 1. Motives to Remit

Altruism: Migrants care of those left behind: spouses, children, parents, and members of larger kinship and social circles.

Re-payment of past loans: Since migration is costly, and with the presence of imperfect credit markets, migration is frequently financed with informal family loans. Remittances may represent a re-payment of those loans.

Exchange: Remittances “buy” various types of services such as taking care of relatives or assets at home.

Family-provided insurance arrangements: this type of insurance runs in two directions; whereas migrants may insure the remaining members of the family against drops in rural incomes, they may receive future assistance against unemployment, disability and other risks.

Migrant investment and self-insurance: Migrants wish to invest in assets at the home country and ensure their careful maintenance (where relatives act as trust-worthy agents). Those investments may be regarded as migrants' self-insurance against future economic eventualities or as resources to be available for future consumption.

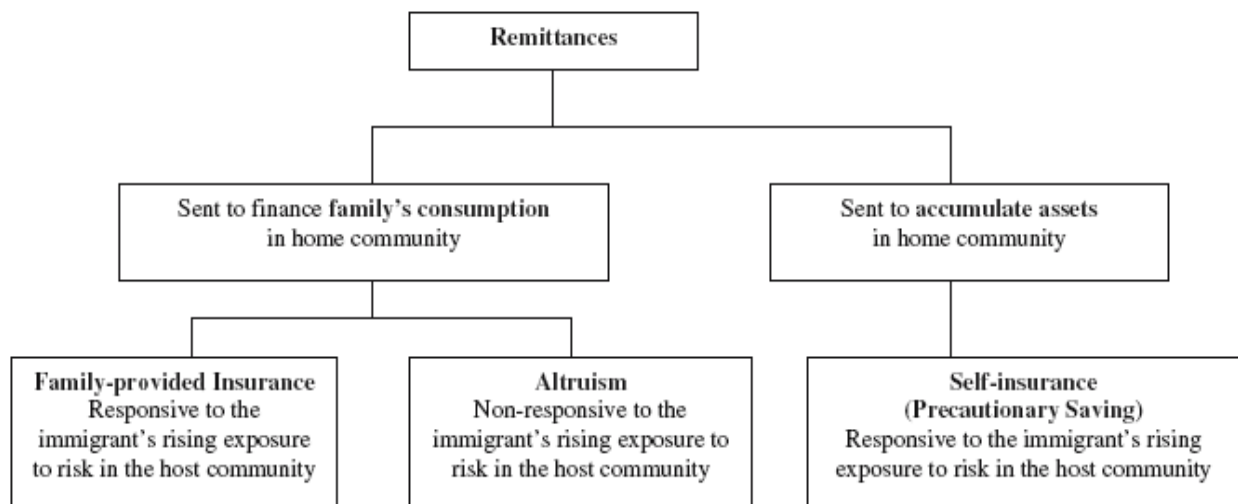
These types of motives are based, at the end, on the economic notion of incentives. But according to Chami et al [2005] these arrangements may not be as self-interested as they first appear. Even if the remittance arrangements are truly self-interested, the self-enforcing mechanism on which they depend may actually be altruism—that is, the migrant will live up to her obligations because she cares about the family members who are the counterparties to the

⁹ Chami et al (2005) further divides the literature into two main strands: the “endogenous migration” approach, and the “portfolio” approach. The first is based on the economics of the family, which includes but is not limited to motivations based on altruism. The second isolates the decision to remit from the decision to migrate, and likewise avoids issues of family ties. In this view, the migrant earns income and decides how to allocate savings between host country assets and home country assets. Remittances are a result of deciding to invest in home country assets.

agreement. Altruism between family members appears, consequently, to be a good benchmark to use when modeling the interaction of causes and effects of remittances.

For the case of Latin America there are some studies that address the determinants of international remittances. Funkhouser [1995] compares remittance patterns for El Salvador and Nicaragua. According to his numbers, nearly twice as many Salvadorian households receive remittances than Nicaraguans. The role of observable characteristics in explaining differences in the level of remittances in this study is not large, even accounting for the self-selection in the decision to remit. The difference is instead explained by differences in the behavioral coefficients and by differences in the self-selection bias of those who remit out of the pool of emigrants between the two countries. Amuedo-Dorantes and Pozo [2006], test the insurance hypothesis for the case of remittances received by families in Mexico. They find that increases in income risk significantly raises both the propensity and the proportion of labor earnings sent home for family-provided insurance and for self-insurance.

Figure 13. Remittances as Insurance



Source: Amuedo-Dorantes and Pozo (2006)

The insurance strand of the literature on remittances remains, however, relatively understudied despite its importance for developing countries, which frequently lack of formal protection systems. Migrants and families could potentially overcome income losses derived from risks like unemployment and old-age by allocating a share of the income earned abroad to

activities that achieve a higher return and expand, consequently, consumption possibilities into the future. One potential contribution in this field, from the point of view of economic analysis, is to propose a concrete model showing that migrants can be significantly better off investing into savings vehicles, such as pension funds, than under current informal family insurance schemes. Of course the results will depend on the assumptions made about the level of altruism.

At the macroeconomic level, it would be interesting to address empirically the importance of altruism, as opposed to the insurance hypothesis, via the estimation of gravity equations. The correlation of aggregate remittances with GDP levels in both source and destination countries can give us a gauge of the importance of altruistic motives. Lueth and Ruiz-Arranz [2006] have performed similar exercises for some Asian countries and find that remittances do not seem to increase in the wake of a natural disaster and appear aligned with the business cycle in the home country, suggesting that remittances may not play a major role in limiting vulnerability to shocks. The gravity equation can also be related to the determinants of the initial migration decision. Freund and Spatafora [2008] find the stock of migrants to be the main determinant of remittances. Nevertheless, one of the crucial issues in the migration literature is that migrants are not a random sample of the underlying native population of home countries. While the number of migrants abroad affects the level of remittances, the desire to remit also influences the migration level. An aggregate empirical study of migration and remittance flows must be performed simultaneously, possibly employing a two-stage methodology.

3.4.2 Emigration, Educational Levels and Wages in the Source Country

The common wisdom recognizes that, under certain conditions, poor regions can improve their economic position by exporting workers to wealthier regions. According to Carrington et al [1996] this occurs because reducing labor supply increases wages for workers staying in the home country and because migrants remit a substantial fraction of their newly higher income.

Mishra [2007] examines empirically the effect of Mexican emigration to the United States on wages and finds that indeed emigration has a strong and positive effect on Mexican wages. There is also evidence, however, of increasing wage inequality insofar the impact on wages is greater for higher wage earners (those with 12–15 years of schooling). Hanson [2005] finds, for instance, that emigration rates appear to be highest among individuals with earnings in the top half of the Mexican wage distribution (which is consistent with positive selection of

emigrants in terms of observable skill). Controlling for regional differences in observable characteristics and for initial regional differences in earnings, the distribution of male earnings in high-migration states shifted ‘to the right’ relative to low-migration states.

