

Has the Suburbanization of Ethnic Economies Created New Opportunities for Income Attainment?*

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Abstract

Objective. International migration to the U.S. suburbs has upended many theories of urban inequality and immigrant incorporation, including ethnic economy theory. This paper is the most comprehensive study conducted to date on the reasons behind ethnic economy suburbanization and its effect on earnings. *Methods.* The paper uses regression techniques to analyze Census microdata from 1990 to 2010. A series of analyses that aggregate and disaggregate trends across nine ethnic groups identify the extent and influence of ethnic economies in suburban areas. *Results.* Ethnic economy suburbanization is strongly associated with ethnic residential suburbanization, and earnings are no different in the suburban and urban portions of the ethnic economy. *Conclusion.* Although existing research highlights the uniqueness of suburban ethnic economies, suburban ethnic economies are delivering outcomes similar to those found in urban areas. This supports the body of literature arguing that differences between immigrant incorporation patterns in cities and suburbs are diminishing.

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Introduction

Despite the rich history of international migration into major U.S. cities, by 2009, the majority (59 percent) of immigrants lived in suburban rather than urban areas (Suro et al., 2011:4). This is changing how urban scholars and immigration scholars theorize the impact of international migration on communities across the U.S. Demographic changes occurring in suburban areas have led urban scholars to analyze the ways in which the new U.S. suburbs are influencing patterns of social stratification. For example, studies have found that more people in poverty today live in suburban rather than urban areas (Kneebone and Berube, 2013), and that numerous suburbs host multi-ethnic, multi-racial neighborhoods and communities (Iceland, 2009; Logan and Zhang, 2010). Migration scholars, in a different vein, focus on how successfully the foreign born are incorporating into suburban economies and politics. There is little consensus on the success of suburban immigrant integration (Jones-Correa, 2008; Li, 2009; Singer et al., 2008).

Few scholars work at the intersection of these issues, looking at the adaptive strategies that immigrant groups may be employing in order to buffer themselves from the possibility of downward mobility in today's suburbs. One such strategy is ethnic economy creation. Ethnic economies are business clusters in which owners and workers identify with a common ethnicity. Examples include a Chinatown or Little Italy. Many groups throughout history have created ethnic economies in urban neighborhoods, and those ethnic economies have helped workers avoid unemployment and, in some cases, achieve upward socioeconomic mobility (Light and Gold, 2000; Portes and Bach, 1985; Zhou, 1992). To date, few studies have measured the scope and success of suburban ethnic economies. The study of ethnoburbs is rapidly growing to fill this void (Chan, 2012; Li, 2009; Zhou et al., 2008). Ethnoburbs are suburban regions characterized by "vibrant ethnic economies, due to the presence of large numbers of ethnic people, and strong ties to the globalizing economy" (Li, 1998:482). Prominent examples include the Chinese business agglomeration of Monterey Park, CA and the Indian business agglomeration of Edison, NJ. Unlike ethnic economies in poor, urban neighborhoods, ethnoburbs tend to occur in middle-class suburbs because of the economic strength of the groups that create them (Li, 2009:46).

Ethnoburban theory is valuable because it highlights a new form of immigrant incorporation in suburban areas. Nevertheless, ethnoburbs are rare occurrences, and the ethnoburban literature is often comprised of case studies, which suffer the selection bias of analyzing only highly successful ethnic economies in the suburbs (Chan, 2012; Lin and Robinson, 2005; Wang, 2012). In order to make rigorous claims about the suburbanization of ethnic economies and its consequences, there is a need for a more comprehensive analysis of ethnic economies growing in suburban areas. This paper addresses that need. Using a series of analyses that aggregate and disaggregate trends across nine ethnic groups in the United States from 1990 to 2010, this paper asks:

- 1) Why are ethnic economies suburbanizing?
- 2) What effect is ethnic economy suburbanization having on income attainment?
- 3) Ultimately, how similar is suburban ethnic economy growth to that in urban areas?

By answering these three questions, this paper helps bridge the literatures on the new U.S. suburbs and on immigrant incorporation. The paper also moves the study of suburban ethnic economies beyond ethnoburbs to ensure that a wider range of ethnic economies are included in future analyses.

International Migration and the Changing U.S. Suburbs

A rich literature in the social sciences discusses the decades-long settlement of immigrants in the U.S. suburbs (Alba et al., 1999; Massey, 1985). Much of this literature emphasizes a process called spatial assimilation. Immigrants settle in less well-off urban neighborhoods when they first move into the country but eventually move into more well-off areas, such as parts of the U.S. suburbs, as a means of incorporating into the native-born majority. Immigrants settle in impoverished urban areas when they first enter the host society because they lack capital, are discriminated against, and attain housing more readily in urban neighborhoods (Massey, 1985). Alternative perspectives exist, such as place stratification theory, which suggests that discriminatory processes like redlining make it insurmountable for immigrants and their children to overcome the spatial sorting of minority groups into areas away from the majority group (Charles, 2003). Despite the considerable research relying on both the spatial assimilation and place stratification perspectives, neither theory accounts for the possibility that immigrant communities may create a vibrant organizational infrastructure in the suburbs, including businesses that employ and serve the local immigrant community.

Evidence is mounting that immigrants are moving into the suburbs in large enough numbers to form such an organizational infrastructure. The suburbanization of immigrant communities has occurred for several reasons: the growth of labor-intensive industries in the suburbs that frequently employ immigrants (Singer et al., 2008:16); the growing wealth and political power of professional immigrants who have re-invented various suburbs as hubs of ethnic activity (Li, 2009); and advances in communications and transportation technology that obviate the need to live in tightly bound spaces to receive social support from others in the immigrant community (Zelinsky and Lee, 1998). The suburbanization of immigrant communities, furthermore, is happening at a time when the aging infrastructure of inner-ring suburbs and the gentrification of urban areas are encouraging non-Hispanic Whites to move from the suburbs to the city (Frey, 2012; Hanlon, 2010).

Due to these trends, scholars are pointing out the inadequacy of previous theories that associate suburban immigrants with relative prosperity and assimilation into the native-born majority. There has been a dramatic rise in suburban poverty, in part brought on by the number of poor immigrants moving into the suburbs (Suro et al., 2011). The dearth of social services available to immigrants in the suburbs compounds the effects of increased poverty (Murphy, 2007:27). Furthermore, longtime residents of the suburbs have sometimes demonstrated great hostility toward foreign-born newcomers. This can drive away immigrants who formerly buoyed the local economy, as occurred in Riverside, NJ (Greco, 2008). Finally, immigrants are beginning to build churches, community centers, and other organizations in the U.S. suburbs that facilitate the persistence of ethnic identity (Li, 2009; Logan et al., 2002). Among these organizations are businesses that are often part of an ethnic economy.

