The Determinants of Remittances in Latin America and the Caribbean

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Abstract

Remittances are money transfers by migrants to their home countries. In recent years, remittances have played an increasingly significant role in the growth of many developing countries, particularly those in Latin American and the Caribbean. The increase in flows around the world has made the study of their determinants and socio-economic consequences important for studying a wide variety of issues. Across the United States, around six million immigrants from Latin America now send money to their families back home on a regular basis.

Remittances are largely thought to be beneficial to a country's growth, but other work suggests that they could create dependency and ultimately harm the development of the nation in the future. Examining the forces behind remittance flows can help us understand this new phenomenon and shed some light on their positive and negative effects.

This paper will examine the macroeconomic determinants of worker's remittances in El Salvador, the Dominican Republic, Guatemala, and Mexico. These four countries are the focus of this paper because they have the most readily available data. They are also four of the largest receivers of remittances from the United States. Economic conditions in both the home and host country will be considered. Host country (United States) variables to be considered will include building permits, farm employment, personal income, and the Hispanic unemployment rate. In addition, we will examine the exchange rate (foreign currency/U.S. dollar), an interest rate differential, and an inflation differential. The results will show that remittances respond to changes in the macroeconomic conditions of both countries. These results have important policy implications and are valuable information for countries receiving remittances, especially for those countries who receive a particularly large inflow of remittances.

I. Introduction

Remittances are money transfers by migrants to their home countries. In recent years, remittances have played an increasingly significant role in the growth of many developing countries, particularly those in Latin American and the Caribbean. For

example, approximately 14% of El Salvador's GDP revolves around remittances (Jackson). The increase in flows around the world has made the study of their determinants and socio-economic consequences important for studying a wide variety of issues. Across the United States, around six million immigrants from Latin America now send money to their families back home on a regular basis (Suro, 2003). There has been increased interest in the determinants of remittances, especially from the governments of countries who are on the receiving end of these monetary flows. There has also been an extensive amount of research on the uses and effects of remittances. Remittances are largely thought to be beneficial to a country's growth, but other work suggests that they could create dependency and ultimately harm the development of the nation in the future. Examining the forces behind remittance flows can help us understand this new phenomenon and shed some light on their positive and negative effects.

A brief discussion of these effects will put the importance of the determinants of remittances in perspective. Remittances have become an important source of income for many developing countries and are not only used as a mechanism for the survival of the poor, but as a risk sharing mechanism, a stable source of investment, and as a means of future consumption smoothing (Huang & Vargas-Silva, 2006). Remittances can increase the household budget and reduce liquidity constraint problems, which allows for more consumption and investment in the home country. Remittances also allow for additional investing in children's human capital. A study has shown that children from recipient households seem to be more likely to be enrolled at school than those from non-recipient households. In addition, remittances are negatively correlated to child labor and the adult female labor supply (Acosta, 2006). Their role in poverty reduction and their ability to help dampen economic volatility have been viewed as the major benefits to recipient countries. An increasing number of studies support the positive developmental role for remittances, finding that remittances have reduced extreme poverty by almost 22%, have a large and significant effect on school retention, and contribute to human capital formation, all of which have the capacity to benefit developing countries' long-term growth prospects (Orozco, 2007).

However, various other studies examine the potential negative effects of increased remittance flows. The growth in remittances is associated with increased immigration, which results in a reduction in the labor force in the home countries. Similarly, some researchers are wary of a brain drain, whereby the most educated and productive workers leave their home countries in order to seek higher wages in the United States. Another theory suggests that increased remittance flows may result in an overvaluation of the real exchange rate (due to the inflow of foreign currency), and therefore lead to a decrease in the competitiveness of the home country (Jackson & Viveros, 2006). Other scholars take issue with the way in which remittances are spent. While more research is necessary, it is believed that most of these funds are spent on consumer goods, which may increase inflation. Perhaps more importantly, there is thought to be a high import content of consumption that increases dependency on imports and results in a balance of payments problem. Other negative social effects include dependency of home country households, an erosion of good work habits, and a lack of investment in capital (Meyers, 1998).