Wage levels and standards of living may also be increased via the indirect effect of educational levels. Authors such as Mayr and Peri [2008] argue that, if migration is initially positively-selected, as it appears to be the case in relative terms for some Latin American countries, then the prospects of future migration increase the expected returns to skills in the source country, which leads at the end to higher incentives to acquire more education. Docquier et al [2008] claim that emigration may act as a substitute for education subsidies and may benefit source countries via the accumulation of human capital.

The above arguments may miss many issues, though. To the extent that migrants take capital with them, the marginal product of labor may raise only slightly with emigration. Also, some migration comprises the most skilled and most educated workers, which may lead to a “brain drain” with adverse economic consequences. Finally, we have the fact that migration can also have indirect effects on economic variables at the home country via the presence of remittances.

3.4.3 Migration, Remittances and Secondary Effects on Labor Supply

According to the neoclassical model of labor-leisure choice, remittances (as a source of non-labor income) may lift budget constraints, raise reservation wages, and, through an income effect, reduce the employment likelihood and hours worked by remittance-receiving individuals. Amuedo-Dorantes and Pozo [2006] start by identifying the different forms of endogeneity of remittances:

- (i) Unobserved heterogeneity and omitted variable bias may exist if remittances are related to wealth which, in turn, may be correlated to the choice of work hours by the respondent;
- (ii) There is the potential of reverse causality as hours worked may influence emigrants’ decisions to send remittances.

They then distinguish between the income effects that remittances may create on the receiving households and the disruptive effect of the migration of one household member, which may induce other family members to increase their supply of labor to compensate for lost household income and/or to defray household migration related expenditures.

In their results for the Mexican case, the possible income effect appears to dominate in the case of women in rural areas, who seem to be using remittances to purchase time away from informal and nonpaid work. Among men, however, the latter income effect seems offset by a higher incidence of informal sector employment, possibly signaling the disruptive effect of household out-migration.

Hanson [2005] had previously analyzed labor market participation in Mexico and finds that over the 1990s women (but not men) from high-migration states become less likely to work outside the home (relative to women from low-migration states). One aspect that has to be considered together with labor supply decisions is the possibility that migrants, and possibly relatives, engage in different economic activities such as self-employment. The movement into those activities may be the result of investments made into productive activities using previous remittances or the result of new skills and entrepreneurial abilities acquired by return migrants abroad. One of the results of Amuedo-Dorantes and Pozo [2006] is that indeed remittance incomes appear to be associated with a reduced male labor supply in formal sector work and higher urban self-employment. One line of potential research related to this literature is to address the implications of return migration on the domestic adoption of new skills and technologies. Also, equally important is the potential effect of remittances on the future ownership of new businesses.

3.4.4 Return Migration, Remittances and Entrepreneurial Behavior

There are several authors that view remittances as promoting dependency of recipient countries and not contributing to the accumulation of productive capital (see, for instance, Durand et al [1996] and Amuedo-Dorantes and Pozo [2005]). Contributing to this view is the observation that a substantial proportion of workers' transfers are used to finance current consumption. This view has been corroborated by the studies pointing out that the receipt of remittances is sometimes associated with reductions in labor force participation of family members in the home country (Funkhauser[1995]).

The central question is the extent to which remittances promote entrepreneurial activity and business investment by lifting financial and liquidity constraints. Amuedo-Dorantes and Pozo [2006] examine the importance of remittances in promoting household business ownership. The existence of reverse causality from business ownership to remittance receipt at the household level motivates also to gauge the extent to which emigrants remit in response to the

existence of investment opportunities and existing family business back home and/or to the possibility of a future bequest. They find, using data for the Dominican Republic, that remittances are attracted by the presence of investment opportunities back home, some of which may be reflected in the household ownership of a business. Yet, these monetary inflows do not seem to promote entrepreneurship activity despite their potentially important role as a source of capital for business investment. At the Macro level, the existence of a negative correlation between GDP growth and the level of remittances would indicate that remittances serve altruistic considerations and would not be intended to serve as a source of capital for economic development. This is the result obtained by Chami et al [2005] by employing aggregate cross-country data.

Policy concerns should therefore aim at creating the incentives to allocate remittances to productive activities. The study of return migration and the occupational choice of those individuals are also crucial for understanding the paths leading to economic growth.

As indicated earlier, the receipt of remittances, whatever the primary motive behind sending them, act by lessening the receivers' production and investment constraints. This should strengthen investment and permit the accumulation of assets. However, this has not occurred in a significant manner in the specific case of Central America. In this case, the receivers of remittances mainly assign these resources to current expenditures (consumption), which is associated with the fact that most of those receiving remittances are persons with a low income level who use these funds to attend to their primary needs; it is also associated with the lack of investment opportunities. However, given the magnitudes that the flow of remittances have reached, one must not discard the importance of the part assigned to the generation of production activities, although potential exists for this portion to be greater.

Table I. Central America: Remittances Use

	El Salvador	Honduras	Guatemala	Nicaragua
Current Expenditures (Consumption)	83.9%	77.1%	68.1%	78.2%
Investment in Business	4.2%	4.0%	10.2%	3.1%
Saving	4.1%	3.8%	11.0%	2.8%
Education	3.9%	10.0%	7.0%	12.7%
Others	3.9%	5.1%	3.7%	3.2%

Source: Author's own elaboration from Pew Hispanic Center-MIF (2003) and Monge & Lizano (2006)

Certainly, the investment decision is a function of the particular preferences of the families that receive the remittances income. Households have the freedom to spend that income in any way that is best for them. However, the percentage that is saved or invested depends not only on those personal preferences. It also depends on the business environment. So, areas where there are more investment opportunities and where the risks associated with investment is lower, we can expect that there will be higher fraction of income that will be invested. (Fajnzylber & Lopez [2006]).

The factors that determine the business climate and the investment decision have been extensively studied. These factors are summarized at (CIPE [2004]). There are also the factors that would allow the informal or "extralegal" sector to accumulate assets in a capitalization process through a movement from dead capital to live capital (De Soto [2003]). Both areas have received initial attention for Central America (IDB [2005] and IDB [2007]). However, there isn't an exhaustive work to examine if these factors are sufficient to make that remittances were used in greater proportion for productive investment.

In general, the poor performance of the factors determining the attraction of FDI are those leading to the existence of few employment and production opportunities, and which lead to the decision to emigrate. These same factors, in turn, are those which limit the remittances productive potential. That is, the factors encouraging people to migrate also limit the productive potential of migrant remittances. It is unrealistic to expect migration to promote development in

areas or countries where business climate conditions are so unfavorable. People migrate “because of the lack of meaningful development in the first place. In the absence of policies designed to channel migrants’ savings into productive investment, it is naive to expect migrants to behave very differently.” (Taylor [1999]).