International Migration and Ethnic Economies

As defined earlier, an ethnic economy can include any business owner or worker who shares the same ethnicity as others in a local business cluster. Nevertheless, ethnic economies are often created and maintained by first-generation international migrants. Members of the first generation may lack marketable skills or face blocked mobility in the general labor market, so they turn to the ethnic economy as a means of avoiding unemployment. The children of first-generation immigrants tend to have more opportunities to attain marketable job skills, so the second generation frequently moves away from the ethnic economy and into the general labor market (Kim, 2004; Waldinger et al., 1990:28-31). For this

reason, although this section will discuss the theory of ethnic economies, the theory largely describes the experience of immigrants rather than ethnics more generally.

The starting point for most ethnic economy theory is the ethnic neighborhood.¹ Residents in tightly bound, densely populated ethnic neighborhoods may desire goods and services that mainstream businesses either cannot or will not supply, such as ethnic groceries or travel services to the home country. Additionally, these communities may be large and concentrated enough to comprise a profitable source of demand. To meet the demand, members of the community familiar with the needs of fellow ethnics become entrepreneurs (Waldinger et al., 1990). Over time, these businesses may accrue enough capital that entrepreneurs move into different niches of the economy beyond the local ethnic client base. In the open market (i.e. outside of the ethnic market), ethnic entrepreneurs face competition from better-capitalized mainstream entrepreneurs, so they tend to move into niches either underserved by or considered too volatile for mainstream entrepreneurs. An example of an underserved niche is grocery stores in low-income African-American neighborhoods (Light and Bonacich, 1988); an example of a volatile niche is the small-scale, special-order apparel industry (Bonacich and Appelbaum, 2000).

If successful, ethnic economies can grow to the point that they employ a sizeable portion of the ethnic workforce. This often occurs through a process of network recruitment in which business owners hire ethnic workers whom they find through their social networks. Workers can also recommend others in their social networks to ethnic business owners in order to help fellow community members find jobs (Light and Gold, 2000). Although many business owners hire fellow ethnic workers as a means of supporting the ethnic community, they sometimes do so in order to exploit community members as a low-wage labor force (Bonacich and Appelbaum, 2000; Waldinger et al., 1990). Workers are nonetheless attracted to the ethnic economy because within its firms they can avoid labor market discrimination, work longer hours, evade taxes, and be in the company of fellow ethnics (Light and Gold, 2000:ch. 3). Recent estimates place 15 percent of the U.S. labor force in an ethnic economy (Light and Gold, 2000:32-33). There are regional concentrations that can be much higher than this, however (Light and Bonacich, 1988; Portes and Bach, 1985).

As migration streams move into suburban areas, scholars are casting doubt on this classic model of ethnic economy development. Individual case studies demonstrate the extensive creation of ethnic

economies in the suburbs among both low- and high-capital ethnic groups (Fong et al., 2007; Oberle, 2006; Wood, 1997). Much research on suburban ethnic economies revolves around the concept of the ethnoburb. Unlike in many urban ethnic economies, participation in ethnoburban businesses may be done by choice rather than as a response to social structural barriers such as blocked mobility in the general labor market. Ethnoburban entrepreneurs may use business partners outside of the ethnic group as well (Li, 2009:45). Despite the conceptual advances made by ethnoburban theorists, ethnoburbs are noteworthy but rare (Li, 2009:175-177). Little nationally representative research has looked beyond ethnoburbs to analyze the suburbanization of ethnic economies of all types. Furthermore, some scholars argue that, rather than support the development of ethnic businesses in the suburbs, suburban residents sometimes travel into the city to purchase goods and services in urban ethnic economies (Zhou, 1992:ch. 8). Although it is clear that international migration is on the rise in the U.S. suburbs, it is unknown how extensively ethnic economies have suburbanized and which market forces are driving suburban ethnic economy development.

Why Have Ethnic Economies Suburbanized?

According to prior research, ethnic economies often come about due to consumer demand within the ethnic community (Waldinger et al., 1990). As the ethnic market, meaning co-ethnic clientele, moves into the suburbs, ethnic economies may follow.

Hypothesis 1a: For each metropolitan-level ethnic economy, as the ethnic market suburbanizes, the ethnic economy suburbanizes as well.

Nevertheless, some models of ethnic economy development treat ethnic demand as synonymous with tightly bound ethnic neighborhoods in cities (Aldrich et al., 1985), so the spatial dispersal of ethnic communities in the suburbs may not generate much ethnic economic activity. Immigrants in the suburbs, moreover, have a propensity to spatially assimilate and patronize non-ethnic businesses (Alba et al., 1999; Massey, 1985). Finally, rather than serving ethnic clientele, ethnic entrepreneurs may be chasing opportunities in the suburbs driven by non-ethnics, such as Vietnamese nail salons serving non-Vietnamese suburbanites (Wood, 1997:61). All of these factors would suggest that suburban ethnic economic activity is attributable to non-ethnic rather than ethnic demand in the suburbs.

Hypothesis 1b: For each metropolitan-level ethnic economy, as the non-ethnic market suburbanizes, the ethnic economy suburbanizes as well.

It is important to note that Hypothesis 1b is not merely a null hypothesis for Hypothesis 1a. Ethnic economies may be suburbanizing due to the growth of both ethnic and non-ethnic markets.

In contrast to the factors noted above, ethnic economy suburbanization may be a consequence of the decentralization of work that has occurred since World War II. Ethnic firms could have moved to the American suburbs for the same reasons that non-ethnic firms did: urban disinvestment, tax abatements for firms moving to the suburbs, and increased reliance by Americans on cars (Glaeser and Kahn, 2001).

Hypothesis 1c: For each metropolitan-level ethnic economy, the ethnic economy suburbanizes in proportion to the overall economy.

The Effect of Ethnic Economy Suburbanization on Income Attainment

Most existing debates about income attainment in ethnic economies come from discussions of wages earned inside versus outside the ethnic economy (Borjas, 1990; Light et al., 1994; Portes and Bach, 1985; Zhou, 1992). Scholars have discussed differences in income attainment between suburban and urban ethnic economies less because suburban ethnic economies are such a new phenomenon. As previously mentioned, the prevailing literature on suburban ethnic economies focuses on ethnoburbs. Scholarship on ethnoburbs shows that one can earn higher wages by working in an ethnoburb compared to an urban ethnic economy (Li, 2009:146-8), but as mentioned earlier, ethnoburbs are rare and may not accurately reflect the entire spectrum of suburban ethnic economies. Nevertheless, because ethnoburbs are the predominant literature on suburban ethnic economies, one should expect that incomes earned in suburban ethnic economies should be higher than urban ethnic economies.

Hypothesis 2a: For a given ethnic economy participant, their income will be higher if they work in a suburb rather than a city.

Looking beyond ethnoburbs, however, it seems possible that suburban ethnic economies are delivering incomes comparable to those found in urban ethnic economies. As international migration suburbanizes, immigrant workers may be creating ethnic economies as a response to discrimination and blocked mobility, just as many of their urban counterparts do (Light and Gold, 2000). Suburban ethnic entrepreneurs may also suffer similar barriers to entry in those niches of the economy dominated by

better-capitalized mainstream entrepreneurs (Waldinger et al., 1990). In other words, suburban ethnic economies may be reproducing the same income attainment patterns associated with urban ethnic economies.

