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## Social Exclusion of Nicaraguans in the Urban Metropolitan Area of San Jose, Costa Rica

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## **Abstract**

The large number of recent Nicaraguan immigrants to Costa Rica during the 1990s have outcomes that are worse than Costa Ricans in many dimensions. Moreover, Nicaraguans are geographically and occupationally concentrated. This paper documents the magnitude of Nicaraguan group effects and examines the consistency of the evidence with the main explanations for social exclusion. The results—and especially the high levels of labor market participation—suggest that Nicaraguans, like other immigrant groups that have chosen to migrate, are vulnerable rather than excluded. There is some evidence that the mechanisms leading to changes in legal status, transferability of skills, and discrimination could explain some of Nicaraguans' worse outcomes and type of integration. While there is not a strong relationship between neighborhood characteristics and outcomes once other controls are included, the current housing policy of the Costa Rican government makes it likely that geographic concentration of Nicaraguans will continue to increase, which could lead to a negative relationship between concentration and outcomes in the future.

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## 1. Background

During the 1990s, Costa Rican society was transformed by the immigration of 350-450,000 Nicaraguans.<sup>1</sup> Most Nicaraguan emigration is now to Costa Rica, a lower economic and psychological cost alternative to the United States in the face of declining economic conditions in Nicaragua.<sup>2</sup> Unlike previous waves of Nicaraguans into Costa Rica, in which most migration was temporary and permanent migration was often linked to marriage to a Costa Rican, this wave is increasingly becoming permanent and family based. Recent arrivals to Costa Rica are more likely to come from rural areas and areas outside of Managua, are younger at the time of arrival, and have less education than previous Nicaraguan emigrants. After years of not recognizing illegal immigrants, in 1999 the Costa Rican government extended a one-year amnesty to 160,000 Nicaraguans who could show residence in Costa Rica prior to November 1998.

This paper explores the nature of integration of Nicaraguans into Costa Rican society. Three aspects of this integration that are of particular interest are: 1) like all immigrants, but in contrast to many other studied excluded groups, Nicaraguans have chosen to integrate into Costa Rican society, 2) non-citizen or illegal status alone limits rights of Nicaraguans, but this status can be changed over time, especially in the second generation, and 3) housing policy in the metropolitan area of San Jose makes geographic concentration of Nicaraguans likely as the migration continues. The main focus of the paper is the documentation of group effects for many different types of outcomes (in Section 4) and the consistency of the observed differences between Nicaraguans and Costa Ricans with some of the many proposed explanations for social exclusion (Section 5).

### *The Concepts of Social Exclusion and Vulnerability*

The application of the idea of exclusion<sup>3</sup> to recent migrants, while not unique to the present study of Nicaraguans in Costa Rica, examines a group that has chosen to be excluded—the different legal treatment of immigrants before they are naturalized ensures exclusion in some important

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<sup>1</sup> These immigrants now make up over 10 percent of the population of Costa Rica. During the 1980s, most emigrants from Nicaragua went to the United States. Recent descriptions of the patterns of migration from Nicaragua to Costa Rica include Funkhouser (1999), Morales and Castro (1999), and FLACSO-Costa Rica (1999).

<sup>2</sup> According to the World Bank, per capita income in Nicaragua fell from ~ \$800 in the early 1980s to ~ \$340 in the early 1990s and rebounded to ~ \$430 in 1999. This compares to \$2,740 in 1999 in Costa Rica.

dimensions—in effect as a compensating differential for other benefits. Though migrants may have worse outcomes than natives, those outcomes (in comparison to those available in Nicaragua), especially in the labor market, may have been the motivation for migration.<sup>4</sup> And while legal status is a current feature of membership in the group of migrants, future exclusion depends on other distinctive characteristics of the group that will persist after naturalization or into the second generation of migrants.

Whether there is more to social exclusion than multi-dimensionality will continue to be debated among economists. The approach is useful, though, as a framework that allows modeling of the effects of social outcomes in addition to household or individual behavior. This paper uses a definition of social exclusion based on the idea of denial of equal access to opportunities. Under any explanation for the causes of social exclusion or any of the mechanisms through which the effects of social exclusion are experienced, such denial of access results in geographic exclusion, economic exclusion, and denial of citizenship. It is the confluence of the different types of exclusion that distinguishes social exclusion from other explanations for worse outcomes experienced by particular groups.

In many cases, though, the dichotomous view of exclusion—either a group is excluded in all dimensions, or it is not—is not always appropriate. This is particularly relevant for groups that have chosen to be excluded. While the labor market integration of these groups may not reflect current exclusion, the type of integration may make the group vulnerable to future exclusion. Vulnerability is also a difficult concept to define. A working definition, though, might include a situation in which a group that maintains its current behavior into the future would experience exclusion at some point in the future because of denial of access to opportunities. For example, employment in cyclical industries displays outcomes during periods of growth that would not appear to be the result of exclusion; during economic downturns, though, outcomes may suggest exclusion as unemployed workers are denied access to other industries and

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<sup>3</sup> For an overview of the application of the idea of social exclusion, see de Haan (1999) or Loury (1999).

<sup>4</sup> The better economic outcomes are a result of the capacity of the Costa Rican labor market to absorb an increase in labor supply. According to the data in the annual national household survey, employment increased by approximately 200,000, or about 20 percent, between 1993 and 1999. Of this increase, about 70,000 of the increase was among those with 6 or fewer years of education, 60,000 was among those with 7 to 11 years of education, and 70,000 was among persons with 12 or more years of education. Between 1997 and 1999 (the years in which Nicaraguans can be distinguished), the increase in employment of Nicaraguans accounts for all of the 20,000 increase in employment of those with 6 or fewer years of education, 5,000 of the 13,000 increase in employment of those with 7 to 11 years of education, and only 2,000 of the 37,000 increase in employment of those with 12 or more years of education.

occupations. It would also be the case for the second generation of immigrants who are denied access to the labor market entered by their parents.

### ***The Legal Status of Nicaraguans in Costa Rica***

Though Nicaraguans are more likely to be of mixed race and to have darker skin than Costa Ricans, the main identifiable differences between Nicaraguans and Costa Ricans are social characteristics, such as accent, slang, and dress, that can be changed even within a generation. As a result, one of the most important aspects of Nicaraguan integration into Costa Rican society is legal status.

Naturalization in Costa Rican may be solicited for children born in Costa Rica, Central Americans who have lived officially in Costa Rica for five years, persons who have been married to Costa Ricans for more than two years and have resided in Costa Rica for two years, and persons who have lived in Costa Rica for more than twenty years.<sup>5</sup> There were approximately 100,000 such Nicaraguans in Costa Rica with citizenship prior to the migration wave of the 1990s. The 1999 amnesty provided legal residence for the 160,000 illegal immigrants who applied before July 31, 1999 and could show residence prior to November 1998.<sup>6</sup> Those who arrived after 1998 are overwhelmingly illegal. Immigration has continued following the amnesty, with 8-9 percent of migrants arriving for the first time between 1999 and 2001.

While the Constitution states that foreigners have the same obligations and rights as Costa Ricans and that the laws can limit these rights only with fairness and reasonableness, in practice there are several differences in the legal treatment of foreigners in Costa Rica. First, there are several restrictions on political participation, including intervention in political affairs, occupation of directorial positions in unions, and the specification of a maximum number of positions in the directorial boards of several other types of organizations.<sup>7</sup> Second, in the labor

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<sup>5</sup> Lizano and Maklouf Weiss (1999).

<sup>6</sup> For a more detailed discussion of the amnesty and those that applied, see Morales (1999).

There are three main reasons why eligible Nicaraguans might not have applied for the amnesty. The main reason is that it may be difficult for some Nicaraguans to show residency prior to November 1998. Second, it is may have been unclear that the period will be renewed at the end of one year and by reporting themselves to the Costa Rican government, some Nicaraguans may feel that they increase their chances of difficulties at the end of the year. A third reason may be a lack of urgency for short-term immigrants. Cost did not appear to be a major deterrent to application: the application requirements were 3,355 Cordobas (approximately \$12), a passport size photo, proof of identity, and lack of criminal record during prior 10 years.

<sup>7</sup> Among those are the directorial boards of barrio organizations, in which Nicaraguans can occupy at most two positions.

market, while restrictions on labor market activity of foreigners have been relaxed—including the elimination of a labor card, the elimination of maximum length of labor contracts, and the elimination of restrictions on employment in private security—employers should select a Costa Rican over a foreigner when the two applicants are otherwise equal.

Third, the possibilities for transfer of ownership of properties accessed through land invasions are limited by legal status. Fourth, affiliation with the social insurance system, which is available to legal but not illegal residents, is a prerequisite for many types of health attention.<sup>8</sup> Fifth, while the law does not establish restrictions per se on Nicaraguans in the educational system, there are problems with graduation at each level since diplomas are not issued for those who cannot show legal residence. This can effectively restrict entry into the next level of schooling.<sup>9</sup>

The primary reason for entering Costa Rica illegally rather than legally is economic, as legal immigration represents significant expenditures, particularly for workers who plan to remain in Costa Rica for only a short time. Obtaining a passport from the Nicaraguan government costs \$100, and obtaining a tourist visa in Costa Rica costs \$25; Nicaraguans who enter Costa Rica as tourists can subsequently regularize their status. Compared to these high initial expenses, renewing a residency visa costs \$3, while renewing an amnesty visa costs \$10.<sup>10</sup> These institutional features, as well as the large number of Nicaraguans who applied for amnesty in 1999 when the costs of legalization were reduced, suggest that, within a model of migration choice, legal status is a measure of the permanence of migration.

