**New Hispanic Migrant Destinations: A Tale of Two Industries** 

Emilio A. Parrado and William Kandel

Draft: September 21, 2005

#### Introduction

In the past decade, scholarly attention has focused Hispanic population growth and immigration in small towns, cities, and regions that traditionally had not experienced post-World War II immigrant population growth (Goździak and Martin 2005; Millard et al 2005; Zúñiga and Hernández-León 2005). Three outcomes are associated with this trend. First, the high volume of immigration has catapulted Hispanics into the largest minority group in the U.S. surpassing African-Americans. Second, new metropolitan areas of destination, particularly in the American Southeast, have emerged as immigrant magnets, competing with traditional cities of Hispanic destination in California and Texas. Third, Hispanic population growth is no longer an exclusively urban phenomenon; rural areas in non-traditional immigrant-receiving States have also experienced dramatic Hispanic population growth. As a consequence, roughly half of all nonmetropolitan Hispanics live outside the traditional five southwestern states of Arizona, California, Colorado, New Mexico, and Texas for the first time in U.S. history (Kandel and Cromartie 2004).

Despite the growing literature on immigrant adaptation in new destinations, the socioeconomic forces under girding rapid Hispanic growth to new areas of destination remain ambiguous. The relative newness of these demographic trends has limited the number of quantitative analyses relating demographic and economic changes on a broader scale. Moreover, researchers have yet to systematically compare rural and urban destinations, limiting our understanding of the labor market processes affecting the geographic diversification of Hispanics. Accordingly, our chapter has three objectives. The first is to relate Hispanic

1

population growth to changing U.S. labor demand by examining industry transformations that attract Hispanic migrants to new destination areas. The second is to contrast these forces across rural and metropolitan areas. The third is to assess the changing socioeconomic characteristics of the labor force in new areas of destination and derive labor market implications.

The first section of our chapter documents the growth of new metro and rural areas of Hispanic migrant destination and reviews several explanations for Hispanic migration to new destinations. Based on Piore's dual-labor market theory we highlight the centrality of industrial restructuring for understanding changes in labor demand and Hispanic population movements (Piore 1979). The analysis explicitly distinguishes between metro and nonmetro growth by comparing two major industries, construction and meat processing, that increasingly attract Hispanics to metropolitan and rural areas, respectively. Combining Census and County Business Pattern data, we link changing characteristics of the labor force in the construction and meat processing industry and growing Hispanic representation, particularly in new urban and rural destinations. We then place these industrial trends within their broader U.S. context by modeling county-level change in the Hispanic representation as a function of industrial composition. Finally, we document the changing socio-demographic characteristics of the construction and meat processing labor force. Results illustrate the centrality of housing and food industry growth and the concomitant demand for low-skilled labor for understanding the geographic dispersion of Hispanics. At the same time, findings show that the forces differ for metro and rural areas. Overall, the analysis highlights the importance of contextualizing Hispanic population growth within broader labor market transformations affecting the United States.

### The Emergence of New Urban and Rural Hispanic Migrant Destinations

Recent changes in the geographic distribution of the Hispanic population are now fairly well documented (Singer, 2004; Suro and Singer, 2002). Since 1990, Hispanics have grown dramatically in both rural and urban non-traditional receiving regions, especially in the Southeastern United States. Between 1990 and 2000 the Hispanic proportion in metropolitan areas of the Southeast grew from 11 to 14 percent while declining from 61 to 58 percent in the Southwest (Kandel and Parrado, 2005). In the cities of Atlanta and Raleigh-Durham, for instance, the Hispanic population grew by an extraordinary 362 and 569 percent, respectively, compared to 27 and 30 percent for Los Angeles and San Antonio. While these figures are partly a function of an initially small Hispanic population, the rapid influx of Hispanics to some new metropolitan destination areas such as Atlanta and Oklahoma City has increased their representation to close to 10 percent of the total population.

Rural areas exhibit an even more pronounced trend. Between 1990 and 2000 Hispanic growth in rural areas (67 percent) was higher than in metropolitan areas (57 percent). Again, the change has been particularly acute in the Southeast. Census 2000 data indicate that during the 1990s the percent Hispanic in the nonmetropolitan Southeast increased from 11 to 19 percent while decreasing from 66 to 53 percent in the Southwest. To cite three not atypical examples, the entire populations of Franklin County, Alabama; Gordon County, Georgia; and Le Sueur County, Minnesota increased by 12.3, 25.8, and 9.4 percent, respectively, between 1990 and 2000. For Hispanics, the corresponding figures were 2,193, 1,534, and 711 percent.

Several explanations have been proposed for the diversification of Hispanic migrant destinations. While not mutually exclusive, they stress different dimensions of the migration process that apply to both rural and urban areas. A policy oriented explanation emphasizes

-

<sup>&</sup>lt;sup>1</sup> The Southeast includes: DE, MD, DC, VA, WV, NC, SC, GA, FL, KY, TN, AL, MS, AR, LA, and OK; the Southwest includes: AR, CA, CO, NM, and TX.

outcomes of U.S. immigration laws and policies. Massey and his colleagues (Durand et al 2000; Massey et al 2002) argue that an unintended consequence of the 1986 Immigration Reform and Control Act (IRCA), which legalized the status of close to 3 million previously undocumented migrants, was to facilitate geographic mobility to new regions of the country. This result coincided with increased border crossing enforcement in the 1990s that caused the Mexico-U.S. migration flows to fan out from their relatively limited domain of well-traversed crossing points on the northwestern border to numerous, more neglected southeastern portions of the border. The crackdown on border crossings during this period dramatically escalated the cost of migrating in the form of higher smuggling fees and a significantly greater likelihood of death from crossing (Massey et al, 2002; Cornelius 2001). Greater migration expenses and risks extend the stays of migrants, which increases opportunities for establishing social and economic ties, legal status, and ultimately new lives in the United States. Hence, the combination of policy outcomes that prompt Hispanics to migrate internally, combined with those that raise the expense to migrate internationally have increased the number of people who settle permanently in new U.S. destinations.

A second explanation for the newer settlement patterns, particularly in rural areas, centers on quality of life factors. Evidence from several ethnographic studies suggests that Hispanic population growth in small cities and towns outside the Southwest stems from migrants' desire for better schools, lower crime, fewer street gangs, affordable housing, and greater tranquility in general (Fennelly and Leitner, 2002; Fennelly 2005; Suro and Singer, 2002; Hernández-León and Zúñiga 2000). In addition to these pull factors, depressed labor markets in Southern California and Texas beginning in the late 1980s served as a push factor, particularly for the millions of foreign-born persons whose legal status regularized with IRCA's implementation.

