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Access to Work: The Effects of Spatial and Social Accessibility on Unemployment for Native-Born Black and Immigrant Women in Los Angeles

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Abstract: This study contributes to the debates on both spatial mismatch and "social-network" mismatch by considering the independent effects of spatial and social accessibility on the unemployment of less-educated native-born black and immigrant women. These groups experience relatively high unemployment yet differ in their residential patterns and the hypothesized capacities of their social networks. Using detailed geographic census data matched to travel data, I calculated an accessibility index to measure spatial job accessibility and used information on neighborhood characteristics and household composition to assess social accessibility. The results indicate that better spatial accessibility to jobs is associated with lower unemployment among native-born black and foreign-born Mexican and Vietnamese women; no association was detected among the remaining immigrant groups. The analysis yielded no empirical support for the advantages that residence in an enclave may provide female immigrant residents in the form of access to employment through social networks. In fact, the results point to detrimental effects of residence in an ethnic enclave for foreign-born Mexican and Vietnamese women. Finally, among all groups, living with other employed adults significantly and substantively decreased a woman's likelihood of unemployment, indicating the importance of household-based social accessibility for less-educated native-born black and immigrant women's employment outcomes.

Key words: employment accessibility, spatial mismatch, immigrant labor markets, neighborhood effects, female unemployment.

Discussions of minority unemployment often turn on the idea of *access.* A frequent refrain among researchers and policy makers is that disadvantaged workers face barriers that block their access to employment, and it is these barriers that policy must seek to remove to reduce joblessness. Although *access* often lacks conceptual clarity in these debates, two bodies of literature explicitly give it operational status: research on spatial mismatch (i.e., spatial accessibility) and sociological studies that deem access a social process (i.e., social accessibility). Until recently, researchers have considered these aspects of access to employment separately (Mouw 2002). This article considers both types of access simultaneously, presenting an

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analysis of their independent effects on female unemployment.

The spatial-mismatch hypothesis argues that poor spatial accessibility to jobs contributes to blacks' higher levels of unemployment relative to whites'. As jobs relocate to the suburbs, blacks, trapped in inner-city neighborhoods by housing discrimination, face a spatial mismatch of jobs and housing (Kain 1968). Unable to surmount this spatial divide because of high commuting costs, blacks experience higher levels of unemployment. Recent studies have found strong evidence of the effects of spatial mismatch on the unemployment of blacks (Raphael 1998; Mouw 2000). A few studies have evaluated the spatial-mismatch hypothesis in relation to minority groups other than blacks, analyzing whether different experiences of residential segregation yield similar effects of spatial mismatch (McLafferty and Preston 1992).

Social accessibility offers another explanation for the relatively higher unemployment of blacks than of whites and why the effects of spatial job accessibility may differ among minority groups. If social networks matter for getting a job (Granovetter 1974), then blacks who do not have employment contacts may face a social, rather than a spatial, mismatch. Research on immigrant labor markets has provided substantial evidence that immigrants' ethnic networks facilitate the search for and acquisition of jobs (Waldinger 1996). In contrast, limited access to employment networks among native-born blacks has been shown partly to explain blacks' poor employment outcomes (Johnson, Bienenstock, and Farrell 1999; Waldinger 1996; Wilson 1987).

Without considering spatial and social accessibility together, however, it is difficult to ascertain the effects of one in the presence or absence of the other. On the one hand, strong social networks within a group may mitigate the negative effect of poor spatial job accessibility. On the other hand, spatial job accessibility may matter more for groups that lack well-developed social contacts to employment. Furthermore, racial and ethnic segregation in the labor market may render spatial accessibility moot under either circumstance. Sociologists have argued that the presence of strong ethnic recruitment networks leads to occupational closure (Waldinger 1995; 1999). By facilitating recruitment along ethnically specific channels, one group is included in the recruitment process to the exclusion of others. For these excluded groups, good spatial accessibility to jobs may provide no benefit in the face of poor social accessibility. For example, jobs that are located down the street from blacks but are held primarily by Mexican immigrants may prove as inaccessible as spatially distant jobs. These jobs, while spatially proximate, are socially distant.

This study contributes to the debates on both spatial mismatch and "social-network" mismatch by considering the independent effects of spatial accessibility and social contacts on women's unemployment. Specifically, I evaluated less-educated native-born blacks and immigrants—two disadvantaged groups who experience relatively high unemployment yet differ in the hypothesized capacities of their social networks. Both groups experience relatively high residential segregation in Los Angeles, although to various degrees. While this segregation yields different levels of spatial job accessibility, in this study, I was primarily interested in whether the *effects* of spatial accessibility on unemployment differ, given the capacities of different social networks.

For the analysis, I used a unique, confidential census data set that provides individual-level information about residential and job location. Particularly, this data set permits the location of jobs by skill at the tract level and the location of an individual within a residential census tract (as opposed to the larger Public Use Microdata Area in the Public Use Microdata Sample). Thus, it allows for a more precise test of the independent effects of the social characteristics of a neighborhood apart from its location (its spatial job accessibility). Furthermore, household information provides another scale of social context that is likely to be an important indicator of an individual's "strong ties" (social

accessibility). This data set's combination of individual-level information with fine-scaled geographic information on jobs and neighborhoods is unique; previously, researchers have had to forgo one for the other in tests of spatial accessibility.

Finally, this study brings gender to the forefront of the analysis. In the literatures on both spatial and social-network mismatch, the question of whether hypotheses and findings hold for women has received limited attention. This study builds upon work in feminist geography that theorizes and identifies gendered differences in the effects of space, place, and social networks on employment. Feminist geographers have shown that women experience the effects of spatial job accessibility differently from men, primarily because of their household responsibilities (Hanson and Pratt 1995). Women not only use "strong ties" in their search for employment to a greater extent than do men (Marsden 1987; Moore 1990), but also make greater use of social contacts that are locally proximate (Hanson and Pratt 1991). This study did not explicate gendered differences by comparing men and women; instead, it investigated whether cross-group differences hold when the analysis is restricted to women.

Spatial Accessibility and Employment

Research on spatial mismatch explores the extent to which minority groups experience negative labor market outcomes as a result of poor spatial accessibility to jobs (Kain 1968; Holzer 1991; Zax and Kain 1996). Kain (1968) postulated the spatial-mismatch hypothesis to explain high unemployment among blacks as a function of both the suburbanization of employment and racial residential segregation. As jobs shift from the inner city to the suburbs, blacks cannot readily access the relocated jobs by moving to the suburbs because of constraints imposed by housing discrimination. In addition, high transportation costs discourage blacks from accepting and commuting to jobs in the suburbs. Thus, as jobs move, blacks are left behind in a wake of rising inner-city unemployment.

Although the claims of the spatial-mismatch hypothesis have met with continual challenge, recent research employing innovative methodology supports spatial mismatch.[1] Mouw (2000) reported that the decentralization of jobs away from black neighborhoods in Detroit between 1980 and 1990 accounted for one-quarter of the black-white unemployment gap. Raphael (1998) found that differential spatial accessibility accounts for 30 percent to 50 percent of the difference in neighborhood unemployment rates between white and black male youths in the San Francisco Bay area. Using the National Longitudinal Survey of Youth, Stoll (1998) reported that the decentralization of jobs negatively affects young black men's unemployment and duration of unemployment.

Although most spatial-mismatch research has focused on men, a few studies have considered the effects of spatial mismatch for women. McLafferty and Preston (1992) found that black and Hispanic women in New York City engage in significantly longer commutes than do their white counterparts and concluded that this finding indicates the effects of a spatial mismatch for minority women. Research by Johnston-Anumonwo (1995) and McLafferty and Preston (1997, 1996) supported this finding. McLafferty and Preston (1992) argued, however, that the effects of mismatch differ between black women and Latinas. Poor spatial job access is the greatest for black women, whereas the lack of access to well-paying jobs is the primary problem for Latinas. Thompson (1997) found that spatial mismatch has an impact on the labor force participation of women, regardless of race,

[1] See Holzer (1991) for a review of the earlier spatial-mismatch literature and Raphael (1998) and Mouw (2000) for a review of more recent work. For challenges to spatial mismatch, see Cooke (1993), Holloway (1996), Leonard (1987), and Ong and Taylor (1995).

although minority women face higher degrees of mismatch than do white women.

Feminist geographers also have theorized and tested the effects of spatial job accessibility on women's employment outcomes through research addressing the spatial-entrapment hypothesis. In brief, this hypothesis argues that women have limited time to commute as a function of their household responsibilities. Shorter commutes constrain women's job-search areas, thereby restricting the range of women's job opportunities (Hanson and Pratt 1988; Villeneuve and Rose 1988; Wekerle and Rutherford 1989; see England 1993 for a critique). Research has found a relationship between shorter commutes and lower wages, that women are often underemployed as a result of commuting constraints, and that female-dominated jobs tend to be located closer to women's places of residence (Hanson and Johnston 1985; Hanson and Pratt 1995, 1991; Madden and Chiu 1990).

The research of Hanson and Pratt (particularly their 1988 article) has shown a strong relationship between the spatial distribution of jobs (relative to women's residence) and occupational sex segregation. In an analysis of the relationship between locally available jobs in female-dominated occupations and employment in a female-dominated occupation, Hanson, Kominiak, and Carlin (1997) found that residential location is important for one group of women—college-educated part-time workers with young children. For these women, living in areas that are rich in female-dominated jobs increases the probability of employment in a female-dominated occupation. While Hanson, Kominiak, and Carlin (1997) did not find significant effects for other groups, they noted that their results may have been limited by their small sample. They also tested the effect of the availability of local jobs on unemployment, but did not find significant effects, although they again indicated that the small number of unemployed women in their sample probably hindered the analysis.

