

The informal financial sector in the U.S.: The role of remittances[☆]

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Abstract

We investigate the interdependence between being unbanked and the decision to remit. Using data from our survey of the low-to-moderate-income (LMI) Hispanic community in a major U.S. metropolitan area, we find that higher income, more education, and greater proficiency in English decrease the probability of being unbanked. A key result is the positive correlation between latent factors that affect the decisions to remit money and to be unbanked. The presence of both institutional and self-selection factors in the decision to not open a bank account sheds light on the kind of policies that need to be implemented to bring the unbanked into the financial mainstream.

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1. Introduction

Debates about “financial exploitation of the poor” in the U.S. are again appearing in the mainstream press and popular literature. A recent line of literature documents the extent to which poor, ethnic groups are unbanked in the U.S., examines the reasons for being “unbanked,” and discusses the damage caused by the use of the informal financial sector to the poor and to their widespread

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communities.¹ In this paper we focus on the low-to-moderate-income (LMI) Hispanic community in Orange County, California, and examine why they have large proportions of unbanked, particularly when remittance considerations are incorporated. We highlight the role of self-selection (demand) factors and institutional (supply) factors underlying a person's being unbanked.

The Survey of Consumer Finances, conducted nationally on a triennial basis, shows a significant proportion of the U.S. population remains unbanked, although the total percentage appears to be decreasing over time. In 2004, 8.7% of U.S. families had no transaction account, while 10.6% were without a checking account (Bucks, Kennickell, & Moore, 2006). Among the families without a checking account in 2004, 55.1% had incomes in lowest 20% of that distribution, 56.6% were cases where the family head was younger than 45, and 61% were nonwhite or Hispanic. According to Rhine, Greene, and Toussaint-Comeau (2006), 24.3% of Hispanics in a six county area of Chicago were unbanked. In Rhine's survey, a large proportion (51.5%) of the Hispanics lived in low-to-moderate-income tracts.

Financial informality is a logical decision for some people, but this choice is seen as perpetuating poverty for several reasons. First, the high cost of check-cashing through the informal sector (relative to banks) is seen as a drain on the already-low incomes of the poor. Good (1999) notes that if an individual cashed three checks per month and purchased three money orders for bill-paying, he or she could pay as much as \$26.50 per month, compared to a fee of under \$10 for a low cost checking account at a bank. [For other comparisons see Green and Leichter (1998), Caskey (1997), Carr and Kolluri (2001), and Doyle et al. (1998).] This means that families without a bank account pay \$15,000 fees over a lifetime to check cashers/fringe bankers (Hawke, 2000). Furthermore, the annualized interest rates charged by check-cashing outlets range from 213% to 913% (Good, 1999).

Second, the poor lose the opportunity to save and establish a financial history. Formal bank accounts are often dubbed the "gateway to economic mobility" and "access to credit and the new economy" (Gensler, 2000); savings accounts can provide cushion for short-term shocks, long-term needs, and help acquisition of larger assets. But people without bank accounts are less likely to hold savings or have positive net financial assets (Kim, 2001; US Department of Treasury, 2000). The formal financial system provides more access to convenient technologies such as ATMs, avenues of consumer redress through regulators, and account insurance (Rhine et al., 2006). Additionally, the unbanked miss the chance to establish financial records which could enable them to obtain more affordable credit terms. This is particularly important in the era of risk-based pricing for credit products (Hogarth & O'Donnell, 2000). Bowdler (2005) notes that low-income Hispanics lack access to mainstream lenders and find themselves with high-cost loans that are not warranted by their actual level of risk.

Finally, the community-wide impacts of the unbanked sector are a topic of growing concern. Communities with well-functioning financial markets are more resilient against economic downturns and can take better advantage of economic growth (Rhine et al., 2006). Money that the unbanked households send as remittances to other countries could be seen as a leakage loss to the local economies where immigrants live (De la Garza & Lowell, 2002). However, migrant expenditures in the local economy are injections with multiplier effects that benefit the region.

Given these adverse consequences of the use of the informal sector, our paper contributes to the literature on the unbanked in the U.S. by testing for the presence of an interlink between

¹ By the "unbanked" we refer to those who do not have any kind of an account at a deposit institution and are thus outside the financial mainstream. The informal or "fringe" banking sector refers to check-cashing centers (CCCs), grocery/liquor stores, pawnshops and other locations where financial services are available to those without a bank account.

the decision to remit and the decision to use the informal sector. Our study is based on a 2002 sample of 217 low-to-moderate-income Hispanic individuals in Orange County, California. The Hispanic population is the largest minority group (30.76%) of Orange County's population. It is also the fastest growing subgroup which constitutes an integral part of the county's workforce. In the interest of the economic stability and vitality of this community it is important that larger proportions of the unbanked be incorporated in the financial mainstream.

Our paper examines the causes for being unbanked with a view to determining whether the reasons for being unbanked arise primarily because of institutional constraints such as stringent identification (ID) requirements to open an account (supply of financial services), or because of lack of motivation to have a bank account (demand for financial services). Exploring the link between not having identification and bank account non-availability is important in the context of pressing policy debates on the provision of ID cards for undocumented immigrants and in the context of immigration policy that considers whether millions of illegal workers could be put on the path to legalization.

In what follows we discuss the literature on informal financial institutions in Section 2. Debates about the problems with (and logic of) "financial informality" actually hearken back to an earlier strand of literature in development economics. In Section 3, we discuss the presence of the informal sector in Orange County, California. We use local data on fees in banks and the informal sector to show that it can very well be the case that the unbanked *perceive* banks to be more expensive for some services, providing support to a model of joint determination between remittances and lack of account. We then discuss our survey methodology and sample characteristics.

In Section 4 we present our empirical methodology. We note that most existing literature does not focus enough on the remittance decisions of immigrants. Uniquely, the data in our analysis allows for an investigation into the decision to be unbanked for lower-income immigrants making remittances. Accordingly, we lay out a framework for a bivariate probit model to address whether the decision to send remittances to one's home country is made jointly with the decision to be unbanked. Section 5 presents the results of our paper. Regression estimates using a bivariate probit model demonstrate that the decisions to not open a bank account and remit money to family have some indirect linkages, so that banks should explore opportunities to provide low-cost services in this area. Section 6 presents our concluding remarks and policy implications.

2. The logic of informal financial institutions

Any financial institution can fill one or several important roles: as a means for cashing checks and receiving income or credit, a method for making payments, and as a store of savings (Dunham, 2001). Informal financial institutions (such as money lenders) existed even before formal banks provided these services, but the importance of banks in national growth drew attention to the importance of "deepening" of the formal financial sector. A well-functioning financial system could provide more investment capital for growth, with a clear link between a high financial ratio (the ratio of net financial assets to GNP) and economic development (Fry, 1995; McKinnon, 1973). A parallel literature in a neo-Marxian tradition pointed to the problems associated with "feudal" informal financial institutions with exorbitant interest rates and interlinked product and factor markets (Bhaduri, 1973).