Clearly, there is still a good deal of debate over the costs and benefits of remittances in Latin America and the Caribbean. Scholars continue to explore the effects and the forces driving remittance flows. This paper will focus on the latter, examining macroeconomic determinants of worker's remittances in El Salvador, the Dominican Republic, Guatemala, and Mexico. Remittance data is difficult to obtain, as countries are still fine-tuning the process by which they track remittances. These four countries are the focus of this paper because they have the most readily available data. They are also four of the largest receivers of remittances from the United States. As data collection improves it will be important to expand the study to incorporate other Latin American countries. Economic conditions in both the home and host country will be considered. Host country (United States) variables to be considered will include building permits, farm employment, personal income, and the Hispanic unemployment rate. In addition, we will examine the exchange rate (foreign currency/U.S. dollar), an interest rate differential, and an inflation differential. A time trend and monthly dummy variables are also included in both fixed effects and seemingly unrelated regressions estimation techniques. The results will show that remittances respond to changes in the macroeconomic conditions of both countries. These results have important policy implications and are valuable information for countries receiving remittances, especially for those countries who receive a particularly large inflow of remittances.

II. Prior Approaches

The amount of literature on the subject is growing at an incredible rate as remittances become increasingly significant to the economies of developing countries. As discussed previously, a good amount of work has been done on the uses and effects of remittances and whether they are ultimately beneficial or not. There is also extensive work on the determinants of remittance flows, which is the focus of this paper. Most of these papers explore similar macroeconomic variables, the effects of which range over time and over the region being examined.

Huang and Vargas-Silva (2006) examine the determinants of worker's remittances using data from Brazil, Colombia, the Dominican Republic, El Salvador, Mexico, and the United States. Their objective was to identify whether changes in host country or home country economic conditions affected remittances. It is likely that improvements in the host country will be accompanied by an improvement in the economic condition of the migrant, thereby increasing remittances. On the other hand, improvements in the home country will likely improve the economic condition of the household back home and the migrant will remit less. However, it is possible that better conditions at home are accompanied by better investment opportunities, which would suggest an increase in the amount of remittances. Huang and Vargas-Silva constructed two data sets, one consisting of net remittance flows between the United States and the rest of the world and the other consisting of Mexico's inward remittances only. They employed variance decompositions, impulse response functions, and Granger causality tests derived from a vector error correction model. Huang and Vargas-Silva found that remittances respond more to changes in the macroeconomic conditions of the host country than to changes in the macroeconomic conditions of the home country.

Another work that examines macroeconomic determinants of remittances is that of Orozco and Lowell (2005). They study Mexico, Colombia, El Salvador, the Dominican Republic, Guatemala, Ecuador, and Jamaica and test certain variables such as unemployment, inflation, foreign exchange, and interest rates. Their analysis utilizes multiple regression of pooled cross-sectional and time series data. Results for individual nations are not examined. Their results show that, although earnings are a major influence on the volume sent by remitters, at the aggregate level total per capita earnings are not statistically significant. They find the United States Latino unemployment rate to be positively correlated to remittances, which is a curious result at first. However, they believe this is consistent with findings elsewhere that remittances demonstrate a countercyclical pattern. They find lending rates to be negatively related to remittance flows, reflecting the fact that remittance sender and recipients save or invest a portion of their money in the home country. CPI was found to be statistically significant and has the largest impact on remittances, indicating that migrants respond heavily to economic conditions affecting daily activities, such as price changes.