Although research in feminist geography has documented the important role that spatial accessibility plays in women's employment outcomes, only a few studies have explored spatial accessibility in relation to the employment outcomes of immigrant women. Mattingly (1999) found that immigrant Mexican women who were employed as domestics in San Diego engaged in long and ever-changing commutes because of the residential segregation between the high-income neighborhoods of their employers and their own neighborhoods. Preston, McLafferty, and Liu (1998) reported that immigrant workers in New York City commuted longer distances than did their American-born counterparts and found no evidence that immigrant women shorten their commutes to accommodate household responsibilities, as they found for native-born white women. They postulated that the long commutes faced by recent immigrants may increase unemployment rates, although they left this question for future empirical analysis.

In addition, place matters. Although Preston, McLafferty, and Liu (1998) argue that spatially concentrated immigrants in New York City live far from emerging job opportunities in the suburbs, the same spatial residential and employment patterns do not necessarily hold in other cities, such as Los Angeles. The maps presented later suggest that several immigrant groups in Los Angeles live near large concentrations of low-skill jobs.

Few empirical studies have tested whether spatial accessibility matters for immigrant women's employment outcomes. Research and theory on the gendered nature of spatial labor markets suggests that spatial accessibility should matter for immigrant women, qua women, although Preston, McLafferty, and Liu's (1998) findings in New York City challenge this expectation. Research and theory on the function of ethnic networks in labor markets provides another explanation: spatial accessibility may not matter for employment outcomes if social accessibility is a deciding factor. Networks may undo the constraints of space.

Before I discuss the theoretical arguments of social accessibility, I briefly consider

another argument that challenges the relevance of spatial accessibility for immigrants' employment outcomes. This argument asserts that because immigrants have crossed international borders to find work, traveling a few miles within a U.S. city should matter little for their employment outcomes (Scott 1996, 236). I contend that this rationale lacks import for two reasons. First, it conflates two distinct "journeys"—the migration journey and the journey to work—into too simple a notion of spatial labor market processes. Rather, these two journeys are governed by different factors and decision-making contexts. Immigrants first decide whether to migrate to another country for work. On their arrival to the host country, they must then contend with the spatial-temporal constraints of daily life. Even for immigrants who know of both a job and a place of residence before they migrate to the United States, the location of this particular job and residence must facilitate a daily commute. As Harvey (1989) put it, labor must go home every night, thus the relevance of geographic local labor market constraints for immigrants.

Second, many female immigrants migrate primarily for the purposes of family reunification; the motivation to migrate for work is secondary or absent. For most immigrant women, then, their migration journey cannot be viewed as part of a "journey to work." Thus, the most compelling challenge to the significance of spatial accessibility for the employment of immigrants is that of social accessibility.

Social Accessibility and Employment

Sociologists have long argued that social networks are important for getting a job (Granovetter 1974; Kanter 1977). Scholars of immigration, in particular, have documented the key role of ethnic recruitment networks in getting immigrants jobs (Waldinger 1992, 1994). These ethnic networks play a key role in matching workers to jobs because they reduce the risks and costs for both workers and bosses. Workers gain inside information about jobs, as well as good referrals, while employers use networks of employees as an efficient recruitment method that provides reliable, low-cost information about job applicants.

Waldinger (1996) argued that both the spatial-mismatch and the skills-mismatch hypotheses miss the critical role that social networks play in the labor market and the ways in which jobs get allocated to different groups. As a result, these explanations fail to account adequately for blacks' disadvantaged labor market position, especially given the growing employment of poorly educated immigrants. The skills-mismatch argument, for example, contends that the changing demand for higher-skilled labor has put blacks at risk. This explanation, however, ignores the rising educational levels of blacks and the expansion of immigrants into low-skilled sectors of the economy. If the economy favors higher-skilled workers, why are poorly educated immigrants employed and more highly educated blacks are not? The reason, Waldinger (1996) argued, is that immigrants have made inroads into jobs that blacks have not. Once a foothold is established, the ranks of immigrants grow through the operation of ethnic networks. These networks provide the primary means through which workers gain access to jobs.

This critique lays the groundwork for a similar challenge to the spatial-mismatch hypothesis. If immigrants also experience residential segregation (a common proxy for poor spatial job accessibility), then why is their presence in low-skill manufacturing growing while that of blacks is shrinking? Scott (1996), building on Waldinger's (1996) arguments, posited that the explanation lies in a process of social exclusion that is facilitated by the operation of ethnic recruitment networks.

However, the challenge to spatial mismatch along these lines is not as finely honed as that of skills mismatch, and empirical questions remain. Although ethnic residential segregation is a fact in an immigrant metropolis such as Los Angeles, different residential locations may advantage one

group over another in terms of spatial job accessibility. Thus, immigrants may be residentially segregated, but they may also be more advantaged spatially than are blacks vis-à-vis jobs.

Nevertheless, social networks, combined with demographic change, are critical in explaining the labor market outcomes of blacks and immigrants in the urban metropolis. Social networks grease the wheels of the employment-matching process, especially at the lower levels of the economy. Networks provide access to some groups, but exclude others (Waldinger 1995). Spatial accessibility, therefore, may matter little if who you know, rather than where you are, gets you a job.

Social Ties at Home: Neighborhood and Household Connections to Employment

A large literature has established the negative effects of concentrated poverty and its corresponding social isolation on individual life chances, especially employment (Massey, Gross, and Eggers 1991; O'Regan 1993; Wilson 1987, 1996). This research has focused largely on poor black neighborhoods, whether the causal factors stressed are economic restructuring and the movement of the black middle class (Wilson 1987) or racial residential segregation (Massey and Denton 1993). In these neighborhoods, residents are described as cut off from social connections to "mainstream" opportunities, such as jobs.

Studies of neighborhood effects and employment outcomes have primarily considered black men (Massey and Shibuya 1995), despite the emphasis that feminist scholars have placed on the neighborhood as an important source of social contact for women. Hanson and Pratt (1991) found that when searching for jobs, women rely heavily on information from other women who are not only close friends or family members, but who also live nearby. Fernandez-Kelly (1995) argued that the neighborhood plays an important role in shaping the social networks of low-income residents, especially women. In a study of "impoverished ghetto women" in Baltimore, she described the spatial nature of social capital as follows:

> Because people derive their knowledge from the physical spaces where they live, they also anticipate that which is probable in their nearby environment, and they recognize as reality that which is defined as such by members of their interpersonal network occupying proximate spheres of intimacy. For that reason, social and cultural capital are *toponomical,* that is, dependent on physical and social location. (Fernandez-Kelly 1995, 215)

Because class, race, and ethnicity shape the range of physical and social locations across which individuals live their daily lives, the scale at which social and cultural capital take their toponomical form differs for different groups. Fernandez-Kelly described the social lives of poor, female residents of the ghetto as embedded in spatially hyperlocal contexts. Fischer (1982) also identified the spatially limited nature of social networks among youths, those with low incomes, and the less educated.

One study that considered the effects of neighborhood on black women's employment outcomes postulated a similar outcome for female as for male "getto residents." Johnson, Bienenstock, and Farrell (1999, 11) stated that the "difficulty [encountered in the labor market] is related, at least in part to the fact that the women are more likely to have truncated social networks, which diminishes their capacity to gain access to resources controlled by larger social networks."[2] They found that black and Hispanic women whose social networks contain at least one person who resides outside their neighborhood are more likely

[2] Although the title of their article describes effects on women's labor force *participation*, Johnson, Bienenstock, and Farrell (1999) tested the effects of neighborhood and neighborhood bridge contacts on women's employment status as working (employed) or not working (unemployed plus those who were not participating in the labor force).

to be working than are those without a "neighborhood bridge" contact.

The immigration literature emphasizes neighborhood context, but of a different cast. Sociological research on immigration has pointed to the important role that immigrant neighborhoods play in defining the immigrant experience, particularly economic attainment (Marcuse 1997; Thomas and Znaniecki 1927; Zhou 1992). Unlike the malevolent ghetto, the immigrant enclave is often championed as a cultural safe haven—a place that offers employment contacts to the newcomer, affordable housing, linguistic familiarity, culturally specific goods and services, and a set of ethnic networks and relationships that help facilitate the newcomer's adaptation to the unfamiliar receiving society. Perhaps poverty stricken, the immigrant enclave neighborhood is nevertheless viewed as a vibrant locale rich in social capital (although see Logan, Alba, and Zhang 2002 for a discussion of high-status "ethnic communities").

To my knowledge, no research has empirically tested the relationship between residence in an immigrant enclave and unemployment. Furthermore, the theorized differences between the immigrant enclave and the black "ghetto" present an important comparison test. If immigrant-enclave neighborhoods provide abundant employment networks to their residents, then immigrant women who live in such neighborhoods may be less likely to suffer unemployment. In contrast, one would expect a black-enclave neighborhood to have the opposite effect on unemployment for native-born black women. In an environment of poor or isolated social capital, social networks may be less likely to carry job information.

