

# Immigrants, Self-Employment, and Growth in American Cities

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**Abstract:** We employ U.S. Census Bureau data from cities of 10,000 or more to examine the impact of immigrants in American cities on self-employment and median income. The results show that self-employment has a statistically significant and positive impact on median income and immigrant population. When controlling for race populations, lagged immigrant population has a negative impact on self-employment, but removing the Hispanic control causes this relationship to become statistically insignificant. In other words, Hispanics, not other ethnicities, drive much of the self-employment in U.S. cities. An implication is that more attention to helping Hispanic business owners succeed and expand their businesses could benefit the general population of a city.

## 1. Introduction

Sustained growth in self-employment over the past twenty years implies an increasing importance of knowledge related to the mechanisms associated with the trend and its impact. In 2009, the self-employed made up 10.9% of total employment (Hipple, 2010). Self-employment is particularly important for immigrants as it represents a critical route for entering the mainstream American economy. An immigrant is more likely than a native to be self-employed, and the longer an immigrant is in the United States, the more likely he or she is to be self-employed (Borjas, 1986). Furthermore, in 2000 the self-employment rates of Latin American, Caribbean, and Southeast Asian immigrants showed sizable increases over their 1990 levels (Toussaint-Comeau, 2005b), implying an increased importance of self-employment for immigrants and the United States economy as a whole.

Small businesses and microenterprises (defined as firms with less than five employees) account for approximately eighteen percent of employment and create roughly 900,000 jobs per year in the U.S.

(Ramirez de Miess, 2009). The increased importance of small and medium size enterprises is occurring in the context of a rapidly growing Hispanic population, which contributes the largest portion of immigration in the United States. Concomitantly, the number of U.S. businesses owned by Hispanics grew by nearly 50 percent from 2.3 million to 3.3 million in just the five years from 2007 to 2012. This growth outpaced the growth in the total number of all U.S. firms over the same time period, which increased by 2 percent, from 27.1 million to 27.6 million (Bernstein, 2016).

The effects of immigration are controversial, especially in terms of their effects on labor markets for natives but also with regard to their use of social services. Passel (2005) estimates that 35-40% of new arrivals are undocumented immigrants from Mexico and Central America with low education and limited English skills. The sector into which the immigrants enter may also have an effect; for example, Federman et al. (2006) found that Vietnamese manicurists did not displace native manicurists already in the field

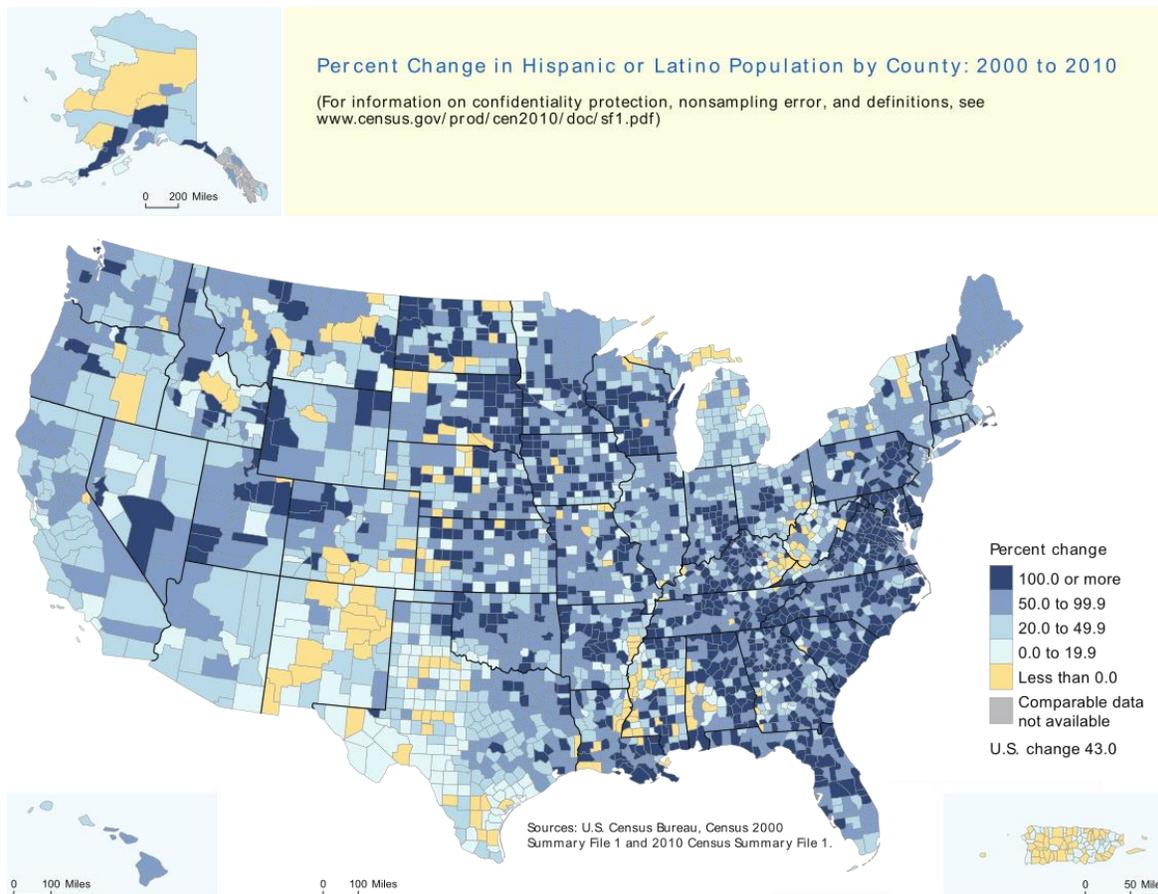
but may have discouraged new native entries. The size and composition of immigrants are particularly important to urban areas, where most immigrants live. Although Latino immigrants are younger and less educated than natives on average, it is also true that the average immigrant education level is higher in urban areas than in rural areas of the U.S. (Carpenter, 2013); persons with higher education may enter the workforce in different ways, either starting as self-employed or starting a business as a second career step, so the effect may be different between urban and rural areas.

