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Working Paper 2004-29
November 2004

WORKING PAPER SERIES

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Abstract: Remittances from migrants in the United States play a major role in the Mexican economy. This paper analyzes the role that different types of social capital play in the remittances decisions of Mexican migrants. Both the decision to remit and the decision on how much to remit are analyzed. The model, based on the idea of enlightened altruism, assumes that the migrant makes his decisions based on his own well-being as well as that of his household in Mexico and his community in Mexico. Social capital is defined as the resources one gains from relationships and networks. Four different types of social capital are identified in this paper: hometown-friendship networks in the United States, family networks in the United States, other-ethnicity-based networks in the United States, and community networks in Mexico. Social capital from friendships proves to be very positively significant in both the decision to remit and how much to remit. However, for all of the observations, familial social capital is not significant in either the decision to remit or how much to remit, although familial social capital has a positive role in both tests. Other-ethnicity-based social capital negatively influences both decisions and is significant in both as well. Social capital in Mexico has a significant negative impact on the two remittance decisions. Beyond social capital, this paper provides insight into other factors that affect remittance decisions including income, bank accounts, proximity to Mexico, exchange rate, interest rate differential, community infrastructure, the number of members in the Mexican household, Mexican household consumption, and time trends. In addition, to investigate time trends further, separate regressions were run on those observations where the last migration took place before 1991 and those whose last migration occurred after 1990.

JEL classification: F22, O10, O54, Z13

Key words: remittance, social capital, immigration, Mexico

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The Role of Social Capital in the Remittance Decisions

1. Introduction

The Inter-American Development Bank estimates that in 2004 more than $30 billion will be sent to the countries of Latin America and the Caribbean from emigrants currently residing and working in the United States of America ("Remittances from the United States"). The dollars that are sent to a country from its workers abroad are called remittances. Mexico is the largest recipient of remittances from its citizens who are working outside of the country, it received $13 billion in 2003 (Orozco 2004 p.3, "Remittances by Selected LAC Countries"). Remittances are an essential component of the Mexican economy. In fact, in 2001 remittances were twice as large as the revenues from farm exports and a third greater than income from tourism. For Mexico, it is the second largest source of foreign exchange behind petroleum sales abroad (EFE 2002). Those concerned with Mexico's development understand the potential for remittances to play a major role in the growth of this emergent nation. About 42 percent of remittances are received in places with a population of less than twenty-five hundred (Migration News 2002). One of every ten households in rural Mexico depends on remittances from family members who live and work in the United States (Kraul 2001).

With such a large amount of money crossing the border, remittances have become a salient issue in both the economies of the United States and Mexico. Many studies have analyzed the effects of various factors on remittance behavior. This study intends to explore various types of migrant social capital and investigate if and how they significantly affect Mexican migrants' remittance decisions.

The second section discusses previous remittances models and theories on the definition and role of social capital. In section three I will develop the theoretical model that I will be using.

Section four describes the data set from the Mexican Migration Project (MMP). The econometric model and the variables to be used in the model are presented in section five. The results of the empirical testing are analyzed in the sixth section. Finally, the conclusions of this study are discussed in section seven.

Section 2. Literature Review

Since migration is a national and international phenomenon there has been a significant amount of literature written on the topic. The first part of this section discusses several migration and remittances models that have been developed and tested over the past forty years. Next, different theories and definitions of social capital are presented followed by the presentation of studies that involve both migrants and social networks.

2.1 Remittances

The Harris-Todaro rural to urban migration model is one of the most well-known and often cited migration models. In this model the individual migrant tries to maximize his annual income by comparing his current rural wage with an expected urban wage. The expected urban wage is calculated by weighting the urban wage by the probability of getting a job. The individual will migrate if the expected wage is higher than the current wage (Todaro 1969).

$$w_r < E(w_u)$$

However, remittances and the connection to the household that remains in the migrant's community of origin are ignored in this model (Gupert 2002).

In contrast to the Harris-Todaro model, the new economics of labor migration (NELM) represented by Oded Stark (1991) and Taylor and Martin (1999) emphasizes the complexity of migration from an economic perspective, the interconnected relationships between migration's causes and effects and the migrant's role as an individual as well as a member of a household

(Rozelle, Taylor, and deBrauw 1999 pp.287). This new approach expands the focus from the individual to the household and broadens the goals of migration beyond exclusively maximizing expected earnings. In this literature migration is a means to vary income sources, lower income risks and surmount restrictions to credit and capital (Gupert 2002 pp.268). One of the main ways that migration achieves these goals is through remittances. Remittances are the portions of migrants' incomes that are returned to their countries of origin.

Altruism, one of the original explanations for remittances, is the idea that the migrant remits money because he values the welfare of those in the receiving household. In Funkhouser's (1995) comparison of remittances behavior in Nicaragua and El Salvador, she includes the altruistic motivation in her empirical test by modeling the migrant's utility function to include both his own consumption and the household's consumption, weighted by a factor of relevant importance. This is seen as altruistic because the migrant receives nothing but the satisfaction of the household's increase in consumption. Several papers, Funkhouser (1995), Durand et al. (1996) and Hoddinott (1994) for example, find altruism to be an important partial motive for the remittance of money. Today, most theories hold that altruism is a partial motive in remittance decisions as opposed to a "pure" motive (Quinn 2002).

Lucas and Stark (1985) introduced the idea of "enlightened altruism" where the migrant is motivated not only by altruism but also bequests, maintenance, implicit loans, and/or coinsurance. The idea of bequests indicates that by remitting larger amounts the migrant will be left a larger share of inheritance (Quinn 2002). In his 1994 study Hoddinott uses data from Western Kenya to empirically conclude that remittances are indeed partially influenced by a parent's ability to reward their migrant with bequests of land. Remittances can also be motivated by the need to maintain social ties or physical investments while abroad. Ahlburg and Brown

(1998) hypothesize that remittance receiving households will help maintain the migrant's social ties, connections and standing in the home community. Many times the migrant is in debt to the household to which it remits; these implicit loans could have resulted from the household paying for an education or the cost to migrate. Poirine (1997) models remittances as originally the repayment of past loans, which eventually become loans by migrants to their Mexican households. The idea of coinsurance is that it alters risk by diversifying the sources of income between two places. Stark and Lucas (1988) find empirical evidence in their study of remittance motivations in Botswana to support the idea of coinsurance because during times of drought remittances increased (Quinn 2002). According to Becker (1988), social norms like guilt, solidarity obligations or familial loyalty can also influence remittance behavior (Gubert 2002).

