New Destination Labor Markets: The Effects of Metropolitan Labor Markets on the Changing Geography of Immigrant Settlement

In the past decade immigration research has taken notice and analyzed the changing spatial structure of immigration. Immigration has gone from a regionally isolated phenomenon to one of a much more dispersed nature. Efforts to understand and define these "new destinations" and the forces pushing and pulling immigrants have been quite limited despite the growing significance of these destinations. What has been particularly lacking in the existing literature is a systematic study of the factors contributing to the growth of the foreign-born population in new destinations as compared to that in traditional gateways. While it has been posited that economic and labor market conditions influence immigrant population growth in new destinations, to my knowledge little empirical evidence of the robustness of such factors exists. The purpose of my research is to further our understanding of the factors associated with new destination formation. In this paper I particularly focus on the role of labor markets in explaining the changing geography of immigrant settlement. Specifically, I seek to answer the following question: How do labor markets stimulate and/or stifle foreign-born population growth?

Economic and Labor Market Theories

Economists explain migration as by and large a function of an area's economic opportunity and an individual's ability to afford to live in an area (Tiebout 1956). The neoclassical economics theory of migration is perhaps the most well-known and historically utilized theory in this area (Massey et al. 1998). To summarize this theory, Todaro (1969) argued that migration was primarily a function of income differentials across space, or the expected earnings gap, and the probability of gaining employment in the new area. This line of thinking involves the macro-level supply and demand of labor as well as micro-level cost-benefit calculation. Neoclassical labor market theories are critiqued in that they overly emphasize the importance of labor markets, particularly labor supply, and income differentials.

The New Economics of Migration theory was crafted to challenge the propositions put forth by neoclassical economists. This theory posits that the individual is only relevant in as much as he or she is part of a larger unit, such as a family or household. Since households vary, a number of components beyond wage differentials affect migration: Wage differentials and labor markets alone do not explain migration. For instance, income gains in a new location may be less important to a family with an already high income. This also raises the point that different employment sectors will be attractive to different families. Lastly, the importance of markets beyond the labor market, such as insurance, capital, and credit, are highlighted as proponents argue that all forms of human capital drive migration (Massey et al. 1998).

Neoclassical and New Economics theories primarily engage with micro-level indicators. Conversely, the Segmented Labor Market theory orients around macro-level percepts. Segmented Labor Market theory posits that immigration stems from demand-side, or pull, factors. In this model wage differentials and rational choice do not hold up against the demands of the receiving market. The demand for cheap labor outweighs all other elements. The continued existence of ethnic enclaves, for example, relies upon the cycle of new immigrant workers to fill lower-end jobs. As another example, segmented labor market theory would assume the immigrant population growth in rural areas, such as those studied by Kandel and Cromartie (2004), is completely driven by meat-packing industries' demand for cheap labor.

Support has been found for tenets of each of the models discussed above (Massey et al. 1998), but the most compelling evidence favors the New Economics of Migration and Segmented Labor Market theories (Massey and Espinosa 1997; Kritz and Gurak 2001; Parrado and Kandel 2011). Aligned with these theories, namely the segmented labor market model, I hypothesize that: 1) Indicators of a strong economy, such as median household income, are positively associated with foreign-born growth, and, 2) industrial shifts towards, or the existing presence of, low-skilled industries, such as construction, predict immigrant population growth.

Data and Methods

This research utilizes data from the 1990 and 2000 decennial censuses, and 2005-2009 American Community Survey 5-year estimates. The analysis is restricted to metropolitan statistical areas (MSA). MSA boundaries fluctuate across decennial censuses, but I have accounted for this change by defining metro boundaries as an aggregate of counties consistent with 2009 Office of Management and Budget (OMB) MSA definitions. Recent MSA boundaries are applied to prior years using Geographical Information Systems (GIS) software. Definitions and technical GIS procedures follow the precedent of recent research such as that conducted by Hall et al. (2011).

Variables

Foreign-born population growth rates, the dependent variables, are defined as follows: 2009 population growth is expressed as the numerical change in foreign-born from 1990 to 2009 divided by the number of foreign-born residents in 1990. The dependent variable for change at 2000 is similarly calculated. This expression of population change as the outcome variable follows suit with previous migration research (see, for example, Cebula 2009).