It is clear that remittances’ productive potential is associated with determinants of investment in general. However, given the intrinsic characteristic of the migration phenomenon and remittances, a set of specific factors exists that must be taken into account. These factors should in no way be taken as a substitute for those that influence the attraction of FDI and decisions to invest in general, but rather must be taken as additional factors associated with the specific case of remittances. Said factors are in general associated with a reduction in the cost of sending remittances, the push behind a greater bankarization of remittances and measures to create a larger scale allowing for investment (Garcia [2009]).

3.4.5 Migration, Remittances and Inequality in Source Countries

Authors like Borjas claim that heterogeneity of skills and the consequent differences in inequality of income in source and receiving countries are key determinants of migration flows. But causality not only goes in one direction. Migration, and the subsequent process of remittances, is likely to re-shape income inequality in the source country. Some authors claim that, since remittances are aimed at alleviating poverty, income inequality will be lower. Acosta et al [2007], for instance, study the impact of remittances on poverty and inequality using cross-country data for Latin America. There are also studies for specific countries with similar findings. Adams [2003] finds that remittances reduce the severity of poverty in Guatemala; households in the bottom decile group receive between 50 and 60 % of their total income (expenditure) from remittances.

The fact that remittances may contribute to reduce poverty does not necessarily imply an improvement in income inequality. According to McKenzie and Rapoport [2007], international migration is costly and initially only the middle class of the wealth distribution may have both the means and incentives to migrate, which can increase inequality in the sending community. Considering the example of Latin American migration into the United States, different studies have found that migrants are relatively well-positioned in the skill distribution of the source country (Borjas[1987], Hanson[2005]). These circumstances imply that families with relative higher income (positioned in the middle of the income distribution) will send migrants abroad

and will receive, as a consequence, the bulk of international remittances. A second mechanism of transmission discussed by authors such as Cox-Edwards and Ureta [2003] and Docquier et al [2008] is the effect of remittances on the levels of schooling of receiving households. If it is the case that those households, which have relatively higher income, manage to obtain higher rates of school retention, then the income prospects of these families will be higher into the future. This pattern would imply an increase in income inequality across time.

This is, as a matter of fact, the result of some studies applied to Central America. Barham and Boucher [1998], for instance, construct no-migration counterfactuals to compare with the observed income distribution including remittances and they find that migration and remittances have increased inequality in Nicaragua. Gonzalez-Konig and Wodon [2005] show, using data for Honduras, that remittances are likely to be more inequality increasing in poorer as opposed to richer areas.

Docquier and Rapoport [2003] get more in depth into the dynamic debate and show that whereas migration may generate higher income inequality, it may at the same time decrease wealth inequality. The short-run and long-run impacts of migration on income inequality may also be of opposite signs, suggesting that the dynamic relationship between migration and inequality may well be characterized by an inverse U-shaped pattern. The existence of endogenous networks, however, may push towards a reduction in inequality. The formation of migration networks may lower the costs of moving abroad for future migrants in some communities, which can in turn lower inequality in a dynamic context. The overall impact of migration may be a reduction of inequality across communities with relatively high levels of past migration (which is in fact the conclusion reached by McKenzie and Rapoport [2007]).

One drawback of the current empirical literature is that it has failed to measure inequality in terms of lifetime income. Households with certain family structure may receive higher remittances, and as a consequence report a higher income, only because of life-cycle considerations. For instance, it may be the case that remittances increase temporarily income inequality. But if these resources will be used in the future to support the family members who moved abroad and now return, then 'lifetime' income of that household may not suffer any change. It is possible for a household to be a net receiver in one period and a net payer (to its migrant member) in another. Lifetime impact may differ from the annual impact. In fact, there is some evidence (see Deaton and Paxson [1994]) that income inequality within a cohort of

individuals born in the same year increases as the cohort ages. Constructing therefore a counterfactual keeping in mind lifetime considerations may end up in a very different result (since families with migrants may be subject to very different shocks than families with no migrants). In another example, families that have migrants will surely face a completely different story into the future (perhaps they will invest more back in the home country and have higher earnings in the future), which will give us a greater impact on inequality and welfare.

3.4.6 Old-Age, Return Migration and Fiscal Sustainability

One last implication of the migration process is the fiscal one. Return migration may seriously menace the fiscal balance of the home country if those migrants, who did not pay taxes nor contributed to any social security system, are entitled to claim social benefits, either in the form of pensions, access to health care services or any other form of welfare benefits such as poverty alleviation programs.

The relation between migration and fiscal sustainability has been tackled in a number of studies, but basically from the perspective of the host (developed) country. Much less has been said about the long-run fiscal implications for source countries. One of the main lines of research into the future is to establish a bridge between the theories behind migrant behavior (which also determine return migration) and the impacts of migration on the sustainability of social expenditure in source countries. This proposed bridge demands the consideration of public policies and institutional arrangements, both in the source and receiving countries, as part of the determinants on the decision to migrate and, particularly, of the optimal length of stay and the possible decision to return home after some years spent abroad. Authors such as Dustmann [2001, 2003] have already proposed a framework for modeling migrants' return decision and the optimal length of stay abroad. However, Dustmann starts from the assumption that the worker has already decided to migrate. The whole migration process must be modeled in a life-cycle context.

The direct effect can be visualized through the old-age support ratio as in equation (1): first, the emigration flow in the current period t reduces the existing workforce (it reduces the denominator); secondly, if a fraction, ' α ' of emigration in period $t-1$ returns in period t , once workers are retired, the number of retirees increases (it increases the numerator). Migrants do not pay taxes but benefit first from education when young (before migrating) and then from possible old-age benefits when they retire and return home.

$$\text{Dependency Ratio}_t = \frac{\text{Elderly}_t + \alpha \cdot \text{Migration}_{t-1}}{\text{Workforce}_t - \text{Migration}_t} \quad (1)$$

Take the Mexican migration experience as example. About 400,000 Mexicans enter the US legally and illegally each year (Ross et al [2005]). Although some of these immigrants stay in the US, more than half return to Mexico after only a few years abroad (see Borjas and Bratsberg [1996]). As these ‘sojourners’ may spend more time working in the U.S., they may be unable to meet vesting requirements to qualify for a pension or health insurance in Mexico. If these return migrants do not either qualify for old-age benefits in U.S., they face the risk of poverty during retirement. Given the recent Mexican programs of poverty alleviation (the program ‘Seguro Popular’, for example),¹⁰ this scenario would imply a significant increase of public spending in order to offer a safety net to those workers. This adds to the adverse fiscal impact of an important aging process: while in 1995 only 4.2% of the population was over 65 years of age, this proportion is expected to rise to 12 % by 2030 (according to figures from the IMSS).

