Helping Immigrant Workers Wherever They Can: Ethnic Economies, Economic Downturns, and the American Suburbs

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Abstract

Economic downturns often hurt foreign-born workers more than native-born workers. Some evidence suggests that ethnic minorities respond by working in the ethnic economy, where, unlike in the larger labor market, business owners may be more inclined to take on extra help in order to protect co-ethnics from unemployment. Scholars rarely treat this as a viable phenomenon because no nationally representative study has demonstrated its occurrence. Using community-level American Community Survey data from before and after the Great Recession on eight national-origin groups, this study finds the phenomenon to occur on a large scale. Nevertheless, the protective effect of ethnic economies is limited to urban areas. Suburban ethnic economies are more likely to accelerate unemployment growth. The vulnerability of suburban ethnic agglomerations is not driving the results; rather, it is those suburban regions whose small ethnic populations likely live there principally to maintain ethnic economy establishments. Scholars should take seriously the role of ethnic economies during downturns and acknowledge how American suburbs provide unique contexts for international migrants and their employment patterns.

Introduction

The story of economic downturns throughout American history is almost always intertwined with immigrant disadvantage. Immigrant workers have generally suffered greater unemployment during recessions than native-born workers who belong to majority groups (Elsby et al., 2010). For instance, during the Great Recession, which lasted in the United States from December 2007 to June 2009, the unemployment rate reached a high of 9.2 percent for immigrants versus a high of 8.3 percent for native-born workers (Orrenius and Zavodny, 2009:3). Immigrants also experienced some of the largest losses in household wealth during the same period (Wolff et al., 2011).

The immigrant experience during the Great Recession was unique in American history due to the spatial dispersal of international migration into the suburbs. Although many immigrants continued to concentrate in densely populated neighborhoods in central cities, as had often been the case in prior epochs, others branched out into the suburbs to both live and work (Singer et al. 2008). The suburbs experienced a rapid increase in poverty during the 2000s (Kneebone and Berube 2013), and suburban job growth has been associated with suburban communities whose minority populations are small (Stoll et al. 2000). Scholars are only beginning to grapple with the ways in which the suburbanization of immigration and labor markets affect one another, although research is fairly consistent in arguing that immigrants are disadvantaged due to a lack of public transportation, language services, and job placement programs in the suburbs compared to the city (Liu and Painter 2012, Allard and Roth 2010). As such, the fate of immigrant communities during recessions may play out in unique ways in the suburbs.

Evidence is mounting that ethnic economies are growing rapidly in the suburbs along with foreign-born residents (Liu and Abdullahi 2012, Somashekhar 2014). Ethnic economies are business clusters in which participants identify with the same ethnicity, forming an internal labor market that can provide an alternative trajectory toward economic mobility than the open labor market (Bailey and

Waldinger 1991, Light and Gold 2000). In the past, when ethnic economies were almost exclusively an urban phenomenon, scholars suggested that the operation of ethnic economies during downturns contrasted with that of firms in the open economy. About collections of businesses owned by the foreign-born Chinese of California during the Great Depression, Ivan Light states,

> In hard times, it was meritoriously customary for Chinese employers to take on *extra* help in their businesses, rather than to fire surplus hands. This custom contrasts dramatically with capitalist theory and practice, and nicely indicates the manner in which the clannish social relationships of employer and employee influenced the conduct of Chinese businesses (1972, 89).

As provocative as this notion is, it needs to be tested on a large scale, integrating measures across ethnic groups and geographic locations. More importantly, in today's America, in which immigrants are dispersed across metropolitan landscapes rather than located in particular neighborhoods, the social bonds that facilitated the contrast between the ethnic and open economies may have diminished.

To bring together the strands of research on international migration, the American suburbs, labor markets, and economic recessions, this paper asks two questions. First, across urban and suburban communities during the Great Recession, did ethnic economies help slow the growth of the unemployment rate of foreign-born workers? If so, why? Second, in spite of the fact that suburbs offer fewer public services that help support foreign-born workers than cities, did the protective effect of ethnic economies in the suburbs mitigate unemployment growth, or were suburban ethnic economies too overwhelmed by the Great Recession to have any protective effect at all? The answers to these questions matter a great deal for scholars of international migration, labor markets, and urban studies.

Literature Review

Much work has looked at the effect of economic downturns on immigrants, and this literature has identified three responses of immigrant workers to the threat of unemployment: leave the country, move to a better-performing local labor market, or turn to self-employment. Immigrants can choose to leave the host country, either going back home or moving to another host country, in order to avoid

unemployment (Carter and Sutch 1999; Kindleberger 1967). In addition, immigrants may move from poorly performing to better performing local labor markets within the host country. At least one group of scholars, for example, estimates that the internal migration patterns of the Mexican-born workforce during the Great Recession reduced the effect of local labor demand shocks on low-skilled natives by more than 40 percent (Cadena and Kovak 2013). Finally, foreign-born workers may turn to self-employment. Self-employment is a common response to economic recessions even among native-born workers (Fairlie 2013), but because immigrants can face added barriers to mobility while doing wage work, they may be more inclined to move into self-employment (Light 1979, Catron 2014). Immigrant self-employment may occur within the context of an ethnic economy, but it is rarely discussed in that context, instead measured and analyzed as an individual-level process. During the Great Recession, Mexican self-employment increased (Catron 2014, Lofstrom et al. 2011), although the role played by ethnic economies in this phenomenon remains unknown.

Overall, scholars have not demonstrated a role for ethnic economies during economic downturns. Evidence from individual case studies of particular ethnic groups has nonetheless demonstrated that ethnic economies protected workers in the past. For instance, during the Great Depression, which lasted from 1929 to the early 1940s in the U.S., *kenjinkai*, or Japanese social organizations, acted as employment agencies for Japanese welfare recipients (Light 1972, 63). This was no trivial matter. Bonacich and Modell estimate that, in 1941, 56.2 percent of Japanese males and 44.4 percent of Japanese females in the United States worked in an ethnic economy (1980, 40). Beyond the Japanese, African-American business startups and employment rolls grew in industries catering to fellow African-Americans during the same period (Boyd 2000), and Jewish credit agencies provided loans to co-ethnic business owners with the explicit purpose of preventing the collective reversal of Jewish gains in America (Tenenbaum 1993, 59). The Great Depression was not the only era in which ethnic economies

provided employment to immigrant workers. The recessionary 1970s in America spawned ethnic entrepreneurship among Chinese, Japanese, Mexican, and Indian workers (Light 1979).