### ***Formation of Nicaraguan Enclaves***

A third important aspect of the integration process of Nicaraguans is residential location. The formation of Nicaraguan enclaves in the metropolitan area of San Jose has followed two dominant processes during the recent migration—land invasions in marginal urban areas and

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<sup>8</sup> Both emergency medical attention and medical attention in the neighborhood health clinics (EBAIS) do not require proof of legal residence. Attention in other health services, however, including doctors' offices, does require participation in the social insurance system.

<sup>9</sup> Of the two types of scholarships offered by the Ministry of Education to poor households, one is not available to foreign households. The two sources of funds to the institution that gives these scholarships, IMAS, are its own budget and funds received through the Ley de Asignaciones Familiares. The latter are available only to Costa Rican households.

<sup>10</sup> In addition to the costs of a passport, the costs of legal border crossings include border taxes of \$2 to leave Nicaragua and \$0.50 to enter Costa Rica.



rooming houses in more established areas.<sup>11</sup> During the presidency of Oscar Arias in the 1980s, and prior to the Nicaraguan influx, urban expansion was promoted with the construction of organized developments of block houses at the outskirts of the urban areas. Since then, expansion has been less organized, with the construction of makeshift housing on unused lands, often publicly owned property, following an illegal invasion. In the most recent areas of such development, there are few public services, roads are unpaved, sanitation is a problem, and distance to schools or work is an issue. This type of invasion has been occurring since before the current wave of Nicaraguan immigrants, but it has included a large proportion of Nicaraguans in recent years.

The general strategy of these invasions is to stake a claim to a piece of land by occupying the land in the hope that the claim becomes recognized over time. Because there is no legal claim to the property, though, temporary abandonment could lead to loss of the property. In most cases, there is a barrio organization that charges a monthly fee and promotes access to services from the government. The main incentive for paying these quotas is the belief that they will improve the chances of attaining legal ownership of the property. At present, Nicaraguans who are in Costa Rica illegally are prohibited from obtaining a title for these properties.<sup>12</sup>

A second type of residential area in which Nicaraguans have become concentrated are houses that have been converted to rooming houses or rental units. These buildings consist of small sleeping rooms, generally 3 meters by 3 meters, a shared bathroom and a common room. The two areas in the metropolitan region with large numbers of Nicaraguans living in rooming houses are located in less desirable areas. One is in the very center of the city, next to the red

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<sup>11</sup> Earlier waves of migrants to the Metropolitan area tend not to be as geographically concentrated. The two other parts of the country with significant clusters of Nicaraguans are the Northern region and the Atlantic region, both traditional destinations of agricultural workers from Nicaragua. Because the former is the destination of workers in large banana plantations, the groupings of Nicaraguans tend to be large but without much infrastructure. Nicaraguan migrants to the Northern region tend to work on smaller farms, with workers for a particular farm or grouping of farms living in proximity to each other. While some land invasions in urban areas similar to those in the Central Valley have occurred in Limon, the spatial distribution of Nicaraguans is mostly related to proximity to the work site.

<sup>12</sup> Some of the characteristics of the main asentamientos with Nicaraguans have been documented by Acuna and Olavares (1999). The expanded (by Edith Olivares) list of concentrations in the San Jose area includes: Los Diques, Los Guido, Rincon Grande, Tejarcillos, La Milpa, La Carpio, Marco Aurelio, Pochote, Paso la Vaca, San Juan de Dios, and Tirases. The areas with Nicaraguans are recently invaded areas with few services and, in most cases, also include a significant number of Costa Rican households. In these cases, a common pattern is for Costa Rican families to be organized along the main road or roads of the new development and for Nicaraguan families to be on the minor roads.

light district in an area that has had an increase in crime. The other is located in a marginal area on the downward slope of a canyon.

## **2. Data**

Two types of data are used to examine group effects and the mechanisms of social exclusion of Nicaraguans in Costa Rica. The first is data from the National Multi-purpose Household Survey (*Encuesta Nacional de Hogares de Propósitos Múltiples*). The types of questions asked on this survey are limited and not directly related to the study of social exclusion, but they provide a large, representative sample. The second survey is a smaller targeted survey in the metropolitan area of San Jose conducted by FLACSO-Costa Rica specifically for this study. This survey is smaller in scope (398 households, with 192 Costa Rican heads and 206 Nicaraguan heads), but it includes a survey instrument with questions related to social exclusion. To ensure that the surveys cover a comparable population, the government household survey is restricted to the greater Metropolitan area of San Jose.

### ***National Household Survey on Employment, Unemployment, and the Household***

The National Household Survey has been conducted by the Costa Rican government (Instituto Nacional de Estadística y Censos) on a regular basis in July of each year since 1976. Approximately 10,000 households are asked basic demographic, labor market, and household information. Since 1997 the Costa Rican Household Survey has included questions about place of birth, asking about citizenship status. Immigrants are classified as either naturalized or citizens of another country, with Nicaraguans identified separately. The survey tends to undercount the number of Nicaraguans, though the included number is increasing over time, with 75,490 Nicaraguans represented in 1997 and 133,548 in 1999 for the country as a whole.<sup>13</sup> Those Nicaraguans not included are likely to be worse off than those included, reflecting either a more precarious position or less permanent migration.

### *Description of FLACSO Survey in Metropolitan Area of San Jose*

Under the direction of Juan Pablo Perez Sainz and Edith Olivares, a survey of 398 households was administered in the metropolitan San Jose area in January and February 2001. While the sample of this survey is smaller than that of the national household survey, the number of Nicaraguan households in the metropolitan area is larger, and the survey instrument is designed to provide some insight into the mechanisms through which social exclusion might operate.<sup>14</sup>

#### *Sample Design*

The FLACSO survey utilized the information from the primary sampling units (approximately 60 households) of the government's household survey to determine the barrios included in the FLACSO sample. The first step was to identify the barrios corresponding each sampling unit (segmento) in the 2000 survey. Sampling units were then assigned to three strata: High presence of Nicaraguans (over 20 percent in the segmento), Medium presence of Nicaraguans (5-20 percent Nicaraguans), and Without presence of Nicaraguans (under 5 percent Nicaraguan, but of similar socioeconomic status) based on the information in the 2000 Household Survey.<sup>15</sup> Two barrios were chosen by randomly selecting two sampling units each of the three strata (less than 5 percent, 5-20 percent, over 20 percent).<sup>16</sup>

The barrios included in the final sample were La Union and La Carpio (High presence of Nicaraguans), Paso Ancho and La Aurora (Medium presence), and Guarari and Barrio Mexico

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<sup>13</sup> The samples for the country as a whole are 994 in 1997, 1092 in 1998, and 1633 in 1999. For the urban area of San Jose the sample includes 211 Nicaraguans representing 28,837 persons in 1997, 224 Nicaraguans representing 29,344 in 1998, and 345 representing 45,540 in 1999.

<sup>14</sup> The information in the FLACSO survey was supplemented with three interviews in each of the six communities: one with the director of the main primary school, one with the leader of the barrio association, and one with the director of the health center. The primary purpose of these interviews was to document differential patterns of activity or outcomes that lead to future inclusion or exclusion as the Nicaraguan community extends its time in Costa Rica.

<sup>15</sup> Few segmentos had a population of between 1 and 5 percent Nicaraguan. The criterion for selecting barrios of similar socio-economic status was poverty rates above the national average.

<sup>16</sup> To allow over-sampling of Nicaraguans in the medium and high presence barrios, a field census was undertaken within each selected barrio in which only head of household was interviewed. Of the original six barrios selected, one from the High strata was found following the field census to not have the appropriate number of Nicaraguans (because the sampling unit in the household survey was not representative of the barrio as a whole). A second barrio, originally selected from the Medium strata, was not large enough to over-sample Nicaraguans. These two barrios were replaced in the sample.

(Low presence).<sup>17</sup> Households were randomly selected within each barrio with over-sampling of Nicaraguans in the barrios with Medium and High presence of Nicaraguans.

An overview of the characteristics of the barrio and the nature of Nicaraguan insertion into the barrio is presented in Table 1. The descriptions make clear that there are two types of geographic insertion of Nicaraguans into the Metropolitan area. The first consists of makeshift houses on occupied previously vacant lands described above. In one case (La Carpio), the Nicaraguan households were part of the original land takeover, though they were located in more marginal locations within the barrio. In a second case (La Aurora), Nicaraguan households occupied the interior of a coffee plantation next to a more established Costa Rican community.<sup>18</sup> The rooming houses are present in the barrios of Paso Ancho and Bajos de La Union.

### ***Summary Information***

Descriptive information from persons aged 20 to 65 living in urban areas of the metropolitan area of San Jose is provided in Table 2. The 1999 government survey results are reported in Columns (1) – (3), and the FLACSO survey results are reported in Columns (4) – (6). The first two columns for each data set show means for Costa Ricans and Nicaraguan. The third column (Columns 3 and 6) includes those Nicaraguans who live in neighborhoods with a high presence of Nicaraguans.

The general patterns for Nicaraguans relative to Costa Ricans are similar in the two surveys. Nicaraguans are younger, are less educated, are more likely to be working,<sup>19</sup> work more hours, are more likely to be working in the informal sector, earn less, are less likely to have social insurance, and are more likely to be living in poverty. For most variables, the magnitudes

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<sup>17</sup> After the field census, the differences in the proportion Nicaraguan (measured by nationality of principal earner in the household) in the Medium presence barrios was higher than originally calculated from the segmentos in the household survey. In the case of La Union, difficulty in entering the rooming houses led to a lower target number of households in that barrio and a higher number in La Carpio.