The analysis that will be undertaken in this paper will also explore the macroeconomic determinants of remittances in Latin America and the Caribbean. There already exist a handful of other relevant papers that discuss the determinants of remittances in other areas of the world and employ similar techniques. One of the first studies to use macro level data is Swamy (1981). Swamy used data from Greece, Turkey, and Yugoslavia and found no significant impact of most home and host country macroeconomic variables on remittances. Straubhaar (1986) found similar results using data of remittances from Germany to Turkey. Neither paper finds evidence of exchange rates or interest rates having an effect on remittances.

However, macroeconomic variables have deemed to have a significant impact in more recent papers. El-Sakka and McNabb (1999) find the black market premium and interest rate differentials to be relevant variables explaining remittances in Egypt. Similarly, Elbadawi and Rocha (1992) used a fixed effects panel estimation to show that macroeconomic variables were significant determinants of remittances using data for six countries. Also using fixed effects, Higgins, Hysenbegasi, and Pozo (2004) find that exchange rate uncertainty, unemployment in the host country, and the exchange rate are significant determinants of remittances. Faini (1994) discovers that real exchange rate depreciation of the home currency has a positive effect on remittances. Glytsos and Katseli (1986) use data from Greece to suggest that remittances are negatively related to inflation in the home country, host country income, and host country interest rates. These results provide the basis for the issue at hand. Our results contradict some of these findings, but they also reinforce a lot of the work done up to this point. We provide a more recent data set that captures the significant increases in remittances that have occurred over the past few years. The techniques used in these papers range from least squares, fixed effects panel estimation, seemingly unrelated regressions, and vector error correction models. We will discuss our methodology shortly as well the different approach that will be taken to understand the how the flow of remittances takes place to individual countries.

III. Data

One of the issues with the study of remittances is the lack of abundant and accurate data. Estimates of remittances are based on balance of payments statistics reported to the International Monetary Fund (IMF) by the central banks of the recipient countries (Meyers, 1998). The numbers are usually considered to underestimate the actual figures because they only include the officially recorded flows in balance-of-payment data. Only a certain percentage of remittances actually flow through a country's official banking system. Unfortunately, remittance data is not available for all countries. In addition, countries have different internal reporting requirements and report remittances to the IMF differently. The most readily available data is for El Salvador, the Dominican Republic, Guatemala, and Mexico, which is why we choose to focus on these four countries. We obtained monthly data from January 1998 to January 2008, February 2008, and March 2008 for Mexico, Guatemala, and El Salvador, respectively. Data for the Dominican Republic is only available up until December 2005. In addition, the data for Guatemala is actually foreign exchange inflows of transfers and grants. This may overstate remittances slightly, but is a good proxy. All remittance data is obtained from the relevant country's central bank.

The macroeconomic variables of the United States that we considered are: building permits, farm employment, personal income, and the Hispanic unemployment rate. In addition, we utilized data on interest rates and inflation in order to construct the differential variables. Data on building permits is from the U.S. Census Bureau. Personal income and inflation (month over month CPI) figures are obtained from the U.S. Bureau of Economic Analysis. Farm employment and the Hispanic unemployment rate are both retrieved from the U.S. Department of Labor's Bureau of Labor Statistics. For the U.S. interest rate we used the prime loan rate, which was obtained from the Federal Reserve.

Exchange rate data for the four home countries is in foreign currency per U.S. dollar. The data is obtained from International Financial Statistics (IFS) database, which is made available by the Statistics Department of the IMF. Interest rate (the lending rate) and inflation data is also retrieved from the IFS database. To obtain the interest rate and inflation differentials we subtract the data from the United States from the home country figures.