Now, since migration reduces the home country labor force it is likely to increase the capital/labor ratio. Therefore, one should also consider the general equilibrium effects through possible decreases in interest rates and increases in wages. Lower interest rates would decrease the costs of servicing public debt whereas higher wages would increase tax revenues. The effect of migration on wages has been tackled mainly for host countries (the main approaches can be found in Card [1999, 2001] and Borjas [2003]). The study by Mishra (2007) is one notable example of the effect of emigration on wages in the source country (in this case, Mexico). Wage changes are not the only consequence of migration, though. As we have seen, remittances are another part of the picture. While worker remittances primarily benefit individual families (in fact, authors like Amuedo and Pozo [2005] report that a great part of the remittances are allocated to consumption), the priority we have discussed above is to encourage an increase in investments in the home country. Some authors have documented the potential of remittances for encouraging investments in small businesses and changes in the occupational activities of return migrants (see Ilahi [1999], Dustmann and Kirchkamp [2002], Woodruff and Zenteno [2007], Mesnard [2004]). The ideal scenario for high-migration countries like those in Central America

¹⁰ The programme Seguro Popular offers universal health care in exchange of a small quota.

would be to observe, in a dynamic framework, a higher capital accumulation in the long-run, which would translate into output growth and which, in addition to the benefits already mentioned, would bring a greater margin to deal with dependency ratios and fiscal sustainability.¹¹

Even when many of the return migrants did qualify for US pension benefits, as it was discussed in the topic of portability of pensions, an extra problem may arise for the aggregate economy. The economic impact is closely related to the ‘centrality’ of output: people that when young migrate to the U.S. and return during retirement come and consume without producing. The consumption of these individuals will create an inflationary pressure in the absence of output growth. Migrants better positioned in the distribution of income could bid goods and services away from poorer domestic households, which would tend to reduce real consumption of other segments in the economy. Effects may be considerable for smaller Central American countries, where the non-tradable goods and services may become unaffordable for families with no access to remittances from abroad. This is a second-round force that may also affect dynamic income inequality.

3.4.7 Remittances and the Economy at a Macro level.

Whereas aggregate variables can help predicting the flows of migrants and their remitting behavior, remittances can also have, in the opposite direction of causality, subsequent effects on macroeconomic variables. The modeling of the Macro consequences is also relevant for the aforementioned exploration of the welfare benefits of remittances, especially while assessing different insurance and investment scenarios. This may be especially true if remittances constitute a significant source of foreign exchange as it occurs in many Central American economies.

The more frequently studied ‘Macro’ variable is national output (and economic growth). Rapoport and Docquier [2005] differentiate between short-run and long-run effects. Keynesian short-run approaches, assuming sticky prices, fixed exchange and interest rates, show that any shock on the demand side, such as the reception of international remittances, has a disproportionate effect on the national output and where the magnitude depends on parameters

¹¹ By contrast, the general equilibrium effect of the reduced labour force due to emigration may have an opposite effect. Follow a mental exercise again: less labour implies a lower productivity of capital which consequently implies a fall in investment. Only in a second-round effect the price of capital would decrease and this would lead to a recover of investment.

such as the marginal propensity to import and the propensity to consume remittances. The potential effect on GDP depends, therefore, on the assumptions made about the degree of capital mobility and the exchange-rate regime. In a pure flexible exchange-rate regime, the equilibrium level of GDP is fully determined on the money market and, hence, is unaffected by international remittances. A rise in the aggregate amount of remittances is fully compensated by a currency appreciation. In a pure fixed exchange-rate regime, on the other hand, the equilibrium of the balance of payments is obtained through variations in the money supply. It is only in this case that a rise in the aggregate amount of remittances may induce an increase of national income. Notice, however, that the final impact on national income may involve economic paradoxes in high-migration economies. Large positive transfers may deteriorate the terms of trade of the receiving country so much (a phenomenon commonly referred to as ‘Dutch’ disease), that such economies may face what is called ‘impoverishing’ transfers: the decline in exports and national output that emerges from the terms-of-trade appreciation may dominate the direct positive effect on income. As we show in Figure 13, for instance, flows of remittances has become one of the main sources of currency for Central America, above the total value of goods exports and total External Aid. These resources improve the region’s current account balance and may indeed affect the terms-of trade. An appreciation of the real exchange rate may increase the price of the exports of these countries and they will therefore lose competitiveness. The ultimate effect of this phenomenon would be a decrease in economic growth.¹²

Modern short-run macroeconomics, as pointed out by Rapoport and Docquier, are based more on a systematic exploration of the endogenous determination of wages and prices, a process in which expectations play a critical role. If expenditure shocks (e.g., induced by international remittances) are perfectly expected, the effect on the level of activity would then depend on the extent to which wages and prices are flexible. If prices are fully flexible, there should be no short-run effect on output (in such a setting, only unexpected shocks may generate departures from the natural output level). If prices or wages adjustments are sluggish, however, temporary real effects could be obtained. The main effects of remittances, however, may be channeled across time. To the extent that remittances, as it has been documented in Micro studies using survey data, affect labor supply decisions at home as well as the levels of investments in

¹² Remittances may also affect domestic equilibrium, understood as a situation where capital and labor are efficiently used, namely through sectoral reallocation. RER will change in response to higher demand in the non-tradable sector as the traditional Balassa-Samuelson effect.

new businesses and accumulation of capital, then they may also have dynamic implications on the long-run steady-state of the domestic economy. A higher accumulation of capital may be obtained by designing the right incentives regarding the use of international remittances. Financial development and access to insurance and pensions funds may be the key factors to shape those incentives and the allocation of resources into productive activities. In short, remittances have indeed been found to be an important vehicle against poverty in many countries. But they also have the potential to contribute to economic development by providing savings for capital accumulation in the country of origin.

4. Lines of Research

Based on our above review of the economic literature on the determinants and effects of international migration, we can identify some research areas that can be exploited in the region. In the rest of this section we enumerate those areas as ‘research topics’ and offer a brief description of the identification of the problem, its relevance and the possible ways of assessing the question. Each of these topics may contain, moreover, a list of academic questions or hypotheses that should be tested empirically. The statistical conclusions on those hypotheses should allow us to address the viability of some specific policy measures. Depending on the type of question, the respective analysis could demand the use of two types of data:

- (i) Data on migrants’ individual characteristics collected via surveys in the receiving country or;
- (ii) Data on migrants’ individual characteristics and perhaps data on the family of those migrants that remains back in the home country, by applying surveys in the countries of origin.

Research Topic No. 1: Welfare policy and impact on migration variables and return migration.