<sup>18</sup> Primarily to limit the survey time to 45-60 minutes, the emphasis of the survey was the principal earner in the household (rather than all household members). Basic information was asked of the respondent about all household members who share food in the household. For Nicaraguan members this included some information about migration. Additional labor market questions and detailed questions about social capital and perceptions were asked about the head. Nicaraguan principal earners were also asked more detailed questions related to migration and activity in Nicaragua.

<sup>19</sup> The relatively high number of Costa Rican principal earners without labor income over the age of 65 in the FLACSO survey suggests that in some cases, the distinction between principal earner and head of household was misunderstood.

of the descriptive statistics are similar in the two surveys.<sup>20</sup> There are two notable differences in the characteristics of the Costa Rican households in the FLACSO survey and those in the government survey: in the FLACSO survey households are larger, but the number of members working is lower; this results in lower household incomes lower in the FLACSO survey. It should also be noted that differences for the barrios of greatest concentration of Nicaraguans (in the final column) are not as pronounced in the FLACSO survey as in the household survey.

### *Nicaraguans in FLACSO Survey*

To better understand the coverage of the FLACSO survey, more detailed summary information for Nicaraguans in each of the four barrios with large numbers of Nicaraguans in the FLACSO survey is shown in Table 3. The first two columns include the two barrios with high presence of Nicaraguans, La Union and La Carpio. The final two columns include the two barrios with medium presence of Nicaraguans, Paso Ancho and La Aurora.

While the demographic characteristics of Nicaraguans 20-65 do not differ much by barrio, the household and migration characteristics are quite different. Barrios consisting of makeshift housing, or ranchos, are larger and have more children than households in more established barrios. Not surprisingly, households in those barrios are more likely to be have deficient materials—42 percent in La Carpio and 84 percent in La Aurora. Residents living in La Carpio are less likely to be in the most recent wave of migrants, while those in Aurora are more likely to include recent immigrants. Nearly one-third of the residents in La Aurora are not in Costa Rica legally, reflecting arrival after 1998 and ineligibility for amnesty.

There are also differences across barrios in place of origin and attachment to Nicaragua. The differences are by type of barrio, rather than level of presence of Nicaraguans. Approximately three-fourths of the residents age 20-65 in the more established barrios, La Union and Paso Ancho, are from the southern part of Nicaragua. Only one-third to two-fifths of the residents of the barrios of ranchos, La Carpio and La Aurora, are from the southern part. In La Aurora, again the barrio including the largest proportion of most recent immigrants, over one-half of the residents 20-65 are from the northern part of Nicaragua.<sup>21</sup>

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<sup>20</sup> This is a bit surprising for incomes since the Costa Rican barrios in the FLACSO survey were chosen according to poverty rate (above national average), while those in the household survey were not.

<sup>21</sup> Over 40 percent of those in La Aurora state they are planning to return.

Remittance rates are highest from principal earners in the more established barrios: 63 percent in La Union and 50 percent in Paso Ancho compared to 38 percent in La Carpio and 43 percent in La Aurora. Remittance levels averaged over all principal earners, including those who do not send any remittances, are also higher in those barrios, reflecting the higher remittance rate and the higher average remittance among who do send money.<sup>22</sup>

### 3. Empirical Approach

The analysis begins by estimating differences in outcomes for Nicaraguans, or group effects:

$$Y_i = \alpha + X_i \beta + C_i \gamma + \delta G_i + \varepsilon_i \quad (1)$$

where  $Y_i$  is outcome  $Y$  of individual  $i$ ,  $X_i$  is a set of individual characteristics,  $C_i$  is a set of community characteristics,  $G_i$  is the group effect, and  $\varepsilon_i$  is the unobservable random component of trading or business opportunities for a minority group.

The demonstration that outcomes of a group presumed to be excluded are worse than those of other groups does not show the existence of social exclusion or the mechanisms through which social exclusion impacts the excluded group. To the extent possible, it is also desirable to examine the consistency of observed patterns of social exclusion with the proposed explanations for social exclusion. These explanations include, among others: Discrimination, Community or Class Norms, Contacts and Networks, and Epidemic Effects. In addition, explanations for differences in outcomes not based on social exclusion include preferences and the possibility that low income alone leads to worse outcomes in other areas.

Table 5 below attempts to control for some of these factors, using the data from the FLACSO survey by including proxy variables corresponding to the different mechanisms for exclusion,  $E$ , into Equation (1), resulting in:

$$Y_i = \alpha + X_i \beta + C_i \gamma + \delta G_i + \lambda E_i + \varepsilon_i \quad (2)$$

The main issue in Equation (2) is the choice of good variables in the vector  $E$ . In particular, there is a possibility that the variables intended to measure social exclusion are endogenous or that the different outcomes are jointly determined. This paper restricts itself to a

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<sup>22</sup> More information on remittance patterns can be found in Funkhouser (1999), Morales and Castro (1999), and Pritchard (1999).

reduced-form approach using the variables available in the FLACSO that most closely correspond to the associated explanation for social exclusion.<sup>23</sup>

#### 4. Measurement of Group Effects

Table 4 presents initial evidence on group effects by reporting the coefficient on the dummy variable for Nicaraguan status in Equation (1) for a variety of outcomes. Panel A presents the results for individual outcomes for males; Panel B presents the results for individual outcomes for females. Individual outcome variables are poverty, affiliation with the social insurance system, working, and, for the working sample, hours, informal sector status logarithm of monthly income. Also included are two measures of child integration into the school system, attendance and grade/age.<sup>24</sup> Panel C includes household level variables, including medical attention by household members, household income, poverty, and several variables related to quality of housing.

In Panels A and B, the first Columns (1) – (5) report results from the pooled sample from the 1997, 1998, and 1999 National Household Survey and Columns (7) – (13) report results from the FLACSO. The first column in each group (columns 1 and 7) reports mean differences without controls, and each subsequent column adds a set of controls for basic demographic information (columns 2 and 8),<sup>25</sup> nationality composition of household (columns 3 and 9),<sup>26</sup> job controls for income and hours regressions (columns 4 and 10),<sup>27</sup> and sampling group fixed effects (columns 5 and 12). The FLACSO survey further includes a column with a set of controls for migration that includes legal status and year of arrival information (column 11). The final column for each data set reports the number of observations in the sample (columns 6 and 13).

Because comparable household information was not available in the data sets provided from the National Household Survey, Panel C includes only information from the FLACSO

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<sup>23</sup> While the original idea was the joint estimation of the determinants of outcomes using instrumental variables, the initial results did not suggest that more would be learned from that approach than from reduced-form results.

<sup>24</sup> Grade for age is measured as a binary variable indicating whether age minus grade completed minus 6 is greater than one.

<sup>25</sup> All specifications with the National Household Survey include year dummy variables. Demographic controls include age, age squared, education, education squared.

<sup>26</sup> Composition controls include Nicaraguan head married to Costa Rican spouse, Costa Rican head married to Nicaraguan spouse, Male Nicaraguan head (only), and Female Nicaraguan head (only). The reported coefficients correspond to Nicaraguan head and spouse.

<sup>27</sup> Job controls include dummy variables for one-digit industry, self-employed status, domestic status, and public employee status.

survey. The organization of the table is similar to that of Panels A and B, starting with mean differences without controls, then adding controls across the columns.

### ***Labor Market Insertion of Individuals***

The patterns in labor market insertion show Nicaraguans to have labor force participation rates and employment rates that are comparable to or higher than those of Costa Ricans. This is not surprising, given the primarily economic motive for migration, but does not suggest restricted access to entry into the labor market. The most pronounced differences are for females, with employment rates over 20 higher than those of Costa Rican females, compared to differences of 5 to 7 percent for males. These differences are similar, though higher for males, when detailed controls including neighborhood fixed effects are included.

The type of insertion is measured crudely with the informal sector and income measures. For males, the proportion in the informal sector is higher than among Costa Ricans, though most of the difference is explained with controls. For females, the proportion working in the informal sector is 40 percent higher and remains over 25 percentage points higher when detailed controls are included. The differences in income between Nicaraguans and Costa Ricans are large: 28-35 log points for males and 36-46 log points for females. For males, about half of the difference is explained with basic demographic controls. The inclusion of household composition and job controls lead to little change in the difference. For females, two-thirds to three-fourths of the difference are explained by basic demographic and household composition controls. After controlling for job characteristics, Nicaraguan females earn *more* than their Costa Rican counterparts. The inclusion of neighborhood fixed effects has little effect on the difference in log monthly earnings for either males or females. The slight increase in the differential for males when neighborhood effects are included in the FLACSO survey suggests that if Nicaraguans earn less than Costa Ricans because they live in worse neighborhoods, this is even more true for Costa Ricans.



### ***Institutional Participation***

The four measures of institutional participation are individual access to social insurance, school attendance of children age 6–14, legal status (shown in Panels A and B), and use of a doctor in the last month (shown in Panel C). In each, Nicaraguan outcomes are substantially and significantly worse than those of Costa Ricans in the household survey. Rates of access to social insurance are 32-35 percent lower for Nicaraguans, falling to 16-20 percent for males with controls. School attendance rates are 6-14 percentage points lower, with little change when controls are introduced, except that the introduction of neighborhood fixed effects increases the deficit in school attendance of Nicaraguans relative to Costa Ricans.<sup>28</sup>

The FLACSO survey asks whether anyone in the household has been to a doctor in the last month. Nicaraguans are 15 percent less likely to have done so; controls for age and education of principal earner and household size reduce the coefficient only slightly to 13 percent.