In addition to the neighborhood, the household is likely to be an important source of social capital. O'Regan and Quigley (1993) found a strong association between the employment status of urban black and white youths and that of their parents and siblings. For example, youths who were living with an employed parent were 74 percent more likely to be employed. Given the predominance of strong ties in immigrant networks, the household offers a primary site of contact into these networks.[3] In her study of immigrant Mexican domestic workers, Hondagneu-Sotelo (1994) found that women benefited from the male-network ties of their husbands in finding their first housecleaning jobs. Because many immigrant Mexican men in the study community worked as gardeners or in horse stables, they were in contact with prospective employers of domestic labor. Kossoudji and Ranney (1984) hypothesized a similar relationship between husbands' social contacts and wives' employment searches to explain their finding that married Mexican immigrant women entered more highly paid unskilled occupations than did their unmarried counterparts. They argued that these married female migrants make use of "established [male] contacts to get the best paying jobs" (p. 1139).

This study examined the relevance of spatial and social accessibility on unemployment for less-educated immigrant and native-born black women. The literatures in both geography and sociology suggest that key differences may be expected in how immigrant and native-born black women experience the effects of these two types of accessibility. If immigrant women rely primarily on ethnic networks in finding employment, then spatial job accessibility may have little to no effect on unemployment. Conversely,

[3] Immigrant networks tend to be comprised of social contacts known as "strong ties." As Granovetter (1973, 1361) defined, "the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie." Friends and family members rank high on all these dimensions, proving the strongest of strong ties. While strong ties often do not provide the best information about jobs because of its redundancy (often what one knows is similar to what one's friends and family know), they nevertheless provide easy access to reliable job information. Furthermore, Hanson and Pratt (1991) found that strong ties in the form of male family members were the main way that women gained access to gender atypical, and therefore better paying, work.

if native-born black women have poor social access to employment networks, then spatial accessibility will likely matter for their employment outcomes.

Furthermore, if immigrant-enclave neighborhoods provide easier social access to ethnic employment networks, then residence in these neighborhoods may decrease the likelihood of unemployment for immigrant women. Conversely, if residents of concentrated black neighborhoods are socially cut off from employment networks, then residence in these neighborhoods may be positively associated with unemployment for black women. Evaluating these effects of social and spatial access to jobs on employment outcomes for different racial, ethnic, and nativity groups helps to clarify the different kinds of disadvantage that less-educated women face in obtaining employment.

Data and Methods

Researchers who are interested in the relationship between spatial job accessibility and women's employment outcomes are hampered by the lack of fine-scale geographic data. Most analyses have relied on a mix of individual-level data and measures of employment opportunities at the level of the metropolitan statistical area, such as the percentage who are employed in service jobs (McNabb 1977; South and Xu 1990; Ward and Dale 1992; see Hanson, Kominiak, and Carlin 1997 for a methodological review). Finely scaled spatial data are critical for a test of the effect of employment accessibility on women's unemployment, since significant research has indicated that distinct intraurban labor markets exist and that individuals search for work at a scale that is well below the metropolitan level (Hanson and Pratt 1992; Stoll 1999; Stoll and Raphael 2000).

In this study, I used a unique data set from the 1990 Census of Housing and Population that contains individual-level information at the tract level, including information on both tract of residence and tract of work, for the Los Angeles consolidated statistical metropolitan area (CSMA)—the five counties of Los Angeles, Orange, Riverside, San Bernardino, and Ventura.[4] Made available to researchers under controlled circumstances, this confidential data set comprises the full sample of the 1990 long form. These data were matched to detailed travel data provided by the Southern California Association of Governments (SCAG 1997).

My focus in this study was on less-educated (high school degree or less schooling) native-born minority and foreign-born women aged 18 to 64. The groups selected for analysis were native-born blacks and the six immigrant groups in Los Angeles with the largest less-educated female populations: Mexicans, Chinese, Koreans, Salvadorans, Guatemalans, and Vietnamese.

I limited my attention to less-educated women in the labor force primarily for two reasons.[5] First, spatial job accessibility is hypothesized to matter more for the employment outcomes of less-educated workers. Highly educated workers are compensated for longer commutes to high-skill, high-wage jobs, while less-educated workers face stiffer commuting constraints, given lower compensation rates (Simpson 1987). The relatively higher costs of commuting for lower-wage workers (as a portion of their earnings) impose a greater friction of distance in their daily journeys to work than they do for more highly educated workers. Second, education provides a "bridge" to social networks beyond the strong ties of family, friends, and neighbors. For less-educated women with limited labor market opportunities, local contacts (such as those in the household or neighborhood) may be their primary sources of information about job opportunities and the experience of work

[4] Because of the confidential nature of these data, I cannot provide this data set to other researchers. I thank the Census Bureau for giving me access to these data.

[5] Labor force participants include employed and unemployed workers. These individuals have made a decision to be in the workforce. Nonparticipants are not actively seeking employment and were not included in this analysis.

in general. Household and neighborhood contacts, then, are likely to be important sources of social accessibility to jobs.

Descriptive Statistics

Native-born black and immigrant women experience relatively high rates of unemployment in the Los Angeles region (see Table 1).[6] Among the groups I considered in this study, native-born black and foreign-born Mexican women experience the highest rates of unemployment (16.6 percent and 14.6 percent, respectively). These rates are considerably higher than the rate for all less-educated women (9.8 percent) and are especially high in comparison to the rate for less-educated native-born white women (5.9 percent) in Los Angeles. Guatemalan and Salvadoran immigrant women have the next-highest rates of unemployment (14 percent and 13.8 percent, respectively).[7] The three Asian groups experience the lowest rates of unemployment, although the experience of Vietnamese immigrant women more closely follows the trend of the aforementioned groups with an unemployment rate of 12 percent. In contrast, the unemployment experience of Chinese and Korean women sharply diverges from that of the other groups examined here. The unemployment rate for Chinese women is nearly half that of their Latino counterparts (6.7 percent) and Koreans experience an extremely low unemployment rate (5.5 percent).

The extremely high rates of unemployment among native-born black and Latina immigrants reflect acute circumstances of disadvantage in light of these groups' high rates of labor force participation. Over 68.4 percent of all Salvadoran women and nearly 64 percent of all Guatemalan women participate in the labor force. Native-born black women participate in the labor force at the next-highest level, with a rate of 60.7 percent. Although a high percentage of these women want and/or need to work, they simultaneously face greater barriers to finding employment than do other groups. This finding for native-born black women

[6] For an informative overview of general trends in unemployment among women, see Blau, Ferber, and Winkler (2002).

[7] In an examination of 1994–98 data from the Current Population Survey, Waldinger (2001, 102) found that "employment probabilities are uniformly and substantially lower among less-skilled immigrant women than among their white or black counterparts." In contrast, I found that less-educated native-born black women experience the highest rate of unemployment. This disparity is likely due to the following factors: (1) Waldinger included those who were not participating in the labor force as part of the "unemployed"; (2) he examined five cities in the aggregate, as opposed to only Los Angeles; (3) he used estimated employment probabilities, not raw rates; and (4) he examined a different period.

Table 1

Unemployment Rates for Less-Educated Women in Los Angeles, 1990

	Native-Born Blacks	Mexicans	Chinese	Koreans	Salvadorans	Guatemalans	Vietnamese
Unemployment rate	16.6	14.6	6.7	5.5	13.8	14.0	12.0
Unemployment in enclave neighborhood	17.1	16.44*	—[a]	—[a]	14.3	14.6	—[a]
Unemployment outside enclave	16.2	13.6	—[a]	—[a]	13.2	13.4	—[a]
N	8,033	30,057	1,336	1,587	5,220	2,498	1,623

Source: Confidential one in six 1990 Census of Housing and Population.

* Statistically significant difference at the .05 level using a chi-square test.

[a] Value suppressed by the Census Bureau.

reflects a national trend: black women participate in the labor force at higher rates than do white women, but experience greater rates of unemployment (Jacobsen 1998, 460; Spain and Bianchi 1997).

Rates of unemployment are slightly higher for all groups in ethnic-enclave neighborhoods. The largest difference exists for foreign-born Mexicans: unemployment is nearly three percentage points higher for immigrant women who reside in enclave neighborhoods than for those who do not. Unemployment is about one percentage point higher in black concentrated neighborhoods.

Maps

The residential maps (see Figures 1 to 7) depict relative concentrations of the groups I examined using a concentration quotient to identify ethnically specific residential enclaves (for example, an immigrant Mexican or black neighborhood).[8] A concentration quotient (CQ) identifies a neighborhood as an ethnic enclave when a group makes up a disproportionate share of a neighborhood's total population relative to its share of the total population of Los Angeles and is defined as follows:

[8] Maps were generated using a count of all members of a group that was drawn from the same confidential 1990 Census of Housing and Population data set described earlier.