Funkhouser (1995) generates insight into additional variables relevant to the remittance decisions of migrants in her comparison of the remittance patterns of El Salvador and Nicaragua. Her model suggests five testable relationships focusing on the probability that one will remit and the amount that migrants who do remit will remit. The theoretical model suggests that those migrants with greater earnings have a propensity to remit greater amounts. Secondly, since households in the country of origin with lower incomes will benefit more on the margin from every dollar remitted, she hypothesizes that they will receive higher levels of remittances. Thirdly, the existence and nature of the marital relationship between the migrant and the household will influence the relative importance of the household's utility to the migrant as well as any plan the migrant has to return to their country of origin. Fourthly, the greater the number of migrants from a single household, all other income sources held equal, means the amount of remittances from individual migrants will be less. Finally, "the time profile of remittance

behavior depends on the relative sizes of the discount factors and the earnings profile of the emigrant" (Funkhouser 1995).

There is a debate on whether remittances have a detrimental impact on the sending communities, as Reichert argues (1981), or if remittances can positively affect the sending community, as Durand, Parrado, and Massey (1996) and Taylor et al. argue (1996). Consequently, some of the more recent literature investigates collective and community remittances whereas studies focused solely on individual remittances. Collective and community remittances are remittances that are used to benefit the entire community, most often through infrastructure projects (Lopez, Escala-Rabadan, Hinojosa-Ojeda 2001).

Macroeconomic analyses focus on analyzing the flow of remittances at the national level. Microeconomic studies, such as this one, often include macroeconomic variables in the empirical model to control for variations in the national economies even though such variables are rarely included in theoretical models (Quinn 2002).

2.2 Social Capital

There are five forms of capital: human, natural, financial, physical, and social (Mubangizi 2003). For immigrants, human and social capital are often the only capital that they have upon arrival. Human capital is a composite of formal education, acquired skills and experiences of an individual. For immigrants important human capital indicators are their education, job skills, English proficiency, and migration history (both the amount of time in the United States and age upon arrival) (Hao and Kawano 2001).

Social capital is thought to be crucial to developing the potential of a migrant's human capital (Mubangizi 2003). There are, however, different views on what constitutes "social capital." Bourdieu and Wacquant (1992) define social capital as "the sum of the resources, actual or

virtual, that accrue to an individual or a group by virtue of possessing durable networks of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu and Wacquant 1992 pp.119). Narayan (1997) defines it as "the norms and social relations embedded in the social structure of society that enable people to coordinate action and achieve desired goals" (Mubangizi 2003 pp.141-142). Both Putnam and Narayan focus on "social networks of trust, solidarity and reciprocity" (Mubangizi 2003 pp.141). Coleman (1988) "explicitly considers the context of social structure and organization as well as normative and cultural factors in governing individual behavior" (Hao and Kawano 2001 pp.376).

Migrant networks are sets of interpersonal ties that connect migrants through kinship, friendship, and shared community origin. Researchers conclude that these networks are important in the persistence of international migration (Massey et al. 1994). By providing direct assistance to migrants which reduces the cost and risks of migration, migrant networks promote international movement. Migrants are able to take advantage of the social capital of these networks to secure employment (Hao and Kawano 2001). According Munshi (2003) those migrants with larger networks are more likely to have a better paying job not in the agricultural field than those with smaller networks. This connection between social capital and migration is seen as far back as the Harris-Todaro model in which the decision to migrate takes into account the probability of getting a job in the new location, which will more likely be higher with the presence of a social network.

Winters, de Janvry and Sadoulet analyze the role of family migrant networks and community migrant networks on Mexican-US migration using data from a national survey of Mexican households. Both familial and community networks are examined. Current family networks are the number of members of the extended family who are currently migrants (Winters, de Janvry

and Sadoulet 2001). In analyzing the community networks they include community characteristics since these can lead to differences in the networks. They find that family and community networks are substitutes.

Hometown Associations (HTAs) are migrant networks, which are great sources of social capital in migrant communities. These organizations often evolve out of more informal migrant networks such as soccer leagues and hometown patron-saint-day parties. Their purpose is to support hometown members here in the United States as well as help raise money in the United States to support their home communities in Mexico. The money raised supports many different projects, many of which are infrastructure projects. These projects often further benefit the community's economy by aiding educational and healthcare related investments, which have a return in human capital (Lopez, Excala-Rabadan, and Hinojosa-Ojeda 2001).

Robert and Morris (1996) analyze the relationship between remittances and social networks. They hypothesize "that remittances serve as a payment for membership in a migration network which provides information to members that enhances economic mobility" (Winters, de Janvry and Sadoulet 2001 pp. 160). Results from econometric analysis indicate a positive relationship between remittances levels and migrant networks (Winters, de Janvry and Sadoulet 2001). This paper intends to explore this relationship even further.

Migration models have moved beyond including just the individual to involving the household. They have also expanded the motivation to migrate beyond solely income maximization to a combination of both altruism and self-interest. The review of literature also finds support for the idea that social networks are an important form of capital for migrants, though theoretically comprehensive models on this relationship still do not exist. In the next

section the lessons learned from past studies are used to create a theoretical model that incorporates the influence of social capital on remittance decisions.

Section 3. Theoretical Model

Building on the research results reviewed in section two, this section describes the creation of a model of migration remittances that incorporates both social capital in Mexico and the United States. Social capital is modeled in a one period remittance framework, thereby expanding the explanatory factors commonly found in relevant literature to also include the migrant's community. The model is based on an enlightened altruistic model that involves both altruism and self-interest. I turn first to a discussion of social capital present both in the migrant's home country and host country communities. The utility function and budget constraint will then be discussed followed by an explanation of the resulting demand functions.

3.1 Social Capital

For the purpose of this study I am using Bourdieu and Wacquant's definition of social capital, "the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing durable network of more or less institutionalized relationships of mutual acquaintance and recognition," as the basis for determining the measure of social capital in Mexico and the United States (Bourdieu and Wacquant 1992 pp.119).

3.1.1 Social Capital in Mexico: Social capital in Mexico is divided into two components: the social capital of the community as a unit and the social capital of an individual in the community. The social networks in a community can be observed in the existence of sports clubs, religious groups, community organizations, participatory local government, the community's involvement in community infrastructure, a low crime rate, community wide celebrations, and the return of migrants for those celebrations. In contrast, an individual's social capital in the Mexican

community can be measured by the number of family members in the Mexican community, the number of friends in the Mexican community, years of residence in the community, the individual's community leadership, and the individual's family's community leadership.

3.1.2 Social Capital in the United States: The presence of social capital in the US focuses on both the existence and strength of social networks. A migrant can be surrounded by friends; however, if he or his friends are not willing to offer or accept assistance through that network the social capital derived from that relationship is severely reduced. Social capital in the United States can take three different forms and each of these has potential to affect behavior in a different way. The three different types are family networks, hometown member networks and other networks with other ethnic groups. The existence of the familial networks can be seen in the number of relatives that are in the migrant's United States community. The strength of the network can be gauged by whether or not the migrant contacts his relatives in the United States upon arrival. Any support that these relatives provide to the migrant can also be indicative of strength in the network. This help can consist of assistance in finding a job or a living location. Social capital with hometown members is measured also by the existence of the networks i.e., how many hometown members are in the migrant's United States community. The strength of the relationships is then evaluated on the basis of whether or not the migrant contacted the fellow members and if these members provided assistance to the migrant. Hometown social capital can also be seen in the existence of social, religious, or sports groups consisting of fellow hometown members.

