Fall 2007

Immigration and Support for Anti-Immigrant Parties in Costa Rica

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Abstract

The central research question of this work is whether large or growing immigration populations cause a rise in support for political parties espousing anti-immigration positions. Virtually all of the research on this topic has been focused on the United States and Western Europe. This study, by contrast, looks at the impact of Nicaraguan immigration into neighboring Costa Rica on support for anti-immigration parties in that country. Existing research has found links between such support and immigration levels, as well as other variables such as education, unemployment and ethnic diversity. After reviewing the literature, I generate a series of hypotheses based on previous findings. I also introduce a novel hypothesis which suggests that the relationship between immigration levels and anti-immigration party support may not be linear, as assumed in the literature, but rather curvilinear. Using local level data on immigration levels, socioeconomic characteristics and electoral results from the 2006 national elections, I first used regression analysis to test my hypotheses. In many cases, my findings from this analysis were inconsistent with or even contradictory to the existing literature. A second set of analyses provided preliminary support for the hypothesized curvilinear relationship. This work is designed to contribute to the literature in several areas. First, it marks one of the first efforts to analyze the dynamics of anti-immigration support in a developing rather than developed country. Second, it represents one of the relatively few attempts to explore the topic at the subnational rather than national level. Finally, it suggests the possibility of an entirely different type of relationship between immigration levels and anti-immigration voting than that assumed in the existing literature.

Introduction

Though there is considerable debate and controversy in this country surrounding the immigration issue, it is important to recognize that the U.S. is only one of many nations in this hemisphere dealing with immigration-related problems. In fact, in terms of the overall levels of illegal immigration as a proportion of the total population, other countries in the region may well have significantly larger illegal populations than we do.

One such country is Costa Rica, which has a long history of dealing with a large number of Nicaraguan immigrants who cross the northern border. These immigrants migrate for both economic and political reasons, and as Costa Rica has both a relatively stable economy and the highest standard of living in Latin America, it is an appealing destination. The debate over immigration issues in Costa Rica parallels the debate currently taking place in the United States, and in both nations political parties accurately view immigration as an issue that has the potential to mobilize the electorate. However, though researchers have long examined the conditions under which explicitly anti-immigration parties are able to successfully mobilize electoral support, virtually all of this research focuses on receiving countries in the developed world. This study, by contrast, examines the issue in the context of immigration from one developing country to another (somewhat more prosperous) developing country. Specifically, this study will investigate whether there is a link between levels of Nicaraguan immigration at the local level and support for Costa Rican parties adopting anti-immigration policies in national elections. More specifically, it is hypothesized that high levels of Nicaraguan immigration will spur greater support among Costa Rican parties for adopting anti-immigration party planks.

Immigration and Popular Attitudes

Though the immigration policies of any given country are the product of many factors, clearly public opinion plays an important part in shaping such policies. As with any set of popular attitudes, particularly those related to "hot-button" issues, there is often a disconnect between the empirical effects of immigration on a receiving country and the public's perception of those effects. One consequence of this divergence between reality and perception has been the periodic ability of those favoring more restrictive immigration policies to frame the issue almost exclusively in terms of threats. Broadly speaking, the literature has grouped such threats into two general categories: cultural threats, which are identity-based, and economic threats, which are class-based.

Cultural threats are often more diffuse and less tangible than economic threats, and are rooted in a belief that an increase in the presence of a culturally different group will effectively undermine and perhaps even destroy prevailing cultural institutions. Research on the source of anti-immigrant attitudes resulting from perceived cultural threats is grounded in the broader sociological literature on group attributes. This literature specifically considers particular groups in terms of either their distinctive characteristics or specific experiences.
In other words, this research hypothesizes that sub-groups in a society will tend to have different attitudes toward immigrants based on who they are and what they have been exposed to. These attitudes arise, then, from issues of identity and values rather than material conditions.

