The Co-Ethnic Buddy System: Hiring Networks among Hispanics in the United States

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Introduction:

Ethnic enclaves, from China Town in many U.S cities to Irangeles in Los Angeles and Little Havana in Florida, are well-known examples of the phenomenon where co-ethnics and immigrants cluster together. The existence of ethnic enclaves and employment niches (Rosenfield and Tienda 2000; Alba and Logan 2000) warrant a more in depth look at this complex labor market. This paper focuses on the U.S Hispanic community. The primary aim of this paper is to ascertain if a "hiring network" or co-ethnic employment assistance exists: specifically, how the ratio of Hispanics in a locality affects Hispanic Unemployment. In addition, we to try ascertain whether these ethnic networks provide a haven for immigrants without English language proficiency and in general how ethnic concentration influences English-language proficiency.

We find that a larger ratio of Hispanics in an area is associated with a lower Hispanic unemployment rate controlling for the group's absolute population size, education levels, proportion of native-born members, and the local demand for labor. We obtain a surprising result from our auxiliary question on English proficiency, namely, in areas of higher Hispanic concentration there are proportionally less linguistically Isolated households (as defined by the Census Bureau) or households where no one over the age of 14 is reported as being proficient in English (i.e. speaking English "very well").

Neoclassical economics typically abstracts from considerations of ethnic identity to view

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labor markets simply in an effort to understand them. This simplification may obscure a reality: labor markets are embedded in cultural and ethnic societies or networks and their outcomes are determined by socio-cultural factors. Widespread ethnic clustering naturally has implications for economics: local enclaves themselves create a market within the larger market which goes beyond local stores selling "ethnic" foods and products desired by immigrants.

Any study of immigrants and ethnic communities and economies is rendered more important considering the rising populations of immigrants in the Unites States and Western Europe. To focus on Hispanics as an ethnic group is pertinent as this group of 40 million are the largest and fastest growing minority, and their numbers are expected to triple by 2050 (Fittipaldi 2004; U.S. Census Bureau 2000). As of 2002 Hispanics comprise 13.3% of the United States population (U.S. Census Bureau 2002).

There are many associated social ills with clustering and segregation which need to be understood and remedied. With time, immigrants are more likely to assimilate with the larger society. However, though this is not a foregone conclusion since the segregation of "blacks" and "whites," persists (Glick and White 2000). To promote assimilation states have developed comprehensive programs which in the case of Illinois provide, "English and civics classes, education about benefits, and support for bilingual staff at suburban health clinics (The Economist, 2004).

If we intend to devise policies to reduce the degree of racial and ethnic segregation, we

must attempt to understand all of its causes. In Europe and Australia, for example, immigrants are funneled into separate geographic and labor markets. To assess the costs and benefits, and predict possible outcomes of such policies is vital. Finally, understanding the nature of enclaves, implying understanding how its members find and obtain employment and how compensation within the group differs from the rest of the market, and what the consequences are for non-members, may provide clues to better understand contemporary and controversial issues such as affirmative action as well as school and housing segregation.

Background:

The economics literature overlooks factors causing or the results of the clustering of ethnic groups and immigrants. Many have focused on explaining various returns to employment (earnings) for immigrants and varying ethnic groups including Hispanics from the perspective of their labor market skills. Few attempt to look specifically at how these enclaves or networks shape economic outcomes for members.

Park (1999) is one example of a host of papers looking at English-speaking ability to explain immigrant wages differentials. The paper finds that English skills are an important determinant of earnings. Those immigrants who initially do not speak English well and who start at a lower wage rate, acquire English proficiency as well as other skills, and hence experience faster growth in earnings than immigrants who are fluent in English. For those whose first language is English or who speak English well, fluency is valuable because it aides in the transfer to the U.S labor market of previously acquired

educational and labor market experience. Others papers specifically focus on the effect of English-speaking ability on earnings for Hispanics (Mora and Davila, 1998). All these papers, however, do not attempt to identify a link between concentrations of ethnic groups and their English language acquisition or proficiency.