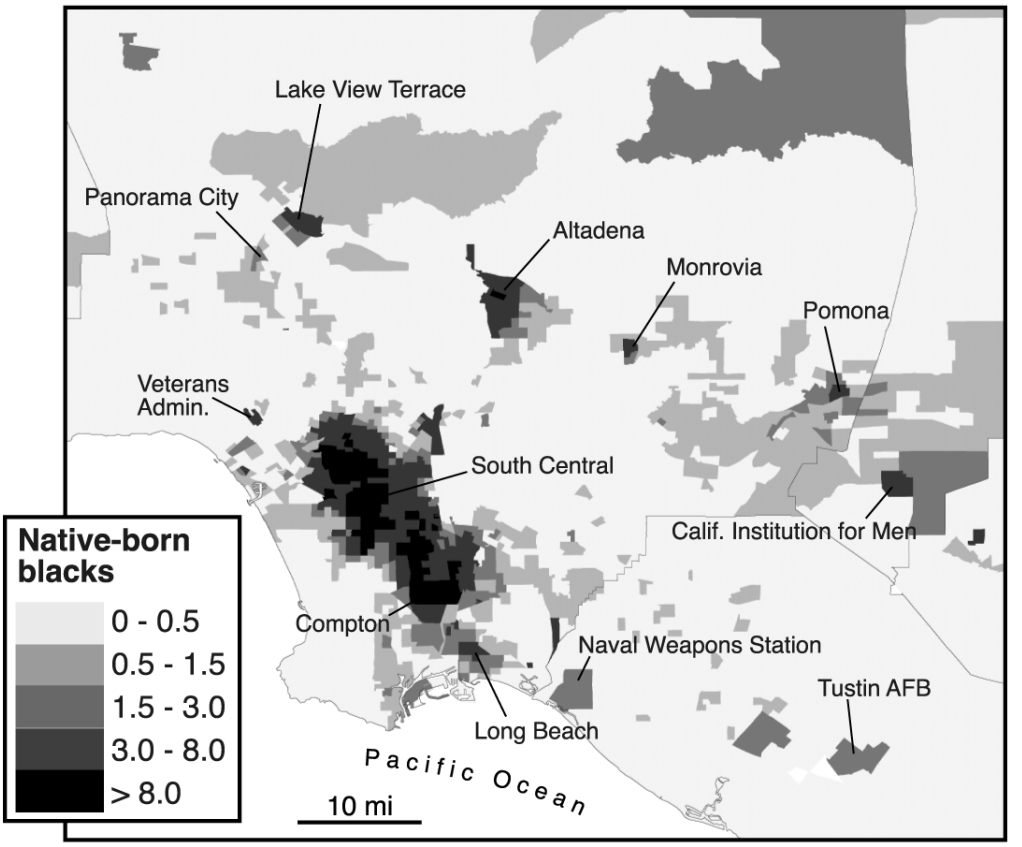

Figure 1. Residential concentrations of native-born blacks in Los Angeles.

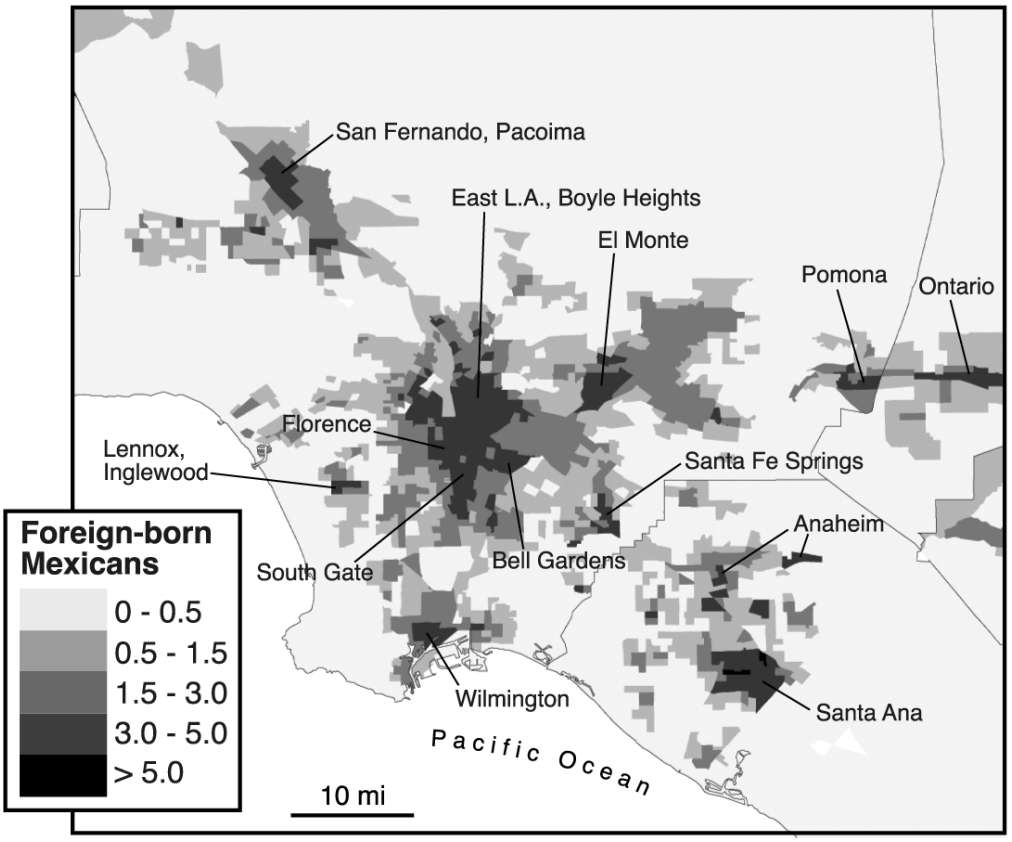

Figure 2. Residential concentrations of foreign-born Mexicans in Los Angeles.

$$CQ_j = (P_{ij}/P_j)/(P_{im}/P_m) \qquad (1)$$

where CQ_j is the concentration quotient for tract j, P_{ij} is the population of group i in tract j, P_j is the total population of tract j, P_{im} is the population of group i in metropolitan area m, and P_m is the total population of metropolitan area m. A tract is identified as an ethnic-enclave neighborhood for a group if the CQ is greater than or equal to 5 for that group. This threshold is similar to Logan, Alba, and Zhang's (2002) odds-ratio cutoff of 5 to define an immigrant enclave. The exception is Mexicans. Because Mexicans constitute such a large portion of the Los Angeles population, even neighborhoods with a CQ = 1 have a high percentage of Mexican residents. As a result of this scale effect, only 1.11 percent of all Mexicans live in neighborhoods with a CQ ≥ 5. I adjusted the enclave cutoff for Mexicans to 3 (CQ ≥ 3); 35 percent of all Mexicans live in enclave neighborhoods by this definition. Black concentrated neighborhoods are neighborhoods that are defined as having a concentration of native-born blacks that is five times greater than their expected share (CQ ≥ 5).

As is visually apparent in the residential maps (see Figures 1 to 7), the seven ethnic-racial and immigrant groups reside in relatively distinct areas of the Los Angeles region. Although there is some overlap among groups (for example, Salvadorans and Guatemalans), each group's ethnic-enclave neighborhoods tend to be located apart from those of the other groups.

While the maps showing concentrations of low-skill jobs in the region (see

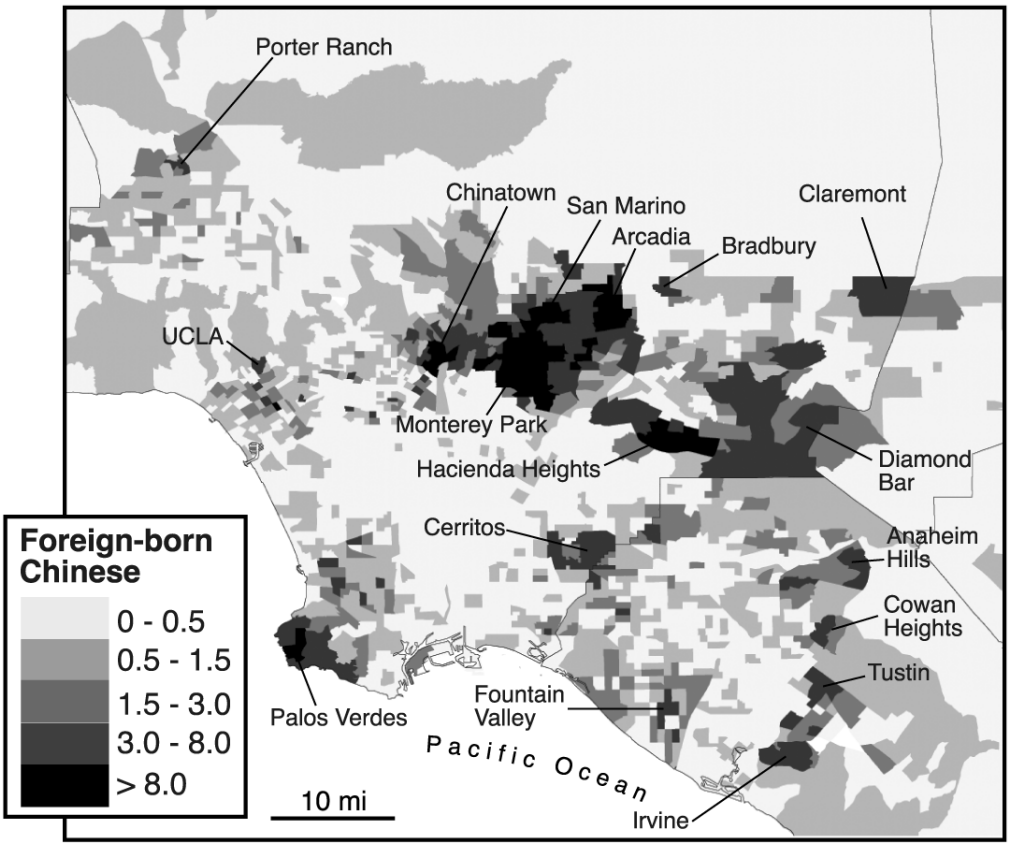

Figure 3. Residential concentrations of foreign-born Chinese in Los Angeles.

Figures 8 and 9) cannot convey spatial accessibility as exactly as an accessibility index, they serve as a first cut at illustrating the relative spatial proximity of each group (residentially) to concentrations of low-skilled jobs.[9] Low-skill jobs (see Figure 8) are relatively ubiquitous throughout the region, but the greatest concentrations lie to the east and southeast of downtown Los Angeles (South Gate, Maywood, Bell, and Huntington Park), along the I-10 corridor, and in pockets of the San Fernando Valley (Pacoima) and Orange County (Santa Ana). Low-skill jobs held by women (see Figure 9) are more evenly distributed, although pockets of high concentration can be found in the same areas as the highest concentrations of all low-skill jobs (east and southeast of downtown Los Angeles, for example). A few more pockets of highly concentrated female low-skill jobs can be found in the affluent Westside communities, such as the Pacific Palisades, Brentwood, and Beverly Hills.