There are several strands of thinking in the literature which focus on various factors related to the cultural threat hypothesis. One looks at the type of contact that occurs between the native and immigrant populations. Some researchers have suggested that both the type of contact and the immigrant population have been at a certain level in the community shapes anti-immigrant opinion greatly (Cornelius 102-106). A second body of research argues that certain subgroups consistently react more favorably to an influx of migration within their communities. The concept of marginality states that groups outside the mainstream in any given locality are more receptive to newcomers. For example, Wilson has found that African Americans in the United States are more supportive of Hispanic immigrants, even though they may be more economically threatened by such immigrants than the dominant Anglo population (Wilson 487).

In contrast to cultural threats, economic threats are linked to perceptions (which may or may not be factually valid) of competition between nationals and immigrants over scarce material goods or benefits. Since this competition is evenly distributed in society, perceptions of economic threat tend to be related to class. The sorts of resources at the heart of this perceived competition fall into two general categories: market-based resources (jobs, wages) and state-based resources (government benefits/services) (Money 693-5).

There is still considerable debate in the literature over the empirical effects of immigration in both these areas, but in terms of support for anti-immigration policies, the perception of such effects matters more than the actual impact. These perceptions are strongly shaped by both prevailing economic conditions and the socioeconomic status of particular individuals. Consistent with the competition thesis outlined above, we would expect to see much higher levels of anti-immigrant sentiment during periods of economic recession than during a period of economic prosperity. The impact of increased competition resulting from recession on such sentiments, though, is not uniform in either socioeconomic or geographic terms.

For example, a number of researchers have found clear evidence that higher-skilled individuals are more tolerant of immigrants than lower-skilled individuals. This is due in part to the fears of many lower-skilled workers that immigrants will effectively push them out of their current jobs and take over the unskilled part of the job market (Mayda 516-25). Others argue it is the lower level of education found among people with low-skill jobs that fosters a hostile attitude toward immigrants, not job fears (Hainmueller and Hiscox 1). Either way, it is clear from the research that a certain socioeconomic class (low skill, less education) in the native population is more prone to anti-immigrant sentiments than other groups.

In the same way that these sentiments will be variably distributed across social groups, we should expect them also to be distributed across communities. Specifically, we would expect that as the level of immigrants shifts in a given locality, public opinion toward immigration will change accordingly. Migrants do not spread out evenly and randomly in a country, but rather are spatially concentrated based on a variety of factors. Interaction between native and migrant populations will obviously be higher in areas with concentrated migrant populations and the immigration issue will likely become more salient in such localities (Money 690-91).

Though the literature on the relationship between immigration demographics and anti-immigrant attitudes or voting behavior is well-developed in certain areas, there are still important gaps in our understanding of the topic. One obvious gap is that virtually all of the research to date has focused on developed countries, despite the fact that a considerable amount of international migration occurs within the developing world itself. This lack of coverage is especially obvious when it comes to research on support for anti-immigrant parties, which almost exclusively focuses on Europe.

In an attempt to fill this gap, my thesis will examine the case of Costa Rica, whose principal source of immigration, legal and otherwise, is its northern neighbor, Nicaragua. Whereas most research to date has focused on attitudes (opinion data) or behavior (voting data) at a national level, I will go into greater depth by examining the effect of immigration at a subnational level. Using a collection of unique data sets, I will explore the relationship between support for various immigration policies (and the parties that propose them) and levels of actual immigration demographics at a local level.

The existing literature may also benefit from additional research concerning how the relationship between demographic change and anti-immigrant attitudes or voting behavior is well-developed in certain areas, there are still important gaps in our understanding of the topic. One obvious gap is that virtually all of the research to date has focused on developed countries, despite the fact that a considerable amount of international migration occurs within the developing world itself. This lack of coverage is especially obvious when it comes to research on support for anti-immigrant parties, which almost exclusively focuses on Europe.