In the years leading up to the Great Recession, ethnic economies played an important role for the ethnic labor force, just as they did in the past. Averaged estimates across 99 ancestry groups in the U.S. place 15 percent of the current ethnic minority labor force in an ethnic economy (Light and Gold 2000, 32-33). Nevertheless, unlike in prior periods from which most evidence about ethnic economies comes, immigrants and their residential and work patterns today are incredibly dispersed. Immigrants traditionally tended to live in dense urban neighborhoods, and many ethnic economies started out by catering to co-ethnic clientele in these neighborhoods (Waldinger et al. 1990).[1] Today's immigrants have spread all across metropolitan America to live and work, however, and they have created new spatial forms of immigrant community and economic activity. These spatial forms include heterolocalism (Zelinsky and Lee 1998), ethnoburbs (Li 2009), and ethnic neighborhoods (Logan et al. 2002). A common thread among these spatial forms is their emphasis that immigrants and immigrant-owned businesses are no longer confined to concentrated urban areas and have spread across the metropolis. Indeed, because of the suburbanization of jobs, increased housing prices in the city, and the growing diversity of inequality within the suburbs, immigrants are sometimes bypassing cities altogether, shifting migration streams toward the suburbs (Singer et al. 2008, Hanlon 2010, Kneebone and Berube 2013). Suburban municipalities have been grappling with these demographic changes, and unlike cities, which are more likely to have a history of immigration as well as an infrastructure for helping them adapt to local conditions, suburbs are sometimes ill-equipped to incorporate their changing populations into the polity and economy. Suburbs offer fewer language services, have a weaker public transportation infrastructure, and can be more hostile toward immigrants than cities (Kneebone and Berube 2013, Jones-Correa 2008). Immigrant-owned businesses in these environments

are less likely to protect workers because they are likely struggling with local economic and social conditions themselves.

In sum, despite the importance of ethnic economies during downturns suggested by previous research, little to no nationally representative research has tested if ethnic economies have any effect on immigrant workforces across urban and suburban communities. Prior research, moreover, takes little account of how labor market conditions may differ between cities and suburbs, and even within suburbs themselves. The next sections will lay out a nationally representative test of the protective effect of local ethnic economies during economic recessions.

Hypotheses

The extent to which ethnic economies have a protective effect on unemployment rates during economic downturns is unclear. During recessions, however, there can be normative pressure among immigrant and ethnic minority communities for co-ethnic business owners to provide jobs to unemployed co-ethnics (Light 1972, 89). Furthermore, the density of social networks within ethnic communities enables ethnic economy workers to connect unemployed co-ethnic job seekers to job vacancies (Light and Gold 2000, 119-120; Portes and Sensenbrenner 1993; Waldinger et al. 1990). Ethnic economies, therefore, may decrease the unemployment rate among co-ethnics during downturns. This should particularly be the case where a greater proportion of the ethnic workforce is in the ethnic economy. If the proportion of the ethnic workforce in the ethnic economy is small, then an unemployed ethnic worker in the open labor market may struggle to tap into the network of co-ethnics who can help them find an ethnic economy job.

> ***Hypothesis 1****: For each local ethnic workforce, as the proportion of workers in the ethnic economy prior to the onset of the economic downturn grows, the greater the decrease, or the smaller the increase, in the local ethnic unemployment rate at the end of the downturn.*

Urban and suburban ethnic communities may not face a similar set of conditions, however. During economic downturns, the spatial dispersal of ethnic economy workers across cities and suburbs poses additional complications. First, increases in unemployment may be greater among suburban ethnic workforces because safety nets are not in place to help minority populations (Kneebone and Berube 2013). Second, suburban ethnic economies have less capacity to absorb workers because they are newer and smaller than many urban ethnic economies (Liu and Abdullahi 2012, Somashekhar 2014). Third, the lower density of suburban communities may translate into less efficient communication across social networks that can connect the unemployed to job vacancies. Consequently, Hypothesis 2 speaks to the distinction between urban and suburban communities.

> ***Hypothesis 2****: For each local ethnic workforce, a greater proportion of workers in the ethnic economy prior to the onset of the economic downturn will slow down growth in the unemployment rate. Among suburban local ethnic workforces, however, a greater proportion of workers in the ethnic economy prior to the onset of the economic downturn will yield an increase in the local ethnic unemployment rate.*

Data

Data come from American Community Survey (ACS) microdata on 25 to 64 year olds in the largest 100 metropolitan statistical areas (MSAs) in America. Pre-recession values come from the 3-Year 2005-7 ACS; post-recession values come from the 3-Year 2009-11 ACS. Although the recession officially occurred between the end of 2007 and the middle of 2009, which overlaps with what I identify as the pre- and post-recessionary eras, data were mostly collected outside the time bounds of the recession. Furthermore, the effects of the recession on labor markets, including unemployment, lasted well beyond 2009 (Hout et al. 2011). One could use the annual ACS estimates to conduct an analysis of ethnic economies throughout the Great Recession, but I look at ethnic economies for specific ethnic groups in specific communities. Annual samples would be too small to conduct this type of analysis and would put the estimates' reliability into question. It is better to use 3-year estimates, which balance the ability to identify before and after conditions with the stability of estimates.

The smallest geographic unit on which data are available is the Public Use Microdata Area (PUMA), a geographical unit consisting of 100,000 to 200,000 residents. Similar to the use of Census tracts as a proxy for neighborhoods, PUMAs are a proxy for local communities (Owens and Sampson 2013:4). The ethnic workforce living in a given PUMA is this paper's unit of analysis. Although the analysis of Hypothesis 1 ignores urban or suburban status, the analysis of Hypothesis 2 requires one to operationalize suburban status clearly. Scholars have distinguished between suburbs and cities in many ways (Hanlon 2010), and for the purposes of this paper, I treat the first city in each MSA's name as the central city and treat the remainder of the MSA as suburbs. Although this ignores the urban condition of secondary cities in a metropolitan area, it creates a distinction between large cities and other cities, the former usually being the most likely immigrant gateway in each MSA. This strategy for identifying suburbs has been used in prior research in urban studies (Berube and Frey 2005).

