Social Capital and the Wages of Mexican Migrants: New Hypotheses and Tests*

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Abstract

In this article, we develop hypotheses about the ways in which network ties influence wages and the circumstances under which social capital assumes greater or lesser importance in the determination of migrant earnings. We then test these hypotheses using data on male Mexican migrants gathered by the Mexican Migration Project. We find that social capital has both direct and indirect effects on migrant wages. Indirectly, social capital influences how a job is obtained and whether it is in the formal sector. Directly, having friends and relatives with migratory experience improves the efficiency and effectiveness of the job search to yield higher wages. Moreover, the effects of social capital on wages are greater for undocumented than documented migrants, reflecting the more tenuous labor market position of the former. These results confirm and extend social capital theory and underscore the importance of social networks in understanding the determination of migrant earnings.

The concept of social capital was introduced into social science by the economist Glenn Loury (1977) but was elaborated theoretically by the sociologists Pierre Bourdieu (1986) and James Coleman (1988). Since its incorporation into the field in the 1980s, it has been applied to a variety of social settings, from neighborhoods (Sampson and Morenoff 1997) to nations (Putnam 2000). Massey and colleagues (1987:170-71) were the first to apply the concept to migration, noting that poor Mexican peasants "may be poor in financial resources, but they are wealthy in social capital, which they can readily convert into jobs and earnings in the United States."

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It is now well established in the migration literature that interpersonal networks are a source of social capital (Espinosa and Massey 1997) and that prospective migrants draw upon them to migrate (Massey & Espinosa 1997), cross the border (Singer & Massey 1998), find jobs (Aguilera 1999, 2002, 2003; Espinosa 1997), and find housing in the U.S. (Espinosa 1997). Recent work has revealed that network effects are not simply artifacts of unobserved heterogeneity or common underlying characteristics (Palloni et al. 2001) and that over time they expand to build a self-sustaining momentum into the process of social capital accumulation (Massey & Zenteno 2000).

Migrant networks have been shown to influence other migratory outcomes as well, such as the sending of remittances (Durand et al. 1996; Roberts and Morris 1996), patterns of investment (Massey & Parrado 1994), and wages and working conditions experienced in the United States (Massey 1987; Phillips and Massey 1999). Prior research has generally found social capital to have positive effects on U.S. wages, although the returns appear to be lower for women (Greenwell, Valdez & Da Vanzo 1997; Hagan 1994). In this article we focus on the issue of migrant wages and seek to identify the *mechanisms* by which social capital influences the wages earned in the U.S. We develop specific hypotheses about the ways in which network ties influence wages and the circumstances under which social capital assumes greater or lesser importance in wage determination. We then test these hypotheses using data on male Mexican migrants gathered by the Mexican Migration Project.

Our results suggest that social capital has both indirect and direct effects on the wages earned by Mexican immigrants. Directly, having friends and relatives with migratory experience improves the efficiency and effectiveness of the job search to yield better jobs and higher wages (by providing greater information). Indirectly, social capital influences how a job was obtained and whether it is in the formal sector (see Tilly & Brown 1967). Given their vulnerable position in the U.S. labor market, moreover, we argue that undocumented migrants should be more dependent on social capital, they should receive higher returns for their social capital, and they should benefit from different forms of social capital than documented migrants. These results confirm and extend the leading tenets of social capital theory and underscore the importance of social networks to the understanding of migrant earnings.

Networks, Social Capital, and Wages

According to Bourdieu and Wacquant (1992:119), "social capital is the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition." The defining characteristic of capital—whether financial, physical, human, social, or cultural—is its

convertibility, the fact that it may be turned into something of value, such as income, prestige, power, or wealth (Harker, Mahar, and Wilkes 1990). People gain access to social capital through membership in networks and institutions and then convert it into other forms of capital to improve or maintain their positions in society. Coleman, in particular, stressed the productive consequences of social capital: "just as physical capital and human capital facilitate productive activity, social capital does as well" (Coleman 1988:S101).

Scholarly recognition of the fact that migrants use social networks is not new. Early in the twentieth century, Thomas and Znaniecki (1918-20) and Gamio (1930) documented the operation of interpersonal networks among Polish and Mexican immigrants (although naturally they did not refer to social capital). Drawing on social ties to relatives and friends who had migrated before, they argued that prospective migrants gained access to knowledge, assistance, and other resources that facilitated their international movement. Although ties of kinship and friendship, in and of themselves, provide few benefits to prospective migrants, once someone in an interpersonal network migrates, social ties to that person are *transformed* into a resource that can be used by friends and relatives to gain access to foreign employment. As Coleman (1990:304) notes, "social capital is *created* when the relations among persons *change* in ways that facilitate action" (emphasis added). Massey, Goldring, and Durand (1994) identify migration itself as the catalyst for change.

Migrant networks incorporate all the forms of social capital identified by Portes and Sensenbrenner (1993). They facilitate *value introjection* because they support the socialization of people into a "culture of migration" (see Kandel & Massey 2002). They function as *reciprocity exchanges*, in which favors are extended to friends and relatives as part of a generalized system of exchange in which migrants help friends and relatives not because they expect immediate repayment, but because they anticipate help being extended to them or their kin at some future date (Massey et al. 1987). They also provide for *bounded solidarity* to reinforce the ties of kinship, friendship, and common community origin among migrants (Massey 1986). Finally, they are characterized by *enforceable trust*, since migrants who refuse to help friends or family may be ostracized or punished by relatives and friends at home and abroad (Goldring 1992; Mines 1981; Reichert 1982).

Given the norms of reciprocity, bounded solidarity, and enforceable trust that are associated with kinship and friendship, migrants draw on the social capital embedded in these relationships to lower the costs and risks of international movement and raise the benefits of foreign employment. The core benefit associated with foreign employment, of course, is earnings, and social connections to people with current or past migratory experience have been shown to increase foreign wages, at least those received by male migrants (Donato, Durand & Massey 1992; Donato & Massey 1993; Phillips & Massey

1999). Just how this increase in wages is accomplished has never been fully specified, however.

One obvious possibility is that friends or relatives identify high-paying jobs as they become available and transfer this information to their friends and family members who are seeking employment, as positions often become available prior to their advertisement or are publicized only within informal networks (Grieco 1987). Of course, having information before other applicants do can be very beneficial since, as Burt (1992) indicates, timing of information can make a substantial difference in who is able to capitalize on opportunity. Thus, well-connected migrants can skip a prolonged and inefficient search for a good job and move directly into a position that a trusted associate has already identified as being stable, available, and well paid.

Friends and relatives may assist migrants by providing them with useful information: where to look for jobs, how to present themselves to employers, how to behave on the job, what wages to ask for, and which sorts of jobs and worksites to avoid (Fernandez-Kelley 1995; Aguilera 1999). If they have regular access to a large and diffuse network of weak as well as strong social ties, they may also be in a better position to hear about job openings and employment opportunities. For example, Massey and colleagues (1987) found that immigrants from one Mexican community met each Sunday in a Los Angeles park to watch a community-sponsored soccer team compete. In addition to enjoying the match, townspeople gossiped, socialized, and exchanged information, thus providing migrants with a regular venue for the dissemination of information about employment opportunities.