Social capital with other ethnic groups provides many opportunities for migrants to become more integrated into their United States community. This can be measured by both the existence

of relationships with members of other ethnic groups and the type of relationship that they have. A friendship provides much more social capital than only a work connection.

The above discussion provides a theoretical foundation for the exploration of the role of social capital in remittance decisions.

3.2 Utility Function and Budget Constraint

In the following one period model the primary decision maker is the migrant. This construct is based on the enlightened altruism model in which the migrant's remittances behavior is affected by both altruism and self-interest. The model is constructed with the assumption that the migrant is making the decisions while in the United States and at least a portion of his household remains in the Mexican community.

$$U_m = f(C, S, R, SC_{us}, SC_{mex}, C_{hh\text{-}mex}, Inf_{comm})$$

A migrant derives utility from his current consumption (C), his savings (S), his remittances back to his household in Mexico (R), social capital in the United States (SC_{us}), social capital in Mexico (SC_{mex}), consumption by his household in Mexico ($C_{hh\text{-}mex}$), and infrastructure in his community in Mexico (Inf_{comm}). Remittances affect the migrant's utility directly by both the satisfaction received from sending them and the potential future financial or social gain from the remittance recipients. Social capital in the United States has a large impact on the migrant's quality of life because it affects the migrant's social and economic integration. An increase in social capital in Mexico benefits the migrant because it will affect his quality of life if he returns to Mexico and affects the quality of life for the remaining household members. Household consumption directly affects the migrant's utility for altruistic purposes. Because the migrant cares about the remaining household members, an increase in their consumption will increase his

utility. Finally, community infrastructure affects the migrant's utility because of both its use by the household members in Mexico and the migrant's potential future use if he returns home.

All of these variables affect utility in a positive way subject to the following budget constraint.

$$Y\ (SC_{us}) = C + S + R$$

The migrant's income must be divided between consumption, savings and remittances. The migrant's income is affected by social capital in the United States because the social capital can be crucial in finding a job. Social capital, Mexican household consumption and community infrastructure are fixed as I analyze the interaction between consumption, savings and remittances in the following demand functions.

3.3 Demand Functions

The following demand functions are derived using demand theory from the above utility function and budget constraint.

$$\underset{+}{C_{us}} = f(\underset{+}{Y}, \underset{?}{SC_{us}}, \underset{?}{SC_{mex}}, \underset{+}{C_{hh\text{-}mex,}}, \underset{+}{Inf_{comm,}}, \underset{-}{i_{us}}, \underset{-}{i_{mex}}, \underset{?}{e})$$

The migrant's consumption is a function of his income, which includes both wage income and returns on investments. All else held equal as income increases, consumption in the United States will increase, thus the relationship is positive. Due to the various types of social capital in the United States and the differences in their effects, one cannot predict the sign for US social capital on consumption in the United States. It depends heavily on the relative influence of each type because each of the three affects consumption in the United States differently. An increase in both familial and friend social capital have a negative relationship with the migrant's current consumption. Though both of these forms of social capital can individually increase income, which has a positive relationship with consumption, they also have a negative effect by

reinforcing the ties to the home community. Nevertheless, there is a positive relationship between other-ethnicity-based social capital and current consumption. This is because the more the migrant becomes integrated into the US community, the more he might value current consumption relative to the utility he would receive from benefiting the Mexican community. The overall effect of social capital in Mexico on remittances is unclear as well because there are two opposing forces. Social capital in Mexico could have a negative influence because the more connected the migrant is to his home community, the more he will value helping the Mexican community over current consumption. However, there is also a potential positive relationship because a community with high social capital probably has a higher standard of living and is able to support its own members. This would decrease the utility of remittances and thus increase current consumption.

The consumption of the household in Mexico is a factor because it demonstrates the household's level of need, which influences the size of remittances for altruistic purposes. As the household consumption in Mexico increases, the migrant remits less and consumes more while in the United States, implying a positive relationship. I hypothesize that infrastructure in the Mexican community has a positive relationship with consumption in the United States. As the infrastructure improves, the quality of life in the Mexican community increases; therefore, the migrant receives less utility from sending remittances to the community. Consequently as infrastructure improves the migrant consumes more, everything else held equal. Both the interest rate for the United States (ius) and for Mexico (imex) have a negative effect on consumption because an increase in the US interest rate would lead to more savings while an increase in the Mexican interest rate would lead to an increase in remittances. The effect of the

exchange rate (e) is unclear because it depends heavily on the migrant's expectations of appreciation and depreciation.

The factors that determine the amount that a migrant remits are expressed in the following function.

$$R = f(Y, SC_{us}, SC_{mex}, C_{hh\text{-}mex}, Inf_{comm}, i_{us}, i_{mex}, e)$$
$$+ \quad ? \quad ? \quad - \quad - \quad - \quad + \quad ?$$

All things held equal, an increase in income leads to an increase in remittances and therefore these variables have a positive relationship**.** Once again, the sign for social capital in the United States as a whole cannot be determined because of the varying effects of its components. Familial and friend social capital in the United States have a positive relationship with remittances because they reinforce the link with the family and community in Mexico, leading to greater altruistic remittance motivations. These relationships can also reduce the cost of transferring the remittances to Mexico, which could have a positive or negative impact on the amount remitted. An increase in ties with other ethnicities in the United States has a negative relationship with remittances because they will reduce the degree of connections to the Mexican community and lower the utility from remittances. The influence of social capital in Mexico is again unclear due to the two competing factors. By providing a strong link between the migrant and the Mexican community, a high level of social capital in Mexico would encourage remittances. However, if the high level of social capital provides a higher quality of life in the community, then remittances decline due to low levels of utility.

Household consumption has a negative relationship with remittances because as the household consumes more their need for additional income declines and the utility of each dollar sent declines; therefore, the migrant sends fewer remittances. This same logic applies to the

negative relationship between remittances and community infrastructure. The US interest rate has a negative effect on remittances because it makes savings in the United States more profitable. However, Mexican interest rates have a positive effect because as they go up so does the profitability of remitting and saving the money in Mexico. The effect of the exchange rate once again depends on the migrant's expectations.

The factors that determine the amount that is saved are expressed in the following equation.

$$S = f(Y, SC_{us}, SC_{mex}, C_{hh\text{-}mex,}, Inf_{comm,}, i_{us}, i_{mex}, e)$$
$$+ \quad ? \quad ? \quad + \quad + \quad + \quad - \quad ?$$

As do the other components of the budget constraint, savings has a positive relationship with income because all things held equal an increase in income leads to an increase in savings. Different types of US social capital affect savings differently, causing the sign of the relationship to be unclear. Moreover, the sign of the relationship of the subset of familial and friend social capital is also unclear. These types of social capital sustain the tie to the Mexican household and community, which can either promote remittances or savings that will later be returned to Mexico. Social capital in the United States in all forms can help the migrant gain access to savings institutions, thus encouraging a positive relationship with savings. Other-ethnic-based social capital has a positive sign because the relationships with other ethnicities both reflect and encourage integration and a focus on their current and future life in the United States. Once again the sign for social capital in Mexico is unpredictable because it is unclear which effect dominates, the promotion of altruistic remittances or a higher quality of life in the community. It also has complications with savings similar to those of familial and friend social capital; it depends on where the savings is ultimately consumed.