Even though the unit of analysis is the ethnic workforce at the PUMA level, I identify those industries comprising ethnic economies at the level of the metropolitan area. This is because ethnic economies today are spread all across the metropolis (Li 2009, Zelinsky and Lee 1998). In addition, a comprehensive analysis of ethnic economies nationwide found the majority of ethnic economy industries to be consistent when the ethnic economy includes the entire metropolitan area or is limited to the central city (Logan et al. 1994). Many PUMAs, furthermore, are so small that estimating the overrepresentation of workers in particular industries leads to large variation in ethnic economy profiles, often inconsistent with prior literature. It is a safer assumption that ethnic economy industries be defined at the metropolitan level.

Moreover, focusing on residential PUMAs rather than place-of-work PUMAs is the best approach to identifying community-level dynamics of workforce characteristics. Although workers may live in one PUMA and work in another, evidence has shown that job search among low-skilled immigrant workers susceptible to working in an ethnic economy often occurs through friends and family in their

local neighborhoods (Elliot and Sims 2001). Even more, evidence shows how access to high quality job networks are often concentrated in particular residential areas. Unemployed workers as a group are often spatially concentrated as well (Elliot 1999). Finally, many ethnic economy workers frequently live near where they work, although the most successful ethnic business owners may move to a better neighborhood or town while maintaining their business in the ethnic economy (Portes and Jensen 1992).

In order to determine the set of industries that are likely part of a group's ethnic economy, I adapt and expand a measure based on industrial odds ratios for self-employed and wage working individuals created by Logan et al. in 1994. The use of Census data to identify ethnic economies has inspired much work in the field (e.g. Logan et al. 2002; Model 1992), and the approach of Logan et al. (1994) is the most comprehensive. An example makes clear how their operationalization works. To see if the restaurant industry is part of the Chinese ethnic economy in the New York metro area, one would first calculate the odds that a restaurant owner or worker in the New York area is Chinese rather than non-Chinese. Then, one would divide this value by the odds that an owner or worker is Chinese in all other industries in the New York area. If the odds ratio is greater than or equal to 1.5, then all of the Chinese owners and workers who work in the restaurant industry are treated as part of the Chinese ethnic economy of the New York metro area.[2] I only use the pre-recession sample to identify ethnic economy and non-ethnic economy industries, applying the distinction to individuals in both the pre- and post-recession samples.[3]

In addition to the odds ratio specification, I limit industries in the analysis to those that are non-professional, non-agricultural, non-mining, non-military, and non-governmental. Governmental and military workers are by definition not self-employed; farmers and miners are unlikely to be found in metropolitan areas; those in professional industries can rely on class resources over ethnic resources to start a business (Light and Gold 2000, 83). Note that, even though professional industries are excluded

from the analysis, workers in professional occupations in non-professional industries may be included in the analysis.

Methods and Variables

The dependent variable used to test Hypothesis 1 is the change in the PUMA-level unemployment rate from before to after the recession for the ethnic workforce in question. The independent variable is the proportion of the PUMA-level ethnic workforce that worked in the local ethnic economy prior to the recession. A fundamental problem of analyzing the effect of ethnic economy workers on unemployment change is that the analysis will select on those PUMAs that have ethnic economy workers. In other words, one must control for the bias inherent in studying the association between ethnic economy workers and unemployment even though not all PUMAs have ethnic economy workers.

In order to control for this selection bias, I apply a Heckman correction, a two-step procedure to test the hypotheses (Heckman 1979). The first step involves the calculation of a probit model of regressors that determine the likelihood of a PUMA's ethnic workforce having workers in the ethnic economy. These include the logged ethnic population of each PUMA, the percent of the PUMA-level ethnic population that is foreign-born, and the proportion of the PUMA-level ethnic workforce that is self-employed, each of which has been shown to positively influence ethnic economy creation (Waldinger et al. 1990, Evans 1989, Light and Gold 2000). The estimates of this probit model are then used to calculate the inverse Mills ratio, λ, which is used as a regressor in a second equation. The second equation is an OLS equation that tests the association between unemployment growth and the pre-recession portion of the workforce in the ethnic economy. This second equation, used to test Hypothesis 1, is shown below.

$$\Delta U_{wp} = \beta_0 + \beta_1 E_{wp} + \sum_{j=1}^{k} \beta_{jwp} C_{jwp} + \sum_{q=1}^{r} \beta_{qm} C_{qm} + \varphi_0 \lambda_{wp} + e \qquad (1)$$

where ΔU_{wp} is the change in the unemployment rate from the pre- to post-recession periods for a given local ethnic workforce w in a given PUMA p, E_{wp} is the proportion of the pre-recession ethnic workforce that was in the ethnic economy, C_{jwp} is a series of k control variables at the level of the ethnic workforce w in PUMA p, C_{qm} is a series of r control variables at the level of the metropolitan area m, and φ_0 is the regression coefficient of λ_{wp}, which can be seen as the estimator of the covariance between the errors in the equation predicting having ethnic economy workers and the errors in the equation predicting unemployment change.

The data include only those national-origin groups that grew through immigration and had more than 500,000 members in 2000. These include Asian Indians, Chinese, Korean, Vietnamese, Mexicans, Cubans, Dominicans, and Salvadorans.[4] Note that regressions specific to each ethnic group would have been ideal, but I need to combine ethnic groups into one regression equation due to small Ns. National-origin groups did not have ethnic economies in every metropolitan area. It may seem counterintuitive to combine the ethnic economies of various ethnic groups together. Indians and Mexicans, for instance, populate different industries and share different human capital profiles in America. I argue that this strengthens the analysis, however. Any hypotheses upheld across these different contexts will be a testament to the robustness of the associations involved.

Control variables include the average age, age squared, and years of education of the PUMA-level pre-recession ethnic workforce, as well as the proportion of the PUMA-level pre-recession ethnic workforce that was male or immigrant. Some evidence shows that unemployment grew worse during the recession for very young and very old workers as well as the less educated, males, and the foreign-born (Elsby et al. 2010). Controls also include the pre-recession industrial mix of the metropolitan area, operationalized as the proportion of the overall workforce in construction, manufacturing, and retail,

respectively. These industries were hit harder by the Great Recession than others (Hout et al. 2011), and changes in PUMA-level employment may in part be attributable to this fact.[5] Finally, I include dummy variables for ethnic group because certain ethnic groups had more PUMAs with ethnic economy workers than others.

