Latino Poverty in the Midwest:
A County-Level Analysis

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Latino Poverty in the Midwest: A County-Level Analysis

Abstract

The amount of research examining poverty among Latinos has increased over the last decade. However, this body of literature is primarily based upon individual-level analysis, particular regions of the country, and metropolitan areas. This research examines poverty in Midwest Latino counties (defined as those containing at least 500 Latinos) in 1989 as well as changes in poverty between 1979 and 1989. The analysis is guided theoretically by an integrated model which identifies four groups of factors that are related to the percent of Latino families having incomes below the poverty level. The four groups of factors include variables reflecting the demographic structure of Latinos, Latino human capital, Latino employment conditions, and the geographic and industrial settings where Latinos reside. Data from the 1980 and 1990 Census Bureau's Summary Tape Files 3C (STF3C) are used in the analysis. Results from ordinary least squares (OLS) multiple regression provide support for the usefulness of the integrated model, especially in the cross-sectional analysis based on the 1990 census.

Latino Poverty in the Midwest: A County-Level Analysis

The Latino population represents one of the fastest growing groups in the United States. Between 1980 and 1990, the nation's Latino population increased by 53 percent, an absolute growth of 7.7 million people. The growth of the Latino population was so impressive during the last decade that the group's absolute population change accounted for more than a third of the total growth in the United States population during the 1980s. Latinos, with a population of 22.4 million, represent the second largest minority group in the country. Population projections, however, suggest that Latinos are likely to surpass African Americans to become the nation's largest ethnic group by 2010 (Day 1993).

Along with the dramatic Latino population growth, the ethnic group experienced an increase in its poverty rate during the 1980s, from 21.3 percent of Latino families being poor in 1979 to 22.3 percent in 1989. This rise in poverty was unique. Anglos and African Americans, the other two major racial/ethnic groups in the United States, saw their poverty rates remain the same or decline slightly, respectively. The large-scale increase in the Latino population and the increase in Latino poverty suggest that researchers and policymakers will need to closely monitor the socioeconomic conditions of this group.

The amount of research focusing on poverty over the last two decades has been impressive. Although poverty research on Latinos

has followed this general pattern, such research has two shortcomings. First, most of the existing research examining poverty among Latinos has been conducted at the individual-level, with the focus being on human capital and household structure. As such, little research has examined poverty at the aggregate level, such as at the community, county or state levels. Second, extant research on Latino poverty has exhibited a regional and metropolitan bias, with certain areas of the country such as the Midwest, South and Northwest, as well as nonmetropolitan areas, being overlooked.

To a certain extent, however, these shortcomings have been due not to the lack of interest on the part of poverty analysts, but to the lack of easily accessible data to conduct such research. For example, consistent definitions on the Latino population have only been in existence since the 1980 census, at which time persons were asked to report for themselves whether or not they were of Spanish origin and, for those indicating that they were of Spanish origin, the specific group with which they identified (e.g., Mexican American, Puerto Rican, Cuban, etc.). Prior to the 1980 census, the Bureau relied on various objective, but problematic, identifiers, such as Spanish surname and use of Spanish language at home, for defining Latinos. As a result, the 1980 census was the first to provide comprehensive data on Latinos, a tradition that continued in the 1990 census.

This analysis examines the prevalence of Latino family poverty in selected counties in the Midwest, one of the regions that has been neglected in poverty research. The analysis is guided theoretically by an integrated model which incorporates various explanations of Latino poverty including the demographic structure of Latinos, Latino human capital and employment conditions, and the geographic and industrial settings where Latinos reside. The first part of the substantive part of the analysis focuses on poverty in 1989, while the second part examines change in poverty between 1979 and 1989. Data used in the analysis comes from the 1980 and 1990 censuses.

Theoretical Model

Latino Demographic Structure

The poverty literature points to various demographic structural factors which are associated with poverty. For instance, the literature suggests that populations with a young age structure and those with high proportions of family households with female householders without a spouse present are especially vulnerable to poverty (Duncan and Rodgers 1991; Eggebeen and Lichter 1991; Garrett et al. 1994; Lichter and Eggebeen 1992; Saenz and Thomas 1991). Populations with high proportions of children are characterized by high levels of strain on the economically active portion of the group, as resources have to be allocated across larger households and families. From the

economic literature of fertility (Becker 1960) and the wealth-flow idea developed by Caldwell (1982), it is apparent that children in industrialized countries, such as the United States, draw more resources from their parents than vice-versa. In contrast, in developing countries, where child-labor and mandatory education policies are not widespread, children often provide a greater amount of resources to their parents than they draw from them (Becker 1960; Weeks 1994).

The relative presence of households with female householders without a spouse is also associated with higher levels of poverty (Bane and Ellwood 1989). In this regard, structural changes as well as labor-market discrimination appear to interact, making such households especially vulnerable to poverty. In particular, structural changes and economic strains have resulted in the need for more than one paycheck for families and households to survive economically. Accordingly, the absence of a husband in female-headed family households places a limitation on the resources from which the household draws. Furthermore, child-support payments are far from universal (Corbett 1993). In addition, for the poor, the limited earnings of divorced fathers cannot be stretched widely, especially if they have established other families. Moreover, to compound the economic problems of female-headed households, women face labor-market discrimination, resulting in women having lower earnings than their male counterparts and

finding themselves segregated in low-paying jobs in the service and clerical sectors (Tienda et al. 1987).

The relative size of the Latino population is also likely to be related to the group's poverty rate. This association is derived from the race and ethnic literature. In his theoretical development of minority-group relations, Hubert Blalock (1970) posited a positive relationship between the relative size of a given minority group, namely African Americans, and patterns of discrimination and inequality. Over the last couple of decades, this hypothesis has received a large amount of empirical support. For example, Tienda and her associates (Bean and Tienda 1987; Tienda and Lii 1987) have observed that Latinos living in areas with a heavy presence of co-ethnics are more likely to pay a cost--in the form of discrimination--in the labor market compared to their more ethnically isolated counterparts. Supposedly, a relatively larger ethnic group represents a threat to the majority group, resulting in the erection of barriers to block the upward mobility of minorities (Blalock 1970). Following this logic, the argument can be extended that areas where Latinos account for a larger portion of the total population are likely to have higher poverty rates compared to areas where Latinos have less proportional representation.

Latino Human Capital and Employment Conditions

The social science literature reveals an association between human capital and socioeconomic attainment. Accordingly, people with more limited human capital--e.g., education--are especially vulnerable to poverty (Falk and Lyson 1988; Lichter and Constanzo 1987; Saenz and Thomas 1991). Hence, areas where Latinos possess low levels of education are likely to have higher poverty rates compared to those places having more educated Latino populations. Similarly, the literature has consistently demonstrated a positive relationship between unemployment and poverty (Duncan and Tickamyer 1988; Tickamyer and Duncan 1990). Areas with limited employment opportunities are, thus, more likely to be plagued by high levels of poverty compared to those with wider employment opportunities.

Geographic and Industrial Settings Where Latinos Are Located

In the last decade, poverty research has devoted increasing attention to the geographic and industrial context where people are located (see Tickamyer and Duncan 1990). This newer understanding of poverty treats the geographic and industrial settings as establishing the parameters under which people can avoid or fall into poverty. While groups may possess favorable demographic and human capital factors which may be negatively associated with poverty, they may continue to be vulnerable to impoverishment if they reside in areas which are associated with poverty (Saenz and Thomas 1991). In this regard, the literature

notes that nonmetropolitan areas tend to have higher rates of poverty compared to metropolitan areas (Garrett et al. 1994; Jensen and Tienda 1989; O'Hare 1988; Saenz and Thomas 1991). Thus, because of generally more limited opportunities and relative geographic isolation, people residing in nonmetropolitan areas are more likely to fall into poverty compared to their peers living in metropolitan areas.