Why are low-income individuals likely to be "unbanked" and use informal finance mechanisms? If the reason lies in "demand-side" factors, such as high costs of account ownership that do not make having a bank account worthwhile for those with low incomes, then increased bank competition and cheaper accounts should be promoted to increase access of the unbanked

into mainstream financial institutions. However, if “supply-side” or institutional factors are at stake—with certain groups necessarily excluded from banking—then the discussion should focus on the rationale and the sources of exclusion.

2.1. *Self-selection*

The demand-side analysis suggests informal financial transactions could simply be superior to services from formal banks in reducing transaction costs and managing risk, so people choose the informal option for their financial needs. Bond and Townsend (1996) highlight the benefits of informal finance which makes it appear “cheap” to certain people. They suggest that informal networks provide relationship-based financing on different criteria than do banks; for instance, personal or kinship ties provide information on creditworthiness, and the risks of ostracism can prevent loan default. An informal lender who knows his or her clientele well may enjoy cost advantages over a bank in information gathering, enforcement mechanisms, and risk sharing (i.e. lower transaction costs). Finally, informal financial markets often incorporate subtle forms of savings mobilization—such as the reliance on reciprocity networks and acceptance of different physical assets.

There are many reasons why those with low incomes may self-select to use the informal sector in the United States. First, some studies link the unbanked decision to household preferences and a mistrust of banks (Carr & Schuetz, 2001). Next, most consumers take their individual social and economic characteristics into account to weigh the relative costs and benefits of acquiring financial products in either the informal or formal sector. The costs include the explicit costs, such as fees, and implicit costs such as inconvenience of hours and location. Increasing costs of formal financial transactions—which occur because of a lower density of banks in low-income areas (Varma, 2004), the time delay in receiving money after depositing checks, high monthly bank fees, and the risk of large overdraft charges—may cause some people to avoid opening bank accounts (Dunham, 2001; Prescott & Tatar, 1999; Rhine et al., 2006). Under this logic, people writing very few checks per month, people needing immediate cash with few questions asked, and those maintaining a very low account balance would tend to lower their costs by using the informal sector.

Third, institutional innovations and competition have lowered the total cost, and increased the benefits, of the informal sector. Many check-cashing centers are open long hours and offer money orders, phone cards, stamps, and utility bill payment on site, thus reducing total time costs for patrons; additionally, free check cashing for preferred customers at grocery stores is increasingly common. So Gensler (2000) suggests that check-cashing outlets may not have as high explicit costs as previously estimated; recent US Department of Treasury research indicates that a minimum wage worker could pay only \$18 per month for cashing paychecks and purchasing money orders through check cashers, an amount which may not be that much above the monthly fee on some bank accounts. Likewise, Dunham (2001) calculates that the costs of being unbanked and using the informal sector for check cashing, bill-paying, and savings is quite low; most unbanked people in *states where regulations exist* have financial costs of less than \$25 per year in the informal sector, while less than 20% of those sampled would pay more \$100 per year.² This indicates why

² This considers that the average check-cashing fee is \$3.38 (1.1% of the value of the check). Low-income individuals sometimes pay more, and some of them cash checks at no cost at the bank that issued the check. Money order costs for paying of bills range about \$1 per order; most use only 25 per year.

self-selection motivations for choosing the informal sector arise. Additionally, only 30% of the unbanked reported any form of savings (compared to 78% of those with bank accounts), including immigrants who reported storing savings in their home countries.

Holding savings abroad is a growing phenomenon. In 2002 nearly \$10 billion of remittances reached Mexico from the U.S., with most immigrants averaging \$200–300 monthly (Cuevas, 2003; Suro, 2005). This could suggest savings options in a home country could be a *substitute* for interest earnings and other savings opportunities of a formal U.S. bank account. Immigrants anticipating short stays might not be concerned about asset building, compounding interest, or developing a credit history in the U.S. (Macias-Castillo, 2003). Many migrants retain membership in their household of origin and save through reciprocity networks. Remittances to family members help these migrants achieve altruism goals by allowing them to provide for the consumption needs of the family in exchange for emergency insurance and later care in old age (Agarwal & Horowitz, 2002; Rosenzweig, 1988). Some remittance flows are applied towards a savings vehicle (such as a house), in the country of their origin.

As a result, the consumer's decisions of not opening a bank account in the U.S. and remitting money to family abroad could be interdependent. In general, many respondents who send remittances do not have a bank account; the Pew Hispanic Center/Kaiser Family Foundation Survey of Latinos (2002/2003) showed that while 65% of the Latinos sampled had a bank account, only 57% of remittances senders were banked. A more recent study (Amuedo-Dorantes, Bansak, & Pozo, 2005) sampled migrant household heads as they returned to Mexico between 1992 and 2002. Only 14% of the sample had a U.S. bank account across the time period, with the average up to 35% by 2002. The banking proportion was even lower for those with illegal status and remittance senders. Only 10% of the sample used bank transfers to send money to their home country, although the percentage increases over time.

It appears reasonable that when making the banking decision individuals compare the explicit costs (fees) and implicit costs (inconvenience) of remitting money abroad through the formal and the informal sector. Generally the informal sector is more convenient for sending money abroad since wire transfer or courier points are available at many locations in low-income neighborhoods and are open at convenient hours, often with helpful Spanish-speaking staff. Data on fees for Orange County, California, in Table 1 suggest that the explicit fee charged *upfront* for remitting money through most banks was higher than that of the informal sector at the time of our study.³ But when the recipients of the remittance are charged additional fees or face unfavorable exchange rates, it can very well be the case that MTFs or “money transfer firms” (the informal sector) are actually more expensive relative to banks (Orozco, 2002). Nevertheless, cultural factors and the greater rural coverage of MTFs may cause some immigrants to continue favoring the informal sector for remitting (Amuedo-Dorantes et al., 2005).

2.2. Institutional factors

In addition to the self-selection route to being unbanked, there also exist institutional factors which prevent a person from obtaining a bank account *even if they wanted one*. Some economists (Stiglitz & Weiss, 1981) focus on market imperfections that force the poor into using the informal

³ More recently (after our study) some banks' attempts to lower the costs of remittance transfer fees have made them competitive with the informal financial sector (Cuevas, 2003). See also Orozco (2004). As an anonymous reviewer points out, this may be due to the U.S. Treasury lowering the ACH (automated clearing house) costs for money wire transfers, albeit a question remains as to whether banks have adequate coverage in the immigrants' home countries.

financial sector. Banks could deny accounts or loans to population subgroups since information asymmetries create adverse selection possibilities, and the costs of servicing this community are too high. Or banks could be denying credit to the poor due to small loan sizes, wide income risks, and high default rates (Tun Wai, 1955).