This type of social event would provide migrants access to information that might not be available through their familial social networks. Granovetter's (1974) seminal study on professional workers, which suggests that weak ties link job applicants with nonredundant information, connections to nonfamily members may be more beneficial than familial social networks. The importance of friendship networks in finding employment was highlighted by Aguilera (2002), who found that friendship ties were positively related to labor force participation. Thus, we expect that both familial and friendship networks play important roles in determining wages, although friendship networks are expected to provide more information to workers than familial networks.

Although the majority of the studies within the network and immigration literature point to the beneficial aspects of social capital, some indicate that social networks do not have strong effects on labor markets (Campbell and Rosenfeld 1985; Bridges and Villemez 1986; Mouw 1999). For example, Mouw (1999) examined the earnings of native workers in the United States utilizing several datasets and found no significant relationship between use of social capital during job searches and earnings. Immigrants, however, may behave quite differently from foreigners. Moreover, his study operationalized a small number of forms of social capital that were specifically tied to job search

method, which may explain why he did not find a statistically significant relationship between social networks and earnings.

In assessing the effect of social capital on labor market outcomes among immigrants, our research is guided by four hypotheses:

> *Hypothesis 1. Possession and use of familial and friendship networks will positively and significantly affect the earnings of Mexican migrants.*

Although we focus on information transferred through migrants' social networks, we recognize that employers also gain information through networks and use them to screen their employees.[1] According to Granovetter (1985), both employers and employees attempt to accomplish goals and both use networks in doing so. Fernandez, Castillo, and Moore (2000) found that employers' informal hiring led to a richer pool of applicants and provided a mentoring system that socialized such employees into the corporations' culture. Employers in this study recognized the value of social capital, as they paid $250 referral bonuses to people within their company, which reduced recruiting costs by an estimated $416 per hire. Employers pay more for workers obtained through informal channels because they believe them to be more productive, less likely to leave, and better prepared for company culture. Thus, not only do employees benefit from their social networks and informal hiring—employers also are quite aware of the economic benefits associated with such hires.

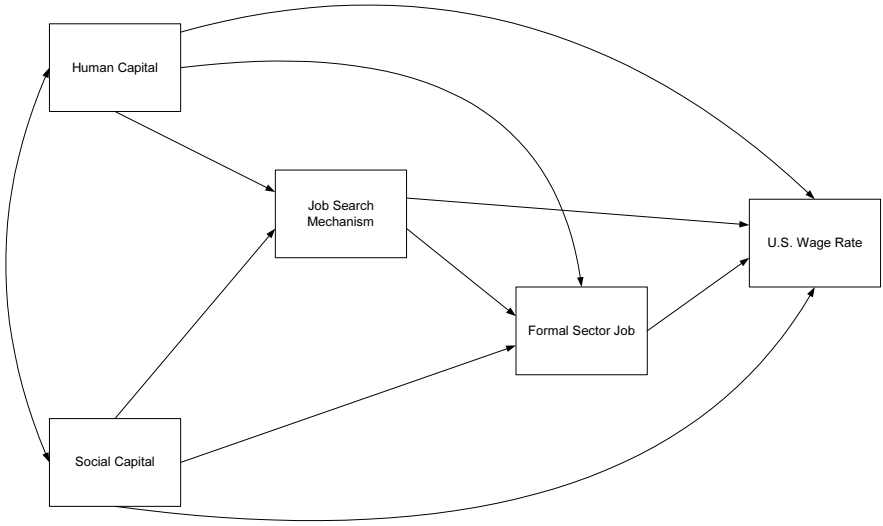
Our model of wage determination is shown in the path diagram of Figure 1. As argued above, we posit that social capital affects wages directly by providing migrants with a privileged source of information about well-paying jobs and employers with a reliable screening device. Whatever the effects of social capital, however, human capital (education, skill, and experience) is also likely to play an important role in determining earnings—hence a direct arrow connects it as well as social capital to U.S. wages.

In addition to a direct effect, we also posit an indirect effect of social capital on wages through its influence on sector of employment:

> *Hypothesis 2:* Social capital leads Mexican migrants to jobs within the formal sector, which in turn offers higher wages.

Given that the U.S. labor market is quite segmented (Bulow & Summers 1986; Dickens & Lang 1985, 1988; Heckman & Hotz 1986), a key determinant of pay and stability is whether a job is located in the formal sector. Formal sector jobs are those that are known to and regulated by state authorities, as indicated by the withholding of taxes. Jobs falling outside the regulatory apparatus of the state tend not be in compliance with minimum wage legislation, covered by union contracts, or in conformity with occupational safety and health regulations. To the extent that friends and relatives can channel prospective migrants into the formal sector, they are likely to reap rewards in the form of higher wages and better working conditions (Lai, Lin, and Leung 1998).

FIGURE 1: Model of Social Capital's Role in Wage Determination



In our analyses, we make a fundamental distinction between documented and undocumented migrants[2] and hypothesize that social capital operates differently for members of the two groups:

Hypothesis 3. Social capital will be a more significant factor in the wage determination of undocumented migrants than documented migrants.

Since those with documents have a right to employment in the U.S., they are in a much stronger bargaining position than those who lack them. Documented migrants can search openly and widely and have full geographic mobility. If they are unhappy with their wages or working conditions on any job, they may complain to the employer and if their concerns are not addressed they are free to look for another job. If their employer is violating fair labor standards, they may complain to state authorities without fear of formal reprisal. Documented migrants thus have substantial individual freedom to maximize earnings.

In contrast, undocumented migrants live in fear of detection and deportation and are highly dependent on their employers, who can get rid of them simply by reporting their existence to immigration authorities. They are afraid to move about, to search widely for other options, or to complain too loudly about existing conditions. They also have access to a few jobs in few occupations, since not all employers are willing to violate federal labor laws. As a result, they are more dependent on others to act on their behalf and in their interests. Compared with documented migrants, they are far more dependent on social capital to get and retain good jobs paying high wages.

Social networks have also been recognized by some scholars as effective in assisting network members to accomplish unauthorized conduct. For example, Bian (1992) reported that job seekers in China used their social networks to influence occupational assignments, despite the fact that this was an unauthorized act. He found that strong ties were especially helpful in this context, as they held trust and obligation. Social networks have also been shown to assist women seeking illegal abortions, though Lee (1969) found that women were forced to use weak ties (people with whom the women were only acquainted) to obtain information about abortions, as these connections provided more information than was available from their own immediate network.

Bian's and Lee's work suggests that social capital may operate differently for documented and undocumented migrants:

> *Hypothesis 4.* The wages of undocumented migrants will be more influenced by more distant friendship networks than documented migrants.