The literature also points to the industrial setting as a factor related to poverty. This insight is drawn from the human ecological tradition, which focuses on the industrial structure influencing the socioeconomic well-being of a given population. The human ecological perspective has been used widely to study various demographic phenomena. For example, human ecologists and demographers have used this theoretical perspective in the understanding of migration patterns. However, far less research has used this perspective in the analysis of poverty (Saenz and Thomas 1991).

Nevertheless, two of the major concepts of the human ecological perspective are applicable to the study of poverty (Frisbie and Poston 1978; Poston et al. 1984). The first of these is sustenance activities, which refers to the pursuits which a given population undertakes for its survival. Empirically, human ecologists have equated sustenance activities with industries. Research on the Latino population in Texas suggests that Latinos living in areas with a high dependence on agriculture tend to

exhibit significantly higher poverty rates than those living in areas less dependent on this industry (Saenz and Thomas, 1990).

The second human ecological concept applicable to the understanding of poverty is sustenance differentiation, which refers basically to the diversity in the industrial pursuits in a given area (Frisbie and Poston 1978; Saenz and Vinas 1990). Higher levels of sustenance differentiation indicate the presence of numerous industrial niches in a geographic setting. People are more likely to find employment in such areas characterized by diverse industrial pursuits. In addition, places with high levels of industrial diversity tend to be less vulnerable to downturns in the economy affecting certain industries (e.g., agriculture, the oil industry, etc.) most heavily. Furthermore, Poston and Johnson (1971) have suggested that sustenance differentiation is a proxy for industrialization, which tends to be associated with more favorable opportunities for women and minorities since people are more likely to be judged and compensated along achieved rather than ascribed characteristics in industrialized labor markets. Consequently, it is expected that areas with higher levels of sustenance differentiation are likely to have lower poverty rates because of the presence of expanded opportunities compared to those areas characterized by lower levels of sustenance differentiation.

Summary of Conceptual Model

The integrated conceptual model presented above draws from various sociological, economic, demographic, and human ecological traditions. The model offers a wide panorama regarding factors associated with poverty at the aggregate level. As such, the model identifies the demographic structure of the Latino population, the level of human capital and employment conditions of the Latino population, and the industrial and geographic settings where Latinos reside as factors that affect the poverty level of the Latino population.

Methods

The analysis will be conducted in two parts. The initial part of the analysis (1990 cross-sectional analysis) examines the relationship between selected independent variables drawn from the conceptual model and the percent of Latino families living in poverty in 1989. The latter part of the analysis (1980-1990 change analysis) focuses on the relationship between changes in the selected independent variables and change in the percent of Latinos living in poverty in the 1979-1989 period.

Data from the 1990 Census Summary Tape File 3C (STF3C) are used to examine the poverty rates of Latinos in the 223 Midwest counties which contained more than 500 Latinos in 1990 (i.e., Latino counties). The STF3C data file is a national dataset containing information for the nation, states, counties, and places having at least 10,000 inhabitants. The data source is ideal for multistate analyses research since information for all states is located in a single file rather than in individual state files. The present analysis focuses only on Latino counties, defined as those having at least 500 Latinos in 1990, to achieve greater stability in the poverty rates as well as on values for the independent variables in the analysis. The inclusion of counties with smaller Latino populations is likely to result in exaggerated percentages, such as the percentage of Latinos in poverty, because of a small population base.

Of the 223 Latino counties, approximately 47 percent are located in three midwestern states (Figure 1)--Michigan (37 counties), Ohio (36), and Illinois (32). The remaining nine states in the Midwest together contain the other 53 percent of the counties: Kansas (25 counties), Indiana (23), Missouri (15), Wisconsin (15), Minnesota (14), Iowa (11), Nebraska (10), North Dakota (3), and South Dakota (2). [See Figure 1 on page 30]

Measures for 1990 Cross-Sectional Analysis

The dependent variable for the first part of the analysis focusing on poverty, using data from the 1990 Census, is the percentage of Latino families having incomes below the poverty level in 1989. The poverty level is based on the size of the family, age of the householder, and the number of children. This percentage is based on all families for which poverty status was determined. For sake of simplicity, we will refer to this percentage as the poverty rate. The reader should be aware that the poverty rate is based on families rather than individuals. Poverty rates based on the latter make comparisons across geographic areas difficult since variations in rates are likely to reflect, in part, the age structure of areas.

Following the integrated model which guides the analysis, the independent variables are categorized into four types: Latino demographic structure, Latino human capital, Latino employment conditions, and geographic and industrial settings. All the

independent variables are measured in 1990. Three variables tap the demographic structure of the Latino population in the county: the log of the percentage of the county's population that is Latino, the percentage of the Latino population less than 15 years of age, and the percentage of family households having female householders without a spouse present. The percentage of Latinos 25 years of age and older who are high-school graduates reflects the level of human capital held by Latinos in the county. The percentage of Latinos 16 years of age and older in the civilian labor force who are unemployed (Latino unemployment rate) represents the employment conditions of Latinos in the county.

Three variables measure the geographic and industrial context of the county based on all workers in the county as opposed to solely on Latino workers. One of these variables is a dummy variable which represents the metropolitan/nonmetropolitan (metro/nonmetro) status of the county, with a value of "1" given to counties that belong to a Metropolitan Statistical Area (MSA) and a value of "0" to nonmetro counties. The second variable, sustenance differentiation, comes from the human ecological literature and reflects the extent to which the county's workers (regardless of race and ethnic background) are employed in a variety of industries and the extent to which they are widely distributed across the different industries. Sustenance differentiation is measured by the M6 index which gives equal

weight to both dimensions of sustenance diversity--number of industries employing workers and the extent to which workers are

widely distributed across the industries. The variable is obtained by the following formula (see Gibbs and Poston 1975):

$$M6 = Nc\left[1-\frac{\Sigma|x-\bar{x}|/2}{\Sigma x}\right]$$

where M6 represents the level of sustenance differentiation, Nc refers to the number of industries (based on a total of 17) employing workers in the county, x represents the number of workers in industry i in the county, $\bar{x}$ signifies the average number of workers across the different industries in the county, and ΣX refers to the total number of workers in the county. Higher scores on the sustenance differentiation measure reflect wider industrial diversity.

The third variable measures the industrial structure of the county through the percentage of all county workers employed in six industries: 1) agriculture, 2) manufacturing, 3) retail trade, 4) finance, insurance, and real estate, 5) personal services, and 6) educational services. The six industries were selected to represent the six industrial sectors identified by Singelmann and Browning (1980): extractive, transformative, distributive, producer, personal, and social, respectively.

The integrated model is examined using ordinary least squares (OLS) multiple regression. The 1990 cross-sectional analysis is based on six models, each containing the Latino poverty rate as the dependent variable and the Latino demographic structure, Latino human capital, Latino employment conditions, metro/nonmetro

status, sustenance differentiation, and the percentage of workers employed in one of the six industries as the independent variables. The inclusion of all six industrial variables in the same regression equation is problematic because it introduces a partialling problem, whereby the inclusion of so many variables results in overcontrolling, and a multicollinearity problem, in which the percentage of workers employed in a given industry is likely to be related to the percentage employed in other selected industries.

For comparative purposes, the 1990 cross-sectional analysis is also conducted for Whites and Blacks, the two largest racial groups in the Midwest region, living in the Latino counties. The same set of variables included in the Latino analysis are included in the White and Black analyses, although racial-specific variables are used. Unfortunately, since Latinos can be of any race, the White racial group includes Latinos who classified themselves racially as White, while the Black racial group includes Latinos who view themselves as Black. As a result, the variables based on Whites or Blacks are influenced by the patterns of Latinos to varying degrees, depending on the proportional representation of Latinos in each racial group. Because Latinos are much more likely to classify themselves as White than Black, the White analysis is more likely to be influenced by the patterns of Latinos. However, the relative presence of Latinos in the White and Black groups is controlled through the inclusion of the

percentage of all Whites who are White, not of Hispanic origin (Anglos) and the percentage of all Blacks who are Black, not of Hispanic origin in the regression equations in the White and Black analyses, respectively. Due to the small presence of Blacks (fewer than 500) in 62 of the Latino counties, the Black analysis is based on 161 rather than 223 counties.