Hypothesis 2b: For a given ethnic economy participant, their income will be no different if they work in a suburb or a city.

Ethnic economies are sometimes successful because entrepreneurs treat densely-populated neighborhoods as captive consumer markets (Aldrich et al., 1985). Ethnic neighborhoods, for example, are often large, concentrated, and in need of ethnic goods and services they cannot get elsewhere. More generally, ethnic economies have been linked to the many benefits of economic agglomeration (Fong et al., 2007). In suburban areas, many of which are spread out and low-density, ethnic economies may not be able to generate high earnings because they lose out on the benefits of agglomeration.

Hypothesis 2c: For a given ethnic economy participant, their income will be lower if they work in a suburb rather than a city.

Data

Data come from five percent microdata samples from the 1990 and 2000 Decennial Censuses as well as the five percent microdata sample from the 2010 American Community Survey (ACS). 1990 is roughly the year in which the suburbanization of international migration to the U.S. began in earnest (Singer et al., 2008), and microdata on workers provide the most geographically fine-grained outcomes for ethnic economies and their workers available from nationally representative data. All microdata come from the Integrated Public Use Microdata Series (IPUMS) maintained by the Minnesota Population Center (MPC) (Ruggles et al., 2015). The MPC organizes its microdata to be directly comparable across years. The 2010 ACS has a smaller sample size and larger sampling error than the 1990 and 2000 Decennial Censuses, but 2010 ACS sampling weights are calibrated using the full 2010 Decennial Census, minimizing biases in the estimates (Census Bureau, 2011).

I operationalize a suburban area as the portion of each Metropolitan Statistical Area (MSA) that, according to the Census Bureau, lies outside of a central city. Appendix A1 explains in detail how I operationalize suburban areas. In total, I include 28 MSAs in the analysis. Each of these 28 metro areas can be cleanly separated into urban and suburban portions according to the criteria in Appendix A1.

Each MSA, furthermore, includes at least one ethnic economy. The 28 MSAs span the U.S., vary in size, and differ in migration histories. Nevertheless, the analysis omits some sprawling metros that lack clearly defined urban-suburban boundaries, such as Los Angeles and Houston. I explain in the conclusion how the findings extend to sprawling regions like L.A.

In order to operationalize ethnic economies, I adapt and expand a measure based on odds ratios created by Logan et al. in 1994. The use of odds ratios to identify ethnic economies has inspired much work in the field, and the approach of Logan et al. (1994) is commonly used (e.g. Logan et al., 2002; Wang, 2010; Wilson, 2003). In short, if the odds are greater than 1.5 that a worker from a given ethnic group is part of a particular industry, then I treat that all ethnic workers in that industry as part of that group's ethnic economy. The paper's analysis is substantively similar even if the 1.5 cutoff is doubled or tripled. I use the 1.5 cutoff because it is used in prior literature and maximizes the number of ethnic economies that can be analyzed. I identify ethnic economy industries uniquely for each group in each MSA, meaning that the Korean ethnic economy in Chicago is comprised of a separate set of industries than the Korean ethnic economy in New York. Appendix A2 contains a more detailed description of how I operationalize ethnic economies.

Similar to Alba et al. (1999:448), I use as my ethnic groups the nine national-origin groups that were growing through international migration during the study period and had more than 500,000 members in 2000.² In addition to these groups, I include native-born, non-Hispanic Whites as a means of comparing trends in ethnic economies to trends affecting the majority group. Non-Hispanic Whites are less likely than ethnic minorities to suffer the same sorts of labor market discrimination and social and cultural capital deficits that encourage the creation of ethnic economies. I therefore use the odds ratio calculation mentioned previously to determine those industries in which Whites were overrepresented rather than to identify where Whites had ethnic economies.

As a final requirement, to be included in the data set, an ethnic economy must have been present across all three time points. This requirement may bias the data away from newer ethnic economies but more accurately addresses the issue of ethnic economy suburbanization. I ultimately organize the data into a set of 68 MSA-level ethnic economies spanning the nine ethnic groups as well as 28 MSA-level collections of industries in which Whites were overrepresented.³ In Figure 1, I list and map the ethnic

economies and MSAs in the data set. Two groups, Filipinos and Jamaicans, only had one ethnic economy—both in the New York City MSA. Whites were unsurprisingly overrepresented in industries in all 28 MSAs.

[Figure 1]

Methods and Variables

I test the hypotheses regarding why ethnic economies (EEs) have suburbanized using OLS fixed-effects regressions. In the analysis, I pool ethnic economies together due to small Ns. Regressions specific to each ethnic group would have been ideal, but national-origin groups do not have ethnic economies in every metropolitan area. Furthermore, because ethnic economies are nested within MSAs, it would have been helpful to use random effects models, or even a hybrid approach, that allowed for variation in regressors across ethnic economies within MSAs. The small number of ethnic economies in the analysis makes this approach difficult as well. Random effects models require more Ns than fixed effects approaches to achieve sufficient statistical power.⁴ This paper is a first cut at a phenomenon that should be studied further. In the conclusion, I suggest ways that future analyses can build on this paper to conduct more comprehensive analyses of ethnic economy suburbanization.

The *unit of analysis* for the regressions is a group's EE-year. Since I analyze 68 ethnic economies across three time points, there were 204 EE-years. The *dependent variable* is the percent of ethnic economy workers in the suburbs in a given year, and the *independent variables* are respectively the percent of ethnic and non-ethnic residents in the suburbs in a given year.⁵ I use entity fixed effects for each ethnic economy because unobserved characteristics specific to each ethnic economy may have influenced the suburbanization process. I also add time fixed effects because the 1990s and the 2000s were very different decades for U.S. immigration policy and the economy. The 1990s found the U.S. economy expanding like almost no other period in history, and a steady stream of undocumented immigrants moved to the United States throughout the decade. The late 2000s, on the other hand, were recessionary, and immigrants of all types faced a more hostile context of reception.

Control variables include the suburban poverty rate specific to the local ethnic population, which holds constant the extent to which impoverished workers may have had few options except to participate in the ethnic economy. Controls also include the overall educational attainment, nativity rates, and

linguistic isolation rates of the local ethnic population. Less education, lower nativity rates, and more linguistic isolation have all been shown to increase ethnic economy participation (Evans, 1989; Nee et al. 1994; Yoon, 1991). I also control for the proportion of the local ethnic population that is comprised of recent immigrants, meaning individuals who have immigrated in the last five years, because recency of immigration is associated with higher ethnic economy participation rates as well (Nee et al., 1994). Finally, I control for the Index Net Difference of City and Suburban Incomes for all MSA residents (Lieberson, 1976) because the attraction to a portion of the MSA in which incomes were higher may have driven changes in ethnic economy suburbanization. The more positive and larger the Index is, the more lucrative jobs in the city were.