Undocumented migrants are similar to the people in China discussed by Bian (1992) who sought to influence their job placement and the women described by Lee (1969) who sought illegal abortions, in that they are seeking to violate the law. This poses a delicate dilemma for those without documents. On one hand, they need to contact people who have non-redundant information about employment opportunities, but on the other hand they must find this information from people whom they are able to trust. Although undocumented migrants need to use social networks of trust, these are likely to be homogeneous and offer only redundant information.[3] Thus we expect that undocumented migrants will receive higher rewards from knowing network members who are distant from them, whether they be distant relatives or friends, than from immediate family members, because such distant networks hold nonredundant information that undocumented migrants need to access and such networks would also be trustworthy.

Data and Methods

We operationalized the constructs shown in Figure 1 using data from the Mexican Migration Project (MMP). Since 1987, this project has annually surveyed 4-8 Mexican sending communities using simple random sampling methods. Surveys are generally conducted in December and January, when seasonal migrants return to Mexico and are available to be interviewed. The sample size was typically 200 households per community, unless the community has fewer than 500 residents, in which case a smaller number of households was selected. At this writing, the database contains some 52 communities.

These communities were not chosen using probability mechanisms but were purposely selected to include a variety of population sizes, geographic situations, ethnic compositions, economic bases, and migratory experiences (Massey, Goldring, and Durand 1994). Although the resulting sample is not strictly representative of Mexico or Mexican immigrants, it nonetheless contains a broad cross section of households and communities that have been shown to yield a representative profile of Mexico–U.S. migrants by direct comparison with the ENADID (Encuesta Nacional de la Dinámica Demográfica), a nationally representative dataset (Massey & Zenteno 2000; Zenteno & Massey 1999).

Each of the Mexican community samples was supplemented with a non-random survey of out-migrants who were subsequently located and interviewed in destination areas of the United States.[4] These interviews were generally conducted during the summer following each winter's survey. The U.S. samples were gathered using snowball sampling methods and focused on migrants from sample communities who had settled abroad permanently. Full information on the sample and its characteristics is available at www.pop.upenn.edu/mexmig/.

The MMP questionnaire gathered detailed information from household heads about their most recent trip to the U.S., and from this information we derived indicators of the various constructs in our conceptual model. Given the small number of female household heads, and given the evidence that labor market processes among migrants are highly gendered (Cerrutti & Massey 2001; Greenwell, Valdez & DaVanzo 1997; Hagan 1994), we focus on the experience of males.

We measured social capital by creating four indices to measure different aspects of social capital.[5] In terms of familial social networks, we created an index called *near family tie,* which captures the degree to which spouses, siblings, parents, and grandparents had current or past U.S. migration experience. Within each kinship category, our index added 1 point if any family member was currently in the U.S. and another point if any member had ever been to the U.S., yielding an index range from 0 to 8.

We created a similar index for more distant family members — uncles/aunts, cousins, nieces/nephews, brothers/sisters in-laws, and other in-laws we called *far family tie*. Far family tie ranged from 0 to 10. For friendship networks, we created *friendship tie* which adds a point for respondents who have a friend currently living in the U.S. and an additional point for respondents who have a friend with past migration experience (the range for this index is 0-2). These three indices, near family tie, far family tie, friendship tie, assess the migrant's connection with current and past U.S. experience, which we believe is crucial in providing labor market information that can be translated into higher economic rewards. Our final index *SCN* measures respondent's interaction with

people and institutions in the U.S., which we also believe provides important labor market information that leads to higher economic rewards. Respondents receive 1 point each if they lived with paisanos, participated in a sports organization, belonged to a social organization, had friends who were white, had friends who were Latino, had friends who were Chicano, and had friends who were black, yielding an index with a range of 0 to 7.[6] These measures of social capital are designed to gauge migrants' access to information regarding U.S. labor markets through their social networks and their participation in U.S.-based social networks, which we believe also provides important U.S. labor market information.

Human capital is measured using a set of standard indicators typical in studies of wage determination among immigrants: education, prior U.S. experience, number of times in the U.S., duration of current/last trip, and English language ability (Bean & Tienda 1987; Chiswick & Miller 1999; Cobb-Clark & Kossoudji 1999; Donato, Durand & Massey 1992; Phillips & Massey 1999; Tienda & Singer 1995). Our model also accounts for four U.S. occupations in which migrants were employed: agriculture (the excluded occupation), unskilled manual workers, service/sales office, and skilled/professional. The latter two occupational groupings combine several occupations, as there are very few migrants in this sample working in professional/technical (1.9% of the sample), or sales (4.2%), and even fewer working in office occupations (.008%). As a result, we combined these occupations with the nearest occupation, meaning that service/sales/office is mostly composed of service workers and skilled/professional includes mostly skilled workers.

In measuring the effects of social capital while holding constant the effects of human capital and U.S. occupation, we also control for a variety of background factors, such as demography (age, marital status, and household size), mode of entry (whether the respondent overstayed a tourist visa or surreptitiously crossed the border), and period of migration: preeconomic crisis in Mexico (1965-82), post-economic crisis in Mexico (1983-86), or post-Immigration Reform and Control Act (1987-97). We also controlled for the receiving state and excluded the self-employed, as our social capital constructs are designed to understand how job applicants are linked with employers. We recognize that social capital may be related with self-employment, but our models are not designed to study how the self-employed use social capital to start or run businesses (Raijman & Tienda 2000).

Our estimation strategy is to regress these variables on three successive outcomes separately for documented and undocumented migrants who made their trips to the U.S. between the years 1965 and 1997. In each case we performed a Chow (F) test to determine whether the documented equation was significantly different from the undocumented equation, and in each case the resulting score was significant at $p < .001$. First we use logistic regression to study how the job search technique is determined, regressing whether the

TABLE 1: Mean and Standard Deviation of Selected Variables by Legal Status — Mexican Household Heads on Most Recent U.S. Trip

	Documented		Undocumented		
	Mean	S.D.	Mean	S.D.	T-test[a]
Hourly wage					
Log of hourly wage	.20	.65	.17	.64	−8.83*
Average hourly wage	.74	—	.57	—	—
Job search technique					
Job through friend or relative	.60	.49	.71	.46	4.62*
Formal labor force participation					
Job in formal sector	.93	.26	.71	.45	−11.62*
Social capital					
Near family tie	.35	.17	.20	.15	−18.56*
Far family tie	.63	.24	.50	.26	−10.09*
Friendship tie	.16	.72	.13	.88	−7.31*
SCN	.27	.17	.23	.15	−5.49*
Human capital					
Years of education	.60	.39	.54	.39	−2.96*
Months of U.S. experience	148	94	50	63	−27.18*
Number of times in the U.S.	9	8	3	4	−22.82*
Duration of current/last trip to the U.S.	43	71	28	52	−5.13*
English language ability					
Doesn't speak or understand English	.18	.38	.51	.50	15.06*
Doesn't speak but understands some English	.26	.44	.26	.44	−0.05
Speaks and understands some English	.35	.48	.17	.37	−9.22*
Speaks and understands English well	.21	.41	.06	.24	−10.25*
U.S. occupation					
Agriculture	.36	.48	.33	.47	−1.53
Unskilled manual	.29	.45	.34	.47	2.37*
Service/sales/office	.19	.39	.21	.41	0.86
Skilled/professional	.16	.36	.12	.33	−2.18*
Demographic background					
Age	41	13	41	13	0.15
Married	.93	.26	.92	.27	−.35
Household size	5	2	5	2	4.36*
Mode of entry					
Undocumented border crosser	—	—	—	—	—
Visa overstayer	—	—	.06	.24	—
Period					
1965–82	.16	.36	.38	.49	10.55*
1983–87	.10	.30	.22	.41	6.55*
1988–97	.74	.44	.40	.49	−15.26*
Region					
California	.63	.48	.65	.48	0.49
Texas	.11	.31	.16	.37	3.13*
Arizona	.01	.12	.01	.12	0.21
Illinois	.06	.23	.06	.25	0.75
Other state	.19	.39	.11	.32	−4.46*
N	661		1,285		