Access to welfare benefits and protection schemes, both in the receiving and the home countries, may be at the core of the decision to migrate, the duration of stay abroad, and the amount of remittances. One interesting empirical research agenda in order to gain a gauge of the importance of institutions and social policy on return migration, savings/remittances and the optimal duration stay in the U.S. is to assess the impact of the 1996 Welfare Reform Act via a before-after approach. One possibility for counting with a control group is to follow Borjas [2002] identification strategy and compare specific States, those whose immigrants were not

significantly affected by such reforms given these States' replacement of federal programs, against the rest of the country. Since the source of variation in this type of analysis is based on regional differences, data from the host country, the U.S. in this case, is needed. The Current Population Survey may be useful for this purpose, especially to explore variables such as levels of savings and remittances. For this, and the rest of the research topics, it is also crucial to count with *longitudinal* survey data on individual migration experiences from the perspective of the home country. Surveys like Mexican Migration Project (MMP) and the Latin American Migration Project (LAMP), although not precisely panel surveys, offer some retrospective information about the Head of the household on variables like access to social security benefits, unemployment benefits, food stamps, etcetera, and also allow us to distinguish the State where the migrant lived and its legal status.

Another database that can be useful for identifying immigrants' participation in welfare programs is the Survey of Income and Program Participation (SIPP). This database contains panel waves that contain data for about 70 cash and in-kind income sources, including transfers from the federal government like social security. It also contains private transfers. The sample is representative at the national level and contains information on the national origin of individuals, allowing us to identify those of Hispanic origin.

An additional line of research related to return migration is the exploration of the consequences of the 2003 Social Security Protection Act, which prohibits the eligibility to any pension or social benefit of individuals that worked illegally. The variables of interest include the duration of stay abroad (and whether the reform encourages return migration or not), the patterns of savings and remittances.

Research Topic No. 2: Savings and the viability of investment schemes for remittances

Two important concerns have been discussed independently in the migration literature: the lack of social protection of migrants and the tendency of migrants and families to spend remittances in consumption. Although they seem indeed completely separate phenomena they can be put together via a specific solution for both, which is the creation of a mechanism of saving for retirement whose objective is twofold: protecting individuals against future economic downturns and taking advantage of the large availability of remittance resources in order to encourage productive investments. One could think of a scheme where remittances are allocated

into ‘defined-contribution’ individual investment accounts, which are now widely-employed in many pension systems of Latin American countries.

As we mentioned in Section 3.4.1, one potential contribution in this field, from the point of view of economic analysis, is to propose a concrete model showing that migrants can be significantly better off investing into savings vehicles, such as pension funds, than under current informal family insurance schemes. One should also show that such funds are superior in terms of return to other types of investment such as those in real estate (which are highly-favored by migrants but may result in low value/return in the long run, especially after taking account of demographic dynamics). One first step is to show, from an accounting perspective, that the potential resources to be managed are big-enough so that the proposal of pension funds is sustainable. From the viewpoint of the design of those schemes, the discussion of incentive instruments enters with no doubts within the sphere of economic analysis. Since these are ex-ante proposals we have little access to past experiences and data. The evaluation of those proposals must therefore be done employing theoretical structural models capable of giving us different scenarios of individual behavior. The assumptions made about the degree of altruism and the ‘insurance’ motivations of workers to remit are key factors in the modeling of migrants’ reactions.¹³

Therefore, part of the exercises to address the feasibility of such a proposal is to determine the motivations to remit. Two hypotheses have been tested in the literature using survey data in the home country:

- (i) Altruism hypothesis (whether remittances are meant to help relatives at the home country); and
- (ii) The insurance/portfolio hypothesis (whether remitting workers act according to their own self-interest and invest their resources for future consumption).

If the insurance/portfolio hypothesis prevails over the altruism hypothesis then the empirical exercises play in favor of schemes like the proposed individual accounts. These types of exercises can be performed using household survey data in home countries.

An alternative way of accessing the protection role of remittances is to determine, as suggested above in the Research Topic No. 1, if migrants with access to social security remit less

¹³ This research agenda would also be interrelated to the theme of return migration and migrants’ entitlements to social benefits in both the destination and the home country and the possible exportability of those entitlements.

that those without access. Data from the CPS and the SIPP would allow us to have a descriptive analysis of the amount of remittances, and other savings in the U.S., for workers with and without social security. In order to determine causality, we could focus on regional differences after the policy shocks of 1996 and 2003.

It is also important to have a gauge of the extent to which migrants accumulate savings other than remittances and to determine whether savings in the destination country serve for a different purpose than remittances. Even if the altruism hypothesis prevails for the case of international remittances, the development of efficient savings vehicles that invest resources safely in home countries may encourage individuals to re-allocate part of their ‘host-country’ savings into such a scheme. One may think of schemes like the 3x1 in Mexico, where the government contributes 2 pesos for each peso contributed by migrants into investment projects. We could take the Mexican experience and evaluate if such type of deal may bring any benefits for Central American countries.

A basic descriptive analysis in this area should include variables such as the access to financial markets (and bank accounts), the access to social security, the legal status of migrants and the correlation they have with the amount of remittances and the levels of ‘host-country’ savings. These may seem like basic statistics but have been rarely touched using descriptive regression tools.

Finally, in terms of policy measures the regulation of the financial infrastructure is extremely relevant for two reasons. First, there seem to be barriers to competition among money transfer agents and fees are, therefore, too high. According to a report by the Migration Policy Institute, a think-tank in Washington D.C., reducing remittance fees by five percentage points could increase annual remittance flows to developing countries by US\$ 5 billion. The second reason for regulation derives from the possibility to establish the aforementioned investment schemes to take advantage of remittances. Some policy areas identified in order to take advantage of remittance flows for investment and savings, while ensuring an adequate level of protection and consumption possibilities for migrants, are:

- (i) Improving competition among money transfer operators (MTOs) and reducing transaction costs through incentives for improved technology;

- (ii) Financial access through microfinance institutions (MFIs) and credit unions as well as through banks should be encouraged, especially related to products directed towards remittance recipients;
- (iii) Governments can also promote the investment of remittances in microenterprise or other ventures;
- (iv) Designing products that offer health and education services by MFIs. Pension schemes may be designed in this fashion;
- (v) Central banks can also team with the private sector to offer financial literacy programs to remittance recipients.

Research Topic No. 3: Return Migration, New Knowledge and Development

The development impacts of migration in home countries are transmitted by two channels:

- (i) The flow of monetary transfers; and
- (ii) The flow of people, and the subsequent transmission of new knowledge and skills.

Great part of the literature has focused on exploring monetary flows such as international remittances, and how they help alleviating poverty, relaxing credit constraints and encouraging new investments. Flows of labor per se have been less studied in the region. Return migration may impact the home country economy by several fronts. We would expect, by the re-incorporation of these returning workers into the domestic economy, a direct impact on labor markets and business activities. Although returning workers might saturate some segments of the labor markets and, consequently, depress wages, our hypothesis here is that return migration may also generate benefits in terms of new knowledge and production/occupational skills acquired abroad. A greater entrepreneurial spirit may be part of these new skills and return migrants may also count with the cash to make it possible.