An alternative hypothesis would suggest that there might be a threshold in terms of this relationship and that after immigration reaches certain levels, support for anti-immigrant
policies or parties will actually decline. This hypothesis conceptualizes the relationship in a curvilinear rather than linear fashion, suggesting a ‘tipping point’ in terms of the link. In other words, after a certain point, the immigrant population level in a given community could reach such a magnitude that it might reverse the anti-immigrant tendency. This could be the result of a number of factors, including sheer statistics (i.e., the number of legal immigrants outnumber non-immigrants) or economic necessity (i.e., local dependence on immigrant labor).

My primary research question is twofold: First, is it possible to identify subnational variation in terms of attitudes toward immigration policy based on local levels of immigrant population? Second, is the relationship between such attitudes best described as linear or curvilinear in nature? My overarching hypothesis suggests that public support for anti-immigration parties will increase to a point in relation to local immigration levels, but will then decline as such levels reach a ‘tipping point.’ Before I turn to my specific research design, however, I first provide a brief overview of the immigration issue in Costa Rica as well as a description of the various positions taken by political parties in the debate.

Immigration Issues in Costa Rica

In order to understand the specific dynamics of Costa Rican public opinion toward Nicaraguan immigrants, and the ways in which these opinions sway law and public policy, we must first briefly examine the history of Nicaraguan migration into the nation. Nicaraguan seasonal and permanent workers have been entering the country in order to work Costa Rica’s abundant banana and coffee crops since the turn of the 20th century. Since needs for additional migrant workers were being met at the beginning of the century, Nicaraguan migrants were welcomed, and even openly solicited, by these large agricultural industries (Cortés Ramos).

Today migrant workers continue to enter the country in sizeable numbers, largely due to the vast differences in the standards of living between Costa Rica and Nicaragua. However, while economic motives for migration have remained fairly consistent over the past century, the number of migrants moving to Costa Rica for political motives accelerated dramatically beginning in the 1960s, as civil war and political unrest in Nicaragua spurred a mass exodus from that country (Mahler 11). As a result of the ongoing political turmoil and economic crisis, the Nicaraguan immigrant population in Costa Rica doubled between the census years of 1973 and 1984, and then doubled again between 1984 and 1997.

Currently, about 250,000 Nicaraguans have official permits to live and work in Costa Rica, and in 1998, 11% of people born in Costa Rica had mothers who had been born in Nicaragua (Mok 44). It is extremely difficult to estimate the exact number of Nicaraguans in Costa Rica, due largely to the fact that statistics for undocumented immigrants are sparse. However, scholars and statisticians put the number of Nicaraguan immigrants near 500,000; if these numbers are accurate, Nicaraguans make up between 1/7 and 1/8 of the entire population of Costa Rica (Mahler 11). Nicaraguan immigrant populations are concentrated along the Caribbean coast, in areas surrounding San José, and along the northern border regions of the country. Sixty percent of the immigrant population lives in urban areas, while 40% live in rural areas. This concentration in the capital city of San José, plus the transition of Nicaraguan immigrants from rural to urban workers, has caused the population to become more visible and subsequently, in the eyes of some, more threatening to Costa Rican nationals.

Increasingly, the historically tolerant Costa Rican public has come to view immigrants as the cause for increased crime, economic problems, and even infant mortality. These societal ills are obviously not solely the consequence of a growing immigrant community, yet Costa Rican nationals confronting such ills now appear more receptive to simplistic explanations which lay the blame for all that ails the country at the feet of Nicaraguan migrants. A mixture of nationalist and xenophobic rhetoric, previously rare, has now become common in Costa Rican political discourse.

The pervasiveness of this surge in nationalistic hostility toward Nicaraguan immigrants is indicated by the sometimes vitriolic response of some members of the normally progressive intellectual class. For example, José Sobrado, a professor, lawyer, and newspaper columnist, compared immigration to AIDS and called it “a cancerous tumor.” Social scientist José Luis Vega characterized immigration as an “anarchy” affecting the social system, undermining tradition, and threatening the economy (Sandoval García 436-438). Such attitudes have filtered into the general population as well. In a 1999 Costa Rican opinion poll, 17% of those polled felt that Nicaraguan immigration was the number one problem facing the country and over 60% supported the immediate deportation of undocumented immigrants (Mahler 12).