Household consumption also has a positive effect on savings. As household consumption decreases, more money is needed immediately in Mexico so more money is remitted and less is

saved. Community infrastructure has a positive relationship, since improvement in the quality of life in Mexico reduces the need for remittances. The interest rate in the US has a positive relationship because as it increases, savings earn more and thus more is saved. The interest rate in Mexico however has a negative effect because an increase in it encourages savings in Mexico, which leads to greater amounts of remittances. The effect of the exchange rate once again depends on the migrant's expectations for the exchange rate in the future. If the migrant thinks that the peso is going to depreciate then he saves more because his dollars will be more valuable in the future.

3.4 Other Modeling Considerations

Though the following considerations are not directly included in the theoretical model, they are important in understanding remittances decisions. It is important to point out that remittances can be sent both to the individual households as well as the community. Literature indicates that community remittances are generally used to either support an improvement in community infrastructure or support community enterprise. The Mexican government has set up a number of programs to encourage the sending and productive use of community remittances. The state of Zacatecas has the most experience with a matching program where the Mexican federal, state and municipal governments match every dollar donated by Hometown Associations, thus quadrupling the remitted money. The money is focused on projects where the entire community benefits, such as infrastructure improvements (Orozco 2000 pp. 14). Another program, which is used by the state of Guanajuato, allows community remittances to fund and run small garment factories with the help of the government (Orozco 2000 pp. 15).

The migrant derives utility from many different sources involving individual, household and community in both the United States and Mexico. Remittances, savings and consumption are all

inter-dependent and are derived theoretically from the same eight factors. I turn now to a discussion of the data and the variables employed in the econometric analysis.

Section 4. Data

Due to the many factors that affect remittance decisions, a large and comprehensive data set is imperative to be able to empirically study the theories developed in the previous section. This study's data is from the Mexican Migration Project (MMP), which is a joint project between the Departamento de Investigacion sobre Movimientos Sociales of the University of Guadalajara and the Population Studies Center of the University of Pennsylvania. This project was started in 1982 and has continued to collect data on migration between the United States and Mexico. The data covers both the social and economic causes and effects of this migration. Both an ethnosurvey questionnaire and an interviewing process are used to collect the data. The majority of surveys are given in Mexico; however, some are interviewed in the United States. The data collection in the US is not sufficiently random therefore those observations were not used in this study. Data is collected in two to five Mexican communities every year. The surveys are given between November and February, which is the off-season for agricultural work and a time when many migrants return to Mexico. The most recently released data, MMP93, is used in this study.[1] Some variables are used directly from the data set while others are combined or restructured to create more useful variables. Due to missing values the range of dates of most recent immigration are limited to 1969 through 2000.

This data will be used to estimate the following empirical model, which will help determine if the predicted relationships are correct

[1] More information on the Mexican Migration Project can be found at http://www.pop.upenn.edu/mexmig/. The data sets used in this study are available for download at this website as well.

Section 5. Econometric Model

To answer questions regarding both the decision to remit and how much to remit, two regressions will be run. The first question attempts to determine what factors appear to influence the probability of a migrant remitting money to Mexico. I employ a general model, where $r = \alpha + \alpha_1 X_j + e$ and e is the error term. A probit is used to estimate this equation**.**

The second question investigates which factors influence the amount of remittances that are sent to Mexico. The following equation is analyzed using the tobit procedure; The tobit procedure fits a model where there are fixed upper and/or lower limits to the data. It is appropriate in this case because the amounts of remittances do not fall below zero and because there is a large probability mass at the lower limit.[2]

This section describes the dependent variables for the two empirical tests, which will be described in section six. This section also describes the independent variables and their expected effect on remittances decisions.

5.1 Dependent Variables

This study runs two empirical tests. The first test attempts to determine the probability that a migrant will remit. For this test a dummy variable is created to indicate whether a migrant remitted money or not. This variable has a value of zero for those migrants who remitted zero dollars per month. A value of one is given if the remit variable is greater than zero.

The second test tries to determine the amount that the migrant will remit. The dependent variable for this test is the average monthly remittances for the migrant. The consumer price index (CPI) for the United States was used to convert nominal remittances to real remittances[3].

[2] The Heckman two-step model, though used often in this literature, is not appropriate for my analysis because my data is limited entirely to people who have migrated to the United States.
[3] The CPI was taken from the Bureau of Labor Statistics.

5.2 Independent Variables and Their Expected Effect

Income- Since the source of remittances is the migrant's income, as seen in the budget constraint, income is an important variable in determining remittance behavior. It is predicted that an increase in income will lead to an increase in remittances, all thing held equal. The migrant's monthly income in the United States is represented with the variable *income.* It is constructed by multiplying the hours worked per week by four and then multiplying that by the hourly wage received during the migrant's last trip to the US. The CPI of the United States was used to make these values real.

Income Squared-In order to capture the rate at which remittances change due to income a quadratic form of the income variable is needed. I hypothesize that though remittances will increase as income rises, they will do so at a declining rate. The square of the income is needed to estimate the quadratic form. Income squared is found by squaring the income variable generated above.

US Familial Social Capital Index- As mentioned, there are several important components that contribute to the migrant's social capital in the United States. Family, both nuclear and extended, is very important in the Mexican culture. Therefore some of the greatest sources of social capital for the migrant are the relationships he has with family members and the strength of those relationships. The stronger these family relationships, the more likely the migrant is to remit to family members. It is therefore predicted that the relationship will be positive. Since there are many components that must be included to accurately represent familial social capital an index is created. This index includes measures that represent both the size of the network as well as its strength. To estimate the magnitude of existing extended familial relations a measure of the

number of cousins in the United States is included in the index. A simple index of the number of cousins is created to limit this unbounded variable. A value of zero is added for those with no cousins. A value of one is added for those between one cousin and the average. Finally, a value of two is added to the family index to those migrants with more cousins in the United States than the average in the data set. I assume that the larger the value, the greater the amount of social capital. This number alone does not indicate the strength of the networks. The index incorporates other variables that measure if the migrant seeks help and if the US familial network provides it. Those who contacted relatives during their last trip to the United States have one added to the index, while all others receive a value of zero. Similarly, those who received help from family members in finding a job receive an additional value of one. Financial help from a relative and lodging upon arrival from a relative also each add another value of one to the index**.** All of these different values are added together to create an index of familial social capital in the United States.