In the context of the U.S. some studies have made reference to this type of “rationing” and its mechanisms. First, legal requirements for identification to open an account have increased since the passage of the 2001 Patriot Act.⁴ For regulatory (or risk-based) reasons, institutions in the formal sector are less likely to supply accounts to people without appropriate documentation of identity or legal status. Second, as Gensler (2000) writes, 80% of U.S. depository institutions look up account applicants through online networks (i.e. ChexSystems⁵) that track checking and savings accounts previously closed “for cause” (i.e. bad checks); this could freeze individuals out of a formal bank account, when an individual is really not an undue risk to a financial institution. Third, minimum balance rules, although decreasing in frequency, block the poorest populations from opening an account. Fourth, although the cost of banking has fallen in recent years, informational asymmetries prevent some people from having a complete knowledge about relative prices across banks and the informal financial sector; the perception of high prices, rules and regulations in banks causes some people desiring an account to avoid applying for one.

For immigrants, stringent identification and/or legal status documentation requirements to open a bank account are particularly burdensome. Illegal status may immediately eliminate eligibility for many or raise fears associated with formal banking systems (Federal Reserve Bank of Chicago, 2003). In the 2002 Pew Survey of Latinos (PHC/KFF, 2002/2003), illegal status (and lack of documentation) was the top reason for being unbanked among 40% of the respondents; the second most important reason was financial, namely the minimum deposit requirement. A consular Matricula card verifying citizenship in the immigrant’s home country (but not legal immigration to the U.S.) is a partial solution to the ID requirement for opening a bank account. Some banks in California such as Wells Fargo, U.S. Bank, and Bank of America have accepted the Mexican Matricula consular ID since 2001 (and more recently the Guatemalan), but this option is not widely available for other immigrants and not available in many U.S. states. Finally, as Toussaint-Comeau and Rhine (2000) mention, immigrants may avoid U.S. banks since they have had little such experience in their country of origin, and they face “informational asymmetries” making them unaware of the security and financial benefits of U.S. bank accounts.⁶

In summary, we suggest several routes for becoming “unbanked” in the United States. Some groups are excluded from having bank accounts for lack of identification and other factors, while others may self-select into the informal financial sector. An observed positive correlation between remittance sending and being unbanked follows a self-selection interpretation of financial market trends, if the total higher cost of bank wire transfers (at least as perceived by the remitter) is an important reason the sampled group chose informal financial sector outlets. Additionally, a correlation between factors such as being paid in cash and informal sector reliance could indicate self-selection. On the other hand, if there is a positive correlation between being unbanked and

⁴ Williams (2003) mentions that the Customer Identification Program (CIP) Section 326 of the USA Patriot Act spells out the four types of ID now required to open an account: name, street address, tax ID or other number from government-issued ID document, and verification of the date of birth of person.

⁵ ChexSystems is a credit reporting agency that tracks a person’s banking history. Negative records can be kept in the database for up to 5 years.

⁶ Gavito Mohar (2003) reports that bank deposits as a share of GDP are only 20% in Mexico (versus 60% in the U.S.), while formal financial intermediaries serve only about 35% of the economically active population.

illegal status (lack of ID) or low income (the inability to acquire a minimum opening balance), institutional or supply-side factors may be behind the financial market trends of many Hispanics.

3. A recent Orange County study

3.1. Orange County and California setting

Orange County represents the fifth largest and one of the faster growing metropolitan areas in the U.S. with increasingly large Hispanic and Vietnamese immigrant populations. The banking habits of neither population have been examined in great detail. The county-specific trade-offs consumers face in choosing between formal and informal financial services provide the context for the actual trends in banking habits presented below.

Table 1 demonstrates the comparative costs of using check-cashing centers versus low-cost checking accounts in local banks. Here we consider the case of the average unbanked person in the sample who cashes checks worth \$11,000 per year and pays a few local bills using formal checks at banks or money orders through the informal financial sector (convenience stores/check-cashing centers).⁷ The person may need several financial products: traditional services such as check-cashing or bill-paying, and auxiliary financial services such as sending a remittance or payday advance services. The rates for cashing checks at CCCs are well below the legal limit in California, indicating a good deal of competition among CCCs; additionally services are available for persons without identification.⁸ Using a rate of 2% to cash checks at CCCs we find that the cost of cashing \$11,000 per year is \$220 per year. The annual cost of 60 money orders to pay bills (at 5 money orders per month at \$0.90 each) is \$54. Therefore, the total cost of using the informal sector (CCCs) to cash checks and pay bills is \$274 per year. The cost of using a bank for similar purposes ranges from \$0 to \$96 per year plus the cost of a check book of \$11, assuming no errors in managing personal budgets and no fees that are triggered from insufficient funds. The cost of using CCCs rises significantly for cashing private checks, and the cost of using banks rises when we consider overdraft fees and maintenance fees for those without direct deposit or a minimum balance. So a subgroup of people unable to maintain a minimum balance would favor the informal sector.

Additionally, the need for auxiliary financial services in the bottom of Table 1 could tilt those with low incomes to choose the local informal sector. Payday advances are more easily acquired informally, even though their rates may be exorbitant.⁹ Since a large proportion of the LMI Hispanic community remits to their home country, the relative price of remittance transfers enters the consumer's comparison of the relative costs and benefits of the informal and formal financial sectors. In 2002 it appears that the front-end cost of remitting through check-cashing centers was lower than that of banks in the county, and indeed they controlled most of the remittance market in 2002.¹⁰ The cost of remitting from banks varied from \$10 to \$40 at the time of the survey

⁷ This figure is based on the average monthly income of \$1377 of the unbanked individuals which has been converted to an annual rate under the assumption that the monthly salary is sustainable for 8 months of the year.

⁸ We assume that all the checks are government or payroll checks. According to CA Civil Code Section 1789.35, "A check casher shall not charge a fee for cashing a payroll check or govt check in excess of 3% if identification is provided by the customer, or 3.5% without the provision of identification, of the face value of the check, or \$3, whichever is greater." We find that many check-cashing outlets report charges less than the legal ceiling in the range of 1.85% to 2.5% for government checks and 4% for personal checks.

⁹ Payday lenders are alternative financial service providers primarily to LMI banked consumers who typically turn over a post-dated check from their account, which is later deposited by the payday lender as payment.

¹⁰ In the *Pew Hispanic Center* (2003) report, 70% of the remittance senders reported using Western Union, Money Gram or other informal sector channels to dispatch money.