This paper contributes to our understanding of current trends and policies by conducting an econometric assessment of the impact and interaction of immigrants, self-employment, and income in urban areas. We first provide brief background information about the national context. Then we review the literature on immigrant entrepreneurship, after which we describe our data and empirical approach. Our empirical methods include pooled OLS and the Arellano-Bond (1991) dynamic panel estimator, sometimes called the “difference generalized method of moments” (GMM) dynamic panel estimator. The

results show that self-employment has a statistically significant and positive impact on median income and immigrant population. When controlling for race populations, the one-time-period (decade)-lagged immigrant population has a negative impact on self-employment, but removing the Hispanic control causes this relationship to become statistically insignificant. In other words, Hispanics, not other ethnicities, drive much of the self-employment in U.S. cities.

### 1.1. State of hispanic immigrants in the U.S.

While many people are aware of concentrations of Latinos in certain regions of the U.S., some may be surprised to know they are present in nearly every county. Figure 1 shows that many areas of the U.S. are experiencing growth of their Latino populations. Urban areas contain a larger population of Latino immigrants. Table 1 shows the total population of the ten cities with the largest populations in the United States and the percent of that population that Hispanic individuals comprise. The right side of Table 1 shows the percent of the Hispanic population of various ethnicities.



**Figure 1.** Percent change in Hispanic or Latino population by county 2000 to 2010 (Ennis et al., 2011).

Table 1 highlights the diversity of the Latino population in the United States. Indeed, it is important to emphasize often that the Latino population in the United States is not a monolithic group of individuals with the same skills and experiences. Furthermore, that diversity or mix of various Latino groups itself is also not monolithic and varies significantly across the country. Naturally, this diversity of experience

complicates economic development efforts and, as such, highlights the need for further research on Latino and immigrant entrepreneurship. This essay continues and extends current research by using data on cities in the United States to investigate a particularly important interaction of Latino immigration and economic development efforts: self-employment.

