

# Future Trends in Remittances to Latin America and the Caribbean

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30 INTER-AMERICAN  
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SHAPING POLICY DEBATE FOR ACTION

This briefing offers some reflections on future trends in family money transfers, or remittances, made by immigrants. We explore factors that may affect remittance growth in the context of the global recession.

As international events rapidly change, new patterns emerge that are likely to shape future flows of remittances. This report reviews and analyzes several trends. Contrary to conventional wisdom, we found that increases in employment only partially explain increases in remittances. Other factors include new money-sending technologies, skilled female migration, transnationalism, and natural disasters brought on by climate change. Increased financial inclusion also plays a role in remittance behavior. Together, these factors signal changes in migration and remittance decisions.

## 1. Remittances to Latin America and the Caribbean in 2011

After a tough recession and low or no economic growth, remittances to Latin America grew by 8 percent from 2010 to 2011, almost comparable to 2007 levels. This may represent a turning point and mark a return to continued growth.

Remittances increased to US \$69 billion in 2011 with growth registered predominantly in Mexico, Colombia, and Central America. As the table below shows, most countries received as much in 2011 as in 2007. Guatemala and Colombia, which continue to be major recipients of remittances, experienced different growth rates in remittances coming from the United States. For the most part, countries that are tied more closely

**Table 1: Inflow of Remittances to Selected Latin American Countries (US\$ in millions)**

Country	2007	2008	2009	2010	2011
Colombia	4,493	4,769	4,145	4,024	4,168
Dominican Republic	3,033	3,148	3,034	2,994	3,131
Ecuador	3,088	2,897	2,495	2,324	2,673
El Salvador	3,695	3,831	3,465	3,540	3,650
Guatemala	4,128	4,459	3,912	4,127	4,377
Honduras	2,561	2,785	2,401	2,529	2,862
Jamaica	1,964	2,093	1,792	1,914	2,025
Mexico	23,979	23,621	21,181	21,271	22,731
Nicaragua	740	830	771	823	1,053
Sum of nine countries above	47,681	48,432	43,196	43,545	46,670
Latin America	68,600	69,200	62,000	63,860	69,291*

Source: Central Bank of each country, last updated February. \*Preliminary estimate.

# FOREWORD

The Inter-American Dialogue is pleased to publish this report prepared by Manuel Orozco, director of the Dialogue's remittances and development program. The Dialogue's aim in publishing working papers is to stimulate a broad and well-informed public debate on complex issues facing analysts, decision makers, and citizens concerned about Latin America's policy agenda.

In this working paper, Orozco, a leading expert on migration and development issues, offers a systematic overview of the trends shaping the flow of remittances in the Americas. Relying on available data, including surveys he conducted over the past decade, Orozco analyzes changes in the number and amount of remittances sent by Latin American migrants. His findings show that natural disasters, female skilled workers, and increased migrant financial access are among some of the leading factors explaining growth of remittances. His assessment integrates comments and recommendations from members of the academic, business, and policy communities in the United States and Latin America and the Caribbean that shed light on these developments.

The report is part of a series of studies carried out by the Remittances and Development Program (<http://www.thedialogue.org/page.cfm?pageID=80>), which seeks to encourage remittances as a tool for development in the Western Hemisphere and around the world. The Dialogue focuses largely on policies governing the flow of remittances, private sector financial and remittance services, and financial access for migrants and remittance recipient families.

The program's scope extends to examining the costs associated with remitting, the banking industry and new modes of remitting through innovative technologies, the economic participation of diasporas, hometown associations (HTAs) in countries of origin, and other transnational activities that involve migrants. Through research, policy analysis, technical assistance, product development, and project implementation, the Dialogue has enhanced knowledge and forged partnerships among public and private institutions in over 100 countries in Latin America and the Caribbean, Africa, Europe and Asia.

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**Michael Shifter**

President

to the US economy experienced higher growth than those whose populations also migrate to Europe.

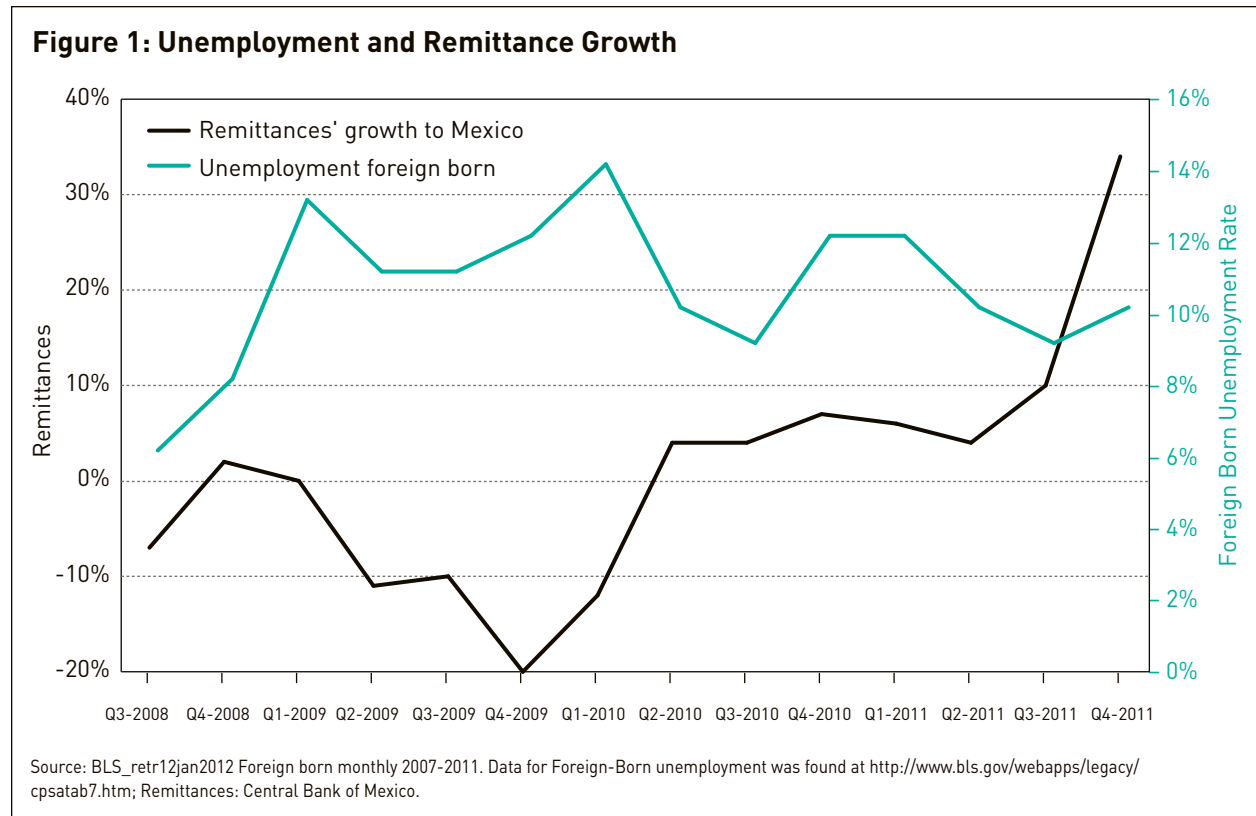
In terms of remittances flows from the United States, there are different opposing forces at work: a 2 percent decline in unemployment among foreign born workers may have increased remittance flows, and increases in deportations during the same period may have reduced remittance flows.