A third explanation for Hispanic settlement in new destinations stresses corporate recruitment. Empirical evidence supporting this argument focuses on rural-based agricultural and manufacturing industries, where exceptionally high turnover rates and limitations on using the H2 visa programs require companies to continually hire new workers. Firms accomplish this through active recruitment campaigns in traditional urban immigrant destinations, such as Miami, Houston, and Los Angeles, as well as in migrant source countries (Johnson-Webb 2002; Katz 1996a; Katz 1996b; Krissman 2000; Taylor and Stein 1999). Other industries in which researchers have reported active recruitment programs include carpet manufacturing (Hernández-León and Zúñiga 2000), forestry (McDaniel and Casanova, 2003) and petroleum refining (Donato et al 2005).

# **Industrial Change, Labor Demand, and Dual Labor Market Theory**

Lacking in these explanations is an explicit assessment of the labor demand processes fueling Hispanic migration. According to dual labor market theory the migration phenomenon, including the geographic destination of migrant flows, is best understood in connection with industry and labor demand changes in receiving areas. In developed societies, labor markets typically bifurcate into a capital intensive primary sector offering long-term, secure jobs with higher wages and economic mobility potential, and a labor intensive secondary sector that provides little long-term opportunity, employment security, or economic mobility.

The employment instability, seasonality, occupational immobility, and overall poor job quality of the secondary sector implies that firms needing to expand their labor forces face considerable obstacles to satisfy labor demand with domestic labor supply. Given the social context of employment, native workers often shun low-status jobs without monetary

compensation that far exceeds feasible levels given the limited skill requirements for these jobs and extensive local and international competition faced by companies. Jobs are also embedded within occupational hierarchies that require earnings differentials for different occupational grades. Firms that raise wages for lower skilled employees must often do the same for all other employees to maintain an established hierarchy, a practice most firms would resist.

Immigrants solve the quandary of flexible low-wage employment recruitment because their transnational status permits them to profit economically through the arbitrage of destination country wages to home country standards of living, and their social frame of reference in home countries ameliorates their unstable condition and low social status in destination countries. They are willing to take what are perceived by natives as "dead end" jobs because they typically view their stay as temporary. The common feature characterizing immigrant workers is a "target earner" orientation and a willingness to accept low reservation wages and almost any available vacancies in the labor market.

This perspective implies that in order to understand the diversification of Hispanic migrant urban and rural destinations closer attention must be directed to processes of employment growth, relocation, and overall transformation of industries in the secondary sector since it is the generation of jobs especially tailored to migrant populations that drives migration flows. The construction and meat processing industries have been particularly instrumental in attracting Hispanic migrants and altering areas of settlement. While they are not the only industries employing Hispanics in new areas of destination, they have been a primary source of employment, and their differential development under girds the emergence of new rural as well as urban Hispanic concentrations. Documenting the expansion and relocation of construction and

meat processing jobs outside traditional immigrant receiving areas is thus a prerequisite to understanding the labor demand processes fueling the diversification of Hispanic destinations.

## "Metropolitan Magnets" and Construction Industry Expansion

In addition to trends in Hispanic population growth, the 2000 Census revealed important population shifts for the native born population which has been consistently migrating away from prior concentrations in the Northeast in favor of Southeastern and Southwestern destinations. Frey has described this process as the emergence of a "New Sunbelt" (Frey 2002). Georgia, North Carolina, and Arizona, for example, have seen significant gains in native population, while New York and Illinois have experienced native population declines. Moreover, the native born has not dispersed, but rather concentrated towards rapidly growing metropolitan areas. As a result, urban destinations like Raleigh-Durham, Atlanta, and Charlotte, which Frey labels "metropolitan magnets," have experienced the highest percentage gains in population due to in-migration of the native born.

These states have become attractive for their growing economies, relatively low cost of living, especially housing, and climatic and environmental amenities. Consequently, they have been receiving a highly selective labor force. According to data from the 2003 Current Population Survey, over 65 percent of in-migrants over the age of 25 to the South have at least some college education. Moreover, 56 percent are employed in management, professional, or service occupations. The combination of a rapidly growing and highly skilled population, especially in new metropolitan magnets throughout the South has triggered a significant increase in the demand for housing that has had clear implications for construction industry growth.

During the last 30 years, the construction industry – which includes infrastructure construction, homebuilding, home remodeling, and manufactured housing – has experienced substantial employment growth. In 2000 it employed 6.7 million people and generated output valued at about \$800 billion, or 7.6 percent of the nation's gross domestic product (Conway et al 2004), making it one of the largest and most dynamic industries in the country. The greatest share of this output is for private residential construction (55 percent) followed by public (25.6 percent) and private nonresidential construction (19.4 percent). The construction industry is also characterized by a relatively low level of concentration, with 80 percent of workers employed in firms with fewer than 10 employees, a size that corresponds to most of the roughly 800,000 construction companies in the United States.

The industry's geographic dispersion is directly connected to population growth and concentration. As a result, the shift in U.S. migration patterns has directly impacted the evolution of the industry and triggered changes to its labor force. Between 1990 and 2004 the industry sold approximately 12 million new residential units, 5.5 million of which were sold in the South (45 percent) and another 3.3 million of which were sold in the West (28 percent). In almost all regions, new residential development is occurring at the metropolitan fringe. These trends, coupled with broader processes of economic development and historically low interest rates, have increased labor demand within the construction industry, especially in new metropolitan magnets for domestic migrants. However, increased labor demand has not been easy to satisfy and industry-oriented reports contend that the industry suffers a consistent labor shortage (Goodrum 2004).

At the same time, employment opportunities in the industry have become less attractive to an increasingly well-educated domestic labor force. To counter reduced profitability, construction companies have relied increasingly on non-union labor (Stepick et al 1994).

Moreover, because construction workers frequently work outdoors, with potentially dangerous tools and materials, on temporary scaffolding, and at dangerous heights, they face greater occupational safety risks than many other occupations. According to BLS data from 2002, construction workers experienced rates of work-related injuries and illnesses that were roughly one third higher than the mean rate for all private sector industries.

Together, the geographical relocation of a mainly professional and educated domestic labor force and the concomitant expansion of the industry rapidly increased demand for low-skilled workers that in a context of short labor supply triggered the increased incorporation of Hispanics into the industry and fueled the growth of the Hispanic population in non-traditional receiving areas. It is no surprise that the Associated General Contractors of America included "responding to the workforce needs of the industry with effective immigration reform" as one of their legislative priorities for the 109<sup>th</sup> Congress (AGC, 2005).