Independent variables indicate static measures and change from the previous time point. Following precedent, industrial structure and change are presented separately as values from the previous time period and change since that period. For example, percent employed in construction in 1990 and the absolute percent change between 1990 and 2009 (expressed as 2009-1990) are treated as two unique variables. This approach is justified by Parrado and Kandel (2011) who state that using both "values and change during the decade captures both the industry conditions at the beginning of the period before migration occurred and changing conditions that might have attracted migrants" (p. 629-30). Industrial structure and change are indicated by percent workforce in each economic sector: Agriculture and mining, construction, manufacturing, transportation and communication, low and high skill services, and public sector (similar to Kritz et al. 2011, and Parrado and Kandel 2011). Since industry codes change over time, crosswalks (akin to weights) from the Census Bureau are applied. Thus analyzing change in industry is possible. Additional labor market measures include unemployment rate and median household income. All dollar amounts are inflation-adjusted to 2009 dollars using the Bureau of Labor Statistics' Consumer Price Index. These variables are germane to examining tenets of neoclassical, new economics, and segmented labor market theories. A series of additional variables are held constant: percent foreign born, Latino, Asian, and white. Controls for region are also included, in large part to help account for the documented implications of climate (Conway and Houtenville 2003). This series of variables strengthens the modeling approach by accounting for a range of social, demographic, and economic factors.

Descriptive Statistics

Metropolitan areas, as will be seen, experienced dramatic increases in foreign-born population over the period examined. In addition to immigrant population growth, these areas underwent a number of economic changes. Beyond tabular descriptives, thematic maps created using ArcGIS contribute to this presentation by allowing the reader to visualize change (see, for example, Figure 1 below).

Multilevel Models

I model metropolitan- and county-level change in foreign-born population (relative to native-born growth) as an outcome of the components outlined above. For each of the time points I will present a model regressing values from, and change since, the prior time point on foreign-born population change during this period. For example, the first model predicts 1990 to 2000 change using 1990 values and 1990-2000 change. Similar models for 2000 and 2009 follow. These analyses are to be conducted using MLwiN software. The typical model will appear as follows:

$$y_{ij} = \beta_0 x_{0ij} + \beta_1 x_{1ij} + \ldots + \beta_k x_{kij} + (u_{0j} x_{0ij} + u_{1j} x_{1ij} + \ldots + u_{kj} x_{kij} + e_{0ij} x_{0ij})$$

Where, i=county, j=metro, k=number of observations

Preliminary Findings

Preliminary findings reveal a number of interesting relationships. Table 1 demonstrates significant correlations ($p<.05$) between select static predictor variables and foreign-born growth. The size of two industrial sectors, construction and ag/mining, in 1990 was positively correlated with the eventual growth in foreign-born population, whereas several sectors, such as FIRE and public, and household income were negatively associated. Figures 1 and 2 elaborate upon the positive relationship between share of construction industry and the foreign-born growth rate. In Figure 1, the dark shaded counties experienced growth beyond one standard deviation from the mean. Similarly, the symbols represent construction shares in 1990 that were one standard deviation above the average proportion. The map reveals overlapping clusters of growth and construction sectors in geographical areas that are commonly known as "new immigrant destinations." Figure 2 demonstrates predicted growth rates by 1990 proportion construction from a reduced form model incorporating only static structure variables. Both the positive relationship between these variables and the importance of accounting for metropolitan-level variance in population growth can be seen. There is considerable variation across MSAs.

Table 1. Significant Correlations between Foreign-Born Growth Rate and Key Independent Variables

	r
1990 Construction	0.075
1990 Ag and mining	0.113
1990 FIRE	-0.083
1990 Public sector	-0.060
1990 Trade and service	-0.129
1990 Median hh income	-0.093