Negatively biased attitudes were at least in part the impetus behind the current Ley Migratoria (Migration Law), passed by the Costa Rican government in August 2005. The new law is a sweeping overhaul of previous migration laws, particularly in regard to tightening border security and increasing penalties for participating in or aiding illegal immigration. These penalties were extended for the first time to the actions of Costa Rican nationals who “abetted” illegal immigration. The new law also seeks to make immigration into Costa Rica less attractive by applying more restrictions and requiring that potential immigrants prove their usefulness to society and Costa Rica as a whole. The Ley Migratoria includes a brief section regarding a need to guard against human rights violations, but outlines in much more detail national and international punishments for illegal immigration (CR Ley 8487).
The passage of the *Ley Migratoria* served as a focal point for the debate over immigration between political parties in the run-up to the 2006 national elections. Politicians saw the issue as one which had the potential to mobilize voters. Parties used the law as a reference point for developing more comprehensive stances on the immigration issue during the campaign. On the basis of these positions, I identified parties as “anti-immigration” if they campaigned with some combination of the following platforms: deportation of undocumented aliens, tighter restrictions on immigration, punishment for those aiding illegal immigrants, decreased asylum for refugees, and exclusion of immigrants from social programs.

In order to identify those parties who most closely fit the “anti-immigration” label, I first undertook a detailed and individualized assessment of the platforms of all of the Costa Rican political parties that fielded candidates at the national level in the 2006 presidential and congressional elections. The platforms, including specific questions regarding the immigration issue, were submitted by the parties and published on the website of the *Tribunal Supremo Electoral*. (http://www.tse.go.cr/pp_ini.htm) On the basis of these statements, I identified the following parties as falling into the “anti-immigration” camp: the *Partido Unión Nacional* (PUN), the *Partido Patrio Primero* (PPP) and the *Partido Unión Para el Cambio* (UPC).

**Research Design**

As noted earlier, my research was designed to address two separate but related questions. The first is whether a link can be identified between immigration demographics and support for anti-immigration parties at the local level. The second question addresses the nature of such a possible relationship. Most of the literature suggests a linear relationship, with support for anti-immigrant parties rising in direct proportion to the level of change in the size of the immigrant population. I will explore the possibility of a different type of relationship, namely one that is curvilinear, and will attempt to determine whether either type is supported by the data. What follows is a summary of the hypotheses suggested in the literature and a discussion of proposed methods for testing my research questions. Before that, however, a brief discussion of data sources is appropriate.

The dependent variable in this research is level of support for parties espousing anti-immigrant platforms. As noted earlier, I used formal campaign platform statements from the various parties to classify such parties. My dependent variable measurements specifically refer to the combined percentage of the valid vote obtained by the three anti-immigration parties identified earlier during the 2006 national elections for President and Deputies. These data were obtained from the website of the *Tribunal Supremo Electoral* (Supreme Electoral Tribunal), the governmental election agency. It is important to note that the vote totals for all of the aforementioned parties are quite small in relation to other parties on the Costa Rican ballot and each of the parties did poorly, so the numbers being manipulated are relatively small and do not account for a large percentage of the total vote in any election.

My independent variables were gathered from two primary sources. The first is the InfoCensos website of the Centro Centroamericano de Población (Central American Population Center) at the University of Costa Rica, which utilizes data from the 2000 Costa Rican governmental census. The second is data from the Costa Rican government’s Encuesta de Hogares (National Household Survey) from 2000 which was previously compiled in a dataset provided by Dr. Jeff Ryan. I turn now to a discussion of my hypotheses.