[9] Low-skill jobs are identified as jobs that are held by individuals with a high school degree or less schooling. Concentrations of low-skill jobs are identified using the same concentration quotient as defined in Equation (1), where P_{ij} is the count of (low-skill) jobs i in tract j, P_j is the total employment of tract j, P_{im} is the count of (low-skill) jobs i in metropolitan area m, and P_m is the total employment of metropolitan area m.

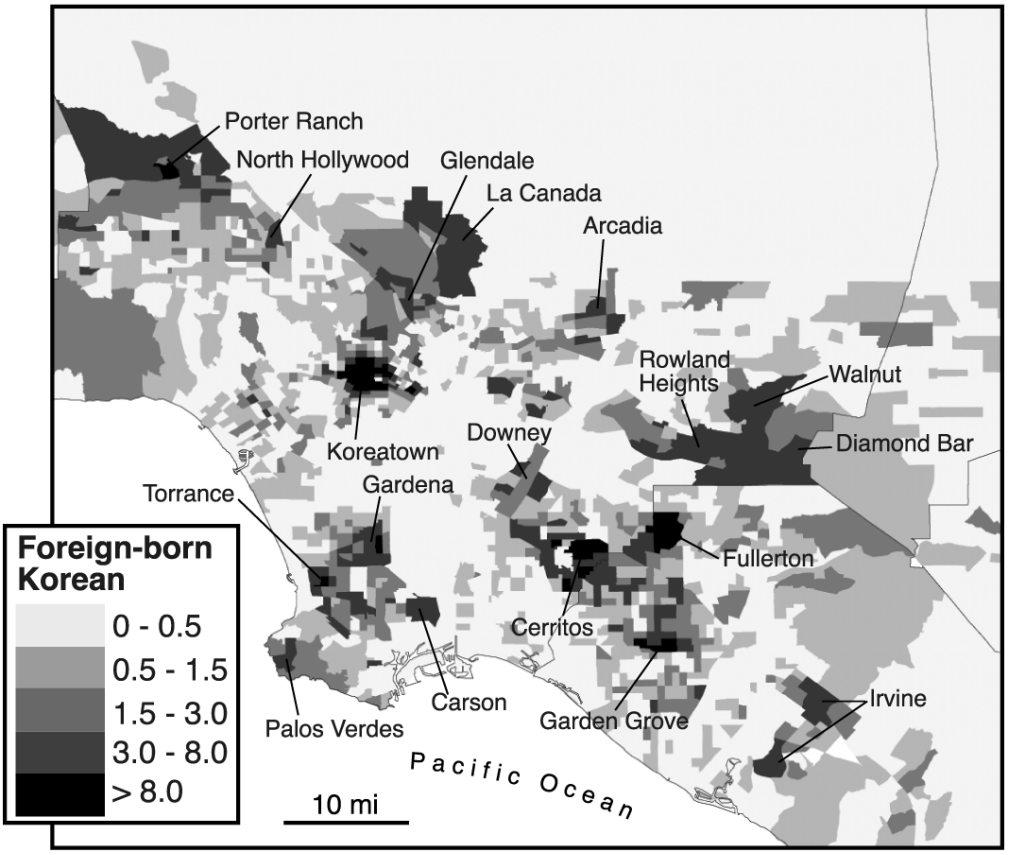

Figure 4. Residential concentrations of foreign-born Koreans in Los Angeles.

Testing the Effects of Spatial and Social Accessibility on Unemployment

Modeling the effect of spatial job accessibility on employment outcomes requires a single parameter that measures an individual's relative access to a set of job opportunities.[10] Following Raphael (1998); Cervero, Rood, and Appleyard (1999); and Mouw (2000), I calculated a gravity-like measure of accessibility as follows:

$$A_{ki} = \sum_{j=1}^{N} E_{kj} \times \exp(-\hat{\gamma} d_{ij}) \qquad (2)$$

where A_{ki} is the accessibility index to jobs of type k for residential tract i, E_{kj} is the number of jobs of type k in tract j, N is the total number of tracts, $\hat{\gamma}$ is an empirically derived distance-decay coefficient (a weight of jobs at different distances from tract i), and d_{ij}

[10] In contrast, commutes only indicate how far away jobs that are held by employed workers in a particular neighborhood are; they do not indicate the full set of jobs a region offers and their location vis-à-vis a particular neighborhood. Furthermore, information about currently employed workers' commutes cannot distinguish between the effects of social and spatial accessibility on employment outcomes. For example, a long commute by a black worker may indicate the effects of spatial mismatch—that available jobs are located far away. But a long commute may also indicate the effects of a social mismatch. A black worker may engage in a long commute because jobs close by are held by immigrants, and ethnic recruitment networks serve to position these jobs out of the social reach of blacks.

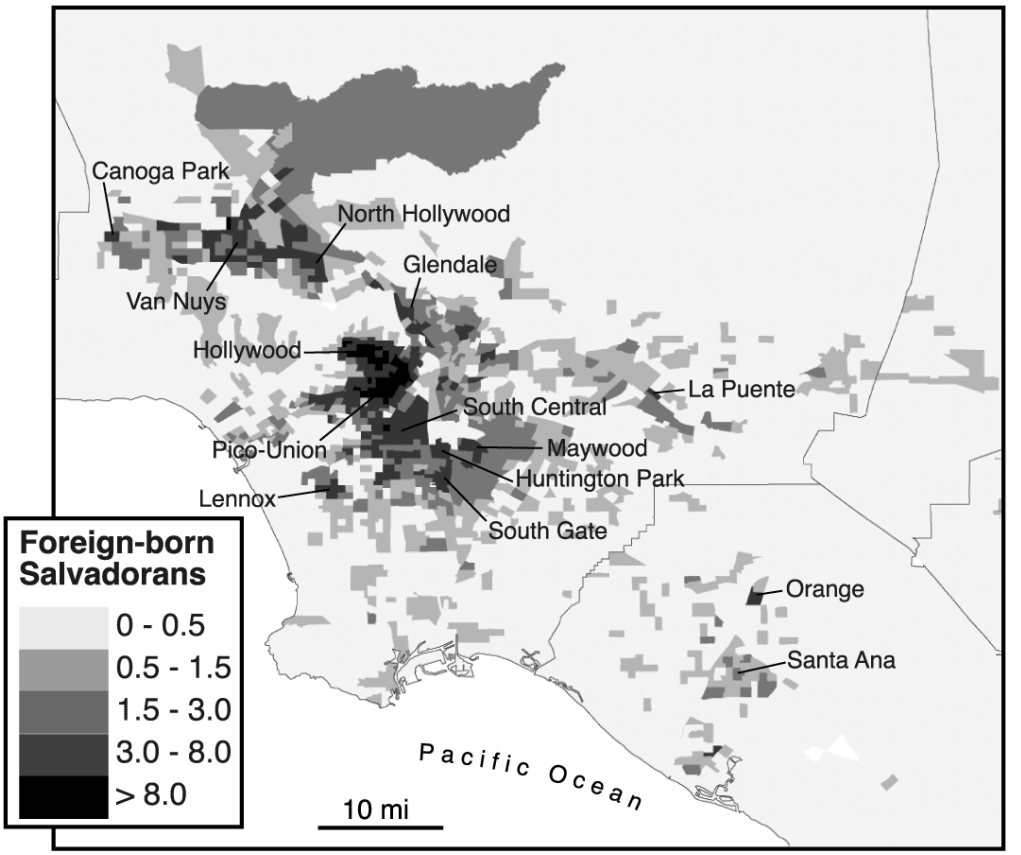

Figure 5. Residential concentrations of foreign-born Salvadorans in Los Angeles.

is the temporal distance (in minutes)—highway network travel times between tract centroids—for all *i*-*j* pairs.[11] Larger values of the accessibility index reflect greater geographic accessibility to employment. If poor geographic accessibility to jobs contributes to women's joblessness, then accessibility should exert a downward pressure on the likelihood of unemployment.

As was mentioned earlier, travel times were calculated by matching the census data set to a SCAG data set containing 1997 peak a.m. private auto travel times between every traffic analysis zone (TAZ) to every other TAZ in the Los Angeles region. A TAZ may be smaller than a census tract but is always wholly contained within a census tract. When necessary, I aggregated TAZs up to the census-tract level.

[11] I empirically derived the distance-decay parameter to be directly input into Equation (2) by estimating the gravity model

$$T_{ij} = \kappa L_i^{\alpha} E_j^{\beta} exp(-\gamma d_{ij}) \qquad (3)$$

where i indexes all residence tracts (origins); j indexes all employment tracts (destinations); T_{ij} is the count of workers that live in tract i and work in tract j; L_i is the count of workers living in tract i; E_j is the count of workers (jobs) employed in tract j; d_{ij} is the temporal distance between tracts i and j measured in minutes by private commute time; and α, β, γ, and κ are parameters to be estimated. Using a negative binomial count model, I estimate $\hat{\gamma} = -0.058$. This estimate weights jobs at k distance from tract i by 0 minutes = 1, 5 minutes = .75, 10 minutes = .56, and 20 minutes = .31.