(although it has fallen since then). Banco Popular's *Acesso Popular* and Wells Fargo's products have allowed its bank account holders to remit at much cheaper rates since 2002.

3.2. *The 2002 survey*

The results of this study are based on a survey of 217 Hispanic individuals in 21 cities in Orange County, California, over the period July–August 2002. We use a stratified random sample to investigate the banking habits of low-to-moderate-income (LMI) Hispanics in the county.¹¹ The proportions of Hispanic householders in each city were established from city-based proportions of the Hispanic population in Orange County from Census 2000.¹² Survey respondents, who were both male and female Hispanics of ages 18–64, answered 15 questions (in either Spanish or English) that dealt with socio-economic variables such as level of income, method of payment of income, expenditure patterns, banking attitude, age, English-speaking ability, and educational attainment. The survey respondents were anonymous, and no record was ever made of their names. The answers were recorded by the survey administrator, not the respondent, in order to minimize inconsistencies among respondents with regard to the interpretation of the questions.

The survey itself was administered randomly to every fourth person at locations consisting of 23 shopping centers and two church parking lots.¹³ The sampling frame of the survey introduces some degree of bias towards the poorer population; not all Hispanics in the county necessarily shop at these grocery stores or congregate, and it is more likely that more recent immigrants (rather than second-or-third generation Hispanics) would choose ethnic food stores. But this method was chosen because of our limited budget and since it was felt that a mail survey that relied on names from a consumer database (or voter registration lists) would oversample Hispanics with banking accounts and credit cards.

Thus, the survey represents the trends of low-to-moderate-income individuals, and all our respondents have an estimated annual family income of less than \$49,999.¹⁴ Reported monthly family income was annualized across 8 months for an estimated 1.87 persons per family based on Census 2000.¹⁵ The median family annual income in Orange County was \$64,611. The median estimated annual family income of our survey respondents was \$20,944. Using the Census 2000 income distribution of Hispanic families in the county, we calculate the median annual family

¹¹ The stratified sample design assigns population elements to a set of mutually exclusive and exhaustive strata subsets (Johnson and Rowe, 1987). Sample elements from each stratum are then selected by random sampling. Given a small research budget (the case of this study), such a strategy increases efficiency by building on prior knowledge, such as the distribution of residences (Cochran, 1977; Kalton, 1983).

¹² The cities which were left out were too small and/or did not have a large enough proportion of Hispanics.

¹³ The non-respondents who refused to participate appeared random, with a non-response rate of 15%.

¹⁴ Following the Federal Financial Institutions Examination Council (FFIEC) definitions, we consider our sample to be representative of low-to-moderate-income families only. This is because all of our respondents fall below an estimated annual family income of \$51,688 which is below 80% of the county median family income of \$64,611 for Orange County.

¹⁵ Using Table PCT 84 (Census 2000) which provides the family type by number of workers in the family for Hispanic families in Orange County, we calculate the estimated number of workers per Hispanic family to be 1.87. We choose to estimate family income rather than household income because Census 2000 does not have the equivalent of Table PCT 84 for households. We multiply monthly income by 8 to account for the fact that the occupations of most of the respondents in our sample (construction, carpentry, landscaping, painting, welding) did not appear to be sustainable for the entire year. These approximations are made *only* to compare our sample with that of Orange County Hispanics with respect to income since the county distribution of income is not available at the individual level. These approximations *do not affect* our empirical results because we use the individual's income in our regressions.

Table 1
Cost comparison in Orange County: Check-cashing centers vs. low cost checking accounts in banks

Criterion	Check-cashing centers	Low cost checking in banks
Identification	\$10 for issue of <i>optional</i> ID check-cashing fees are higher without ID	For opening an account: two valid forms of ID. Primary: State Driver's License or Matricula consular; and secondary: pay stub, car registration, credit card, utility bills, social services or work photo ID
Credit screening	Not applicable	Yes (evaluation of ChekSystems records for up to 5 years)
Minimum opening deposit	Not applicable	Ranges from check printing charge to \$100
Minimum balance	Not applicable	\$0–\$100
Traditional financial products (check-cashing, bill payment, interest-bearing savings)		
Monthly cost of account maintenance	Not applicable	\$0–\$8 per month without direct deposit or \$1000 min balance
Cost of cashing a payroll or government check	Not to exceed 3.5% without ID; not to exceed 3% with ID	\$0
Cost of cashing a personal check	Not to exceed 12% of check	\$0
Limitations on account use	Not applicable	Unlimited check writing and unlimited teller access
Overdraft and returned item fees	Not applicable	\$15–\$30 per item depending on the number of times the customer overdrafted
Availability of cash upon cashing checks	Immediate	Only a portion is available immediately. The rest needs 2–3 days, unless the check is cashed at the issuing bank
Interest on savings	None/not applicable	Some, but small in recent years
Location and hours	Easy access in shopping centers in low middle income neighborhoods/open evenings and weekends	Locations and hours are not convenient except for online/automated operations
Establishment of credit history	No	Yes
Security of money	No; leads to excessive holding of cash by the unbanked	Yes
Auxiliary financial products		
Payday advances	Yes. At 15% (fee + interest rate) \$300 maximum by CA law	Available for direct deposit customers up to a maximum of half of the previous paycheck only at some banks; \$1.50 for every \$20 (7.5%)
Wire transfer \$250/month to Mexico	\$10 (at the time of study, 2002)	\$10–\$40

Sources: California Civil Code at <http://www.leginfo.ca.gov>; California Reinvestment Committee Fact Sheet, February 2003; Survey of local CCCs and banks.

Table 2
Variable summary statistics across banking subgroups

	Total mean (<i>n</i> = 217)	Banked mean (<i>n</i> = 141)	Unbanked mean (<i>n</i> = 76)
Age (years)	33.84 (9.12)	34.09 (8.97)	33.37 (9.42)
Length of residence (years) ^a	7.94 (6.58)	8.54 (6.29)	6.82 (7)
Education: High School completed (1 = yes) ^b	69.5% (.46)	83% (.38)	44% (.50)
Education: University or Junior College completed (1 = yes) ^a	11.5% (.32)	13.5% (.34)	7.8% (.27)
English skills (level) ^b			
None	12%	4%	28%
Some	23%	13%	40%
Full	65%	83%	32%
Total monthly income (\$) ^b	\$1581 (586)	\$1691 (629)	\$1377 (432)
Income payment method (type) ^b			
Cash	18%	11%	30%
Check	82%	89%	70%
Check-cashing location ^b			
Bank	77%	94%	36%
Stores/CCC	23%	6%	64%
Extra money after expenses ^b (\$)	\$517 (326)	\$562 (333)	\$435 (295)
Use of extra money	65.8% remittance	65% remittance	68% remittance
Reasons (R) for not having bank account			
R1 = no documents			47.4%
R2 = minimum balance			63.1%
R3 = lack of confidence			1.3%
R4 = don't understand/banking inconvenient			2.6%
Made a large purchase in last year	19.4% (.40)	21% (.41)	17% (.38)
Holds Matricula ID card (1 = yes) ^b	22.7% (.42)	15% (.36)	37% (.49)
Legal status offered (1 = yes) ^b	42.2% (.50)	58.2% (.50)	13.2% (0.34)
ID Documents available (1 = yes) ^b	64.9% (.47)	73.2% (.45)	50.2% (.50)
Non-Catholic religion (0 = Catholic, 1 = other)	11.5% (.32)	10.6% (0.31)	13.2% (.34)

Figures represent means with standard deviations in parentheses.