### ***Housing and Household Labor Market Insertion***

The most substantial differences besides legal status in the societal integration of Nicaraguans is in quality of housing (shown in Panel C). For each of three general measures, binary outcome variables were constructed similar to those used to calculate satisfaction of basic human needs. The first measure is quality of housing materials, which is classified as inadequate if any one of the floor, the roof, or the walls are made of inadequate materials. The second measure is access to services of electricity, water, and sanitation, which is classified as inadequate if any one of those services is not available. The third measure is overcrowding, which is considered inadequate if there are more than two persons per bedroom in the house.

Nicaraguan households are much more likely to be living in housing with inadequate materials or lack of access to basic services. Not reported in the table are the relatively low levels of housing inadequacy among Costa Rican households (7-8 percent in each measure). In the FLACSO survey, 24 percent of households do not have adequate materials and over 40 percent do not have access to basic services. The overcrowding measure is also substantially

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<sup>28</sup> For evidence on Nicaraguans in the Costa Rican school system, see Mora and Chinchilla (1998).

higher for Nicaraguans—by 44 percent when no controls are included.<sup>29</sup> The summary measures show 56 percentage points more of Nicaraguan households have inadequate housing in at least one dimension than Costa Rican households and 21 percent more have inadequate housing in all dimensions. These levels are not explained by head characteristics, household characteristics, head migration characteristics, or neighborhood fixed effects. Only in the case of adding neighborhood fixed effects in the determination of deficient materials is there any change in the Nicaraguan group effect, and the change is relatively small (7 percentage points).

### *Correlation in Outcomes*

While not surprising and indicating nothing about causality, there is a confluence of negative outcomes with a significant relationship between income and other outcomes, including housing quality, use of doctor, and affiliation with the social insurance system. Using the FLACSO data and the sample from Table 4, we calculated (but do not report) the correlations between outcomes using both the levels without controls and the residuals from the estimation of the specification with household controls.

The two-way correlations range in magnitude from 0.1 for the relationship between log of household income and use of a doctor to 0.21 for the relationship between log of household income and both access to basic services (negative) and affiliation with the social insurance system. In addition, there is an even stronger correlation between housing quality outcomes (inadequate materials, access to basic services, and overcrowding) and a significant relationship between affiliation with the social insurance system and other outcomes.

What is a bit surprising is that many of these relationships are much weaker, and not statistically significant when calculated for Nicaraguan households. In particular, the correlation between housing quality outcomes and variables other than poverty are weaker and statistically insignificant. In addition, the relationship between the residuals from the specification with household controls also yields much weaker and statistically insignificant relationships.

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<sup>29</sup> While 30 percent of Costa Rican households suffer from overcrowding, over three-fourths of Nicaraguan households do.

### *An Initial Portrait of Nicaraguan Integration into Costa Rica*

The integration of Nicaraguans into Costa Rica reflects the economic motive to migration. The labor market integration is high and outcomes are better than what would have occurred in Nicaragua. The pattern of labor market integration reflects the lower skills of Nicaraguans as much as restricted access. Though there are indications of occupational segregation, especially among Nicaraguan females, and incomes of Nicaraguans are lower than those of Costa Ricans even after controlling for other factors, the high absorption of low skill workers by the Costa Rican economy over the late 1990s may have led to vulnerability in the labor market, rather than exclusion.

In other areas, Nicaraguans show many patterns documented elsewhere for excluded groups. Integration into institutions is lower and quality of housing is lower for the large group of Nicaraguans that live in the ranchos of La Carpio and La Aurora. Differences in other outcomes, especially labor market outcomes, do not show significant differences by level of concentration of Nicaraguans in the neighborhood or barrio.

These initial findings lead us to emphasize the migrant nature of Nicaraguans in Costa Rica. In particular, the concept of exclusion may not be appropriate to describe the current situation of Nicaraguans as a group. Rather, the differential participation of Nicaraguans in Costa Rican society, accepted by current migrants as part of a package that includes economic gains, makes the group vulnerable.<sup>30</sup> As the time of Nicaraguans as a group in Costa Rica increases, these differences may decline and those that are not successful may return to Nicaragua, leading to the possibility for inclusion of those Nicaraguans that remain. Or they may increase, especially if there is continued new migration and differential outcomes of the children of Nicaraguans in Costa Rica, leading to the possibility of exclusion.

## **5. Mechanisms of Social Exclusion**

The preceding discussion suggests that Nicaraguans are a vulnerable, rather than an excluded group in Costa Rica at the present. Among the factors that will determine whether Nicaraguans as a group become an included group or an excluded group in the future are the potential for integration of those Nicaraguans that are currently residing and remain in Costa Rica and the integration of new Nicaraguan migrants. In the view most favorable to inclusion, the only

factors leading to worse outcomes of Nicaraguans are time in Costa Rica and legal status, which will mechanistically improve over time for current Nicaraguans as a group, especially once the second generation of Costa Rican citizens reaches adulthood. The alternative view is that there are other mechanisms of social exclusion, including the persistent effects of initial legal status, use of networks, geographic epidemic effects, transferability of human capital, and discrimination that cause Nicaraguans as a group to be different than Costa Ricans and these differences will persist over time. In this section, we explore these possibilities and the effects that they might have on worse outcomes of Nicaraguans.

Where possible, we try to include variables to proxy for the mechanisms of social exclusion in Equation (2). For some mechanisms, especially social capital and discrimination, our evidence is more indirect, using the questions in the FLACSO survey related perceptions, utilization of networks, and participation in organizations. In these cases, the evidence addresses the possibility that these mechanisms are important, with limited evidence on the magnitude of the impact.

Table 5 presents many of the coefficients included to proxy for the mechanisms of exclusion discussed below. Each row includes the results of a regression for the determinants of a separate outcome variable, including logarithm of household income, use of doctor, inadequate housing materials, inadequate services, over-crowding, household poverty, working status of the principal earner of the household, affiliation with the social insurance system of the principal earner, and income of the principal earner. Other controls include those in Table 4.

### *Legal Status*

To examine the effects of legal status, we include three dummy variables for naturalized, applied for amnesty, and eligible but not applying for amnesty. The omitted group are those who were not eligible for the amnesty. The reported coefficients are shown in Columns (7) – (9) of Table 5. While the precision of the estimates is low and there is a relationship between legal status and length of time in Costa Rica (shown in Columns 10-11), legal status is a significant determinant of some outcomes. Those who are naturalized or applied for amnesty are (slightly) significantly more likely to use a doctor and to be affiliated with the social insurance system, indicated greater integration into institutions than other immigrants. There is a large and significant difference in

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<sup>30</sup> Even legal status has been chosen by most migrants who enter Costa Rica illegally.

access to basic services by legal status, but no difference in the two other housing outcomes. In other outcomes, there are mixed results, most of which are not individually significant. For example, those who chose not to apply for the amnesty have worse outcomes in many dimensions, though females in this category are more likely to work and to have higher incomes. Time in Costa Rica does not have a significant impact on outcomes other than use of doctor and access to basic household services, when controls for legal status are included.

### *Use of Networks*

In the FLACSO survey, there are two sets of questions related to networks—e.g., how did you obtain your current job and have you used networks to obtain a job, enter a health clinic, obtain housing, obtain credit, or matriculate a child in school. The evidence does not suggest that only Costa Ricans have access to networks. There are very little differences between the proportion of Nicaraguans that have used networks of friends and family and that of Costa Ricans. If anything, Nicaraguans are more likely to obtain a job and to obtain housing, though the results are not statistically significant. A fairly high proportion of principal earners, though, report the use of networks. Over one-third report use of contacts in the labor market, while over one-fourth report use of contacts in health centers and housing. Thus while the quantity of network use may be similar between Nicaraguans and Costa Ricans, the general use of networks may lead to the quality of networks having an impact on the outcomes of Nicaraguans and Costa Ricans. In Columns (1) and (4) of Table 5, the coefficients on the use of networks is reported. For Costa Ricans, networks have a statistically significant correlation with outcomes only for use of a doctor and poverty. For Nicaraguans, use of networks is not a significant determinant of any outcome variable, and the sign of the coefficients in many labor market variables (household income, poverty, affiliation with social insurance, and individual income) suggests that the networks that Nicaraguans use may not be improving these outcomes.

### *Geographic Concentration*

Much of the recent literature in economics on group effects has focused on the role that geographic concentration, or enclaves, has on the development of worse outcomes. Most relevant to our study among these are Cutler and Glaeser (1997), Cutler, Glaeser, and Vigdor (1999), Borjas (1998), Glaeser, Laibson, and Sacerdote (2000), and Bertand, Luttmer, and Mullinathan

(2000). Several other authors, including Lazear (1999), Portes (1987), and Portes and Jensen (1989) have discussed the possibility that the formation of enclaves may improve economic opportunities of residents.

Given the past housing policy of the Costa Rican government and the effect it has had on the location decisions of Nicaraguan migrants, it is important to document the extent to which geographic concentration exists and the relationship, if any, between concentration and outcomes. The examination of neighborhood effects begins by measuring the extent of geographic segregation. The potential effect of geographic concentration is then examined by trying to explain neighborhood effects from Equation (1) with variables related to Nicaraguan presence.

#### *Measures of Segregation, Isolation, and Exposure*

The household survey is used to examine geographic concentration at the level of the metropolitan area. The primary sampling unit, or *segmento*, is used as a rough measure of neighborhoods. The *segmentos* of the surveys for 1997 to 1999 are divided into those with 0-5 percent Nicaraguan, 5-10 percent Nicaraguan, 10-15 percent Nicaraguan, 15-25 percent Nicaraguan, and over 25 percent Nicaraguan. There is significant representation of Nicaraguans in each category for each year, with a greater proportion in the lower percentage groups in 1997 compared to 1999. In 1997 only 29 percent of Nicaraguans lived in areas with over 15 percent Nicaraguans; by 1999 this proportion had grown to 58 percent, in part due to the growth in the number of Nicaraguans included in the survey. In each year 80 to 85 percent of Costa Ricans live in areas with less than 5 percent Nicaraguans and an additional 10 percent live in areas with 5 to 10 percent Nicaraguans.