I test Hypothesis 2 using the same model specification as Equation (1) excepting that I include another independent variable that interacts the proportion of workers in the ethnic economy with the suburban status of the PUMA. Both Hypotheses 1 and 2 are also tested on native-born, non-Hispanic Whites and Blacks as a means of comparing the ethnic minority models to majority groups. For Whites and Blacks, rather than identify ethnic economy industries, I use the same odds ratio calculation noted earlier to identify the industries in which these respective racial groups were overrepresented. Although Whites and Blacks may be overrepresented in certain niches of the economy, the density of networks and sense of shared fate that characterize many who participate in ethnic economies are likely weaker because characteristics such as linguistic isolation or a lack of citizenship occur less frequently among native-born, non-Hispanic Whites or Blacks (Portes and Sensenbrenner 1993). Consequently, the niching of Whites or Blacks in certain industries should provide less protection from unemployment than should ethnic economies.

Results

Characteristics of Ethnic Economies and Their Growth during the Great Recession

To understand the potentially protective effect of ethnic economies during the Great Recession, one must first understand the industrial, occupational, and geographic composition of ethnic economies prior to the onset of the recession. In terms of industries and occupations, the construction, transportation, and retail industries—particularly those involving restaurants and groceries—dominated many ethnic economies, a common occurrence throughout history due to the low costs of entry (Light

and Gold 2000; Waldinger et al. 1990). Certain unique concentrations within these industrial categories were apparent, however, many of which have been recorded in previous scholarship. For instance, Chinese gravitated toward restaurants (53 percent of ethnic economy workers nationwide did so), Vietnamese toward hairdressing and cosmetology (51 percent did so), Mexicans toward construction (35 percent did so) and Koreans toward laundry (11 percent did so) (Liang and Li 2012; Kang 2010; Yoon 1997). The most common industries among Whites and Blacks were respectively construction (17 percent) and trucking (20 percent). In terms of geography, four metro areas—Houston, New York, Washington D.C., and Atlanta—had ethnic economies for all eight ethnic groups included in the data set. Twenty-eight metro areas only had an ethnic economy for one group, usually Mexicans because these metros were almost all new immigrant destinations fueled by Mexican immigration (Massey and Capoferro 2008).

Beyond mere characteristics, ethnic economy workforces grew by 2.5 percent on average from before to after the Great Recession. This compares to an average of a 1.6 percent growth rate in PUMA-level workforces overall. More importantly, in order to determine how non-ethnic workers comparable to ethnic economy workers fared during the recession, I create a measure I call the non-ethnic growth rate. The non-ethnic growth rate isolates the industries of each PUMA-level ethnic economy workforce and tallies the number of non-ethnic workers in those same industries in those same PUMAs from before to after the recession. The average non-ethnic growth rate was -1.5 percent, implying a contraction among non-ethnic workforces in ethnic economy industries. The faster pace of growth of ethnic economies during the Great Recession supports the possibility that ethnic workers used ethnic economies as a means of avoiding unemployment, particularly considering that non-ethnic workforces in the same industries as ethnic economies decreased in size during the same time period.

Ethnic Economies and the Unemployment Rate

Table 1 presents descriptive statistics of major variables in the data set. As mentioned earlier, the ethnic minority data set combines all ethnic groups together, and each row of the data set includes information on a PUMA-level ethnic workforce. Among majority groups, I omit information on the proportion of the Non-Hispanic White and Black workforces that was foreign-born because I restrict those samples to the native-born. There are three important takeaways from Table 1. First, on average, the local ethnic workforces included in the data set were heavily comprised of foreign-born workers. When one talks of ethnic economies in America, they are in large part discussing a phenomenon driven by and affecting foreign-born workers, a finding verified by others (Nee et al. 1994; Portes and Shafer 2007). Second, growth in the unemployment rate was less among ethnic minorities than for Whites. Growth in unemployment was different for Asian and Hispanic groups, however. The growth in the unemployment rate among Asians was 2.46 percent on average, whereas it was 4.04 for Hispanics. Others have shown that unemployment grew less for Asians than Whites during the Great Recession, while Hispanics suffered higher growth in unemployment (Elsby et al. 2010). Third, ethnic workforces were slightly more suburbanized than Whites, which may demonstrate the degree to which the suburbs are diversifying (Kneebone and Berube 2013). When the data set is restricted to those combinations of PUMAs and ethnic workforces that had at least one ethnic economy worker, however, the suburban portion of PUMAs dropped to 67 percent, below the suburbanization rate of Whites.

[Table 1]

Table 2 shows multivariate regressions that test Hypothesis 1, which argues that growth in the ethnic unemployment rate slowed as the proportion of the pre-recession workforce in the ethnic economy increased. Models (1) through (3) use as their dependent variable the change in the local ethnic unemployment rate. Model (4) uses as its dependent variable the change in the local ethnic employment-to-population ratio as a robustness check on the other models. Model (1) presents a

baseline model that includes the key independent variable and standard control variables. This model shows a modest but statistically significant negative association between the proportion of workers in the ethnic economy and change in the unemployment rate. A one unit increase in the proportion of the local ethnic workforce in the ethnic economy prior to the recession was associated with a 0.02 unit decrease in ethnic unemployment growth. In addition, a more educated workforce was unsurprisingly associated with a decrease in unemployment growth. Finally, the proportion of the metro area's workers in construction prior to the recession was associated with a decrease in unemployment growth as well. This may appear to counter the story that the construction industry was hit hard by the Great Recession (Elsby et al. 2010), but this negative association was largely due to the fact that many housing markets crashed in the pre-recession period, making the proportion of workers in the construction industry artificially low. For instance, the two metro areas with the lowest proportions of workers in the construction industry in the pre-recession period were Las Vegas, NV and San Jose, CA, both hit hard when the housing bubble burst. The final important piece of information in Model (1) is that selection bias had little influence on changes in the unemployment rate.

[Table 2]

Model (2) includes a control indicating whether or not a portion of a given metro area overlapped with a state that implemented E-Verify requirements through 2009. This included ten states.[6] E-Verify is a program to ensure that all new hires in local businesses are authorized to work in the United States in order to deter the employment of undocumented immigrants. The implementation of E-Verify could have affected the relationship between the change in unemployment and the proportion of workers in the ethnic economy in two ways. First, E-Verify programs sometimes encouraged the out-migration of both documented and undocumented immigrant workers from states with punitive employment laws, which potentially left job vacancies available to others (Bohn and Lofstrom 2013). Second, undocumented immigrants may have avoided employment in mainstream

economic enterprises, turning instead to self-employment or ethnic economy jobs that are less concerned with documentation status. This is what occurred after Arizona passed the Legal Arizona Workers Act (Lofstrom et al. 2011). Despite these possibilities, Model (2) shows that the addition of a control for E-Verify does not change the association between the independent and dependent variables.

