Factors influencing Latino immigrant householder's participation in social networks in rural areas of the Midwest

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1. Introduction

In this paper, the factors influencing a Latino immigrant householder's participation in social networks are assessed in order to understand the characteristics of those Latinos who participate. Given that social networks use is context specific, this study also seeks to compare the literature findings with these results. The rationale, selection, and operationalization of both dependent and independent variables used for this study are presented below. Participation in three types of social networks are assessed with the binary Logit regression, namely (a) informal networks, (b) formal networks, and (c) religious network. The assessment of participation in community social networks was not carried out due to lack of variability in the sample collected.

The paper is organized as follows: section 2 provides the background for participation in social networks. Section 3 presents the empirical approach used to assess participation in friendship, recreational and informal social networks. Section 4 presents the results and discussion of the propensity to participate in informal social networks. Section 5 presents the findings and discusses the propensity to participate in formal social networks. Section 6 discusses the propensity to participate in religious social network and section 7 concludes.

2. Background and hypothesis

Current social network analysis in regards to Latinos has been mostly concentrated in the influence that these networks have on various facets of Latinos' livelihood such as employment, settlement, housing, and community integration. However, very little has been said about what influences the participation in to these social networks in the first place. So far, research has suggested that even though there are some general factors influencing participation in a specific

social network, most factors are case specific (Menjivar, 2006). Furthermore, assessing the behavior of Latinos elsewhere might be informative in regards to the identification of patterns and likely factors influencing participation in a specific network.

There are many factors that influence participation is social networks. In the case of Latino immigrants, access to institutions and acquisition of information necessary to reduce transaction costs is among the most important. Participation in social networks is also interwoven in the Latino's cultural capital. However, given that Latino immigrants living in these communities are, most of the time, moving from one place to another, participation in informal social networks can no longer be considered as default. A householder needs to make a concerted effort to associate with others in order to extract the benefits that a network can bring.

Theoretically, it could be hypothesized that Latino immigrants would make a prior evaluation of the benefits to be derived from participating in a specific social network, K_s. If the analysis of the costs and benefits is positive, i.e., this activity provides more benefits than the costs incurred in seeking, obtaining, and maintaining these contacts, then a household participates, otherwise, he/she declines participations. This relationship could be explained formally using the postulates of utility. That is, assuming that the starred terms are the optimal levels, then the household will only invest in social network, k_s, if their current levels of utility is less than the optimal:

$$(V.1)\ U(C, Z; D, \vartheta) \leq U(C_i^*, Z_i^*; D, \vartheta)$$

Whereby C represents overall consumption; Z represents the home good; D represents household demographic characteristics; and ϑ is a stochastic disturbance term. Thus, whenever

the condition (*V.1*) is satisfied, it will be on the best interest of the householder to invest in social networks.

From the above discussion, it could be hypothesized that:

<u>Hypothesis:</u> participation in social networks is a function of the cultural and human capitals, the context of reception and the acculturation path.

The factors influencing a Latino immigrant householder's participation in social networks are assessed to understand the characteristics of those Latinos who participate in informal, formal and religious networks. Given that social networks use is context specific, this analysis seeks to compare the literature findings with these results, to identify unique behaviors in rural communities.

3. Empirical approach

The dependent variables of interest are participation in social networks (informal, formal, and religious). These are modeled as binary variables, i.e., if a Latino participates the dependent variable takes a value of 1 and 0 otherwise. Binary logistic regression is particularly appropriate to carry out a regression analysis using these type of variables thus used for the analysis of participation in social networks.

3.1. Variables used

Three dependent variables are used, namely participation in (a) informal and recreational networks, (b) formal networks, and (c) religious networks. These are assessed as binary: if a Latino participates takes a value of 1, and 0 otherwise. Each dependent variable is used once on a

separate regression as reflected in the results presented below. These variables are operationalized by asking participants if they participate in these types of social networks in their communities.

All three regressions used the same independent variables for the logistic regression. The literature on the selection and participation on social networks suggests that age, context of reception, marital status, gender, length of residence in a community, education and language ability, country of origin, and community of residence influence participation in social networks.

3.2. Approach used for the interpretation of results

There are many ways to interpret the results from a binary logistic regression. For the purposes this analysis, two particular methods are well suited: (a) partial impact of the coefficients on the dependent variable and (b) observing each result as the percentage change of the participation or not into a given social network. However, this interpretation is not straight forward. Coefficients need to be transformed before they can be interpreted as a percent of participation.