US Friendship Social Capital Index- Hometown relationships and friendships in the United States are other components of US social capital. These relationships often differ from familial relationships. Because these relationships promote ties to Mexico, it seems that there would be a positive relationship between remittances and friend social capital. For the purposes of this study I make the assumption that the majority of the migrant's friends either come from his hometown or are also Mexican. This assumption is drawn from indications from the data set that "friends" have also crossed the border. Once again due to the complex nature of social capital, an index is created to include both the existence of friendships and their strength. The number of friends in the United States is included in the index to account for the existence of networks, friendships. A value of zero is added for those with no friends. A value of one is added for

those with between one friend and the average. Finally, a value of two is added to the friend index for those migrants with more friends in the United States than average. As with familial networks, the importance of these relationships is indicated by their strength. Several other variables are included to demonstrate the strength of friend and hometown networks in the United States. Those who contacted fellow hometown community members during their last trip to the United States have one added to the index; those with no contact receive a value of zero. Similarly, those who received help from friends and hometown community members in finding a job receive an additional value of one. Financial help from a friend or a hometown community member and lodging upon arrival from a friend or hometown community member also each add another value of one to the index. The sum of all of these different values creates an index of hometown and friendship social capital in the United States.

Other-Ethnicity-Based Social Capital Index- The third component of US social capital is the relationships the migrant has with members of other ethnic groups. This type of social capital provides the migrant access to other cultures, and a different knowledge set. Unlike the other two components of US, it is posited that this type of social capital does not promote the maintenance of ties back to the Mexican household and community. Therefore, the relationship between other-ethnicity-based social capital and remittances is most likely negative. An index is also created to represent other-ethnicity-based social capital due to its complexity. Due to the lack of data on the number of relationships only the strength of relationships is measured. Also due to a lack of data, only relations with Anglos and African Americans are considered in this index. For each ethnic group a value of zero is given when there were no relations with the given ethnic group. A value of one is given if the relations were found only in the work place and a value of two is given if the relations were based on friendship. A higher value is placed on

friendships because these often tend to be more influential. Finally, a value of three is given if the relationship is described as "very close." The sum of the value for the relationships with African Americans and the relationships with Anglo variable create the other ethnicity based social capitals index.

Border Proximity- Those migrants that live in those states that are close to the Mexican border are subject to several different conditions than those who live in other states. The closer proximity might facilitate more frequent returns to Mexico. Also these states have higher numbers of Mexican migrants and have adapted to this situation. This could mean that the infrastructure in the community is much more accessible to Mexican migrants, including both remittances and saving mechanisms. Due to the many different influences of this variable, it is unclear what type of relationship it will have with remittances. A dummy variable is created to indicate the proximity of the migrant's United States location to Mexico. This variable has a value of one if the migrant resided in Arizona, California, Florida, New Mexico or Texas during his last trip to the United States. Migrants who lived in other states have a value of zero for proximity to Mexico.

US Bank Account- US bank accounts have an interesting relationship with remittances. First, the main purpose of these bank accounts is to save money in the United States; however, many banks are beginning to create ways that money can be remitted more cost effectively from bank accounts. Due to these conflicting benefits of a bank account, it is unclear if the relationship will be positive or negative. A dummy variable is created to indicate whether or not the migrant has a bank account in the United States. Migrants with a bank account receive a value of one for the bank account variable while those that do not have a bank account have a value of zero for this variable.

Mexican Social Capital- Social capital in Mexico indicates how closely knit the migrant's home community is, which might indicate the ties that the migrant continues to feel toward his community while in the United States. Under this assumption one might predict that there would be a positive relationship between social capital in Mexico and remittances because the altruistic feelings would be maintained. However, the relationship might be negative because strong social capital might lead to a higher quality of life in the community making the utility of remittances lower. Due to a lack of data, the theoretical distinction between individual and community social capital in Mexico cannot be analyzed in this empirical study. The social capital index is structured to reflect the amount of social capital in the migrant's hometown Mexican community. The data set only provides one set of data per community therefore this variable is not adjusted for the migrant's year of migration and thus is limited in representing the social capital in the community during the years of migration. A value of one is added for each of the following activities: a special mass is said for migrants on the community's patron saint's day, migrants return for the community's saint's day, there is a soccer league, there is a baseball league, there is a basketball league, community participation in initiating the electric service, community participation in initiating the water service, community participation in initiating public lighting, and community participation in initiating telephone service.

Mexican Community Infrastructure- The infrastructure in a community is important to remittances because it can indicate a need for either community or household remittances. The relationship with remittances is predicted to be negative because a low level of community infrastructure can demonstrate community need, thus inspiring higher levels of remittances. Once again, the data set only provides one set of data per community therefore this variable is not adjusted for the migrant's year of migration and thus is limited in representing the

community infrastructure in the community during the years of migration. Since all for the migrations took place before the survey was conducted this measure of infrastructure represents the maximum amount of infrastructure possible during the years of migration. An index of community infrastructure is created from five different variables. A value of one is added for the existence of a central plaza, majority of the roads being paved, majority of dwellings having running water, majority of dwellings having electricity, and majority of dwellings having indoor plumbing.

Mexican Household Consumption- Household consumption in Mexico is an important indicator of the quality of life of the migrant's family that remains in Mexico. A lower household consumption indicates a greater need, which will encourage the migrant to remit more due to altruistic feelings and concern for the household. Due to a lack of data on household consumption, it is proxied by a measure of the number of members in the household and an index of wealth. The variable household members represents the number of members in the Mexican household. The wealth index is created based on whether or not the household has certain consumer durables. The amenities that are used to create this index are running water, stove, refrigerator, washing machine, sewing machine, radio, television, stereo, and telephone. For each amenity a value of one is given if the amenity exists in the household and zero if it does not. The values for all nine amenities are summed for the household consumption index. The idea is that the greater the wealth of the household the greater the consumption will be. Household members is still used in the analysis to fortify the use of the wealth index as a measure of household consumption.

Exchange Rate- Because remittances are transferred from dollars to pesos the exchange rate and its variations are important in remittance decisions. When migrants expect the peso to

appreciate they will remit more because if they wait they will receive fewer pesos for their dollars. Because one cannot predict migrants' expectations of appreciation and deprecation, the sign on this variable cannot be predicted. The exchange rate between Mexico and the USA is shown as the number of pesos per US dollar. The values are included in the MMP data set. The CPI of the United States and the CPI of Mexico were used to convert the nominal values into real exchange rates[4]. The year of the migrant's last migration is used to select the exchange rate to assign to each migrant.

Interest Rate Differential- Interest rates determine the potential profit gained by saving in a location. To compare the differences in profitability of saving in Mexico as compared to the United States I created an interest rate differential. I subtracted the real US interest rate from the real Mexican interest rate. The Mexican interest rate is found in the MMP data set. The US interests rates did not come from the MMP; the "bank prime loan" rates were taken from the Federal Reserve Board and were converted to real interest rates using the CPI of the US. The year of the migrant's last migration is used to select the differential that is assigned to each migrant. The relationship is expected to be positive because the higher the interests rates are in Mexico the more profitable it will be to save there and thus more money will be remitted to be saved in Mexico instead of being saved in the United States.