[a] Compares differences in means of documented and undocumented migrants.
* $p < .05$

job was obtained through a friend or relative on indicators of social capital, human capital, and other background conditions. Then, conditional upon job search technique, we again use logistic regression to consider the effect of social and human capital on the sector of employment. Finally, given both job search technique and sector of employment, we measure the effect of human and social capital on the hourly wages earned by documented and undocumented migrants for their most recent U.S. job. The latter models were estimated using OLS regression after first converting wages from nominal to constant 1990 dollars and then taking the natural logarithm of the resulting wage rate. The regression coefficients can thus be interpreted as the percentage effect of each variable on real wages earned in the United States.

Means of the Independent and Dependant Variables

In Table 1 we present the means for the dependent and independent variables for both documented and undocumented migrants. Although *t*-tests will not be reported in the text, the differences between documented and undocumented migrants discussed in the following paragraphs are all statistically significant, as can be confirmed by referring to the statistics shown in Table 1. In terms of the dependent variables, documented workers earn $7.50 per hour while undocumented workers earn $5.70 per hour. Sixty percent of the documented and 71% of the undocumented immigrant workers obtained their jobs through a friend or relative. Ninety three percent of the documented and 71% of the undocumented worked in the formal sector. These labor market disparities illustrate that legal status is positively associated with earnings and formal labor market participation. As predicted, undocumented workers utilize their social networks at a higher rate than documented migrants, perhaps to circumvent the legal sanctions against their employment.

In terms of social capital, both documented and undocumented migrants have a large stock of social capital to draw from in the sense that they do have access to friends and family members with current/past U.S. migration experience. However, as predicted, it is quite clear that documented migrants have more social capital at their disposal than undocumented migrants. The average number of types of family members with current/past migration experience is 3.5 for documented migrants, while for undocumented migrants it is 2. Documented migrants also have more distant relatives than undocumented migrants, as their average number of types of distant relatives within their network is 6.3 while this number is 5 for undocumented migrants. Documented migrants are also more likely to possess friends with current/past migration experience, as the average on our friendship network index is 1.6 and it is 1.3 for undocumented migrants. Documented migrants are also more

likely to participate in more destination networks, as their score on our *SCN* index is 2.8 and the score for undocumented migrants is 2.4.

The level of human capital that these migrants possess is rather low. However, documented migrants do possess more U.S. and labor market experience than undocumented migrants. Both documented and undocumented Mexican migrants have an average educational background equivalent to a sixth grade education. Documented migrants spent slightly more than 12 years in the U.S., three times the amount spent by undocumented migrants. Documented migrants have been to the U.S. nine times on average, while undocumented migrants have been three times. Documented migrants also spent 42 months in the U.S. on their current/last trip, which is 13 months longer than the undocumented migrant workers. In general, documented migrants are likely to be receiving more information about local labor markets and attain more work experience as a result of their greater exposure to U.S. labor markets than undocumented migrants.

English language deficiency is a labor market barrier for many Mexican migrants, but undocumented migrants are especially deficient. For example, 18% of the documented migrants as compared to 51% of the undocumented migrants cannot speak or understand any English. At the other end of the English fluency spectrum, 21% of the documented migrants and only 6% of the undocumented migrants can speak and understand English well.

The U.S. occupational distributions of documented and undocumented Mexican migrants are quite comparable. Both groups of migrants work in low-skill, low-wage jobs. Nearly two-thirds of documented and undocumented Mexican workers are employed in agriculture or unskilled manual occupations. Documented migrants are slightly more likely to work within skilled or professional occupations than undocumented migrants. The demographic background of documented and undocumented migrants is also quite similar. The average age of both groups is 41% and 93% of the documented and 92% of the undocumented are married and their average household size is five people.

In terms of period of migration, the migrants who came on their last trip prior to IRCA are primarily undocumented (60%). After IRCA, the percentage documented is nearly twice that of undocumented migrants. This shift reflects the large number of undocumented migrants who received amnesty through IRCA, since 60% of the documented immigrants in this sample who were in the U.S. during the IRCA period received legal status through IRCA.

The majority of both documented and undocumented migrant workers migrated to California: 63% of the documented and 65% of the undocumented migrants. Texas received 11% of the documented and 16% of the undocumented migrants. Only 1% of either group went to Arizona and 6% went to Illinois. Nineteen percent of the documented and 11% of the undocumented Mexican migrants went to states not traditionally Mexican migrant receiving states.

Job Search Technique

In Table 2 we show the effect of our theoretical and control variables on the odds that documented and undocumented household heads got their last U.S. job through a friend or relative. In terms of the independent variables in Table 2 and all following analyses, Appendix B shows the correlations among the independent variables and multicollinearity does not appear to be a problem. We also provide *t*-tests of differences in coefficients to help gauge the differences in coefficients between documented and undocumented migrants.

Among those with legal documents, measures of social capital do not significantly affect whether a job was obtained through friends or relatives. In fact, this model does not reach statistical significance, for none of the variables is significantly related with the likelihood of finding a job though friends or family members. In contrast, among undocumented migrants, the job search technique is closely connected to language ability, U.S. occupation, regional destination, and social capital. As a migrant's English language ability increases, the likelihood of getting a job through a friend or relative falls sharply, but the probability of using interpersonal connections to get a job are greatest at the midlevel occupations, greater either for unskilled manual and service/sales/office than for farm workers. The discrepancy between agricultural workers and unskilled manual and service/sales/office seems to be reflecting agricultural workers' heavier reliance on labor contractors to find employment than the other occupational groupings. Undocumented respondents living in Texas and other nontraditional receiving states are also less likely to use these informal search channels.

In addition to the human capital, occupation, and regional effects, job search technique is also very strongly determined by social capital. Having more distant family members with current/past U.S. migration experience greatly increase the odds of getting a job through a friend or relative. Further, undocumented migrants having friends with current/past U.S. migration experience are also more likely to use these informal networks. It is also interesting to note that the friendship network is significantly larger than the coefficient for documented migrants, as the *t*-test of difference in coefficients is 1.69.

In general, therefore, we find that job search technique, as predicted, is determined by the social capital at a person's disposal among undocumented migrants. Since social capital is not significantly related with job search technique of documented migrants and that there is at least one coefficient that is significantly larger for undocumented migrants, there is evidence to support hypothesis 3, which suggests that undocumented migrants would receive higher returns for their social capital than documented migrants.