IV. Methodology

We started by employing methodology that has been used by several others in the relevant literature. We used a fixed effects estimation technique, as well as seemingly unrelated regressions. Fixed effects will capture characteristics that are specific to particular countries and that are not accounted for by the variables in the model. These characteristics are all the time constant factors that make one country inherently different from another and are referred to as unobserved heterogeneity (a_i). The appropriate fixed effects model is as follows:

$$remittances_{it} = \beta_0 + \beta_1 t + \beta_2 permits_{it} + \beta_3 farmemp_{it} + \beta_4 personalinc_{it} + \beta_5 hisu_{it} +$$

$$\beta_6 exchrate_{it} + \beta_7 intratediff_{it} + \beta_8 infdiff_{it} + \sum_{j=1}^{11} \delta_j d_j + a_i + u_{it}$$

Another advantage of using a fixed effects model is that it easily accommodates unbalanced panel data sets, which is what we are working with in this paper. We also estimated two fixed effects models, where the second model drops the Dominican Republic from the data set. Our reasoning for this will be explained in the results section.

The other model that we employed is seemingly unrelated regressions. Considering the nature of the variables utilized it is not unreasonable to expect that there would be some correlation amongst the errors if a regression was ran on each country using ordinary least squares. The more correlation amongst the errors, the more effective seemingly unrelated regressions will be. The main advantage of seemingly unrelated regressions is that it allows each of the slope parameters to differ across countries. We utilized the same model as seen above, but now we can examine the determinants of remittances as they differ across countries, since each country gets its own vector of parameters.

V. Results

Fixed Effects

The fixed effects model provides some interesting results. Several of the macroeconomic variables in the model are statistically significant, particularly the interest rate and inflation differentials, which suggests that economic conditions in the home country does affect remittances. The results of the fixed effects model are shown in Version 1 of Table 1.

The trend term, building permits, Hispanic unemployment rate, and d3 through d11 are all statistically insignificant. The two host country (United States) variables that were statistically significant are farm employment and personal income, with respective z-scores of 3.38 and 1.70. Personal income is the more economically significant of the two. A one standard deviation increase in personal income leads to a .404 standard deviation increase in remittances ($210.78 MM). A one standard deviation increase in farm employment leads to only a .148 standard deviation increase in remittances ($77.24 MM).

The home country variables are all statistically significant, although the exchange rate is only moderately significant with a t-score of 1.58. It also has a fairly negligible economic impact, although the positive sign is consistent with previous work that finds exchange rate depreciation to have a positive effect on remittances. The inflation and interest rate differentials are both highly significant with t-scores of -3.27 and -8.94, respectively. The inflation differential does not have a major economic impact on remittances, as a one standard deviation decrease only increases remittances by .089 standard deviations ($46.60 MM). However, the negative coefficient is consistent with theory. If inflation in

the home country is high relative to the United States then money in the home country loses value faster and the immigrant will want to save more dollars in the United States and will remit less. The interest rate differential has a greater impact, with a one standard deviation decrease, increasing remittances by .384 standard deviations ($200.30 MM). Since these are lending rates this result makes sense. Migrants remitting for the purpose of paying off loans in the home country for example, may be disinclined to send money for this purpose when lending rates increase.

Version 1 of Table 1 shows that most of the monthly dummy variables are insignificant. However, there are still a few conclusions that can be drawn. All of the coefficients are negative, implying that remittances peak in the base month of December. Since December is a holiday month and also the last month of the year, it is rational to believe that immigrants will send large amounts of money home during this month. This may explain the moderate statistical significance that we see for the dummy variables for January and February. These months exhibit the two most negative coefficients, likely reflecting the fact that if large amounts of money are sent home in December there are not bound to be very significant amounts sent home in the following few months.

Seemingly Unrelated Regressions

Table 2 summarizes the results from the seemingly unrelated regressions technique. These results show that there are in fact fairly large discrepancies in the determinants of remittances across countries. Depending on the country in question, several of the estimates are also quite different from those of the fixed effects model. we will discuss the results one country at a time.