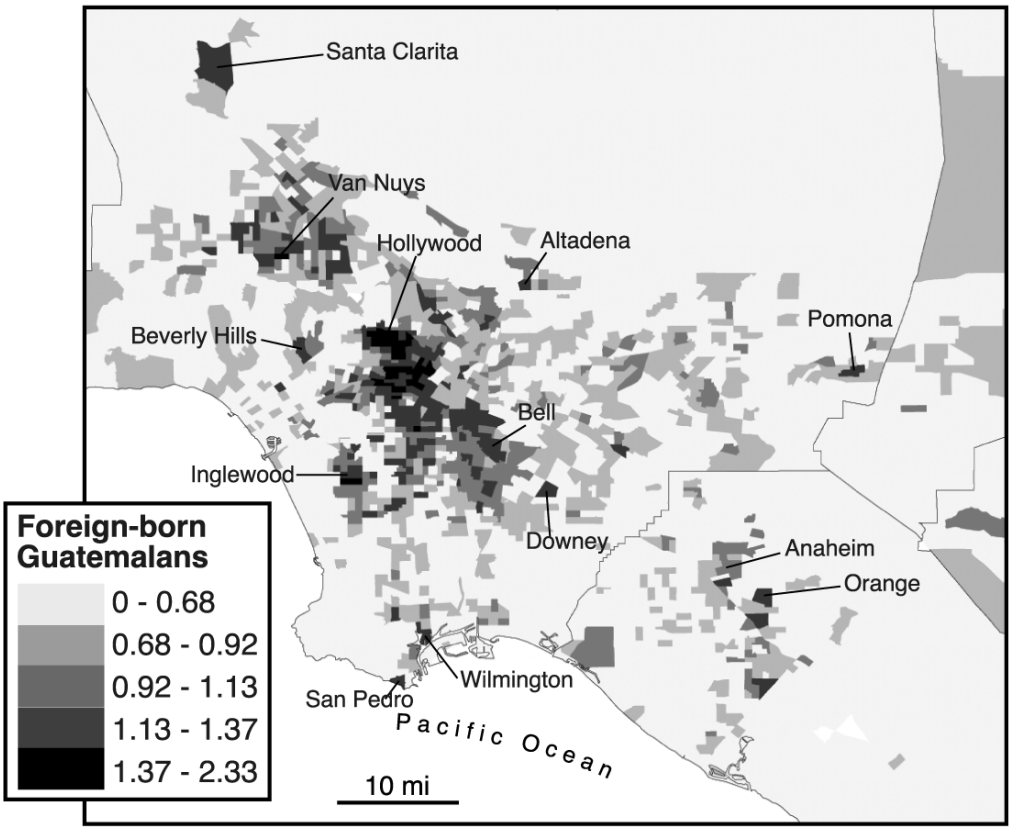

Figure 6. Residential concentrations of foreign-born Guatemalans in Los Angeles.

This geographic correspondence between TAZs and census tracts was not in place until 1997 when SCAG redesigned its TAZ system to match census tracts. Prior to 1997, the typical TAZ was larger than a census tract and did not share the same geographic boundary. When matching data from the 1990 census to 1990 travel data, one must aggregate census tracts to the TAZ level (losing geographic specificity in the individual data) and allocate tracts that are split between TAZs to one TAZ or the other. As a result, the matched TAZ data inaccurately correspond to the network patterns of a particular census tract, and the finer geography of the 1990 census tract is forgone for the grosser geography of a 1990 TAZ. A closer approximation can be achieved by using SCAG's 1997 travel data set with its finer TAZ geography and its TAZ-to-census tract geographic correspondence. Aspects of the travel network changed between 1990 and 1997 (including highway improvements, additional HOV lanes, and the opening of the 105 freeway), which may result in lower point-to-point travel times in the 1997 data. Thus, this study's estimations of the effects of spatial accessibility are likely to be more conservative than would estimations using 1990 travel data with a one-to-one match between TAZs and census tracts—data that are not available. Furthermore, the SCAG region was much smaller in 1990, disallowing an analysis of major portions of the five-county region that now fall within the 1997 SCAG region. The 1997 SCAG region contains all of Ventura, Los Angeles, and Orange counties and portions of Riverside and San Bernardino counties

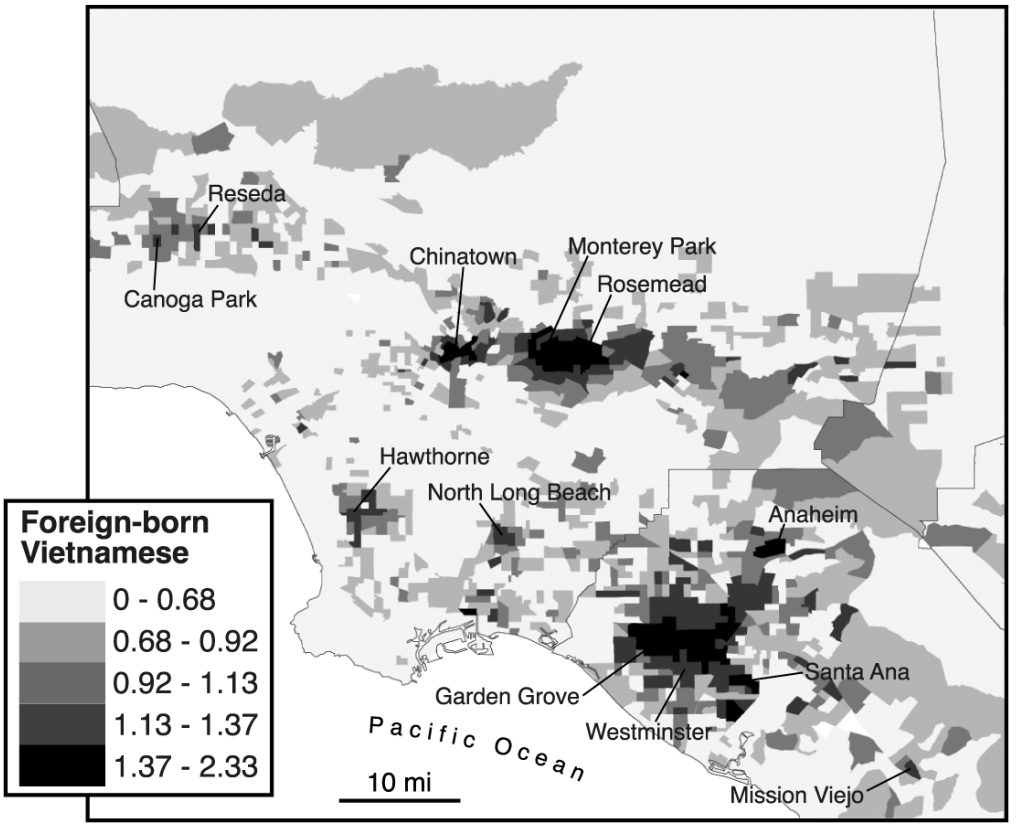

Figure 7. Residential concentrations of foreign-born Vietnamese in Los Angeles.

(containing over 90 percent of the population in both counties).

Focusing on women minimizes endogeneity issues that arise when one explores the spatial relationships between home and work. Underpinning the spatial-mismatch and spatial-entrapment hypotheses is the assumption that some groups, such as blacks and women, search for work from a fixed place of residence. Because the historical and contemporary effects of housing discrimination have limited the number of residential areas that serve as viable neighborhoods for blacks, most blacks must search for work from fixed residential locations. Women's residential locations can be assumed to be fixed prior to the job search; Hanson and Pratt (1991) found that for 95 percent of the women in their sample, residential location preceded job search.

Following Raphael (1998), I controlled for the spatial accessibility of a competing labor supply. A positive effect of spatial job accessibility will be diminished for workers who live in or near neighborhoods that are dense with competing workers. In other words, the benefit of living close to jobs may be offset by also living near other workers who are competing for these jobs. The effect of the spatial distribution of competing workers on women is particularly important, since the presence of fewer competing workers opens up job opportunities previously closed to women (Reskin, McBrier, and Kmec 1999). I measured the spatial variation in the labor force by adapting the accessibility index used in Equation (2):

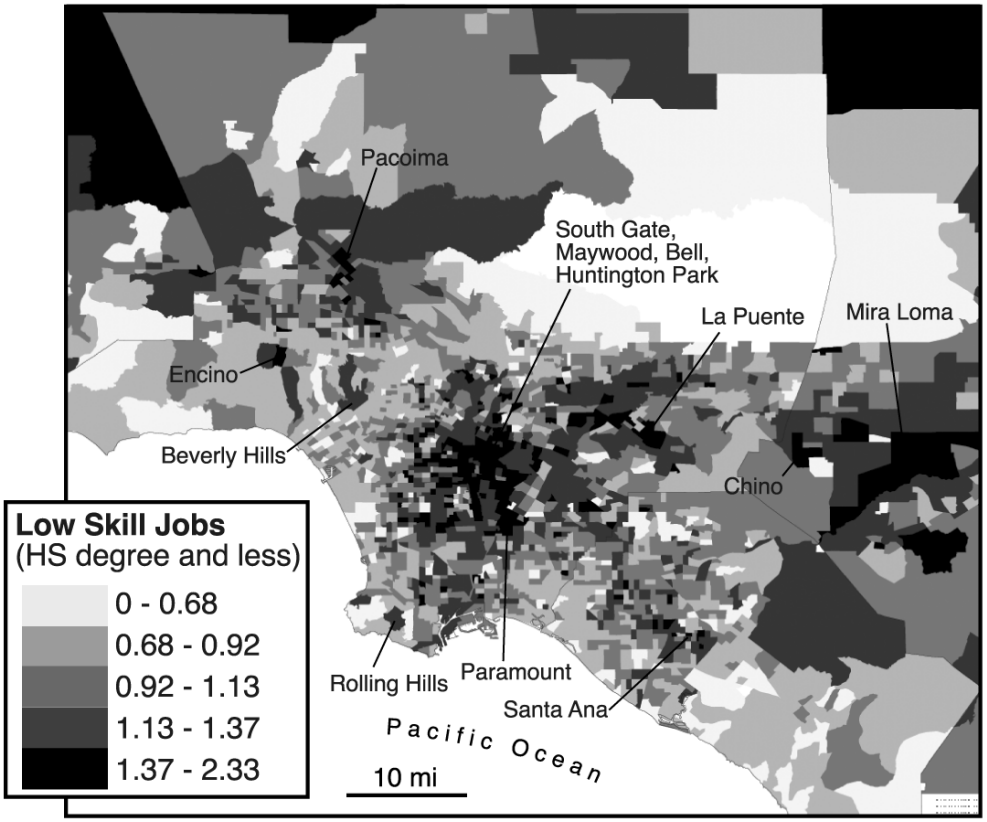

Figure 8. Concentrations of low-skill jobs as a share of all jobs in Los Angeles.