Although unemployment in the United States remains high, US economic recovery (and associated declines in unemployment rates) may have played a role in increasing flows to Latin America from 2010 to 2011. For example, declines in unemployment rates seem to have contributed to the increases in remittances to Mexico—Mexican migrants constitute over one-third of the US foreign labor

**Table 2: Percentage Growth of Remittances (Selected Latin American Countries)**

Country	2008	2009	2010	2011
Colombia	6	-15	-3	3
Dominican Republic	4	-4	-1	4
Ecuador	-7	-16	-7	13
El Salvador	4	-11	2	3
Guatemala	7	-14	5	6
Honduras	8	-16	5	12
Jamaica	6	-17	6	5
Mexico	-2	-12	0	6
Nicaragua	11	-8	6	22

Source: Central Bank of each country, last updated February 2012.



force. However, deportations of Mexicans in particular were almost as large as the inflow of Mexican immigrants to the United States—which stands at 350,000 in 2011. Because the number of migrants in the United States did not grow, it is unlikely that growth in remittances was due to an increase in the number of migrants. Deportations might have taken job seekers out of the market, lowering unemployment at the same time lowering the number of people sending money home. Thus, a decline in unemployment contributes to remittance growth, but it may not alone explain the increase in flows. Specifically an 8 percent increase in remittances can't be explained by a 2 percent decline in unemployment between 2010 and 2011.

Research shows that remittance trends between 2000 and 2010 were influenced by both the inflow of new immigrants remitting home and the profile of remitters. Typically, increases in the number of persons sending parallel the increases in migration. As more migrants arrive in a host country, the number of person-to-person transfers grows annually. If economic upturns generate greater labor demands in a host country, the number of remitters will also increase. Moreover, increases in volume are also a function of the type of senders (gender and age or years remitting, for example), and the level of senders' financial access (owning an account, for example). The challenge is to understand which factors affect the increases in transfers more than others.

Through existing research and fieldwork over the period between 2005 and 2011, we explore these issues as a means to understand prevailing and shifting patterns in remitting, some of which are associated with international migration trends. Below we examine some factors that may explain the drivers of remittance growth to Latin America and the Caribbean in the last decade.

## 2. Increases in Volume—Financial Access, Women, Transnationalism

Several factors contribute to an increase in the volume of remittances: access to new financial tools, an increase in the number of skilled female migrants who send more than other groups, and external dynamics such as changes in the cost of living in the home country. Here we review some of these issues.

### Transactional and Financial Inclusion

Increased use of technology and access to financial tools (both in their host and home countries) among immigrants may positively affect growth in remittance amounts. Studies show that remitters who use technology-based financial instruments, such as online transfers via online bank accounts, send slightly larger amounts than those who use cash-to-cash methods, even after controlling for income and education.<sup>1</sup> For some time immigrants have consistently expressed interest in changing how they transfer money home. Their behavior is increasingly matching these expressed preferences, as more people use the Internet and instruments other than cash-to-cash to remit.<sup>2</sup> The share of remitters using technology-based instruments has grown steadily year by year. In turn, more companies are now

<sup>1</sup> Orozco, Manuel, with Elisabeth Burgess, and Netta Ascoli, "Is there a match among migrants, remittances and technology?" Inter-American Dialogue, September 2010; Orozco, Manuel and Katy Jacob, "Card-Based Remittances: A Closer Look at Supply and Demand" Chicago, CFSI, 2007.

<sup>2</sup> These changes are partly a function of financial access for migrants. As the number of immigrants with bank accounts increases, the options and preferences to use account transfers also grows.

	Amount Sent Each Time	Total Amount Annually
Banks	258	3,592
Money transfer operators	169	2,344
Internet	269	2,685
Travelers	162	1,704

Source: Orozco, Manuel, with Elisabeth Burgess, and Netta Ascoli. Sep 2010. "Is there a match among migrants, remittances and technology?" Inter-American Dialogue.  
 Note: The averages reported here are survey based and are not to be compared with other data on average remitted, such as data reported by companies.

**Table 4: Remittances and the Internet**

Host Country	Number of Companies	Average fee to send US\$200 via Internet	Average fee to send US\$200 via agent
France	13	10.39	8.61
Netherlands	7	11.00	9.5
United Kingdom	15	8.95	9.53
United States	7	9.78	8.29

Source: Data compiled by the author. June 2011.

offering account transfer methods that serve as alternatives to cash-to-cash remittances.

In the United States, Xoom Corporation is a leader in global online money transfers. Xoom facilitates over half-a-million monthly transfers, with half of these transfers being account withdrawals authorized by the immigrant to the remittance company to pay at home. In Colombia, over 25 percent of remittances are received via online transfers into bank accounts. Wells Fargo is estimated to be outperforming other banks, as far as the volume of remittances. It has experienced a 40 percent annual growth in remittance transfers in 2010, amounting to a total of US\$1.4 billion in transfers in 2010 and a monthly flow of over 400,000 transfers. In 2011, it grew to US\$1.8 billion in transfers. Over half of Wells Fargo's transfers are from bank accounts to cash. Increasing use of bank account to cash transfers, such as those done by Wells Fargo, has made recipients more familiar with banking institutions.

Moreover, in developing countries individuals' financial access is growing. While growth in savings and bank account ownership has not increased dramatically, remitters have increased access to financial institutions via non-bank agents, the Internet, and mobile telephone banking. The age of 'branchless' financial operations is reaching a point of increasing returns in the short term. In Latin America, for example, banking access has grown to 51 percent, with Brazil and Southern Cone countries having higher rates and Mexico and Central America with lower percent access. Only 43 percent of municipalities in Mexico, for example, have a bank branch. Non-banking corresponding agents are entering the financial sector to meet the need.

Mobile banking via cell phone is also entering Latin America. Electronic transfers increased 121 percent in 2010, and during 2004 and 2009 check transfers dropped

11 percent.<sup>3</sup> M-banking is growing in Brazil, *Davivienda* in Colombia, *Nipper* in Mexico, and *Tigo Money* in Guatemala and Honduras. Mexican banks are also penetrating the market with new mobile banking features to expand competition in both national and international segments. Card based payments are also increasing, partly as a result of marketing strategies or government social programs on cash transfers, such as those in the Dominican Republic, *Tarjetas Solidaridad*; Argentina (with 23 percent of the population benefiting from a card-based social program); and Chile's *Chile Solidario*. Some 9.5 million Mexicans have enrolled in the *Oportunidades* program that uses cards for its cash transfer service.<sup>4</sup>

## Women Migrants

The number of women immigrants is growing substantially, fueled in part by a demand for high-skilled female labor across the world. The percent of female migrants with a tertiary education is greater than that of males. Women are increasingly migrating to high-income countries, and they are working in various industries. These range from domestic work, textiles and garments, entertainment, and agriculture, as well as management and professional positions in other business sectors. Indeed, for the first time women now represent 50 percent of the total migrant population.

<sup>3</sup> Europraxis expects that the increase in utilization of mobile phones in Brazil will facilitate the adoption of mobile payment services. Available online: [http://www.segs.com.br/index.php?option=com\\_content&view=article&id=60561:-europraxis-aponta-a-ascensao-da-telefoniamovel-e-da-utilizacao-de-dados-no-brasil-como-tendencias-positivas-para-a-adocao-do-mobile-payment-&catid=48:cat-info-ti&Itemid=329](http://www.segs.com.br/index.php?option=com_content&view=article&id=60561:-europraxis-aponta-a-ascensao-da-telefoniamovel-e-da-utilizacao-de-dados-no-brasil-como-tendencias-positivas-para-a-adocao-do-mobile-payment-&catid=48:cat-info-ti&Itemid=329)

<sup>4</sup> SEDESOL (Mexico's Social Policy Department) highlights the importance of banking to otherwise unserved low-income families. January 25, 2012. Available online: Veracruzanos.info, <http://www.veracruzanos.info/2012/01/destaca-sedesol-bancarizacion-de-familias-de-escasos-recursos/>

This emerging trend is changing the gender dynamics of remittances and transnational ties. For example, among migrants, women traditionally tended to remit less money back to their home countries than men. As the table below shows, however, migrants in several host countries demonstrate differences in remitting by gender and education: since 2008, female migrants with a tertiary education have remitted either as much as, or more, than men.