^a Indicates significant difference in sub-sample means using a two-tailed *t*-test at 90%.

^b Indicates significant difference in sub-sample means using a two-tailed *t*-test at 95%.

income of low-to-moderate-income Hispanic families in Orange County (i.e. with annual family income less than \$49,999) to be approximately \$27,500.

Table 2 compares the summary statistics of those with and without bank accounts; we focus our discussion on the variables which are statistically significant in their differences across the two subgroups. We find that about 35% of the sample did not participate in the banking system (i.e. 76/217 were unbanked). This figure is higher than the 24% of unbanked Hispanics in the random sample of households studied in Rhine et al. (2006), yet given the emphasis on LMI households a larger proportion of unbanked is to be expected.¹⁶ Almost half (47.4%) of the unbanked gave the reason for their being unbanked as “paperwork and need identification” or “No Documents”

¹⁶ Rhine et al. (2006) used data from responses to questions included by the Federal Reserve Bank of Chicago in an annual survey conducted by Metro Chicago Information Center, a non-profit research organization, for the Chicago metropolitan area. They found that 75% of the unbanked Hispanics lived in LMI neighborhoods.

in Table 2. Nearly two-thirds (63.1%) of the unbanked subgroup stated a perceived “minimum balance requirement” as their reason for not having an account. These reasons suggest the presence of institutional or supply-side factors as the reason for not having a bank account; nearly 86% of the unbanked replied “yes” (not shown in Table 2) when questioned about desiring a bank account in the future if “there were no minimum balance and little paperwork or identification rules.”

Approximately one-fourth (22.7%) of the sample mentioned holding the new *Matricula* ID card issued by Mexican consular offices. The *Matricula* ID program, and bank acceptance of this form of ID, was still relatively new at the time of our survey. Some respondents also *volunteered* that they were residents or citizens of the U.S.; a larger proportion (58.2%) of those who had bank accounts had volunteered that they were U.S. citizens or U.S. residents, compared to 13.2% of those had no bank account. We refer to the sum of the two subgroups (*Matricula* holders and citizens/residents) as those with “ID Documents.” Accordingly, 50% of the unbanked possessed relevant identification (either had the *Matricula* card or *volunteered* that their legal status was U.S. citizen or U.S. permanent resident) compared to 73% of those who had bank accounts.

It can be seen in Table 2 that specific personal economic characteristics and financial needs clearly affect the banking decision in the sample, with poorer, less-educated people more likely to experience higher actual costs of formal banking (and lower costs of the informal sector). The average monthly income of the 76 non-banked Hispanics is \$1377. The average income of the 141 banked Hispanics is 23% higher than the average income of the banked. Eighty-three percent of those with bank accounts had at least a high school level of education, compared to 44% of the unbanked. Twenty-eight percent of the unbanked spoke no English compared to 4% of the banked individuals.

As expected under a self-selection interpretation, those paid in cash were more likely to not hold a bank account. Thirty percent of the unbanked were paid in cash as opposed to 11% of the banked individuals. Sixty-four percent of the unbanked who were paid by check cashed their checks in the informal sector (convenience stores and check-cashing centers) paying fees in the range of 0–5% or a flat fee of \$1–\$5. Six percent of the banked individuals who were paid by check cashed their checks in the informal sector even when they have a bank account. Out of 217 respondents, 42 said that they made a large purchase in the last 6 months, with the majority of the unbanked paying cash for their large purchases.

Table 3 compares the summary statistics across those in the sample who remit and do not remit. Two-thirds (65.8%) of the sample of 217 sent money to relatives, regardless of banking status. This is close to the 62% average of foreign-born Latinos cited in recent studies (Pew Hispanic Center, 2003). Greater assimilation in the United States, both through longer residence length and college completion, decrease the remittance likelihood. Monthly income, particularly discretionary self-reported “extra money,” affects the likelihood of making remittances to family. Possession of identification should not affect the ability to send money to family since the informal sector channels requires little such verification. But those possessing the *Matricula* ID card were more likely to retain ties to their native country (i.e. Mexico) and remit. Most of the sample (88.5%) affiliated with the Catholic religion, which is somewhat above state-wide trends in California.¹⁷ A larger proportion of remitters were Catholics (93.7%) as compared to the proportion of non-remitters who were Catholic (78.4%).

¹⁷ The recent 2004 National Survey of Latinos by the Pew Hispanic Center (PHC/KFF, 2004) included questions on religious preference. In the California sub-sample, 70% of the Hispanics with incomes under \$50,000 reported a Catholic religious affiliation. Thus, the administration of the survey in two church parking lots (out of 25 survey locations) perhaps led to an overrepresentation of Catholic Hispanics in the sample.

Table 3
Variable summary statistics across remittance subgroups

	Total mean (<i>n</i> = 217)	Remitters' mean (<i>n</i> = 143)	Non-remitters' mean (<i>n</i> = 74)
Age (years)	33.84 (9.12)		
Length of residence (years) ^b	7.94 (6.58)	6.99 (5.42)	9.76 (8.12)
Education: High School completed (1 = yes)	69.5% (.46)	67.8% (.46)	73% (.45)
Education: Junior College or University completed (1 = yes) ^b	11.5% (.32)	7.7% (.27)	18.9% (.39)
English skills (level)			
None	12%	14%	8%
Some	23%	23%	23%
Full	65%	63%	69%
Total monthly income (\$) ^a	\$1581 (586)	\$1628 (531)	\$1491 (676)
Income payment method (type)			
Cash	18%	18%	17.5%
Check	82%	82%	82.5%
Check-cashing location			
Bank	77%	79%	74%
Stores/CCC	23%	21%	26%
Extra money after expenses ^b (\$)	\$517 (326)	\$615 (292)	\$329 (305)
Use of extra money	65.8% remittance		
Reasons (R) for not having bank account			
R1 = no documents ^b		58%	26%
R2 = minimum balance ^b		53%	83%
R3 = lack of confidence		2%	0%
R4 = don't understand/banking inconvenient		2%	4%
Made a large purchase in last year	19.4% (.40)	16.8% (.38)	24.3% (.43)
Holds Matricula ID card (1 = yes) ^a	22.7% (.42)	25.9% (.44)	16.4% (.37)
Legal status offered (1 = yes)	42.2% (0.50)	42% (0.50)	43% (0.50)
ID Documents available (1 = yes)	64.9% (.47)	67.8% (.47)	59.5% (.49)
Non-Catholic religion (0 = Catholic, 1 = other) ^b	11.5% (.32)	6.3% (.24)	21.6% (.41)

Figures represent means with standard deviations in parentheses.