Table 2 shows that the macroeconomic variables in the United States explain most of the variation in the amount of remittances in El Salvador. In fact, none of the variables that include macroeconomic conditions in El Salvador are statistically significant. This includes the exchange rate, the interest rate differential, and the inflation differential. The only U.S. variable that is not significant is the Hispanic unemployment rate. Of the significant variables, personal income has by far the largest effect. A one standard deviation increase in personal income increases remittances by 1.66 standard deviations ($177.85 MM). Higher incomes in the United States, a result of higher wages, result in migrants sending more money back to El Salvador. Building permits and farm employment both have modest positive effects on the amount of remittances. Both construction and farming are occupations that many migrants enter into when they come into the United States. Therefore, one would suspect that as these sectors of the economy are performing better, migrants are better off and have the capacity to remit more. Interestingly, the trend term is highly significant but negative. Chart 1 shows a clear upward trend in remittances to all of the countries in this study, but it is possible that these movements have already been controlled for by some of the other variables. Also noteworthy, is that all of the monthly dummy variables are highly significant and all the coefficients are negative in comparison to the base month of December. As discussed previously, December is a major holiday month and migrants are likely to remit heavily during this month and a little or not at all in the next few months.

The only macroeconomic variable of any statistical significance for remittances sent to the Dominican Republic is farm employment with a t-score of -1.98. The oddity here is that the coefficient is negative, while it is strongly expected to be positive. It is also positive and significant for every other country in this study. The estimate suggests that for a one standard deviation increase in farm employment, remittances decrease by about .146 standard deviations ($5.62 MM). The only possible rationale is that if the employment situation is poor in the United States it may be even worse in the Dominican Republic. In this case, maybe the migrant would sacrifice some of their own well-being in order to send money home to their family who may be in even worse condition. Similar to El Salvador, the full set of dummy variables are highly significant. They are all negative for the previously discussed reasoning. The trend term is also significant and positive, suggesting that remittances increase by about $1.35 MM each month.

Table 2 shows that the macroeconomic variables of statistical significance for remittances to Guatemala are building permits, farm employment, the exchange rate, and the inflation differential. Farm employment is the most significant and a one standard deviation increase will increase remittances by .216 standard deviations ($27.16 MM). The estimate for building permits is negative, the opposite of what is expected. However, the magnitude of the effect is essentially trivial. The exchange rate also has a negative coefficient, the opposite of what previous studies have shown. This suggests that exchange rate appreciation would lead to increases in remittances, while Faini (1994) finds that exchange rate depreciation has a positive effect on remittances. However, others have proposed that it is really the migrant's expectations of the future exchange rate that should affect the amount they remit. If they expect appreciation in the future then they will remit more because if they wait they will receive fewer pesos (for example) for their dollars. The negative coefficient on the inflation differential is expected, but the economic effect is again inconsequential. The trend term is highly significant and implies that remittances increase by $2.75 MM each month. The dummy variables for the months of January and February are highly significant and negative, for the same reasons as discussed above. May and October also prove to be moderately significant and they are both positive. However, we are unaware of any theory that would explain why this may be the case.

Every macroeconomic variable except the exchange rate is statistically significant for remittances sent to Mexico. The macroeconomic conditions of the United States are clearly the most significant and have the greatest effect on the amount of remittances to Mexico. Personal income is the most economically significant variable. A one standard deviation increase translates to a .718 standard deviation increase in remittances ($424.97 MM). A one standard deviation increase in farm employment leads to a .268 standard deviation increase in remittances ($158.50 MM). A one standard deviation increase in building permits results in a .161 standard deviation increase in remittances ($95.11 MM). All of the signs on the coefficients are consistent with theory. However, the positive coefficients on the interest rate and inflation differentials are not. This suggests that higher lending rates and higher inflation in Mexico would lead to an increase in remittances. There does not seem to be much of an explanation for why higher lending rates would lead an immigrant to remit more. However, higher inflation may mean that

the household in Mexico faces higher prices for everyday items and needs the extra assistance. In this case, it may be reasonable for the immigrant to remit more. However, both variables have little economic effect on the amount of remittances anyways. We again see significant and negative estimates for the dummy variables for January and February. There are also significant estimates for May and August, both of which are positive. There does not seem to be any viable explanation for why this may be the case.