Despite this initial evidence of geographic concentration of Nicaraguans, it is not the case that Nicaraguans are isolated from Costa Ricans. Even in the areas in which most of the Nicaraguans live, Costa Ricans are a majority. In only one *segmento* in the three years are Nicaraguans a majority (1999) and in only 9 (4 in 1997, 2 in 1998, and 3 in 1999) are Nicaraguans over 25 percent.

To formalize these ideas, measures of segregation, isolation, and exposure were calculated, using the data from the metropolitan area. The Duncan index—which measures the proportion of Nicaraguans that would have to move from disproportionately Nicaraguan survey

areas to other areas to have a proportional population in each survey area—ranges from 0.62 in 1997 to 0.60 in 1999 and shows that Nicaraguans are geographically segregated.<sup>31</sup> The measures of isolation, measuring the proportion of Nicaraguans in the survey areas in which Nicaraguans live scaled to be between 0 and 1, does not show much isolation but does increase from 0.12 in 1997 to 0.23 in 1999. This is not surprising given the high number of Costa Ricans that live in survey areas in which Nicaraguans live. Similarly, the measures of exposure—measuring the proportion of other groups in survey areas in which Nicaraguans live, again scaled to be between 0 and 1—also does not show lack of exposure to other groups. The figure was 0.88 in 1997, falling to 0.77 in 1999.<sup>32</sup>

#### *Including Neighborhood Variables for Nicaraguan Presence in Outcomes Regressions*

Neighborhood fixed effects are included in the regressions in Table 4. To summarize those findings, the coefficient on Nicaraguans status changed in a way that indicated that Nicaraguans experience worse outcomes on the basis of neighborhood only for the outcome variables of affiliation with the social insurance system and grade/age of children 6-14 in the household data and for housing quality variables in the FLACSO data. Despite this weak evidence that neighborhood effects are important for Nicaraguans, the possible importance of Nicaraguan concentration, rather than all neighborhood characteristics, is explored by including variables related to the concentration of Nicaraguans in the regressions for outcomes.<sup>33</sup> We include dummy variables for living in neighborhoods with a high presence of Nicaraguans for Costa Ricans (Column 3) and Nicaraguans (Column 6) of Table 5.

These results are also weak. Those living in barrios with a high presence of Nicaraguans have worse outcomes only in the case of housing materials (both Nicaraguans and Costa Ricans) and working status (Nicaraguan males). The data also suggest that Nicaraguan females are more likely to be affiliated with the social insurance system in these barrios, a finding that runs counter to the existence of negative externalities.

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<sup>31</sup> Values between 0.3 and 0.6 are considered to show some segregation; over 0.6 is high segregation.

<sup>32</sup> For comparison, similar measures are calculated for other divisions of the population by characteristics that might explain Nicaraguan segregation: poor versus non-poor and primary education or less versus those with more than primary education. For each of these divisions, the Duncan index is much lower (0.29-0.49), isolation is similar (0.12-0.20), and exposure is also similar (0.80-0.87).

<sup>33</sup> The qualitative results are similar when the Nicaraguan concentration variables are included in the household data. Because the other variables in Table 7 are not available in the household survey, only the results from the FLACSO data in the table are reported.

### *Occupational Concentration and Transferability of Human Capital*

Data on the occupational concentration of Nicaraguan workers in the metropolitan area of San Jose and work status prior to migration are shown in Table 6. The first column presents the five most represented three-digit occupations for males and females calculated from the 1999 Household Survey. The second column shows the same information from the FLACSO survey. The row labeled “These Occupations” includes the totals for all of the listed occupations only. In each, 40-50 percent of males are employed as sellers, carpenter’s assistants (or other construction), *talabateros* (leather workers), and security guards. Females are even more concentrated, with 44–51 percent employed as domestics alone and 71-81 percent employed in the three-digit classification associated with sellers, sewing, domestics, restaurants, and cleaning occupations.

The final two columns report the work status and occupation in Nicaragua for principal earners only. The bottom row labeled “All Occupations” for males and females, respectively, includes the sample of all workers in Costa Rica. Prior to migration, 79 percent of males and 71 percent of females of employed in Costa Rica were working in Nicaragua. Of these, only 19 percent were working in the same three-digit occupations. The sample sizes for some three-digit occupations are small when calculated for principal earners only, but it is worth noting that of the most represented occupations for males in Costa Rica, only those employed in construction have a high percentage that were employed prior to migration in the same occupation. Among females, only 17 percent of those employed as domestics in Costa Rica were employed in the same occupation in Nicaragua.

To further examine the possibility that human capital is not completely transferable, or that the quality of Nicaraguan education is lower than that in Costa Rica, the coefficient on years of education from log monthly earnings regressions is calculated separately for Nicaraguans and Costa Ricans in regressions similar to those presented in Table 4. The Household Survey shows a return to education for Nicaraguan males of about two-thirds that for Costa Rican males and insignificantly different for females. The FLACSO survey shows much lower returns to education for Costa Ricans and very little relationship between education and earnings for Nicaraguans.

These findings provide fairly strong support for the idea that skills are not transferable or that the quality of education in Nicaragua is much lower than that in Costa Rica. Combined with



the patterns in occupation, patterns of skill transferability—and the intergenerational transmission of skill—represent an important factor in explaining the future condition of Nicaraguans in Costa Rica.

### *Social Capital*

The FLACSO survey included several questions related to existence and use of organizations. The general pattern is for a significantly higher proportion of Costa Ricans than Nicaraguans to report the existence of a type of organization in the barrio; for Costa Ricans to have a slightly higher, but low and insignificant, rate of participation in that type of organization; and for Nicaraguans to think that participation is more important. The type of organization identified as being most prevalent and most important are religious organizations, followed by barrio organizations.

The low rates of participation in organizations and the similarity in participation rates of Costa Ricans and Nicaraguans do not suggest a large role for social capital attained through participation in organizations in explaining differences between Costa Ricans and Nicaraguans. The disparity between Costa Ricans and Nicaraguans in identifying the existence of organizations combined with the stated importance of organizations by Nicaraguans does suggest that there may be a lack of information on the part of the Nicaraguans.

### *Discrimination*

The large unexplained differences between Nicaraguans and Costa Ricans in many outcomes is consistent with, but does not show, discrimination against Nicaraguans. Though there are not available any good direct measures of discrimination against Nicaraguans, the FLACSO survey does provide some evidence on whether discrimination could be a determinant of the relative outcomes.

In the FLACSO survey, there are three sets of questions related to perceptions of discrimination. The first set ask whether there exists in Costa Rica discrimination related to the labor market, health centers, housing, credit, and children's matriculation in school. The results are quite striking and show that over half of Costa Ricans (58 percent) think that there exists discrimination against Nicaraguans in the labor market and between one-third and two-thirds of Costa Ricans think that there is discrimination against Nicaraguans in health centers, credit, and

housing. Among Nicaraguans, the proportion who think there is discrimination against Nicaraguans is even higher. Eighty-three percent think there is discrimination in the labor market, 55 percent think that there is discrimination in health centers, and 67 percent think that there is discrimination in housing. The high proportion of all persons that think that there is discrimination against Nicaraguans and the differential perception between Nicaraguans and Costa Ricans suggests that discrimination may play a role in the outcomes of Nicaraguans. It is interesting to note that less than one-fourth of both Costa Ricans and Nicaraguans think that there is discrimination in enrolling children in school.

The second set of questions related to discrimination is the perception of Costa Ricans and Nicaraguans of the attributes of the majority of persons of each nationality. The principal earners were asked if Costa Ricans were good workers, honest, trustworthy, and racist, respectively. The questions were repeated for Nicaraguans. While there may be some information in the results of these questions, it is important to note that all interviewers were Costa Rican and this may have had an effect on the answers in Nicaraguan households. When describing whether the majority of Costa Ricans are hardworking, honest, or trustworthy, Nicaraguans responded more favorably than the Costa Ricans themselves. But 68 percent of Nicaraguans describe the majority of Costa Ricans to be racist. Less than one-fourth of Costa Ricans consider themselves to be racist.

Nearly all Nicaraguans consider themselves to be hardworking, honest, and trustworthy and do not consider themselves to be racist. While nearly all Costa Ricans consider Nicaraguans to be hardworking, they are less favorable in describing the honesty and trustworthiness of Nicaraguans, and 41 percent of Costa Ricans consider Nicaraguans to be racist. These patterns are consistent with a view, expressed independently by several observers, that as a group Costa Ricans consider the main contribution of Nicaraguans to Costa Rican society to be in the labor market, and especially in low-skill occupations.<sup>34</sup>

The third set of questions asks both Costa Ricans and Nicaraguans if they avoid having Nicaraguan friends and asks Nicaraguans if they avoid Costa Rican friends. The responses do

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<sup>34</sup> The opinion survey by Sandoval, Carrillo, Calderon et al. (1999), conducted in July 1999, also indicates a high percentage of Costa Ricans who think Nicaraguans are hard workers. They also find a high proportion who think Nicaraguans help the economy of Costa Rica, and a high proportion who think Nicaraguan customs are different than those of Costa Ricans. The Costa Ricans in their survey are mixed on whether Nicaraguans are equal to Costa Ricans, whether they would like to have Nicaraguan relatives, whether Nicaraguans only bring problems, and

not show strong avoidance on either side; approximately 20 percent of Costa Ricans avoid having Nicaraguan friends and 6 percent of Nicaraguans avoid having Costa Rican friends.