A notable paper assessing Sweden's immigrant settlement policies (Edin et al., 2004) finds a negative effect on earnings and labor market assimilation for immigrants forced to live in areas where fewer co-ethnics reside. This paper lays the blame on a mismatch between where people were initially forced to settle and the demand for labor. Furthermore it discovers that immigrants usually move from these initial designated areas. This paper does not however try to understand the role that fellow ethnics or ethnic communities play in helping co-ethnics adjust to their new society or even helping them find employment. Unfortunately the paper does not report data on whether these immigrants chose to re-settle in a co-ethnic community.

The sociology literature has made more in-roads into the topic of the economic effects of ethnic enclaves. However, the literature does not use a consistent definition of an "enclave." A comprehensive and complex definition may have theoretical importance (see Kaplan 1997 for a summary of definitions used), but ultimately, keeping within restrictions imposed by available data, a simplified definition may be needed to make empirical measurements in an effort to first isolate and then understand enclaves. One study defines an enclave as enterprises where a significant proportion of immigrant employees share the same ethnicity as employers (Portes, 1981). Another focus is on

immigrants concentrating in specific job sectors or industry specific "niches" in firms not necessarily owned by immigrants (Rosenfield and Tienda, 2000; Alba and Logan, 2000). A few papers using a method similar to dissimilarity measurements for assimilation do a good job showing the relative over-representation of certain ethnic groups as either owners or workers, or both, in various economic sectors (Alba and Logan, 2000; Wilson, 2000).

These papers have varied, often conflicting conclusions, when considering economic outcomes for enclave workers. Many like Wilson (2000) find no evidence of increased earnings or a decreased likelihood of unemployment for niche or enclave workers. Hence, to justify the undoubted existence of these enclaves and niches they cite other possible benefits for members. A favorite, yet unsupported hypothesis is that recent immigrants who may otherwise be unemployed due to English language deficiencies can find a haven in their ethnic network (for example see the Conclusion in Alba and Logan, 2000 or discussion in Hum 2001). In theory Spanish-speaking Hispanic employers can both better assess the skills of Spanish-only speaking employees and more effectively interact and communicate with them in the work environment. Larger concentrations of Hispanics would decrease the value of English language proficiency as the resultant labor markets and social networks may use Spanish as their main language of operation.

Undoubtedly, some of the clustering has at its roots the process by which the immigrant learns about and eventually relocates to their host country. For example, most immigrants to the United States follow specific channels - the majority have family

contacts in the United States - and also they tend to move to similar geographic locations often in urban areas (Sassen, 1998). There is growing evidence that they are also moving into Suburbia (Economist, 2004). Frey (2000) refers to a number of studies that all note that a large proportion of immigrants gravitate to small number of metropolitan areas, and specifically to where there already exist immigrant enclaves. Nevertheless, the same factors causing the clustering of immigrants may also help the unemployed find work.

Data and Methods:

This paper differs from previously published work in the scale of the econometric testing and factors tested. While many focus on specific cities or regions to identify concentrations in specific business sectors and occupation types, they do not test for an overall "network effect" in many regions and cities or control for the same variables.

The U.S. Census Bureau has a wealth of data, often disaggregated according to race and ethnicity. Standard Metropolitan Statistical Areas (SMSA's) are used because these 276 localities with their corresponding data allow for heightened confidence in the results. Furthermore these regions have large populations and immigrant concentrations. All data is from the 2000 Census Summary File 3 (U.S. Census Bureau 2000).

All our specifications have either the local *Hispanic Unemployment Rate* as the dependent variable or Hispanic households that are linguistically isolated. All regressions are corrected for heteroskedasticity.

An Employment Network Effect

The first set of regressions tests for an employment network using the Hispanic unemployment rate as the dependent variable. The main independent variable tested in Regressions 1-5 (see Table 2 attached) is the Hispanic Ratio, or *the ratio of Hispanics to the whole MSA population*. To control for the other factors that may affect the Hispanic unemployment rate, we include the following:

a) *Population Unemployment Rate*. This helps us control for the effects of the business cycle on labor demand.

b) *Native Born Hispanics* as a percentage ratio of total Hispanics.

c) *Naturalized Hispanics* as percentage ratio of total Hispanics.