By constructing the dependent variable in terms of a proportion, I acknowledge that ethnic economies sometimes crossed the city-suburb divide. Because changes in the suburban portion of the ethnic economy may have been affected by a shrinking urban ethnic economy rather than a growing suburban ethnic economy, I do a series of robustness checks using raw numbers rather than proportions. In this set of regressions, the dependent variable becomes the logged number of workers in the suburban portion of the ethnic economy, and the independent variables respectively become the logged number of ethnic residents in the suburbs and the logged number of non-ethnic residents in the suburbs.

I test the hypotheses regarding income attainment using cross-sectional OLS regressions. For these regressions, the *dependent variable* is the logged annual income of a given worker. I am unable to gauge changes in income over time because the Census and ACS lack a panel data structure. Nevertheless, analyzing changes in cross sections over time provides some evidence that can test Hypothesis 2. I create the dependent variable by combining annual wage and business incomes. Incomes are inflation-adjusted to dollar values in the year 2000. The primary *independent variable* is an interaction between whether one worked in a suburban (rather than urban) area and whether one worked in an ethnic economy (rather than outside of one). I use *control variables* common in wage models, including work experience [age – years of education + 6], experience², gender, highest degree attained, marital status, and number of children. Work experience, being male, having a professional degree, being married, and having children have all been associated with a higher wage among ethnic economy participants (Light and Gold, 2000). I also use a control for class of worker, which includes three

statuses: wage work, incorporated self-employment, and unincorporated self-employment. Each of these three classes of workers may have faced different degrees of income competition and income ceilings. I also include the metropolitan-level unemployment rate, which constrains the options of those considering ethnic economy work, as well as a series of dummy variables controlling for industry at the NAICS two-digit level.⁶ Unlike the tests of hypotheses on ethnic economy suburbanization, the tests for the hypotheses on income attainment include enough Ns to conduct regressions separately for each group, except for Filipinos and Jamaicans. I consequently omit these two latter groups from the analysis of income attainment.

Results

Before conducting multivariate analyses, it is important to understand the characteristics of the ethnic economies in the data set. Table 1 shows both the number of ethnic economies for each group as well as the top three industries and occupations in each group's ethnic economies. I constructed the list by aggregating ethnic economy workers across MSAs and time points. Table 1 highlights two important points. First, ethnic minorities specialized in different industries than Whites, supporting the argument made by prior literature that ethnic economies specialize in industries in which they will face little competition from the majority group. Second, many ethnic economies were comprised of industries that have a low cost of entry, such as restaurants, grocery stores, and auto repair (Waldinger et al., 1990).

[Table 1]

Although not shown in Table 1, it is important to note that, across all years and ethnic minority groups, the average proportion of ethnic minority workers in the data set who worked in the ethnic economy was roughly 15 percent, a percentage comparable to that found in prior research (Light and Gold, 2000:32-33). The proportion ranged from a high of 28 percent of Koreans in 1990 to a low of one percent of Filipinos and Jamaicans in 2010. This variation in the proportion of ethnic workers in ethnic economies across groups is consistent with prior research (Kasinitz and Vickerman, 2001; Min, 1986). Furthermore, across almost all minority groups, ethnic economy workers were largely foreign-born. The ethnic economy, as mentioned earlier, is a phenomenon driven by and affecting immigrant workers. Appendix A3 includes detailed information on the foreign-born composition of each group's ethnic economy workforce.

Ethnic Economy Suburbanization

Appendix A4 shows that ethnic economies suburbanized in ways that differed from the majority group, violating the general trend toward work decentralization posed by Hypothesis 1c. I thus reject the hypothesis that ethnic economy suburbanization was due to general work decentralization. Table 2 consequently focuses in on regressions that test Hypotheses 1a and 1b, which posit that the suburbanization of ethnic economies was due to the suburbanization of ethnic and non-ethnic market demand, respectively. Univariate statistics and correlation matrices associated with the regressions in Table 2 can be found in Appendix A5. Model (1) shows that ethnic economy suburbanization was statistically significantly associated with ethnic residential suburbanization, and Model (2) shows that non-ethnic residential suburbanization was not likely associated with ethnic economy suburbanization, which upholds Hypothesis 1a and rejects Hypothesis 1b. Model (3), which combines ethnic and non-ethnic residential suburbanization into one regression and controls for other factors, further supports the argument that ethnic residential suburbanization drove ethnic economy suburbanization. A comparison of Models (1) and (3) shows that, of the 25 percent of variation in ethnic economy suburbanization explained by the independent variables, 17 percent is attributable to ethnic residential suburbanization. In other words, ethnic residential suburbanization explained a great deal of ethnic economy suburbanization.

[Table 2]

As discussed earlier, it is important to address whether ethnic economy suburbanization was due to the decline of ethnic demand in the city rather than the growth of ethnic demand in the suburbs. Models (4) through (6) demonstrate that this was not the case.⁷ Interestingly, in Model (6), more educated ethnic populations were associated with less ethnic economy suburbanization. Highly agricultural metro areas, such as Modesto, CA or Fayetteville, NC, drove this result. In addition, although the association was small, the proportion of the ethnic population that was native born was positively associated with ethnic economy growth in the suburbs. This was driven primarily by Mexican suburbanization. Mexicans have long been highly suburbanized across the country (Lichter et al., 2010; Logan et al., 2002). When Mexicans are omitted from the model, all significant associations persist excepting for the one pertaining to native-born suburbanization.

Models (7) through (10) run comparable models on native-born, non-Hispanic Whites. Including all controls, no statistically significant association existed between White residential suburbanization and the suburbanization of overrepresented industries. Instead, unlike for ethnic minorities, the Index of Net Difference of City and Suburban Incomes was negatively, significantly associated with industrial suburbanization. The importance of the Index makes sense: Whites had much more freedom than ethnic economy participants to find and choose work where incomes were highest, so more lucrative central city jobs were likely to slow down the suburbanization of industries in which Whites were overrepresented.

Ethnic Economy Suburbanization and Income Attainment

Figure 2 provides a coefficient plot revealing that suburban ethnic economies did not pay better than urban ones, controlling for other factors. Full regressions results are presented in Appendix A6. In the coefficient plot, a dot is the effect size of a given independent variable, and a line represents the associated 95 percent confidence interval. A dot whose line does not cross zero is statistically significantly different than zero at the five percent level. As mentioned earlier, I omit Jamaicans and Filipinos due to small Ns.

[Figure 2]

The black dots, which correspond to the association between logged annual income and working in the suburbs, are fairly consistently negative, meaning that working in the city yielded a higher income. Suburban work generally offers lower wages because job opportunities closer to a central business district are associated with higher nearby housing prices as well as greater transportation costs for workers living far away. Higher wages in the city offset these higher subsistence costs (Bartik and Eberts, 2006). The grey dots in Figure 2 tell a more compelling story: In almost all cases, irrespective of suburban status, ethnic economy work was associated with lower wages. The ethnic economy is often a means of subsistence for immigrant workers, employing the least employable workers, so this finding is unsurprising (Light et al., 1994).