Taken at face value, the results of these three sets of questions related to discrimination provide some evidence that discrimination may be an issue and is likely to be a determinant of some of the differential outcomes of Nicaraguans. Given the responses indicating that discrimination is an issue, it is somewhat surprising that there are not greater differences in outcomes for Nicaraguans. One possible explanation for this is that though discrimination exists, the effect of discrimination is small. As in other studies of discrimination, the determination of the magnitude of any effect is difficult without adequate measures of the phenomenon. A second explanation is that the survey question does not adequately measure the extent of discrimination.

### *Summary*

The proxy measures for the mechanisms through which social exclusion might affect outcomes of Nicaraguans are imperfect, and the findings should be taken as suggestive rather than definitive. Nevertheless, there is evidence that uniquely Nicaraguan characteristics are likely to be affecting outcomes in a way that is consistent with some explanations for social exclusion. The results do not distinguish well among the explanations that are consistent with the evidence, but they do rule out some explanations.

There is some evidence that labor market integration is related to occupational concentration that is the result of lack of transferability of human capital, the use of sub-optimal networks, or discrimination. There is also evidence that housing outcomes are affected by time in Costa Rica and legal status. There is also fairly strong evidence that Nicaraguan integration into Costa Rican institutions is affected by factors particular to Nicaraguans, in particular legal status. There is not much evidence of the effects of social capital or the quantity network use of Nicaraguans, while recognizing that these findings could be the result of imperfect measures for these mechanisms.

Perhaps the most surprising finding is that there is little relationship between geographic concentration of Nicaraguans and many of the outcomes under consideration. Given that geographic concentration of Nicaraguans is high, that it is increasing over time, and that the

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whether Nicaraguans should be permitted to enter Costa Rica. Less than half of Costa Ricans supported the amnesty.

current housing policy of the Costa Rican government is likely to lead to further increases in concentration as Nicaraguan migration continues, this is a result that has significant policy implications. There are alternate means of exploring this finding, such as looking at communities of rancho, rather than proportion of Nicaraguans, for example. Nonetheless, Nicaraguan presence continues to have strong effects on housing outcomes, but weaker results for other outcomes. The results suggest that the effects of geographic location on outcomes, where there are effects, operate through characteristics other than nationality, such as poverty.

Of the mechanisms for exclusion that have some support, such as transferability of skills, legal status, and discrimination, only discrimination is the result of denial of access. Nicaraguans who migrate have chosen to migrate even though their skills are not transferable and Nicaraguans who arrive in Costa Rica illegally have chosen to do so for economic rather than institutional reasons.

## **6. Conclusion and Policy Recommendations**

The study of Nicaraguans in Costa Rica in the year 2001 provides a benchmark against which the future inclusion or exclusion of Nicaraguans as a group occurs. While many outcomes of Nicaraguans are worse than those of otherwise similar Costa Ricans, the data do not exhibit many of the common features associated with social exclusion. First, the negative relationship between group effects and geographic concentration, which dominates much of the discussion of group effects of African-Americans in the United States and social exclusion in Europe, is not strong in these data. Second, integration into institutions is correlated with legal status. Third, the worse outcomes of Nicaraguans in the main public services of education and health appears to be more related to factors other than denial of access or discrimination. Fourth, the general paternalistic role of the Costa Rican state towards the poor has been extended, to a certain extent, towards Nicaraguans. And fifth, the strong performance of the Costa Rican economy during the 1990s has generated demand for labor, especially unskilled labor.

Despite this mixed evidence on the current exclusion, Nicaraguans as a group are vulnerable. First, they are very concentrated in terms of both geography and occupation. Second, the housing conditions of Nicaraguans, measured by quality of housing, access to services, and over-crowding are significantly worse than those of Costa Ricans. Third, integration into the political process is limited by legal status and the type of integration is

strongly correlated with geographic concentration. Fourth, the effects of future migration on Nicaraguans as a group are likely to create a stronger relationship between geographic concentration and outcomes and to test the capacity of the Costa Rican labor market to absorb low-skill labor. In particular, current housing policy makes it likely that future Nicaraguan immigrants will be concentrated in rancho-style asentamientos.

The main policy recommendations from these findings are divided according to the three aspects of Nicaraguan integration into Costa Rican society. First, the characteristics of Nicaraguans, especially low income levels, make it more likely that they will have worse outcomes in other dimensions. Policies in these areas are related to improving the quality of the characteristics of Nicaraguans, rather than Nicaraguan status, such as access to school. While these policies redistribute resources from native Costa Ricans to Nicaraguans, they are likely to produce net benefits for Costa Rica as a whole given the permanent nature of the current migration for many Nicaraguans. Second, Nicaraguan status itself affects outcomes by increasing the costs of residing legally in Costa Rica. It also reduces the benefits of investment in institutional integration if migration is not permanent, and through the experience of discrimination. Because the main costs of migrating are the cost of the Nicaraguan passport, which is outside the control of the Costa Rican government, the only possibility for increasing the probability of legal residence is to eliminate the passport requirement, as in the the amnesty that was offered in 1999. When legal status proxies for permanence of migration, the outcomes for which such policies will have an impact are limited. Third, while the finding of little relationship between outcomes and geographic concentration is weak, there is a possibility that there will be a relationship as the number of Nicaraguans in Costa Rica increases. This possibility is greater with the finding that there does appear to be some evidence of discrimination against Nicaraguans. Policies in this area should recognize the likelihood of continued urbanization in the San Jose metropolitan area and the benefits of planned urbanization over unplanned takeovers. As in the case of anti-poverty policies, policies designed to rationalize urban development in poorer areas involves some redistribution to Nicaraguan households and in likelihood would have net benefits to all those residing in the metropolitan area of San Jose. But unlike any additions to current anti-poverty programs, housing policies would not be aimed mainly at Nicaraguan immigrants.

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<b>Location</b>	<b>Community Infrastructure</b>	<b>Condition of Houses</b>	<b>Condition of Nicaraguans</b>
<p><b>La Carpio</b> High presence of Nicaraguan population. First invasion occurred in April 1993. Located in Central Canton of San Jose, District of La Uruca.</p>	<p>Main road is paved and has sidewalks. The other streets are dirt, without sidewalks and in poor shape. The community has one public school and an health clinic in the Iglesia comunidad P.A.S. There are no green or recreation zones. The space that children use to play soccer and baseball has been designated for the construction of a new school.</p>	<p>No family has been served by programs related to housing or social interest. As a result, housing is predominately ranchos with desecho materials, though there are some houses of cement. It is common to see many houses on one lot, with a single electric meter or one faucet for water.</p>	<p>The overwhelming majority of Nicaraguan households are located in the southern section of the asentamiento, in which the most vulnerable conditions are observed because of the terrain, the proximity to a river, and the poor state of the houses.</p>
<p><b>Bajos de La Union</b> High presence of Nicaraguan population in old barrio of San Jose. Located next to a bridge that crosses to La Uruca, the community is based around a narrow road that descends a steep hill without exit.</p>	<p>The streets are paved, but in poor shape. There are sidewalks. All basic services are available. There are problems with the canerias because they were constructed with materials that have deteriorated and the water that is consumed becomes contaminated. In some cases, the waste water runs to the river. There are no green or recreation zones, with the exception of bars and cantinas.</p>	<p>The majority of the houses were constructed many years ago and are in a process of deterioration. Many of the houses are thin, but long.</p>	<p>Nicaraguans live primarily in “cuarterias” (rooming houses) with a series of small (3m x 3m) rooms. En some cases, new rooms have been constructed on an improvised second floor. En nearly all cases, there is shared bathroom and electricity. In some rooms, the occupants have installed equipment to cook.</p>
<p><b>Paso Ancho</b> Medium presence of Nicaraguans. Traditional barrio in San Jose, located in the south of the central canton.</p>	<p>The streets are paved, but in poor shape. All basic services are available. There is a school, soccer field, and fairly nearby is a supermarket.</p>	<p>There is a lot of variety in the type of housing, ranging from wood houses in a state of deterioration to others made of cement in better condition.</p>	<p>The majority of Nicaraguan families live in rooming houses that are concentrated in two sectors of the barrio. Some of these rooming houses were constructed under the level of road, which results in little illumination and, in some cases, the stair access is dirt. There are also Nicaraguan families that rent houses.</p>



**Table 1, continued**

<b>Location</b>	<b>Community Infrastructure</b>	<b>Condition of Houses</b>	<b>Condition of Nicaraguans</b>
<p><b>La Aurora</b> Medium presence of Nicaraguans. Located in the central canton of Heredia, district of San Francisco. The barrio was constructed by INVU in the 1970s. In 1993, a land takeover occurred on an adjacent coffee plantation with approximately 100 families.</p>	<p>The main community has paved roads and all basic services. The houses in the asentamiento do not have electricity, water, or bathrooms. The residents constructed a trench for waste water. Water is obtained from a common pipe. The access road is made of dirt. There is also a high number of persons per room.</p>	<p>In the main community, the houses are made of cement, with two stories, four bedrooms. The majority of the houses are in good condition. In the asentamiento, the ranchos have been made of desecho materials, with a large number having dirt floors.</p>	<p>Nicaraguan families are concentrated in the asentamiento. 70 of 80 families in the asentamiento have a Nicaraguan principal earner. Only 6 of 216 households in main community are Nicaraguan.</p>
<p><b>Guarari</b> No presence of Nicaraguans. Located in the central canton of Heredia, district of San Francisco. The original invasion occurred in 1986-1987 and was led by a group called COPAN.</p>	<p>The urbanization was constructed as part of one of the housing programs under Arias. It has all basic services. There are a primary school, a health clinic, and green zones.</p>	<p>The majority of the houses are made of cement and there is a sector with makeshift housing (ranchos)</p>	
<p><b>Barrio Mexico</b> No presence of Nicaraguans. Located in the central canton of San Jose, near the zona roja.</p>	<p>The streets are paved in good condition. There are all basic services. The community has a primary school, a secondary school nearby, and a large number of businesses.</p>	<p>The majority of the houses are three decades old.</p>	