According to existing research, support for anti-immigrant parties and policies can be expected to change in relation to both relative and absolute demographic change. Relative change refers to the rate of increase of the immigrant population, meaning that a community that went from 1% to 2% would experience a 100% relative growth. Absolute change refers to the numerical growth in the population, meaning that the same community would experience only a 1% growth rate. The specific hypotheses related to demographic change are provided below.

**H1:** As the size of the immigrant community increases, the size of the anti-immigrant vote will increase.

*Independent Variable: Percent immigrant population: percent of local immigrant population according to 2000 census.*

**H2:** As the growth of the immigrant community rises in relative terms, the size of the anti-immigrant vote will increase.


**H3:** As the growth of the immigrant community rises in absolute terms, the size of the anti-immigrant vote will increase.


Education is another variable which may change support for anti-immigrant parties. The literature indicates that lower-educated members of the receiving country are more likely to support anti-immigrant parties than their more highly educated countrymen. Education-based hypotheses relevant to this study are:

**H4:** As the level of literacy increases across communities, the size of the anti-immigrant vote will decrease.

*Independent Variable: percentage of local population over age 21 able to read and write.*
H5: As gains are made in literacy rates over time, the size of the anti-immigrant vote will decrease.


H6: As the number of school-age individuals enrolled in school rises, the size of the anti-immigrant vote will decrease.

Independent Variable: percentage of 5-24 year-olds who attend school.

H7: As the change in the rate of the percentage of the school-age population enrolled in school rises, the size of the anti-immigrant vote will decrease.

Independent Variable: school attendance rate change.

H8: As the percentage of the population with no education completed rises, the size of the anti-immigrant vote will increase.

Independent Variable: percentage with no education.

H9: As the percentage of the population with any level of primary education completed rises, the anti-immigrant vote will decrease.

Independent Variable: percentage of population with primary education.

H10: As the percentage of the population with any level of secondary education completed rises, the anti-immigrant vote will decrease.

Independent Variable: percentage of population with secondary education.

H11: As the percentage of the population with university education completed rises, the anti-immigrant vote will decrease.

Independent Variable: percentage of population with any level of university education completed.

Unemployment is also hypothesized to cause an increase in support for anti-immigrant parties. Consistent with the competition hypothesis, we would expect a positive linear relationship between unemployment and support, as noted in the following hypotheses.

H12: As unemployment increases in a society, the anti-immigrant vote will increase.

Independent Variable: percentage of total unemployment in a locality.

H13: As unemployment among youth increases, the anti-immigrant vote will increase.

Independent Variable: percentage of local population under 24 unemployed.

Service access is also a particularly important variable for anti-immigration viewpoints generally, and may be particularly sensitive in Costa Rica. Nicaraguan immigrants are often portrayed by some parties as the cause of an erosion of these services, so support for anti-immigrant parties should go up as access to social services decreases. Two hypotheses address this factor.

H14: As social security is more widely present in a locality, the anti-immigrant vote will decrease.

Independent Variable: percentage of population with social security.

H15: As social security is more widely available over time, the anti-immigrant vote will decrease.

Independent Variable: change in percentage of the population with social security.

The level of ethnic diversity of a population may also be related to support levels for anti-immigrant parties. The literature indicates that some groups are more receptive to immigration than others, namely groups outside the mainstream, such as minority groups. Traditionally excluded Costa Rican ethnic groups (e.g. Afro-Costa Ricans, Asians and Indigenous) might therefore be expected to have a less hostile attitude toward Nicaraguans, who are generally characterized as darker-skinned and ethnically distinct from the stereotypical light-skinned Costa Rican. Thus we would expect that higher levels of ethnic diversity should decrease anti-immigrant party support, as more diverse populations may be more accepting of immigration. My final hypothesis considers the projected impact of diversity increases on voting.

H16: As diversity increases, or the ‘non-white’ population increases, the anti-immigrant vote will decrease.

Independent Variable: percentage of Indigenous, Asian, and Afro-Costa Rican population.