These two variables are included to control for the case where unemployment varies with factors associated with time spent in the United States. Hispanics who are "new" to the country, for instance, may have not yet learned enough English or settled in.

A regression (results not reported) was run with c) included and b) excluded to see whether some interaction between the two caused one or both to appear less significant. However, c) remained insignificant and was removed from the model in the final two regressions.

d) *Education levels* - a standard variable affecting unemployment - of Hispanics is included. In Regression 1-3, the percentage of Hispanics with a high-school degree or more, is used for this measure. In Regression 4 and 5 however, the percentage of Hispanics with more than a high-school degree, is used instead as it

is more statistically significant (see Results below for further discussion).

e) *Absolute Hispanic Population* in the MSA was included in Regression 5. This is added to test the robustness of the Hispanic Ratio. It can be argued that the reason that many Hispanics are in an area is because they are attracted to the economic advantages of that area. Therefore, controlling for their population size is important.

Ethnic Concentration and English-Language Proficiency

The second set of regressions test how Ethnic concentration influences English language proficiency. We use a model with the dependent variable the ratio of linguistically isolated Hispanic households to total Hispanic households. Linguistic Isolation is defined by the Census Bureau as follows:

> A household in which no person 14 years old and over speaks only English and no person 14 years old and over who speaks a language other than English speaks English "Very well" is classified as "linguistically isolated." In other words, a household in which all members 14 years old and over speak a non-English language and also speak English less than "Very well" (have difficulty with English) is "linguistically isolated." All the members of a linguistically isolated household are tabulated as linguistically isolated, including members under 14 years old who may speak only English (U.S Census Bureau, 2002).

Note that speaking English "very well" is self-reported by the census taker and is not independently verified. Once again the regressions were corrected for heteroskedasticity and tested for multicollinearity.

For dependent variables in this model, we used the following familiar variables:

a) *Native Born Hispanic (Hisnativ)* and *Naturalized Hispanic (Hisnatur) ratios*.

A negative relationship is expected since Native born Hispanics must learn

English in school. Households with immigrants may have children older than 14 years who were born in the U.S who speak English "very well." Native Hispanics may also improve English-speaking ability for newer immigrants through their interactions or even directly helping them to learn it. Though mutually exclusive, the Naturalized Hispanics and Native Hispanic ratios are highly correlated. Therefore, they are not run in the same regression, and hence we have two regressions (Regression A and B in Table 3) where one is substituted for the other.

b) *Hispanic Ratio* as the measure of concentration of Hispanics. In theory, the larger the ratio of Hispanics controlling for Native Born Hispanics and other factors may mean:

i) Fewer contacts with other groups who speak English. We expect a positive correlation with the ratio of linguistically isolated households. Another variable – or perhaps a whole new model is required - may be more appropriate in its place, which is sensitive to the fact that there are often other sizable groups with members who may not speak English well.

ii) More Hispanic employers and co-workers in the workplace decreasing the need or occasion for English language use.

c) *Hispanic Education* (variable Hiseduc – see Table 1). Hispanics with more education may have learnt English directly in school even if it was overseas.

Furthermore, having more education may allow for improved skills that can be applied to learning or "picking up" the language.

d) *Absolute Hispanic Population*. Together with variable a) above, this latter variable is used to control for a third factor that might be correlated with both a large Hispanic ratio in an MSA and linguistic isolation, for example, an area which attracts many new immigrants.

e) *Population Unemployment Rate*. This variable is used to control for general economic conditions in the SMSA.

Included in initial testing were a number of variables and composites to represent the difference in earnings of Hispanics from Whites and all other predominantly English speaking groups, hypothesizing that one such variable would capture the "willingness" or economic benefit for Spanish-only speakers to learn English (to be able to interact with them). The more one group has the greater the benefit of economic transactions with them. None however, in the confines of this model, was statistically significant and hence not reported here. Even the simple ratio of Hispanic to total population per capita earnings was insignificant.