Any database designed for addressing the above hypothesis should contain basic characteristics of return migrants: age, educational level, legal status, time spent abroad, and the levels of income and wealth of those migrants getting back home. Surveys such as the MMP and LAMP contain retrospective information on migration histories and the survey follows the family and extended family in the U.S. It also contains information on the current activities of those once migrants (i.e. once they have returned). This type of data should allow us, therefore,

to estimate a model like the one found in Dustmann and Kirchkamp (2002), where migrants decide simultaneously about the optimal migration duration, and their after-return activities.

Now, in order to isolate the causal effect of having migration experience on learning new skills and, consequently, on returning migrants expanding new business activities, it is important to determine whether migrants who invest after returning differ from other migrants, say, salaried return migrants in terms of having accumulated more savings, training or having stayed longer abroad. A key concern has to do with the causality of the relationship, this is, whether higher savings or training induce afterwards to the involvement in self-employment in own business or if individuals with a preference for self-employment, but credit-constrained, self-select for longer stays abroad to accumulate enough wealth and skills. Depending on which hypothesis is accurate, policy measures can be designed. If the second case prevails, for instance, then a policy in the home country for wider access to credit should encourage productive activities. In contrast, if it is the case that individuals somehow ‘learn’ to be entrepreneurial after having accumulated money and skills abroad, such a policy may not be that effective. If the causality implies that higher savings (maybe in the form of remittances) lead to higher prospects of starting up new business, then a policy of financial instruments that encourage savings makes particularly sense.

Our hypothesis above is that migrant workers acquire skills and new knowledge abroad and then translated those skills into entrepreneurial activities at home. An additional research question that can be address under this topic is the impact of migration on the incentives not of migrants but of the people in the home country to invest in education and the acquisition of new skills. The general question is whether migration increases or actually reduces the level of education at the home country. Some authors argue that if migration is initially positively-selected, as it appears to be the case in relative terms for some Latin American countries, then the prospects of future migration increase the expected returns to skills in the source country, which leads at the end to higher incentives to acquire more education. A specific policy concern is whether national governments should encourage the flow of educated workers. Recent literature suggests that this sort of policy, instead of leading to a ‘brain drain’, would lead to a ‘brain gain’ via the transfer of technologies and the higher incentives for workers who stay at home to acquire more education.

Research Topic No. 4: Liquidity constraints and migration

In Research Topic No. 3 we argued that some workers may be willing to invest in business activities at home, but given that they face credit constraints, they migrate in order to accumulate wealth. Notice that we can observe other kind of constraints in the case of workers who wish to migrate but face liquidity problems to finance the moving costs. These constraints imply that some workers may be willing to invest in business activities at home but they are both credit-constrained and with no money to afford the trip abroad. These relationships generate a series of questions. The first policy inquiry is whether the receipt of public transfers, say in the form of anti-poverty programs using cash transfers, raise the likelihood of migrating by relaxing any liquidity constraints. Data from the evaluation of specific programs, such as PROGRESA in Mexico or *Red de Proteccion Social* in Nicaragua, to enumerate some, would allow us to perform quasi-experimental exercises in order to study changes in migration and remittance patterns for both individuals affected and those not affected by the respective programs.

If anti-poverty programs indeed happen to reduce liquidity constraints for potential migrants and increase the flows of workers abroad, the concern is that, if this is not accompanied by more remittances or new workers' skills, then financing migration without the benefit of remittances may be very harmful for labor markets and public finances. The inquiry would be now the extent to which those migrants tend to return home and engage in new business activities. If they return with new skills and money to invest then anti-poverty programs make sense. In terms of policy there is a disjunctive between allocating more resources into conditional cash transfers programs or into credit-enhancing programs for specific projects, say micro-enterprises. One drawback of micro-financing is that it may benefit the better-off and marginalize the poor.

A separate research area that is linked to many of the already discussed topics is the role of migration networks. Access to networks abroad can reduce moving costs (including transportation, housing and job-hunting). Networks allow, therefore, more workers to move abroad and acquire more skills. But they may also mean that people integrate more easily to the foreign country. A consequent reduction in return migration and in the linkages to the home country may imply a decline in the flow of both

- (i) Resources (i.e. remittances); and
- (ii) Knowledge and skills.

From the point of the home country, migration networks can be measured by the history of migration of some communities. From the viewpoint of families, indicators like the receipt of remittances or the number of people of the extended family abroad may serve as a measure. To study the effects of these networks, and to study, in general, the movements in dynamic variables such as return migration, savings and the acquisition of new skills, ideally implies the availability of longitudinal data. We already discussed that surveys like the MMP and the LAMP make do the job in some instances by containing retrospective history of some variables. But the greater challenge in the region in terms of data availability for analysis is the development of rich panel waves of data which are representative of the migrant population and follow the same individuals/households across time. There are some examples of longitudinal household surveys in the region: the Mexican Family Life Survey is a representative database that spans for a period of at least 10 years to better understand the social, economic, demographic and health transitions happening in Mexico and the dynamics of Mexicans who decide to migrate to the United States during the first decade of the 21st century. In Central American, Nicaragua is the only country whose national household survey (Encuesta Nacional de Hogares sobre Medicion de Niveles de Vida) is designed as a panel of data. And it contains a rich module of migration and remittances. Similar efforts can be done for other Latin American countries. In the specific case of Central America, the module of migration must be developed such that we can follow workers throughout an ample period of time in which we can observe the time they emigrate and then return home (if it is the case they do), and their associated characteristics all the way long. Support in this area will yield benefits in terms of economic and policy analysis and would allow clarifying what the policy priorities are in the region.