Similarly, the addition of a control for ethnic population change from the pre-to-post recession periods has little effect on the association between ethnic economy workers and unemployment growth. As mentioned earlier, a common response to economic downturns is for immigrants to move away from high-unemployment areas (Cadena and Kovak 2013; Carter and Sutch 1999), which may have affected changes in the unemployment rate. Ethnic population change is added to Model (3), and here, Hypothesis 1 remains upheld. The positive association between population growth and unemployment change may appear to counter existing literature. Actually, the correlation between the pre-recession ethnic unemployment rate and population change during the recession was -0.04, suggesting that population change may in part have been driven by those workers leaving places that had initially high unemployment rates rather than high unemployment rates during the recession. These workers likely drove up the unemployment rate wherever they moved by the recession's end. Regardless, the association between population growth and unemployment growth is modest and does not influence the association between the dependent and independent variables.

Some scholars argue that the employment-to-population ratio is a better measure of labor market vitality because the unemployment rate ignores those who may have dropped out of the labor force. In Model (4), which uses as its dependent variable the change in the ethnic employment-to-population ratio, a one unit increase in the proportion of the local ethnic workforce in the ethnic economy prior to the recession was associated with a 0.04 unit increase in the employment-to-population ratio, which further corroborates Hypothesis 1.

Finally, Models (5) and (6) test the effect of respective White and Black industrial overrepresentations on unemployment growth. The model for Whites uses OLS estimation without a Heckman correction because only three PUMAs had no White workers in over-represented industries. Among Whites, the association of interest moved in the opposite direction as it did for ethnic minority workforces. Ethnic workforces frequently suffer discrimination, language barriers, and a lack of credentials, all of which encourage the development of dense networks of social and economic support among ethnic communities and their ethnic economies (Portes and Sensenbrenner 1993; Waldinger et al. 1990). Non-Hispanic Whites generally lack these experiences, which means that they are less likely to form these types of support networks. It is therefore unsurprising to see that the association between unemployment growth and the industrial overrepresentation of White workers moved in the opposite direction as it did for ethnic workforces.

Table 3 shows regressions that test Hypothesis 2. Model (1) of Table 3 is simply the same as Model (1) of Table 2 with the addition of two independent variables: a dummy variable for the suburban status of a PUMA and an interaction for suburban status and proportion of workers in the ethnic economy. When the interaction variable is added, the negative association between ethnic economies and lower unemployment growth becomes larger because this quantity now represents the association for urban ethnic economies only. The positive, statistically significant association between the interaction variable and unemployment growth signifies that the protective effect of ethnic economies was limited to urban ethnic economies. This upholds Hypothesis 2. As with Hypothesis 1, the associations found among ethnic workforces were the opposite of what occurred among Whites, highlighting a unique effect among ethnic economies and their associated workforces.

[Table 3]

Why was there a divergence between the relatively protective effect of urban ethnic economy workforces and the relatively harmful effect of suburban ethnic economies? In order to determine likely

mechanisms, I conduct an in-depth analysis of the geography of ethnic economies in New York and Los Angeles during the Great Recession. New York and Los Angeles are not only the two largest metropolitan areas and immigrant gateways in the U.S., they also represent opposite poles of urban planning, with the former being a classical urban core surrounded by suburbs and the latter lacking a distinct core at all (Logan et al. 2002). Moreover, New York was little affected by the Great Recession, whereas parts of the Los Angeles metro area were hardest hit by it (Public Policy Institute of California 2013).

Ethnic Economies in the New York and Los Angeles Metro Areas

The in-depth analysis will focus on three groups in order to simplify trends among ethnic groups: Chinese, Koreans, and Mexicans. The Chinese are stratified by class in New York and Los Angeles and have notable Chinatowns in each central city (Kwong 1996, Li 2009). The Chinese also have an ethnoburb—or a suburban ethnic economy and community in which the ethnic minority group has a significant concentration but does not necessarily comprise a majority—in the San Gabriel Valley outside of Los Angeles (Li 2009). The Chinese ethnoburb outside Los Angeles is perhaps the most vibrant suburban ethnic economy in America. Koreans have strong ethnic economy presences in New York and Los Angeles as well (Min 1996), including an ethnoburban presence outside of New York City (Li 2009:174). Mexicans have weaker ethnic economies than do the Chinese and Koreans in America (Portes and Bach 1985). Regardless, Mexicans and their ethnic economy workforces are spread all throughout Los Angeles and New York. In Los Angeles, Mexicans are highly suburbanized (Logan et al. 2002), and in New York, the presence of Mexicans is much smaller but rapidly growing. New York's Mexican community concentrates in Brooklyn and Queens, but Mexicans live in many parts of the New York metropolitan area because of the availability of construction jobs and related occupations all over the region (Begard 2013).

One potential reason that urban ethnic economy workers were associated with slower unemployment growth while suburban ones were associated with faster unemployment growth may have been because ethnoburbs concentrated the disadvantages of foreign-born workers in the suburbs. Table 4 uses Global Moran's I statistics to determine how spatially clustered unemployment change and ethnic economy workforce proportions were in the New York and Los Angeles metro areas. The Global Moran's I ranges from -1 to 1, in which -1 means similar values are perfectly geographically dispersed and 1 means similar values are perfectly geographically concentrated.[7] High Moran's Is for both unemployment growth as well as ethnic economy workforce proportions could suggest that suburban agglomerations of ethnic economy workers increased unemployment among ethnic workers during the Great Recession.

[Table 4]

According to Table 4, there was generally no association between geographic space and unemployment growth, whether or not the central city was included in the calculation or not. The proportion of workers in the ethnic economy, on the other hand, appears to have been spatially concentrated, particularly in New York. In fact, among Chinese workers in the New York MSA, even when the central city was omitted from the calculation of the Moran's I statistic, the spatial concentration remained meaningful at 0.37. Figure 1 reveals PUMA-level Chinese workforces in which high Local Moran's I statistics clustered together. Unlike the Global Moran's I statistic, which measures average geographic concentration or dispersal of a particular value, the Local Moran's I statistic can detect where clusters of high values are spatially concentrated.[8] Panels (a) and (b) show notable clusters of areas with high ethnic economy worker proportions, and panels (c) and (d) show comparable maps for unemployment growth. Panels (a) and (c) include the entire New York area whereas panels (b) and (d) are limited to the suburbs.