TABLE 2: Effect of Selected Variables on Probability of Getting U.S. Job through a Friend or Relative — Mexican Households on Most Recent U.S. Trip

	Got U.S. Job Through Friend or Relative				
	Documented Migrants		Undocumented Migrants		
	B	S.E.	B	S.E.	T-test[a]
Social capital					
Near family tie	.049	.058	–.005	.049	.718
Far family tie	.006	.038	.071*	.025	–.142
Friendship tie	.013	.115	.241*	.068	–.169*
SCN	–.093	.050	.027	.040	–.185*
Human capital					
Years of education	.027	.025	.012	.019	.490
Months of U.S. experience	–.001	.001	–.002	.002	.524
Number of times in the U.S.	–.011	.014	–.005	.023	–.221
Duration of current/last trip to the U.S.	–.003	.002	.000	.002	–.975
English language ability					
Doesn't speak or understand English	—	—	—	—	—
Doesn't speak but understands some English	–.187	.253	–.191	.158	.014
Speaks and understands some English	–.085	.267	–.558*	.188	.145
Speaks and understands English well	–.286	.335	–.101*	.293	.163
U.S. occupation					
Agriculture	—	—	—	—	—
Unskilled manual	.369	.224	.338*	.148	.114
Service/sales/office	.285	.245	.434*	.173	–.497
Skilled/professional	.295	.276	.214	.203	.236
Demographic background					
Age	–.005	.009	–.010	.006	.454
Married	.092	.310	–.021	.222	.296
Household size	–.002	.038	.002	.025	–.088
Mode of entry					
Undocumented border crosser	—	—	—	—	—
Visa overstayer	—	—	.280	.261	—
Period					
1965–82	—	—	—	—	—
1983–86	–.002	.392	–.140	.163	.326
1987–97	–.266	.370	–.232	.154	–.085
Region					
California	—	—	—	—	—
Texas	.163	.266	–.518*	.154	.221*
Arizona	–.104	.651	–.119	.472	–.115
Illinois	–.471	.354	.072	.256	–.124
Other state	–.242	.220	–.469*	.180	.799
Intercept	.105	.734	.845	.446	
Pseudo R^2	.034		.052		
χ^2	32.94		.99*		
N	726		1,537		

[a] Compares differences in coefficients of documented and undocumented migrants.
$p < .05$

Sector of Employment

Contingent on job search technique, the equation estimates presented in Table 3 show how human and social capital together determine whether migrants were employed in the formal sector. We define a formal sector job as one where the migrant had taxes withheld from his pay. Among those with documents, the likelihood of formal sector employment grows steadily as the amount of U.S. experience accumulates: The more time a migrant has spent working in the United States, the greater the likelihood he holds a job in the formal sector. Among undocumented migrants, the likelihood of formal sector employment also grows steadily as U.S. experience accumulates during their current/last trip: the longer the trip, the greater the likelihood a migrant holds a job in the formal sector.

The occupational coefficients suggest that neither group of migrants benefits much from being employed in higher-status occupations, at least in terms of formality of employment. As one moves from farm workers to service/sales/office workers to skilled and professional workers, the odds of being employed in the formal sector diminish quite sharply, and surprisingly the dropoff is greater for documented than for undocumented workers. Moreover, in neither group does schooling influence the odds of formal sector employment. Interestingly, for documented migrants, having access to friendship ties with current/past U.S. migration experience is *negatively* related with formal labor market participation. This relationship doesn't exist for undocumented migrants. Indeed, the documented coefficient is significantly less than the undocumented coefficient ($t = 2.396$). However, for undocumented migrants, having close family members with current/past U.S. migration experience is positively associated with their likelihood of working in the formal sector.

The principal distinction determining sector of employment between documented and undocumented migrants lies in the influence of job search technique: whether one got a job through a friend or relative has no bearing on the sector of employment among documented migrants, but it does have a strong positive influence on the odds of being in the formal sector for undocumented migrants. In other words, among undocumented migrants social capital has a significant indirect effect in determining the sector of employment, whereas among documented migrants it does not. Among the former, access to social capital increases the likelihood of getting a job through a friend or relative, and getting a job through such an interpersonal link increases the odds of working in the formal sector but does not increase the odds of formal employment for documented immigrants.

TABLE 3: Effect of Selected Variables on Probability of Working in a Formal Sector Job — Mexican Household Heads on Most Recent U.S. Trip

	U.S. Job in Formal Sector				
	Documented		Undocumented		
	B	S.E.	B	S.E.	T-test [a]
Job search technique					
Job through friend or relative	–.006	.336	.462*	.134	–.129
Social capital					
Near family tie	–.018	.123	.155*	.054	–.129
Far family tie	.078	.083	.020	.027	.670
Friendship tie	–.622*	.280	.073	.075	–.239*
SCN	–.115	.100	.044	.044	–.145
Human capital					
Years of education	.078	.055	–.016	.020	.159
Months of U.S. experience	.008*	.003	.004	.003	.864
Number of times in the U.S.	–.034	.031	–.000	.028	–.814
Duration of current/last trip to the U.S.	.005	.006	.008*	.004	–.475
English language ability					
Doesn't speak or understand English	—	—	—	—	—
Doesn't speak but understands some English	–.344	.509	.050	.166	–.736
Speaks and understands some English	.784	.601	.067	.210	.112
Speaks and understands English well	–.120	.705	.645	.394	–.946
U.S. occupation					
Agriculture					
Unskilled manual	–.391	.593	–.037	.161	–.576
Service/sales/office	–.197*	.528	–.568*	.182	–.252*
Skilled/professional	–.236*	.569	–.712*	.218	–.270*
Demographic background					
Age	–.013	.019	.005	.007	–.907
Married	.193	.566	–.117	.241	.503
Household size	.121	.081	–.046	.027	.195*
Mode of entry					
Undocumented border crosser	—	—	—	—	—
Visa overstayer	—	—	–.163	.268	—
Period					
1965–82					
1983–86	–.040	.849	.052	.184	–.106
1987–97	–.342	.740	–.712*	.161	.488
Region					
California	—	—	—	—	—
Texas	–.333	.439	–.809*	.161	.101
Arizona	–.162*	.815	–.744	.471	–.935
Illinois	—	—	.613*	.303	—
Other state	.425	.591	.180	.204	.204*
Intercept	.342*	.157	.419	.489	
Pseudo R^2	.208		.125		
χ^2	76.51*		226.09*		
N	714		1,467		

[a] Compares differences in coefficients of documented and undocumented migrants.

* $p < .05$

Wages Earned in the U.S.