^a Indicates significant difference in sub-sample means using a two-tailed *t*-test at 90%.

^b Indicates significant difference in sub-sample means using a two-tailed *t*-test at 95%.

4. The empirical methodology

4.1. Factors affecting the propensity to be unbanked

Multivariate regression analysis can consider the relative importance of all variables affecting the non-banking decision simultaneously with the decision to remit. The literature on the unbanked commonly focuses on regressors such as income, net worth, age, race, intergenerational banking tradition, married status, education, employment status, welfare/food stamp status, residence in low-income neighborhoods, prior financial experience, and geographic variables such as number of bank branches and check cashers in zip code of residence. These studies indicate that the unbanked are more likely to be less educated, younger, black or Hispanic, unemployed, reside in a low-income community, have a poor credit history, have low income and net worth (Bond &

Townsend, 1996; Caskey, 1994, 1997, 2001; Doyle, Lopez, & Saldenberg, 1998; Dunham, 2001; Good, 1999; Hogarth, Anguelov, & Lee, 2003; Hogarth & O' Donnell, 1997, 1999, 2000; Prescott & Tatar, 1999; Rhine & Toussaint-Comeau, 1999; Rhine, Greene, Toussaint-Comeau, & Hogarth, 2001; Rhine, Toussaint-Comeau, Hogarth, & Greene, 2001; Stegman, 1999; Stegman & Faris, 2001; Toussaint-Comeau & Rhine, 2000).

In our specification, the factors that affect the propensity to be unbanked and their expected impact on being unbanked are: residence length (–), income (–), wages paid in cash (+), possession of identification (–), education (–), and English language ability (–). These variables are represented by Z in Eq. (1) below in the following univariate probit model:

$$\begin{aligned} \text{Prob}[\text{Unbanked}] &= 1 && \text{if } y_i > 0 \\ \text{Prob}[\text{Unbanked}] &= 0 && \text{if } y_i \leq 0 \\ \text{With } y_i &= B'Z_i + \varepsilon_i (\varepsilon \sim N(0, 1)) \end{aligned} \quad (1)$$

4.2. Demand for remittance services

The existing literature has not focused enough on the empirical estimation of remittance decisions of immigrants. Studies by the [Pew Hispanic Center \(2003\)](#) highlight factors commonly-associated with remittances by foreign-born Latinos. Greater assimilation in the U.S. is associated with fewer financial ties abroad, while migrants supporting home country families tend to be younger, less educated (without college completion), and low income.

We also hypothesize that association with Catholicism could symbolize greater cultural values of family ties and assistance. Although the impact of religion has not yet appeared in analyses of these financial flows, studies of non-profit giving and immigration experiences highlight its importance. Lab experiments suggest that those with religious beliefs are more generous than nonreligious persons, particularly in giving to religious causes ([Eckel & Grossman, 2004](#)) while [Forbes and Zampelli \(1997\)](#) find a higher income elasticity of giving for Catholics compared to Protestants. Recent case studies of Hispanic immigrant communities specifically examine the impact of religious affiliation; [Menjivar \(2003\)](#) finds that Catholic leaders tend to invoke a greater “communitarian ethic” among members and encourage international links and bonds between Hispanics, while Protestant (evangelical) pastors focus on programs of individual salvation. Thus, we predict that those surveyed stating a preference for non-Catholicism (either no religion or Protestantism) could be less likely to send money to family members. Additionally, references in the economic development literature ([Weber, 1905](#)) link Protestant, non-Catholic, affiliation to greater rates of modern banking use, suggesting religion may influence both decisions jointly.

Thus, the likely regressors that affect remitting money to family and their expected impact on whether to remit or not include length of residence (–), extra money available after stated expenses (+), age (–), and non-Catholic religious affiliation (–), and college completion (–). These variables are represented by X in Eq. (2) below. The consumer's choice of whether to remit or not can be seen as:

$$\begin{aligned} \text{Prob}[\text{Remit}] &= 1 && \text{if } y_i > 0 \\ \text{Prob}[\text{Remit}] &= 0 && \text{if } y_i \leq 0 \\ \text{With } y_i &= A'X_i + \varepsilon_i (\varepsilon \sim N(0, 1)) \end{aligned} \quad (2)$$

4.3. Joint decisions of being unbanked and remitting

In addition to the explanatory variables mentioned above, unobserved factors affecting a person's decision to remit could also be correlated with or be inherent in the person's decision to be unbanked. We do not have information on the method a person uses to send money, but many remittance wire transfer points are physically located within informal financial outlets (i.e. grocery stores, check-cashing outlets), so that sending remittances could affect the decision to be unbanked. It is possible that other latent factors prevail. For instance, higher perceived rates-of-return from investing in the immigrant's place of origin (compared to the U.S.) may be causing a substitution towards savings abroad in the form of remittances. Additionally, the (unseen) poverty levels and banking habits of remaining family members in the immigrant's country of origin could increase the need for the U.S. resident to remit as well to distrust or to lack experience with formal financial institutions.

Since the two decisions are jointly determined we rely on a bivariate probit model estimated by the maximum likelihood technique in a manner similar to Rhine, Greene, et al. (2001a), Rhine, Toussaint-Comeau, et al. (2001b) and Rhine et al. (2006). We considered this alternative to a two-stage selection model since the dollar amount of remittances is not available in our sample, and we wish to identify the importance of latent factors and the recursive relationship between the two choices. Our model is different from that of Rhine, Greene, et al. (2001a), Rhine, Toussaint-Comeau, et al. (2001b) and Rhine et al. (2006) because we ask whether the decision to send remittances is jointly made with the decision to not hold a bank account, while controlling for having identification documents as one of the factors affecting the propensity to be unbanked.