**Table 1.** Hispanic ethnicity in highest population cities in the United States 2010 (Census).

City	Total Population	Percent Hispanic	Percent			
			Percent Mexican	Puerto Rican	Percent Cuban	Percent Other
New York	8,175,133	28.6	13.7	31.0	1.8	53.6
Los Angeles	3,792,621	48.5	65.8	0.9	0.7	32.6
Chicago	2,695,598	28.9	74.2	13.2	1.1	11.5
Houston	2,099,451	43.8	73.2	1.0	0.8	25.0
Philadelphia	1,526,006	12.3	8.3	64.8	2.1	24.8
Phoenix	1,445,632	40.8	88.1	1.4	0.7	9.9
San Antonio	1,327,407	63.2	84.1	1.6	0.3	14.0
San Diego	1,307,402	28.8	86.7	2.2	0.7	10.5
Dallas	1,197,816	42.4	86.6	0.7	0.5	12.2
San Jose	945,942	33.2	85.6	1.5	0.4	12.5

## 2. Literature review

Findings on the impact of immigrants on local income are mixed. The impact of immigrants on regional economic growth depends on the characteristics of the immigrants (Barro and Sala-i-Martin, 2004), and there is evidence that general population growth hinders per capita income growth (Connaughton and Swartz, 2015). Previous studies on the impact of immigration have struggled in part because immigrants, like natives, are drawn to growing cities (Cebula and Alexander, 2006; Foley and Angjellari-Dajci, 2015), making it harder to draw inferences about the causal effect of immigrant inflows on income growth (Card, 2005). Compounding this difficulty, GDP fluctuations of both the sending and receiving countries impact immigrant flows, and this impact changes depending on immigrant characteristics (Simpson and Sparber, 2013). Further, immigrant movement in and out of self-employment may confound this difficulty. It could be, for example, that an immigrant lacks sufficient cultural skills and certifications to operate in the formal employment market during the initial years after moving to the U.S. and so is forced into “necessity” entrepreneurship. An immigrant gradually becomes acculturated (Shaeffer, 2006) and may be able to enter the formal workforce

and begin to build capital or obtain (formal or informal) credentials, which ultimately might allow them to become self-employed again, but in a much higher-level occupation. Thus how and when an immigrant enters the formal labor force is highly idiosyncratic, and one-size-fits all policies may lead to undesirable outcomes.

Although immigrants are less skilled than natives on average and hence tend to reduce the average skills of the local population (Card, 2005), recent studies find that even after controlling for city size effects, human capital spillovers, and the possibility that immigrants are drawn to cities with stronger local economies, there is a positive effect between immigrants and average wages (Card, 2001; Orrenius and Zavadny, 2006; and Glitz, 2006). The impact of immigration on wages, however, is not entirely positive; the wage gap between the lowest-skilled natives (who are in most direct competition with immigrants) and natives at the middle of the skill distribution is wider in high immigrant cities than in low-immigrant cities (Altonji and Card, 1991).

Past findings indicate that education, English language skills, marriage, financial resources, the sending country’s self-employment rate, and length of time in the host country are all positively associated with the decision to become self-employed (Light,

1972; Raijman, 2001; Yuengert, 1995). Although education in general is positively associated with an immigrant's decision to become self-employed, an immigrant with a college degree is less likely to become self-employed than one with a high school diploma (Toussaint-Comeau, 2005a). It is also true however, that more highly trained immigrants (i.e., with a college degree) are more likely to start successful companies than their native counterparts (Hunt, 2010). Highly trained immigrants are more likely to enter on a student or work visa, and they are more likely to have their highest degree in a science or engineering field (Hunt, 2010). Indeed, Saxenian (1999) finds that in the 1980s and 1990s Chinese or Indian owners ran 24% of ventures in Silicon Valley, and Wadhwa et al. (2007) find that this trend continued in 2006 with immigrants starting 25% of new high-tech companies with initial capitalizations of more than \$1 million.

Immigrant networks have important impacts on business owners in several ways: mentoring and the decision to enter self-employment; raising capital; employee training; acquiring a labor force; and attracting and holding a client base (Walton-Roberts and Hiebert, 1997; Kariv et al., 2010). These networks typically rely on solidarity and trust within families in small immigrant communities. This trust mainly derives from kinship, ethnic, or community relationships, rather than by formal legal contracts (Epstein, 1994; Roberts, 1994). This trust, in turn, constitutes an important source of social capital used in the creation of small enterprises and the allocation of jobs (Rath, 2002).

Past studies have not extensively examined the interaction of self-employment vis-à-vis immigration and income. This paper seeks to elaborate on the interaction of these three factors while keeping the importance of local population size and ethnic composition in mind. Racial and ethnic population shares are included to control for labor market trends, rather than in an attempt to directly investigate a causal relationship between race/ethnicity and a dependent variable under consideration. As noted above, there are numerous theories for why immigrants and non-White entrepreneurs are likely to be self-employed (e.g., "necessity" entrepreneurship) that do not attribute a direct causal relationship to race or ethnicity.