Fixed Effects without the Dominican Republic

Version 2 of Table 1 shows results of a fixed effects model that excludes the data from the Dominican Republic. Seemingly unrelated regressions showed that the macroeconomic variables had essentially no explanatory power for remittances sent to the Dominican. Many of the estimates were also the opposite sign from the other countries in the study. This may be because the data for the Dominican Republic is truncated at December 2005. As can be seen from Chart 1 that there is significant volatility in remittances after this date and the data for the Dominican Republic fails to capture this.

Sure enough, when the Dominican Republic is dropped from the data set, every macroeconomic variable becomes statistically significant. Interestingly, personal income has the biggest effect on the amount of remittances. A one standard deviation increase results in a 1.23 standard deviation increase in remittances ($694.56 MM). Even more interesting is that while the exchange rate was not even statistically significant in Version 1 of Table 1, it is highly significant and has the second largest effect on remittances in Version 2. If the exchange rate depreciates by one standard deviation, remittances increase by .666 standard deviations ($375.66 MM). This reinforces the findings of previous work that exchange rate depreciation has a positive effect on remittances. A one standard deviation in farm employment translates to a .173 standard deviation increase in remittances ($97.73 MM). Both of the differentials are highly significant, but the inflation differential has a negligible effect on remittances. Building permits are significant but also have a trivial effect. The Hispanic unemployment rate has a positive coefficient, which is not expected. It would imply that a 1% rise in the Hispanic unemployment rate actually increases remittances by $37.58 million. However, this is consistent with the findings of Orozco and Lowell who believe remittances demonstrate a countercyclical pattern. As we have seen previously, the dummy variables for January and February are both significant and large negative numbers. Overall, these results are substantially different from those that included the Dominican Republic in the data set. They suggest that macroeconomic conditions in both the home and host country are significant determinants of remittances.

VI. Conclusions

As remittances continue to play an increasingly large role in several developing countries in Latin America and the Caribbean, the study of their determinants and effects will grow in importance. Remittances clearly respond to macroeconomic variables in both the home and host country. However, there are fairly large discrepancies in which variables have

the most significant effect depending on estimation technique and the countries in the data set. The results in Table 2 show that different macroeconomic variables affect remittances in different countries in unique ways. This may require analysis on a country by country basis. It also suggests that there should be greater focus on individual and demographic variables, which may be the forces behind these discrepancies. It can be concluded that macroeconomic conditions do in fact drive remittance flows to Latin American countries, and further analysis can help pinpoint which variables are significant across all countries and which are specific to particular countries.