**Table 2. Summary Data**

	1999 National Household Survey			2001 FLACSO Survey		
	Costa Ricans (1)	Nicaraguans All (2)	In Segmentos >20% Nic. (3)	Costa Ricans (4)	Nicaraguans All (5)	In Barrios >20% Nic. (6)
<b>Persons Age 20-65:</b>						
Age	37.602 (.209)	31.083 (.782)	28.802 (1.236)	37.078 (.656)	33.698 (.539)	33.779 (.769)
Female	.528 (.009)	.509 (.033)	.440 (.052)	.540 (.031)	.546 (.025)	.562 (.035)
Years of Education	9.578 (.074)	7.344 (.283)	6.530 (.451)	8.483 (.239)	6.304 (.157)	5.985 (.218)
Male Working	.864 (.009)	.893 (.032)	.863 (.048)	.808 (.036)	.919 (.021)	.926 (.029)
Female Working	.510 (.012)	.655 (.046)	.600 (.079)	.586 (.041)	.629 (.034)	.614 (.047)
<b>Working Sample:</b>						
Hours of Work	47.692 (.359)	51.046 (1.254)	49.912 (2.012)	49.355 (1.192)	50.895 (.963)	51.169 (1.222)
Informal Sector	.300 (.010)	.540 (.035)	.529 (.056)	.355 (.042)	.556 (.033)	.564 (.046)
Total Income	132,908 (2,807)	73,405 (9,319)	58,855 (14,614)	122,168 (7,259)	77,400 (2,206)	74,521 (2,737)
Any Social Insurance (Head)	.833 (.011)	.610 (.043)	.469 (.067)	.832 (.038)	.481 (.038)	.524 (.055)
<b>Household Variables:</b>						
Household Size	3.947 (.050)	4.658 (.214)	5.242 (.330)	3.970 (.167)	4.994 (.205)	5.299 (.308)
Children Under 12	.948 (.030)	1.519 (.130)	1.788 (.201)	1.022 (.113)	1.704 (.122)	1.734 (.176)
Number Working	1.643 (.027)	2.089 (.117)	2.212 (.181)	1.436 (.080)	1.687 (.070)	1.712 (.093)
Household Income	218,675 (5,453)	146,001 (22,512)	124,335 (33,196)	179,812 (12,782)	122,035 (5,792)	118,634 (6,587)
Poverty	.147 (.010)	.274 (.042)	.394 (.062)	.395 (.062)	.514 (.050)	.449 (.068)

Numbers in parentheses are robust standard errors.

Informal sector is all self-employed workers, domestic workers, apprentices, family workers, and wage and salary workers in firms with fewer than 5 employees that are not in professional or managerial occupations.

**Table 3. Characteristics of Nicaraguans by Barrio**

	<b>La Union</b>	<b>La Carpio</b>	<b>Paso Ancho</b>	<b>La Aurora</b>
Total Persons	4.219 (.462)	5.662 (.310)	4.292 (.377)	4.740 (.369)
Children <=12	1.250 (.287)	1.915 (.193)	1.375 (.234)	1.860 (.230)
Working Members	1.750 (.174)	1.718 (.116)	1.688 (.142)	1.500 (.130)
Poverty	.250 (.085)	.380 (.057)	.375 (.069)	.540 (.060)
<b>Housing:</b>				
Deficient Materials	.000	.423 (.043)	.063 (.053)	.840 (.052)
Deficient Services	.719 (.078)	.620 (.053)	.292 (.064)	.840 (.063)
Over-Crowding	.844 (.075)	.718 (.051)	.833 (.061)	.700 (.060)
<b>Persons 20-65:</b>				
Age	33.017 (1.346)	33.866 (.847)	35.758 (1.061)	31.825 (1.019)
Female	.576 (.065)	.557 (.065)	.547 (.051)	.505 (.049)
Years of Education	6.288 (.392)	5.918 (.249)	7.462 (.312)	6.088 (.298)
Informal Sector	.565 (.074)	.543 (.056)	.603 (.066)	.527 (.068)
Monthly Income	74,345 (6,167)	74,978 (4,361)	86,384 (5,396)	76,438 (5,087)
Not Legal	.153 (.046)	.128 (.029)	.074 (.037)	.301 (.305)
Not Citizen	.864 (.054)	.718 (.034)	.600 (.043)	.893 (.041)

**Table 3, continued**

	La Union	La Carpio	Paso Ancho	La Aurora
<b>Year of Arrival:</b>				
Prior to	.017	.048	.087	.010
1980	(.026)	(.017)	(.021)	(.020)
1980-	.293	.241	.315	.146
1990	(.056)	(.036)	(.045)	(.042)
1991-	.345	.545	.315	.388
1995	(.064)	(.040)	(.051)	(.048)
1996-	.345	.166	.283	.456
2001	(.058)	(.037)	(.046)	(.044)
<b>Region in Nicaragua:</b>				
North	.220	.286	.118	.553
	(.057)	(.036)	(.045)	(.043)
Managua	.017	.286	.172	.107
	(.048)	(.030)	(.038)	(.036)
South	.763	.429	.710	.340
	(.061)	(.039)	(.049)	(.046)
<b>Principal Earner:</b>				
Planning to	.250	.200	.311	.408
Return	(.080)	(.058)	(.067)	(.065)
Relatives	.594	1.558	.739	1.000
in U.S.	(.430)	(.312)	(.359)	(.358)
Relatives	2.031	2.590	2.130	1.673
in C.R.	(.643)	(.466)	(.536)	(.520)
Send	.625	.377	.500	.429
Remittances	(.088)	(.466)	(.073)	(.071)
Avg. Monthly	37.406	16.459	40.196	26.286
Remittance (\$)	(8.265)	(5.987)	(6.894)	(6.679)

Notes: Relatives in Costa Rica are those who do not live in household.

Monthly Remittances are averaged over all principal earners including those who do not send remittances.

**Table 4. Coefficients on Nicaraguan Status, Urban Metropolitan Area, National Household Survey and FLACSO Survey**

**Panel A – Males**

	Household Survey						FLACSO Survey						
	Without Cont. (1)	With Cont. (2)	HH Type Cont. (3)	Job Cont. (4)	Neighb. FE (5)	N (6)	Without Cont. (7)	With Cont. (8)	HH Type Cont. (9)	Job Cont. (10)	Migr. Cont. (11)	Neighb. FE (12)	N (13)
<b>Labor Market, Adults 20-65</b>													
Poverty	.032 (.023)	-.008 (.023)	.017 (.025)		-.025 (.029)	3795	.079 (.092)	-.001 (.092)	.082 (.094)		.017 (.159)	.052 (.101)	353
In Labor Force	.077 (.020)	.059 (.019)	.047 (.022)		.050 (.024)	4807							
Working	.051 (.023)	.051 (.023)	.029 (.026)		.047 (.029)	4807	.114 (.060)	.132 (.059)	.064 (.059)		.056 (.100)	.060 (.056)	352
<b>Working Sample:</b>													
Ln Hours Week	.083 (.027)	.077 (.027)	.071 (.031)	.060 (.031)	.055 (.035)	4088	.088 (.049)	.015 (.049)	-.019 (.050)	-.014 (.061)	.008 (.100)	.042 (.063)	298
Pct. Inf. Sector	.102 (.032)	.055 (.031)	.024 (.035)		.047 (.040)	4086	.022 (.093)	.028 (.095)	.025 (.100)		.008 (.166)	.065 (.108)	216
Ln Monthly Income	-.354 (.054)	-.112 (.045)	-.134 (.052)	-.160 (.050)	-.152 (.056)	3506	-.283 (.106)	-.156 (.100)	-.155 (.104)	-.211 (.128)	-.153 (.215)	-.254 (.128)	226
<b>Institutional Participation:</b>													
Any Social Insurance	-.315 (.028)	-.247 (.028)	-.224 (.032)	-.208 (.030)	-.183 (.034)	4796	-.280 (.071)	-.245 (.093)	-.237 (.099)		-.528 (.197)	-.649 (.172)	186
<b>Children Age 6-14:</b>													
Attend School	-.130 (.030)	-.132 (.029)	-.132 (.031)		-.175 (.039)	1749	-.062 (.067)	-.067 (.061)	-.082 (.065)		-.257 (.204)	-.237 (.159)	90
Grade/Age	-.375 (.170)	-.602 (.151)	-.674 (.155)		-.314 (.202)	1551	-.306 (.125)	.298 (.109)	.348 (.108)		.095 (.345)	.287 (.200)	141