1980-1990 Change Analysis

The second part of the analysis focuses on the relationship between the absolute change in the poverty rate between 1979 and 1989 and the absolute change in the four sets of independent variables during the 1980-1990 period. Because the analysis uses the same set of variables (from the 1980 and 1990 censuses) described in the discussion of the 1990 cross-sectional analysis, they will not be described in great detail here. The absolute change in the variables is obtained by subtracting the value on the 1990 (1989 in the case of the poverty rate) variable from the value on the 1980 (1979 poverty rate) variable. As is the case with the 1990 cross-sectional analysis, the 1980-1990 change analysis is conducted through OLS regression. Because of the scope of the analysis, this part of the study only focuses on Latinos.

It should be noted that the analysis presented below is not intended to reflect a cause-effect structure. This situation is brought about by the cross-sectional nature of the 1980 and 1990

census data. Because the independent and dependent variables are measured at roughly the same point in time, it is difficult to argue with any precision that the independent variables occurred prior to the dependent variable. The argument is made even more difficult since the poverty rate is based on income earned in the year prior to the census data (e.g., calendar years 1979 and 1989) while the independent variables are generally measured at the time of the census (April 1, 1980 and 1990). As a result, results from the analysis can be treated as independent and dependent variables that are related to one another, without regard to temporality.

Findings

We begin the analysis by providing descriptive information regarding poverty trends among Latinos in broad settings. According to the 1990 Census, 22.3 percent of Latino families in the nation had incomes below the poverty rate in 1989. Yet, the Latino poverty rate varied widely across states, from a high of 35.7 percent in Massachusetts to a low of 6.4 percent in Vermont. The states having Latino family poverty rates of 25 percent or higher were located predominantly in certain parts of the Southwest, Northwest, and Northeast (Figure 2). The five states with the highest Latino poverty rates in 1989 included Massachusetts (35.7%), Pennsylvania (33.6%), Texas (29.7%), Rhode Island (29.3%), and New York (28.5%). The Latino population in three of these states--Massachusetts, Pennsylvania, and New York--

is predominantly Puerto Rican. In Texas, the Latino population is predominantly of Mexican-origin. The lowest poverty rates among Latino families tended to be in selected states, such as New England and Southern states located along the Atlantic shore. The five states with the lowest Latino poverty rates in 1989 were Vermont (6.4%), Virginia (7.6%), Alaska (8.0%), Maryland (8.5%), and New Hampshire (9.9%). These states have relatively small Latino populations. [See Figure 2 on page 31]

While the Latino poverty rates in the Midwest states were not ranked among the highest at the national level in 1989, three states (South Dakota, 24.2%; Michigan, 23.5%; Wisconsin, 23.5%) had Latino poverty rates above the national rate of 22.3 percent (Table 1). An additional three Midwestern states joined these states with more than one in five Latino families having incomes below the poverty level in 1989: Ohio (21.8%), Minnesota (21.7%), and North Dakota (21.3%). By way of contrast, the Latino poverty rates were the lowest in Missouri (13.5%), Indiana (15.0%), and Kansas (15.3%). [See Table 1 on page 33]

At the national level, in 1989 the Latino poverty rate (22.3%) was significantly higher than that of Whites (7.0%), but not as high as that of Blacks (26.3%) (Table 1). This pattern was generally found in the Midwestern states, with ten states showing this trend. The two states deviating from this pattern--North Dakota and South Dakota--had fairly low Black poverty rates (about 10%) and very small Black populations. The highest White poverty

rates in 1989 were in North Dakota (9.6%), South Dakota (9.1%), and Missouri (8.3%), while the lowest rates were in Illinois (5.5%), Michigan (5.6%), and Wisconsin (5.6%). In the case of Blacks, more than one in three Blacks families were in poverty in 1989 in three states: Michigan (38.0%), Wisconsin (38.0%), and Minnesota (35.6%). In examining the poverty rates across the three groups, the greatest disparity in the prevalence of poverty appears to be in Michigan and Wisconsin, where White families compared quiet favorably to their counterparts in other parts of the region, while both Hispanic and Black families compared unfavorably relative to their respective counterparts in other states in the region.

The geographic distribution patterns broken down by poverty level among Latino counties in the Midwest shows high concentrations of poverty in certain parts of the region (Figure 3). Readers should note that counties appearing in solid white in Figure 3 are not "Latino counties." Counties with poverty rates of 15 percent or higher tend to be predominantly clustered in southern and central Michigan as well as in the Great Lakes portions of Illinois, Indiana, Ohio, and Wisconsin. Of the 43 Latino counties having at least one-fourth of Latino families being in poverty in 1989, over half of these are located in Michigan (8 counties), Ohio (8), and Minnesota (6). However, Minnesota counties tend to predominate among Latino counties with the highest Latino poverty rates in the Midwest. Indeed, of the

14 Latino counties which had more than one-third of Latino families in poverty, five are located in Minnesota, with the state containing the four counties with the highest poverty rates in the region: Kandiyohi County (69.5%), Clay County (51.4%), Polk County (44.4%), and Watonwan County (44.3%). The two Latino counties that had the highest Latino poverty rates in 1979 in the Midwest continued to be ranked in the top ten Latino counties with the highest poverty rates in 1989: Oceana County, Michigan (ranked first in 1980 with a poverty rate of 39.0%; ranked seventh in 1990 with a poverty rate of 40.5%) and Jackson County, Illinois (ranked second in 1980 with a poverty rate of 34.1%; ranked eighth in 1990 with a poverty rate of 39.4%). [See Figure 3 on page 32]

Figure 4 shows the average poverty rates across the Latino counties for the three racial and ethnic groups examined in this analysis. As can be seen, the 223 Latino counties had an average of 18.0 percent of Latino families having incomes below the poverty level. Consistent with the pattern observed at the national and state levels, the Latino poverty rate is significantly higher than that of Anglo families (6.7%), but noticeably lower than that of Blacks in the 161 Latino counties that had at least 500 Blacks, with an average of about one-fourth of Black families being poor. [See Figure 4 on page 34]

The three groups were also quite different on their demographic, human capital, and employment patterns (Table 2). The White population accounted for the largest segment of the

populations of Latino counties, with Latino counties averaging approximately 161,000 Whites, 34,000 Blacks, and 7,000 Latinos in 1990. Indeed, across the 223 Latino counties, on the average, Whites comprised 90 percent of the population compared to 7 percent among Blacks and 3 percent among Latinos. Latinos, however, were the youngest racial or ethnic group, with the Latino counties containing an average of slightly more than one-third of their inhabitants being less than 15 years of age, compared to 27 percent of their Black and 22 percent of their White residents.

The groups also differed significantly on the basis of the composition of the family household. In the 161 Latino counties with at least 500 Blacks, on the average about 37 percent of Black family households had female householders without a spouse present, compared to 18 percent of Latino and about 11 percent of White family households across the 223 Latino counties. Finally, while Whites had the most favorable educational and unemployment rates, Latinos represented the least educated group with Latino counties having on the average only slightly more than three-fifths (61.8%) of Latinos 25 years of age and older being high-school graduates. Blacks had the highest level of unemployment with an average of 14.2 percent across the 161 Latino counties having at least 500 Blacks. [See Table 2 on page 35]

Having described the poverty levels and demographic, human capital, and employment patterns of Latinos and the two comparison groups, we now turn our attention to the examination of the

integrated model to analyze poverty in 1989. The analysis focusing on Latino poverty shows that several predictor variables were significantly related to the percentage of Latino families classified as impoverished (Table 3). As suggested by the literature, Latino counties with a young age structure and those with a high prevalence of family households with female householders without a spouse present were significantly more likely to have higher poverty rates. This pattern is consistent regardless of the industry included in the model. The results also suggest that Latino counties where Latinos held greater amounts of human capital had lower poverty rates. This negative relationship between the percentage of Latinos with a high-school degree and the group's poverty rate reached statistical significance in five of the six models. Moreover, the employment conditions of Latinos were positively and significantly associated with the group's poverty conditions.