Finally, Table 4 estimates the effects of social capital as well as the job search technique and sector of employment on the wages earned by migrants in the U.S., controlling for human capital, demographic background, mode of entry, period, and region. Table 4 also reports the *t*-test of difference in coefficients and these will be reported when significant. In general, real wages declined over time for both documented and undocumented migrants, and they are significantly lower in Texas than in California. Wages are also lower for undocumented migrants who went to nontraditional states. Both groups also evince significant returns to English language ability. Among documented immigrants, real wages are 14% higher among those who speak and understand English well, and the returns are even more marked for undocumented migrants, who experience a 38% wage premium if they speak and understand English well (*t*-test = –1.645).[7]

Documented migrants experience significant returns to human capital, with wages rising as education, months of U.S. experience, and trip duration increase. Undocumented migrants' earnings are negatively related with months of experience and positively related with trip duration. Each year of schooling yields a 1.2% increase in the wages of documented migrants. Likewise, each additional month of migration experience brings a .04% return for documented migrants and a .06% return for those who lack documents. Whereas documented migrants experience a small positive return on prior U.S. experience, for undocumented migrants prior U.S. experience has a small *negative* effect.

As expected, social capital plays a positive role in determining wages. For documented migrants, close family members with current or past migration experience play an important role in determining wages, whereas for undocumented migrants distant relatives, friends, and being in contact with destination networks is positively related with wages. Thus, the mechanisms by which social capital affects earnings appear to differ between the two groups. Documented migrants receive a 4% reward for each increment on the near family tie index. The documented migrant coefficient for this variable also differs significantly from the undocumented coefficient, lending support to hypothesis 4 that the mechanisms differ between groups. Undocumented migrants receive a 1.4% return for each increment on the far family tie index, compared with a 4.6% return for the friendship tie index, and 2.6% return for the SCN index.

In addition to these manifold direct effects on wages, social capital also has indirect effects through sector of employment. As we saw earlier, access to social capital greatly increases the odds that an undocumented migrant will get a job through a friend or relative, and getting a job through this job search technique increases the odds that it will be in the formal sector. Finally, as shown in Table 4,

TABLE 4: Effect of Selected Variables on the Log of Real Wages — Mexican Household Heads on Most Recent U.S. Trip

	Wage in Constant Dollars				
	Documented		Undocumented		
	B	S.E.	B	S.E.	T-test[a]
Job search technique					
Job through friend or relative	–.051	.033	.011	.031	–.138
Formal labor force participation					
Job in formal sector	.187*	.064	.106*	.032	.114
Social capital					
Near family tie	.040*	.012	.010	.012	.184*
Far family tie	.010	.008	.014*	.006	–.453
Friendship tie	.012	.024	.046*	.017	–.118
SCN	.017	.010	.026*	.010	–.647
Human capital					
Years of education	.012*	.005	.009	.004	.533
Months of U.S. experience	.001*	.000	–.001*	.001	.285*
Number of times in the U.S.	.004	.003	.007	.006	–.500
Duration of current/last trip to the U.S.	.004*	.000	.006*	.001	–.202*
English language ability					
Doesn't speak or understand English	—	—	—	—	—
Doesn't speak but understands some English	–.045	.052	.113*	.037	–.248*
Speaks and understands some English	.006	.054	.087	.046	–.114
Speaks and understands English well	.131*	.067	.321*	.071	–.195*
U.S. occupation					
Agriculture					
Unskilled manual	.145*	.044	.139*	.036	.088
Service/sales/office	–.012	.050	.007	.041	–.297
Skilled/professional	.201*	.056	.119*	.050	.109
Demographic background					
Age	–.003	.002	–.001	.001	–.768
Married	.071	.063	–.065	.052	.165*
Household size	–.013	.008	–.001	.006	–.117
Mode of entry					
Undocumented border crosser	—	—	—	—	—
Visa overstayer	—	—	.078	.059	—
Period					
1965–82	—	—	—	—	—
1983–87	–.103	.077	–.267*	.039	.190*
1988–97	–.255*	.072	–.373*	.037	.144
Region					
California	—	—	—	—	—
Texas	–.120*	.053	–.094*	.040	–.394
Arizona	.016	.138	–.106	.115	.686
Illinois	.128	.073	.065	.058	.678
Other state	–.067	.044	.139*	.045	–.323**
Intercept	.148*	.164	.146*	.112	.103
R^2	.633		.424		
N	661		1,285		

[a] Compares differences in coefficients of documented and undocumented migrants.

* $p < .05$

TABLE 5: Hourly Wage Ggains from Social Capital — Mexican Household Heads on Most Recent U.S. Trip

	Years of Education			
	Documented Migrants		Undocumented Migrants	
	Dollars	Percent	Dollars	Percent
Social capital				
Near family tie	2.40	27	—	—
Far family tie	—	—	.80	14
Friendship tie	—	—	.50	9
SCN	—	—	.11	17
Combined (far family tie, friendship tie, SCN)	—	—	2.45	34

being employed in the formal sector increases the wages earned by 11.2%. Although the wage premium for formal sector employment is even greater for documented migrants (20.6%), social capital is not connected with wages through this indirect pathway.

Value of Social Capital

To assess the economic importance of social capital, we use the log of earnings estimates presented in Table 4 to illustrate the amount of money that both documented and undocumented migrants earn in additional wages for their social capital based on our social capital indices. We take a hypothetical average documented and undocumented worker who possesses the average characteristics of all the independent variables in our models reported in Table 1 and estimate the amount of wages gained as a result of social networks for the significant social capital variables. We accomplish this task by computing the dollar difference between a person with the lowest score 0 on all our indices that are significant and compare this hypothetical individual with someone who ranked at the top of the index. We also provide the percentage wage gain, as a means of gauging the effect. Finally, for the undocumented migrants, we provide the combined increase, which compares a respondent possessing no social capital to a person who has complete far family ties, friendship ties, and ranks high on our SCN index.

The only statistically significant social capital variable for documented migrants has quite a substantial impact on their wages. Moving from the bottom of the near family tie index to the top of the index is associated with a $2.40 increase in hourly wages, a 27% gain. Undocumented migrants also receive substantial returns for their social capital, although the mechanisms are quite

different. Moving from the bottom of the far family tie index to the top of the index is associated with an eighty-cent increase in hourly wage, or a 14% gain. Among undocumented migrants there is a fifty-cent or 10% increase in wages associated with our friendship index. The SCN, which is basically a measure of participation in U.S. institutions, is associated with a $1.10 or 17% increase in hourly wages.

We also estimated the combined effect for social capital of the significant variables for the undocumented migrants, as only one variable was significant for the documented migrants. An undocumented migrant with complete social capital as measured by these indices would earn $2.45 more than the migrant without any social capital and this amounts to a 34% increase in hourly wages. Table 5 illustrates the substantial increases in wages that are accrued by documented and undocumented migrants possessing rich, complete social networks.

Assessing Social Capital Theory

In this article we sought to extend social capital theory by revealing how interpersonal connections influence the wages earned by Mexican immigrants, and to test social capital theory more rigorously by deriving specific hypotheses about the circumstances under which social connections would function more strongly in determining wage outcomes. We argued that social capital should be expected to directly affect wages. Ties to friends and relatives living in the U.S. with U.S. migration experience were hypothesized to influence wages directly to the extent that a migrant's social contacts could provide guidance and information to make the job search more *effective and efficient,* thus providing the job seeker with higher wages. We also hypothesized that social ties would influence wages indirectly to the extent that friends and relatives guided migrants into particular kinds of jobs — namely those in the formal sector. We argued that owing to their precarious status in the U.S., social capital would generally be more important in determining the wages earned by undocumented migrants than for those with the legal right to live and work in the U.S. and that more distant familial and friendship ties would be most important for this group, as they would need to access nonredundant information to connect with employers willing to hire undocumented migrants.