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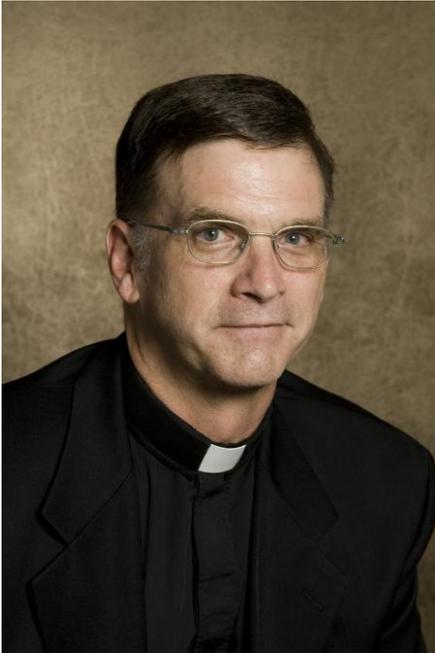
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Appendix
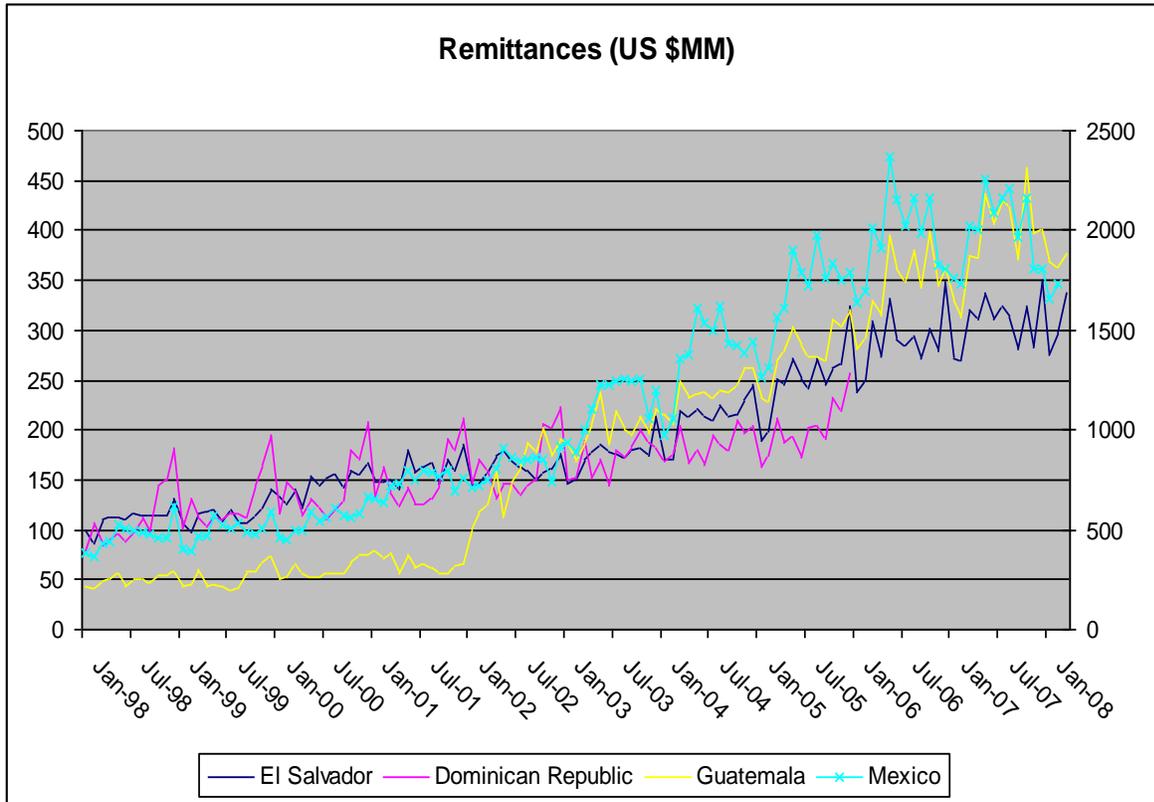
Remittances (US $MM)

Chart 1: Remittances

Notes: Remittances to Mexico are plotted on the right axis.

Table 1: Fixed Effects Model Variables

	Version 1	Version 2
Building Permits	0.3826768	1.639996***
	(0.730)	(0.633)
Farm Employment	.0521447***	.0653069***
	(0.015)	(0.014)
Personal Income	.1655053*	.5213948***
	(0.097)	(0.087)
Hispanic Unemployment Rate	12.22713	37.58161**
	(20.769)	(18.192)
Exchange Rate	4.153829	312.011***
	(2.628)	(18.902)
Interest Rate Differential	-24.93718***	-28.2104***
	(26.182)	(2.614)
Inflation Differential	-25.84639***	-23.9612***
	(7.913)	(8.356)
t	-3.122084	-19.18926***
	(3.618)	(3.291)
d1	-72.77773	-79.24569**
	(45.674)	(40.129)
d2	-78.96082*	-80.7935**
	(45.784)	(40.565)
d3	-39.20934	-59.73847
	(50.760)	(45.333)
d4	-57.76914	-71.57301
	(51.429)	(45.776)
d5	-2.259711	-11.98628
	(51.961)	(46.429)
d6	-33.60589	-70.94447
	(54.614)	(48.513)
d7	-26.28115	-24.48812
	(49.270)	(43.737)
d8	-6.147919	-17.25459
	(50.237)	(44.530)
d9	-40.1856	-57.83447
	(47.395)	(41.958)
d10	-0.7575703	-26.40126
	(47.887)	(42.238)
d11	-35.71176	-26.87293
	(45.457)	(40.160)
Observations	462	366

