

More than Altruism: Cultural Norms and Remittances Among Hispanics in the USA

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Abstract Cultural norms embody the communalism and familism that characterize social structures and traditions of care among certain identity groups, notably, Hispanics. In turn, they affect remitting behavior as they do family dynamics thereby extending care transnationally. Using the 2006 Latino National Survey, the largest instrument that captures socioeconomic variables and political perspectives among Hispanics residing in the USA, we constructed a Hispanic identity index that is used to capture the role of cultural norms in remittance behavior. This index is used as an explanatory variable in a logit model for the probability and frequency of remitting money. We find that both the probability and frequency of remitting increase with higher levels of self-defined familism as reflected by the Hispanic index. This effect is stronger among males, renters, foreign-born non-US citizens, and migrants with fewer years of residence in the USA. Incorporating variables such as our Hispanic identity index may shed light on a relatively unexplored area in the field of economics that explains remitting behavior.

Keywords Migration · Remittances · Familism · Latino studies · Interdisciplinary studies

Introduction: Cultural Norms Matter

The analysis of remittances and migration flows has experienced a refreshing paradigmatic change due to novel approaches. Contributions underscoring culture, institutions, and sociopolitical context are challenging neoclassical scholarship that underscored pure economic rationality to explain international migration and remittance behavior. In

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this paper, we postulate that cultural norms in Hispanic interfamily relationships affect people's decisions to remit money back home. Basically, migrants care for those left behind, and they feel it is their obligation to transfer part of their income to their family and kin (Dennis et al. 2009; Rivera et al. 2008; González et al. 2010; Sabogal et al. 1987). We argue that the behavior of Hispanics¹, in particular, first and second generations in the United States of America (USA), is influenced by familism², a social structure that emphasizes the well-being of family and implies subjugation of the individual for the good of the nuclear and extended family. Omitting this understanding can lead to generalizations about financial motives for remitting grounded in individual interest rather than familism. Examples of such individual-based motives include payment of insurance policies to cover for the likelihood of returning back home and remaining on the "good side" of the family, ensuring being a beneficiary of inheritance, profitable investment as asset owner or business partner, and payment of migration debts (incurred to fund the migration project). Other less self-interested motives may include giving when the economy back at home is going through a downturn or when it is exposed to a natural disaster. While any or a combination of these motives may be consistent with migrants' aspirations for their financial future, it is also true, as we show below, that emotional bonding with those left behind at home is important enough to send money.

We argue that Hispanics' strong sense of familism is reflected in their loyalty, solidarity, and identification with family. When migrants leave their hometowns, mostly for economic reasons, and find jobs in the USA, they will continue their bond to family and transfer money frequently. Expanding the evidence drawn from a case study on familism and social inclusion in New London³, Connecticut (Cruz-Saco and López-Anuarbe 2013), we assessed how familism and the frequency and probability of remitting are highly associated. In the New London case study, approximately 150 surveyed Hispanic participants exhibited a high degree of familism within their own Hispanic residential communities ("barrio") that sharply departed from feelings of exclusion in the larger, non-Hispanic society. Seventy percent of them remitted money, mostly to parents and relatives, and manifested obligation with family left behind.

Using the 2006 Latino National Survey (LNS)⁴, a comprehensive survey with approximately 10,000 responses, we constructed a Hispanic identity index and found that we cannot reject the association between it and the probability and frequency of remitting. The LNS, containing over 100,000 observations and 165 items, provides crucial information on the migrants' social and cultural views (proxies for cultural

¹ According to the US Census, Hispanics or Latinos are those people, of any race, who classified themselves in one of the specific Spanish, Hispanic, or Latino categories listed on the Census 2010 questionnaire or who indicated that they are of "another Hispanic, Latino, or Spanish origin." We acknowledge the difficulties with this identity definition, but nonetheless, we use the category to refer to persons of Spanish or Hispanic cultural background.

² It may generate contradictory feelings of excessive burden and sacrifice due to financial or time commitments to support or care for family that may undermine one's own well-being.

³ A town of approximately 30,000 residents (one third is of Hispanic background).

⁴ The 2006 LNS is one of the largest, most representative data sets of Hispanics. It is a telephone-based survey that sampled 11 million Hispanic households residing in areas with 87.5 % of the Hispanic population in the USA. For a more detailed description of the data, please access the Inter-University Consortium for Political and Social Research, LNS 2006 Description and LNS, Executive Summary (<http://www.icpsr.umich.edu/icpsrweb/ICPSR/>).

identity), reasons for coming to the USA, and plans to go back. Our empirical findings provide evidence that an interdisciplinary approach to the study of Hispanic remittance behavior enhances our understanding of the role of cultural values in financial behavior. Furthermore, we believe that the findings in this paper may be applied to other cultural groups residing in the USA, for example, migrants from Southeast Asian or sub-Saharan countries who may share strong levels of familism.

Review of Relevant Literature

One stream of scholarship has looked at drivers and outcomes of international migration, impact on sending families, labor markets, and remittance behavior. A second stream has analyzed gender relations and globalization forces, citizenship, exclusion, transnationalism, cultural norms, and intergenerational solidarity. Within the first stream, remittances have been considered the “other side of the migration coin,” and models have estimated a variety of motives for remittances (Rapoport and Docquier 2006). They include altruism (willingness to raise family’s consumption level especially when family at home is hit by financial or natural hardship), self-interest and/or insurance (Amuedo-Dorantes and Pozo 2006; Osaki 1999), repayment of educational expenses and loans at home (Hoddinott 1994), diversification of savings (Quinn 2005), responses to natural disasters (Stark and Lucas 1988), and desire to increase assets at home (Yang 2006, 2008). There is evidence that altruism, reciprocity or exchange, insurance, loan repayment, and investment in home countries explain both the flow of remittances and the probability to remit (Rapoport and Docquier 2006; Amuedo-Dorantes and Pozo 2006; Stark and Lucas 1988; Osaki 1999; Quinn 2005; Hoddinott 1994).

In the second stream of scholarship, the literature has taken a gender approach to better understand the complex decision-making within the family and how migration flows unfold in specific corridors given gender relations and migrants’ transnational networks (Hondagneu-Sotelo 1994, 1999; Göbel 2013; Karakaplan et al. 2011; IOM 2010; 2011; 2013; Pessar 2006; Pfeiffer et al. 2008). In the words of Donato et al. (2006, p.6) “Scholars now analyze gender in the lives of both female and male migrants, in the politics and governance of migration, in the workplaces of immigrants, in neoliberal or welfare state policies toward migration or foreign-born populations, in diasporas, and even in the capitalist world system.”

Does gender affect the likelihood and frequency of remitting? Gender affects who migrates, why, how, and how much is remitted (IOM 2011; Donato et al. 2006; Donato et al. 2010; Hondagneu-Sotelo 1994). The evidence, however, on whether women remit more is inconclusive because it is difficult to distinguish between the monetary and nonmonetary contributions to family and outmigration motives in a variety of corridors. Increasingly, women are migrating on their own for reasons other than family reunification and remitting money to their relatives or managing remittances at home with greater autonomy (Castles and Miller 2009; Göbel 2013; Karakaplan et al. 2011; Orozco 2012; Donato et al. 2010). Economists have incorporated gender as a control variable (Pfeiffer et al. 2008), and recently, models include gender relations more rigorously. The latter suggests that females are more altruistic given their caregiving responsibilities, and therefore, they have a higher propensity to remit. Their remittances

are substantial in migration corridors where females work abroad (in south to south corridors between India and Bangladesh, Malaysia and Indonesia, and the Russian Federation and Ukraine).