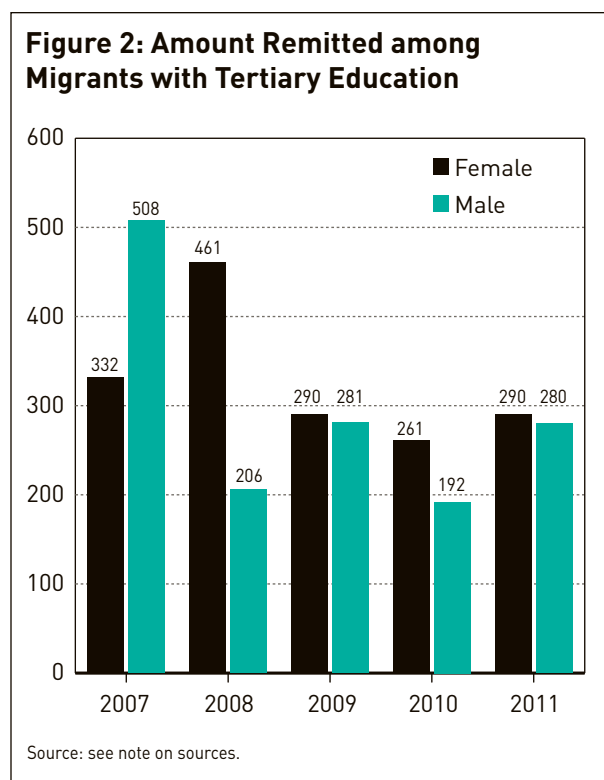
### Transnationalism

Transnational ties have also turned into important drivers of migration. Stronger transnational ties and increased labor mobility facilitate a range of linkages between home and host countries, which are created through migrants' economic, cultural, social, and other activities. In this way, migrants have become more substantively and directly involved in different economic and social activities in their

**Table 5: Migrant Characteristics, by Gender, 2009**

	Female			Male		
	US\$ Average per Remittance	% w/ Tertiary Education*	Years in Host Country	US\$ Average per Remittance	% w/ Tertiary Education*	Years in Host Country
Spain	258	36	6	274	31	7
Italy	373	42	11	256	38	10
France	436	26	12	299	30	18
United States	290	27	11	280	22	12

Source: "Skilled Diasporas: An Imagined or Real Community? Understanding its Policy Implications." Manuel Orozco and Mariellen Jewers. Skilled Diasporas and the Transnational Flow of Knowledge and Resources. An International Workshop, Organized by the Migration Studies Project, PSU, April 30th and May 1st 2010.  
 \* This percent includes people who completed university or have years of university education.



countries of origin. This is due in part to the dynamics of globalization and to new opportunities resulting from political and economic openings in their home societies.

One of the most important outcomes of globalization and migration has been the formation of transnational families and communities, defined as groups or families whose relations and connections encompass both home and host societies. Use of technology makes it easier to stay in touch and maintain linkages among families, thus reducing the cost of migrating and facilitating labor mobility.

People are expanding their economic ties to operate across home and host country economies, furthering the interdependence on migrant labor. Immigrants' economic linkage with their home country extends to at least four practices that involve spending or investment: 1) family remittances; 2) demand for consumer goods, telecommunication, or travel services; 3) capital investment; and 4) charitable donations to philanthropic organizations working in migrants' home communities. Immigrants worldwide are sending \$400 billion to their relatives (25 percent of which comes from the United States). Data shows that those

who are more engaged with their homeland tend to send more money. Additionally, migrants donate \$400 million to philanthropic work, and invest more than \$100 billion in their home countries.

### Global Commodity Prices and Foreign Exchange Shifts

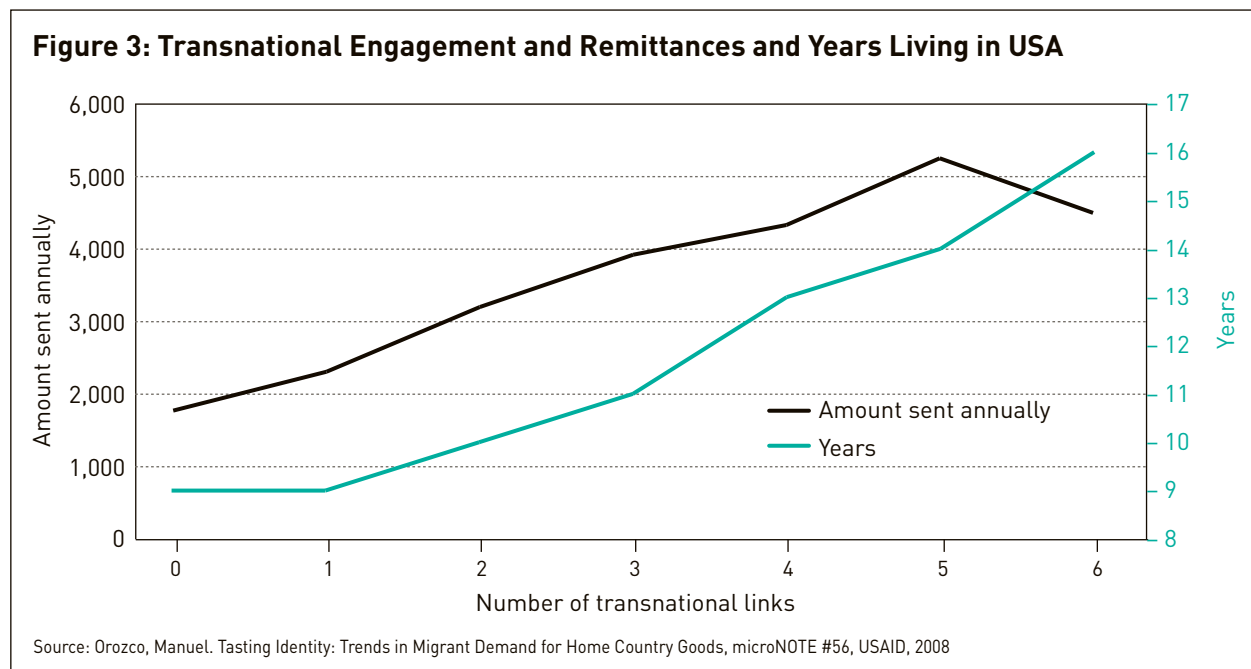
Prevailing costs of living are also an important factor that influences amounts sent. Increases in cost of living that stem from rising commodity prices (a significant driver of cost-of-living increases in Latin America) induce migrants to send more money. Data shows that there is a strong relationship between remittances and price increases in the home country. If commodity prices increase above prices in agricultural exports, the cost of living will then increase in the home country. This has been the case for most of Latin America and the Caribbean.<sup>5</sup>

Another factor that may affect remittances is global currency markets. With the decline of the US dollar prior to and during the global recession, the average amount sent shifted as home countries' currency appreciated.<sup>6</sup> For example, the Mexican economy experienced peso fluctuations as a result of the value of the US dollar dropping vis-a-vis other major currencies, including the Euro and Sterling Pound. This may have influenced the amount migrants remitted to Mexico. When the peso dropped, immigrants sent slightly less (see Figure 4). In contrast, when the peso appreciated, immigrants tended to send more. Local currency appreciation (or US dollar depreciation) also tends to increase local prices and lead to inflationary periods in Mexico and Central America. This situation increases the local cost of living and may prompt migrants to remit more.<sup>7</sup>