These variables are those which are discussed in the most detail in the literature. Three other variables which were tested for significance were poverty rates, urbanization and internal migration, for which existing research provides no clear guidance in terms of hypothesis generation. The following article sections describe the process of data analysis and testing of the 16 hypotheses formulated for this study. Given length constraints, only key findings can be discussed briefly in this article.

Analysis

The initial phase of data analysis involved a series of regression models designed to account for the differences across local districts, or cantones, in terms of support for anti-immigrant parties. Costa Rica has 81 cantones which are roughly the equivalent of municipalities. Linear regression models were estimated using both dependent variables (vote totals for all anti-immigration party candidates at the presidential and congressional, or diputado levels) with all of the possible independent variables.
Most of the models produced relatively meager results. For reasons of space, I don’t report the results of all of the models I tested. Generally speaking, though, the analysis indicated the following. With regards to the dependent variables, models with the presidential electoral statistics are much more robust than models using congressional electoral results. In all of my estimations, the former indicated higher R-squared figures than the latter.

In terms of the independent variables, the successive model runs indicated that certain variables consistently fell into one of three categories: those that nearly never achieved significance, those that occasionally did and those that routinely achieved levels of significance. These variables, and the direction of observed relationships (positive or negative) are shown in Table 1.

What emerged from successive model runs was a clear indication that many of the independent variables, including those most prominently cited in the literature, have little explanatory power in the Costa Rican case. Certain variables did, however, demonstrate significant explanatory value. Taking these results into consideration, the “best” models were selected on the basis of both the amount of variance explained (R2) and the significance levels of the independent variables (See Tables 2 and 3).

In examining these models, a number of anomalies were apparent. For example, the trends in the Presidential model are actually reversed in the Deputies (congressional or legislative) model. The relationship between literacy and the anti-immigration vote for president is positive, for deputies it is negative. Indeed, we see a similar reversal of direction in each of the independent variables save for Secondary Education and ‘Non-White’ population. This is obviously a curious finding. A tentative explanation would posit that voters may more clearly express their preferences in regard to the immigration issue in their presidential vote, which could also account for the significantly higher R-squared value in that model.

Table 1. Variable clusters in terms of significant contributions to regression.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Rarely/ Never Show Significance*</th>
<th>Occasionally Show Significance*</th>
<th>Almost Always Show Significant*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unemployment</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>% Immigrant Population</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Poverty</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>% Change in Immigrant Population (Relative &amp; Absolute)</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Social Security</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>School Attendance</td>
<td>+/-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Education Level Completed Secondary</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>% Living in Substandard Housing</td>
<td>+/-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Log: Total Population</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Net Loss/Gain in Population 1995-2000</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Literacy Rate</td>
<td>Usually +, sometimes -</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>% Urban Population</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>% Non-White Population</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

Table 2: Dependent Variable: All Anti-Immigrant Presidential Vote 2006

<table>
<thead>
<tr>
<th>B</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-23.561</td>
<td>-4.216</td>
</tr>
<tr>
<td>Percent Change in Immigration (Relative)</td>
<td>-.074</td>
<td>-2.352</td>
</tr>
<tr>
<td>Literacy Rate</td>
<td>.374</td>
<td>4.921</td>
</tr>
<tr>
<td>% 'Non-White' Population</td>
<td>.020</td>
<td>3.053</td>
</tr>
<tr>
<td>% 5-24 Year Olds Who Attend School</td>
<td>-.109</td>
<td>-3.024</td>
</tr>
<tr>
<td>% Urban Population</td>
<td>.018</td>
<td>2.700</td>
</tr>
<tr>
<td>% Secondary Education (Any level completed)</td>
<td>-.2753</td>
<td>-1.982</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.514</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Dependent Variable: All Anti-Immigrant Deputies Vote 2006