Finally, the level of activity in each of the six different industries at the county level was significantly related to the poverty rate of Latino families. Latino poverty tended to be the highest in counties having higher dependence on four industrial activities: agriculture, forestry, and fisheries; retail trade; personal services; and educational services. On the other hand, the Latino poverty rates were generally lower in those counties with higher percentages of all workers employed in manufacturing and in the finance, insurance, and real estate industrial sector.

The other three variables in the model (the log percent of the county's population that is Latino, metro/nonmetro status of the county, and sustenance differentiation) were for the most part not significantly related to the percentage of Latino families living in poverty. The amount of variance in the Latino poverty rate explained by the eight variables in the models ranged from 42.1 percent to 52.3 percent. [See Table 3 on page 36]

The multivariate analysis focusing on Whites shows that overall the eight variables in the integrated model perform better in explaining White poverty (range of r-square: low of 62.3% to high of 73.7%) than Latino poverty (Table 4). This is due, possibly, to the lower degree of variance in the White poverty rate (standard deviation = 2.3%) compared to the Latino poverty rate (standard deviation = 9.7%). As was the case with Latinos, poverty rates among White families were significantly related in a positive direction to the percentage of White family households headed by females without a spouse present, the unemployment rates of White workers, and level of activity in four industries (agriculture, forestry, and fisheries; retail trade; personal services; educational services). The group's poverty rate was negatively associated with the percentage of Whites 25 and older holding a high-school degree and with level of county activity in manufacturing and in the finance, insurance, and real estate industrial sector.

In patterns deviating from those observed for Latinos, the age structure of Whites was not related consistently to the poverty rate of White families. However, the results also demonstrate that nonmetropolitan areas tended to have significantly higher White poverty rates compared to their metropolitan counterparts. [See Table 4 on page 37]

The findings based upon Blacks tend to depart the most from those for Latinos and Whites (Table 5). The three variables that were most consistently related in a positive direction to the percentage of Black families living in poverty were the percentage of Blacks who were less than 15 years of age, the percentage of Black family households having female householders without a spouse present, and the Black unemployment rate. Counter to the patterns observed for the other two groups, the Black educational level was not related to the group's poverty rate on a consistent basis. In addition, activity level in only two of the six selected industries was significantly related to the Black poverty rate, with the Black poverty rate being lowest in counties with heavy dependence on manufacturing jobs and highest in those with high levels of activity in the educational services industry.

Finally, the Black poverty rate was negatively associated with the county's sustenance differentiation level, suggesting that counties with wider industrial diversity tended to have a lower degree of poverty among Black families. Together the eight variables included in the models account for close to three-fifths

of the variance in the Black poverty rate, with the range being from 56.9 percent to 59.6 percent. [See Table 5 on page 38]

Overall, the integrated model guiding the analysis appears to be useful in understanding the poverty of Latinos and that of the two comparative groups. For Latinos, the group's demographic structure, human capital and employment patterns, and the county's level of activity in different industries were significantly related to the poverty rate in 1989.

Latino Poverty: 1979-1989 Change Analysis

The 1980s brought about major changes in the economic opportunities available in the Midwest region, as jobs and people fled to other parts of the country. The next part of the analysis focuses exclusively on Latinos in order to assess the relationship between the group's changing poverty level and changes in its demographic, human capital, and employment conditions and industrial changes taking place in the areas where Latinos reside. At the national level, the percentage of Latino families having incomes below the poverty level increased slightly from 21.3 percent in 1979 to 22.3 percent in 1989 (Table 6). In contrast, poverty rates remained the same among White families (7.0% in 1979 and 1989) and declined slightly among Black families (26.5% in 1979 and 26.3% in 1989). In the Midwest, every state except Illinois experienced increases in the Latino poverty rate between 1979 and 1989. The greatest increases in Latino poverty rates

during this period occurred in South Dakota (1979, 16.0%; 1989, 24.2%), Michigan (17.0%; 23.5%), Wisconsin (17.0%; 23.5%), and Iowa (13.4%; 19.6%). The increasing prevalence of poverty in Midwestern states during the 1980s was also the case among White families (9 of the 12 states had increases in the White poverty rate) and Black families (10 of the 12 had poverty rate increases). [See Table 6 on page 40]

In a similar fashion, the majority of Latino counties experienced increases in the percentage of Latino families with incomes below the poverty level between 1979 and 1989. Indeed, nearly 65 percent of the 197 counties that had at least 500 Latinos in 1980 and 1990 had higher poverty rates among Latino families in 1989 than in the previous decade. To illustrate, while only 5 percent (10 of 201) of Latino counties had Latino poverty rates of one-fourth or higher in 1979, close to 20 percent (43 of 223) had this high a poverty rate in 1989. As was the case in the 1990 cross-sectional analysis, Latino counties having the most significant increases in their family poverty rates were disproportionately located in Michigan, as well as in the Great Lakes areas of Illinois, Indiana, Ohio, and Wisconsin (Figure 5). Note that counties appearing in solid white in Figure 5 are counties that did not have at least 500 Latinos in 1980 and 1990. Seven Latino counties experienced increases of at least 20 percent in the poverty rate among Latino families between 1979 and 1989: Lincoln County, Nebraska (11.0% in 1980; 44.1% in 1990); Huron

County, Ohio (1.1%; 28.9%); Ashtabula County, Ohio (6.0%; 29.6%); Black Hawk County, Iowa (11.1%; 33.8%); Lancaster County, Nebraska (3.2%; 25.6%); Madison County, Indiana (13.0%; 34.1%); and Polk County, Minnesota (24.2%; 44.4%). [See Figure 5 on page 39]

In contrast, six Latino counties had declines of over 10 percent in the Latino poverty rate between 1979 and 1989: Vigo County, Indiana (27.5% in 1980; 5.2% in 1990); Vermilion County, Illinois (32.2%; 12.7%); Allen County, Ohio (19.5%; 3.2%); Platte County, Missouri (17.2%; 4.6%); St. Clair County, Illinois (22.2%; 10.0%); and Leavenworth County, Kansas (14.0%; 3.5%). Among this group of Latino counties, particularly impressive was the reduction in Latino poverty in Vermillion County (Illinois), St. Clair County (Illinois), and Vigo County (Indiana), which had the third, fourth, and fifth highest poverty rates among Latino counties in the Midwest in 1979, respectively.

Overall, the 197 Latino counties having more than 500 Latinos in 1980 and 1990 saw their poverty rates among Latino families climb by an average of 3.3 percent between 1979 and 1989 (Table 7). A quick glance at the differences in the predictor variables shows interesting changes in Latino counties. For example, the percentage of Latinos 25 and older with at least a high-school degree increased by an average of almost 11 percent during the 1980s, while the Latino unemployment rate dropped by an average of about 8 percent during the period. However, the percentage of Latino family households headed by females without a spouse

present rose by an average of 3 percent across the Latino counties. [See Table 7 on page 41]

In the overall industrial setting of Latino counties, there were significant shifts in the relative presence of employment in certain industries (Table 8). Of the six industries which are used in the multivariate analysis, on the average, the following industries experienced declines in the percentage of workers who were employed in the given industry: extractive (i.e., agriculture, forestry, fisheries, and mining); manufacturing; personal, entertainment, and recreational services; and educational services. The most dramatic decline took place in manufacturing, where Latino counties saw an average of 4.5 percent fewer workers employed in this industry in 1990 compared to a decade earlier. On the other hand, two industrial sectors had an average increase in the percentage of workers employed in the given industry (retail trade, 1.1% increase; finance, insurance, and real estate, 0.6%). [See Table 8 on page 42]

The results of the multivariate analysis examining the relationship between the different groups of independent variables and the absolute percentage change in the Latino family poverty rate between 1979 and 1989 appear in Table 9. The findings show that counties experiencing growth in the younger segment of the Latino population (persons younger than 15 years of age) as well as those having gains in the proportion of Latino family households with female householders without a husband present were the ones most likely to experience increases in the poverty rate among Latino families. In addition, Latino counties experiencing the most rapid gains in sustenance differentiation (i.e., those diversifying their industrial bases the most), tended to have the largest gains in Latino poverty. While this seems counterintuitive, it may be that counties undergoing industrial diversification efforts during the 1980s have lagged behind their counterparts which have made such transitions at an earlier period.