The white dots in Figure 2 reveal whether or not working in the suburban portion of the ethnic economy mitigated—or even compensated for—the wage penalty associated with ethnic economy work. Of the 24 regressions presented in Figure 2, only five regressions demonstrated a statistically significantly higher wage in the suburban rather than the urban portion of the ethnic economy. This is a strong

indication that suburban ethnic economy work provided no advantage to ethnic economy workers and was associated with similar wages as the city. Of the five instances in which suburban ethnic economy work was statistically significantly associated with a higher wage, only one group—Dominicans—demonstrated a higher suburban ethnic economy wage in more than one point in time. The suburban ethnic economy wage advantage for Dominicans only occurred in 1990 and 2010, not 2000. By and large, the suburban portion of the ethnic economy appeared to offer no income advantage over the urban portion, which supports Hypothesis 2b.

Discussion and Conclusion

The U.S. suburbs are undergoing a significant demographic shift, including an increase in the number of suburbanites in poverty as well as the growth of numerous multi-ethnic, multi-racial communities (Iceland, 2009; Kneebone and Berube, 2013; Logan and Zhang, 2010). Scholars continue to grapple with the implications of these changes, particularly for the economic, social, and political incorporation of the foreign born into suburban communities (Jones-Correa, 2008; Li, 2009; Singer et al., 2008). Ethnic economy creation is an important part of immigrant incorporation because it provides jobs and, on occasion, opportunities for upward socioeconomic mobility (Light and Gold, 2000; Portes and Bach, 1985; Waldinger et al., 1990). This article is perhaps the first ever attempt at measuring ethnic economy suburbanization on a large scale. The analysis reveals that ethnic economy suburbanization is tightly coupled with ethnic residential suburbanization, and that most suburban ethnic economies provide earnings comparable to those found in urban ethnic economies. This finding not only provides a counterpoint to existing research on suburban ethnic economies, much of which comes from select case studies analyzing highly successful ethnic economies in suburban areas (Fong et al., 2007; Li, 1998; Wood, 1997). The finding also holds lessons for scholars studying international migration, urban studies, and economic development.

The first lesson is that suburban ethnic economy growth is likely due to factors similar to those found in urban areas. Rather than upend traditional ethnic economy theories, suburban ethnic economies likely extend these theories into new regions. Extant theories emphasize how blocked labor market mobility and the prospect of unemployment are two major reasons that immigrants choose to work in ethnic economies (Light and Gold, 2000; Waldinger et al., 1990). Even if the analyses above are

conducted only on urban- or suburban-level workforces rather than metropolitan-level workforces, the industrial composition of each group's ethnic economies would remain extremely similar. Furthermore, as discussed earlier, patterns of income attainment are similar across the urban and suburban portions of ethnic economies. This implies that the structural conditions leading to ethnic economy growth in urban areas are likely reproducing themselves in suburban areas, despite other differences that may exist between urban and suburban areas. On a more general level, this finding supports literature showing how immigrant incorporation and adaptation processes in the suburbs increasingly resemble those in cities (Jones-Correa, 2008; Lichter et al., 2010; Murphy, 2007:27; Suro et al., 2011). Although the immigrants living and working in the U.S. suburbs have traditionally been associated with relative prosperity over their urban counterparts (Alba et al., 1999; Massey, 1985), today's international migration streams are altering the association between the U.S. suburbs, relative prosperity, and the economic incorporation of immigrants into the mainstream labor market.

The second lesson is that more research is needed on the adaptive strategies immigrant groups may be employing in order to buffer themselves from the possibility of downward mobility in today's suburbs. Alongside ethnic economy growth in suburban areas, social service organizations have become strained, access to public transportation has diminished, and a spatial mismatch has emerged between the suburbs where jobs are growing and the suburbs where minority communities are growing (Holzer and Stoll, 2007; Murphy, 2007). Future research should determine the linkages between ethnic economy creation and these features of the suburbs. Ethnic economies may be a vital lifeline for the most disadvantaged groups in suburban areas.

To move research on suburban ethnic economies forward, future scholarship should extend this paper's analysis in various ways. For example, this analysis included metro areas in which the urban-suburban distinction could be cleanly identified. This approach omits some large, sprawling immigrant gateways such as Los Angeles, Houston, and Atlanta. Individual case studies nonetheless show that the trends in this article are occurring in these places as well (Lin, 1998:322-323; Oberle, 2006; Odem, 2008). Future research can determine if the trends found in this paper extend to these areas by using surveys specific to individual metro regions. Additionally, this study makes no distinction between different types of suburbs. The growth in suburban poverty has largely concentrated in inner-ring suburbs, while the

foreclosure crisis of the late 2000s had a heavy impact on outer-ring suburbs (Hanlon, 2010; Kneebone and Berube, 2013). By grouping different types of suburbs together, the relationship between ethnic economy suburbanization and income might be obscured. This study is a first pass at an issue that should be studied at a variety of levels of geography, and future research should investigate data at a finer-grained level.

Despite the need for more research, policy makers can take heed of some lessons immediately. Suburban ethnic economy growth appears to be similar to urban ethnic economy growth, so suburban municipalities struggling to incorporate their growing immigrant communities into their economies can take advantage of policies already practiced elsewhere. Numerous towns, for instance, are fostering relationships with immigrant entrepreneurs, using them as liaisons to the local ethnic community (Grey and Woodrick, 2005; Griffith, 2008). In addition, policy makers are facilitating immigrant entrepreneurship through programs such as microcredit lending with the hope that immigrant entrepreneurs will stimulate growth in the local economy (Kerr et al., 2014:11). With creative policy initiatives, suburban municipalities can maximize the benefits they receive from the ethnic economies growing in their midst.

Notes

1. There are strands of ethnic economy research that start from the notions of mixed embeddedness or middleman minorities rather than the ethnic neighborhood. Nevertheless, the proponents of mixed embeddedness lament the degree to which the concept has influenced the field as a whole (Rath and Kloosterman, 2000), and many middleman minority economies first start by serving the ethnic neighborhood before expanding to non-ethnic markets (Waldinger et al., 1990:119-122).
2. The analysis should include Cubans, a highly entrepreneurial ethnic group in the United States (Portes and Bach, 1985). According to personal correspondence with the MPC, however, the microdata on those who worked in the Miami-Hialeah, FL MSA in 2000 and 2010 are missing. Miami is a central hub of Cuban economic activity, and any data that omit information on the Cubans of Miami will be biased away from trends found in prior research on Cuban ethnic economies. I consequently drop Cubans from the analysis.
3. Ethnic economy industries were virtually identical across all three time points, and no matter what year was used to identify ethnic economy industries, the results are effectively the same as those reported in this paper.
4. By fixed effects, I mean that each ethnic economy serves as its own control. Comparisons of ethnic economy suburbanization across time, in other words, are made within rather than across ethnic economies. Differences across time but within each ethnic economy are then averaged over all ethnic economies. Allison (2009) discusses in detail the benefits of using fixed effects approaches.
5. I do not model the dependent variable, which ranges between zero and one, using a logit specification because the deviations from mean values over time on the variables of interest are normally distributed, and the models presented do not violate OLS regression assumptions.
6. Almost all ethnic economy participants were immigrants. Therefore, I ran models including immigration-specific variables, including citizenship, number of years in the U.S., and English proficiency. In no case did it substantively alter the relationship between the independent and dependent variables.
7. Lest one think that the effect of ethnic demand is masking any effect of non-ethnic demand because the two are inter-related in Models 3 and 6, the variance inflation factor between ethnic and non-ethnic demand due to multicollinearity is respectively only 1.89 and 1.56 in Models 3 and 6.