<table>
<thead>
<tr>
<th>B</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-.77.199</td>
<td>-4.524</td>
</tr>
<tr>
<td>Percent Change in Immigration (Relative)</td>
<td>1.100</td>
<td>2.038</td>
</tr>
<tr>
<td>Literacy Rate</td>
<td>-.543</td>
<td>-1.726</td>
</tr>
<tr>
<td>% 'Non-White' Population</td>
<td>.861</td>
<td>4.880</td>
</tr>
<tr>
<td>% 5-24 Year Olds Who Attend School</td>
<td>.064</td>
<td>3.771</td>
</tr>
<tr>
<td>% Secondary Education (Any level completed)</td>
<td>-.849</td>
<td>-1.696</td>
</tr>
<tr>
<td>% Living in Substandard Housing</td>
<td>.224</td>
<td>1.864</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.270</td>
<td></td>
</tr>
</tbody>
</table>
present study finds that, as the percentage of the population living in community urban areas grows, support for anti-immigration parties increases.

One issue not yet discussed relates to the nature of a possible relationship between my immigration-related independent variables and my dependent variables. As noted earlier, one question I hoped to address was whether the relationship between immigrant population patterns and anti-immigrant party support is best described as curvilinear. In the models reported thus far, immigrant population levels/changes in population did not seem to explain much of the variance in my dependent variables. The standard regression models used in this study can only discern linear, as contrasted with curvilinear, data trends. Given the weakness of the immigration-related variables in the regression model used here, it is possible that non-linear patterns were present. Discussion of the analysis techniques used to explore curvilinear patterns is beyond the length and scope of the present paper. However, I do present a series of scatter plots which both give a graphic representation of the data and allow comparisons of the predictive power of linear versus non-linear explanations or trends, at least for a single explanatory variable at a time (see Figures 1 to 3).

For each figure, both linear and quadratic (curvilinear) lines were plotted against the data, with the R-squared value indicating how much variance is explained by each of the two lines. Only the immigration-related variables of absolute percentage, absolute change, and relative change of immigration are plotted against the dependent variable of anti-immigration vote for president. While both linear and quadratic functions on these graphs have low R-squared values, the values are consistently higher for the curvilinear line.

Conclusions

As noted at the outset, this study was designed as part of a broader body of research on the relationship between changing immigration demographics and anti-immigration party support. On the basis of these data, it appears that few of the patterns which have been identified in the literature are supported in the case of Costa Rica. In fact, in some instances, my findings not only fail to support the expectations of existing research on developed countries, but actually directly contradict such expectations. Also, some of the variables (e.g., unemployment) which have repeatedly been shown to be robust predictors in that body of research fail more or less
completely in the case of Costa Rica. Most notable in this regard were the unemployment and social security variables.

In addition to finding no support for some important variables in the literature, this analysis found significant support for a variable that is never addressed in existing research: level of urbanization. The positive relationship indicated in my results suggests the possibility that immigrant communities are more conspicuous in urban as opposed to rural areas, and that such heightened visibility may sharpen perceptions of competition over resources. A further discrepancy between my results and the literature involves findings where the effect of an independent variable is in the opposite direction of that predicted. This is clearly the case with regard to ethnic diversity, which appears to be positively rather than negatively related to anti-immigration sentiment. One possible explanation for this finding is that in Costa Rica, diversity actually fosters racial animosity which might then be easily translated into anti-immigrant attitudes.

Perhaps the most confusing outcomes are the sharp inconsistencies across different variables which ostensibly measure the same thing. As noted earlier, this was the case with regard to education-related variables. There is no immediately obvious explanation for the clearly counter-intuitive finding that increasing literacy produces more anti-immigrant support other than to suggest that may be a poor indicator or that the data is somehow flawed.