In order to derive the partial change impact brought about by a variable on the probability of a Latino householder participating in social network, we start by defining probability to participate given explanatory variables (Long, 1997):

$$Pr(y = 1|x) = F(x\beta)$$

In this equation, F is the logistic cumulative distribution function Λ. The partial effect is then derived thus:

$$\frac{\partial Pr(y=1|x)}{\partial x_k} = \lambda(x\beta)\beta_k = \frac{exp(x\beta)}{[1+exp(x\beta)]^2}\beta_k$$

$$= Pr(y=1|x)[1-Pr(y=1|x)]\beta_k$$

The sign of the marginal effect is determined by the coefficient, β_k. However, the magnitude of the change is dependent on the magnitude of β_k and the value of $x\beta$.

The second form of interpreting logit results is also the most commonly used in social science research: the probability of participating, or the odds ratio. Here, a transformation of the coefficient will indicate the odds of an event, in this case participation in social network, occurring. To start, the logit model can be transformed to a log-linear form by: $\ln\Omega[x] = x\beta$ where $\Omega[x] = Pr(y=1|x)/1 - Pr(y=1|x)$. Therefore,

$$\frac{\partial ln\Omega[x]}{\partial x_k} = \beta_k$$

This formulation allows for the interpretation of a unit change holding other variables constant since a unit change on x_k using this approach does not depend on the level of x_k or the value of any other variable. However, this result is not always intuitive, a much more intuitive result can be obtained by transforming the coefficient once more. This can be achieved by:

$$exp[\ln\Omega(x)] = x\beta \rightarrow \Omega(x) = \exp(x\beta)$$

This result can then be interpreted as a factor change. For instance, it could be said that for a unit change, the odds are expected to change by a factor of $\exp(x\beta)$ everything else equal. For a percent change all we have to do is to use the following formula:

$$100[\exp(x\beta) - 1]$$

Using this formula, it is possible to estimate the effect of an arbitrary change induced on a variable of interest by a given value δ. For instance, if want to know the effect of an increase of 10 more years of age on social networks participation, all we have do is multiply delta (in this case the 10 years) on the coefficient:

$$100[\exp(x\beta\delta) - 1] \rightarrow 100[\exp(x\beta * 10) - 1]$$

4. Participation in recreational and informal social networks

The results of the decision of a householder to participate in a recreational or informal social network are presented in table 1. The findings show that high levels of racism and discrimination, higher level of cultural identity, lower levels of ability to speak English, and belonging to other Latin American countries were significant predictors of the participation in informal social networks.

Cultural identity was the only variable presenting a positive significance impact among mostly negative effects. Latinos who identified strongly with Latino culture had a higher predisposition to join this type of social network. This result makes sense if it is considered that these types of social networks are designed to allow immigrants to reminisce about the old country, meet people with similar objectives and people with similar socio-economic conditions. Additionally, these social networks function as sources of information about where to get ingredients to prepare dishes from their home country.

TABLE 1. RESULTS OF THE PARTICIPATION IN RECREATIONAL NETWORKS

Parameter	Estimate (β)	Std. Error	Sig.	% Change
Age	-0.010	0.011	0.323	-1.00
Socio-Environmental context	-0.038	0.115	0.741	-3.73
Racism and Discrimination	0.027	0.088	0.047**	2.74
Language Pressures	0.036	0.097	0.708	3.67
Cultural Identity/Capital	0.010	0.011	0.063*	1.01
Married individuals	0.299	0.229	0.192	34.85
Gender = females	-0.293	0.200	0.142	-25.40
Region C	-0.074	0.250	0.768	-7.13
Region B	0.157	0.248	0.527	17.00
Length of residence	0.024	0.027	0.384	2.43
Ability to speak English	-0.175	0.152	0.077*	-16.05
Educational Level	0.000	0.029	0.997	0.00
Salvadorian	0.049	0.279	0.861	5.02
Honduran	0.533	0.320	0.096	70.40
Guatemalan	-0.077	0.395	0.846	-7.41
Other Latin American	-0.376	0.049	0.053*	-31.34
Intercept	-7.251	0.792	0.000	-99.93

a. LOGIT model: LOG(p/(1-p)) = Intercept + BX **Sig. at 5% *Sig. at 10%

Dep Var: Participation in Recreational groups

-2 Log Likelihood: 434.909

Cox and Snell R square: 0.129

Nagelkerde R square: 0.189

N: 398

Having the ability to cook dishes from home country is very important for these Latinos (Suarez-Orozco and Suarez-Orozco, 2001) and the ingredients used can be very expensive if you don't know where to buy them. Participants might also have higher affinity to these social networks because they are more likely to engage in cultural activities that appeal to these groups.