### 3. Methods

We use multiple double log pooled OLS (POLS) regressions and lag the likely endogenous variables of interest by one time period (a decade). Borjas (1986) finds that immigrants are most likely to

become self-employed five years to ten years after immigration, supporting our ten-year lag; shorter lags may not capture the full extent of the impact of immigration on self-employment. Equation (1) describes the set-up.

$$\ln(y_{it}) = \beta \ln(X_{i,t-1}) + \gamma \ln(W_{it}) + \delta Z_i + \rho D_t + \varepsilon_{it} \quad (1)$$

The four contemporaneous dependent variables are the natural logs of self-employment population share, immigrant population share, median income, and unpaid family worker population share for city  $i$  at time  $t$  ( $\ln(y_{it})$ ). Each regression uses the natural log of the single time period (one decade for our data) lag of the three variables not used as the dependent variable  $\ln(X_{i,t-1})$  as well as a vector of the natural logs of the contemporaneous sectoral and demographic variables  $\ln(W_{it})$ , including manufacturing and service sector shares, race shares, bachelor's degree share, median age, and city population. The regressions use the natural log of variables, including those already in share form, to account for the nonlinear nature of the variables discovered in results not reported. Further, the regressions control for state ( $Z_i$ ) and year ( $D_t$ ) fixed effects with appropriate dummy variables. Our final regression has the natural log of self-employment population share as the dependent variable and follows the same design as equation 1, but it excludes the Hispanic population share control variable. The goal of this regression is to examine the interaction between the Hispanic immigrant population and self-employment.

We include the Arellano-Bond (1991) dynamic panel estimator, sometimes called the "difference generalized method of moments" (GMM) dynamic panel estimator, as a robustness check. With this estimator, one first takes the first difference of the same variables used in equation (1), as shown in equation (2).

$$\Delta \ln(y_{it}) = \alpha \Delta \ln(y_{i,t-1}) + \beta \Delta \ln(X_{i,t-1}) + \gamma \Delta \ln(W_{it}) + \rho \Delta D_t + \Delta \varepsilon_{it} \quad (2)$$

One then uses all prior lagged values of  $\ln(y_{it})$ , as well as  $\ln(X_{i,t-1})$  and  $\ln(W_{it})$ , as "GMM-style" instruments, as described in Holtz-Eakin, Newey, and Rosen (1988) and Arellano and Bond (1991). A GMM-style instrument uses all available lags of the specified variables in levels as instruments for the transformed equation and the contemporaneous first differences as instruments in the levels equation, as is appropriate for predetermined variables that are not strictly exogenous (Bond, 2002).

## 4. Data

The analysis that follows uses an unbalanced panel of 3,367 cities with population greater than 10,000 in the continental United States in the years 1980, 1990, 2000, and 2010. These ten-year gaps are necessary because the data were developed from publicly available sources from the Bureau of the

Census: the decennial census and the American Community Survey (ACS). Much of the data come from the National Historical Geographic Information System (Minnesota Population Center). To facilitate our examination of the impacts of interest, most variables (those labeled “population share”) are as a percent of the city population. Table 2 presents a list of the regression variables.

**Table 2.** Variable descriptions.

Variable Name	Variable Description	Mean	Std. Dev.	Source
Immigrant population	immigrant population share	0.08	0.10	Census and ACS
Median income	median income	35470	18985	Census and ACS
Self-employment	self-employed population share	0.03	0.02	Census and ACS
Family worker	unpaid family worker population share	0.00	0.00	Census and ACS
Black population	Black population share	0.10	0.16	Census
Asian population	Asian population share	0.03	0.05	Census
Hispanic Population	Hispanic population share	0.36	0.42	Census
Median age	median age	33.42	5.61	Census
Bachelor’s degree	population share with bachelor’s degree	0.10	0.06	Census and ACS
Manufacturing	population share working in mfg sector	0.08	0.04	Census and ACS
Service	population share working in svc sector	0.21	0.10	Census and ACS
Population	total city population	53867	202708	Census

## 5. Results

Table 3 contains our pooled OLS results. Much in the results is generally consistent with expectations, given extant literature on self-employment; for example, our findings that age, education, and services are positively related to self-employment are consistent with past findings (e.g., Toussaint-Comeau, 2005a; Goetz and Rupasingha, 2013). Similarly, our finding that a larger Black population share is associated with less self-employment is consistent with past findings that Blacks are relatively less likely to be self-employed (Hipple, 2010). The finding that a 1% Black population share implies a 3.3% decrease in the unpaid family worker population share is also consistent with this finding, given that self-employment is positively related with unpaid family workers. Similarly, a larger share of the population having a bachelor’s degree increases the local median income.