# **Meat Processing Industry Restructuring and Rural Areas**

The diversification of rural destination areas for Hispanics, in contrast, has been affected mainly, although not exclusively, by changes in labor demand within the meat processing industry (Kandel and Parrado 2004; 2005). This growing and diverse industry includes beef, pork, and poultry products. In recent decades the industry has experienced important transformations that altered its labor demands and geographic location. Although the timing and specific attributes of this process vary among producers, the restructuring tends to conform to a

consistent sequence: 1) changes in consumption patterns; 2) increased demand for value-added production; 3) industry consolidation and vertical integration, leading to larger firms; 4) increasing location of production facilities to rural areas, mainly in the Midwest and Southeast; and 5) declining relative attractiveness of meat-processing jobs (MacDonald et al 2000; Ollinger et al 2000). Together these transformations lie at the root of Hispanic migration to new rural areas of migrant destination (Kandel and Parrado, 2005).

Up through the 1950s, American per capita consumption of beef and pork was several times that of poultry. Beginning in the late 1950s, however, poultry producers began adopting new technologies that allowed them to process more birds at faster line speeds, precipitating a steady decline in poultry prices relative to beef that helped permanently alter Americans' eating habits over the course of two decades. While red meat and pork consumption remained stable, poultry consumption has increased consistently over the past four decades. The meat processing industry responded to changes in greater total consumption by adding "further processing" operations to their increasingly larger plants and vertically integrating their production processes. This, in tandem with changing consumer tastes toward more pre-cut and pre-processed meat products, greatly increased the demand for meat processing labor.

These changes occurred over different time periods and at different rates for the poultry, hog, and cattle processing industries, but the effect was similar: substantial control of production, from start to finish, of large quantities of uniformly sized animals that could be processed quickly in increasingly mechanized plants. Such transformations produced an industry dominated by few firms with large plants that now account for most of the meat produced in the United States and employ a growing number of low-skilled employees.

Geographic relocation played a key role in this transformation (Broadway 1995). To reduce transportation costs, ensure constant supplies of animals, and maintain high year-round plant utilization, beef and hog processing plants gradually relocated to nontraditional rural regions outside the Midwest, exploiting advantages of lower land and labor costs in rural areas of the West, Southwest, and Southeast. At the same time, relocation to rural areas weakened labor unions representing meatpackers, decreasing the attractiveness of these jobs to domestic workers.

Together these processes contributed to a consistent pattern of low-skilled job growth in rural areas. Not surprisingly, growing consumer demand combined with frequent plant location to rural areas produced labor shortages in the meat processing industry similar to those faced by the construction industry in metropolitan magnets. Rural-based meat processing firms found themselves short-handed in the face of an increasingly educated domestic workforce that had greater employment alternatives resulting from extended macroeconomic growth. While meat processing wages remain high compared with those of low skilled employment in other industrial sectors, they entail relatively difficult working conditions, and many processing plants experience employee turnover rates range from 60 to 140 percent a year or higher (Grey 1999; Macguire 1993). Thus, given increasing demand for value-added food products from an evergrowing population, larger plants located increasingly in sparsely population nonmetropolitan counties, stagnant or declining wages, and unattractive working conditions, meat processing plants incurred difficulty filling the growing demand for local workers. As a result, the industry began attracting Hispanic migrants to new rural destinations.

### **Changing Racial and Ethnic Labor Force Composition**

In order to document more directly the connection between changes in the construction and meat processing industries and the diversification of Hispanic migrant destinations we now turn to an analysis of the labor force composition of the two industries and how it varies across metropolitan and rural areas of the U.S.

[Table 1 about here: Racial and Ethnic Composition of the Construction Industry]

We start by illustrating these trends for the construction industry, using data from the 5 percent Public Use Micro Sample (PUMS) of the 1980, 1990, and 2000 Census. Table 1 presents changes in the racial and ethnic composition of the labor force for all metropolitan areas, as well as for those that have experienced the greatest domestic migration losses and those that have been magnets for domestic migrants.<sup>2</sup> The top panel of the table reports estimates for all industries, as well as for just the construction industry in all metropolitan areas in the U.S. Results illustrate the increasing Hispanic representation in the U.S. labor force over time. Between 1980 and 1990 the percent Hispanic in all industries increased from 7 to 14 percent. While the percentage of non-Hispanic blacks remained similar, the percent white declined from 79 to 68 percent. This change has been particularly pronounced in the construction industry. Estimates show that between 1980 and 2000 the percent Hispanic in the industry increased from 7 to 18 percent.

Results in Table 1 also illustrate the growing employment capacity of the construction industry. Between 1980-1990 and 1990-2000, the U.S. labor force expanded by 9 and 21 percent, respectively, compared with the construction industry labor force which increased by 24 and 34 percent, respectively. Combined with the growing Hispanic representation in the industry, this

\_

<sup>&</sup>lt;sup>2</sup> Metropolitan areas with greatest domestic migration losses are defined as those with more than a negative 3 percent net migration rate between 1995 and 2000. Magnets for domestic migrants include those metropolitan areas with more than 3 percent net migration rate during the same period. Estimates for net migration rates were obtained from Frey (2003).

change resulted in a 70 percent increase in the number of Hispanic workers in the construction industry between 1990 and 2000, compared to a 49 percent increase within all U.S. industries.

These trends however, vary considerably between Metropolitan Statistical Areas (MSAs) that have experienced domestic population losses and those that have become magnets for domestic migrants. The bottom two panels of Table 1 report these results. Especially for the period 1990-2000, MSAs with migration losses experienced relatively stagnant growth of their labor force (13 percent), which is below the average for all metropolitan areas (21 percent). The same applies to the labor force in the construction industry in these places which grew only 12 percent compared to 34 percent in all MSAs. These trends directly affected the ethnic composition of the construction labor force. The percent Hispanic in the industry has grown consistently since 1980 and even reached 30 percent in 1990. However, in absolute terms, this represents a 31 percent increase in the number of Hispanics in the industry, well below the average absolute growth rate of 70 percent for all MSAs.

A very different trend highlights the attractiveness of metropolitan magnets for domestic migrants, where labor force growth averaged 40 percent between 1990 and 2000. The growth has been particularly pronounced for the construction industry, which experienced an average growth of 66 percent in its labor force during the same period. Moreover, the Hispanic representation in the labor force increased considerably, from 8 to 15 percent for all industries, and from 10 to 25 percent for the construction industry. Overall, employment growth and increased representation combined for a 146 percent increase in the number of Hispanic construction workers between 1990 and 2000. Together, the trends in the metropolitan labor force and the growth of the construction industry in areas that have been magnets from domestic migrants illustrate the

importance of the growing labor demands of the construction industry in altering Hispanic destinations throughout the U.S.