**Table 4, continued**

**Panel B – Females**

	Household Survey						FLACSO Survey						
	Without Cont. (1)	With Cont. (2)	HH Type Cont. (3)	Job Cont. (4)	Neighb. FE (5)	N (6)	Without Cont. (7)	With Cont. (8)	HH Type Cont. (9)	Job Cont. (10)	Migr. Cont. (11)	Neighb. FE (12)	N (13)
<b>Labor Market, Adults 20-65</b>													
Poverty	.050 (.024)	-.009 (.023)	.019 (.026)		-.013 (.028)	4212	.172 (.093)	.090 (.092)	.177 (.098)		.075 (.168)	.065 (.107)	430
In Labor Force	.259 (.030)	.272 (.029)	.365 (.031)		.340 (.033)	5354							
Working	.222 (.030)	.245 (.029)	.341 (.031)		.318 (.034)	5354	.044 (.071)	.114 (.071)	.188 (.074)		.226 (.127)	.232 (.078)	412
Working Sample:													
Ln Hours Week	.155 (.047)	.196 (.048)	.252 (.050)	.307 (.049)	.321 (.056)	2673	-.082 (.072)	-.066 (.075)	-.069 (.084)	.017 (.094)	.071 (.145)	.117 (.127)	236
Pct. Inf. Sector	.407 (.034)	.287 (.031)	.272 (.033)		.254 (.037)	2673	.378 (.092)	.323 (.084)	.330 (.090)		.393 (.148)	.415 (.110)	210
Ln Monthly Income	-.457 (.066)	-.128 (.055)	-.091 (.058)	.073 (.054)	.085 (.062)	2321	-.357 (.155)	-.206 (.149)	-.138 (.163)	.345 (.171)	.387 (.261)	.122 (.176)	229
<b>Institutional Participation:</b>													
Any Social Insurance	-.340 (.021)	-.305 (.021)	-.346 (.023)	-.337 (.026)	-.330 (.029)	5343	-.452 (.081)	-.458 (.090)	-.533 (.080)		-.550 (.343)	-.439 (.291)	130
<b>Children Age 6-14:</b>													
Attend School	-.072 (.025)	-.064 (.024)	-.089 (.026)		-.032 (.032)	1619	-.140 (.049)	-.147 (.048)	-.156 (.054)		-.370 (.242)	-.384 (.213)	102
Grade/Age	-.638	-.538	-.400		-.058	1432	-.256	-.257	-.317		-.473	-.451	183

(.144) (.129) (.138)

(.173)

(.113) (.101) (.105)

(.334) (.191)

**Table 4, continued**  
**Panel C – Households, FLACSO Survey**

	Without Controls (1)	Head Demog. Controls (2)	HH Controls (3)	Head Migr. Controls (4)	Neighb. FE (5)	
Go to Doctor	-.090 (.071)	-.101 (.072)	-.123 (.081)	-.137 (.142)	-.237 (.098)	342
Poverty	.058 (.062)	.004 (.060)	.055 (.068)	.068 (.118)	.071 (.084)	349
Log HH Income	-.087 (.108)	.086 (.100)	-.235 (.104)	-.188 (.180)	-.149 (.118)	341
Housing:						
Inadequate Material	.236 (.039)	.222 (.040)	.269 (.046)	.299 (.080)	.165 (.067)	349
Inadequate Services	.418 (.042)	.383 (.041)	.436 (.048)	.541 (.080)	.418 (.072)	349
Over- Crowded	.439 (.064)	.379 (.064)	.385 (.067)	.509 (.117)	.467 (.079)	349

### Notes to Panels A and B

Entries are coefficient on dummy variable for Nicaraguan. All regressions using National Household Survey include year dummy variables.

1. Demographic controls -- Adult regressions with controls include age, age-squared, education, and education squared. Controls in children regressions include age dummy variable.
2. Household composition controls include nationality composition of head and spouse  
Job controls include dummy variables for one-digit sector of economic activity, self-employed status, domestic, and public employee status.
3. Migration controls include years since migration, years since migration squared, and four legal status dummy variables.
4. Sample for affiliation with social insurance is heads only.

### Notes to Panel C:

Entries are coefficient on dummy variable for Nicaraguan.

1. Demographic controls include age, age squared, years of education and years of education of head.
2. Household controls include nationality composition of head and spouse, number of household members, number of children, marital status and gender of head.
3. Migration controls include years since migration, years since migration squared, and four legal status dummy variables



**Table 5. Inclusion of Proxy Variables for Mechanisms of Social Exclusion  
FLACSO Sample of Principal Earners**

	Costa Ricans			Nicaraguans			Natur. (7)	Applied Amnesty (8)	Elig., Did Not Apply (9)	Time in C. R. (10)	Time in C.R. Sq./100 (11)	N (12)
	Use of Networks (1)	Have Problems (2)	High Presence (3)	Use of Networks (4)	Have Problems (5)	High Presence (6)						
<b>Ln (HH Income)</b>	.120 (.143)	-.352 (.140)	-.043 (.137)	-.009 (.097)	.024 (.115)	.055 (.167)	-.098 (.202)	.116 (.152)	-.288 (.228)	-.007 (.015)	-.025 (.051)	333
<b>Use Doctor</b>	.215 (.112)	-.011 (.109)	-.021 (.099)	.119 (.104)	-.080 (.092)	.024 (.126)	.407 (.148)	.216 (.134)	-.147 (.223)	.012 (.013)	-.090 (.038)	332
<b>Inadequate Housing Mat.</b>	.041 (.032)	.037 (.032)	.172 (.063)	-.085 (.079)	.129 (.080)	-.324 (.100)	-.014 (.153)	.023 (.137)	.137 (.250)	.016 (.012)	-.092 (.035)	341
<b>Inadequate Services</b>	-.033 (.041)	.035 (.058)	.137 (.062)	-.057 (.076)	.053 (.073)	-.123 (.077)	-.495 (.115)	-.253 (.092)	-.170 (.225)	.011 (.022)	-.084 (.035)	341
<b>Over- Crowding</b>	.021 (.102)	-.057 (.107)	-.006 (.093)	.003 (.074)	.058 (.072)	.046 (.115)	.026 (.133)	-.022 (.117)	.284 (.135)	-.010 (.012)	.045 (.037)	341
<b>Household Poverty</b>	-.152 (.079)	.210 (.085)	-.089 (.079)	.024 (.077)	.051 (.080)	.007 (.108)	.071 (.182)	-.050 (.165)	.347 (.240)	.013 (.013)	-.054 (.045)	341
<b>Working:</b>												
<b>Males</b>	.014 (.026)	.063 (.033)	.105 (.042)	-.044 (.028)	-.032 (.034)	-.114 (.051)	-.046 (.042)	-.056 (.037)	.041 (.075)	.003 (.004)	.002 (.011)	194
<b>Females</b>	.016 (.094)	.042 (.089)	-.105 (.092)	-.016 (.051)	.017 (.055)	.037 (.114)	.132 (.240)	.155 (.231)	.271 (.274)	-.001 (.014)	-.019 (.069)	147
<b>Affiliated Social Insurance:</b>												
<b>Males</b>	-.115 (.108)	-.098 (.098)	.135 (.116)	-.120 (.104)	-.146 (.112)	-.098 (.149)	.317 (.184)	.232 (.156)	-.187 (.196)	.009 (.017)	-.034 (.052)	185
<b>Females</b>	-.155 (.143)	-.086 (.126)	-.154 (.126)	-.183 (.133)	.097 (.129)	.329 (.179)	-.043 (.351)	.024 (.326)	.211 (.423)	.032 (.030)	-.171 (.134)	129
<b>Head Income:</b>												
<b>Male</b>	-.077 (.168)	-.535 (.168)	.004 (.232)	-.068 (.093)	-.066 (.103)	.001 (.230)	.038 (.198)	-.054 (.153)	-.407 (.289)	.005 (.019)	-.039 (.073)	156
<b>Female</b>	.055 (.159)	.015 (.175)	.166 (.182)	.004 (.210)	-.161 (.215)	-.310 (.269)	-.263 (.358)	-.084 (.284)	.733 (.509)	-.007 (.035)	-.094 (.142)	104

Numbers in parentheses are robust standard errors.

**Notes to Table 5:**

Each row reports the results of a separate regression in which the use of networks and have problem variables are interacted with Costa Rican and Nicaraguan status. Controls include age, age squared, years of education, years of education squared, four dummy variables for household nationality composition. Household level variables (first four rows) include household size and number of children. Individual income regressions included dummy variables for industry, self-employed status, domestic status, and public worker status.

## Table 6. Transferability of Skills

### Panels A and B -- Occupation Distribution, Urban Metropolitan Area

	1999 HH Survey	FLACSO Survey		
		Ocup. in C.R.	Principal Earner Only: Working	Status in Nicaragua Same 3-dig.
<b>Panel A -- Males</b>				
Sellers	8.13	4.12	100.00	0.00
Carpenter Assist.	14.63	28.35	66.67	30.30
Other Construction		6.70	88.89	22.22
Skilled Manuf.		7.22	75.00	0.00
Talaberteros	5.69			
Security	9.76	5.67	71.43	0.00
These Ocupations	38.21	47.94	73.33	19.67
All Ocupations			78.63	19.49
<b>Panel B -- Females</b>				
Sellers	6.67	6.21	100.00	25.00
Sewing	4.76	4.83	83.33	50.00
Domestic	51.43	44.83	68.97	17.24
Rest./Hotel	12.38	5.52	100.00	37.50
Cleaning	5.71	9.66	80.00	0.00
These Ocupations	80.94	71.05	78.85	23.08
All Ocupations			71.43	19.23

Note: Principal earner sample sizes for individual occupations are small.

### Panel C – Coefficients on Years of Education, log monthly income

	1999 Household Survey	2001 FLACSO Survey
<b>Males</b>	.096 (.005)	.061 (.012)
* Nicaraguan	-.036 (.021)	-.052 (.019)
<b>Females</b>	.135 (.007)	.073 (.016)
* Nicaraguan	-.028 (.029)	-.054 (.026)