Results:

Summary statistics for all variables are contained in Table 1(attached) and the key to this table presents a full description and specifications of these variables.

An Employment Network Effect

For all regression results obtained see Table 2. Table 1 shows that on average the

Unemployment Rate for Hispanics was a full two percentage points above the rate for the

general population. In addition the Hispanic Unemployment Rate shows much greater

variation than the population Unemployment Rate.

Results across all regressions indicate that the larger the ratio of Hispanics in an SMSA

the less unemployed Hispanics in that area, controlling for variables such as overall

Unemployment Rates, education levels, and ratio of Native born Hispanics. This

suggests that there is a hiring "network effect" whereby an ethnic group facilitates or

increases employment for co-ethnics.

The R-squared values for the variables improve from Regression 1-5 indicating an

improving model, with more variability in the dependent variable "explained' by

variation in the independent ones. Correcting for heteroskedasticty (for all regressions

except Regression 1 which is uncorrected) improves the p-values (significance) for all

individual variables, and the R-squared value for all models. F statistics are all

significant. Although the p-values for all the individual parameters improve across the

regressions, this is not always evident in Table 2 as they often remain within the same

band of significance (i.e. 0-1%, 1-5%, and 5-10%).

In Regression 2 and 3, testing the model excluding either Native Hispanics or Naturalized

Hispanics, we find that the Native Hispanic ratio becomes statistically significant in the

absence of the other. Regression 4 mirrors Regression 2 except that *percentage of Hispanics 25 years or older with a High-school degree or more* (Hisdegree variable), is replaced by the more significant *percentage of Hispanics 25 years or older with more than a high-school degree* (Hiseduc variable). Therefore, Regression 4 is an improved hybrid of Regressions 1-3 containing only significant variables.

Regression 5 is similar to Regression 4 except that *absolute Hispanic population* is added alongside the Hispanic Ratio variable. The added variable is statistically significant without altering this key ratio's significance. In fact the Hispanic ratio remains robust throughout Regressions 1-5. A 10 percentage point rise in the ratio of Hispanics in an MSA is associated with a 0.2 percentage point decrease in Hispanic Unemployment. In theory a stronger effect may be dampened because the model lacks important variables or needs to be better formulated. There may also be an unknown effect from other workers, Hispanic or otherwise, who work in the MSA but live outside it and hence do not alter the gathered MSA unemployment statistics.

Absolute Hispanic population is included to control for the possibility of a third factor causing MSAs with larger Hispanic ratios to have correspondingly lower unemployment. This could happen where, for example, growing local economies with low unemployment entice many Hispanics to settle there. Therefore the results obtained here after controlling for the absolute size, lend support for the "network" hypothesis. Furthermore, the negative relationship between the dependent variable and Hispanic Population counteracts a purely economic reason as a "third factor." Indeed, as mentioned

previously, this bolsters the findings that reject the idea that immigrants move to areas of high employment growth in the United States (see Background for discussion of immigrant settlement patterns).

Also in Regression 5, the *Hispanic education* variable has the expected and non-trivial negative effect on Hispanic Unemployment. A 10 percentage point increase in the level of Hispanic education variable is associated with a decrease of approximately half a percentage point in Hispanic Unemployment.

Surprisingly, a 10 percentage point increase in the *ratio of Native Hispanics* in the Hispanic population is associated with an augmentation of the Hispanic Unemployment rate by 0.15 percentage points. There is a surprising negative relationship with Hispanic Unemployment. This may be an instructive area for investigation. One can imagine that Native Hispanics are less likely to accept lower paying jobs, or being less associated with the "network" are less likely to find employment. Indeed being employed does not tell us about pay, hours worked, nor the duration of the jobs held. This result may also offer cursory evidence that the network effects are reduced for natives relative to recent immigrants who have stronger cultural (Waldinger, 2000) ties to their respective groups.