Finally, the findings with regard to the immigration demographics variables that are at the heart of this study are also far from straightforward. The only one of these variables that proved significant in the regression models was the relative growth measure, which operated in the opposite direction from expectations. Though these findings appear at odds with my argument that links immigration levels to anti-immigrant party support, it is possible that they provide indirect support for my hypothesized curvilinear relationship. As noted earlier, scatter plots indicated that for all three immigration-related measures, a quadratic curved lines provided a better predictive fit than did linear ones. Obviously, scatter plots are an imperfect tool for evaluating the strength of the underlying relationship, but the information provided by those plots is the closest that we can come in this study to alluding to the existence of a curvilinear trend.

The ambiguous and occasionally perplexing findings of this analysis indicate quite clearly the need for additional research. Nonetheless, this present study has attempted to contribute to the debate in several important areas. First, it marks one of the first efforts to analyze the dynamics of anti-immigration support in a developing country. Second, it represents one of the relatively few attempts to explore the topic at the subnational rather than national level. Finally, it suggests the possibility of an entirely different type of relationship between immigration levels and anti-immigration voting than that assumed in the existing literature.

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**Mentor Comments**

In supporting the publication of Ms. Churchill’s study of factors influencing anti-immigration parties in Costa Rica, Dr. Jeffrey J. Ryan describes her work as the epitome of what the University of Arkansas strives for in supporting undergraduate research.

*I am writing on behalf of Adrielle Churchill’s submission for publication in Inquiry. I have known Adrielle since she arrived here at the University of Arkansas four years ago and have served as her Honors Thesis Chair. Her project, which was funded in part through a SILO-SURF grant, is one of the most innovative and challenging that I’ve been involved with. The research she produced, furthermore, is relevant not only to the academic debate over immigration issues, but to the ongoing policy debate over such issues as well.

Adrielle’s work, which explores the linkages between changing levels of immigration and electoral support for anti-immigrant parties, makes at least three important contributions in this area. First, while there is a reasonably large body of literature dealing with the source of anti-immigrant attitudes in the United States and Europe, that topic remains almost totally unexplored in areas outside the developed world. Adrielle’s thesis marks the first attempt that I am aware of to examine the phenomenon of immigration from one developing country (Nicaragua) to another developing country (Cost Rica). Second, even within that established literature focusing on the developed world, there are only a handful of studies that I know with which deal with the subject at a sub-national (i.e., local or regional) level rather than at the national level. In using local cantons (municipalities) as her basic unit of analysis, Adrielle is able to produce a much more nuanced analysis of the relationships she investigates than would have been possible had she used aggregated national level data.

Finally, in the course of developing her project, Adrielle elaborated what I believe to be an extremely novel and potentially very important hypothesis. As noted, her basic research question focused on the relationship between local levels of immigration and prevailing levels of support for anti-immigrant parties within a given community. The explicit assumption in every piece of research that I have seen is that the relationship between whatever explanatory variables are being tested and those support levels is linear. In other words, existing hypotheses all share the basic premise that increases or decreases in the value of the independent variable (e.g., education, immigration levels, diversity, etc.) will produce corresponding changes in the level of support in a direct linear fashion. Adrielle, instead, suggests the possibility of a curvilinear relationship, such that anti-immigrant attitudes will rise in proportion to immigration levels only up to a certain point, but that once a sort of ‘critical mass’ of immigrant population is reached, such attitudes will actually decline. Though for several reasons, including data availability and statistical complexity, she was unable to perform a rigorous test of this hypothesis, she did find some evidence strongly indicating that curvilinear models provide a more robust explanation of the relationship than do linear ones.
The implications of this last innovation are potentially far-reaching. Confirmation of the curvilinear hypothesis could in a very real sense revolutionize our thinking in this area. Beyond that is the possibility that such new knowledge could be put to practical use in identifying those communities most likely to become receptive to xenophobic or extremist appeals, perhaps allowing for early intervention designed to mitigate social polarization in these vulnerable localities.

I believe Adrielle's thesis represents the very best of what we look for in undergraduate research: intellectual challenge, rigorous and innovative scholarship and relevance to a community which goes beyond narrow disciplinary boundaries.