When controlling for Hispanic population share, the results indicate that a 1% increase in the one-time-period (decade)-lagged immigrant population share implies a 2.9% decrease in contemporaneous self-employment. When not controlling for Hispanic population share, however, the results indicate that lagged

immigrant population share does not have a statistically significant impact on self-employment population share. Another result is that working in the service sector, local median age, and the share of the local population with a bachelor’s degree all have a positive impact on local self-employment. An intuitive result is that an increase in the share of the population in the service sector increases the share of the population that is an unpaid family worker.

Even though the explanatory variables of interest are lagged, there may still be some concern about endogeneity. As a robustness check to address this concern, we next present the results of the difference-GMM estimator. The finding that removing the Hispanic population share control variable makes the impact of immigrant population share shift from statistically significant and negative to insignificant remains in the difference-GMM results in Table 4. This finding supports the idea that Hispanic immigrants are more inclined than other types of immigrants to be self-employed. The other results presented in Table 4 are similar to the OLS results presented in Table 5.

**Table 3.** POLS regression results.

	ln(self- employment)	ln(self- employment)	ln(immigrant population)	ln(median income)	ln(family worker)
lagged ln(self-employment)			-0.062* (0.033)	-0.009 (0.020)	0.321*** (0.037)
lagged ln(immigrant popn.)	-0.025*** (0.008)	-0.006 (0.007)		0.034*** (0.007)	0.030* (0.017)
lagged ln(median income)	0.090*** (0.024)	0.089*** (0.024)	0.210*** (0.038)		-0.160*** (0.042)
lagged ln(family worker)	0.084*** (0.007)	0.084*** (0.007)	0.014 (0.012)	-0.008 (0.005)	
ln(Asian share)	-0.030*** (0.008)	-0.030*** (0.008)	0.358*** (0.014)	0.059*** (0.008)	0.014 (0.015)
ln(Black share)	-0.050*** (0.004)	-0.048*** (0.004)	-0.050*** (0.009)	-0.036*** (0.003)	-0.034*** (0.008)
ln(Hispanic share)	0.028*** (.008)	(omitted)	0.509*** (0.012)	0.019*** (.006)	-0.006 (0.013)
ln(bachelor's degree share)	0.228*** 0.026	0.217*** (0.026)	-0.072* (0.037)	0.382*** (0.018)	-0.045 (0.037)
ln(manufacturing)	0.011 (0.018)	0.016 (0.019)	-0.073*** (0.037)	0.092*** (0.012)	0.018 (0.022)
ln(median age)	0.656*** (0.051)	0.618*** (0.48)	0.453*** (0.093)	0.229*** (0.047)	0.180** (0.088)
ln(population)	-0.016** (0.007)	-0.014*** (0.007)	0.037*** (0.010)	-0.041*** (0.005)	-0.079*** (0.011)
ln(service)	0.480*** (0.086)	0.475*** (0.085)	0.299*** (0.074)	-0.108** (-0.052)	0.285*** (0.084)
y1990	0.228*** (0.065)	0.201*** (0.062)	0.530*** (0.069)	-0.517*** (0.039)	0.787*** (0.086)
y2000	0.391*** (0.055)	0.382*** (0.053)	0.356*** (0.053)	-0.223*** (0.032)	0.505*** (0.073)
Joint state F-stat	34.261***	46.317***	36.028***	23.555***	5.648***
<i>n</i>	5,802	5,803	5,802	5,802	5,446
<i>R</i> <sup>2</sup>	0.734	0.732	0.844	0.755	0.211

Notes: The term "lagged" is included to emphasize which explanatory variables the models lag by one time period (a decade). Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 4.** Difference GMM regression results.