Given the strong presence of sending money to family in the sample, we first assume that households take the decision to remit as given, and then decide whether to be unbanked. This implies estimating $P[y_1 = 1|y_2 = 1]$ in Eq. (3) below:

$$\begin{aligned}
 P(\text{Unbanked}) &= f(Z_i) \text{ as the } y_1 \text{ equation} \\
 P(\text{Remittance Use}) &= f(X_i) \text{ as the } y_2 \text{ equation} \\
 \text{Full model : } y_1 &= B'Z + \gamma y_2 + \varepsilon_1 \quad y_2 = A'X + \varepsilon_2 \\
 [\varepsilon_1, \varepsilon_2] &\sim \text{BVN}[0, 0, 1, 1, \rho] \quad \rho = \text{corr}(\varepsilon_1, \varepsilon_2)
 \end{aligned} \tag{3}$$

Here we suggest that given the decision to remit, the individual may perceive the informal financial sector as cheaper for provision of all financial services. The cross-equation correlation variable (ρ) picks up the latent factors which jointly affect the likelihood of remittances and the propensity for being unbanked.

We also present an alternative specification below in Eq. (4) where the order of the two decisions is reversed. The individual has decided to be unbanked, and given that decision, the individual decides whether to remit or not. $P[y_1 = 1|y_2 = 1]$ becomes:

$$\begin{aligned}
 P(\text{Remittance Use}) &= f(X_i) \text{ as the } y_1 \text{ equation} \\
 P(\text{Unbanked}) &= f(Z_i) \text{ as the } y_2 \text{ equation} \\
 \text{Full model : } y_1 &= B'X + \gamma y_2 + \varepsilon_1 \quad y_2 = A'Z + \varepsilon_2 \\
 [\varepsilon_1, \varepsilon_2] &\sim \text{BVN}[0, 0, 1, 1, \rho] \quad \rho = \text{corr}(\varepsilon_1, \varepsilon_2)
 \end{aligned} \tag{4}$$

Here we suggest that given the outcome of not having a bank account, the individual may be unaware of financial opportunities in the U.S. and is therefore more likely to use remittances as a means of saving.

Table 4
Bivariate probit model of joint decisions on banking and remittances

	Specification A		Specification B	
	Variable	Marginals (E[unbanked remit = 1])	Variable	Marginals (E[remit unbanked = 1])
Unbanked = 1				
Constant	1.68**		1.44**	
Residence length	-0.004	0.002	0.005	
Total income	-0.0004**	-0.0002**	-0.0004**	0.00001
Paid in cash	0.42	0.17	0.41	-0.005
ID Documents	-0.335	-0.14	-0.35	0.004
High School	-0.67**	-0.27**	-0.64**	0.008
Full English	-0.94**	-0.38**	-1.07**	0.012
Remit	-0.44	-0.18		
Remit = 1				
Constant	0.47		0.35	
Residence length	-0.04**		-0.04**	-0.0125**
Extra money	0.002**	0.0002*	0.002**	0.0007**
Age	-0.016	0.001	-0.018	-0.006
College	-0.32	0.03	-0.24	-0.08
Non-Catholic	-0.89**	0.10	-0.94**	-0.35**
Unbanked			0.30	0.10
Correlation ρ	0.44**		0.05	
Log-likelihood	-205.76		-206.18	

* 10% level of significance.

** 5% level of significance.

5. Empirical results

Table 4 presents the two specifications of the bivariate probit model. The results of the binary probit model Eq. (1) of the attributes that influence the decision to be unbanked for the *whole sample* were very close to those found under the bivariate specification. So we start by taking the remittance decision as given (Eq. (3)) in specification A and then taking the unbanked decision as given (Eq. (4)) in specification B. The marginal effects demonstrate the effect of one variable on the propensity to be unbanked or remit, including cross-equation interaction effects.¹⁸

In specification A, income, high school completion and English language command are the outstanding significant factors reducing the probability of being unbanked. Among those remitting, a person earning an additional \$100 monthly would be 2% points less likely to be unbanked. Their current low-income status could prevent some Hispanics from opening an account, if minimum balance rules were enforced. For those sending remittances, the likelihood of being unbanked is 27% points *lower* for those with a high school degree or beyond (compared to the omitted

¹⁸ The reported marginal effects (the partial derivatives of $E[y_1|y_2 = 1]$) include the direct effect of the variable in the primary equation as well as the indirect effects when the attribute is included in the second equation. The marginal effects of the dummy variables represents the difference when the dummy variable equals 1 versus 0, as computed by the Limdep software package.

category of no high school degree). Additionally, full English speakers are around 38% points less likely to be unbanked. This suggests that although many banks have Spanish-speaking staff, perceived communication barriers and informational asymmetries are preventing some Hispanics from seeking a bank account. Being paid in cash, a factor lending towards a self-selection interpretation of being unbanked, was not statistically significant.

When the decision to remit is taken as given, lack of identification increases the unbanked probability by 14% points on the margin, but this variable is not statistically significant. A plausible reason for the statistical insignificance could be because the “ID Documents” variable in Table 4 combines both Matricula holders and U.S. legal residents/citizens. The use of the Matricula in California as an ID to open a bank account was new at the time of the survey.

Nevertheless, possession of identification still plays a role; in separate results (not reported here) we find that those households with identification were significantly less likely to be unbanked and that provision of ID Documents could increase the likelihood of account ownership. From the “ID Documents” and “no-ID Documents” sub-samples we calculated the predicted probability of being unbanked and found a gross 23% gap across regimes. In other words, those with identification documents and the common background characteristics of this sub-sample would be 23% more likely to have a bank account than those without ID (and those personal characteristics). If consumers with “identification-type” background characteristics were without ID, the probability of being unbanked would rise by 24%, while if consumers with “no-ID”-type characteristics were given ID, their probability of being unbanked would fall by 44%. Moreover, among the unbanked sample, almost half (47.4%) stated a lack of documents (R1 in Table 2) as their primary decision factor. Thus, lack of identification documents—either through not possessing legal residency status in the U.S. or a Matricula card—could suggest some households are excluded from the U.S. formal banking system.

Although a direct link between sending remittances and banking is not present (since the coefficient of Remit is statistically insignificant) the latent effects cross-correlation, ρ , is positive and significant in specification A.¹⁹ This implies that *hidden* factors increasing jointly the probability of remitting and being unbanked are causing latent effects. Rhine et al. (2006) found similar results and interpreted this trend by focusing on Hispanics’ *perception* of the lower cost of using the informal sector, desire to make transactions in cash, or past discrimination in the formal banking sector, reasons which suggest some part of our sample would be self-selecting away from opening an account. Alternatively, the latent effects variable could also be reflecting the effects of omitted variables (such as discrimination) which *exclude* low-income Hispanics from banks and towards remittances as the only form of savings.

In specification B we focus on the joint process in which unbanked status is taken as given and then remittances become the center of focus. In this case the two consumer decisions of remitting and being unbanked appear independent (since ρ is statistically insignificant). Hispanics are likely to remit whether or not they are unbanked, and hidden factors affecting the unbanked propensity do not relate to the decision to send money to family.