Pre 1991-Trends in Mexican migration have changed significantly over the time span of the data set. The effect of these trends on the data are most likely gradual; however, due to the construction of the data, not being a panel or time series, the gradual changes are hard to observe. A dummy variable was created to try to observe a time trend between those who migrated more recently. This variable has a value of one if the migrant's last migration occurred before 1991. It has a value of zero if the migrant's last migration occurred after 1990. 1991 was chosen as the

[4] The Mexican CPI comes from the MMP data set.

year for the break because it appeared from the data that it was the point where the changes became significant. It is predicted that this variable will be significant indicating that migrant behavior has changed over time.

States-The data used from the MMP includes observations from 17 Mexican states[5]. A dummy variable was created for each of these states and included in each regression to account for any variation due to differences in state of origin. The dummy for the state of Hidalgo is omitted in every regression to avoid colinearity.

The summary statistics of all of the variables described above are included in Table 1. The next section displays and discusses the results of the empirical testing of this econometric model. [6]

6. Regression Results and Analysis

This section presents the results of the empirical testing of the econometric model discussed in the previous section. I proceed by first discussing the probit evaluation of the likelihood that a migrant will remit. Secondly, I present the analysis of the tobit estimation of the amount that a migrant remits. For each of the two empirical tests, a table of the results will be included followed by a discussion of the results and their interpretations.

6.1 Probability that a Migrant Will Remit

This section focuses on the results of the probit evaluation, which is trying to explain the likelihood that a migrant sends remittances back to Mexico. The probit is run on 1863 observations with fourteen independent variables. The pseudo R^2 of .0899 indicates that this

[5] The included states are Michoacan, Baja California Norte, Colima, Guanajuato, Jalisco, Nayarit, Zacatecas, Guerrero, San Luis Potosi, Oaxaca, Sinaloa, Puebla, Aguascalientes, Durango, Nuevo Leon, Chihuahua, and Hidalgo.

[6] A variable indicating the number of workers in a household was not included in the analyses because of its correlation with *members*. Due to its correlation with *income*, a measure of the years of education of the migrant was also omitted from the analyses.

probit model explains almost 9 percent of the variation in the probability that a migrant will remit. The resulting LR P^2 of 171.95 indicates that the hypothesis that all of the coefficients equal zero can be rejected at the 1 percent confidence interval. The model predicts that 79.0568 percent of the migrants will remit which is extremely close to the actual percentage of 79.0660 that did. Table 2 provides detailed results by variable.

The friendship social capital index is significant at the 1 percent level with a positive coefficient indicating that friendship social capital has a significant and positive influence on the probability that the migrant will remit. Other-ethnicity-based social capital index is significant at the 2 percent level and has a negative coefficient as predicted. Both of these observations support the paper's hypothesis. The Mexican social capital index is also significant at the 1 percent level; however, it has a negative coefficient indicating that the greater the social capital in Mexico the less likely one is to remit money**.** This is interesting because it suggests that the effects of social capital in Mexico on the quality of life outweigh its motivation for altruistic remittances. Also very interesting is that familial social capital in the United States is not significant in the remittance decision though its positive sign is as predicted.

The proximity of the US location to Mexico, and how many members are in the household are both significant to the decision to remit at the 1 percent level. The negative coefficient on the proximity variable indicates that the migrants who resided in states close to Mexico are less likely to remit. This might be a result of the money being carried back by the individuals themselves if they return frequently, and thus not viewed as remittances. The positive sign of the members coefficient indicates that the greater the number of members in a household the greater the chances are that the migrant will remit. The larger number of members suggests that the household has greater needs, resulting in an increase in the probability of remitting.

Having a bank account is significant at the 7 percent level to a migrant's decision to remit or not. Interestingly the relationship is negative, as seen by the negative coefficient. This indicates that those with bank accounts are less likely to remit than those without. This would make sense if saving is a substitute for remitting because those with bank accounts could be more likely to save. Household consumption also has a negative relationship with the decisions to remit. Though it is only significant at the 12 percent level the sign indicates that as predicted the higher the level of household consumption the less likely to remit.

It is also interesting to note that neither income nor income squared is significant factors in the decision of whether to remit or not. Community infrastructure in Mexico has the opposite sign from the predictions but it is insignificant. The interest rate differential also has the opposite sign than predicted; however, it is insignificant. The other macro variable, exchange rate, is also insignificant. The macro variables are most likely insignificant because most Mexican migrants are unfamiliar with the banking system and therefore when making the decision whether to remit or not are not likely to take into account exchange and interest rates.

One of the most interesting results is that the fact that the dummy variable for the year of last migration being greater than or equal to 1991 is significant at the 2 percent level. This indicates that there is a time trend factor in the data. I therefore ran two additional regressions; one for those observations whose last migration was before 1991 and one for those observations whose last migration was post 1990. See Table 3 for a comparison of the summary statistics of both sets of observations and Table 4 for the probit results.

In both of these two regressions the variables for proximity and household members remained significant with the same predicted signs. However, there were several differences in the results of the two regressions. Other ethnicity based social capital is only significant in the pre 1991

regression. In looking at the data the relationship with Anglos generally stayed the same while there were changes in the relationship with African Americans. Pre 1991 the majority of the relationships with African Americans was based on friendship; however, the observations who migrated more recently show that the majority of the relationships are based in the workplace. The negative sign is explained with the idea that stronger relationships with other ethnicities will decrease the probability of remitting because it promotes integration, which can lessen the importance of ties to Mexico.

The family and friendship social capital indices are significant for the observations who migrated post 1990 and insignificant for those that migrated before 1991. As predicted, both of these variables have a positive influence on the decision of the recent migrants on whether or not to remit. In looking at the data the average number of friends and family members for the two time periods are very similar. This indicates that it is the strength of the networks, not the extent, which changed over time. It could be explained that the family members and friends of those migrants in the post 1990 time period have greater knowledge and experience and are thus able to provide greater support.

Other variables change in significance between the two time periods. The exchange rate is significant in the post 1990 period and not in the pre 1991 period. This is most likely explained by the fact that during the first period the exchange rate was pegged while after 1994 the exchange rate was floating. The bank account variable is only significant in the first period. The percentage of those with bank accounts only increased by 2 percent between the time periods. The change in influence must have come from another source. In 2001, right after the study's period, banks began to push to gain more Hispanic customers by accepting the Mexican identity card, the matricula consular, as a valid form of identification. However during the 1990's the

banks might have made efforts at better serving the current Hispanic clientele and thus reducing the negative impact of banking on remittance sending for those who migrated after 1990. Mexican social capital is also only significant for those who migrated before 1991. This variable is difficult to look at from the perspective of time because the information used to create the Mexican social capital variable is only given for one year; therefore, all of the observations from one community have the same measure of Mexican social capital no matter their year of last migration. Therefore it is more appropriate to look at this variable in the general probit analysis. Finally the dummies for the states are all significant at the 1 percent level for those who migrated before 1991; however, the majority of the states for those who migrated after 1990 are insignificant. This indicates that the Mexican state had a greater impact before 1991. It does not appear that this is caused by internal Mexican migration because of those who migrated before 1991 89 percent returned to their state of birth and 91 percent of those who migrated after 1990 returned to their state of birth. Other state-specific differences that might explain this pattern are outside of the scope of this paper.