[Table 2 about here: Racial and Ethnic Composition of the Meat Processing Industry] A similar story emerges for the meat processing industry. However, the geographic distinction in this case is between metropolitan and nonmetropolitan areas. Table 2 reports changes in the racial and ethnic composition for the entire U.S. labor force and separately for metro and nonmetro areas. The top panel shows that while the Hispanic proportion of the total U.S. labor force almost doubled from 5.7 to 11.1 percent between 1980 and 2000, it more than tripled from 8.6 to 28.6 percent in the meat processing industry. Corresponding Hispanic workforce growth rates also outpaced that of all workers during the 1980s and 1990s for all industries and especially for the meat processing industry. Similar trends appear for both metropolitan and nonmetropolitan areas as shown in the middle and bottom portions of the table. The meat processing industry's labor force transformation, characterized by the growth in the immigrant labor force and the movement of plant operations from urban to rural locations, began in the late 1970s and early 1980s (Griffith 1995). Table 2 indicates that during the 1980s, the meat processing workforce shrunk by 31.3 percent in metropolitan areas as it grew by 41.3 percent in nonmetropolitan areas. Yet, during this same period, the number of Hispanic workers increased by 19.3 and 98.2 percent in metropolitan and nonmetropolitan areas, respectively.

### A Multivariate Analysis of Hispanic Population Growth

We now compare the relative weight of employment growth in construction and meat processing with that of other industries and broader socioeconomic processes. Using Decennial Census and County Business Patterns data, we model Hispanic population change for metro and nonmetro

counties from 1980 to 1990 and from 1990 to 2000. We model the dependent variable – change in the proportion of the total population that is Hispanic – as a function of labor force distribution, macroeconomic indicators, population indicators, and geographic region. We analyze separately metro and nonmetro counties to compare differential forces attracting Hispanics to metropolitan and rural areas.<sup>3</sup>

The critical independent predictor for our analysis is change in the industrial composition of the labor force between Census years. Using the industrial sector categories from the Census SF3 data, we include the employment share of ten sectors, including construction. We break out manufacturing into durable and nondurable goods, and further divide non-durable goods manufacturing by extracting our second sub-sector of interest, meat processing. We do so by computing the ratio of meat processing to non-durable goods manufacturing employment using CBP data for 1981 (a proxy for 1980), 1990, and 2000 and applying this ratio to decennial Census data for those years. These industrial sector variables resemble the dependent variable and represent the change over each decade in the proportion of total employment occupied by each sector. Sectoral employment shares in any given year and their change over the decade necessarily sum to one and zero, respectively.

We control for county-level economic conditions at the beginning of each decade by including the mean household wage income, proportion of the county population with poverty-level incomes, and male unemployment rate. Although these factors change over the course of

.

<sup>&</sup>lt;sup>3</sup> "Nonmetropolitan" areas follow the Office of Management and Budget (OMB) definition based upon population and commuting patterns. A metropolitan area consists of one or more core counties with an urbanized area of 50,000 or more inhabitants, together with surrounding counties with metropolitan characteristics such as commuting patterns and population density and growth. Nonmetropolitan areas consist of all other counties and contain only open country, small towns, or small cities. Hence, counties can be grouped according to whether they are metropolitan or nonmetropolitan. The term "nonmetropolitan" is distinct from "rural," which despite its frequent general usage also refers to a Census Bureau definition for places with fewer than 2,500 inhabitants. In this paper, however, we use the term "rural" in its general context. Because population change over a decade may prompt

the decade, we expect they sufficiently capture variation in employment and economic conditions related to population change. To control for non-employment related factors attracting in-migrants to rural areas, such as climate, topography, and scenic beauty, we include in each model an Amenity Scale Value<sup>4</sup> to capture physiographic variation associated with retirement, second home, telecommuting, and tourist destinations that have spurred economic development in many nonmetro counties (McGranahan 1999).

Covariates related to county population conditions include measures of total population, growth rate and percent Hispanic at the beginning of the decade, which we expect captures population momentum from social networks that foster new destination settlement. For the analysis of nonmetro counties we control for proximity to urban employment with an indicator of whether the county is adjacent to metropolitan counties. Finally, we include region to control for the overall geographic distribution of Hispanics.

[Table 3 about here: OLS Regression Estimates – Metro and nonmetro Counties]

Results from the models for metro and nonmetro counties are reported in Table 3. Bolded coefficients indicate significant differences in parameter estimates across the two decades. Among industrial sectors, we use services as the reference category, hence positive and significant coefficients for a given sector indicate its greater association with Hispanic population growth relative to the services sector. Concentrating on the role of industrial

counties to be reclassified from nonmetropolitan to metropolitan, or vice-versa, we use the initial period's 1980 classification throughout the analysis.

<sup>&</sup>lt;sup>4</sup> The Amenity Scale is a composite measure of six indicators of climate, typography, and water area characteristics reflecting environmental qualities most people prefer. These characteristics (and their measures in parentheses) include warm winters (average January temperature), winter sun (average January days of sun), temperate summers (winter-summer temperature gap), summer humidity (average July humidity), topographic variation (topography scale), and water area (water area as proportion of total county area). Because the six characteristics are measured differently, they are normalized through the computation of Z-scores which are then summed and recoded to yield values ranging from 1 to 7. The ASV has not been recalibrated for periods earlier than 1999, but the environmental features it measures are unlikely to change significantly over the two decade span of our analysis. For more information on this scale, see McGranahan (1999: 2-6).

characteristics, five industries are central to understanding Hispanic population growth: agriculture, construction, durable goods manufacturing, non-durable goods manufacturing, and meat processing. However, their effects vary across metro and nonmetro counties and across the time periods considered.

Results for metropolitan counties clearly show that even after controlling for other economic and population characteristics Hispanic population growth is directly affected by growth of the construction industry. Moreover the effect becomes significantly stronger across time periods. Thus, results corroborate that the more rapid growth of construction employment in the South relative to other regions under girds Hispanic growth in new metropolitan destinations. At the same time the role of construction diminished and became insignificant for rural areas over this same period.

Another striking result for metro counties is the reversal of the effect of meat processing employment on Hispanic population growth across periods. This reversal contradicts the pattern evident for rural counties, where meat processing employment is associated with a significant contribution to Hispanic population growth. This change is consistent with the description presented earlier regarding the industrial and geographic transformation of the industry. As the meat processing industry relocated to rural areas in the American Southeast and Midwest it also attracted Hispanic population and contributed to the growing diversification of rural Hispanic destination areas.

Other industry effects are also worth noting. In general, coefficients appear to be more stable across periods in metro than in nonmetro counties. There is a statistically significant increase in the size of the coefficient for agriculture, durable, and non-durable goods manufacturing in rural counties over time. This suggests that to the extent that rural counties

become more involved in these activities they can expect growing Hispanic populations. In other words, economic processes fueling the growth of manufacturing employment in rural areas are likely to change their ethnic composition.