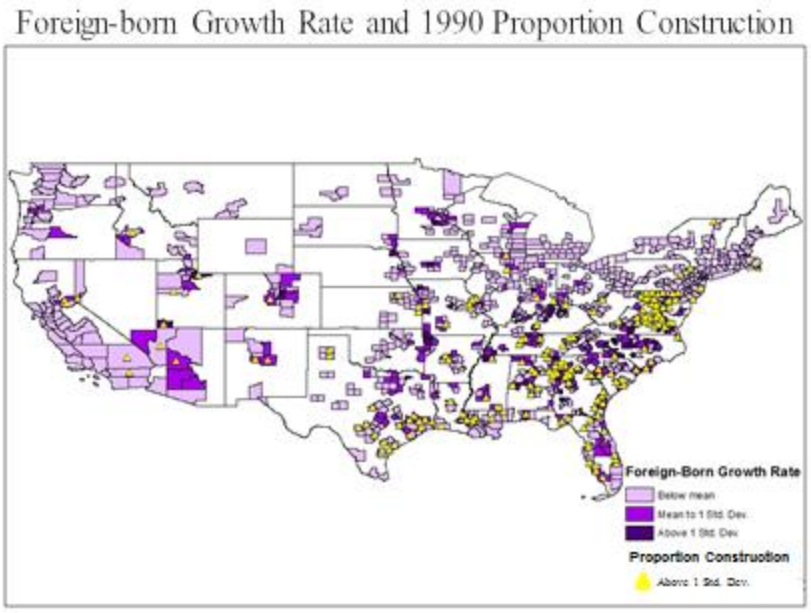
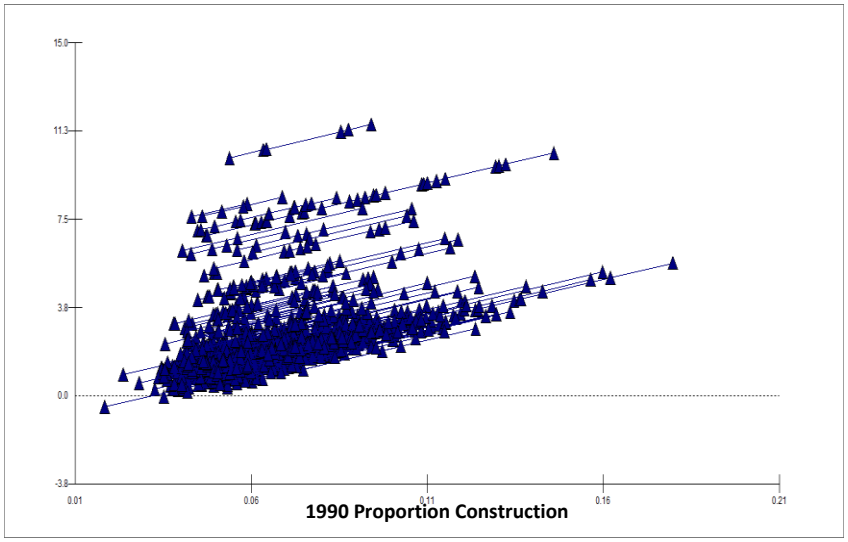


Figure 2: Predicted Growth Rates Demonstrating Metro-level Variation



Conclusion

Upon further analyses, I expect to find that foreign-born population growth follows the disproportionate presence of low-skilled labor market sectors. Contrary to my hypothesis, the preliminary analyses suggest that low median household income, perhaps indicative of a weak economy and labor market, is associated with foreign population growth. Further analysis and discussion is required to properly address such relationships. Unfortunately at this stage my analysis has many limitations. Despite these limitations, my research reacts to a number of inconsistencies created by gaps in literature and should ultimately inform demographers and immigration scholars interested in labor markets in new destinations and foreign-born population change across the metropolitan U.S.

References

Conway, Karen Smith and Andrew J. Houtenville. 2003. "Out with the Old, in with the Old: A Closer Look at Younger Versus Older Elderly Migration." *Social Science Quarterly* 84: 309-328.

Cebula, Richard J. 2009. "Migration and the Tiebout-Tullock Hypothesis Revisited." *American Journal of Economics and Sociology* 68: 541-551.

Hall, Matthew, Audrey Singer, Gordon F. De Jong, and Deborah Roempke Graefe. 2011. *The Geography of Immigrant Skills: Educational Profiles of Metropolitan Areas*. Washington, DC: Brookings Institute.

Kandel, William and John Cromartie. 2004. *New Patterns of Hispanic Settlement in Rural America*." Washington, DC: USDA, Economic Research Service.

Kritz, Mary M. and Douglas T. Gurak. 2001. "The Impact of Immigration on the Internal Migration of Natives and Immigrants." *Demography* 38: 133-45.

Kritz, Mary M., Douglas T. Gurak, and Min-Ah Lee. 2011. "Will they Stay? Foreign-Born Out-Migration from New U.S. Destinations." *Population Research and Policy Review* 30: 537-567.

Massey, Douglas, Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino, and J. Edward Taylor. 1998. *The World in Motion: Understanding International Migration at the End of the Millennium*. New York: Oxford University Press.

Massey, Douglas S. and Kristin E. Espinosa. 1997. "What's Driving Mexico-U.S. Migration? A Theoretical, Empirical, and Policy Analysis." *American Journal of Sociology* 102: 939-999.

Parrado, Emilio A. and William Kandel. 2011. "Industrial Change, Hispanic Immigration, and the Internal Migration of Low-skilled Native Male Workers in the United States, 1995-2000." *Social Science Research* 40: 626:640.

Tiebout, Charles M. 1956. "A Pure Theory of Local Expenditures." *The Journal of Political Economy* 64: 416-424.

Todaro, Michael P. 1969. "A Model for Labor Migration and Urban Unemployment in Less Developed Countries." *The American Economic Review* 59: 138-48.