Finally, change in only one of the six industries is significantly associated with change in the Latino poverty rate. Latino counties experiencing increases in the percentage of all workers employed in agriculture generally had increases in the poverty rate among Latino families. The amount of variance in the change in the Latino poverty rate varied from 21.5 percent to 26.4 percent across the six models. [See Table 9 on page 43]

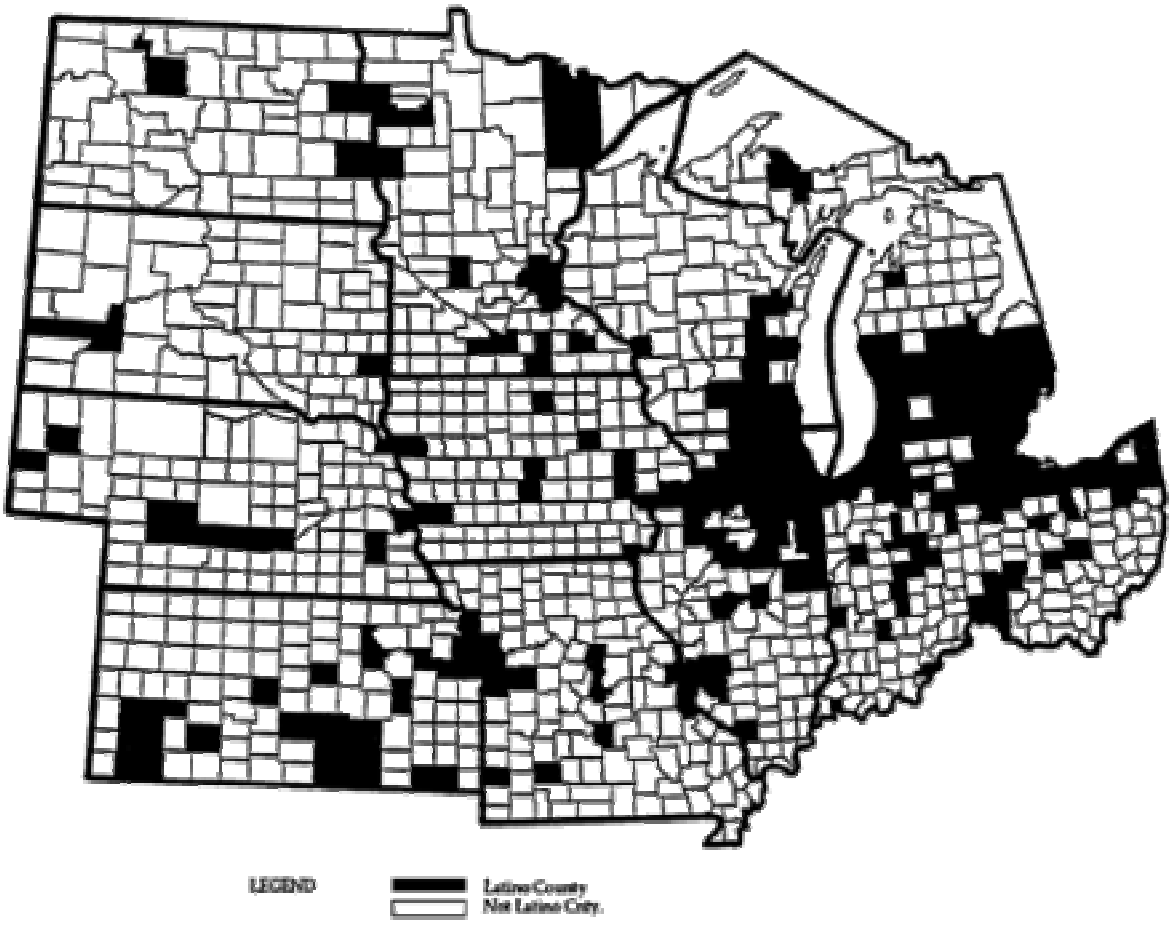
Conclusions

This investigation has sought to increase knowledge concerning Latino poverty in the Midwest. The findings reveal that Latino families in Latino counties had relatively high poverty rates in 1989, much higher than those of Whites but not as high as those of African Americans. The multivariate analysis was guided by an integrated conceptual model which highlighted various groups of factors (Latino demographic structure, Latino human capital, Latino employment patterns, and the county's geographical/industrial setting) as predictors of Latino poverty. The empirical results provide support for the usefulness of the conceptual model, as variables from each of the groups were significantly related to Latino poverty in 1989. However, the analysis focusing on poverty change between 1980 and 1990 found that changes in the Latino demographic structure and in the industrial structure of the county were the only variables significantly associated with changes in the Latino poverty rate during the 1980s.

The results of this analysis have practical applications. Indeed, this research has identified the Latino counties that have the highest poverty rates among Latino families. Policymakers and social-service agents charged with monitoring the needs of the poor need to focus attention on those Latino counties where Latinos are relatively young, have high proportions of family households headed by females without a spouse present, and have

low educational and high unemployment levels. Additionally, this research has shown that counties with high dependence on certain industries, especially agriculture, are especially likely to have high poverty rates among Latinos. The results based on the 1990 cross-sectional data also suggest that Latino poverty rates tend to be lower in counties with high levels of activity in the manufacturing sector. Unfortunately, Latino counties experienced a drop of about 4.5 percent of workers employed in this sector of the economy between 1980 and 1990. This pattern points to the need to provide training and employment for Latino workers in counties that have witnessed declines in manufacturing employment.

The availability of other census datasets will allow more sophisticated analyses than those shown here. For example, the 1990 Public-Use Microdata Samples (PUMS) contain individual-level data which can be used to carry out research on the prevalence of poverty among individual Latinos rather than Latino aggregate units. The Summary Tape File 4B (STF4B) dataset contains aggregate-level information broken down by specific Latino groups (i.e., Mexican Americans, Puerto Ricans, Cubans, etc.). The availability of individual- and aggregate-level datasets lend themselves to the analyses of multi-level models.


LEGEND
Latino County
Not Latino City.