	ln(self-em- ployment)	ln(self-em- ployment)	ln(immigrant population)	ln(median income)	ln(family worker)
lagged ln(self-employment)			-0.162** (0.065)	-0.020 (0.042)	0.488*** (0.091)
lagged ln(immigrant popn.)	-0.067*** (0.025)	-0.026 (0.036)		0.053*** (0.017)	0.061* (0.033)
lagged ln(median income)	0.094*** (0.059)	0.073 (0.072)	0.000 (0.083)		-0.084 (0.087)
lagged ln(family worker)	0.030*** (0.011)	0.026** (0.012)	0.006 (0.018)	-0.007 (0.008)	
ln(Asian share)	0.041 (0.054)	-0.080 (0.051)	0.409*** (0.035)	0.066* (0.039)	-0.047 (0.043)
ln(Black share)	-0.008 (0.011)	-0.024* (0.014)	0.003 (0.019)	-0.101*** (0.010)	0.018 (0.020)
ln(Hispanic share)	0.054*** (.020)	(omitted)	0.505*** (0.017)	0.039** (.016)	0.012 (0.021)
ln(bachelor's degree share)	0.352*** (0.113)	0.313*** (0.119)	-0.240*** (0.069)	0.439*** (0.070)	-0.097 (0.110)
ln(manufacturing)	-0.085 (0.058)	-0.074 (0.061)	-0.291*** (0.037)	0.001 (0.043)	0.107** (0.049)
ln(median age)	-0.346* (0.199)	-0.710** (0.283)	2.226*** (0.215)	0.448*** (0.174)	-0.561** (0.254)
ln(population)	-0.066*** (0.018)	-0.072*** (0.019)	0.033 (0.022)	-0.042*** (0.016)	-0.072*** (0.023)
ln(service)	0.217 (0.231)	0.250 (0.237)	0.622*** (0.109)	0.089 (-0.047)	0.371* (0.198)
1990	0.043 (0.181)	-0.001 (0.175)	0.891*** (0.110)	-0.241** (0.114)	0.904*** (0.192)
2000	0.233 (.148)	0.242 (0.150)	0.635*** (0.082)	-0.037 (0.096)	0.600*** (0.152)
<i>n</i>	5,804	5,805	5,804	5,804	5,448

Notes: The term "lagged" is included to emphasize which explanatory variables the models lag by one time period (a decade). Robust standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

## 6. Conclusions and suggestions for future research

Our regressions produce several insights into the immigrant economic experience and how it plays out in U.S. urban settings. First, immigrant Hispanics seem to play a different role in urban economies than people from the other great sending region, Asia. Asian newcomers in general come from further away than Hispanics, and this represents a barrier to entry. Overcoming the barrier to entry takes resources. The Asian population is therefore likely to be better

resourced (in human or financial capital) and better able to enter the formal employment market than the Hispanic population, and this is reflected in the opposite signs of the respective coefficients in our self-employment equation. It could also be that the Asian population is more inclined to support extended family and social network franchises (e.g., the manicurists studied by Federman et al., 2006; the Gujarati owners of U.S. Hotels studied by Kalnins and Chung, 2006) that result in employment even when the immigrant is not competitive in traditional formal

employment situations. Further, it would be consistent with the literature because the population of Hispanic immigrants is larger (relative to other immigrant populations), so the positive networking effects are stronger for Hispanic business owners. An implication of our results with respect to Hispanics is that there may be some efficiency in focusing on that group in efforts to increase the survival and growth rate of start-ups. One should also note that the situation may differ regionally depending on the nature of the local economy: Silicon Valley, for example, may wish to pay special attention to Asian business owners given what the literature has found with respect to tech start-ups from that group (Saxenian, 2002).

We also find that the proportion of the local employment base in manufacturing is negatively related to the proportion of immigrants in the city. The mechanism for this outcome could be related to more formalized hiring mechanisms in urban manufacturing that preclude the use of undocumented workers, or it could be that modern capital-intensive production processes require great fluency in English as a prerequisite to employment. Another explanation might be that consistent employment found in manufacturing (relative, say, to construction labor) is more attractive to the resident population such that employers do not need to seek labor elsewhere.