Results for the control variables confirm the validity of the model specification. Immigrants and migrant workers are relatively mobile populations that are attracted to places with employment opportunities, and our results show a consistent negative relationship between Hispanic population growth and unemployment rates and poverty. The influence of the presence of natural amenities has a slight influence, positive for metropolitan counties that need service workers, and negative for nonmetropolitan counties where Hispanics are more likely to work in agriculture, manufacturing, and similar industries situated in areas of the Midwest and South that rank low on the natural amenities. At the same time, larger initial Hispanic populations facilitate growth in metro and nonmetro Hispanic representation over time, a reminder of the importance of social networks for facilitating new Hispanic settlement. Total population growth also drove Hispanic population growth, and may be capturing total employment growth independent of changes in industry sector share. Finally, while negative coefficients for the four regional indicators in the model demonstrate the relative dominance of the Southwest, where roughly half of all nonmetro Hispanics reside, those for the Northeast and Southeast changed over time. Between the 1980s and 1990s metropolitan and nonmetropolitan Northeastern counties were less likely to increase their Hispanic representation. The nonmetropolitan Southeast, in contrast, experienced elevated nonmetro Hispanic population growth during the 1990s.

### Socioeconomic characteristics of the Hispanic population

The analyses above illustrate the importance of labor demand from the construction and meat processing industries for Hispanic population diversification. Yet, a core tenet of dual labor market theory is that the socioeconomic characteristics of the Hispanic population should reflect their position in the secondary sector of the U.S. economy. Specifically, we would expect an increasing representation of foreign-born and low skilled Hispanic workers in the construction and meat processing industry, especially in new destinations.

[Tables 4 about here: SES characteristics of the construction labor force]

Table 4 shows trends in national origin and educational characteristics for construction workers by race and ethnicity. For the urban-based construction industry we again separate metropolitan areas that have experienced the most domestic migration losses from those that have functioned as magnets for domestic migrants. For the rural-based meat processing industry, we distinguish between metro and non-metro areas.

The data in Table 4 illustrate an unmistakable pattern. Between 1980 and 2000 both industries experienced increased proportions of foreign-born workers, from roughly 8 to over 20 percent. Moreover, during the same period these industries did not enjoy the substantial decline in the least educated proportions of their workforces that one would expect based on the continued rise in average educational attainment in the United States. In 2000 well over 20 percent of both industries' labor force had less than high school education. These trends highlight the relative unattractiveness of jobs in industrial sectors that are increasingly being fulfilled by non-native and relatively poorly educated individuals.

The change is particularly pronounced for Hispanics. While results hold for both traditional and new areas of destination, the proportion of Hispanics who were foreign-born in the construction industry in areas that have been magnets for domestic migrants more than

doubled from 31 to 78 percent between 1980 and 2000. Moreover, in these areas the percent Hispanic with less than high school education remained unchanged, increasing slightly from 53 to 55 percent. These findings bolster additional intra-industry occupation tabulations (not shown) indicating that while 28 percent of non-Hispanic Whites are employed in professional or managerial occupations in the construction industry, only 10 percent of Hispanics hold similar positions. In turn, only 9 percent of Whites are laborers, compared to 28 percent of Hispanics.

[Table 5 about here: SES characteristics of the meat processing labor force]

Similar results hold for the Hispanic labor force in the meat processing industry. In rural areas the foreign-born proportion of Hispanics in the industry increased from 37 to 83 percent between 1980 and 2000. As a result, the percent of Hispanics with less than high school remained unchanged at 65 percent throughout the period. As with the construction industry, this trend is further reflected in the occupational composition of the labor force by race and ethnicity. According to Census 2000 data (not shown) 12 percent of Whites work in professional and managerial positions in the meat processing industry compared with just 2 percent for Hispanics. Moreover, while 44 percent of Hispanics are employed as meat cutters or other operatives, only 15 percent of Whites hold the same occupation.

One result from this shift in labor force composition is a substantial decline in relative real wages for Hispanics in both industries. Hispanic construction workers in metropolitan areas characterized either by population losses or in-migration saw their wage incomes decline consistently across the two decades examined, in sharp contrast with those of all other racial and ethnic groups, whose incomes increased. In the meat processing industry, Hispanic workers saw their wage incomes decline more severely during the 1980s and rebound less forcefully during the 1990s than workers of other ethno-racial backgrounds.

When combined with the growth of Hispanics in both industries and the growing representation in new areas of destination discussed above, these results highlight how the foreign-born and low-skilled status of Hispanic workers increased with their representation. This is consistent with dual-labor market theories which predict that the relatively undesirable new jobs created in the construction and meat processing industry would be filled with immigrant and low-skilled workers who do not compete directly with the slower growing, native, and more skilled labor population. This is particularly the case for non-Hispanic Whites, the only group to experience a considerable decline in representation in both industries.

#### **Discussion**

In the past two decades, Hispanic population growth in nontraditional metropolitan and nonmetropolitan destinations has been promulgated by several factors. These include changes in border enforcement and immigration policy, migrants' search for more favorable employment and living conditions, and formal and informal recruitment by firms seeking to replenish a continuously depleted supply of low-skilled workers. The dispersion of the Hispanic population to new towns, cities, and regions throughout the nation has profound implications for political outcomes, social service delivery, economic development, and social, cultural, and public policy response.

In this analysis we elaborated on a labor demand explanation of increasing Hispanic representation in new destination areas that linked metropolitan growth to the rising demand for construction services and rural growth to industrial restructuring in the meat processing industry. In both cases, the growth of the Hispanic population in new destinations between 1980 and 2000 stems from a demand for labor in two major industries that hire large numbers of low-skilled

workers for physically demanding and relatively hazardous work to produce two fundamental necessities, food and shelter. For the construction industry, a growing U.S. population, historically low interest rates, and economic growth in the Southeast and Southwest all convened to exacerbate a huge demand for new housing and home renovations, especially in urban areas and their surrounding exurbs. During the same period, the meat processing industry experienced growing demand for its products due to changing consumer tastes for meat products and preprepared products, total U.S. population growth, and skyrocketing exports.

The construction and meat processing industries have seen a substantial decline in the proportion of their workforces represented by labor unions, and, not coincidentally, annual wage incomes for Hispanic workers in both industries actually declined in real terms between 1980 and 2000. Hispanic meat processing workers suffered income declines considerably more precipitous than those of average workers in that industry. Hispanic construction workers did even worse, experiencing income declines while the average construction worker enjoyed an increase in real income during this period. Our results do not point to racial or ethnic discrimination as the culprit for this unusual outcome, because non-Hispanic Blacks and individuals in the "Other" category experienced gains during this same period. Rather, it appears that significant income declines for Hispanic workers in both the meat processing and construction industries stem from a workforce with relatively less human capital endowment, and more importantly, from the structural conditions in both industries that create the very demand for such workers. If there is one central point to our analysis, it is that Hispanic population growth in new and traditional destinations originates from growing demand and changing preferences of U.S. consumers for fundamental goods and services, such as food and housing.