In their pioneer paper, Stark and Lucas (1988) proposed that girls from Botswana were brought up with the expectation that they would pay their families back with remittances. Blue (2004) and Osaki (1999) showed that Cuban and Thai female immigrants, respectively, were more socially and morally obliged to families and remitted more. Similarly, Naufal (2008) showed that Nicaraguan females appeared to remit more than males. In contrast, Orozco et al. (2006) found that Latina migrants may remit less than males, but when they do, they remit to distant family members and help raise families above the poverty line. Against this evidence, a number of studies have shown that male migrants remit more for reasons that include motives for international out-migration, migration corridor, and labor market constraints (Ramírez et al. 2005; Amuedo-Dorantes and Pozo 2006; INSTRAW 2007; Bollard et al. 2010; Bettin et al. 2009; Lozano-Ascencio 2005; Holst et al. 2012).

Remittances of Hispanic migrants need to consider culturally specific values regarding family bonding and intergenerational solidarity. Family roles, from children and older persons to females and males, are framed by familism⁵ that delineates relative positions that family members have in the social network. These relationships have traditionally supported the resilience of Hispanic communities and helped them overcome socioeconomic disadvantage and vulnerability through the establishment of networks of care (Bermúdez et al. 2010; Radina and Barber 2004; Hilton et al. 2012; Beyene et al. 2002). While Hispanics are neither a monolithic nor a homogenous group, on average, they have traditionally lagged behind the general population in household income, access to health insurance, and quality education and are more likely to live in poverty (U.S. Census 2010; Baker 2002). For these reasons, a cultural system that relies heavily on informal care networks is hard pressed to function effectively if resources are not available.

For example, Hispanic children are expected to care for their senior aging parents. Burr and Mutchler (2003) found that, relative to white Anglo-Saxons, Hispanics and Asians were more likely to feel that parents should live with adult children in multigenerational households. There is also an important gender dimension to these circles of care. Males possess a cultural privilege, which means that caregiving falls predominantly on the shoulders of women (Brewer 2001).

The importance of the value of communalism among Hispanics expands the reach of social networks beyond parents, children, and siblings to other family members, friends, neighbors, priests, and other members of the local community (Ruiz and Ransford 2012). The power of these social networks has been identified as a reason for the “barrio effect” that helps the livelihood of all ages and, especially, older persons (Aranda et al. 2011). Presently, the barrio effect transcends the local and includes the transnational family integrated through the internet.

A large proportion of Hispanics residing in the USA remits more than \$55 billion to their home countries in Latin America and the Caribbean. These transfers are expected to reach \$80 billion in 2015, helped by the strengthening of international financial

⁵ While familism has been strongly associated with Hispanic cultures, Schwartz (2007) found familism evidence in similar forms across many ethnic groups.

intermediation and the easing of transfer payments across borders (Yang 2011; World Bank 2014). While remittances represent a small proportion of national income in a relatively larger country, Mexico or Brazil for example, they represent a substantial addition to national income in smaller countries. These transfers often represent more than official development assistance and foreign investment combined. As a proportion of national income, remittances represent between 10 and 19 % in Honduras, Guyana, El Salvador, Haiti, Jamaica, Nicaragua, and Guatemala (World Bank 2011).

The literature on the macroeconomic impact of Hispanic remittances shows a significant positive correlation with per capita GDP and long-term economic growth (Fajnzylber and López 2007; Ramírez and Sharma 2008; Mundaca 2009). Transfers have directly improved the formation of human capital through an increase in the coverage of educational services and better health care indicators of recipient communities (Cohen 2010). In addition, migrants' relatives have invested in small businesses, generated employment, and expanded productive and income-generating activities. In some countries, transfers have been accompanied by matching funds from local governments and financial organizations to develop small infrastructure projects (Ketkar and Ratha 2009; Economist Intelligence Unit 2008). Overall, the inflow of transfers from abroad has increased the stability of foreign exchange markets in recipient countries. While some voices have warned against "remittance addiction,"⁶ the macroeconomic impact of such transfers has been largely positive on the balance of payments of receiving countries. We anticipate that in the near future, these transfers will continue to increase consumption and investment and help mobilize resources for economic growth (INSTRAW 2007; Maimbo and Ratha 2005; World Bank 2006; UN 2009; UNDP 2009; García-Fuentes and Kennedy 2009; Acosta et al. 2008).

Why Were Cultural Norms⁷ Excluded from Remittance Behavior Models?

In the economics literature, individuals are assumed to understand their environment and behave in ways that ensure their well-being given anticipated behavior of others (Ermisch 2003). "Altruism" is equivalent to caring and love, it is caused by affection and empathy, and it is also the outcome of cultural norms (Cruz-Saco 2010). The well-being of the altruistic person depends on the welfare of the other, the beneficiary. However, evidence is mixed on the motives that persuade parents, for example, to fund their children's education and health care. It is difficult to completely separate feelings of caring and love from image building, earning respect, wanting one's descendants to do well, and even expecting one's descendants to reciprocate in the future. Altruism and the cultural norms of familism vary in that the latter brings to the forefront not just feelings of love and caring but the much larger characteristics of a cultural and ethnic identity. Since culture, tradition, and social norms lie at the foundation of the social structure that identifies Hispanics as a community, where social bonding and

⁶ The term refers to a situation characterized by any of the following: a. Economies rely excessively on the influx of foreign exchange from the work of migrants abroad; b. Individuals of working age decide not to join the labor force in recipient countries due to rents received from relatives abroad; and c. Remittances may originate on "illegal" activities ("laundering").

⁷ Since cultural norms and traditions determine the social structure of familism, we will use the terms cultural norms and familism interchangeably.

intergenerational cohesion are particularly high, it is only natural to set these two concepts apart. Altruism continues to condition behavior in ways that are mixed or ambiguous because it is not possible to truly isolate love and caring from some form of self-interest and reciprocity. But familism and cultural norms are unambiguous traits of the Hispanic identity.

In the case of economic remittance models, simplifying assumptions regarding migrants' rational behavior are adopted. They postulate that a migrant's own level of utility or satisfaction is based on her own consumption and the consumption of family back at home (an altruistic postulate). Given prices, maximizing satisfaction subject to a budgetary restriction helps allocate income between own consumption and remittances that help fund the consumption of family at home. Under this approach, a family contract ensures an income flow at home (Stark and Lucas 1988). The contract is self-enforcing due to incentives such as promise of rewards upon return or support for family reunification abroad (Sana 2008). The option of social punishment through a network of other migrants from the same community helps discipline migrants' behavior.