[Figure 1]

Within the suburbs, there was a spatial concentration of both high ethnic economy workforce proportions as well as high unemployment growth immediately southwest of New York City, in New Jersey. Although scholars have discussed the concentrations of Chinese workers in various affluent New Jersey suburbs of New York (Aptekar 2009, Lurie and Mappen 2004), the concentrations in Figure 1 came from poorer cities such as Newark and Bayonne. These areas had small Chinese populations, but the populations who worked there were largely in the ethnic economy. Parts of the New York area more traditionally associated with large Chinese populations, such as Flushing, Queens, or Edison, NJ (Li 2009:175, Aptekar 2009), had workforces whose proportions in the ethnic economy were more modest because their ethnic populations were so big.

This finding strongly suggests that the small ethnic population of certain suburban areas drove up unemployment among suburban ethnic workforces. Suburban areas with smaller ethnic populations, unlike ethnoburbs, are associated with a weaker ethnic infrastructure as well as a polity less accommodating of immigrant populations (Li 2009). Table 5, which presents correlations between ethnic economy workforce proportions and logged ethnic population size, supports this assertion. In order to be included in Table 5, a PUMA-level ethnic workforce needed to include at least one ethnic economy worker. Across almost all groups in both Los Angeles and New York, correlations were much more strongly negative among suburban than urban workforces. The lone exception was Mexicans in Los Angeles, whose population is large and diffused throughout the L.A. region.

[Table 5]

Cities generally have a more established ethnic infrastructure and more supportive social services than the suburbs (Singer et al. 2008, Kneebone and Berube 2013, Allard and Roth 2010), which likely mitigated the growth of unemployment in small, urban ethnic workforces that were heavily concentrated in the ethnic economy. This contrasts with the suburbs, where evidence shows that small ethnic populations may move to areas without social supports specifically to maintain ethnic economy

establishments in a new market (Liang and Li 2012, Dhingra 2012). It is likely that small, suburban ethnic workforces that concentrated in the ethnic economy were therefore least able to absorb extra workers during downturns. In addition, small, suburban ethnic workforces have few resources to draw on during recessionary periods, both from co-ethnics as well as from the local community at large.

Discussion and Conclusion

This paper combined three previously unconnected literatures on ethnic economies, economic downturns, and the American suburbs. The paper supports the argument that ethnic economies operate by the opposite logic of the open labor market, taking on extra workers rather than firing them during recessions. This finding corroborates suggestive research claiming that ethnic economies protect foreign-born workers during downturns because ethnic economy participants either actively want to help unemployed co-ethnics or do so out of normative pressure from the co-ethnic community (Light 1972, Tenenbaum 1993). Although the association between slower unemployment growth and ethnic economy workforces during the Great Recession was modest, this association was stronger among urban rather than suburban ethnic economy workforces. Suburban areas with large proportions of workers in the ethnic economy actually accelerated unemployment growth. Rather than attribute the positive association between ethnic economies and increased unemployment to suburban ethnic agglomerations, I attribute it to those suburban areas with small ethnic workforces that work almost exclusively in the ethnic economy. A small ethnic workforce in a suburban locale away from major ethnic population centers is likely less able to take on extra workers during downturns and may in fact contribute to unemployment rolls. The lack of social services offered to minority populations in many suburbs may compound this fact (Kneebone and Berube 2013, Allard and Roth 2010).

Scholars rarely address the use of ethnic economies as a response to economic downturns, privileging instead either theories about the out-migration of foreign-born workers or their turn toward

self-employment (Carter and Sutch 1999, Cadena and Kovak 2013, Catron 2014, Light 1979). This paper shows that these scholars should pay more attention to how ethnic economies affect foreign-born workers during downturns. More generally, scholars should recognize that contexts exist in which hiring decisions during economic downturns counter trends in the general labor market. This paper also addresses how international migration is changing America's suburbs because the protective effect of ethnic economies often does not extend beyond the borders of central cities. The suburbs, which, in contrast to many cities, often lack language services, public transportation, and a non-profit infrastructure to support ethnic minorities (Kneebone and Berube 2013, Allard and Roth 2010), appear to disadvantage those communities with a large proportion of ethnic economy workers. Future research should more thoroughly identify how and why suburban ethnic economies operate differently than those in central cities.

While this study provides initial evidence that, during economically unstable times, ethnic economies inclusive of many local ethnic workers are associated with a decrease in the growth of unemployment, future research must use measures that go beyond employment (e.g. firms, revenues, and payrolls) to better understand how economic downturns ripple through the supply side of the economy. In addition, individual-level panel data are ideal to look at transitions into and out of ethnic economy work (or the workforce entirely) to better understand what it means for ethnic economies to buffer workers from downturns. More in-depth case studies can better assess why some ethnic economies protect workers from unemployment more than others. Finally, the identification of ethnic economies in this paper may suffer from the modifiable areal unit problem (Openshaw 1983), in which ethnic economies might look different if PUMA boundaries are modified. Local surveys may be able to use more appropriate local boundaries than PUMAs. More research is clearly needed on how international migration, economic downturns, labor markets, and the suburbs interconnect.

Notes

1. For the sake of brevity and to focus on the more common types of ethnic economies, this discussion excludes the development of middleman minority ethnic economies (Bonacich and Modell 1980).

2. Results are largely consistent no matter the odds ratio cutoff used above 1.5. However, as the odds ratio cutoff grows higher, Chinese ethnic economies make up more of the data set because of their ubiquity in metropolitan areas and the remarkable concentration of many Chinese workers in the restaurant industry. An odds ratio of 1.5 balances the need to capture overrepresentation while maintaining the flexibility necessary to find ethnic economies under a variety of industrial contexts.

3. When the odds ratio method is applied to the post-recession sample, the industries identified as part of the ethnic economy are similar to the pre-recession sample, meaning that ethnic economies did not grow into other niches in response to the recession.

4. Although this list should also include them, I omit Filipinos and Jamaicans from the analysis. These groups have such small ethnic economies that ACS estimates on them are virtually non-existent.

5. I did not use a multilevel model for my data because the intraclass correlation among metro area industrial mixes was 0.05. This indicates that only five percent of variation in my model came from industrial mix variables, a negligible amount.

6. For a list of the states that implemented E-Verify laws during this period, see Liu and Edwards (2012).

7. More formally, the Global Moran's I statistic may be defined as

$I = \frac{n}{\sum_{i=1}^{n}\sum_{j=1}^{n} w_{ij}} \frac{\sum_{i=1}^{n}\sum_{j=1}^{n} w_{ij}(y_i - \bar{y})(y_j - \bar{y})}{\sum_{i=1}^{n}(y_i - \bar{y})^2}$, where y_i is the ith observation, $\bar{y}$ is the mean of the variable of interest, and w_{ij} is the spatial weight of the link between units i and j (Bivand et al. 2008:259). In this case w_{ij} is the inverse of spatial distance between i and j.