Immigrant labor in construction and food processing follows a pattern found in crop agricultural and other nondurable and durable goods manufacturing sectors. As educational attainment for the general population rises, and other employment options reduce the relative attractiveness of manufacturing sector employment, U.S. firms that do not or cannot locate production overseas are likely to seek cost-cutting measures in the U.S. A central strategy is the use of low-cost and low-skilled labor (Barboza 2001). The construction and the meat processing industry experienced substantial increases in the proportion of foreign-born workers for each racial and ethnic group we examined, non-Hispanic Whites excepted. Yet education levels for Hispanic workers in both industries remained relatively stagnant over this period, a striking contrast with considerable improvement experienced by other racial and ethnic groups. Such outcomes are consistent with a segmented labor market interpretation of Hispanic employment occurring in industries and occupations that native residents increasingly shun.

#### References

AGC (Associated General Contractors of America). 2005. <u>Construction News</u>. January 11. Alexandria: VA.

Barboza, D. 2001. "Meatpackers' Profits Hinge on Pool of Immigrant Labor." New York Times, December 21.

Broadway, M. J. 1995. "From City to Countryside" In <u>Any Way You Cut It: Meat Processing and Small-Town America</u>, eds. D. D. Stull, M. J. Broadway, and D. Griffith, pp.17-40. Lawrence: University Press of Kansas.

Conway, H., C. Dunn, and G. Khalil. 2004. <u>Construction: A Report on the Industry</u>. Washington, D.C.: Industrial College of the Armed Forces.

Cornelius, W. A. 2001. "Death at the border: Efficacy and unintended consequences of U.S. immigration control policy." Population and Development Review, 27(4) 661-685.

Donato, K. M., M. Stainback, and C. L. Bankston III. 2005. "The Economic Incorporation of Mexican Immigrants in Southern Louisiana: A Tale of Two Cities", in V. Zúñiga and R. Hernández-León (Eds.), <u>New Destinations: Mexican Immigration in the United States</u>. New York: Russell Sage Foundation.

Durand, J., D. Massey, and F. Charvet, 2000. "The Changing Geography of Mexican Immigration to the United States: 1910-1996." <u>Social Science Quarterly</u>. 81: 1-16.

Fennelly, K. 2005. "Latinos, Asians, Africans in the Northstar State: New Immigrant Communities in Minnesota", in E. M. Gozdziak and S. F. Martin (Eds.), <u>Beyond the Gateway: Immigrants in a Changing America.</u> Lanham, MD: Lexington Books.

Fennelly, K., and H. Leitner. 2002. "How the Food Processing Industry is Diversifying Rural Minnesota." Working Paper 59, The Julien Samora Research Institute, Michigan State University.

Frey, W. H. 2002. "Metropolitan magnets for international and domestic migrants." The Brookings Institution. Washington, DC.

\_\_\_\_\_. 2003. "Metropolitan Magnets for International and Domestic Migrants." Washington, DC: Brookings Institution.

Goodrum, P.M. 2004. "Hispanic and Non-Hispanic Wage Differentials: Implications for United States Construction Industry." <u>Journal of Construction Engineering and Management</u> 130(4): 552-559.

Goździak, E. M. and S. F. Martin (Eds.) 2005. Beyond the Gateway: Immigrants in a Changing America. Lanham, MD: Lexington Books.

Grey, M. 1999. "Immigrants, Migration, and Worker Turnover at the Hog Pride Pork Packing Plant." Human Organization 58: 16-27.

Griffith, D. 1995. "Hay Trabajo: Poultry Processing, Rural Industrialization, and the Latinization of Low-Wage Labor." In Stull, D. D., M. J. Broadway, and D. Griffith (eds.) 1995. <u>Any Way You Cut It: Meat Processing and Small-Town America</u>. Lawrence: University Press of Kansas.

Hernández-León, R. and V. Zúñiga. 2000. "'Making Carpet by the Mile': The Emergence of a Mexican Immigrant Community in an Industrial Region of the U.S. Historic South." <u>Social Science Quarterly</u> 81:49-66.

Johnson-Webb, K. D. 2002. "Employer Recruitment and Hispanic Labor Migration: North Carolina Urban Areas at the End of the Millennium." <u>Professional Geographer</u> 54(3): 406-421.

Kandel, W., and J. Cromartie. 2004. <u>New Patterns of Hispanic Settlement in Rural America</u>. Rural Development and Research Report 99. Washington, DC: Economic Research Service, U.S. Department of Agriculture.

Kandel, W., and E. Parrado. 2004. "Industrial Transformation and Hispanic Migration to the American South: The case of the Poultry Industry," in D. Arreola (ed.) <u>Hispanic Spaces, Latino Places: A Geography of Regional and Cultural Diversity</u>. Austin, TX: University of Texas Press.

\_\_\_\_\_. 2005. "Restructuring of the US Meat Processing Industry and New Hispanic Migrant Destinations." <u>Population and Development Review</u>, 31(3): 447-471.

Katz, J. 1996a. "Poultry Industry Imports Labor to do its Dirty Work." <u>Los Angeles Times</u>, December 8.

. 1996b. "The Chicken Trail." (three articles) Los Angeles Times, November 10-12.

Krissman, F. 2000. "Immigrant Labor Recruitment: U.S. Agribusiness and Undocumented Migration from Mexico." In N. Foner, R. Rumbaut, and S. Gold (eds.), <u>Immigration Research for a New Century.</u> New York, NY: Russell Sage.

McDaniel, J.M. and V. Casanova. 2003. "Pines in Lines: Tree Planting, H2B Guest Workers, and Rural Poverty in Alabama." <u>Southern Rural Sociology</u> 19(1): 73-96.

McGranahan, D. A. 1999. "Natural Amenities Drive Rural Population Change." Agricultural Economic Report 781. Washington, DC: Economic Research Service, U.S. Department of Agriculture.

MacDonald, J., M. Ollinger, K. Nelson, and C. Handy. 2000. "Consolidation in U.S. Meatpacking." Agricultural Economic Report 785. Washington, D.C.: Economic Research Service, USDA.

Macguire, S. R. 1993. Worker Tenure in 1991. Occupational Outlook Quarterly, Spring: 25-37.

Massey, D. S, J. Durand, and N. Malone. 2002. <u>Beyond Smoke and Mirrors: Mexican Immigration in an Era of Economic Integration</u>. New York: Russell Sage.