Bibliography

- Alba, Richard D., John R. Logan, Brian Stults, Gilbert Marzan, and Wenquan Zhang. 1999. "Immigrant Groups and Suburbs: A Reexamination of Suburbanization and Spatial Assimilation." *American Sociological Review* 64:446-60.
- Aldrich, Howard, John Cater, Trevor Jones, David McEvoy, and Paul Velleman. 1985. "Ethnic Residential Concentration and the Protected Market Hypothesis." *Social Forces* 63:996-1009.
- Allison, Paul. 2009. *Fixed Effects Regression Models*. Thousand Oaks, CA: Sage.
- Bartik, Timothy and Randall Eberts. 2006. "Urban Labor Markets." Pps. 389-403 in *Companion to Urban Economics*, edited by Richard Arnott and Daniel McMillan. Oxford: Wiley.
- Bonacich, Edna and Richard Appelbaum. 2000. *Behind the Label: Inequality in the Los Angeles Apparel Industry*. Berkeley: University of California Press.
- Borjas, George. 1990. *Friends or Strangers? The Impact of Immigrants on the U.S. Economy*. New York: Basic Books.
- Census Bureau. 2011. *American Community Survey Research Note: Change in Population Controls*. Washington, D.C.: Census Bureau Population Division.
- Chan, Arlene. 2012. "From Chinatown to Ethnoburb." Paper Presented at the WCILCOS Conference of Institutes and Libraries for Chinese Overseas Studies, Vancouver, Canada.
- Charles, Camille. 2003. "The Dynamics of Racial Residential Segregation." *Annual Review of Sociology* 29:167-207.
- Evans, M.D.R. 1989. "Immigrant Entrepreneurship: Effects of Ethnic Market Size and Isolated Labor Pool." *American Sociological Review* 54(6): 950-962.
- Fong, Eric, Wenhong Chen, and Chiu Luk. 2007. "Ethnic Businesses in Suburbs and City." *City & Community* 6:119-136.
- Frey, William H. 2012. "Demographic Reversal: Cities Thrive, Suburbs Sputter." *Brookings Institution: State of Metropolitan America* 56.
- Glaeser, Edward and Matthew E. Kahn. 2001. "Decentralized Employment and the Transformation of the American City." *Brookings Papers on Urban Affairs* 2:1-69.
- Greco, JoAnn. 2008. "La Vida Local." *Planning March*: 14-19.

Grey, Mark and Anne Woodrick. 2005. "Latinos Have Revitalized Our Community: Mexican Migration and Anglo Responses in Marshalltown, Iowa." Pp. 133-152 in *New Destinations: Mexican Immigration in the United States*, edited by Víctor Zúñiga and Rubén Hernández-León. New York: Russell Sage Foundation.

Griffith, David. 2008. "New Midwesterners, New Southerners." Pp.179-210 in *New Faces in New Places: The Changing Geography of American Immigration*, edited by Douglas Massey. New York: Russell Sage.

Hanlon, Bernadette. 2010. *Once the American Dream*. Philadelphia: Temple University Press.

Holzer, Harry and Michael Stoll. 2007. *Where Workers Go, Do Jobs Follow?* Washington D.C.: Brookings Institution Press.

Iceland, John. 2009. *Where We Live Now: Immigration and Race in the United States*. Berkeley: University of California Press.

Jones-Correa, Michael. 2008. "Immigrant Incorporation in Suburbia." Pp. 19-45 in *Immigration and Integration in Urban Communities*, edited by L. Hanley and B. Ruble. Washington: Wilson Center Press.

Kasinitz, Philip and Milton Vickerman. 2001. "Ethnic Niches and Racial Traps." Pp. 191-211 in *Migration, Transnationalization, and Race in a Changing New York*. edited by Héctor Cordero-Guzman, Robert C. Smith, and Ramón Grosfoguel. Philadelphia: Temple University Press.

Kerr, Juliana, Paul McDaniel, and Melissa Guinan. 2014. *Reimagining the Midwest: Immigration Initiatives and the Capacity of Local Leadership*. Washington D.C.: American Immigration Council.

Kim, Dae Young. 2004. "Leaving the Ethnic Economy: The Rapid Integration of Second-Generation Korean Americans in New York." Pp. 154-88 in *Becoming New Yorkers: Ethnographies of the New Second Generation*, edited by P. Kasinitz, J. Mollenkopf, and M. Waters. New York: Russell Sage.

Kneebone, Elizabeth, and Alan Berube. 2013. *Confronting Suburban Poverty in America*. Washington, D.C.: Brookings Institution Press.

Li, Wei. 1998. "Anatomy of a New Ethnic Settlement: The Chinese Ethnoburb in Los Angeles." *Urban Studies* (35)3: 479-501.

Li, Wei. 2009. *Ethnoburb*. Honolulu: University of Hawaii.

Lichter, Daniel T., Domenico Parisi, Michael Taquino, and Steven Michael Grice. 2010. "Residential Segregation in New Hispanic Destinations: Cities, Suburbs, and Rural Communities Compared." *Social Science Research* 39:215–30.