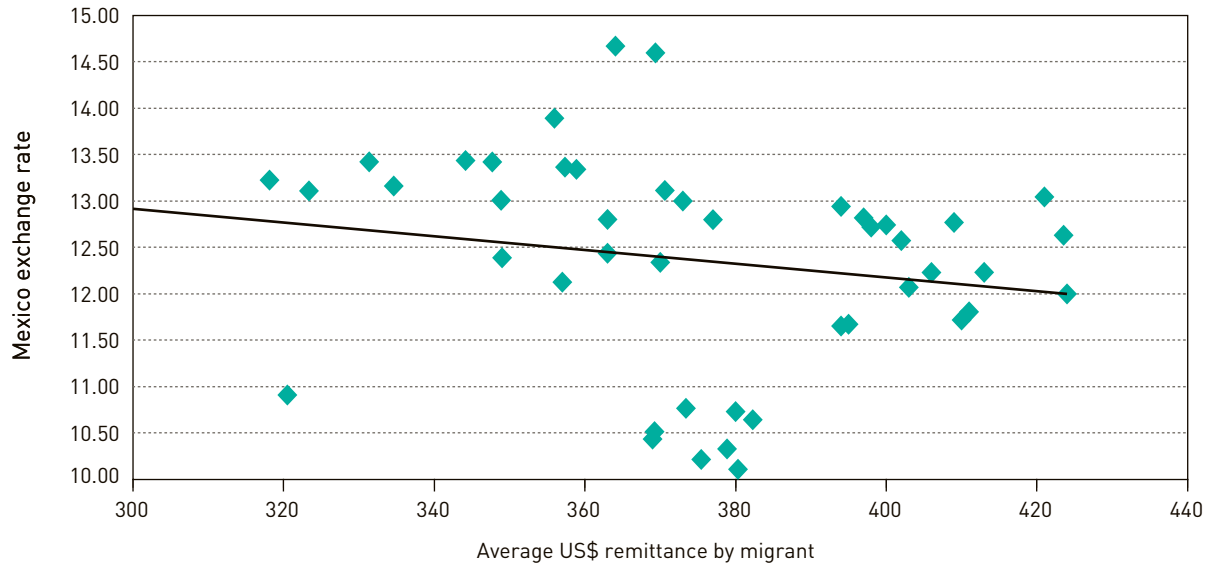
<sup>5</sup> In Latin America surges in commodity prices for oil and agricultural products result in inflationary pressures of domestic consumer prices indexes (CPI). However, Central Banks' attempts to curb inflationary pressures by increasing interest rates instigate volatile capital inflows into many countries, which causes excessive appreciation of local currency, surges in domestic credit, with rising prices.

<sup>6</sup> "Remittances to Latin America and the Caribbean in 2010: Stabilization after the crisis," Inter-American Development Bank, 2011. <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=35788832> discusses the relationship between local currency appreciation and the impact on remittances.

<sup>7</sup> While conventional theory argues that depreciation causes inflation, in countries where there is large revenue from natural resources, accompanied by a weakening foreign currency, the local currency appreciates more rapidly. In turn, though, the appreciation of the currency makes imports cheaper, exports become more expensive, and local property values higher (as people increase the demand for real estate buying in dollars). In poor and export-dependent countries, increases in real estate value and hard-to-sell exports may increase inflation.

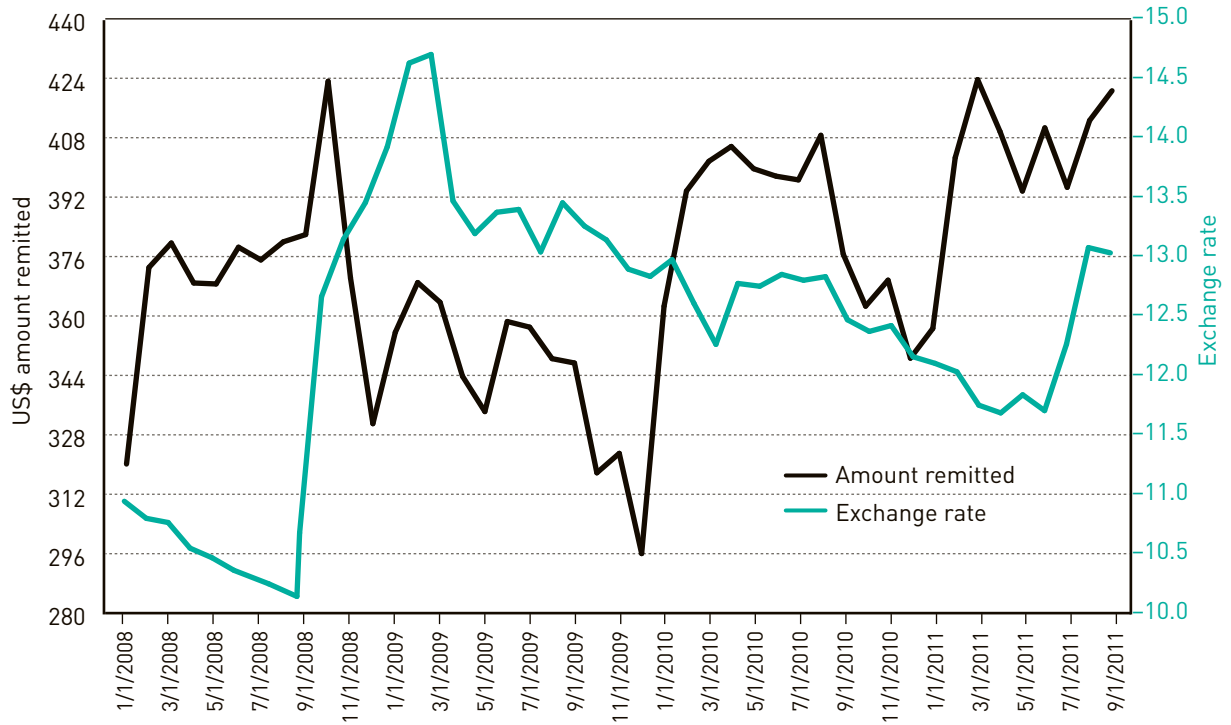


**Figure 4: Exchange Rate and Amount Remitted**



Source: Central Bank of Mexico

**Figure 5: Exchange Rate and Average Remitted**



Source: Central Bank of Mexico

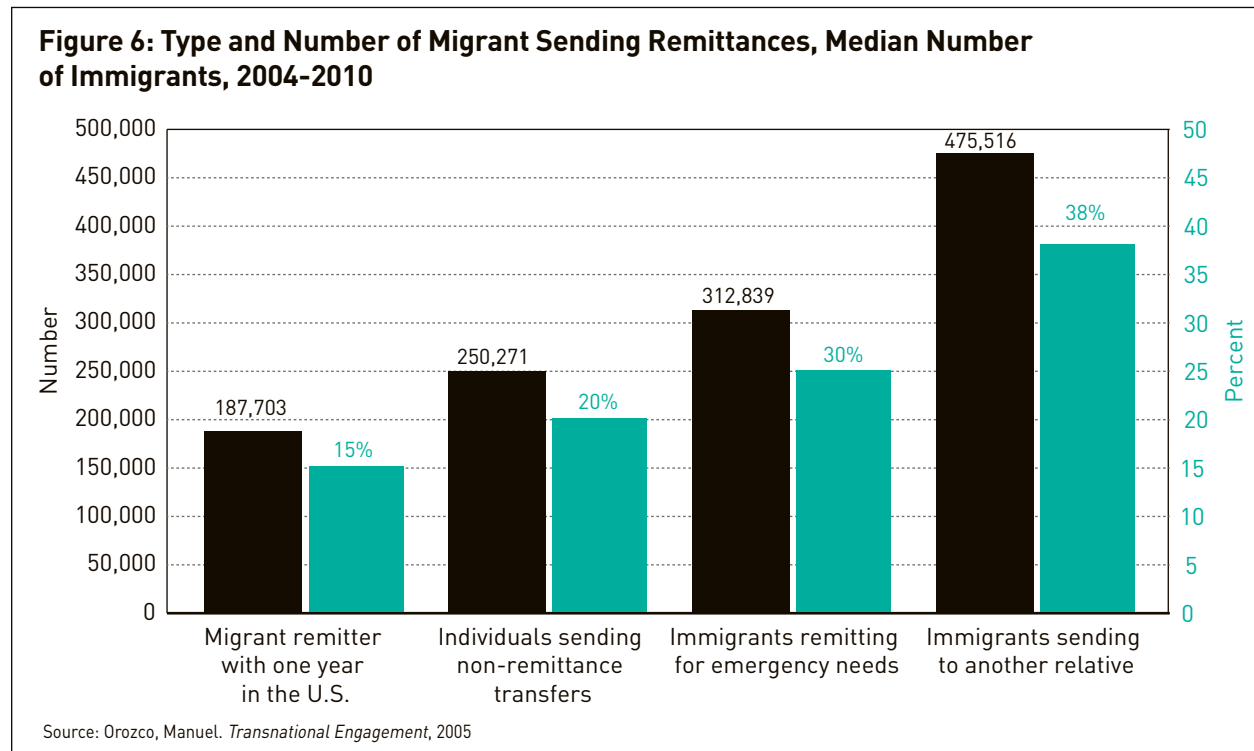


### 3. Increase in Number of Senders—Economics, Natural Disasters, Migration Policy

Survey research in 2005 showed that the annual growth of money transfers was associated with several factors: new immigrants sending money during their first year (15 percent), transfers sent to additional family members (38 percent), special emergencies (25 percent), and non-family remittance transfers (20 percent). The most noticeable increases have been from new arrivals and those who send to additional family members.