Notes: Dependent variable is the amount of remittances. Standard errors are in parentheses.
* Significant at the 10-percent level
** Significant at the 5-percent level
*** Significant at or beyond the 1-percent level

Table 2: Seemingly Unrelated Regressions Variables

	El Salvador	Dom. Rep.	Guatemala	Mexico
Building Permits	0.2821725*** (0.086)	0.1014706 (0.148)	-.3068581** (0.153)	3.423748*** (0.706)
Farm Employment	.0081564*** (0.002)	-.0040988** (0.002)	.018102*** (0.005)	.105567*** (0.017)
Personal Income	.0872053*** (0.013)	-0.0071787 (0.015)	0.0029559 (0.025)	.3221043*** (0.103)
Hispanic Unemployment Rate	-2.557715 (2.414)	0.3144817 (2.801)	0.177961 (4.496)	-42.31992** (19.920)
Exchange Rate	-540.7012 (2.628)	0.1730039 (0.280)	-30.75809** (13.343)	-37.90003 (24.693)
Interest Rate Differential	1.250752 (0.957)	-0.1713192 (0.383)	-1.688063 (3.043)	7.534132*** (2.805)
Inflation Differential	0.2254644 (0.793)	-0.226852 (0.861)	-4.542579* (2.457)	50.71625** (21.442)
t	-1.741764*** (0.506)	1.351631*** (0.516)	2.75366*** (0.981)	1.723771 (4.205)
d1	-46.43252*** (5.212)	-62.75504*** (5.934)	-24.81801*** (9.242)	-90.29196** (43.629)
d2	-48.4268*** (5.182)	-43.59795*** (5.772)	-31.35024*** (9.308)	-81.86013* (47.480)
d3	-27.85458*** (6.170)	-45.68462*** (7.045)	6.007241 (10.753)	-34.7264 (51.722)
d4	-34.80209*** (6.045)	-68.55541*** (7.274)	0.5846716 (10.567)	-21.83205 (51.570)
d5	-16.69852*** (6.110)	-56.96463*** (7.347)	19.05677* (10.666)	144.5996*** (53.123)
d6	-36.17255*** (6.403)	-71.08239*** (8.207)	5.859356 (11.149)	19.12586 (53.181)
d7	-30.7435*** (5.690)	-60.5203*** (6.916)	5.497222 (9.905)	48.00528 (47.743)
d8	-27.67342*** (5.774)	-59.2765*** (7.371)	10.24658 (10.098)	94.64293** (47.814)
d9	-40.93553*** (5.424)	-58.99248*** (6.394)	-9.813408 (9.603)	-5.745389 (44.496)
d10	-29.44004*** (5.459)	-19.0247*** (6.861)	16.10957* (9.608)	-3.74636 (44.244)
d11	-29.77095*** (5.159)	-24.45828*** (5.625)	-8.199587 (9.121)	-65.49334 (42.263)
Constant	4167.411 (8988.475)	209.7619 (127.777)	162.246 (245.830)	-2584.301 (984.914)
Observations	123	96	122	121

Notes: Dependent variable is the amount of remittances. Standard errors are in parentheses.
* Significant at the 10-percent level
** Significant at the 5-percent level
*** Significant at or beyond the 1-percent level