Thus, results from the binary probit model of remittance behavior Eq. (2) is most useful. In a separate regression (not reported here), we find that on the margin, across the whole sample, each year of local residence reduces the likelihood of remittances by 1.27% points from

¹⁹ A Likelihood Ratio test of the hypothesis that the correlation coefficient $\rho = 0$ was done by comparing the sum of the Log-likelihood functions for separate unbanked and remit probits (Eqs. (1) and (2)) against the bivariate probit model (Eq. (3)). The calculated test statistic of 3.28 was slightly below the χ^2_{95} value of 3.84 for 1 restriction but above the 90% level of significance ($\chi^2_{90} = 2.71$).

the mean, while an additional \$100 of discretionary money would increase the remittance probability by 7% points. As expected, non-Catholics are significantly less likely to send money to families. And being unbanked significantly increases the probability of remitting by 12% points.

Overall, the results suggest that both rationing and self-selection factors undermine the reality of the large unbanked (LMI) Hispanic population in the United States. While some appear unable to open a bank account due to the lack of legal identification and insufficient income to hold a minimum balance (and thus excluded) from the formal financial sector), others choose to voluntarily use the informal sector for its overall convenience and cheaper (upfront) remittance services. The most important factors associated with being unbanked—low income, low education levels, and low proficiency in English—could cause Hispanics to choose to be unbanked (and self-select into the informal sector) due to their perception of few benefits and high expenses in using the formal sector, particularly the higher front-end costs of bank wire transfers. Additionally, many may lack knowledge of skills needed to operate a bank account. Remittances do not appear as a direct substitute for a U.S. bank account; rather, we find that hidden factors jointly affect the likelihood of being unbanked and sending money to family members.

6. Lessons for formal financial institutions desiring to reach the unbanked

Hispanic and other minority populations continue to represent a large proportion of the unbanked population in the United States. Our study of the low-income Hispanic community was based on randomly-selected interviews within a large and economically vibrant metropolitan area, Orange County, California. Since the in-person survey methodology at public places frequented by Hispanics introduced some degree of bias in the sampling frame, the results are most applicable to low-moderate-income Hispanics rather than the ethnic group in general. Only a few studies in the Chicago area have provided such random sub-sample data necessary to find targeted solutions to increase account ownership for the broader Hispanic community.

We find that apart from their income, language status, and education, two factors explain why recent Hispanic immigrants are often unbanked: (i) the requirement of identification is a barrier to opening a bank account (institutional or supply-side factor), and (ii) the relative attractiveness of the informal sector in providing apparently cheaper financial products, especially remittance savings (self-selection or a demand-side factor). Whereas some segment of the population will be excluded from the formal banking sector, the remaining population considers economic factors in deciding whether or not to open a formal account.

Our results mirror some previous studies which suggest that the costs of not using banks for check-cashing and bill payment (traditional financial services) is quite high. We find that reliance on check-cashing centers can cost a consumer nearly \$274 per year, depending on the number and types of checks that are cashed. Turning to Hispanic grocery stores for free check-cashing services is an option available to some which makes the benefit of having a bank account diminish on the margin. The financial benefits of banking diminish further when higher front-end wire transfer (remittance) fees, overdraft/returned item fees, minimum opening balance requirement, minimum deposit requirement or cost of account maintenance, inconvenience of hours and location, and knowledge of skills needed to operate a bank account are factored into cost calculations.

Along the lines of Rhine et al. (2006), our empirical results highlight the importance of income, education, and language ability in acquiring a bank account, with higher levels of these variables

decreasing the probability of being unbanked. About two-thirds of our unbanked sample stated perceived minimum balance requirements (in comparison to their incomes) as the reason for not opening an account. It follows that policy measures to increase wages and school completion could yield additional benefits in terms increasing the banking propensity. We also note that almost half of the unbanked sample indicated the lack of identification as a reason for not having a bank account. This suggests that institutional constraints and other supply-side factors need a greater focus in the analysis of the unbanked. It is still unclear in recent debates on the extension of drivers' certificates to undocumented immigrants as to whether such identification documents could change account ownership (Dewan, 2005); indeed, some states have withdrawn the certificate program recently.

However, half of our unbanked sample of Hispanics did offer some form of identification suggesting that this group was not interested in owning a bank account perhaps due to an income constraint and/or low perceived benefits. Thus, we also highlight the importance of remittances in the banking decisions of Hispanics. We find that nearly two-thirds of our sample remit money to family members, and Hispanics both with and without bank accounts tend to send money of varying levels. The idea that remittances offer a direct substitute form of savings causing consumers to switch away from formal banking was not strongly supported in the results. However, we found a significant positive correlation between the latent factors affecting the decision to remit money and be unbanked in the U.S.; omitted variables such as relative rates-of-returns to savings, poverty levels of family members abroad, and hidden cultural tastes ultimately affect both the choice of avoiding a U.S. bank account and remitting.

Future studies using simultaneous equations techniques with international consumer choice data could further explore this issue. Additional research adding financial questions to randomly selected respondents drawn from an unbiased sampling frame such as in the Survey of Consumer Finances could also explore the remittances and unbanked status linkages. Studies involving participants using both the formal and informal financial sector simultaneously could better illuminate savings behavior and choices.

Clearly, as banks move to find innovative programs to attract the unbanked they must try to replicate some characteristics of the informal sector which have drawn people there. Urban areas such as those in this study house a greater, and perhaps more competitive, concentration of informal financial options. Our study did not focus on the effect of financial education (see Lyons & Scherpf, 2004) as a variable influencing banking habits; rather, our results, like those in Kim (2001), suggest that banks must provide more low-cost services, particularly of auxiliary financial products to attract customers. But beyond this, the role of transaction costs, informational asymmetries, and cultural barriers facing Hispanic consumers must be considered. Better publicity about actual bank account requirements and costs is needed. Replicating the flexibility of the informal sector in terms of its geographical coverage, communicational advantages with both educated and uneducated populations, and flexible hours of operation can help lower the implicit costs associated with formal banks. Hispanic consumers may perceive lower implicit transaction costs when dealing with foreign banks (such as Banco Popular) operating in the U.S. and see this as a logical intermediary step between the informal and formal U.S. banking sector.

Finally, expanding the savings programs offered to the poor in the U.S. could assist in this area. If remittances are viewed as a form of savings, encouraging migrants to hold savings in a U.S. account longer would be a win-win option which could reduce remittance fee charges and enhance the deposit creation role of banks. But this would ultimately require a perceived competitive return on a U.S. account compared to returns in the country of origin. Studies comparing the use,

and returns to remittances abroad compared to returns on U.S.-based investments have not been undertaken. The expansion of remittance-linked savings programs, with flexibility in identification requirements through further use of Matricula cards or other forms of driver identification, could change the dynamics and debates about the unbanked in upcoming years.

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