### Economic Recession

The global economic recession continues to strongly influence the amounts sent by remitters. During the recession, a substantial percentage of migrants stopped remitting and those who continued remitting usually sent less money. By 2010 a slight recovery was observed in terms of the percent of migrants that were sending more, as well as in the frequency of sending, which increased from nine times a year in 2008 to 11 in 2010. The frequency remained lower, though, than the 2007 average of 13 times a year. In 2011, the frequency of remitting increased to 12 times per year, and active remitters reported sending more or the same amount as in 2010.



**Table 6: Whether Migrants in the U.S. Are Sending More, Less or Same Amount (Percentage)**

	2008	April, 2009	August, 2009	June, 2010
Sending same	83.9	66.0	48.9	53.3
Sending less	7.9	30.0	44.9	33.8
Sending more	8.2	4.0	6.2	12.8
Difference: "more" & "less"	0.3	26.0	38.7	40.5

Source: Orozco, Manuel. *Understanding the continuing effect of the economic crisis on remittances to Latin America and the Caribbean*. Inter-American Dialogue. August 2nd, 2009. Orozco, 2008 supplemental survey (see "Note on Sources" page 18). Orozco, Manuel. "Is there a match ...?" [see footnote 1].

**Table 7: Average Remittance Amount Remitted by Migrants in the U.S. (US\$)**

Country	2007	2008	2009	2010	2011
Bolivia	218	183	161	176	
Colombia	241	264	261	236	222
Costa Rica	302	268	204	190	260
Dominican Republic	215	215	204	206	277
Ecuador	348	337	300	277	224
El Salvador	351	350	314	292	321
Guatemala	407	383	336	327	390
Guyana	232	161	133	140	
Haiti	131	120	105	100	
Honduras	211	243	251	258	295
Jamaica	215	147	116	140	
Mexico	368	371	343	322	400
Nicaragua	131	125	111	158	125
Paraguay	279	306	278	298	191
Peru	167	168	160	170	215
Venezuela	151	167	156	155	146
<b>Latin America and Caribbean</b>	<b>256</b>	<b>238</b>	<b>215</b>	<b>215</b>	<b>255</b>

Source: Company data provided to the author by various money transfer operators.

## Natural Disasters

Migration from Mexico, Central America, and the Caribbean is increasingly shaped by natural disasters, such as floods, earthquakes, and hurricanes. On average, Mexico and Central America experience at least one major disaster

every year. Natural disasters pose a real threat to economic and human security throughout the region due to their frequency and intensity. For this reason, hurricanes, earthquakes, and floods in the region trigger internal and international migration.

**Table 8: Natural Disasters, Select Latin American and Caribbean countries, (Number of Deaths)**

Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Colombia		38	0	0	0	0	88	0	0	6	0	160
Dominican Republic		0	0	0	0	674	0	0	91	22	1	0
Ecuador		2	91	0	0	0	0	4	0	19	0	1
El Salvador	0	1	1200	8	0	0	147	0	0	29	124	21
Guatemala	179	12	14	30	22	0	1508	0	0	0	0	0
Honduras		0	6	0	6	0	0	0	41	0	0	35
Jamaica	0	0	2	11	0	18	6	0	0	0	0	13
Mexico	0	1	7	4	19	25	88	0	22	0	5	60
Nicaragua		12	4	0	0	21	11	0	98	0	0	54
Peru		5	63	0	18	0	0	0	15	0	0	20
<b>Grand Total</b>	<b>179</b>	<b>71</b>	<b>1387</b>	<b>53</b>	<b>65</b>	<b>738</b>	<b>1848</b>	<b>4</b>	<b>267</b>	<b>76</b>	<b>130</b>	<b>364</b>

Source: GLocal Identifier Number (GLIDE) database. Accessed August–September 2011. [http://www.glidenumber.net/glide/public/search/search.jsp?nStart=\\*September 2011](http://www.glidenumber.net/glide/public/search/search.jsp?nStart=*September 2011).

**Table 9: Natural Disaster, by Type (Number of Disasters, 2000–2010)**

Country	Earthquake	Flood	Hurricane	Volcano	Drought	Landslide	Dengue Outbreak	Sum of Disasters
	Percent of Total Disasters							Number
Mexico	14.3	21.4	46.4	3.6	0	0	14.2	28
El Salvador	15	25	40	5	10	0	5	20
Guatemala	15.8	21.1	21.1	10.5	15.8	10.5	5.3	19
Honduras	15.8	21.1	31.6	0	10.5	0	21.1	19
Nicaragua	15.4	23.1	30.8	0	7.7	7.7	15.4	13

Source: GLocal Identifier Number (GLIDE) database. Accessed August–September 2011. <http://www.glidenumber.net/glide/public/search/search.jsp?nStart=>

## Deportations

Declines in remittances are associated with deportations, as migrants are sent back to their home countries. Deportations—totaling 396,000 in 2011—have hit record levels under the Obama administration.<sup>8</sup> The increase is mostly a result of states taking more aggressive roles in deporting people under already established federal laws. Of the 24 states with agreements under the 1996 enforcement law 287(g), most were established between 2007 and 2010.<sup>9</sup>

<sup>8</sup> “Deportations of illegal immigrants hit record high,” *Los Angeles Times*, October 6, 2010, Web, June 22, 2011, <<http://latimesblogs.latimes.com/lanow/2010/10/record-number-of-deportations-of-illegal-immigrants-in-fiscal-2010-officials-announce.html>>.

<sup>9</sup> “Delegation of Immigration Authority Section 287(g) Immigration and Nationality Act,” US Immigration and Customs Enforcement, Web, June 22, 2011, <<http://www.ice.gov/news/library/factsheets/287g.htm>>, Factsheet.

The Administration’s “Secure Communities” program—which is seen as an amended version of the 287(g) legislation—aimed to detect and deport undocumented criminals. But many local authorities have misused the program as a way to deport any undocumented person. Although deportations are at the discretion of the federal Immigration and Customs Enforcement (ICE) rather than local officials, Secure Communities is still susceptible to being used to detect and deport immigrants regardless of seriousness in criminality.<sup>10</sup>

States have begun to vie with the federal government for authority over immigration policy in the last several years. State legislatures have adopted over 200

<sup>10</sup> Spencer Hsu, “ICE officials set quotas to deport more illegal immigrants,” *The Washington Post*, March 27, 2010, Web, June 22, 2011, <<http://www.washingtonpost.com/wp-dyn/content/article/2010/03/26/AR2010032604891.html>>.