Millard, A., J. Chapa, and C. Burillo. 2005. <u>Apple Pie and Enchiladas: Latino Newcomers in the Rural Midwest</u>. Austin, TX: University of Texas.

Moody, K. 1988. An Injury to All: The Decline of American Unionism. New York: Verso.

Ollinger, M., J. MacDonald, and M. Madison. 2000. <u>Structural Change in U.S. Chicken and Turkey Slaughter</u>. Agricultural Economic Report 787. Washington, D.C.: Economic Research Service, USDA.

Piore, M. J. 1979. <u>Birds of Passage: Migrant Labor and Industrial Societies</u>. Cambridge: Cambridge University Press.

Singer, A. 2004. "The rise of New Immigrant Gateways." Washington, DC: Brookings Institution

Stepick, A, G. Grenier, S. Morris, and D. Draznin. 1994. "Brothers in Wood," in L. Lamphere, A. Stepick, and G Grenier (Eds.) Newcomers in the Workplace: Immigrants and the Restructuring of the U.S. Economy. Philadelphia, PA: Temple University.

Suro, R., and A. Singer. 2002. "Latino Growth in Metropolitan America: Changing Patterns, New Locations." Washington, DC: Center on Urban and Metropolitan Policy, The Brookings Institution and The Pew Hispanic Center.

Taylor, M., and S. Stein. 1999. "Network Helps Recruit Immigrants for U.S. Job Market." <u>The Fort Worth Star-Telegram</u>, July 4.

Zúñiga, V. and R. Hernández-León (Eds.) 2005. <u>New Destinations: Mexican Immigration in the United States</u>. New York: Russell Sage Foundation.

Table 1: Percent Racial/Ethnic Composition of the Construction Industry in Metropolitan Areas, 1980-2000

	1	All Industries		C	Construction Industry	
	1980	1990	2000	1980	1990	2000
All Metropolitan Areas						
Non-Hispanic White	78.9	75.1	67.8	83.3	79.4	72.3
Non-Hispanic Black	11.6	10.6	11.6	7.7	6.2	6.0
Other	2.6	4.3	7.0	1.7	2.5	3.7
Hispanic	6.9	10.1	13.6	7.3	11.9	18.0
Percent growth		8.9	21.2		23.9	33.9
Percent growth Hispanic		46.2	49.0		70.4	70.3
N	4,133,648	4,500,820	5,454,570	184,301	228,405	305,738
Metropolitan Areas with (	Greatest Domes	stic Migration	Losses			
Non-Hispanic White	67.4	62.9	54.1	74.9	63.6	56.7
Non-Hispanic Black	13.2	14.1	15.0	7.7	5.9	6.2
Other	5.9	7.3	11.0	4.8	6.3	7.7
Hispanic	13.5	15.7	19.9	12.6	24.2	29.5
Percent growth		36.7	12.9		21.5	11.6
Percent growth Hispanic		46.1	36.1		84.5	30.7
N	945,217	1,291,720	1,458,363	34,015	41,314	46,094
Metropolitan Magnets for	Domestic Mig	rants				
Non-Hispanic White	80.7	77.0	66.8	83.0	81.6	65.6
Non-Hispanic Black	11.7	12.0	13.2	8.4	7.1	6.6
Other	1.7	2.5	5.2	1.0	1.6	2.6
Hispanic	6.0	8.4	14.8	7.6	9.7	25.2
Percent growth		-11.9	40.1		18.1	65.8
Percent growth Hispanic		21.7	89.9		40.9	145.6
N	466,127	410,859	575,669	27,280	32,210	53,409

Table 2: Percent Racial/Ethnic Composition of the Meat Processing Industry, 1980-2000

		All Industries		Mea	t Processing In	ndustry
	1980	1990	2000	1980	1990	2000
All Areas						
Non-Hispanic White	81.8	79.6	72.8	73.4	66.2	48.4
Non-Hispanic Black	10.2	9.2	10.1	16.4	17.1	18.5
Other	2.3	3.5	6.0	1.6	3.3	4.5
Hispanic	5.7	7.7	11.1	8.6	13.5	28.6
Percent growth		15.7	12.4		7.4	31.1
Percent growth Hispanic		44.8	47.6		52.4	102.1
N	5,879,356	6,799,819	7,645,970	15,705	16,863	22,099
All Metropolitan Areas						
Non-Hispanic White	78.9	75.1	67.8	70.0	59.9	42.0
Non-Hispanic Black	11.6	10.5	11.6	15.5	13.5	17.1
Other	2.6	4.3	7.1	2.2	4.7	6.9
Hispanic	6.9	10.1	13.6	12.4	21.9	34.1
Percent growth		8.9	21.2		-31.3	53.1
Percent growth Hispanic		46.4	49.2		19.3	86.9
N	4,133,648	4,500,820	5,454,570	7,338	5,038	7,712
All Nonmetropolitan Area	ıs					
Non-Hispanic White	88.9	88.2	85.0	76.4	68.8	51.9
Non-Hispanic Black	6.7	6.6	6.6	17.2	18.6	19.2
Other	1.5	2.0	3.5	1.2	2.7	3.3
Hispanic	2.9	3.2	4.9	5.3	9.9	25.7
Percent growth		31.7	-4.7		41.3	21.7
Percent growth Hispanic		35.7	37.9		98.2	114.6
N	1,745,708	2,298,999	2,191,400	8,367	11,825	14,387

Table 3: OLS Regression Estimates on Percentage Change in Hispanic Population Composition