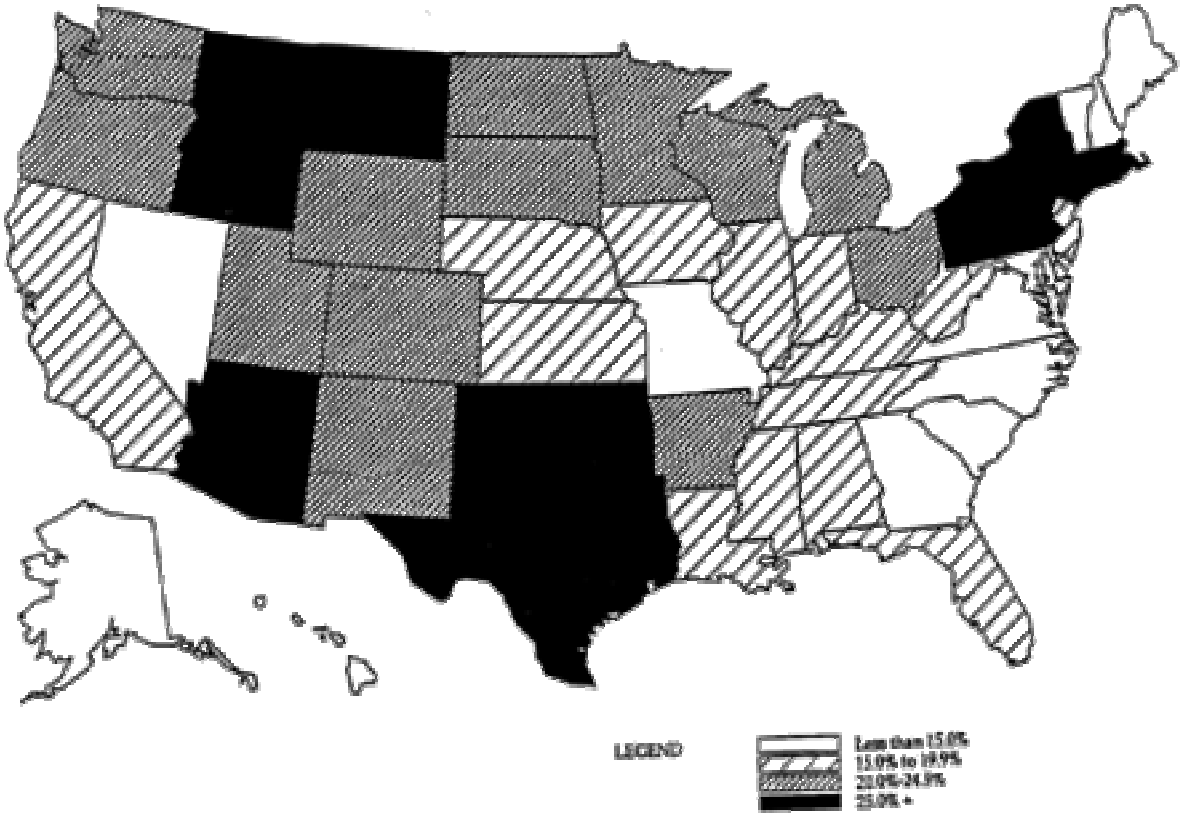
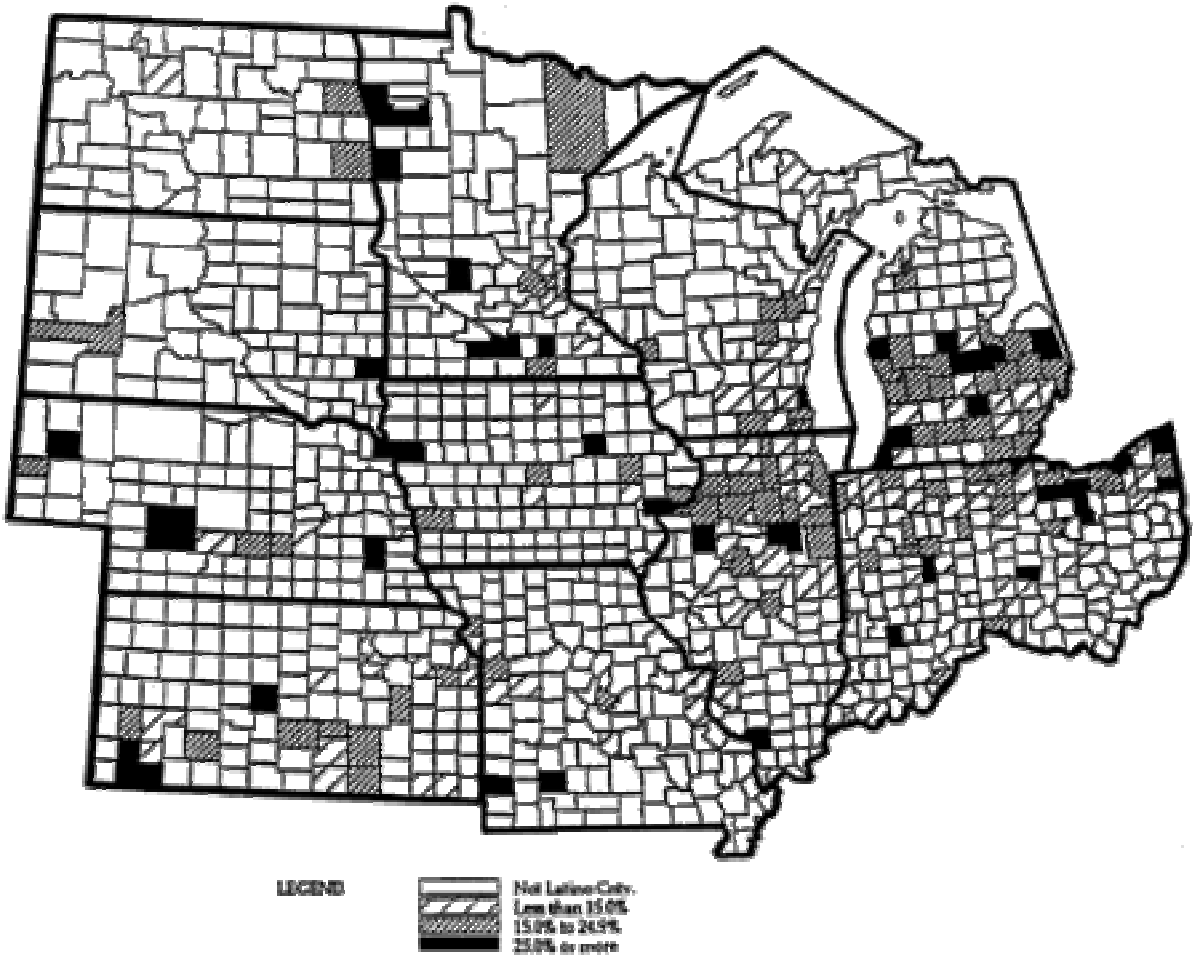

LEGEND
Less than 15.0%
15.0% to 19.9%
20.0%-24.9%
25.0% +

Table 1. Percent of Latino, White, and Black Families With Incomes Below the Poverty Level in Midwest States, 1989.[a]

Midwest States	Latino	White	Black
Illinois	17.8%	5.5%	27.6%
Indiana	15.0%	6.4%	26.1%
Iowa	19.6%	7.8%	32.7%
Kansas	15.3%	7.0%	26.2%
Michigan	23.5%	5.6%	38.0%
Minnesota	21.7%	6.0%	35.6%
Missouri	13.5%	8.3%	26.2%
Nebraska	19.8%	6.9%	28.8%
North Dakota	21.3%	9.6%	9.5%
Ohio	21.8%	7.5%	29.1%
South Dakota	24.2%	9.1%	10.3%
Wisconsin	23.5%	5.6%	38.0%
United States	22.3%	7.0%	26.3%

[a]The White and Black racial groups include Latinos who classified themselves racially as White or Black, respectively.


LEGEND
Not Latino Cntv.
Less than 15.0%
15.0% to 24.9%
25.0% or more

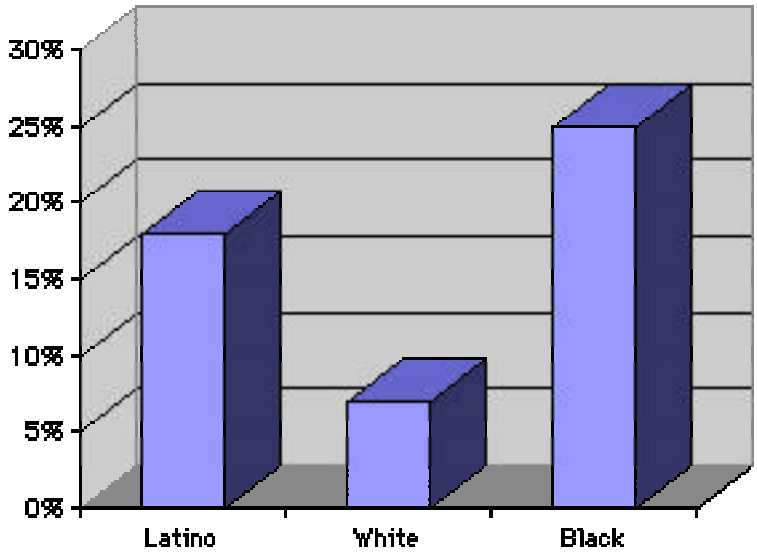

30%
25%
20%
15%
10%
5%
0%
Latino
White
Black

Table 2. Summary Statistics on Selected Characteristics for Latino, White and Black Populations in Latino Counties in the Midwest, 1990.[a]

Selected Characteristics	Latino	White	Black
Avg. Race/Latino Population Size	7,037	161,203	34,032
Avg. Pct. of County's Total Pop.	2.9%	90.4%	6.9%
Avg. Pct. of Pop. Less than 15	33.7%	21.9%	26.8%
Avg. Pct. of Fam. Householders Female	17.5%	11.4%	36.9%
Avg. Pct. of Pop. 25+ High-School Grds.	61.8%	79.7%	70.2%
Avg. Pct. of Race/Latino CLF Unemployed	10.6%	5.3%	14.2%
Total Counties	223	223	161[b]

[a]Latino counties include those counties with 500 or more Latinos in 1990. It should also be noted that the White and Black racial groups include Latinos who classified themselves racially as White or Black, respectively.