8. The Local Moran's I statistic may be defined as $I_i = \frac{(y_i - \bar{y})\sum_{j=1}^{n} w_{ij}(y_j - \bar{y})}{\frac{\sum_{i=1}^{n}(y_i - \bar{y})^2}{n}}$. For an explanation of the variables, see footnote 7.

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Table 1. Descriptive Statistics of Key Variables

Variables	All Ethnic Workforces		Non-Hispanic Whites		Non-Hispanic Blacks	
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Dependent Variable						
ΔUnemployment Rate	3.31	6.24	3.58	3.04	4.68	5.44
Independent Variable						
Proportion in EE (in %)[1]	16.48	11.50	27.07	8.30	10.74	5.21
Control Variables						
Mean Age of Workforce (in Yrs)	41.04	3.96	45.26	1.80	43.52	1.85
% of Workforce That Was Male	50.59	13.71	50.03	3.19	46.93	6.56
% of Workforce That Was Foreign-Born	80.50	21.64				
Mean Years of Education of Workforce	13.52	2.48	14.37	0.94	13.48	0.76
Industrial Mix of MSA						
% of Workers Overall in Construction	10.28	2.19	11.12	2.35	11.07	2.26
% of Workers Overall in Manufacturing	10.82	3.87	11.66	4.26	11.27	4.05
% of Workers Overall in Retail	13.16	1.10	13.34	1.09	13.25	1.04
Suburb	0.71	0.45	0.69	0.46	0.64	0.48
N_U	1993		1250		835	
N_C	2305		14		422	
N	4298		1264		1257	

1. 'Proportion in EE' refers to the proportion of the local ethnic workforce that works in the ethnic economy. For Whites and Blacks, rather than the proportion in the ethnic economy, this metric can be interpreted as the proportion of the local racial workforce that is overrepresented as self-employed and wage workers in local industries.

Values are specific to each local ethnic workforce. In addition, values are only taken from the pre-recession period unless preceded by **Δ**, in which case the value represents the change in the variable from the pre- to the post-recession periods. Furthermore, 'N_U' refers to the number of uncensored values, and 'N_C' refers to the number of censored values.

Table 2. Regressions of the Change in the Ethnic Unemployment Rate on Selected Variables

	Ethnic Workforce Models				Non-Hispanic Whites	Non-Hispanic Blacks
Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Independent Variable						
Proportion in EE[1]	-0.02*	-0.02*	-0.02*	0.04*	0.05***	-0.06
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.04)
Control Variables						
Mean Age of Workforce	-0.17	-0.16	-0.14	-2.43	-1.76	3.71
	(0.73)	(0.72)	(0.72)	(1.39)	(1.04)	(3.24)
Mean Age[2] of Workforce	0.00	0.01	0.00	0.32	0.02	-0.04
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.04)
% of Workforce That	0.02	0.02	0.03	-0.13***	-0.03	-0.04
Was Male	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)
% of Workforce That	0.02	0.01	0.01	0.04*		
Was Foreign-Born	(0.10)	(0.10)	(0.10)	(0.02)		
Mean Years of Education	-0.22*	-0.22*	-0.24*	0.30	-0.78***	-0.31
of Workforce	(0.11)	(0.11)	(0.11)	(0.21)	(0.09)	(0.26)
Industrial Mix						
% of Workers Overall in	-0.21**	-0.21**	-0.19**	-0.07	-0.24***	-0.29**
Construction	(0.06)	(0.07)	(0.06)	(0.13)	(0.04)	(0.09)
% of Workers Overall in	-0.15	-0.15	-0.09	-0.14	-0.10	-0.33
Manufacturing	(0.29)	(0.30)	(0.29)	(0.57)	(0.16)	(0.40)
% of Workers Overall in	0.21	0.20	0.21	0.25	-0.04	0.42*
Retail	(0.16)	(0.16)	(0.16)	(0.30)	(0.08)	(0.21)
λ	-0.62	-0.63	-0.75	-3.11***		1.14
	(0.39)	(0.39)	(0.39)	(0.76)		(0.59)
Ethnic Group Controls	Yes	Yes	Yes	Yes	No	No
Other Control Variables						
E-Verify		0.16				
		(0.56)				
ΔPopulation, Logged			0.01*			
			(0.00)			
Intercept	7.91	7.92	6.86	43.40	72.65**	-65.68
	(15.33)	(15.34)	(15.29)	(29.58)	(24.44)	(70.36)
R^2	0.29	0.29	0.34	0.28	0.46	0.09

*p<0.05, **p<0.01, ***p<0.001

1. See note 1 of Table 1.

Values are specific to each local ethnic workforce. In addition, values are only taken from the pre-recession period unless preceded by **Δ**, in which case the value represents the change in the variable from the pre- to the post-recession periods.

Table 3. Regressions of the Change in the Ethnic Unemployment Rate on the Suburban Interaction Variable

Variables	Ethnic Workforce Model (1)	Non-Hispanic Whites (2)	Non-Hispanic Blacks (3)
Independent Variables			
Proportion in EE[1]	-0.05**	0.09***	-0.08
	(0.02)	(0.02)	(0.06)
PUMA is Suburban	-0.23	0.22	0.59
	(0.41)	(0.34)	(0.44)
EE*Suburban	0.04*	-0.05*	0.02
	(0.02)	(0.02)	(0.07)
Control Variables			
Mean Age of Workforce	-0.17	-1.57	3.79
	(0.72)	(1.04)	(3.30)
Mean Age[2] of Workforce	0.00	0.02	-0.05
	(0.01)	(0.02)	(0.04)
% of Workforce That	0.03	-0.06	-0.03
Was Male	(0.02)	(0.03)	(0.03)
% of Workforce That	0.04		
Was Foreign-Born	(0.10)		
Mean Years of Education	-0.22*	-0.78***	-0.38
of Workforce	(0.11)	(0.09)	(0.28)
Industrial Mix			
% of Workers Overall in	-0.21**	-0.24***	-0.31**
Construction	(0.07)	(0.04)	(0.09)
% of Workers Overall in	-0.31	-0.07	-0.26
Manufacturing	(0.30)	(0.17)	(0.41)
% of Workers Overall in	0.23	-0.06	0.44*
Retail	(0.16)	(0.08)	(0.21)
λ	-0.56		0.95
	(0.39)		(0.61)
Ethnic Group Controls	Yes	No	No
Intercept	7.55	51.34	-68.30
	(15.44)	(23.64)	(71.61)
R^2	0.34	0.48	0.09

For notes on this table, see the notes for Table 2.