**Table 10: Deportations of Mexican and Central American Immigrants**

Year	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Mexico	34,662	151,267	150,762	122,058	155,812	175,865	169,031	186,726	208,996	246,851	280,219	282,003
Belize	71	170	185	178	179	202	219	211	233	218	244	253
Costa Rica	43	328	392	376	514	599	676	795	655	687	699	522
El Salvador	1,932	4,736	3,928	4,066	5,561	7,269	8,305	11,050	20,045	20,031	20,849	19,809
Guatemala	1,763	4,543	4,716	5,396	7,726	9,729	14,522	20,527	25,898	27,594	29,661	29,378
Honduras	1,931	4,768	4,548	4,946	8,182	8,752	15,572	27,060	29,737	28,851	27,293	24,611
Nicaragua	376	513	526	468	820	947	1,292	2,446	2,307	2,250	2,176	1,847
Panama	90	154	157	163	162	188	187	209	185	192	200	183
Central America	6,206	15,212	14,452	15,593	23,144	27,686	40,773	62,298	79,060	79,823	81,122	76,603

Source: Yearbook of Immigration Statistics 2009 and 2010, Department of Homeland Security; Aliens Removed by Criminal Status and Region and Country of Nationality: Fiscal Years 2000 to 2009. Aliens Removed by Criminal Status and Region and Country of Nationality: Fiscal Years 2001 to 2010. Online: <http://www.dhs.gov/files/statistics/publications/YrBk09En.shtm>

immigration laws nationwide since 2008,<sup>11</sup> ranging from integrating immigrants to cancelling automatic citizenship for children of undocumented parents.<sup>12</sup> The appeals process for Arizona's law SB 1070<sup>13</sup> is likely to lead to a Supreme Court decision on the scope of states' rights to enact immigration law.<sup>14</sup> In the meantime, Arizona challenged and won the right to require businesses to use E-verify, despite employer participation in E-verify being optional under federal law.<sup>15</sup> On the other end of the spectrum, Massachusetts, Illinois, and New York have protested against participating in Secure Communities, even though the federal law makes participation mandatory.<sup>16</sup> The differences among states reflect the larger division among the American populace on how to handle immigration.

The byproduct of these policies has been felt in Latin America and the Caribbean, particularly in Mexico and Central America. For one, the number of immigrants coming into the United States from the region is now close to the number of people deported. Second, the resources invested in Central America to address migration have been diverted to deal with people being deported, rather than on leveraging the economic impact of remittances in these countries.

Using remittance transfers data, survey data, and field research, we estimated the median number of immigrants

that have entered annually from 2004 and 2010.<sup>17</sup> Roughly 65 percent of all migrants remit. Of the total migrants that arrive in any given year, 15 percent send money that same year.<sup>18</sup> Deportations during the past six years are higher than all migrants (authorized or unauthorized) entering the United States during the same period. Moreover, as the table below shows, for Central America, the number of immigrants is much lower than the number of deported migrants. Finally, the declines in remittance flows are associated (to some extent) with deportations; as the number of deportations increase relative to migrant inflow, there are fewer people to send money due to attrition (see Figure 7).

As deportations grow, home countries have been directing resources toward providing basic services to the needs of their returning populations. In Guatemala, Honduras, and El Salvador, for example, governments and civil society have participated in serving those returned under various frameworks. In Honduras, the government created the *Centros de Atención a Migrantes Retornados*, which are administered by four organizations and staffed by a mix of government and NGOs. The government of El Salvador established the program *Bienvenido a Casa* to cope with the volume of returned migrants and also passed the *Ley Especial para la Protección y Desarrollo de la Persona Migrante Salvadoreña y su Familia* this year. In 2007, Guatemala established the *Consejo Nacional de Atención al Migrante de Guatemala*, which works with the *Centro de Atención al Migrante*. The need to cope with the influx of returned migrants further limits governments' capacity to leverage remittances for economic development—which had only limited success even before 2008.

A final factor that might contribute to the increase in volumes of remittances, despite the increase in deportations, is the number of temporary work visas granted, particularly to Mexican migrants. Many of the large increases in total admissions in 2010 compared to earlier years is due to the more accurate account of land entries, rather than a real surge

<sup>11</sup> "Immigration and Emigration," *The New York Times*, June 7, 2011, Web, June 22, 2011, <<http://topics.nytimes.com/top/reference/timestopics/subjects/i/immigration-and-emigration/index.html>>.

<sup>12</sup> *Ibid.*

<sup>13</sup> The Support Our Law Enforcement and Safe Neighborhoods Act (SB1070) was signed into Arizona state law in April 2010. The bill charges law enforcement with the responsibility to identify, prosecute, and deport undocumented people in the state. The bill requires state officials to gather information to determine the legal status of suspected individuals, forbids undocumented people from seeking employment in Arizona, and requires employers operating in Arizona to use E-verify when hiring employees.

<sup>14</sup> Dylan Smith, "Appeals court rules against SB1070: Ninth circuit denies Brewer's appeal, won't lift stay," *Tucson Sentinel.com*, April 11, 2011, Web, June 22, 2011, <[http://www.tucsonsentinel.com/local/report/041111\\_sb1070\\_appeals/appeals-court-rules-against-sb-1070/](http://www.tucsonsentinel.com/local/report/041111_sb1070_appeals/appeals-court-rules-against-sb-1070/)>.

<sup>15</sup> Chamber of Commerce of the United States of America et al. v. Whiting et al. Supreme Court of the United States, Oct. 2010, Supreme Court of the United States, 26 May 2011, Web, 22 June 2011, <<http://www.supremecourt.gov/opinions/10pdf/09-115.pdf>>

<sup>16</sup> "Too Little, Too Late," *The New York Times*, June 19, 2011, Web, June 22, 2011, <[http://www.nytimes.com/2011/06/20/opinion/20mon3.html?\\_r=2&ref=immigrationandemigration](http://www.nytimes.com/2011/06/20/opinion/20mon3.html?_r=2&ref=immigrationandemigration)>.

<sup>17</sup> Annual flows vary from year to year with changes explained by a range of factors, which include personal needs, immigration flows, investment interests, number of dependents to remit to. Central Bank data shows the number of annual transactions resulting from an average annual amount remitted and a total annual volume. Survey research shows that immigrants send to 1.38 people.

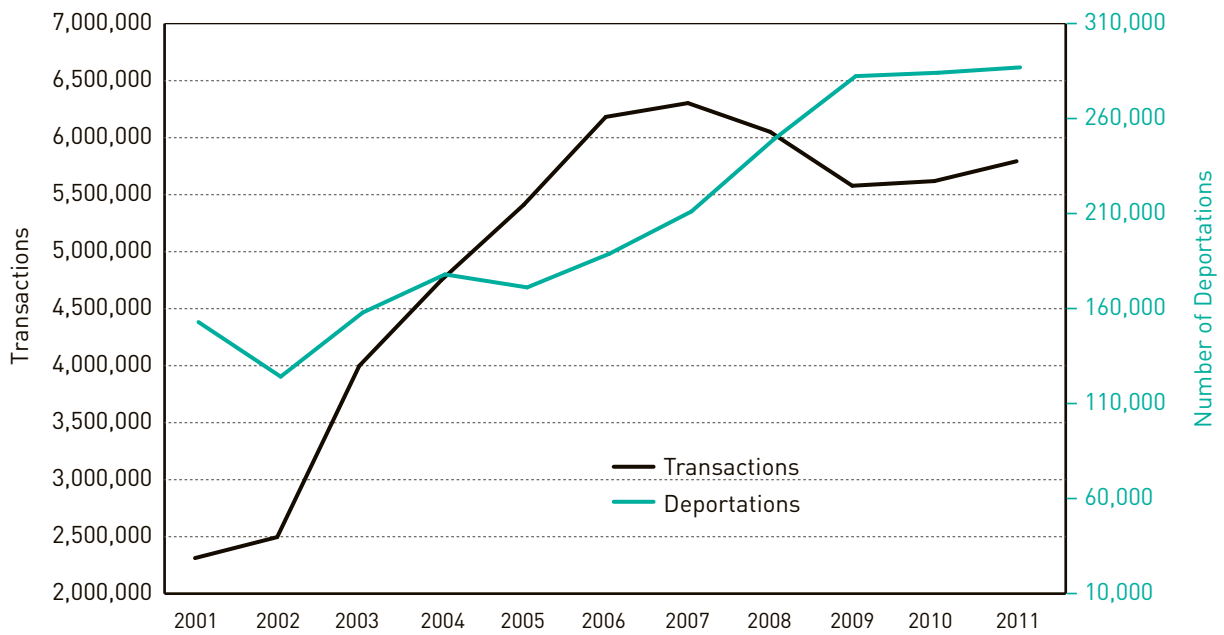
<sup>18</sup> Survey data from 2007, 2008, 2009, and 2010 surveys on Latino immigrants shows that migrants remitting within the first year of arriving to the United States represent 15 percent or less of all immigrants sending money. Immigrants who remit are 65 percent of all migrants. Among Mexicans the percent is lower.