For the most part, our hypotheses were sustained, thus lending rather strong support to the theory of social capital. We confirmed prior research by demonstrating once again that social capital has a positive effect on wage rates: migrants who are socially connected to current or former U.S. migrants generally earn higher wages than those who lack such connections. These

connections provide migrants with information about the U.S. labor market that can efficiently link them with employers paying the highest wages.

In addition, we found that social capital indeed has both direct and indirect effects on U.S. wages of both documented and undocumented migrants. However, the indirect effect of job search technique is significant only for undocumented migrants. For them, access to social capital increases the odds of getting a job through friends or relatives, which in turn increases the probability of formal sector employment, which finally increases the U.S. wages they ultimately earn. In other words, for undocumented migrants, entering the formal labor market is a critical juncture. Our analysis shows that 29% of undocumented Mexican workers were employed within the informal labor market as compared with only 7% of documented Mexican workers. Jobs within the informal labor market are of low quality and offer few benefits, low wages, job instability, and little upward mobility. However, since social capital works indirectly to increase wages by leading undocumented migrants to jobs within the formal sector, undocumented migrants finding jobs through friends and family members are able to escape the informal labor market. Without the assistance of social capital, many superior jobs located within the formal sector would not be available to undocumented migrants.

The direct effects of social capital are generally stronger, more consistent, and more manifold for undocumented migrants than their legal counterparts. Because of their precarious legal status, undocumented migrants are limited in their ability to market themselves. They are blocked from actively gathering labor market information and freely seeking jobs. In other words, labor market information cannot and does not flow freely between potential employees and employers, as undocumented migrants cannot effectively relay their information to all potential employers without jeopardizing themselves.

Furthermore, since the number of employers willing to violate federal employment laws is small, the supply of potential employers of undocumented migrants is smaller than that of documented workers. For undocumented workers, locating such employers is problematic. Thus, labor market conditions for undocumented migrants are extremely competitive and information becomes a crucial asset in marketing oneself. However, social networks provide nonredundant information that can link undocumented workers with employers who are willing to hire them despite their undocumented status. We find that for undocumented migrants, having connections with distant relatives and friends and involvement with social institutions in the U.S. is more important than having close family members, as such networks provide nonredundant information linking undocumented migrants with employers willing to hire undocumented workers.

We also find that near relative networks are important for documented migrants but not for undocumented migrants. For them, distant relatives, friends, and participation in U.S. institutions are positively related with

earnings. As in previous research by Lee (1969), which suggested that weak ties are important in providing information to women seeking illegal abortions, our findings also seem to suggest that these distant ties are linking the undocumented migrants with information that may not be held within their immediate network.

The fact that social capital plays a more significant role in determining wages of undocumented migrants than documented migrants suggests that all workers facing employment barriers, such as legal restrictions, discrimination, and structural constraints, can use social capital to circumvent these barriers. We believe that the information gained from social capital allows Mexican migrant workers to entertain more employment offers, which, in turn, enables them to maximize their wages. Although our findings are specific to Mexican migrants, they suggest that workers who cannot gain this vital and necessary labor market information on their own will receive higher returns for their social capital than workers not separated from this information.

Our research shows that social capital works in theoretically expected ways, as most Mexican migrants in this study clearly participated in and benefited from social networks. Participation in these social systems translates into improved labor market outcomes reflected in higher earnings, above and beyond what individual human capital endowments would provide. Our study shows that both documented and undocumented migrants receive substantial economic rewards from their social capital, although the mechanisms differ between the two groups. Since the wages of both documented and undocumented migrants are affected by social capital, our findings highlight an important characteristic of the U.S. labor market that migrants encounter: migrant workers have unequal access to labor market information. Some Mexican migrant workers are privy to private information, which provides them with advantages such as increased access to jobs within the formal labor market. Regardless of their human capital endowments, other migrant workers without such information earn lower wages. Ironically, since some forms of social capital appear related to time spent in the U.S., undocumented migrants—the group most in need of the benefits of social capital—possess less social capital than documented migrants. However, for those possessing it, social capital constitutes a particularly important, indeed crucial, resource for achieving mobility in the U.S. labor market.

Notes

1. Marsden and Gorman (2001) point out that studies about employer's motivations for using informal hiring are few relative to the vast literature on employee use of such job search methods.

2. In addition to the theoretical reasons for separating these groups that will be discussed, Table 1 shows that documented and undocumented differ in many critical ways such as possession of social capital and human capital.

3. Such homogeneous networks are partially maintained by family reunification, the immigration policy of granting legal residence to immigrants who already have family members with legal residence in the U.S. However, studies suggest that people have close relationships with people very similar to themselves (Burt 1990; Marsden 1987). Thus we believe that undocumented migrants would be more likely to benefit from friends, institutions, and distant relationships than documented migrants.

4. One might expect that migrants interviewed in Mexico are more likely to have lower earnings, as a result of a selection bias. This might have occurred as return migration might have been related with poor labor market outcomes in the U.S. However, we did several tests to check this selectivity, and where the interview was conducted does not appear to be related with earnings.

5. All the variables utilized in our analyses are described in detail in Appendix 1.

6. *Paisano* is translated into English as countryman.

7. The 14% and 38% were derived through exponentiation of the coefficients.

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APPENDIX A: Variable Descriptions of Variables Used in Analysis

Dependent Variables

Log of Hourly Wage
The hourly wage the migrant earned on his/her current/last trip to the U.S. for his/her most recent job. U.S. wage is logged to account for a skewed distribution.

Job through Friend or Relative
Respondents indicating that their most recent job in the U.S. was found through a friend, relative, or fellow countryman were coded as finding their job through a friend or relative and they were compared to respondents indicating that they found their most recent job in the U.S. through a job search, a coyote, a contractor, or other.

Job in Formal Sector
Respondents who had taxes withheld from their pay by their employers were consided to be working in the formal sector and were compared to those who did not have taxes withheld from their pay.

Social Capital

Near Family Tie
This index ranges from 0 to 8. If respondents had a spouse, a sibling, a parent, or a grandparent with past U.S. migration experience, they are given a point for a total of 4 points for past experience. Similarly, if they had a spouse, a sibling, a parent or a grandparent with current U.S. migration experience they were given a point totaling 4 points. These two indices were combined to create our near family tie index, which measures whether respondents had access to current or past migration experience.

Far Family Tie
This index ranges from 0 to 10. If respondents had a uncle/aunt, cousin, niece/nephew, brother-/sister-in-law, other in-laws with past U.S. migration experience, they are given a point, for a total of 5 points for past experience. Similarly, if they had a uncle/aunt, cousin, niece/nephew, brother-/sister-in-law, or other in-laws with current U.S. migration experience they were given a point totaling 5 points. These two indices were combined to create our far family tie index, which measures whether respondents had access to current or past migration experience.