Table 4. Degree of Spatial Clustering Among Key Variables

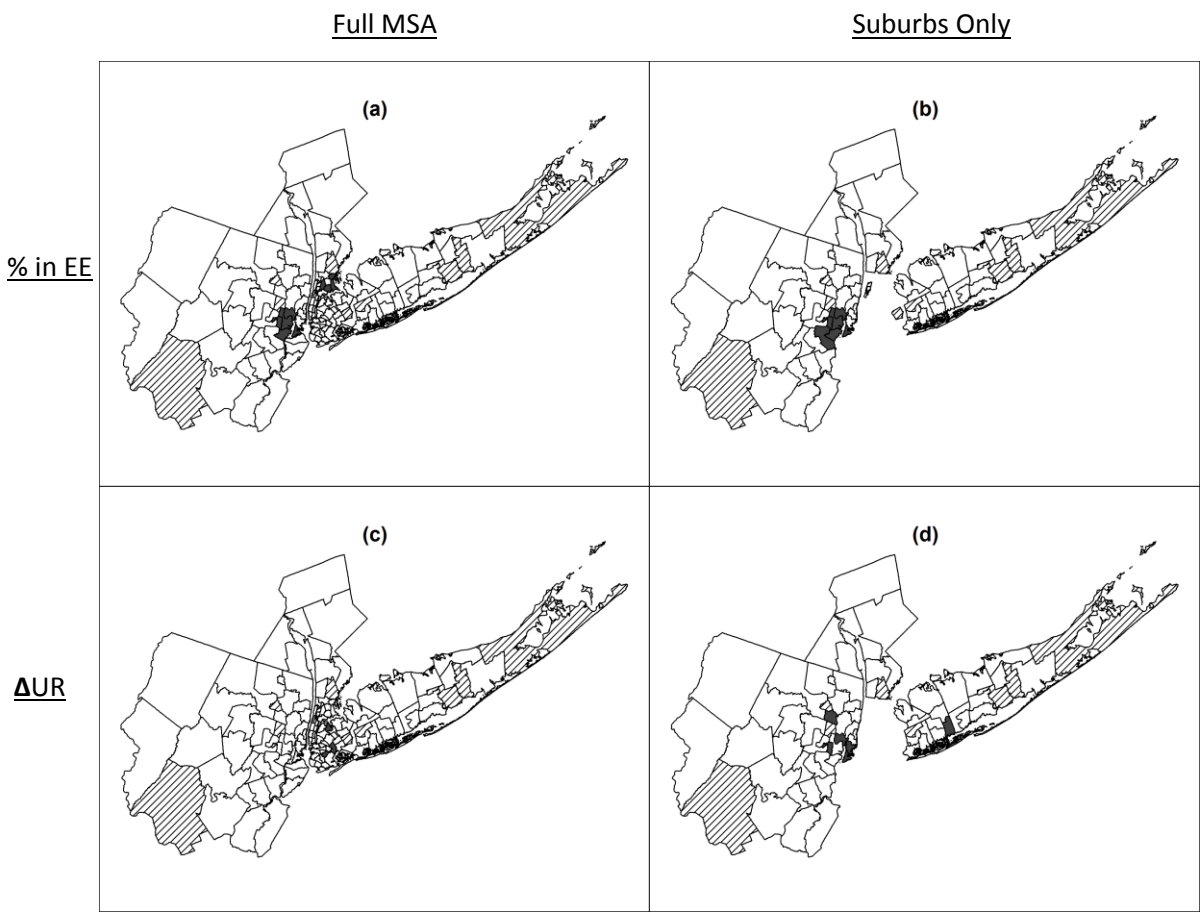
	Overall				Suburbs Only			
	Los Angeles		New York		Los Angeles[2]		New York	
Group	%inEE[1]	ΔUR[1]	%inEE	ΔUR	%inEE	ΔUR	%inEE	ΔUR
Chinese	0.06	0.01	0.37***	-0.08	0.01	0.09	0.37***	-0.02
Korean	0.07	-0.03	0.21**	0.04	-0.13	0.01	0.12	-0.02
Mexican	0.12*	-0.01	0.06**	-0.1	0.04	-0.15	0.03	-0.15

*p<0.05, **p<0.01, ***p<0.001

1. '% in EE' refers to the proportion of the pre-recession local ethnic workforce that worked in the ethnic economy. '**Δ**UR' refers to the change in the local ethnic unemployment rate.

2. Certain municipalities of Los Angeles County, such as Malibu and Beverly Hills, are surrounded by the City of Los Angeles. Omitting the City of Los Angeles, in other words, leaves the PUMAs containing these municipalities without contiguous neighbors, a requirement to calculate Moran's I. To do these calculations, I omit the PUMAs containing these municipalities.

Figure 1. Maps of Local Spatial Clustering Among Key Variables for Chinese Workforces in the New York Metropolitan Area



Darkly shaded areas indicate those PUMA-level Chinese workforces that had a high Local Moran's *I* on a given variable. Diagonal lines indicate that no Chinese ethnic economy workers lived in that particular PUMA. '% in EE' refers to the pre-recession proportion of the local ethnic workforce that worked in the ethnic economy. '**Δ**UR' refers to the change in the local ethnic unemployment rate.

Table 5. Correlation Between Logged Ethnic Population Size and Proportion of Workers in the Ethnic Economy, by Metro Area and Ethnic Group

	Los Angeles		New York	
Variables	**City**	**Suburb**	**City**	**Suburb**
Chinese				
ρ	-0.03	-0.40	-0.13	-0.51
N_{PUMA}	20	52	51	63
Korean				
ρ	-0.05	-0.32	0.21	-0.18
N_{PUMA}	22	52	38	52
Mexican				
ρ	-0.13	0.49	-0.01	-0.16
N_{PUMA}	24	60	47	57

ρ represents the Pearson's product-moment correlation coefficient between logged ethnic population size and the proportion of the ethnic workforce in the ethnic economy prior to the Great Recession. Values are taken at the level of PUMAs, and correlations are calculated for central cities and suburbs separately. N_{PUMA} is the number of PUMAs used in the calculation of the associated ρ.