Racism and discrimination was assessed using a scale that ranges from 1(low perceived racism) to 7(extremely high racism). Those who perceived higher levels of racism and discrimination had a 2.7 percent higher probability of joining informal social networks. The effects of this result are wide ranging. Some enterprising Latinos might use these social networks

as sources of moral support in order to balance out the discrimination in the wider community. That is, amongst themselves they feel comfortable enough to air their grievances whereby more experienced, long term residents can advise on how to deal with whatever situation they are facing. Alternatively, the situation might force Latinos to effectively withdraw from the mainstream society and seek only their own kind thus making economic integration very difficult in these regions and effectively creating a population that is, at best, separated, and at worst marginalized from the mainstream society. This is in line with social capital research whereby discontent with certain behavior in the society fosters a creation of negative social capital such as gangs and the like (Portes & Sensenbrenner, 1993; Wacquant, 1998).

Those with higher level of English ability were 19 percent less likely to join informal groups. This result makes sense if we consider that most in the sample who reported higher English proficiency were either born in the US or have stayed in the community for a very long time. These are more likely to be disconnected with the newcomers, the majority of whom have lower levels of education and very low level of English ability. This result can also be interpreted in the opposite direction: lower level of English ability increases the odds of joining informal social networks. People from other Latin American countries were 31 percent less likely to join informal social networks in relation to the default group, which were the Mexicans.

5. Participation in formal social networks

The participation in formal social networks also uses a binary dependent variable that 1 if a householder participates and 0 otherwise. Table 2 present the results of the binary logistic analysis. The participation in formal social networks was significantly affected by language pressures in the community, by being married (this included those living with partners), residing

in the region B, and the ability to speak English. Formal organizations tend conduct most (if not all) their business in English thus it is only natural that those who felt higher language pressures were less likely to join formal social networks. It is important to realize that context of reception variables were reverse scored: 1 is positive and 7 is negative. Thus a higher positive score actually means negative impact. These had a 62 percent higher probability of not participating as compared to those who did not feel such kind of pressures.

Those Married showed a much higher probability of participating in formal social networks as compared to singles. It is also worth mentioning here that this category included both married and those living with partners. The single category combines single, widow(ed), and divorced. People living in region B had a 79 percent lower probability of joining formal networks as compared to those in region A. This could be attributed to the relative size of the community, lack of such networks that were directly involved in recruiting Latinos and the lack of English speaking ability, which most Latinos expressed. The lack of speaking English ability could be tied up with the English pressures as one of the most important factors precluding their participation in some of these networks.

Lower participation in these types of networks has very important implications in terms of community and economic integration of immigrants in the community. It was mentioned above that there are (almost) no formal social networks that were geared towards recruiting Latinos. This does not mean that these networks do not exist. It means that there is a clear divide on what types each community adheres to, Latinos belong to operators' networks and Anglos belong to suppliers' networks. In this region, suppliers are those involved in the gestation and/or fattening of pigs, which are then supplied to the processing plant. Operators are those working in

the processing plant on these supplied pigs. The nature of the suppliers' activities make it more likely for those involved to invest in the community and much more likely to move upward economically. For the operators, the result is exactly the opposite.

TABLE 2 RESULTS OF THE PARTICIPATION IN FORMAL NETWORKS

Parameter[a]	Estimate (β)	Std. Error	Sig.	% Change
Age	-0.030	0.021	0.154	-2.95
Socio-Environmental context	-0.296	0.256	0.247	-25.62
Racism and Discrimination	-0.151	0.189	0.423	-14.01
Language Pressures	0.485	0.190	0.011**	62.41
Cultural Identity/Capital	-0.011	0.064	0.858	-1.09
Married individuals	0.642	0.487	0.053*	90.02
Gender = female	0.354	0.418	0.397	42.47
Region C	-0.250	0.405	0.538	-22.12
Region B	-1.586	0.666	0.017**	-79.52
Length of residence	0.007	0.055	0.896	0.70
Ability to speak English	0.584	0.270	0.030**	79.32*
Educational Level	0.064	0.060	0.283	6.60
Salvadorian	0.259	0.538	0.631	29.56
Honduran	-8.595	67.661	0.899	-99.98
Guatemalan	-0.324	1.067	0.761	-27.67
Other Latin American	0.285	0.652	0.662	32.96
Intercept	-9.967	1.479	0.000	-99.99