Along this narrative, forces such as peer influence, herd behavior, chain migration, and the existence of transnational migration networks that provide opportunities for people to out-migrate are excluded. These forces can also explain a migrant's decision to leave. Additionally, excluded from the analysis are cultural, emotional, and social variables that do influence a migrant's financial behavior (Boswell 2008; Boswell and Mueser 2008). These variables determine in distinctive ways how the culture of familism and social bonding characterizes Hispanic families. In Cruz-Saco and López-Anuarbe (2013), it was found that migrants remit even if they sustain personal sacrifice due to low earnings placing them under the poverty line. Migrants' strong cultural motivation to remit, however, has not been captured by rational economic models (Radu 2008; Haug 2008; Epstein 2008).

The quantification of a highly complex social structure, such as cultural norms of communalism, is admittedly challenging and another reason why familism was not included in remittance behavior models. Often, data sets that contain mostly economic and financial variables will exclude indicators needed to construct a proxy. Some analysts have modeled cultural norms as intergenerational solidarity and use multivariate methods to measure family affection, association, norms, exchange and consensus, family ambiguity and conflict, attitudinal and behavioral patterns, and degree of familism and assimilation (Bengtson and Mangen 1988; Mangen et al. 1988). To add to this difficulty, although we refer to Hispanics as a common denominator, Hispanics are a heterogeneous and diverse population with notorious identity differences among subgroups (Chicanos, Cubans, Puerto Ricans, Dominicans, Mexicans, Central and South Americans). Differences in identities originate in diverse sociohistorical and political conditions (Rivera et al. 2008; Oboler 1995) that are further complicated by their arrival date as migrants to the USA, assimilation, their spatial distribution, and intermarriage with other ethnicities and racial groups in the USA (Portes et al. 2009; Allen et al. 2011; Ellis and Almgren 2009). Although the US Census has begun to use Hispanics or Latinos as if they were synonymous, Hispanics is a more narrow construction than Latinos or Latinas. The former is based on language, i.e., Spanish, and the latter on geography since it is based on the region of Latin America or Latin America and the Caribbean. There is an unavoidable political construction of these

labels that confuses the identification of persons who speak Spanish at home or who have a Latin American and Caribbean background. This translates into a problem: a large number of persons identified as Hispanics in the USA do not necessarily self-identify this way.

A Remittance Analytic Framework Based on Cultural Norms

We contend that money transfers and sending gifts to relatives and friends abroad are motivated by the migrant's desire to remain in regular contact despite time and distance and to maintain their cultural identity by helping to improve the family's well-being (Lindley 2009; Taylor et al. 2012). Based on findings showing a high and direct association between familism and Hispanic identity (Calderón-Tena and Knight 2011; Desmond and López Turley 2009; Realo et al. 2008; Schwartz 2007; Taylor et al. 2012), we postulate that the sense of obligation to provide for family that was instilled in migrants as small children explains the likelihood and the frequency of remittances. To assess this association, we construct a "Hispanic index" that will capture cultural norms and will be plugged as an explanatory variable into a reduced form for the likelihood, level, and frequency of remitting money back home. The following items in the 2006 LNS⁸ were used for this measure:

1. Do Hispanics strongly identify themselves as "Hispanics," "Latino/as,"⁹ or citizens of their home countries?
2. Do Hispanics believe that it is important to maintain their distinct cultures?
3. Do Hispanics believe it is important to speak Spanish at home?

These questions explore the degree of identity of the respondent with being a member of the distinct Hispanic cultural grouping and acknowledging the relative importance of speaking Spanish at home. The index is the simple sum of the Likert scale scores of the three answers (0=not at all important, 1=somewhat important, 2=important, 3=very important). Appendix 1 presents the frequency distribution of the Likert scale for each of these questions. Out of 5703 respondents, 91 % consider that they identify as Hispanic (somewhat to very important), 97 % consider that they should maintain their distinctive culture (somewhat to very important), and 97 % consider that maintaining Spanish at home is important (somewhat to very important). These percentages indicate a strong self-reported degree of identity with being Hispanic, further reflected in a mean value of 8.1 in a total of 9 maximum value in the combined Hispanic index (see Appendix 1).

Following the standard utility maximization proposition that migrants' utility is based on their own consumption and the utility of family members back home (Holst et al. 2012; López-Anuarbe 2013)—which in the economic literature is considered an altruistic proposition, we argue that remittance behavior is contingent upon migrants' consumption possibilities, their socioeconomic conditions, and personal characteristics including most notably, the Hispanic index that captures Hispanic cultural norms. Thus,

⁸ Respondents self-identify as Latino/as or Hispanic.

⁹ We and the LNS use Hispanics and Latino/as interchangeably.

the altruistic, conventional specification of the migrant's utility is enhanced with the addition of the Hispanic cultural norm variable.

A utility maximization model is used to determine a migrant's optimal level of remittances (R^*). Controlling for personal characteristics and cultural norms, her utility level depends not only on her own consumption and leisure but also on the utility level of her family abroad. Likewise, the family's utility function depends on its own consumption, which increases when it receives remittances from a migrant relative. Remittances are endogenously determined and depend on cultural norms and a migrant's socioeconomic and personal characteristics, such as age, gender, income level, and marital status. More than altruism, the Hispanic index that is included as an argument in the model reflects how the cultural norms of being Hispanic or Latino/a affect remittance behavior.

When solving to find an optimal level of remittances, we find that a migrant's optimal level of remittances, R^* , depends on the relative importance that the Hispanic index plays in her utility, the share size of her family utility compared to her own utility, her propensity to remit, her income level, and relative importance of her propensity to remit, which is directly affected by the impact of the utility of the family abroad on her own. Likewise, her R^* is negatively impacted by the migrant's propensity to consume, the cost of her consumption basket, and the cost of remittances. An explicit layout of the framework can be found in [Appendix 2](#).

Empirical Strategy and Data

When transitioning to an empirical estimation, we estimated the probability of migrants giving remittances to their families in their countries of origin and which variables affect this likelihood. A logit equation is used to answer our research question and determine the marginal effects of each independent variable on either remitting or not remitting and frequency.

Our estimation equation can be summarized as

$$R(0, 1) = f(pf, se, HI, mc) + e \quad (1)$$

where

$R(0,1)$ is the probability that a migrant sends remittances to their home country;

pf is a vector of personal and family demographic characteristics such as age, gender, marital status, number of children (in the USA and abroad), and state of residence;

se is a vector of socioeconomic characteristics such as education level, household income level, employment status, and home ownership. It would be ideal to have access to an individual income variable with actual dollar values, but the LNS only provides a household income variable with seven predetermined income categories: less than \$15,000; between \$15,000 and \$25,000; between \$25,000 and \$35,000; between \$35,000 and \$45,000; between \$45,000 and \$55,000; between \$55,000 and \$65,000; and over \$65,000. Moreover, our education level index has five levels: (1) did not finish high school, (2) finished high school, (3) attended some college, (4) obtained a college degree, and (5) obtained an advanced degree;

HI is a Hispanic familism index (that ranges between 0 and 9) which captures how respondents identify with their Hispanic culture (as explained earlier). The higher HI , the stronger the migrant's ties with her culture and family;

mc is a vector of migrant characteristics such as country of origin (ancestry), years lived in the USA, citizenship status, and plans to return to country of origin; and e is an error term.