6.2 Amount Remitted

This section focuses on the results of the tobit analysis, which is trying to describe the variation in the amount of money each migrant remits. This censored regression is run on 1863 observations with fourteen independent variables. The 0.1133 comparable R^2 indicates that the tobit analysis explains more than 11 percent of the variation in the decision of how much to remit. The comparable R^2 is found by squaring the coefficient of the correlation between the predicted values and the actual values. The LR P^2 statistic of 224.05 indicates that the hypothesis that all of the coefficients equal zero can be rejected at the 1 percent confidence interval. Table 5 describes the results for the individual variables

The social capital indices are again varied in their significances in affecting the amount remitted. Friendship social capital in the United States is significant at the 1 percent level and has a positive sign. This agrees with the hypothesis that an increase in this type of social capital will both lead to better access to remittances mechanisms and will strengthen connections with the home country, therefore leading to larger amounts of remittances. The index for social capital with other ethnic groups is significant at the 1 percent level. Its negative sign suggests that the greater the interaction and relations with those of other ethnic groups, the fewer dollars the migrant will remit. This could happen because the migrant is becoming more integrated and, as a result, the home community is losing importance relative to the US community. The index of social capital in Mexico is significant at the 3 percent level, with a negative coefficient. Reinforcing the conclusion from the probit model that altruistic motivations caused by social capital in Mexico are outweighed by the same social capital's positive effect on quality of life. The family index, however, is not significant though it still has the expected positive sign.

Both the income and the income squared are significant in the tobit regression. This indicates that the income has a quadratic relationship with remittances. The fact that the sign on income is positive while the sign on income squared is negative indicates that as income increases, remittances increase as well but at a decreasing rate or possibly begin to decrease (Figure 5). This is logical because remitted money likely has diminishing marginal returns to both the sender and the recipient.

The proximity of the US location to Mexico is significant at the 1 percent level. The negative sign on the proximity variable can be viewed similarly to before, i.e. a migrant's ability to return home more frequently might result in the migrant carrying a portion of the money back himself instead of formally "remitting it." Community infrastructure is significant at the 10 percent

level with a negative coefficient indicating that communities with less infrastructure are in greater need and therefore each dollar remitted is more valuable, encouraging higher amounts of remittances. The household consumption is significant at the 1 percent level but has a positive coefficient which conflicts with the hypothesis. The positive sign indicates that those households with higher consumption receive larger amounts of remittances. This can possibly be explained by the fact that they need more money to maintain their current level of consumption. The high-level of consumption could have been originally financed by remittances and thus they are required to maintain it. Once again for all observations the exchange rate and the interest rate differential are insignificant for reasons similar to those in the first regression. The number of members in the Mexican household is insignificant but has the predicted positive sign. The coefficient for the bank account variable has the opposite sign than predicted; however, it is insignificant.

As in the probit, the dummy variable for the observations having migrated before 1991 is also significant in the tobit. Therefore I ran a separate tobit regression for both period one and two. (See Table 6 for results) In both of these separate tobits income, income squared, proximity to the boarder and friendship index are significant with the same signs as in the original tobit. Family index however is only significant for those observations who migrated in 1991 or after. This is probably for reasons similar to those in the probit discussion. The results of the other ethnicity based social capital index are interesting because it is significant in both period one and period two; however, the coefficients have opposite signs. Taking into account the discussion on the changes in relationships with blacks the negative sign for the pre 1991 coefficient is rational. The coefficient on the post 1990 period is positive indicating that the greater the social capital the larger the amount that will be remitted. The influence by the other ethnic groups is

probably less integrating post 1991 because more of the relationships are based on work, not friendship. These relationships can still provide valuable information to the migrant.

Mexican social capital and community infrastructure are both significant with a negative coefficient in the pre 1991 period while insignificant in the second period. Once again the difference in the time periods is more difficult to interpret due to the construction of these variables from limited data that is not adjusted for time. Family index and real exchange rate are once again significant for the post 1990 observations and not for the pre 1991 observations for similar reasons as discussed in the probit section. The state dummy variables are once again significant at the 1 percent level for those who migrated pre 1991 and mostly insignificant for those who migrated post 1990. Once again the reasons are also similar to those the explanation given in the probit section.

These results provide many insights into a migrant's remittance decisions. The following section will discuss the most important of those insights, and provide some suggestions for future work.

7. Conclusions

This study focuses on the role of social capital in influencing the remittance decisions of Mexican migrants. The empirical results provide a number of interesting and pertinent insights into the role that social capital plays in these decisions. Social capital from friendships as well as other ethnicity based social capital proves to be very positively significant in both the decision to remit and how much to remit. For the entire time period family index is not significant for either decision. The most interesting conclusion is that social capital in Mexico has a significant negative impact on the two remittance decisions. When the observations are divided by year of migration different trends in social capital are revealed for the two time periods, pre 1991 and

post 1990. Other ethnicity based social capital and Mexican social capital are the most significant for both decisions for those who migrated before 1991. For those who migrated after 1991 familial and friendship based social capital are the most significant forms of social capital.

Though the focus of this paper is on social capital, the econometric results produce other interesting conclusions. It is important to note that income does not appear to influence the probability that a migrant sends remittances but is very significant in determining the amount to remit. Also interesting in regards to income is the fact that though it has a positive slope the slope is declining. This means that as a migrant's income increases he will remit more but at a decreasing rate and that remittances could begin declining at higher levels of income. Many of the conclusions will become important in policy issues as the number of Mexican migrants continues to rise.

There remains much research to be done on the topics of remittance and migrant social capital. The time trends merits further investigation especially if a panel or time-series data set is available. It would also be interesting to investigate whether the inclusion of savings returned to Mexico in the definition of remittances would alter the relationships between remittances and social capital variables in a study similar to this one. HTAs are important sources of both social capital and community remittances that are not specifically examined in this study due to a lack of data. As HTAs become more prevalent in the United States, an analysis of how remittances and social capital influence HTA activities and behaviors could lead to interesting and useful conclusions. Finally, the scope of this paper does not include an examination of the use of the money remitted. Given the large flow of remittances and their predominant use for consumption, an investigation into how social capital can be used to inspire the productive use of remittances, especially through micro enterprises, would be very pertinent.