The *Population Unemployment Rate* is both statistically significant and substantial. A one percentage point change in the Population Unemployment rate is associated with a 1.15 percentage point change in the Hispanic Unemployment rate. The positive correlation with Hispanic Unemployment indicates that a downturn in the local economy

has the deleterious effect for all ethnic groups. However, a unit change in the Population

Unemployment Rate is associated with a more than unit change in the Hispanic

Unemployment Rate which could be due to elements not controlled for in this regression

such as quality of education, English language proficiency, work experience or skill

levels, or perhaps the nature of the industries that Hispanics concentrate in.

Ethnic Concentration and English-Language Proficiency

In Table 1 we note that the average of all MSAs ratio of linguistically isolated households

to total Hispanic households (Lingisolated) is a non-trivial 26%. We see a large degree

of variation of this variable across MSAs (the smallest has 3.7% while the largest 55%).

Noteworthy MSAs with high levels of such households are Atlanta Georgia and Charlotte

North Carolina.

The regression results are displayed in Table 3. The F-statistics are significant.

Similarly, all individual dependent variables are statistically significant. In the following

paragraphs only the results of Regression B (which has the Native Hispanic ratio instead

of the ratio of Naturalized Hispanics to total Hispanics) are discussed. Nevertheless, it is

important to note the positive coefficient for the Naturalized Hispanic ratio in Regression

A, indicating that higher concentrations of this dependent variable are associated with

higher levels of linguistically isolated households. We may expect this result as

Naturalized Hispanics from the perspective of their language of instruction at school or

time spent in the U.S may have had relatively few opportunities to learn English.

In Regression B a surprising result is that Hispanic Ratio has a negative coefficient: a one percentage-point rise in the ratio of Hispanics decreases the number of linguistically isolated households by about 0.11 percentage points ceteris paribus. This result is contrary to expectations. One possible explanation is that - assuming that the model used here is correctly specified and includes all important variables - since English-speaking ability is self reported, people believe that their English is better than other people's they are in contact with, in this case, fellow Hispanics. In addition increases in the absolute size of the Hispanic population exert a negative effect on linguistic isolation. An increase of 100,000 in the absolute size of the Hispanic population reduced the percentage of linguistically isolated households by 0.7 percentage points. Thus, we find no evidence that higher concentrations of Hispanics in a given SMSA reduce the rate of English language acquisition.

The population unemployment rate is also negatively correlated with the dependent variable: a 1 percentage point rise in the latter variable decreases the dependent variable by about 0.7 percentage points. Weaker economic conditions seem to foster more rapid language acquisition.

Less surprisingly, a 1 percentage point increase in the ratio of Native Hispanics in the Hispanic population is associated with a decrease of the dependent variable by about 0.5 percentage points. Also, a 1 percentage point increase in the ratio in the Hispanic Education ratio variable is associated with a decrease in 0.19 percentage points in the ratio of linguistically isolated households.

<u>Conclusion:</u>

An important conclusion from this paper is that a greater ratio of Hispanics in a locality is associated with their increased employment. With evidence that a larger ethnic network creates employment opportunities for its members, further study could focus on mechanisms by which this occurs. Job Information may "move" along social networks (corroborated by studies showing employment niches), which certainly decreases job search costs. Also, hiring of co-ethnics or indeed family members may fulfill a social role.

We find no evidence to support the claim that Hispanics living with relatively more co-ethnics are less likely to learn English. The surprising result we obtain is that in areas of higher Hispanic concentration there are proportionally less linguistically isolated households or households where no one over the age of 14 is proficient in English. This interesting result deserves attention. We cannot say whether the self-reported fluency level is systematically influenced by the ratio of Hispanics in their vicinity. Hypothetically, people may report higher fluency if they have more contact with people who are less fluent. More tests using data on fluency levels for all ethnic groups in an area could help clarify this latter hypothesis.