		MET	METROPOLITAN COUNTIES	FAN COL	NTIE	S		NO.	NONMETROPOLITAN COUNTIES	ITAN CC	UNTIE	S
	19	1980-1990	066	1	1990-2000	00	19	1980-1990	06	51	1990-2000	0
Change over decade in proportion employed in:	d in:											
Agriculture	0.081	* *	(0.035)	0.006		(0.093)	0.035	*	(0.010)	0.123	*	(0.020)
Construction	0.066	*	(0.036)	0.188	*	(0.076)	0.035	* *	(0.015)	0.020		(0.031)
Durable goods manufacturing	0.064	* *	(0.020)	0.1111	* *	(0.045)	0.032	*	(0.011)	0.114	*	(0.019)
Nondurable goods manufacturing	0.070	* *	(0.024)	0.128	* *	(0.048)	0.032	*	(0.013)	0.170	*	(0.019)
Meat Processing	0.121	*	(0.045)	-0.171	*	(0.094)	0.059	*	(0.015)	0.261	*	(0.025)
Transportation	0.052		(0.051)	0.035		(0.112)	-0.032		(0.022)	0.077		(0.043)
Communication, Utilities	0.037		(0.072)	0.008		(0.088)	-0.010		(0.027)	-0.117	* *	(0.049)
Wholesale and retail trade	0.032		(0.027)	0.088		(0.057)	-0.027	* *	(0.013)	0.037		(0.022)
Public administration	-0.076		(0.059)	-0.098		(0.093)	-0.066	* *	(0.030)	-0.141	* *	(0.050)
County-level economic indicators – start of decad	decade											
Poverty rate (percent below)	-0.019		(0.019)	-0.036		(0.028)	-0.015	* *	(0.001)	-0.005		(0.012)
Male unemployment rate	-0.054	* *	(0.025)	-0.114	* *	(0.060)	-0.048	*	(0.008)	-0.145	*	(0.018)
Mean household wage inc. (\$10,000)	0.002		(0.003)	0.001		(0.002)	0.001		(0.002)	-0.001		(0.002)
Amenity Scale Value	0.002	* *	(0.001)	0.003	* *	(0.001)	-0.001	* *	(0.000)	-0.002	* *	(0.001)
County nonulation etatue												
Total population (1000) (start of decade)	0.000	* *	(0.000)	0.000	* *	(0.000)	0.000		(0.000)	0.000	* *	(0.000)
Population growth rate	0.003		(0.003)	0.010	*	(0.005)	0.004		(0.003)	0.030	* *	(0.004)
Percent Hispanic (start of decade)	0.069	* *	(0.008)	0.088	* *	(0.012)	0.026	* *	(0.004)	0.028	* *	(0.006)
Adjacent to metro county							0.001		(0.001)	-0.001		(0.001)
National region variables												
Northeast	-0.005	*	(0.003)	-0.014	*	(0.004)	-0.017	*	(0.002)	-0.026	*	(0.003)
Midwest	-0.012	* *	(0.003)	-0.017	* *	(0.004)	-0.020	* *	(0.002)	-0.019	* *	(0.002)
South	-0.014	* *	(0.002)	-0.014	* *	(0.004)	-0.021	*	(0.001)	-0.012	* *	(0.002)
West	-0.006	* *	(0.003)	-0.002		(0.005)	-0.011	* *	(0.002)	-0.006	* *	(0.002)
Intercept	0.015	*	(0.009)	0.024	*	(0.013)	0.027	* *	(0.005)	0.023	* *	(0.007)
Adjusted R-Squared	0.463			0.393			0.280			0.204		
Number of cases			•	16/		-	1667	4		1667		
Boided coefficients indicate statistically singificant		renc	es across u	me period	s (p>0.	differences across time periods (p>0.1 one-sided test)	(1Si	* P<.U3	P<.U.	.01		

Table 4: Socio-economic Characteristics of the Construction Industry Labor Force 1980-2000

	4	Percent		_	Percent with less			Average Annual	
	Ŧ	Foreign Born		t	than High School			Wage Income <sup>1</sup>	
	1980	1990	2000	1980	1990	2000	1980	1990	2000
All Metropolitan Areas	ıs								
Non-Hispanic White	4.6	5.1	8.8	19.5	10.3	8.1	33,304	35,942	37,277
Non-Hispanic Black	8.4	9.1	10.8	41.0	20.4	12.7	24,259	27,299	28,260
Other	34.5	51.7	45.4	18.7	11.9	12.9	34,894	37,602	33,763
Hispanic	44.9	64.4	72.9	50.7	44.4	46.8	26,635	26,286	24,869
TOTAL	8.1	13.6	19.0	23.4	15.0	15.5	32,279	34,513	34,653
Greatest domestic migration lo	gration los	SSes							
Non-Hispanic White	10.3	11.6	12.2	16.6	8.3	5.7	36,734	40,655	42,954
Non-Hispanic Black	11.0	20.7	24.7	34.0	14.0	10.7	27,847	32,551	32,131
Other	35.6	55.9	9.69	17.5	10.9	14.4	36,387	39,365	35,279
Hispanic	52.0	20.6	72.8	46.4	44.7	41.8	28,347	27,546	26,647
TOTAL	16.8	29.3	34.5	21.8	17.7	17.3	35,160	37,360	37,408
Magnets for domestic migrants	migrants								
Non-Hispanic White	2.4	2.8	3.6	21.6	12.6	6.6	30,063	31,972	36,831
Non-Hispanic Black	2.0	5.8	9.7	43.5	25.6	14.0	21,186	23,602	26,513
Other	21.3	32.5	33.4	25.8	17.2	13.4	27,853	30,419	31,491
Hispanic	31.3	55.8	78.5	52.7	46.8	55.0	26,181	24,185	23,195
TOTAL In 2000 dollars	4.7	8.6	23.5	25.8	16.9	21.7	29,101	30,756	32,980

Table 5: Socio-economic Characteristics of the Meat Processing Industry Labor Force 1980-2000

		Percent			Percent with less		A	Average Annual	
		Foreign Born			than High School			Wage Income <sup>1</sup>	
	1980	1990	2000	1980	1990	2000	1980	1990	2000
All Areas									
Non-Hispanic White	3.9	2.5	3.1	28.5	16.4	11.8	30,949	27,439	30,519
Non-Hispanic Black	1.4	6.0	1.8	41.9	21.4	14.3	21,195	18,591	20,561
Other	46.9	60.2	62.0	39.5	35.3	31.6	24,707	21,996	24,103
Hispanic	49.6	70.5	81.9	65.0	60.7	62.5	26,092	21,049	20,825
TOTAL	8.2	13.3	28.1	34.0	23.8	27.6	29,001	25,087	25,972
Metropolitan Areas									
Non-Hispanic White	7.1	6.8	6.9	26.8	15.0	6.6	34,631	34,589	36,891
Non-Hispanic Black	1.9	2.1	3.2	38.9	15.0	13.7	26,367	21,557	22,286
Other	54.7	80.5	79.5	32.1	38.1	34.5	26,844	24,702	26,103
Hispanic	55.8	71.8	81.1	64.7	56.3	58.9	27,291	22,952	21,912
TOTAL	13.4	23.8	36.5	33.5	25.1	28.9	32,474	30,089	29,105
Nonmetropolitan Areas	as								
Non-Hispanic White	1.4	6.0	1.4	29.9	16.9	12.6	27,914	24,787	27,708
Non-Hispanic Black	6.0	0.5	1.1	44.2	23.4	14.5	17,082	17,700	19,747
Other	34.3	44.9	42.5	51.5	33.1	28.4	20,940	19,879	21,674
Hispanic	36.9	69.2	82.5	65.4	64.9	65.1	23,640	19,180	20,036
TOTAL <sup>1</sup> In 2000 dollars	3.6	8.8	23.5	34.5	23.2	27.0	25,916	22,931	24,293