References

- Acosta et al, Remittances and Development in Latin America, *The World Economy*, 29, 7, 957-987, 2006.*
- Acosta P., C. Calderon, P. Fajnzylber, and Humberto Lopez. What is the impact of international remittances on poverty and inequality in Latin America? World Bank Policy Research Working Paper, (4249), 2007.
- Adams R. H. Remittances and Poverty in Guatemala. World Bank Policy Research Working Paper, (3418), 2004.
- Amuedo Dorantes C. and S. Pozo. Migration, Remittances, and Male and Female employment Patterns. *American Economic Review Papers and Proceedings*, 96(2):222–226, 2006.
- Amuedo Dorantes C. and S. Pozo. Remittance receipt and business ownership in the Dominican Republic. *The World Economy*, 29(7):939–956, 2006.
- Amuedo Dorantes C. and S. Pozo. Remittances as Insurance: Evidence from Mexican Immigrants. *Journal of Population Economics*, 19:227–254, 2006.
- Amuedo Dorantes C., C. Bansak, and S. Pozo. On the remitting patterns of immigrants: Evidence from Mexican survey data. *Federal Reserve Bank of Atlanta Economic Review*, First Quarter 2005:37–58, 2005.
- Barham B. and S. Boucher. Migration, remittances, and inequality: estimating the net effects of migration on income distribution. *Journal of Development Economics*, 55:307–331, 1998.
- Borjas G.J. Self-selection and the earnings of immigrants. *American Economic Review*, 77(4):531–53, 1987.
- Borjas G.J. Economic Theory and International Migration. *International Migration Review*, 23(3):457–485, 1989.
- Borjas G.J. The Economics of Immigration. *Journal of Economic Literature*, 32:1667–1717, 1994.
- Borjas G.J. Immigration and Welfare Magnets. *Journal of Labor Economics*, 17(4):607–637, 1999.
- Borjas G.J. Welfare Reform and Immigrant Participation in Welfare Programs. *International Migration Review*, 36(4):1093–1123, 2002.

- Borjas G.J. Welfare reform, labor supply, and health insurance in the immigrant population. *Journal of Health Economics*, 22:933–958, 2003.
- Borjas G.J. and B. Bratsberg. Who leaves? the out-migration of the foreign-born. *Review of Economics and Statistics*, 78(1):165–176, 1996.
- Borjas G.J. and L. Hilton. Immigration and the welfare state: Immigrants participation in means-tested entitlement programs. *Quarterly Journal of Economics*, 111(2):575–604, 1996.
- Bovbjerg, Proposed Totalization Agreement with Mexico Presents Unique Challenges, United States General Accounting Office, 2004.
- Carrington W.J., E. Detragiache, and T. Vishwanath. Migration with endogenous moving costs. *American Economic Review*, 86(4):909–930, 1996.
- Chami R., C. Fullenkamp, and S. Jahjah. Are immigrant remittance flows a source of capital for development? *IMF Staff Papers*, 5(1):55–81, 2005.
- Chiquiar D. and G.H. Hanson. International migration, self-selection, and the distribution of wages: Evidence from Mexico and the United States. *Journal of Political Economy*, 113(2):239–281, 2005.
- CIPE. “Foreign Direct Investment”. Economic Reform Issue Paper, CIPE, August 2004
- Clark X., T. J. Hatton, and J. G. Williamson. What explains cross-border migration in Latin America? mimeo, 2003.
- Cox D., Z. Eser, and E. Jimenez. Motives of private transfers over the life-cycle: An analytical framework and evidence from Peru. *Journal of Development Economics*, 55:57–80, 1998.
- Cox Edwards A. and M. Ureta. International migration, remittances, and schooling: evidence from El Salvador. *Journal of Development Economics*, 72:429–461, 2003.
- De Soto, Hernando. “The Hidden Architecture of Capitalism”. Institute of Liberty and Democracy. 2001. (available at www.ild.org.pe/eng/articles_en1.htm.)
- De Soto, Hernando. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*” Basic Books. 2003
- Deaton A. and C. Paxon. Intertemporal choice and inequality. *Journal of Political Economy*, 102(3):437–467, 1994.
- Djajic S. and R. Milbourne. A general equilibrium model of guest-work migration. *Journal of International Economics*, 25:335–351, 1988.

- Docquier F. and H. Rapoport. Remittances and inequality: a dynamic migration model. Stanford University Center for Research on Economic Development and Policy Reform, Working Paper, (167), 2003.
- Docquier F., O. Faye, and P. Pestieau. Is migration a good substitute for education subsidies? *Journal of Development Economics*, 86:263–276, 2008.
- Durand J., W. Kandel, E. Parrado, D.S. Massey. International Migration and Development in Mexican Communities. *Demography*, 33, 2, 249-264
- Dustmann C. Return migration, uncertainty and precautionary savings. *Journal of Development Economics*, 52:295–316, 1997.
- Dustmann C. Return migration, wage differentials, and the optimal migration duration. *European Economic Review*, 47:353–369, 2003.
- Dustmann C. and O. Kirchkamp. The optimal migration duration and activity choice after re-migration. *Journal of Development Economics*, 67:351–372, 2002.
- Dustmann C., T. Hatton, and I. Preston. The labour market effects of immigration. *Economic Journal*, 115:297–299, 2005.
- Ethier W.J. Illegal immigration. *American Economic Review Papers and Proceedings*, 76(2):258–262, 1986.
- Fajnzylber P. and H. Lopez. Remittances and Development: lessons from Latin America. The World Bank, 2008*
- Freund C. and N. Spatafora. Remittances, transaction costs, and informality. *Journal of Development Economics*, 86:356–366, 2008.
- Funkhouser E. Remittances from international migration: A comparison of El Salvador and Nicaragua. *Review of Economics and Statistics*, 77(1):137–146, 1995.
- Galor O. and O. Stark. Migrants’ savings, the probability of return migration and migrants’ performance. *International Economic Review*, 31(2):463–467, 1990.
- Garcia, Pablo M. Remittances in Central America: A missing business opportunity? . Inter-American Development Bank. 2009. Mimeo
- Glover S. et al. Migration and Economic and Social Analysis. RDS Occasional Paper, 67, The Research, Development and Statistics Directorate, UK Home Office, 2001.
- Gonzalez-Konig G. and Q. Wodon. Remittances and Inequality. Mimeo, 2005.

- Grigorian D. A. and T. A. Melkonyan. Microeconomic implications of remittances in an overlapping generations model with altruism and self-interest. IMF Working Paper, (08/19), 2008.
- Haan A. de. Livelihoods and poverty: the role of migration. *Journal of Development Studies*, 36(2):1–47, 1999.
- Hanson G. H. Emigration, labor supply, and earnings in Mexico. University of California San Diego. Mimeo, 2005.
- Hanson G. H. Emigration, remittances, and labor force participation in Mexico. University of California San Diego. Mimeo, 2005.
- Harris J. R. and M. P. Todaro. Migration, unemployment and development: A two-sector analysis. *American Economic Review*, 60(1):126–142, 1970.
- Hill J. K. Immigrant decisions concerning duration of stay and migratory frequency. *Journal of Development Economics*, 25:221–234, 1987.
- Holzmann R., J. Koettl, and T. Chernetsky. Portability regimes of pension and health care benefits for international migrants: an analysis of issues and good practices. Policy Analysis and Research Programme of the Global Commission on International Migration, 2005.
- Ilahi N. and S. Jafarey. Guestworker migration, remittances and the extended family: evidence from Pakistan. *Journal of Development Economics*, 58:485–512, 1999.
- Ilahi N. Return migration and occupational change. *Review of Development Economics*, 3(2):170–186, 1999.
- Inter - American Development Bank (IDB). The IDB Business Climate Initiative: Annual Report”. Inter-American Development Bank. May 2005.
- Karemera D., V. Iwuagwu Oguledo, and B. Davis. A gravity model analysis of international migration to North America. *Applied Economics*, 32:1745–1755, 2000.
- Koettl J. The relative merits of skilled and unskilled migration, temporary and permanent labor migration, and portability of social security benefits. World Bank Social Protection Discussion Paper, (0614), 2006.
- Lindstrom D. P. Economic opportunity in Mexico and return migration from the United States. *Demography*, 33(3):357–374, 1996.