We anticipate that the likelihood of sending remittances increases when the migrant has children abroad, a higher Hispanic index, is employed, does not own a home in the USA, plans to return to their home country, has lived fewer years in the USS, and is not a US citizen. For the binary model, we use an item on the Latino National Survey (LNS) which asks: “How often do you send money (to your home country)?” to reflect the frequency of remitting. If the respondent answered ‘Never,’ our binary remittance variable equals zero and one otherwise. Table 1 provides descriptive summary statistics of the sample.

The Latino National Survey (LNS), one of the largest data sets of self-identified Latino/Hispanic residents in the USA, allows us to study the remittance behavior of Hispanics. This instrument sampled 11 million Hispanic households residing in areas where 87.5 % of the Hispanic population resided in the USA in 2006¹⁰. The survey consists of interviews that contained approximately 165 distinct items ranging from demographic to political attitudes and policy preferences. It also provides information on the migrants’ social and cultural views, reasons for coming to the USA, and their plans to go back.

In addition to analyzing the entire sample and controlling for personal and socioeconomic characteristics, subsamples that focused on gender, place of birth, and citizenship were also created. In particular, we were interested in becoming more familiarized with each subgroup and estimating and separating the effect of familism on remittance likelihood, frequency, and amount for men, women, US-born respondents, and US and non-US citizens. These categories are presented separately in columns of Table 1 (mean and standard deviation are included).

As can be seen in Table 1, nearly 52 % of the sample (5703 individuals) remitted an average of about \$371. The reported remittance amount varied sharply with standard deviations that were almost three times the mean values. The LNS question is (TRMONAMT): “What is the average amount you send each time?” Answers led to a wide range of values that too often were not consistent with reported income levels. Values were either overvaluations given reported income levels or undervaluations probably due to fear of perceived repercussions for transferring monies abroad. For a distribution of sent remittances, please refer to Appendix 3.

US-born Hispanics had the lowest likelihood of remitting (23 %), a result that is fairly consistent with expectations about the bonding with family left behind. Non-US-born, non-US citizens will have a larger probability of remitting to their homeland than US-born Hispanics who may have most of their family living with them or who may have assimilated into the American culture and may be second generation (or higher) Hispanic Americans. When they did, however, US-born Hispanics remitted a larger amount on average than their counterparts, perhaps reflecting a more advantageous socioeconomic status. Even when non-US citizens

¹⁰ Description of the data is found at the Inter-University Consortium for Political and Social Research, LNS 2006 Description and LNS, Executive Summary (<http://www.icpsr.umich.edu/icpsrweb/ICPSR/>).

Table 1 Sample summary statistics

Variable	All		All without kids abroad		US-born citizen		Non-US citizen without kids abroad		Female without kids abroad		Male without kids abroad	
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
Remittance (who remits)	0.515	0.50	0.486	0.50	0.233	0.42	0.711	0.453	0.469	0.499	0.506	0.500
Hispanic identity index	8.131	1.19	8.121	1.20	7.849	1.44	8.210	1.051	8.239	1.078	7.982	1.316
Age	38.41	12.14	38.52	12.34	38.12	12.92	35.36	10.76	38.94	12.13	38.02	12.57
Education level index	3.764	1.91	3.843	1.89	4.719	1.49	2.999	1.839	3.788	1.891	3.908	1.889
Household income index	2.531	2.03	2.621	2.05	3.535	2.04	1.646	1.599	2.340	1.991	2.951	2.061
% of men	0.469	0.50	0.460	0.498	0.473	0.499	0.464	0.499				
Observations	5703		3246		1634		2055		2834		2412	
Remittance amount (\$)	371.12	924.30	374.33	978.24	452.25	1525.84	349.87	752.64	272.87	723.90	484.77	1185.56
Observations	2938		2550		381		1462		1329		1221	

Source: 2006 LNS, authors' calculations

had no children abroad, over 71 % of these Hispanics sent remittances to their countries (51 % if male and 47 % if female).

Our Hispanic index averaged 8.1 for the entire sample (the maximum is 9), was statistically significant in all cases, was slightly smaller for US-born Hispanics (7.8), higher for non-US citizens who were female, and had significantly smaller standard deviations than our other variables.

Findings and Discussion

Our results suggest that Hispanic identity—measured as an index that includes the practice of speaking Spanish at home, identifying oneself as Hispanic or Latino/a, and believing that it is important to maintain a distinct Hispanic culture in the USA—is a statistically significant (1 %) explanatory variable that influences the probability of remitting. Specifically, a higher value of Hispanic identity increases the probability of sending remittances by 5.07 % for the entire sample. This percentage increases to 5.79 % if the sample is entirely male and smaller and decreases to 4.86 % if the sample is entirely female (see Table 2; row 1, first, sixth, and fifth columns, respectively).

Though having children abroad is certainly a reason to remit and a statistically significant variable, a higher Hispanic identity index increases the probability of remitting when there are no children outside of the USA for the entire sample (5.12 %) and controlling for citizenship status (4.94 % for US citizens and 3.19 % for non-US citizens, respectively). A stronger Hispanic index also increases the frequency of remitting by 13 % for the entire sample, 14.7 % for the male sample, and 15.2 % for the US citizen without a child abroad, further corroborating the importance of this index (see Table 3).

Naturally, not having income or being unemployed decreases the probability of remitting, as do a higher level of income and education, a result that has been shown in other empirical estimations. When looking at the entire sample, a higher level of household income decreases the probability and frequency of remitting by 1.65 and 4.47 %, respectively; a higher level of education also reduces the probability and frequency of remitting by 1.83 and 4.29 %, respectively. It is not uncommon for high income and well-educated Hispanics living in the USA to also have high income and well-educated relatives abroad who do not need any financial support. Also, renters, who are presumed to have a lower income level or may be unsure about permanently living in a specific town, remit with a higher likelihood and more frequently.

In addition to income levels, birthplace and the number of years residing in the USA also matter when remitting. Non-US-born Hispanics, regardless of US citizenship, and respondents who have lived fewer years in the USA have a higher probability and frequency of remitting money compared to US-born Hispanics who reside in the USA. For example, living one additional year in the USA reduces the probability and frequency of remitting by 7.04 and 14.8 %, respectively. This result is further enhanced if the sample is male, as males living one additional year in the USA are 15.4 % less likely to remit, but does not apply to females since this coefficient, though negatively signed, is statistically insignificant. A larger degree of assimilation to the US culture may be present the longer someone lives in the country, especially for males. Likewise, a foreign-born US citizen is 14.4 % more likely to remit—and will do so 54.3 % more