A logical extension of this study is to test these models with data on other ethnic groups. To isolate the effects of culture on an employment assistance network will be difficult since data, at least from the Census, is not disaggregated by distinct cultural groups. Indeed though we can say that sub-classes of "Asians" or "Hispanics" share

characteristics of this larger grouping we cannot make grounded generalizations. Finally, an advanced model could test the employment and earnings outcomes are for non-members making progress towards ultimately diagnosing and curing the associated economic ills.

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Table 1: Means and Standard Deviations

Variable	Mean	Standard Deviation	Minimum	Maximum
Hisunemp	5.665	2.328	1.246	17.715
Popunemp	3.675	0.961	1.493	7.783
Hisdegree	61.366	13.424	27.665	95.122
Hisratio	9.277	14.859	0.360	94.397
Hiseduc	37.299	12.090	11.106	79.870
Hisnativ	68.968	14.837	31.635	95.462
Hisnatur	8.108	3.532	1.620	31.459
Hispop	1.164	5.010	0.005	66.011
Lingisolated	26.108	10.178	3.768	55.102

All variables measured at MSA level:
Hisunemp: The Hispanic civilian unemployment rate (excludes Hispanics in armed services).
Popunemp: The local unemployment rate (includes Hispanics).
Hisratio: The ratio (percentage form) of Hispanics to all other groups.
Hisdegree: The percent of Hispanics 25 years or older with a High-school degree or more.
Hiseduc: The percent of Hispanics 25 years and older with more than a high-school degree.
Hisnativ: The percent of native Hispanics (to all Hispanics).
Hisnatur: The percentage of foreign born naturalized Hispanics.
Hispop: The total Hispanic population (in hundreds of thousands).
Lingisolated: The percentage ratio of Linguistically Isolated Hispanic Households to total Hispanic Households (households as defined by the Census Bureau).

Table 2: Regression results with dependent variable Hisunemp

Variable	Reg. 1	Reg. 2	Reg. 3	Reg. 4	Reg. 5
Popunemp	1.134***	1.134***	1.154***	1.148***	1.154***
	(0.147)	(0.147)	(0.146)	(0.141)	(0.141)
Hisratio	-0.019**	-0.018**	-0.015**	-0.020**	-0.020**
	(0.008)	(0.008)	(0.008)	(0.008)	(.008)
Hisdegree	-0.035**	-0.033**	-0.021**		
	(0.014)	(0.014)	(0.010)		
Hiseduc				-0.046***	-0.046***
				(0.012)	(0.012)
Hisnativ	0.021	0.018*		0.015*	0.015*
	(0.014)	(0.010)		(0.008)	(0.008)
Hisnatur	0.016		-0.030		
	(0.044)		(0.032)		
Hispop					.0317**
					(0.016)
Constant	2.239**	2.453***	3.121***	2.322***	2.259***
	(1.024)	(0.758)	(0.919)	(0.632)	(0.632)
n	276	276	276	276	276
Root MSE	2.0507	2.0474	2.0571	2.0162	2.0136
R^2	0.2382	0.2379	0.2306	0.2609	0.2655
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000

Note: Standard errors in parentheses.
*** = significant at 0.01, ** = significant at 0.05, * = significant at 0.1.

Table 3: Regression results with dependent variable Lingisolated

Variable	Regression A	Regression B
Hisratio	-0.173***	-0.108**
	(0.042)	(0.032)
Hiseduc	-0.434***	-0.186***
	(0.042)	(0.031)
Hisnativ		-0.486***
		(0.024)
Hispop	-0.076*	-0.068*
	(0.043)	(0.037)
Popunemp	-0.906*	-0.696*
	(0.546)	(0.421)
Hisnatur	1.076***	
	(0.180)	
Constant	38.604***	70.209***
	(2.808)	(2.127)
n	276	276
Root MSE	8.211	5.9633
R^2	0.3610	0.6630
Prob > F	0.0000	0.0000

Note: Standard errors in parentheses.
*** = significant at 0.01, ** = significant at 0.05, * = significant at 0.1.