$$LS_i = \sum_{j=1}^{N} R_j \times \exp(-\hat{\gamma} d_{ij}) \qquad (4)$$

where LS_i is the accessibility of a competing supply of low-skill labor for residential tract i and R_j is the number of less-educated residents in residential tract j.

The Model

Using logistic regression, I modeled the probability of unemployment among less-educated minority women as a function of spatial and social accessibility and a set of individual controls. I restricted my sample to women aged 18–64 with a high school degree or less schooling, who were not enrolled in school, were not disabled, were not working at home, and were not living in group quarters. The model takes the following form:

$$P_i(E) = f(A_i, LS_i, R_i, H_i, I_i) \qquad (5)$$

where P_i(E) is the probability of unemployment for individual i; A_i is a measure of spatial accessibility to jobs from the individual's tract of residence; LS_i is a measure of the competing labor supply in relation to the individual's tract of residence; R_i is a vector of the characteristics of the individual's residential tract, including whether or not the neighborhood is an ethnic enclave; H_i is a vector of the individual's household characteristics; and I_i is a vector of the individual's characteristics. Interactions between independent variables were tested but were dropped if insignificant. The model was run separately for native-born blacks and the six immigrant groups in Los Angeles with the largest less-educated female populations: Mexicans,

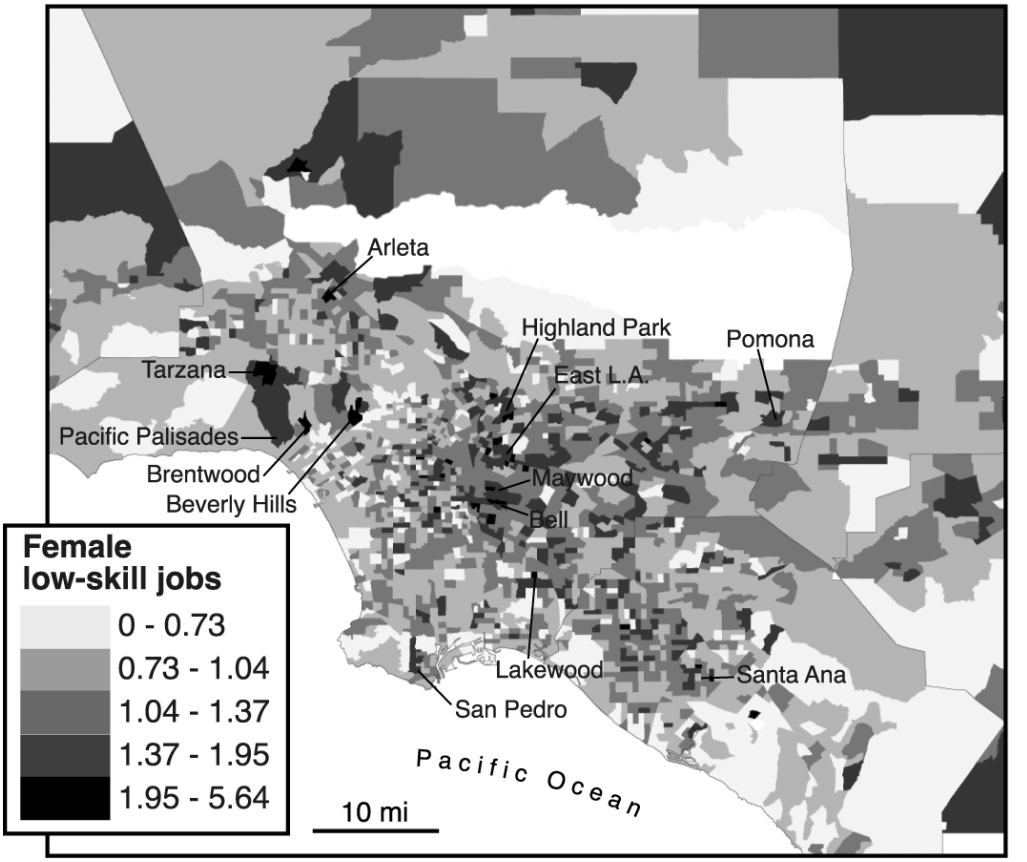

Figure 9. Concentrations of female low-skill jobs as a share of all jobs in Los Angeles.

Chinese, Koreans, Salvadorans, Guatemalans, and Vietnamese. See Table 2 for a list of the variables used in the models and Table 3 for the means of these variables.

Spatial Accessibility to Different Types of Jobs

For each group, I tested measures of spatial accessibility to different kinds of jobs. First, I used a measure of accessibility to all low-skill jobs (jobs held by individuals with a high school education or less). Doing so allowed for a measure of accessibility to skill-appropriate job opportunities for less-educated workers and controlled for the effects of a skills mismatch (see Kasarda 1988). Thus, high-skill finance jobs in downtown Los Angeles were not counted as spatially "accessible" to less-educated women who lived nearby in Pico Union or South Central Los Angeles. This incorporation of a skills match distinguishes my accessibility measure from that used by Raphael (1998). Although Raphael's (1998) approach proxies for job vacancies through a measurement of job growth, it fails to capture an essential element of employment matching—the skill requirements of these vacant jobs.[12]

Second, I used a measure of accessibility to all low-skill jobs held by women. This

[12] The data that are necessary to account for both a skills requirement and a dynamic measure of employment change do not exist. Although the 1980 or 2000 versions of the 1990 data set I used would provide a measure of accessibility that

Table 2

Description of Regressors Used in the Models

Variable	Definition
Dependent	
UNEMP	Probability of being unemployed
Neighborhood-level independents	
ACCESS[a]	Spatial accessibility to jobs of type *k*
EDSUPPLY[a]	Spatial accessibility of competing labor supply
ENCLAVE[a]	Residence in ethnic enclave or concentrated black neighborhood (1 = yes)
PERPOV	Percentage of households in tract below the poverty line
Household-level independents	
COUPLE	Living with a spouse or partner (1 = yes)
LNKIDS	Total number of children aged 18 or younger (logged)
KIDS3	Presence of children aged 3 or younger (1 = yes)
LNADULTS	Number of adults in household (logged)
LNEMPADULTS	Number of employed adults in household (logged)
FEMHELP	Presence of nonworking female in household other than the respondent (1 = yes)
K_FEMHELP	Interaction term between LNKIDS and FEMHELP
CAR_ADLT	Ratio of cars to adults in household
Individual-level controls	
AGE	Age
AGE2	Age squared
COH2[b]	Cohort-of-arrival, 1980–85 (1 = yes); immigrants only
COH3	Cohort-of-arrival, 1975–80 (1 = yes); immigrants only
COH4	Cohort-of-arrival, 1970–75 (1 = yes); immigrants only
COH5	Cohort-of-arrival, pre-1970 (1 = yes); immigrants only
ENG	English language ability (0 = poor, 1 = good); immigrants only

[a] See the text for a full explanation of this variable.
[b] Comparison group for cohort-of-arrival is 1985–90.

measure further refines the accessibility measure to account for sex segregation in the labor market. Women are more likely to qualify for jobs held by other women. Third, I used a measure of accessibility to all low-skill jobs held by members of the respondent's national origin or racial group. This measure refines the measure to account for the ethnic division of labor. Workers are more likely to be hired for jobs held by members of the same national-origin group, given the operation of immigrant employment networks (Waldinger 1986–87). Fourth, I used a measure of accessibility to all low-skill jobs held by *female* members of the respondent's national-origin or racial group. This highly refined measure of accessibility captures both ethnic and sex segregation in the labor market. Last, as a replication of Hanson, Kominiak, and Carlin's (1997) study, I included a measure of accessibility to all jobs that I identified as female-dominated occupations.[13]

Neighborhood Variables

I used the CQ described in Equation (1) to identify ethnically specific residential enclaves (for example, a black or immigrant Vietnamese neighborhood). A neigh-

incorporates a skill-specific measure of change in employment, these data are currently unavailable to the research community. Cross-sectional analyses using employment levels, such as those that I used in this study, were used recently to discern patterns of mismatch (see Raphael and Stoll 2002).

[13] Given the highly variable nature of local labor markets, I defined occupations that are more than 70 percent female in the Los Angeles region as female-dominated occupations for this study.