- Lopez-Cordoba, E. and Olmedo, A. International Migration, Remittances and Development: An Overview. in *Integration and Trade Journal* No 27. July-Dec 2007.
- Lucas R. E. and O. Stark. Motives to remit: Evidence from Botswana. *Journal of Political Economy*, 93(5):901–918, 1985.
- Lueth E. and M. Ruiz-Arranz. A gravity model of workers remittances. *IMF Working Paper*, (06/290), 2006.
- Mandelman F. S. and A. Zlate. Immigration and the Macroeconomy. Federal Reserve Bank of Atlanta Working Paper Series, (2008-25), 2008.
- Martinez-Pizarro J. and M. Villa. International migration in Latin America and the Caribbean: a summary view of trends and patterns. United Nations Population Division, Expert Group Meeting on International Migration and Development, 2005.
- Massey D. S. and K. E. Espinoza. What’s driving Mexico-U.S. migration? a theoretical, empirical, and policy analysis. *American Journal of Sociology*, 102(4):939–999, 1997.
- Massey D. S. Patterns and processes of international migration in the 21st century. University of Pennsylvania. Mimeo, 2003.
- Mayda A. M. International migration: A panel data analysis of economic and noneconomic determinants. *IZA Discussion Paper Series*, (1590), 2005.
- Mayda A. M. International migration: A panel data analysis of the determinants of bilateral flows. *Centre for Research and Analysis of Migration Discussion Paper Series*, (07/07), 2007.
- Mayr K. and G. Peri. Return migration as channel of brain gain. *Centre for Research and Analysis of Migration Discussion Paper*, (04/08), 2008.
- McKenzie D. and H. Rapoport. Network effects and the dynamics of migration and inequality: Theory and evidence from Mexico. *Journal of Development Economics*, 84:1–24, 2007.
- McKenzie D., J. Gibson, and S. Stillman. How important is selection? Experimental vs. non-experimental measures of the income gains from migration. *IZA Discussion Paper Series*, (2087), 2006.
- Mendola M. Migration and technological change in rural households: Complements or substitutes? *Journal of Development Economics*, 85:150–175, 2008.
- Mesnard A. Temporary migration and capital market imperfections. *Oxford Economic Papers*, 56:242–262, 2004.

- Mishra P. Emigration and wages in source countries: Evidence from Mexico. *Journal of Development Economics*, 82:180–199, 2007.
- Multilateral Investment Fund. “Movilización de Remesas a Través de Entidades Microfinancieras” [Mobilization of Remittances through Microfinance Institutions]. Multilateral Investment Fund Technical Cooperation. Inter-American Development Bank. 2006.
- Munshi K. Networks in the modern economy: Mexican migrants in the U.S. labor market. *Quarterly Journal of Economics*, 118(2):549–599, 2003.
- OECD. International migration outlook. OECD Annual Report 2006 Edition, 2006.
- OECD. Trends in international migration. OECD Annual Report 2002 Edition, 2002.
- Okonkwo U. Remittances and savings from international migration: Theory and evidence using a matched sample. *Journal of Development Economics*, 83:446–465, 2007.
- Orozco, M. and B. L. Lowell. Transnational Engagement, Remittances and their Relationship to Development in Latin America and the Caribbean,” Institute for the Study of International Migration, Washington: Georgetown University, 2005*
- Orozco, M. International flows of remittances: cost competition and financial access in Latin America and the Caribbean. Report prepared for the Inter-American Development Bank, 2006.*
- Orrenius P. M. and M. Zavodny. Self-selection among undocumented immigrants from Mexico. *Journal of Development Economics*, 78:215–240, 2005.
- Osili, U. O. Remittances and savings from international migration: Theory and evidence using a matched sample . *Journal of Development Economics* 83 (2007) 446–465, 2007.
- Pew Hispanic Center-Multilateral Development Fund. “Receptores de Remesas en Centroamérica- Encuestas Nacionales de la Región Centroamericana”. Guatemala City. September 2003.
- Rapoport H. and F. Docquier. The economics of migrants remittances. IZA Discussion Paper Series, (1531), 2005.
- Razin A. and E. Sadka. Migration and pension with international capital mobility. *Journal of Public Economics*, 74:141–150, 1999.
- Reyes B. Dynamics of immigration: Return migration to western México. Public Policy Institute of California, 1997.

- Ross S., J. Pagan, and D. Polsky. Mexican migration to the US and access to health care. University of Pennsylvania, Population Aging Research Center Working Paper Series, (05-11), 2004.
- Sana M. and C. Yu. Is international migration a substitute for social security? Wellbeing and Social Policy, 2(5):27–48, 2007.
- Sana M. and D. S. Massey. Seeking social security: An alternative motivation for México-US migration. International Migration, 38(5):3–24, 2000.
- Stark, O. Economic–Demographic Interactions in Agricultural Development: The Case of Rural-to-Urban Migration. Food and Agriculture Organization of the United Nations (FAO), 1978*
- Stark O. Inequality and migration: a behavioral link. Institute for Advanced Studies Economics Series, (178), 2005.
- Stark O. and D. E. Bloom. The new economics of labor migration. American Economic Review Papers and Proceedings, 75(2):173–178, 1985.
- Stark O. and E. Taylor. Migration incentive, migration types: the role of relative deprivation. Economic Journal, 101:1163–1178, 1991.
- Storesletten K. Sustaining fiscal policy through immigration. Journal of Political Economy, 108(2):300–323, 2000.
- Taylor J. E. and J. Mora. Does migration reshape expenditures in rural households? evidence from Mexico. World Bank Policy Research Working Paper, (3842), 2006.
- Taylor, Edward. “The New Economics of Labor Migration and the Role of Remittances in the Migration Process”. International Migration. Vol 37 (1). 1999.
- Terry; D and Wilson, S (Ed.). “Beyond Small Change: Making Migrant Remittances Count”. Multilateral Investment Fund. Inter-American Development Bank. 2005
- Woodruff C. and R. Zenteno. Migration networks and microenterprises in Mexico. Journal of Development Economics, 82:509–528, 2007
- World Bank, Global Economic Prospects 2006: Economic Implications of Remittances and Migration. World Bank, Washington D.C., 2005*