[b]Excludes 62 Latino counties which contained fewer than 500 Blacks.

Table 3. Standardized OLS Regression Estimates Representing the Relationship between Selected Variables and Percent of Latino Families in Poverty in 223 Latino Counties in the Midwest, 1990.[a]

Selected Predictors	Model 1	2	3	4	5	6
Latino Demographic Characteristics						
Log Pct. of County's Pop. Latino	-.05	-.17**	-.03	-.03	-.06	-.16*
Pct. of Latinos Less than 15	.18**	.25**	.19**	.19**	.20**	.32**
Pct. of Latino Fam. HH'lds. Female	.36**	.32**	.30**	.34**	.32**	.33**
Latino Human Capital						
Pct. of Latinos 25+ H.S. Graduates	-.11	-.39**	-.26**	-.15*	-.22**	-.38**
Latino Employment Conditions						
Pct. of Latino C.L.F. Unemployed	.28**	.23**	.24**	.26**	.26**	.25**
County Demographic and Industrial Characteristics						
Metro County	.01	-.05	-.07	-.02	-.05	-.04
Sustenance Differentiation	.01	-.17**	-.02	.07	-.03	.13**
Pct. of Workers Employed in:						
Agriculture, Forestry, Fisheries	.22**					
Manufacturing		.10**				
Retail Trade	-----	-----	.18**	-----	-----	-----
Finance, Insurance, Real Estate	-----	-----	-----	-.15*	-----	-----
Personal Services	-----	-----	-----	-----	.14*	-----
Educational Services	-----	-----	-----	-----	-----	.43**
R-Square	.402	.504	.429	.417	.421	.523

[a] The percent of families in poverty is based on income in calendar year 1989.
[*] Significant at the 0.05 level.
[**] Significant at the 0.01 level.

Table 4. Standardized OLS Regression Estimates Representing the Relationship between Selected Variables and Percent of White Families in Poverty in 223 Latino Counties in the Midwest, 1990.[a]

	Model					
Selected Predictors	1	2	3	4	5	6
White Demographic Characteristics:						
Pct. of County's Pop. NonHisp. Anglo	.04	.10*	-.03	-.00	.04	.04
Pct. of Whites Less than 15	-.03	.13**	.05	.02	.03	.30**
Pct. of White Fam. HHlers. Female	.45**	.31**	.20**	.34**	.24**	.40**
White Human Capital.						
Pct. of Whites 25+ H.S. Graduates	.00	-.37**	-.16**	.00	-.17**	-.33**
White Employment Conditions						
Pct. of White C.L.F. Unemployed	.51**	.41**	.28**	.41**	.41**	.36**
County Geographic and Industrial Characteristics.						
Metro County	-.25**	-.29**	-.37**	-.24**	-.31**	-.31**
Sustenance Differentiation	.00	.22**	.06	.08	.09	.10*
Pct. of Workers Employed in						
Agriculture, Forestry, Fisheries	.43**	-----	-----	-----	-----	-----
Manufacturing	-----	-.53**	-----	-----	-----	-----
Retail Trade	-----	-----	.26**	-----	-----	-----
Finance, Insurance, Real Estate	-----	-----	-----	-.25*	-----	-----
Personal Services	-----	-----	-----	-----	.27**	-----
Educational Services	-----	-----	-----	-----	-----	.40**
R Square	.630	.737	.643	.623	.653	.700

[a]Includes Latinos who classified themselves racially as White. Also, the percent of families in poverty is based on income in calendar year 1989.
[*]Significant at the 0.05 level
[**]Significant at the 0.01 level

Table 5. Standardized OLS Regression Estimates Representing the Relationship between Selected Variables and Percent of Black Families in Poverty in 161 Latino Counties in the Midwest, 1990.[a]

Selected Predictors	Model 1	2	3	4	5	6
Black Demographic Characteristics						
Pct. of County's Pop. NonHisp. Black	.01	-.07	-.01	-.01	-.02	-.04
Pct. of Blacks Less than 18	.19**	.19**	.18**	.19**	.18**	.21**
Pct. of Black Fam. HH'ders, Female	.53**	.51**	.52**	.52**	.52**	.48**
Black Human Capital:						
Pct. of Blacks 25+ H.S. Graduates	-.08	-.21**	-.11	-.17	-.11	-.21**
Black Employment Conditions:						
Pct. of Black CLF Unemployed	.21**	.20**	.19**	.20**	.20**	.20**
County Geographic and Industrial Characteristics						
Metro County	-.02	-.07	-.08	-.07	-.08	-.06
Sustenance Differentiation	-.13*	-.18**	-.12*	-.11	-.13*	-.04
Pct. of Workers Employed in:						
Agriculture, Forestry, Fisheries	.11	-----	-----	-----	-----	-----
Manufacturing		.18**				
Retail Trade	-----	-----	.03	-----	-----	-----
Finance, Insurance, Real Estate	-----	-----	-----	-.02	-----	-----
Personal Services	-----	-----	-----	-----	.12	-----
Educational Services	-----	-----	-----	-----	-----	.21**
R-Square	.574	.588	.569	.569	.569	.596

[a]Includes Latinos who classified themselves racially as Black. This part of the analysis excludes 52 Latino counties which had fewer than 500 Blacks. Also, the percent of families in poverty is based on income in calendar year 1989.

[*]Significant at the 0.05 level.

[**]Significant at the 0.01 level.

Table 6. Percent of Latino, White, and Black Families With Incomes Below the Poverty Level in Midwest States, 1979 and 1989.[a]

Midwest States	Latino		White		Black	
	1979	1989	1979	1989	1979	1989
Illinois	18.7%	17.8%	5.2%	5.5%	27.0%	27.3%
Indiana	13.5%	15.0%	6.3%	6.4%	21.3%	26.1%
Iowa	13.4%	19.6%	7.2%	7.8%	24.1%	32.7%
Kansas	13.3%	15.0%	6.4%	7.0%	23.1%	26.2%
Michigan	17.0%	23.5%	5.4%	5.6%	27.6%	38.3%
Minnesota	16.2%	21.7%	6.3%	6.0%	23.5%	35.3%
Missouri	12.5%	13.5%	7.7%	8.3%	23.1%	26.2%
Nebraska	14.2%	19.8%	7.3%	6.9%	20.2%	28.3%
North Dakota	17.8%	21.3%	9.1%	9.6%	10.4%	9.5%
Ohio	18.1%	21.8%	6.3%	7.5%	24.1%	29.1%
South Dakota	16.0%	24.2%	11.5%	9.1%	11.1%	10.3%
Wisconsin	17.0%	23.0%	5.4%	5.0%	27.0%	38.3%
UNITED STATES	21.3%	22.3%	7.0%	7.0%	26.5%	26.3%

[a]The White and Black racial groups include Latinos who classified themselves racially as White or Black, respectively.