[a]. LOGIT model: LOG(p/(1-p)) = Intercept + BX **Sig at 5% *Sig. at 10%
Dep Var: Participation in formal groups
-2 Log Likelihood: 465.664
Cox and Snell R square: 0.197
Nagelkerde R square: 0.140
N: 406

6. Participation in religious social networks

Religious social networks are very effective in helping Latino immigrants' access institutions and manage their daily lives. Estimation results shown in table 3 indicate that age, cultural identity, living in region C and education have a significant influence in the probability

of participating in religious social networks. Age's positive impact on the probability of participating in religious social networks might be strongly related to Latinos cultural perception about the importance of religion in their livelihood. This is line with prior research, which states that older Latinos are more attuned to religion than younger Latinos (Falicov, 2000).

Latinos with higher level of cultural capital were also more likely to participate in these type of social networks. Living in region C had a negative impact on the probability of participating in religious social networks. This region's economy, and consequently jobs, is mostly hospitality and tourism-based. This leads to odd working hours. If these situations are coupled with the tendency of religious social groups to meet in early morning or evening times, the end result would be very few participants in group meetings/activities. Thus their schedules would barely leave time to participate in these social groups.

Latinos with higher educational level had a higher probability of being a member of religious social networks. This makes sense especially if we consider that most highly educated Latino immigrants have a more settled status, have better jobs and might be considered leaders of their community. These are also the ones who might not have to work two or three jobs to make ends meet and subsequently have more time to participate in these types of social networks. Additionally, these might also be very important for these social networks in terms of planning, fundraising, and other complex activities that might require complex reasoning and the ability of understanding the law, access to institutions and the like.

TABLE 3 RESULTS OF THE PARTICIPATION IN RELIGIOUS NETWORKS

Parameter	Estimate (β)	Std. Error	Sig.	% Change
Age	0.054	0.386	0.035**	5.55
Socio-Environmental context	0.029	0.100	0.769	2.94
Racism and Discrimination	-0.112	0.077	0.148	-10.59
Language Pressures	0.111	0.082	0.174	11.74
Cultural Identity/Capital	0.154	0.101	0.009**	16.65
Married individuals	0.319	0.185	0.086	37.58
Gender = female	-0.064	0.160	0.690	-6.20
Region C	-0.236	0.177	0.183	-21.02
Region B	-0.674	0.408	0.001**	-49.03
Length of residence in the community	0.023	0.020	0.261	2.33
Ability to speak English	0.047	0.121	0.698	4.81
Educational Level	0.052	0.023	0.021**	5.34
Salvadorian	-0.003	0.228	0.989	-0.30
Honduran	0.185	0.394	0.638	20.32
Guatemalan	0.290	0.321	0.366	33.64
Other Latin American	-0.329	0.344	0.338	-28.04
Intercept	-7.278	0.632	0.000	-99.93

a. LOGIT model: LOG(p/(1-p)) = Intercept + BX **Sig at 5% *Sig at 10%

Dep Var: Participation in Religious groups

-2 Log Likelihood: 544.934

Cox and Snell R square: 0.131

Nagelkerde R square: 0.192

N: 401

It is also important to mention that some of the variables that were not significant are also important here. For instance, gender is not significant because, it can be argued, that Latino cultural perception about religion is so strongly engrained to both genders that it does not matter who is the subject of interest. For the community climate, most of these churches and networks have gone to great lengths to make the environment accommodating to Latino immigrants thus generating some level of trust between the church and Latinos. This makes the church one of the few places where Latino immigrants feel safe to go without fear of being rounded up and deported. For instance, churches conduct masses in Spanish and have personnel very fluent in

Spanish on staff to help immigrants with daily chores. Thus immigrants feel “at home” in churches almost as if they were still in their own country. Additionally, churches provide services to immigrants such as workshops about how to interpret the law and what to do in case of emergencies regarding the authorities.

7. Conclusion

In this paper, we assessed the characteristics of those Latinos with higher propensity of using social networks. The estimations of the probability of participating on social networks were separated by type, namely: informal, formal, and religious social networks. Findings show that, for the informal social networks, racism and discrimination, cultural identity, ability to speak English, and belonging to other Latin American countries were statistically significant predictors of the participation in informal social networks; for formal social networks language pressures in the community, being married, residing in region B, and the ability to speak English were significant predictors of participation; finally for religious social networks, age, cultural identity, living in region C and education had a significant influence in the probability of participating in religious social network.

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