- Lieberson, Stanley. 1976. "Rank-Sum Comparisons between Groups." *Sociological Methodology* 7:276-291.
- Light, Ivan and Edna Bonacich. 1988. *Immigrant Entrepreneurs*. Berkeley: University of California Press.
- Light, Ivan and Steven Gold. 2000. *Ethnic Economies*. New York: Academic Press.
- Light, Ivan, Georges Sabagh, Mehdi Bozorgmehr, and Claudia Der-Martirosian. 1994. "Beyond the Ethnic Enclave Economy." *Social Problems* 41:65-80.
- Lin, Jan. 1998. "Globalization and the Revalorizing of Ethnic Places in Immigration Gateway Cities." *Urban Affairs Review* 34(2): 313–339.
- Lin, Jan and Paul Robinson. 2005. "Spatial Disparities in the Expansion of the Chinese Ethnoburb of Los Angeles." *GeoJournal* 64(1):51-61.
- Logan, John, Richard Alba, and Thomas McNulty. 1994. "Ethnic Economies in Metropolitan Regions: Miami and Beyond." *Social Forces* 72:691-724.
- Logan, John, Richard D. Alba, and Wenquan Zhang. 2002. "Immigrant Enclaves and Ethnic Communities in New York and Los Angeles." *American Sociological Review* 67:299–322.
- Logan, John, and Charles Zhang. 2010. "Global Neighborhoods: New Pathways to Diversity and Separation." *American Journal of Sociology* 115(4):1069–1109.
- Massey, Douglas. 1985. "Ethnic Residential Segregation: A Theoretical Synthesis and Empirical Review." *Sociology and Social Research* 69:315-50.
- Min, Pyong Gap. 1986. "Filipino and Korean Immigrants in Small Business." *Amerasia* 13(1):53-71.
- Murphy, Alexandra. 2007. "The Suburban Ghetto." *City & Community* 6:21–37.
- Nee, Victor, Jimy M. Sanders, and Scott Sernau. 1994. "Job Transitions in an Immigrant Metropolis: Ethnic Boundaries and the Mixed Economy." *American Sociological Review* 59(6): 849-872.
- Oberle, Alex. 2006. "Latino Business Landscapes and the Hispanic Ethnic Economy." Pp. 149-64 in *Landscapes of the Ethnic Economy*, eds. D.H. Kaplan and Wei Li. Lanham, MD: Rowman.
- Odem, Mary. 2008. "Unsettled in the Suburbs: Latino Immigration and Ethnic Diversity in Metro Atlanta." Pp. 105–136 in *Twenty-First Century Gateways: Immigrant Integration in Suburban America*, eds. A. Singer, S. W. Hardwick, and C. B. Brettell. D.C.: Brookings Press.

- Portes, Alejandro and Robert L. Bach. 1985. *Latin Journey: Cuban and Mexican Immigrants in the United States*. Berkeley: University of California Press.
- Rath, Jan and Robert Kloosterman. 2000. "Outsiders' Business: A Critical Review of Research on Immigrant Entrepreneurship." *International Migration Review* 34(3): 657-681.
- Ruggles, Steven, Katie Genadek, Ronald Goeken, Josiah Grover, and Matthew Sobek. 2015. *Integrated Public Use Microdata Series: Version 6.0*. Minneapolis: University of Minnesota.
- Singer, Audrey, Susan W. Hardwick, and Caroline B. Brettell. 2008. *Twenty-First Century Gateways: Immigrant Incorporation in Suburban America*. Washington, DC: Brookings Institution Press.
- Suro, Roberto, Jill H. Wilson, and Audrey Singer. 2011. *Immigration and Poverty in America's Suburbs*. Washington D.C.: Brookings Institution Press.
- Waldinger, Roger, Howard Aldrich, and Robin Ward. 1990. *Ethnic Entrepreneurs*. Newbury Park: Sage.
- Wang, Qingfang. 2010. "How Does Geography Matter in the Ethnic Labor Market Segmentation Process?" *Annals of the Association of American Geographers* 100(1):182-201.
- Wang, Ying. 2012. "From Urban Enclave to Ethnoburb: Changes in Residential Patterns of Chinese Immigrants." Ph.D. dissertation, Department of Sociology, University of Maryland, College Park.
- Wilson, Franklin. 2003. "Ethnic Niching and Metropolitan Labor Markets." *Social Science Research* 32(3):429-466.
- Wood, Joseph. 1997. "Vietnamese American Place Making in Northern Virginia." *Geographical Review* (87)1:58-72.
- Yoon, In-Jin. 1991. "The Changing Significance of Ethnic and Class Resources in Immigrant Businesses: The Case of Korean Immigrant Businesses in Chicago." *International Migration Review* 25(2): 303-332.
- Zelinsky, Wilbur and Barrett Lee. 1998. "Heterolocalism." *International Journal of Population Geography* 4:281-298.
- Zhou, Min. 1992. *Chinatown: The Socioeconomic Potential of an Urban Enclave*. Philadelphia: Temple University Press.
- Zhou, Min, Yen-Fen Tseng, and Rebecca Y. Kim. 2008. "Rethinking Residential Assimilation: The Case of a Chinese Ethnoburb in the San Gabriel Valley, California." *Amerasia Journal* 34(3): 53-83.

Table 1. Top Three Ethnic Economy Industries and Occupations, By Group

Group	Top 3 Industries	%	Top 3 Occupations	%
Whites (N = 28)	Construction	18	Managers, n.s.	9
	Machinery and Supplies	6	Salespersons, n.s.	7
	Motor Vehicle Dealers	5	Sales Job Managers	6
Indians (N = 7)	Machinery and Supplies	15	Taxicab Drivers	13
	Taxicabs	13	Sales Job Managers	12
	Drug Stores	13	Salespersons	5
Chinese (N = 18)	Restaurants and Bars	62	Cooks	27
	Apparel and Accessories	22	Sewing Machine Operators	14
	Grocery Stores	3	Waiters	11
Filipino (N = 1)	Private Households	57	Housekeepers, etc.	27
	Apparel and Accessories	15	Child Care Workers	22
	Wholesale Trade, n.s.	12	Nursing Aides	7
Korean (N = 6)	Grocery Stores	24	Sales Job Managers	26
	Restaurants and Bars	17	Cashiers	10
	Misc. Personal Services	8	Cosmetologists	9
Vietnamese (N = 13)	Misc. Personal Services	35	Cosmetologists	47
	Beauty Shops	21	Sales Job Managers	6
	Restaurants and Bars	13	Cooks	5
Jamaican (N = 1)	Personnel Supply Services	27	Auto Mechanics	19
	Urban Transit	26	Taxicab Drivers	14
	Auto Repair	22	Bus Drivers	10
Mexican (N = 16)	Landscaping	24	Gardeners	19
	Restaurants and Bars	16	Housekeepers, etc.	7
	Services to Buildings	10	Cooks	7
Dominican (N = 3)	Grocery Stores	44	Taxicab Drivers	19
	Taxicabs	21	Cashiers	14
	Auto Repair	9	Sales Job Managers	12
Salvadoran (N = 3)	Services to Buildings	51	Housekeepers, etc.	30
	Private Households	22	Janitors	29
	Landscaping	13	Gardeners	10

These data combine ethnic economies across time but within groups. 'N' is the number of ethnic economies in the data set by group. '%' is the proportion of each group's ethnic economy workers that were in a particular industry or occupation. 'n.s.' means that the industrial or occupational category was not specified beyond a general description.