**Table 11: Migrants Deported and Coming into the U.S.**

Home Country	Median annual inflow, 2004–2010		
	Deported	Immigrants	Ratio (D/M)
Mexico	282,003	300,326	0.94
Guatemala	29,378	17,723	1.66
Honduras	24,611	10,670	2.31
El Salvador	19,809	15,897	1.25
Dominican Republic	3,309	11,513	0.29
Ecuador	2,321	2,753	0.84
Colombia	2,267	11,988	0.19
Nicaragua	1,847	6,654	0.28
Jamaica	1,475	13,630	0.11
Peru	1,047	3,963	0.26
Costa Rica	522	4,742	0.11
Venezuela	369	3,238	0.11
Guyana	219	4,970	0.04
Bolivia	207	7,878	0.03
Paraguay	39	3,017	0.01

Source: Surveys conducted by the author 2005, 2007–2010 (see note in appendix).

**Figure 7: Deportations and Remittance Transactions of Mexicans**



Source: Transactions: Central Bank of Mexico; deportations, Table 10.

in overall migration<sup>19</sup>. Nevertheless, improvements in visa processing have increased both the number of applications approved and temporary migration entries in recent years. Although strict comparisons cannot be made due to discrepancies in data collections from earlier years, the increases do point to a larger cohort of migrants entering the United States for temporary work. This temporary employment would contribute to larger volumes of remittances.

## 4. Determinants of Remittance Sending and Growth

The range of factors that can explain growth in remittances is mixed and multiple, but looking at some of these issues can help explain possible future trends in flows. In order to capture some of these dynamics, two statistical regressions were performed. First, using survey data from 2010 a model was selected to examine whether average amounts remitted depended on whether remitters were skilled and female, used Internet or bank transfers, were legal or undocumented, or were engaged transnationally. A second model uses macroeconomic data to test how larger environmental and economic factors influence the overall volume of remittances sent.

### Average Remitted and Migrant Characteristics

As noted earlier, some characteristics associated with sending, such as female skilled migrants, transnational engagement, and use [or preferred use] of non-cash sending methods have changed during the 2000s. On average, skilled female migrants in the United States send about 6.7 percent more dollars home each time they remit than their male counterparts. Those remitters who prefer account transfers send 30 percent more but they represent only a small percentage of all senders. Moreover, those living in their host country for longer are more engaged and send

15 percent more than those less engaged with the home country. Because of the high deportation rates, we introduced a variable on legal status as a proxy for the decline in the undocumented population and the amount sent. Undocumented migrants tend to remit less than their legalized counterparts; increases in deportation reduce the relative size of the undocumented, thus increasing the average remitted by all migrants.

The table below shows that skilled female migrants, those who send via the Internet or via a bank account, and those with more transnational ties remit more than others. It also shows that those without legal documentation for immigration remit almost 10 percent less.

The results<sup>20</sup> in Table 13 indicate that the average amount remitted shows a poor correlation with the variables explored. The statistical significance of these variables is significant for all of them except legal status. The model weakly confirms the hypothesis that the transfer method, transnationalism, and skilled female migrants increase the average remitted over other variables.<sup>21</sup>

<sup>20</sup> To determine whether any of these characteristics were significant predictors of sending more (or less) remittances on average, we used an Ordinary Least Squares regression with the following specification: Average remitted each time = Preferred Transfer Method + Female Skilled Migrant + Transnational Engagement + Legal Status +  $\beta$ . We defined these concepts using the following variables: Preferred Transfer Method: dummy variable for those using banks or internet transfers; Female Skilled Migrant: dummy variable for skilled female migrants; Transnational Engagement: This is how many years a migrant has been remitting home; Legal Status: dummy variable for those not possessing legal documentation to be in the United States. The data used in the model from a survey of 1000 migrants in the United States conducted in 2010. The survey focused on migrant transnational engagement and remitters' characteristics. Two hundred observations were dropped in data cleaning for interview completeness.

<sup>21</sup> We keep the model despite the weak  $r^2$  in order to present the demographic variables, such as gender and transnationalism, which combine to be a subset of the larger set of factors influencing remittance volumes. The author does not expect the model to capture a large part of the variation in remittances for this reason. However, within the variation that the model does capture, it is useful to note which variables are statistically significant and discuss their roles. The model is not to be considered evidentiary, but rather as an additional perspective on the theoretical issues discussed.

<sup>19</sup> U.S. Department of Homeland Security. Yearbook of Immigration Statistics: 2010. <http://www.dhs.gov/xlibrary/assets/statistics/yearbook/2010/table28d.xls>

**Table 12: Remittance Sender Characteristics**

	Percent Sent Above Counterparts	Percent Share of All Migrants
Skilled Female Migrant	6.76	5
Migrant Transfers by Internet or Banks	37.6	21
Preference to Continue Using Account or Internet Based Transfers	31.6	6
Irregular Legal Status in Country	-9.57	35
Transnationally Engaged	15	10

Source: Orozco, Manuel, with Elisabeth Burgess, and Netta Ascoli. Sep 2010. "Is there a match among migrants, remittances and technology?" Inter-American Dialogue. Survey of migrants in 2010.

**Table 13: Regression Results on Average Remitted**

Model	Unstandardized Coefficients		Standardized Coefficients	t-value
	B	Std. Error	Beta	
(Constant)*	142.917	10.761		13.281
<i>Preferred Transfer Method*</i>	97.406	13.269	.239	7.341
<i>Transnational Engagement*</i>	2.943	.952	.105	3.092
<i>Legal Status</i>	-11.978	12.376	-.033	-.968
<i>Female Skilled Migrant*</i>	68.284	26.182	.085	2.608

Adj-R-squared = .07, N = 1000. \*Means that the variable was significant at the .05 level. See note on sources for sources used.

## Determinants of Aggregate Flows<sup>22</sup>

The second model<sup>23</sup> explores aggregate flows between 2006 and 2011 and uses quarterly data to capture variations within year cycles. In particular, and following the dynamics explored in sections 2 and 3, the model analyzes whether aggregate quarterly remittance volumes are influenced by natural dis-

asters in home countries, unemployment of migrants in host countries, and exchange rates of the dollar to local currency and of the dollar to the Euro. We also include the average amount remitted per migrant to control for the demographic changes in migrants (i.e. gender, transnational engagement, etc.) examined in the first regression model.

The quarterly total remittance volumes were lagged by one quarter in order to capture remitters' reactions to changes in the independent variables (such as unemployment and the occurrence of a natural disaster). As the constant is significant, there are important influences on remittance volumes that we were unable to capture in this model. Nevertheless, the model has been able to capture at least 50 percent of the variation in remittance volumes, and can provide useful insights, though not absolute answers, to how remittances respond to various external factors.

The significance of average remittance size per transfer encompasses the importance of the demographic variables

<sup>22</sup> Analysis done in collaboration with Mariellen Jewers.