Table 2 Logit results on probability of sending remittances

Variables	(1) All	(2) No kids abroad	(3) Citizen no kids	(4) Non citizen no kids	(5) Female	(6) Male
Hispanic identity index	0.0507*** (0.00710)	0.0512*** (0.00728)	0.0494*** (0.00862)	0.0319*** (0.00841)	0.0486*** (0.0106)	0.0579*** (0.0105)
Age/10	0.0302 (0.0458)	0.0309 (0.0465)	-0.0772 (0.0583)	0.207*** (0.0542)	-0.0139 (0.0634)	0.122* (0.0715)
Age squared/100	-0.0097* (0.0056)	-0.0099* (0.0057)	0.0033 (0.0076)	-0.0281*** (0.0066)	-0.0052 (0.0079)	-0.0194** (0.0087)
Ln (years in the USA)	-0.0704*** (0.0156)	-0.0726*** (0.0163)		-0.109*** (0.0178)	-0.0238 (0.0212)	-0.154*** (0.0279)
Household size	0.0175*** (0.0054)	0.0194*** (0.0055)	0.0260*** (0.0065)	0.00827 (0.0063)	0.0305*** (0.0075)	0.0074 (0.0084)
Have kids abroad	0.209*** (0.0301)					
Education	-0.0183*** (0.00502)	-0.0177*** (0.00517)	-0.0147* (0.0076)	-0.0156*** (0.0056)	-0.0118* (0.0070)	-0.0245*** (0.0079)
Household income	-0.0165*** (0.0051)	-0.0167*** (0.0052)	-0.0105* (0.0061)	-0.0181*** (0.0060)	-0.0119* (0.0072)	-0.0228*** (0.0077)
Citizenship status						
Puerto Rican-born	-0.0461 (0.0513)	-0.0387 (0.0515)			-0.0288 (0.0664)	-0.0592 (0.0843)
Foreign-born citizen	0.144*** (0.0330)	0.143*** (0.0349)		-0.0421* (0.0227)	0.193*** (0.0463)	0.0497 (0.0568)
Foreign-born noncitizen	0.226*** (0.0382)	0.219*** (0.0400)			0.302*** (0.0517)	0.0808 (0.0662)

Table 2 (continued)

Variables	(1) All	(2) No kids abroad	(3) Citizen no kids	(4) Non citizen no kids	(5) Female	(6) Male
Housing						
Other setting	-0.0820 (0.0530)	-0.0947* (0.0534)	-0.0733 (0.0467)	-0.0922 (0.0666)	-0.0617 (0.0698)	-0.1135 (0.0873)
Rental	0.0539*** (0.0187)	0.0442** (0.0192)	-0.00467 (0.0241)	0.0627*** (0.0212)	0.0300 (0.0258)	0.0639** (0.0294)
Ancestry						
Colombia	-0.00300 (0.0536)	0.00319 (0.0555)	0.100 (0.150)	-0.0433 (0.0570)	0.0523 (0.0716)	-0.0664 (0.0924)
Cuba	-0.0206 (0.0470)	-0.0326 (0.0475)	-0.0131 (0.0621)	-0.0499 (0.0545)	0.0205 (0.0692)	-0.0879 (0.0677)
Dominican Republic	0.0594 (0.0410)	0.0521 (0.0429)	0.0178 (0.0693)	0.0173 (0.0445)	0.0968* (0.0556)	0.00338 (0.0723)
Do not know	-0.0587 (0.153)	-0.0815 (0.154)	-0.0881 (0.102)	-0.105 (0.269)	-0.0735 (0.179)	-0.0200 (0.319)
Ecuador	0.0951 (0.0736)	0.125 (0.0804)	0.580*** (0.208)	0.0327 (0.0757)	0.188* (0.112)	0.0703 (0.115)
Other South American	-0.00226 (0.0602)	-0.0130 (0.0613)	0.461* (0.271)	-0.0715 (0.0638)	-0.103 (0.0725)	0.214** (0.0877)
Peru	0.0966 (0.0753)	0.0881 (0.0788)	0.397 (0.265)	0.00446 (0.0754)	0.200** (0.0976)	-0.108 (0.120)
Puerto Rico	-0.0517 (0.0435)	-0.0566 (0.0432)	-0.0222 (0.0380)	-0.177 (0.244)	0.00964 (0.0594)	-0.152** (0.0646)
Central America	0.183***	0.179***	0.247***	0.122***	0.186***	0.181***



Table 2 (continued)

Variables	(1) All	(2) No kids abroad	(3) Citizen no kids	(4) Non citizen no kids	(5) Female	(6) Male
Marital status						
Divorced (0,1)	0.0283 (0.0384)	(0.0309)	(0.0937)	(0.0271)	(0.0440)	(0.0440)
Married (0,1)	0.0384 (0.0350)	0.0339 (0.0365)	0.0338 (0.0483)	0.0303 (0.0424)	0.0621 (0.0457)	0.0431 (0.0634)
Married spouse apart (0,1)	0.0492** (0.0222)	0.0492** (0.0227)	0.0146 (0.0267)	0.0446* (0.0270)	0.0966*** (0.0302)	0.0132 (0.0360)
Not married with family (0,1)	0.103** (0.0406)	0.100** (0.0439)	0.131* (0.0767)	0.0682 (0.0448)	0.170*** (0.0529)	0.0104 (0.0776)
Widowed (0,1)	0.0821** (0.0355)	0.0787** (0.0374)	0.0653 (0.0579)	0.0598 (0.0384)	0.133*** (0.0485)	0.0590 (0.0601)
Male (0,1)	-0.0206 (0.0699)	-0.00697 (0.0711)	0.0159 (0.127)	0.00826 (0.0770)	0.0251 (0.0855)	0.000148 (0.137)
Employment status						
Part-time worker (0,1)	0.0466*** (0.0167)	0.0355** (0.0172)	-0.00768 (0.0210)	0.0570*** (0.0195)		
Not in the labor force (0,1)	-0.0455* (0.0232)	-0.0484** (0.0236)	0.0155 (0.0289)	-0.0716** (0.0286)	-0.0662** (0.0300)	-0.0200 (0.0393)
Unemployed (0,1)	-0.117*** (0.0254)	-0.112*** (0.0252)	-0.0504 (0.0318)	-0.107*** (0.0316)	-0.129*** (0.0289)	-0.0548 (0.0554)
Respondent's state						
Arkansas	-0.129*** (0.0293)	-0.121*** (0.0294)	-0.0518 (0.0357)	-0.136*** (0.0371)	-0.142*** (0.0326)	-0.0553 (0.0676)
	0.0701	0.0676	0.108	0.00870	0.0265	0.120

Table 2 (continued)

Variables	(1) All	(2) No kids abroad	(3) Citizen no kids	(4) Non citizen no kids	(5) Female	(6) Male
Arizona	(0.0520) -0.174***	(0.0546) -0.177***	(0.0882) -0.0560	(0.0604) -0.234***	(0.0770) -0.204***	(0.0758) -0.136*
California	(0.0486) -0.0269	(0.0468) -0.0328	(0.0482) -0.0149	(0.0671) -0.0483	(0.0596) -0.0875	(0.0751) 0.0446
Colorado	(0.0431) -0.108**	(0.0437) -0.123**	(0.0503) -0.0442	(0.0528) -0.153**	(0.0596) -0.138*	(0.0635) -0.0929
Connecticut	(0.0531) -0.0554	(0.0522) -0.0616	(0.0530) 0.00590	(0.0728) -0.0715	(0.0715) -0.0990	(0.0781) 0.0128
Florida	(0.0601) -0.0617	(0.0606) -0.0576	(0.0777) 0.0190	(0.0874) -0.0929	(0.0792) -0.117*	(0.0948) 0.0242
Georgia	(0.0502) 0.0499	(0.0506) 0.0319	(0.0733) 0.119	(0.0630) -0.0353	(0.0663) 0.0141	(0.0772) 0.0568
Illinois	(0.0554) 0.0872*	(0.0578) 0.0772	(0.0957) 0.140*	(0.0662) -0.0131	(0.0810) 0.0357	(0.0844) 0.124*
Massachusetts	(0.0459) -0.0576	(0.0482) -0.0633	(0.0767) 0.151	(0.0568) -0.0979	(0.0702) -0.0460	(0.0653) -0.125
Maryland	(0.0601) -0.0202	(0.0606) -0.0227	(0.116) 0.0623	(0.0833) -0.0644	(0.0820) -0.0695	(0.0926) 0.00307
North Carolina	(0.0669) 0.0420	(0.0686) 0.0467	(0.129) 0.0588	(0.0778) 0.0202	(0.0946) 0.0876	(0.1101) 0.0185
New Jersey	(0.0550) 0.0669	(0.0578) 0.0667	(0.0926) -0.0240	(0.0617) 0.0955*	(0.0849) 0.0837	(0.0812) 0.0637
	(0.0555)	(0.0580)	(0.0720)	(0.0577)	(0.0809)	(0.0856)