APPENDIX A: Variable Descriptions of Variables Used in Analysis (Cont'd)

Friendship Tie
Respondents with friends with past U.S. migration experience are given a point and those with friends with current migration experience are given an additional point. The range for this variable is 0-2.

SCN
Respondents receive a point if they lived with fellow countrymen, participated in a sports organization, belonged to a social organization, had friends who were white, had friends who were Latino, had friends who were Chicano, or had friends who were black, for a range of 0 to 7.

Human Capital

Years of Education
Total number of years of education completed.
Months of U.S. Experience
Total number of months spent in the U.S.
Number of times in the U.S.
Total number of trips made to the U.S.
Duration of current/last trip to the U.S.
Total number of months of current/last trip.
English language ability
Doesn't Speak or Understand English
Doesn't Speak but Understands Some English
Speaks and Understands Some English
Speaks and Understands English Well

U.S. Occupation

Agriculture
Respondent's principal occupation at their last job in the U.S. was in agriculture.

Unskilled manual
Respondent's principal occupation at their last job in the U.S. was in unskilled manual labor.

Service/sales/office
Respondent's principal occupation at their last job in the U.S. was in service, sales, or office work.

Skilled/professional
Respondent's principal occupation at their last job in the U.S. was in skilled labor, professional, and technical.

APPENDIX A: Variable Descriptions of variables used in analysis (Cont'd)

Demographic Background

Age

Age at time of survey.

Married

Respondents who indicated that they were married or seperated were compared to those who were never married, widowed, divorced, or in a consensual union. *Household Size*

Total size of household.

Mode of Entry

Undocumented border crosser

Respondents indicating that they entered the country without documentation or false documentation were compared to those with green cards, contracted or braceros, citizens, amnestied, seasonal agricultural workers, or had silva letters.

Visa overstayer

Respondents indicating that they entered as tourist were compared to those with green cards, contracted or braceros, citizens, amnestied, seasonal agricultural workers, or had silva letters.

Period

1965-82: Entered U.S. last time between 1965 and 1982.
1983-87: Entered U.S. last time between 1983 and 1987.
1988-97: Entered U.S. last time between 1988 and 1997.

Region

California

State of destination on last visit was California.

Texas

State of destination on last visit was Texas.

Arizona

State of destination on last visit was Arizona.

Illinois

State of destination on last visit was Illinois.

Other State

State of destination on last visit was a state other than California, Texas, Arizona, or Illinois.

APPENDIX B: Correlation among Variables Used in Analyses from the MMP

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Personal	.10												
2. Tax	.04*	.10											
3. Near tie	–.04	.22*	.10										
4. Far tie	.10*	.17*	.51*	.10									
5. Friend tie	.09*	.09*	.29*	.42*	.10								
6. SCN	.08*	.06*	.15*	.09*	.12*	.10							
7. Education	.05*	.01	.24*	.12*	.13*	.20*	.10						
8. U.S. experience	–.12*	.27*	.43*	.28*	.16*	.23*	.01	.10					
9. U.S. trips	–.09*	.14*	.13*	.19*	.11*	.00	–.20*	.46*	.10				
10. Duration	–.05*	.17*	.33*	.15*	.08*	.23*	.14*	.61*	–.17*	.10			
11. English 2	.01	.00	.03	.02	.06*	.09*	.01	–.01	.06*	–.04	.10		
12. English 3	–.03	.10*	.18*	.11*	.05*	.20*	.16*	.20*	.10*	.12*	–.31*	.10	
13. English 4	–.05*	.12*	.32*	.18*	.10*	.23*	.27*	.38*	–.03	.37*	–.20*	–.19*	.10
14. Unskilled	.05*	.05*	.06*	.04*	.02	.06*	.09*	.00	–.11*	.07*	.05*	.03	.00
15. Service	.04	–.06*	.02*	.01	.05*	.09*	.10*	.01	–.09*	.07*	–.02	.07*	.07*
16. Professional	.00	–.05*	.12*	.05*	.03	.08*	.13*	.11*	–.06*	.12*	–.01	.01	.17*
17. Age	–.08*	.03	–.23*	–.08*	–.10*	–.10*	–.45*	.21*	.31*	.04*	–.09*	–.16*	–.09*
18. Married	–.00	.00	.01	.04*	–.02	–.05*	–.07*	–.00	.08*	–.05*	–.00	–.04*	–.02
19. Household	.01	.00	–.13	–.08*	–.12*	–.08*	–.03	.01	–.00	.02	.03	–.03	–.01
20. Overstayer	.04	–.05	.01	.04	.01	–.02	.16*	–.08	–.06*	–.02	.03	–.04	.02
21. 82–86	.01	.01	–.01	–.02	–.01	.02	.03	–.07	–.08*	–.01	–.03	.02	–.01
22. 87–97	–.02	–.05*	.11*	.08*	.09*	.02	.14*	.03	.25*	–.28*	.12*	.14*	–.02
23. Texas	–.04*	–.17*	–.16*	–.14*	–.11*	.04*	–.04	–.10*	–.05*	–.07*	–.04	–.02	–.06*
24. Arizona	–.02	–.06*	–.03	–.03	–.01	.02	–.02	–.02	.00	–.02	.02	–.02	–.03
25. Illinois	.00	.07*	.03	–.01	–.02	.03	.06*	.08*	–.05*	.09*	–.01	–.03	.08*
26. Other state	–.07*	.06*	–.04	.02	.01	–.03	–.08*	.00	.15*	–.12*	.02	.05*	–.07*

APPENDIX B: Correlation among Variables used in Analyses from the MMP

	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
(1) Personal													
(2) Tax													
(3) Near tie													
(4) Far tie													
(5) Friend tie													
(6) SCN													
(7) Education													
(8) U.S. experience													
(9) U.S. trips													
(10) Duration													
(11) English 2													
(12) English 3													
(13) English 4													
(14) Unskilled	.10												
(15) Service	–.34*	.10											
(16) Professional	–.26*	–.19*	.10										
(17) Age	–.07*	–.09*	–.07*	.10									
(18) Married	–.01	–.06*	–.00	.07*	.10								
(19) Household	–.00	–.00	.02	.01	–.00	.10							
(20) Overstayer	.01	.01	.03	.02	–.02	.02	.10						
(21) 82-86	.04*	.01	–.02	–.08*	.01	–.03	–.02	.10					
(22) 87-97	–.01	.03*	.04	–.30*	–.02	.01	–.00	–.42*	.10				
(23) Texas	.09*	–.06*	.03	.00	–.01	–.02	–.01	.02	–.03	.10			
(24) Arizona	–.06*	.06*	–.01	.03	.02	–.04*	–.01	–.02	.03*	–.05*	.10		
(25) Illinois	.12*	.04*	–.00	.07*	.02	.00	.07*	–.02	–.04*	–.11*	–.03	.10	
(26) Other State	–.11*	–.06*	–.12*	.02	.05*	–.04	–.01	–.05	.11*	–.17*	–.05*	–.10*	.10