<sup>23</sup> The Ordinary Least Squares model specification was: Total Remittances Volume (logged) – hat = US-Euro Exchange Rate + US-Local Currency Exchange Rate + Foreign Born Unemployment + Natural Disasters + Average Remitted Each Time +  $\beta$ . The independent variables were defined as follows: US-Euro Exchange Rate: logged, average quarterly exchange rate; US-Local Currency Exchange Rate: logged, average quarterly exchange rate; Foreign Born Unemployment: Average quarterly US foreign born unemployment rate; Natural Disasters: logged, ordinal variable, omitting quarters with 0 disasters; Average Remitted Each Time: logged, Average remittance sent per person per month, quarterly average. 10 countries were included in the model. Due to data cleaning for completeness of information (especially information on natural disasters) the entire sample was reduced to 90 observations.

**Table 14: Regression Results on Total Remittance Volumes**

	Unstandardized Coefficients		Standardized Coefficients	t-value
	B	Std. Error	Beta	
(Constant)*	10.54254	.9252656		11.39
US-Euro Exchange Rate	.8127674	.9085838	.0614047	0.89
US-Local Currency Exchange Rate*	-.0468354	.0199066	-.1614332	-2.35
Host Country, Foreign Born Unemployment Rate	7.29e-06	.0245812	.0000202	0.00
Natural Disaster*	.3459538	.1457781	.1625252	2.37
Average Remitted Each Time*	1.801478	.1607818	.7695617	11.20

Adj-R-squared = .56218, N = 90. \*Means that the variable was significant at the .05 level. Dependent and all independent variables are logged using the natural log. See note on sources for sources used.

examined earlier. A 1 percent increase in average amounts remitted in any given quarter is associated with an average increase of 1.8 percent in overall remittance volumes in the subsequent quarter, keeping all else constant. This indicates that the demographic variables (such as gender, education, transnational engagement, and legal status) that increase remittance size contribute, in the end, to overall increases in remittance volumes.

Natural disasters and the strength of local currencies relative to the dollar are both significantly associated with increases in remittance volumes in the following quarter. Holding all else constant, a 1 percent increase in natural disasters in one quarter is associated with a .34 percent increase on average in remittances the following quarter. The results of the model in regards to natural disasters coincide with theory and anecdotal evidence that remitters respond with extra support in the event of a disaster in their home country.

On average, remittance volumes will decline by .04 percent the quarter following a 1 percent depreciation of local currency relative to the dollar, holding all other variables constant. Depreciation of local currency relative to the dollar would mean that recipients would not need to receive as many dollars to pay for normal expenses. In this scenario, it would make sense that remittance volumes would decline the following quarter, as more remitters sent less in response to the shift in exchange rate. Conversely, if the local currency appreciates, immigrants are pressured to send more money.

The results of the statistical model reflect the original premise in the paper that other factors, such as deportations, might override the role that a decline in unemployment may play in remittance volumes. After all, three quarters of those who lost their jobs had stopped sending in 2009, but by 2010 half of those that were unemployed were already remitting.

## 5. Reflections and Implications of Remittance Trends

These results help confirm that money transfer increases are a function of several factors, rather than a single one. More important, the increase in 2011 is signaling the role of emerging trends that are shaping the nature of migration, remittances, and economics. Economics is only one factor driving changes in the number and volume of remittances.

Increases in the demand for female skilled migrants will change migration as well as the volume of remittances sent. Similarly as people become more aware of the impact of climate change and natural disasters in their communities of origin, they will likely send more money. Foreign currency changes also affect remitting. Currency devaluations in the home country influence whether people decide to send additional amounts. Transnational engagement and account transfer preferences, which continue to rise, will also impact remitting, as will financial inclusion. From a policy standpoint as well as business perspective, these changes offer



opportunities to design policies that can be leveraged from these trends. Some of these are gender based policy opportunities, others are economic and business related.

The relative increasing number of migrant women deserves special consideration. Migrant women tend to take on more obligations than their male counterparts partly because they look after their parents, siblings, or children. But men also have children who are looked after by a female relative. Twenty percent of migrants have children back home and 13 percent in both countries. Only 23 percent do not have children. As migration is increasingly female and skilled, it is important to consider strategies that offer financial advising in a transnational context as well as various forms of psychological counseling for their children and migrant parents. These strategies should aim to improve women’s financial independence and ability to support families. With greater increases in remittances, receiving households have increased opportunities to save, thus offering advice and products to improve their financial lot is an important consideration.

Two important dynamics associated with remitting are preferred method for sending money and financial access of both sending and receiving families. As immigrants

gain access to financial institutions, their choice to send via account transfers increase. Moreover, as people receive more, their savings increase, but their level of financial access levels off. Accelerating financial access and inclusion to migrants and recipients will increase their opportunities to create wealth and achieve financial independence. These objectives can be reached through different means, for example, expanding access through financial education, introducing greater awareness of a range of saving products and instruments in the market, marketing new products, and introducing technologies that can enhance financial access, such as debit cards.

Remittances also present business opportunities for financial and other commercial institutions. Money transfer companies and banks, among others, can offer Internet-based transfers and ACH withdrawals as alternative products to cash-to-cash transfers. Mobile technology applications for low-income consumers might also be explored. Financial institutions on the receiving side can also benefit from such approaches. More payers of remittances realize that transfers into bank accounts may offer more revenue to them as they can tap into additional services to recipients.

	Children Living with Immigrant in the U.S.	Children Living in Home Country	Children Living in Both Countries	Does Not Have Children
Female Immigrants	54.1	15.1	10.6	20.2
Male Immigrants	36.9	23.6	14.8	24.7

Source: Orozco, Manuel, with Elisabeth Burgess, and Netta Ascoli. Sep 2010. “Is there a match among migrants, remittances and technology?” Inter-American Dialogue. Survey of migrants in 2010.

## A Note on Sources

The report relied on multiple sources, including macro-economic and other data at national levels, such as national remittance inflow reported by Central Bank offices, natural disaster data reported by independent international organizations, and real remittance transfer data from money transfer operators.

Topic	Publication(s)
Natural Disasters	GLobal IDentifier Number database. Accessed Jun to Sep 2011. <a href="http://glidenumber.net/glide/public/search/search.jsp">http://glidenumber.net/glide/public/search/search.jsp</a> . News stories were determined using uniform search process, including keywords and page visited, through Google from Jun to Sep 2011.
Commodity Prices	The World Bank. Global Economic Monitor (GEM). Accessed August 2011. Prices were based in 2000 constant dollars.
US-Euro Exchange Rate	United States Federal Reserve Board. Exchange Rates and International Data. Data Download Program. Accessed August 2011. <a href="http://www.federalreserve.gov/datadownload/">http://www.federalreserve.gov/datadownload/</a>
Foreign Born Employment Rates	Pew Hispanic Center tabulations of Current Population Survey data and United States Bureau of Labor Statistics. Labor Force Statistics from the Current Population Survey. Unemployment Rate - Foreign born. Accessed August 2011.
Local Currency Exchange Rates	Accessed online August 2011. Central Banks for Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, and Peru.

In addition, the report used survey data collected by the author and released in various publications. These surveys are included in analyses of the following publications:

Survey year	Publication
2005	Orozco, Manuel. <i>Transnational Engagement, Remittances and their Relationship to Development in Latin America and the Caribbean</i> , Washington, DC: Georgetown University, 2005.
2006	Orozco, Manuel and Katy Jacob, "Card-Based Remittances: A Closer Look at Supply and Demand" Chicago, CFSI, 2007.
2007	Orozco, Manuel, with Nancy Castillo. "Latino migrants: a profile on remittances, finances and health," Inter-American Dialogue, Washington, DC 2008, 2009.
2008	Orozco, Manuel. "Tasting Identity: Trends in Migrant Demand for Home Country Goods," microNOTE #56, US-AID, 2008.
2009	Orozco, Manuel. <i>Understanding the continuing effect of the economic crisis on remittances to Latin America and the Caribbean</i> . Inter-American Dialogue. August 2, 2009.
2010	Orozco, Manuel, with Elisabeth Burgess, and Netta Ascoli. "Is there a match among migrants, remittances and technology?" Inter-American Dialogue, September 2010.



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