Table 2 (continued)

Variables	(1) All	(2) No kids abroad	(3) Citizen no kids	(4) Non citizen no kids	(5) Female	(6) Male
New Mexico	-0.153*** (0.0510)	-0.169*** (0.0487)	-0.0714* (0.0433)	-0.190** (0.0761)	-0.169*** (0.0636)	-0.183** (0.0775)
Nevada	0.0148 (0.0509)	0.000538 (0.0521)	-0.00130 (0.0698)	-0.0317 (0.0594)	0.0646 (0.0764)	-0.0468 (0.0728)
New York	0.0302 (0.0511)	0.0329 (0.0528)	0.0615 (0.0772)	0.000636 (0.0620)	-0.00643 (0.0732)	0.0766 (0.0773)
Rhode Island	-0.0345 (0.0586)	-0.0402 (0.0594)	-0.00110 (0.0934)	-0.0378 (0.0706)	-0.0739 (0.0780)	-0.00724 (0.0939)
Texas	-0.120*** (0.0447)	-0.129*** (0.0439)	-0.0547 (0.0444)	-0.158*** (0.0599)	-0.115* (0.0609)	-0.152** (0.0649)
Virginia	-0.000746 (0.0744)	-0.0140 (0.0754)	-0.0117 (0.113)	-0.0268 (0.0849)	-0.0290 (0.106)	-0.0480 (0.112)
Washington	-0.0689 (0.0513)	-0.0614 (0.0520)	-0.00126 (0.0630)	-0.0893 (0.0653)	-0.120* (0.0684)	0.0205 (0.0772)
Observations	5703	5246	1634	3191	2834	2412
Pseudo R-squared	0.221	0.200	0.141	0.112	0.178	0.249

Standard errors in parentheses

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

Table 3 Tobit results on remittance frequency

Variables	(1) All	(2) No kids abroad	(3) Citizen no kids	(4) Non citizen no kids	(5) Female	(6) Male
Hispanic identity index	0.130*** (0.0155)	0.130*** (0.0159)	0.152*** (0.0252)	0.111*** (0.0240)	0.118*** (0.0233)	0.147*** (0.0218)
Age/10	0.0605 (0.0995)	0.0536 (0.101)	-0.257 (0.170)	0.615*** (0.152)	-0.0520 (0.141)	0.255* (0.146)
Age squared/100	-0.0233* (0.0123)	-0.0225* (0.0125)	0.0128 (0.0220)	-0.0868*** (0.0186)	-0.0115 (0.0175)	-0.0436** (0.0180)
Ln(Years in the U.S.)	-0.148*** (0.0310)	-0.157*** (0.0333)		-0.330*** (0.0457)	-0.0562 (0.0463)	-0.263*** (0.0485)
Household size	0.0395*** (0.0114)	0.0421*** (0.0117)	0.0780*** (0.0195)	0.0158 (0.0173)	0.0633*** (0.0165)	0.0216 (0.0167)
Have kids abroad	0.468*** (0.0708)					
Education	-0.0429*** (0.0106)	-0.0425*** (0.0110)	-0.0467** (0.0224)	-0.0503*** (0.0153)	-0.0281* (0.0152)	-0.0581*** (0.0158)
Household income	-0.0447*** (0.0111)	-0.0439*** (0.0113)	-0.0450** (0.0184)	-0.0515*** (0.0172)	-0.0296* (0.0159)	-0.0597*** (0.0161)
Citizenship status						
Puerto Rican Born	-0.0189 (0.114)	-0.0228 (0.115)			-0.0307 (0.151)	0.0778 (0.186)
Foreign Born Citizen	0.543*** (0.0877)	0.477*** (0.0897)		-0.198*** (0.0630)	0.562*** (0.128)	0.401*** (0.127)
Foreign Born Non Citizen	0.744*** (0.0918)	0.666*** (0.0976)			0.822*** (0.139)	0.502*** (0.137)

Table 3 (continued)

Variables	(1) All	(2) No kids abroad	(3) Citizen no kids	(4) Non citizen no kids	(5) Female	(6) Male
Housing						
Other Setting	-0.0752 (0.115)	-0.110 (0.118)	-0.230 (0.171)	-0.0900 (0.177)	-0.0557 (0.159)	-0.156 (0.179)
Rental	0.153*** (0.0409)	0.130*** (0.0420)	0.00745 (0.0727)	0.234*** (0.0601)	0.108* (0.0573)	0.169*** (0.0616)
Ancestry						
Colombia	0.0361 (0.120)	0.0375 (0.125)	0.416 (0.438)	-0.116 (0.152)	0.163 (0.171)	-0.0938 (0.189)
Cuba	-0.0826 (0.102)	-0.0917 (0.103)	0.000672 (0.191)	-0.205 (0.140)	0.0241 (0.158)	-0.197 (0.135)
Dominican Republic	0.150 (0.0936)	0.123 (0.0964)	0.0316 (0.203)	0.0728 (0.127)	0.231* (0.132)	0.0358 (0.149)
Don't Know	-0.206 (0.312)	-0.277 (0.312)	-0.459 (0.363)	-0.424 (0.612)	-0.171 (0.378)	-0.400 (0.586)
Ecuador	0.224 (0.166)	0.285 (0.186)	1.775* (0.913)	0.0726 (0.217)	0.384 (0.281)	0.221 (0.248)
Other South American	-0.0647 (0.130)	-0.0826 (0.131)	1.093 (0.744)	-0.336** (0.152)	-0.254 (0.156)	0.382 (0.256)
Peru	0.314* (0.188)	0.283 (0.188)	1.306 (0.810)	0.0961 (0.218)	0.678** (0.285)	-0.256 (0.225)
Puerto Rico	-0.124 (0.0949)	-0.134 (0.0943)	-0.0316 (0.118)	-0.374 (0.570)	0.0240 (0.136)	-0.336*** (0.129)
Central America	0.424*** (0.0949)	0.435*** (0.0943)	0.675*** (0.118)	0.451*** (0.570)	0.471*** (0.136)	0.415*** (0.129)

Table 3 (continued)