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Table 1: Summary Statistics

Variable	Mean	Std. Dev.	Min	Max
Remitted	0.7907	0.4069	0	1
Amount Remitted	432.3988	558.2023	0	7756.533
Income	1763.39	4547.658	29.17742	185230.6
Income Squared	$2.38x10^{7}$	$7.96x10^{8}$	851.322	$3.43x10^{10}$
Family Index	2.6581	1.8018	0	6
Friendship Index	2.445	1.4357	0	6
Other-Ethnicity Index	2.7305	1.3562	0	6
Proximity to Mexico	0.7236	0.4474	0	1
Bank Account	0.0875	0.2826	0	1
Exchange Rate	14.0039	4.5847	9.220406	27.28319
Interest Rate Differential	2.4149	15.5407	-38.7414	44.14411
Mexican Social Capital	4.4391	1.9349	0	8
Community Infrastructure	3.6135	1.1362	0	5
Household Members	5.1562	2.3494	1	18
Household Consumption	6.2458	1.7947	0	9
Migrated Pre 1991	0.4155	0.4929	0	1

Table 2: Probit Results

Remitted	Coefficient
Income	0 (0)
Income Squared	0 (0)
Family Index	-0.0007 (-0.0206)
Friendship Index	0.0844*** (-0.0263)
Other-ethnicity Index	-0.0715** (0.0319)
Mexican Social Capital	-0.0954*** (0.0347)
Community Infrastructure	0.0315 (0.0439)
Household Members	0.0474*** (0.0158)
Household Consumption	-0.0325 (0.0206)
Proximity to Mexico	-0.3422*** (0.0903)
Bank Account	-0.2207* (0.1201)
Real Exchange Rate	0.0034 (0.0077)
Interest Rate Differential	-0.002 (0.0022)
Pre 1991	-0.2194*** (0.0862)
Pseduo R squared	.0897
N	1863

Note: Numbers in parentheses are standard errors.
*Significant at 10 percent level. ** Significant at 5 percent level.
*** Significant at 1 percent level.

Table 3: Mean Comparison

	Pre 1991	Post 1990
Remitted	0.7613	0.8463
	(-0.4265)	(-0.361)
Amount Remitted	445.4832	407.632
	(-618.5713)	(-420.1991)
Income	1890.317	1523.135
	(-5525.49)	(-1402.493)
Income Squared	34100000	4283872
	(983000000)	(-29300000)
Family Index	2.5644	2.8354
	(1.8135)	(-1.7674)
Friend Index	2.4512	2.4332
	(1.4338)	(-1.4404)
Other Index	2.9614	2.2935
	(1.2388)	(1.4584)
Proximity to Mexico	0.8072	0.5652
	(0.3946)	(0.4961)
Bank Account	0.082	0.0978
	(0.2745)	(0.2973)
Exchange Rate	14.7114	12.6647
	(5.2528)	(2.4206)
Interest Rate Differential	3.5235	0.3164
	(17.8459)	(9.4535)
Mexican Social Capital	4.5939	4.146
	(1.8516)	(2.0531)
Community Infrastructure	3.6317	3.5792
	(1.0977)	(1.2058)
Household Members	5.2732	4.9348
	(2.4488)	(2.1329)
Household Consumption	6.1575	6.413
	(1.8837)	(1.601)
Pre 1991	1	0
	(0)	(0)

Note: Numbers in Parentheses are standard errors.

Table 4: Probit Comparison

Remitted	Pre 1991	Post 1990
Income	0 (0)	0.0002 (0.0001)
Income Squared	0 (0)	0 (0)
Family Index	-0.0329 (0.0248)	0.0677* (0.0412)
Friendship Index	0.039 (0.0315)	0.1623*** (0.0529)
Other-ethnicity Index	-0.1519*** (0.0414)	0.0714 (0.0576)
Mexican Social Capital	-0.0827** (0.0412)	-0.0926 (0.0756)
Community Infrastructure	-0.0169 (0.0526)	0.1146 (0.1011)
Household Members	0.0461*** (0.018)	0.0659* (0.035)
Household Consumption	-0.0374 (0.0241)	-0.0717 (0.0449)
Proximity to Mexico	-0.3431*** (0.117)	-0.366** (0.1622)
Bank Account	-0.304** (0.1482)	-0.1511 (0.2328)
Real Exchange Rate	0.0018 (0.0081)	0.0818** (0.0385)
Interest Rate Differential	-0.0022 (0.0024)	0.0112 (0.0091)
Pseudo R squared	.0734	.1888
N	1219	643

Note: Numbers in parentheses are standard errors.
*Significant at 10 percent level.
** Significant at 5 percent level.
*** Significant at 1 percent level.

Table 5: Tobit Results

Amount Remitted	Coefficient
Income	0.0895***
	(0.0106)
Income Squared	0***
	(0)
Family Index	6.3264
	(9.064)
Friendship Index	39.7374***
	(11.2239)
Other-ethnicity Index	-38.3196***
	(14.0226)
Mexican Social Capital	-33.3903**
	(14.5627)
Community Infrastructure	-31.9879*
	(19.0746)
Household Members	4.4042
	(6.5545)
Household Consumption	26.8185***
	(8.9998)
Proximity to Mexico	-157.2828***
	(36.527)
Bank Account	63.1564
	(55.4758)
Real Exchange Rate	-2.3818
	(3.4276)
Interest Rate Differential	-0.7747
	(0.9932)
Pre 1991	70.7512**
	(36.4266)
Adjusted R squared	.3341
N	1863

Note: Numbers in parentheses are standard errors.
*Significant at 10 percent level. ** Significant at 5 percent level.
*** Significant at 1 percent level.

Table 6: Tobit Comparison

Amount Remitted	Pre 1991	Post 1990
Income	0.0784***	0.2722***
	(0.0144)	(0.0246)
Income Squared	0	0***
	(0)	(0)
Family Index	-9.9967	22.0732**
	(12.8456)	(10.1005)
Friendship Index	26.0249*	40.3323***
	(15.9567)	(12.4095)
Other-ethnicity Index	-84.3407***	19.9264
	(21.1008)	(14.2706)
Mexican Social Capital	-45.4701**	9.8129
	(20.3499)	(16.4765)
Community Infrastructure	-47.3033*	-32.2896
	(26.4327)	(5.3342)
Household Members	4.515	8.4241
	(8.8309)	(7.8022)
Household Consumption	20.7383*	14.9308
	(12.2618)	(11.0644)
Proximity to Mexico	-201.4953***	-66.7761*
	(55.5428)	(37.0176)
Bank Account	59.9923	-2.3386
	(82.2113)	(56.1256)
Real Exchange Rate	-2.55	15.5409*
	(4.1148)	(8.3946)
Interest Rate Differential	-1.1816	3.3303
	(1.2077)	(2.1035)
Adjusted R squared	.0410	.0265
N	1219	644

Note: Numbers in parentheses are standard errors.
*Significant at 10 percent level.
** Significant at 5 percent level.
*** Significant at 1 percent level.