Table 2. Fixed-Effect Regressions of Ethnic Economy Suburbanization on Select Variables, 1990-2010

Variables	Ethnic Economies						Non-Hispanic Whites			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>Independent Variables</i>										
% EP Living in Suburbs	0.61*** (0.17)		0.67** (0.21)				0.91*** (0.15)	0.29 (0.30)		
% Non-EP Living in Suburbs		0.52 (0.30)	0.04 (0.41)					0.32 (0.12)		
ln(# EP Living in Suburbs)				0.94** (0.29)		0.97* (0.41)			0.69* (0.26)	0.71 (0.49)
ln(# Non-EP Living in Suburbs)					0.87 (0.61)	0.27 (0.78)				-0.52 (0.38)
<i>Control Variables</i>										
% Suburban EP in Poverty			-0.05 (0.18)			0.02 (0.01)		0.05 (1.16)		-0.02 (0.06)
% EP College Educated			0.01 (0.33)			-0.09*** (0.02)		-1.78* (0.78)		-0.07 (0.04)
% EP High School Educated			-0.62 (0.32)			-0.04* (0.02)		-0.87 (0.93)		-0.09 (0.05)
Index of Net Difference of City and Suburban Incomes ¹			0.15 (0.40)					-0.82* (0.36)		-0.03* (0.02)
% EP Recent Immigrants ²			-0.53* (0.26)			0.02 (0.02)				
% EP Native Born			0.09 (0.23)			0.04* (0.02)				
% Suburban EP Linguistically Isolated ³			0.03 (0.25)			0.04* (0.02)				
Entity Fixed Effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time Fixed Effects?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	204	204	204	204	204	204	84	84	84	84
R ²	0.17	0.10	0.25	0.45	0.39	0.54	0.48	0.64	0.10	0.28

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

'EP' refers to the local ethnic population of the MSA in which the ethnic economy occurred.

1. See Lieberman (1976).
2. Recent immigrants are those who moved to the U.S. within the five years prior to when data were collected.
3. Linguistic isolation includes those members of the local ethnic population who spoke little to no English.

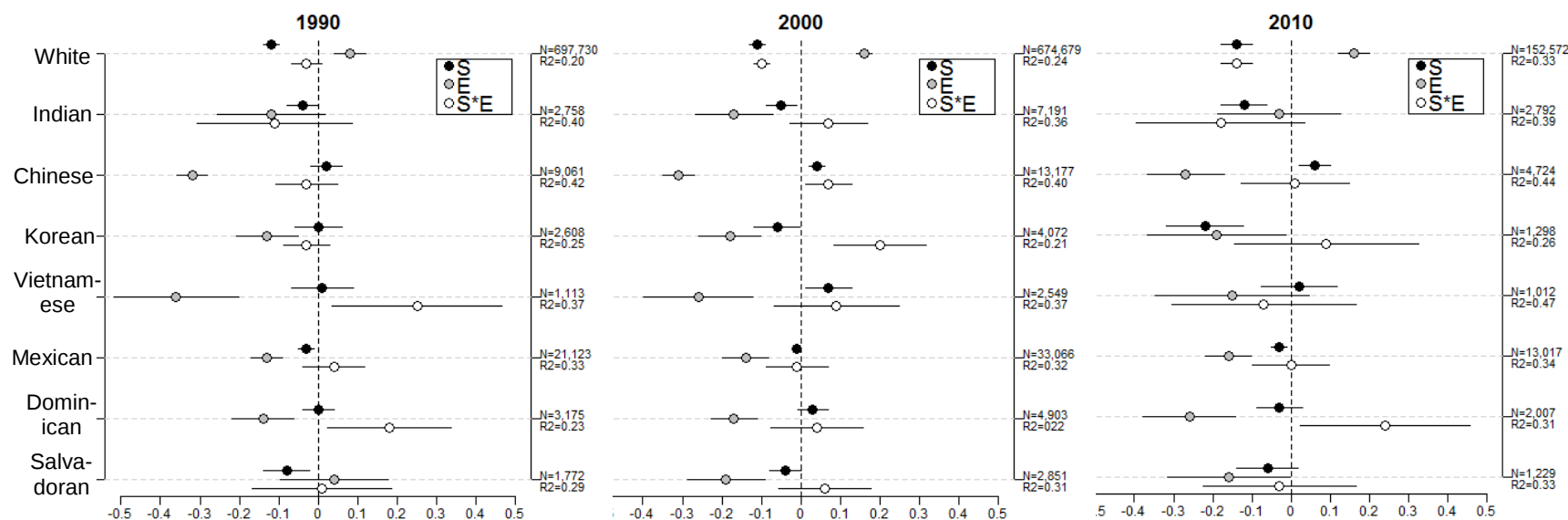
Figure 1. Metropolitan Statistical Areas (MSAs) and Their Ethnic Economies ($N_{MSAs} = 28$)



MSA	W	I	C	F	K	V	J	M	D	S	MSA	W	I	C	F	K	V	J	M	D	S
Austin, TX	•					•		•			Memphis, TN/AR/MS	•	•						•		
Bakersfield, CA	•							•			Minneapolis-St. Paul, MN	•		•				•	•		
Baltimore, MD	•	•	•		•						Modesto, CA	•							•		
Boston, MA	•		•			•					New Orleans, LA	•						•	•		
Charlotte-Gastonia-Rock Hill, SC	•	•									New York-Northeastern NJ	•	•	•	•	•	•	•	•	•	•
Chicago-Gary-Lake IL	•	•	•		•			•			Newark, NJ	•	•	•						•	
Cincinnati, OH/KY/IN	•		•								Norfolk-VA Beach-Newport News, VA	•		•			•				
Cleveland, OH	•		•								Philadelphia, PA/NJ	•		•		•	•				
Detroit, MI	•	•	•								Sacramento, CA	•		•			•		•		
Fayetteville, NC	•							•			San Antonio, TX	•							•		
Fresno, CA	•					•		•			San Francisco-Oakland-Vallejo, CA	•		•			•	•	•	•	•
Hartford-Bristol-Middleton, CT	•		•								Seattle-Everett, WA	•		•		•	•	•			
Indianapolis, IN	•							•			St. Louis, MO	•		•			•	•			
Jersey City, NJ	•	•							•		Washington, DC/MD/VA	•	•	•		•	•	•			•

MSAs included in the analysis are colored in the map above and listed in the table below. A dot indicates that a group had an ethnic economy in the MSA between 1990 and 2010. For Non-Hispanic Whites, rather than indicate the presence of an ethnic economy, a dot indicates an MSA in which Whites were overrepresented in at least one industry. W = Non-Hispanic Whites; I = Asian Indian; C = Chinese; F = Filipino; K = Korean; V = Vietnamese; J = Jamaican; M = Mexican; D = Dominican; S = Salvadoran.

Figure 2. Coefficient Plots of Unweighted OLS Regressions of Logged Annual Income on Key Correlates by Year



This figure provides the regression estimates of the variables S, E, and S*E in regressions specific to workers belonging to a particular group in a particular year. S is a dummy variable indicating whether a person worked in the suburbs. E is a dummy variable indicating whether a person worked in one of the group's ethnic economies. S*E indicates whether a person worked in the suburban portion of the group's ethnic economy. For Whites, E refers not to ethnic economies but rather to industries in which they were overrepresented. Filipinos and Jamaicans are dropped from the analysis due to small Ns. A dot provides a regression estimate, and a line provides a 95 percent confidence interval. The number of cases and R² of each regression are reported on the right-hand side of each year's results. Consult Appendix A6 for the complete regression results, including all control variables.