Variables	(1) All	(2) No kids abroad	(3) Citizen no kids	(4) Non citizen no kids	(5) Female	(6) Male
Marital status	(0.0702)	(0.0760)	(0.248)	(0.0937)	(0.113)	(0.102)
Divorced (0,1)	0.0992 (0.0810)	0.0871 (0.0836)	0.122 (0.138)	0.0848 (0.129)	0.167 (0.109)	0.126 (0.142)
Married (0,1)	0.114** (0.0468)	0.116** (0.0482)	0.0360 (0.0798)	0.139* (0.0722)	0.265*** (0.0667)	-0.0113 (0.0717)
Married Spouse Apart (0,1)	0.286*** (0.0984)	0.299*** (0.108)	0.413** (0.209)	0.276* (0.149)	0.518*** (0.150)	0.0593 (0.158)
Not Married with Family (0,1)	0.154** (0.0787)	0.165** (0.0832)	0.173 (0.159)	0.148 (0.115)	0.382*** (0.122)	0.00623 (0.117)
Widowed (0,1)	-0.0396 (0.154)	0.00607 (0.162)	-0.0493 (0.340)	0.0878 (0.244)	0.0992 (0.204)	0.0442 (0.303)
Male (0,1)	0.123*** (0.0360)	0.0940** (0.0371)	-0.0181 (0.0627)	0.199*** (0.0546)		
Employment status						
Part-time Worker (0,1)	-0.102** (0.0476)	-0.103** (0.0494)	0.0506 (0.0846)	-0.197*** (0.0713)	-0.141** (0.0643)	-0.0398 (0.0776)
Not in the labor Force (0,1)	-0.277*** (0.0515)	-0.262*** (0.0524)	-0.127 (0.102)	-0.335*** (0.0765)	-0.281*** (0.0616)	-0.201* (0.111)
Unemployed (0,1)	-0.281*** (0.0571)	-0.275*** (0.0594)	-0.157 (0.118)	-0.390*** (0.0834)	-0.296*** (0.0686)	-0.191 (0.128)
Respondent's state						
Arkansas	0.0989	0.0974	0.273	-0.0143	0.0226	0.206

Table 3 (continued)

Variables	(1) All	(2) No kids abroad	(3) Citizen no kids	(4) Non citizen no kids	(5) Female	(6) Male
Arizona	(0.115) -0.348***	(0.118) -0.362***	(0.235) -0.156	(0.157) -0.556***	(0.162) -0.445***	(0.174) -0.241
California	(0.0971) -0.0961	(0.0975) -0.105	(0.163) -0.0699	(0.137) -0.160	(0.129) -0.248**	(0.149) 0.0865
Colorado	(0.0888) -0.263**	(0.0902) -0.308***	(0.152) -0.181	(0.128) -0.395**	(0.121) -0.362**	(0.135) -0.207
Connecticut	(0.104) -0.165	(0.104) -0.174	(0.167) -0.0814	(0.156) -0.225	(0.146) -0.291*	(0.151) 0.0235
Florida	(0.118) -0.116	(0.122) -0.112	(0.217) 0.0147	(0.200) -0.185	(0.157) -0.274**	(0.198) 0.0917
Georgia	(0.102) 0.0615	(0.105) 0.0365	(0.206) 0.317	(0.148) -0.118	(0.136) -0.0206	(0.164) 0.101
Illinois	(0.117) 0.221**	(0.120) 0.192*	(0.257) 0.371*	(0.158) 0.00963	(0.168) 0.0744	(0.171) 0.330**
Massachusetts	(0.112) -0.140	(0.112) -0.158	(0.204) 0.318	(0.150) -0.265	(0.155) -0.135	(0.161) -0.274
Maryland	(0.120) -0.0417	(0.123) -0.0444	(0.290) 0.160	(0.188) -0.170	(0.169) -0.165	(0.173) 0.0290
North Carolina	(0.130) 0.0563	(0.136) 0.0473	(0.356) 0.0929	(0.177) 0.0170	(0.190) 0.0163	(0.190) 0.103
New Jersey	(0.115) 0.127	(0.119) 0.133	(0.245) -0.113	(0.160) 0.302	(0.171) 0.129	(0.167) 0.158
	(0.127) (0.127)	(0.131) (0.131)	(0.218) (0.218)	(0.195) (0.195)	(0.181) (0.181)	(0.192) (0.192)

Table 3 (continued)

Variables	(1) All	(2) No kids abroad	(3) Citizen no kids	(4) Non citizen no kids	(5) Female	(6) Male
New Mexico	-0.328*** (0.101)	-0.355*** (0.101)	-0.251* (0.146)	-0.348** (0.170)	-0.358*** (0.135)	-0.374** (0.151)
Nevada	0.0285 (0.110)	-0.0117 (0.110)	0.0181 (0.212)	-0.0948 (0.148)	0.0963 (0.168)	-0.0827 (0.144)
New York	0.0444 (0.110)	0.0487 (0.113)	0.112 (0.206)	0.00406 (0.162)	-0.0733 (0.151)	0.181 (0.169)
Rhode Island	-0.101 (0.117)	-0.104 (0.121)	-0.0199 (0.282)	-0.141 (0.171)	-0.205 (0.158)	0.00706 (0.188)
Texas	-0.281*** (0.0876)	-0.307*** (0.0878)	-0.180 (0.145)	-0.434*** (0.126)	-0.276** (0.125)	-0.356*** (0.122)
Virginia	0.0248 (0.151)	0.0131 (0.156)	0.00572 (0.347)	0.00148 (0.212)	-0.0548 (0.224)	-0.0192 (0.206)
Washington	-0.163 (0.103)	-0.157 (0.106)	0.00687 (0.189)	-0.264* (0.148)	-0.324** (0.138)	0.0704 (0.165)
Observations	5703	5246	1634	3191	2834	2412
Pseudo R-squared	0.106	0.0962	0.0817	0.0491	0.0833	0.122

Standard errors in parentheses

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$

frequently—than a US-born Hispanic, while a foreign-born non-US citizen is 22.6 % more likely to remit and will do so 74.4 % more frequently than a US-born Hispanic.

When analyzing the 2006 LNS sample by country of origin or region and state of residence, we find that, compared to Mexicans, Central Americans are over 18 % more likely to remit and over 42 % more frequently. Remittances in some Central American countries significantly contribute to their economies. For example, remittances in El Salvador were one sixth of its GDP (Anzoategui et al. 2011; World Bank 2013). Moreover, compared to the state of Iowa¹¹, residents of Arizona, Colorado, New Mexico, and Texas are less likely to remit and do so less frequently. This result suggests that states with a high proportion of Hispanics may have more organized diasporas and relatives living in the USA thus reducing the need to send remittances. Also, it is noteworthy that the coefficients on Perú and Central American countries are positive and statistically significant in contrast to other countries where coefficients are not (with positive or negative sign). This finding may illustrate the fact that migrants from these countries have moved to the USA for economic reasons and hold strong values of familism affecting their remittance behavior.

By linking and including cultural identity as a proxy for a familism index that serves as an additional explanatory variable and reason to remit, we suggest that transnational bonding and systems of support go beyond altruism and migrants' socioeconomic personal characteristics. As more comprehensive datasets with targeted questions that are not usually asked surface, it will be easier to construct a richer and more precise familism index.

Conclusion

Using the LNS (2006) survey, the most comprehensive instrument on Hispanics in the USA describing a range of indicators from socioeconomic and demographic to political attitudes, we show that it is not possible to reject the hypothesis that Hispanic identity reflecting cultural norms affects remittance behavior. This finding is consistent with behavioral science literature in which subjugation of self to family and tight social networks are high among Hispanics and affect cultural, economic, emotional, and social responses.