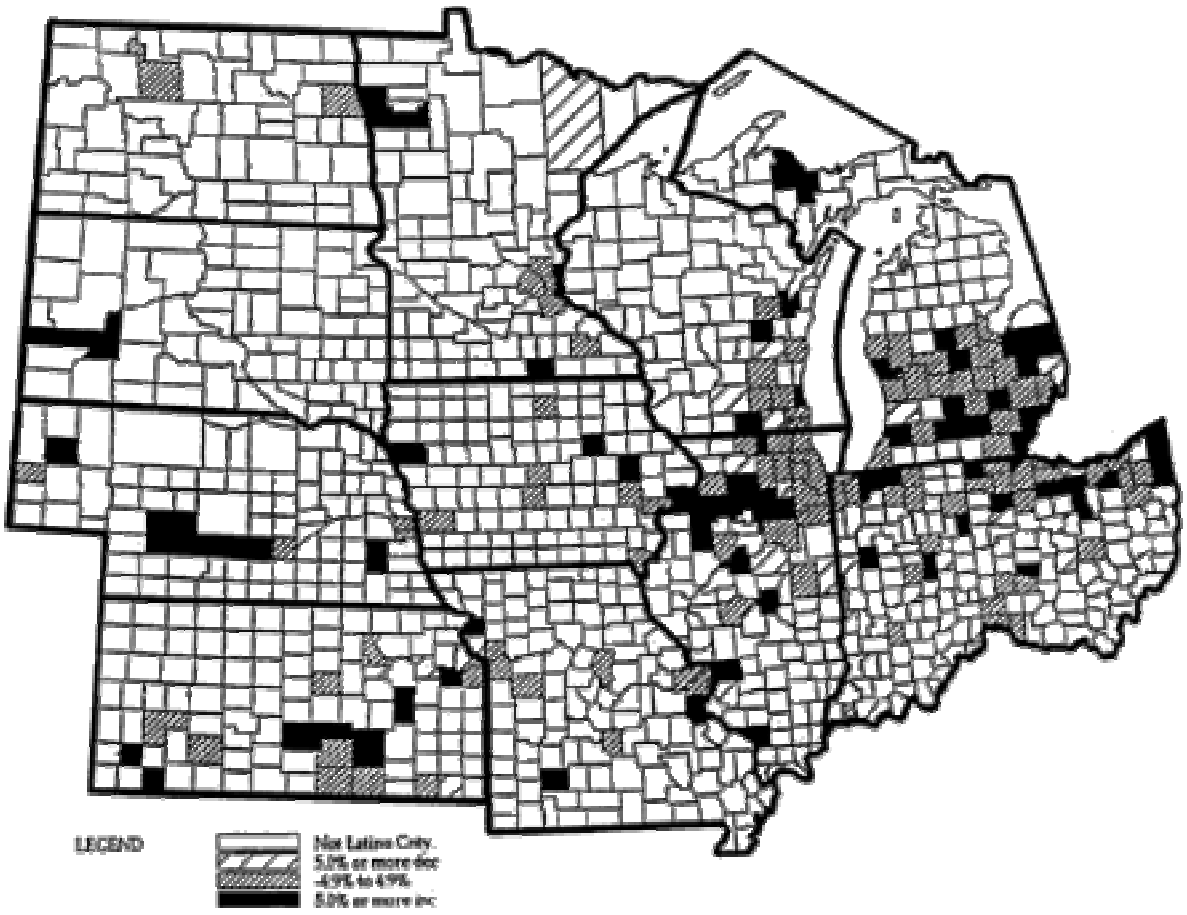

LEGEND
Not Latino Cnty
5.0% or more dec
-4.9% to 4.9%
5.0% or more inc

Table 7. Summary Statistics on Absolute Differences in Selected Characteristics for the Latino Population in 197 Latino Counties in the Midwest, 1980-1990.[a]

Selected Characteristics	Average	Standard Deviation	Range Low	Range High
Diff Pct Families in Poverty[b]	3.3	8.4	-22.3	33.1
Diff Pct of County's Pop. Latino	0.3	1.4	-0.5	10.9
Diff Pct of Pop. Less than 15	-2.0	5.3	-14.2	24.7
Diff Pct of Fam. HHlds. Female	3.0	8.2	-35.1	30.4
Diff Pct Pop. 25+ High School Grds.	10.7	9.2	-17.0	39.6
Diff Pct CLF Unemployed	-8.4	6.3	-28.7	16.2

[a] Latino counties include those counties with 500 or more Latinos in both 1900 and 1990.
[b] The percentages of families in poverty in 1980 and 1990 are based on income in calendar year 1979 and 1989, respectively

Table 8. Summary Statistics on Differences in Industrial Characteristics in 197 Latino Counties in the Midwest, 1980-1990.[a]

Industrial Characteristics	Average	Standard Deviation	Range Low	Range High
Diff. Pct. Employed in:				
Agri., Forestry, Fish., Mining	-0.6%	1.1%	-6.6%	2.9%
Construction	0.2%	1.0%	-4.1%	2.2%
Manufacturing	-4.5%	3.5%	-13.3%	10.3%
Transportation, Comm., Pub. Util.	-0.5%	1.3%	-9.1%	2.8%
Wholesale Trade	0.1%	1.0%	-1.9%	9.0%
Retail Trade	[illegible].1%	1.2%	-2.8%	3.8%
Finance, Insurance, Real Estate	0.6%	0.7%	-2.0%	2.8%
Business and Repair Services	0.7%	0.6%	-2.0%	2.0%
Pers., Entertain., Recreation Srvs.	-0.3%	0.5%	-2.0%	1.3%
Health Services	[illegible].0%	1.0%	-3.7%	3.0%
Educational Services	-0.3%	1.4%	-7.0%	4.[illegible]%
Other Professional and Related Srvs.	2.1%	0.3%	-0.7%	4.8%
Public Administration	-0.2%	0.5%	-3.0%	2.3%
Sustenance Differentiation	-1.3	0.5	-2.8	0.0

a The data presented here are based on all workers, irrespective of race or Spanish origin

Table 9. Standardized OLS Regression Estimates Representing the Relationship between Selected Variables and the Absolute Percent Difference of Latino Families in Poverty in 197 Latino Counties in the Midwest, 1980-90.[a]

Selected Predictors	Model 1	2	3	4	5	6
Latino Demographic Characteristics						
Diff. Pct. of County's Pop. Latino	.01	.07	.07	.07	.06	.07
Diff. Pct. of Pop. Less than 15	.17**	.17**	.15*	.16*	.17**	.17**
Diff. Pct. of Fam. HHers Female	.41**	.41**	.40**	.40**	.40**	.41**
Latino Human Capital						
Diff. Pct. Pop. 25+ High School Grds.	.06	.07	.04	.05	.00	.06
Latino Employment Conditions						
Diff. Pct. in LF Unemployed	.11	.12	.11	.11	.11	.12
County Geographic and Industrial Characteics.						
Metro County	.12	.03	.01	.02	.03	.00
Diff. Sustenance Differentiation	.16*	.22**	.15*	.18**	-.06	.19**
Diff. Pct. Employed in						
Agr., Forestry, Fish., Mining	.26**	-----	-----	-----	-----	-----
Manufacturing	-----	.09	-----	-----	-----	-----
Retail Trade	-----	-----	.13	-----	-----	-----
Finance, Insurance, Real Estate	-----	-----	-----	-.06	-----	-----
Pers., Entertain., Recreation Srvs.	-----	-----	-----	-----	-.11	-----
Educational Services	-----	-----	-----	-----	-----	.07
R-Square	.264	.237	.240	.233	.215	.230

[a]The analysis is based on Latino counties that contained at least 500 Latinos in both 1980 and 1990. The percentages of families in poverty in 1980 and 1990 are based on income in calendar year 1979 and 1989, respectively.
[*]Significant at the 0.05 level.
[**]Significant at the 0.01 level.

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