Past research found that co-ethnic involvement may enhance the success of businesses owned by ethnic immigrants within their communities (Portes and Bach, 1985; Borjas, 1986; Sanders and Nee, 1987), but not in the mainstream market, which would typically be larger and therefore have more room for growth. Given that recent mapping of race by census tract strikingly illustrates a trend towards self-segregation in the United States (Cable, 2013), future research into the impact of immigrants could investigate the impact of urban mixing and diversity. Although there is likely widespread agreement on the value of diversity, it may be the case that more diversity (or more urban mixing) has the perverse effect of actually

decreasing immigrant (and thereby minority) self-employment by isolating newcomers from social networks that can provide support as the individual transitions to the new culture. Alternatively, the limited market could benefit a start-up initially due to better understanding of the clientele base while limiting long-term growth. Strategies to help moderately successful but plateaued enclave business owners break into the national market may be appropriate.

Future work may also want to integrate measures of economic freedom. Economic freedom may have two counteracting effects on the extent to which immigrants contribute to the self-employed population: (1) it is easier to start a business, so immigrants are more likely to enter self-employment; and (2) lower unemployment rates and higher incomes associated with higher economic freedom reduce the incentive to enter self-employment, so immigrants are less likely to enter self-employment. It may also be that immigrant location patterns correlate with economic freedom measures. Thus, there may be significant interaction between where Hispanic immigrants start their businesses and the level of "economic freedom." In neoclassical theory, the level of economic freedom should positively correlate with entrepreneurial activity, and indeed numerous scholars have created indices of economic freedom (Gwartney et al., 1996; Stansel, 2013).<sup>1</sup> While our limited tests of an economic freedom index are inconclusive,<sup>2</sup> other work (Nikolaev et al., 2013) shows impacts on entrepreneurship, so future research may include consideration of measures of economic freedom as the time series grows or as the geographies of index and observations more closely match. Similarly, future work may also expand from Stansel's (2013) 384 metropolitan areas to look at finer delineations of geography (given access to such data) and examine potential spatial spillover effects.

Lofstrom (2002) finds that the higher the unemployment rate in a city, the greater the likelihood of

<sup>1</sup> These indices began at the country level but also show that there can be significant variation in economic freedom at the sub-national level too (Karabegović et al., 2002; Ruger and Sorens, 2013). More recent work by Stansel (2013) shows that there is significant variation in economic freedom among U.S. metropolitan areas, even within states, and that this correlates with per capita personal income and employment. Unfortunately, the data here examines cities rather than metropolitan statistical areas (MSAs), so we cannot use Stansel's (2013) estimates of the economic freedom of cities due to lack of data at the finer level of geographic detail.

<sup>2</sup> Ruger and Sorens (2013) provide state ranking for 2001, 2007, 2009, and 2011, which does not match the time periods under consideration here. To test for significance of the Ruger and Sorens

(2013) state rankings, we examined correlation between the 2000 and 2010 residuals in our POLS regressions, which may indicate over or underperformance, and the 2001 and 2011 state "economic freedom" rankings. Similar to Nikolaev et al. (2013), we follow the same procedure with the "fiscal policy" component ranking. The only statistically significant correlation (at the 5% level) is small (0.039) and between the economic freedom ranking and the residual on regression (3), which has immigrant population as the dependent variable. The inclusion of state fixed effects likely controls for most of these effects, though results may improve in the future if the index continues to be maintained or if researchers create a more comprehensive dataset based on cities.

self-employment. Future research should want to include more controls for such factors as the unemployment rate. Future research can also explore the relationships found in our work with respect to services in more detail. The service sector is diverse, including disparate activities such as gardening and finance. While the results indicate that the size of the service sector in the local economy is positively related to the proportion of the population that are immigrants, it is possible that the story may be more nuanced if the sector is more finely divided into higher-order and lower-order services. Including non-urban areas in future research is also needed to inform national policy recommendations. The situation in rural areas may be quite different due to large regions of population stagnation or decline that may provide openings in existing business niches that at once provide a better quality of life for long-term residents (e.g., more choices as consumers) and an income for newcomers. Finally, some immigrant self-employment takes place in the underground economy and is not reported to the Census. Rajzman (2001) suggests census data do not sufficiently cover some economic activities, such as part-time, irregular work or informal self-employment. Future research may want to examine this aspect of Latino business ownership. Although this paper includes a control for unpaid family workers, some underground work may not be captured and thus, given availability, future research may want compare results using a non-Census dataset that is not subject to such biases.

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