To construct a Hispanic identity index, we used three survey items that measure how strongly respondents identify as “Hispanics” or “Latino/as”, how important is maintenance of their distinct culture, and how important is the use of Spanish at home. We estimated a logit remittance equation controlling for our Hispanic identity index and other personal characteristics. Our findings consistently show that the probability and frequency of remitting increase with higher levels of Hispanic identity that is stronger among males, renters, foreign-born and non-US citizens, and migrants with fewer years of residence in the USA. Furthermore, compared to Mexicans, Central Americans and Peruvians are more likely to remit and remit more frequently. Being unemployed, living

¹¹ STATA randomly chose Iowa as the baseline state. However, compared to AZ, CO, NM, and TX, Iowa has a small, but increasing, percentage of Hispanics (under 6 % according to the Pew Hispanic Center).

more years in the USA, and being more educated reduce both the probability and frequency of remitting.

We have reinterpreted that remitting is an expression of bonding and care for family left behind as more than 71 % of respondents of any gender remit because they care. This cultural characteristic had been omitted in labor migration economic studies that define remitting behavior as being solely determined by economic motives. It is possible that the influence of cultural values may also be important in helping explain remittances in other national groups residing in the USA, for example, Southeast Asian and sub-Saharan migrants. We look forward to exploring this subject further and to find additional links between cultural norms and identity on one side and remittance behavior on the other.

To support the increased transnationalism of Hispanic families, public policies should attempt to further reduce the transaction costs of remittances and provide opportunities for collective remittances such as the 3×1 programs in Mexico. In the latter, home associations remittances are matched by the Mexican government (federal or local), Western Union (a remittance operator), and international financial institutions such as the World Bank and the IADB (InterAmerican Development Bank).

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Appendix 1: Hispanic index frequency distribution and correlation coefficient matrix

Hispanic index=Hispanic identity+distinct culture+speak Spanish

Key Variables:

Hispanic identity (LAIDENT)

[In general,] how strongly or not do you think of yourself as Hispanic or Latino?

0=Not at all

1=Not very strongly

2=Somewhat strongly

3=Very strongly

Distinct Culture (DISTINCT)

[In general,] how important is it for you and your family to maintain your distinct cultures?

0=Not at all

1=Not very important

2=Somewhat important

3=Very important

Speak Spanish at home (KEEPSPAN)

[In general], how important do you think it is for you or your family to maintain the ability to speak Spanish at home?

- 0=Not at all important
- 1=Not very important
- 2=Somewhat important
- 3=Very important

	Keep Spanish		Latino identity		Distinct culture	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Not at all important (0)	58	1.02	179	3.14		
Not very important (1)	109	1.91	331	5.8	157	2.75
Somewhat important (2)	668	11.71	1416	24.83	968	16.97
Very important (3)	4868	85.36	3777	66.23	4578	80.27
Total	5703	100	5703	100	5703	100

Index	Freq.	Percent
1	3	0.05
2	8	0.14
3	21	0.37
4	52	0.91
5	136	2.38
6	357	6.26
7	720	12.62
8	1436	25.18
9	2970	52.08
Total	5703	100.00

Correlation coefficient matrix

	Keep Spanish	Hispanic identity	Distinct culture
Keep Spanish	1		
Hispanic identity	0.176	1	
Distinct culture	0.239	0.162	1

Appendix 2: A utility maximization analytical framework

A utility maximization model is used to determine a migrant’s optimal level of remittances (R^*). Controlling for personal characteristics (vector Z), their utility or satisfaction level (U_M) not only depends on his or her own consumption (X) and leisure levels (N) but also on the utility level of their family abroad (U_F).

(1) $U_M = U_M [X_M, N, U_F, Z]$

Likewise, the family’s utility function (U_F) depends on their own consumption levels, which increase when they receive remittances from

their migrant relative. Remittances are endogenously determined and depend on the Hispanic migrant’s socioeconomic and personal characteristics, such as age, gender, income level, marital status, and familism (F_H). We theoretically and empirically construct a Hispanic identity index that links and relates familism to cultural identity, specifically, identifying as a Hispanic, Latino/a, or from their country of origin in the USA (H), believing it is important to maintain a Hispanic culture in the USA (C), and believing that it is important to speak Spanish at home (S)

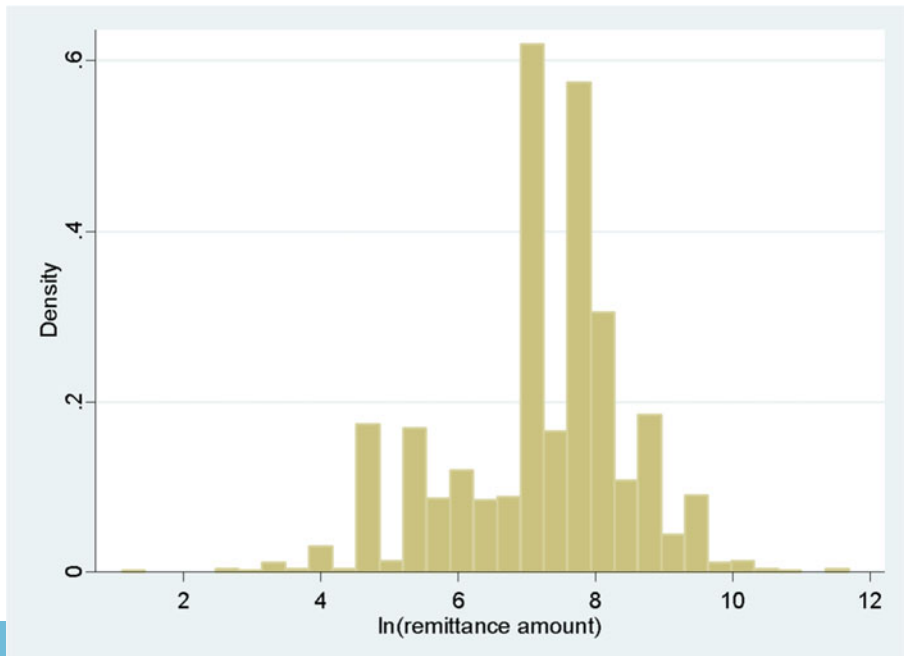
(2) $F_H = F_H(H, C, S)$

When solving to find an optimal level of remittances, R^* , we find that a migrant’s optimal level of remittances, R^* , depends on the relative importance that familism plays in her utility, $\delta U_M / \delta F_H$, the share size of her family utility compared to her own utility (γ), her propensity to remit (φ), her income level (M), and relative importance of her propensity to remit, which is directly impacted by how U_F can positively affect U_M . Likewise, her R^* is negatively impacted by the migrant’s propensity to consume (α), the cost of her consumption basket (p , a proxy for inflation), and the cost of remittances ($1+c$).

(3) $R^*(F_H, U_F, \alpha, \gamma, \varphi, p, c) = M[\delta U_M / \delta F_H] U_F(\gamma\varphi) / (\alpha p + \gamma\varphi)(1+c)$

Appendix 3: Remittance amount histogram

(Natural log of the values of sent remittances).



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