Table 3

Means (Standard Deviations in Parentheses)

	Native-Born Blacks	Mexicans	Chinese	Koreans	Salvadorans	Guatemalans	Vietnamese
UNEMP	0.166	0.146	0.067	0.055	0.138	0.140	0.120
	(0.372)	(0.353)	(0.251)	(0.228)	(0.345)	(0.347)	(0.325)
AIW_LOW	0.111	0.089	0.012	0.011	0.012	0.011	0.013
	(0.476)	(0.397)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
EDSUPP	1.588	0.278	0.371	0.273	0.442	0.413	0.288
	(0.887)	(0.564)	(0.496)	(0.532)	(0.449)	(0.443)	(0.371)
PERPOV	0.186	0.173	.130	.111	.211	.203	.114
	(0.111)	(0.092)	(.080)	(.088)	(.098)	(.103)	(.074)
ENCLAVE	0.483	0.358	0.879	0.316	0.398	0.380	0.470
	(0.5)	(0.479)	(0.327)	(0.465)	(0.49)	(0.485)	(0.499)
COH2	NA[a]	0.188	0.297	0.310	0.393	0.295	0.370
		(0.391)	(0.457)	(0.463)	(0.488)	(0.456)	(0.483)
COH3	NA[a]	0.215	0.174	0.236	0.198	0.175	0.352
		(0.411)	(0.38)	(0.425)	(0.398)	(0.38)	(0.478)
COH4	NA[a]	0.187	0.099	0.136	0.103	0.110	0.038
		(0.39)	(0.299)	(0.343)	(0.304)	(0.313)	(0.19)
COH5	NA[a]	0.175	0.137	0.054	0.047	0.076	0.010
		(0.38)	(0.344)	(0.225)	(0.211)	(0.266)	(0.102)
ENG	NA[a]	0.428	0.423	0.423	0.373	0.408	0.534
		(0.495)	(0.494)	(0.494)	(0.484)	(0.491)	(0.499)
AGE	37.553	33.326	43.364	40.964	34.215	34.426	36.290
	(12.446)	(10.244)	(10.786)	(10.12)	(9.639)	(10.074)	(9.761)
AGE2	1565.090	1215.540	1996.670	1780.410	1263.580	1286.620	1412.200
	(991.329)	(758.943)	(937.36)	(840.817)	(727.552)	(762.724)	(756.243)
HINC	37386	37700	45961	47322	35259	36757	48764
	(33103)	(38507)	(67342)	(47355)	(59993)	(63875)	(37713)
COUPLE	0.357	0.528	0.671	0.711	0.461	0.439	0.547
	(0.479)	(0.499)	(0.47)	(0.454)	(0.498)	(0.496)	(0.498)
KIDS	1.141	2.271	0.934	0.943	1.752	1.627	1.536
	(1.316)	(1.765)	(1.095)	(0.977)	(1.47)	(1.487)	(1.445)
KIDS3	0.181	0.344	0.109	0.101	0.306	0.301	0.201
	(0.385)	(0.475)	(0.312)	(0.302)	(0.461)	(0.459)	(0.401)
EMPADLT	0.875	2.043	1.507	1.314	1.825	1.905	1.768
	(1.054)	(1.686)	(1.156)	(1.042)	(1.428)	(1.553)	(1.382)
FEMHELP	0.191	0.260	0.284	0.250	0.219	0.207	0.376
	(0.393)	(0.439)	(0.451)	(0.433)	(0.413)	(0.405)	(0.485)
CAR_ADLT	1.199	0.906	1.067	1.183	0.839	0.811	0.994
	(0.557)	(0.477)	(0.478)	(0.432)	(0.429)	(0.455)	(0.45)
N	8,033	30,057	1,336	1,587	5,220	2,498	1,623

[a] NA = Not applicable.

borhood is identified as an ethnic enclave when a group makes up a disproportionate share of a neighborhood's total population relative to its share of the total Los Angeles population. For example, a neighborhood occupied by Vietnamese at five times their expected share (CQ = 5) is identified as a Vietnamese ethnic enclave.

If residential enclaves provide resources in the form of social capital, specifically to ethnic employment networks, then immigrant women who live in immigrant-enclave

neighborhoods may be more likely to be employed, given their easy access to information of jobs. Furthermore, ethnic enclaves may provide jobs to immigrant women in businesses that serve the immigrant community (Portes and Jensen 1989). These jobs may not require the ability to speak English and may be much easier to obtain for the immigrant woman than jobs outside the enclave. Such characteristics reduce cultural barriers to employment that may keep immigrant women out of the workforce.

Finally, I included the percentage of households living in poverty in a tract to control for neighborhood class effects. "Ghetto" neighborhoods are poor neighborhoods, and the underclass debate centers on the dual effects of racially segregated neighborhoods and concentrated poverty. Therefore, negative neighborhood effects may hold only for poor neighborhoods. Controlling for class effects also helps to isolate uniquely social or racial and ethnic effects of a neighborhood. I used the 1990 census poverty thresholds to identify households with incomes below the poverty line.

Household Variables

Family context is an important factor for women's employment because of women's domestic social roles. The significant responsibility that women bear as primary childcare providers presents an obstacle to labor force participation, although less so recently than in the past (Apter 1993; Connelly 1992; Leibowitz and Klerman 1995). The presence of children may also affect women's unemployment if women have difficulty finding jobs that accommodate their childcare responsibilities at home. I included two variables to capture the effect of children: a dummy indicating the presence of young children (aged 3 or younger) and a continuous variable providing the (logged) count of all children aged 17 or younger in the household.

The presence of other adults in the household likely offsets the costs of entering the labor market for women through an intrahousehold substitution of labor (Osterman 1993; Tienda and Glass 1985; Yoon and Waite 1994). Other adults provide child care (presumably at little or no cost) and carry out other household tasks, such as cooking, cleaning, and shopping. A similar effect may be found on women's unemployment. Women who have help in attending to household tasks may be more flexible in the jobs they can take, therefore increasing their likelihood of employment. I included two variables to capture these effects: a count of all adults (aged 18 or older) in the household and a dummy indicating the presence of an unemployed woman in the household (*femhelp*). Given the gender typing of domestic roles, a woman is the most likely to perform household tasks. An unemployed woman supplies a considerable amount of flexible time to the household that may free other women from household responsibilities, allowing them to enter the workforce and take jobs with rigid work rules or unstable schedules more easily. The presence of such female help may be particularly important in the context of immigrant households that tend to include extended family members, such as grandparents and other relatives.

I included a dummy indicating whether a woman lives with her husband or partner (by my definition, both are "partnered" women). While married men tend to have lower rates of unemployment than do single men, the effect is ambiguous for women. Marriage may have the same "motivational" effect for women as for men, or it may allow women to be choosier in the jobs they take and extend their spells of unemployment. Similarly, other household income may either be a stimulus for employment if it is insufficient or provide women with a financial buffer against the costs of unemployment. I included a measure of other household income, excluding the respondent's wages, to capture this effect. To control for the effect of car ownership (poor spatial accessibility may not matter if one has access to a car), I included a car-to-adult ratio for each household.

As a proxy of social accessibility, I included a (logged) count of all employed adults in

the household (excluding the respondent).[14] Drawing on the theorized role of strong ties, I hypothesized that household relationships represent strong ties and that women with employed husbands or partners and those who live in households with other employed adults have more "strong ties" to draw upon for employment information, thus reducing their likelihood of unemployment (O'Regan and Quigley 1993). Each working adult represents a set of employment contacts; thus, the likelihood of unemployment should drop with each additional employed member of the household.

Individual Controls

Individual controls include age, cohort of arrival (for immigrants), and English proficiency (for immigrants). Age is a common individual control in models of unemployment because young workers routinely experience higher rates of unemployment than do older workers. The expected effect for immigrants, however, is unclear, since time in the United States may be a more important correlate with unemployment. Years spent in the United States may influence immigrant women's unemployment if acclimation to the U.S. labor market helps an immigrant's employment prospects. Although the data do not provide information about experience in the U.S. labor market, time in the United States may be a proxy for it (*cohort*). Past employment experience in the United States is likely to help an individual find a subsequent job and avoid joblessness. This supposition follows from research that has indicated that "prior employment experience strongly influences future labor market outcomes" (Tienda and Stier 1996, 147).

The expected empirical effects of English proficiency for immigrants' employment outcomes are ambiguous. On the one hand, English may aid an immigrant woman in finding and securing a job. In fact, Bean and Tienda (1987) found that the effect of English proficiency on labor market participation among Hispanics is stronger among women than among men. They argued that it is stronger because of the type of jobs that are sex typed for women—often clerical or other "soft-skill" occupations that require personal interaction with customers. On the other hand, immigrants in Los Angeles often work among coethnics and do not need to speak English to interact with customers or perform their job duties.

Finally, I ran separate models by national-origin group and nativity to account for differences along national origin and ethnic lines. Nelson and Tienda (1985), among others, have argued that national origin is a proxy for distinct modes of immigrant incorporation that reflect such factors as access to resources, the context of reception (e.g., state-sanctioned refugee groups versus nonstate-sanctioned immigrants), circumstances of departure from the home country, ascribed characteristics, and historical factors that shaped the immigration experience for different groups. Cultural factors also vary along national-origin and ethnic lines.

Results

I initially calculated five different accessibility measures to the following types of jobs: all low-skill jobs, all low-skill jobs held by women, all low-skill jobs held by a member of the respondent's national-origin group, all low-skill jobs held by a female member of the respondent's national-origin group, and all jobs typed as female-dominated occupations. To test the sensitivity of the effect of accessibility when measured for different types of jobs, I ran five models, each using a different measure of accessibility, for each racial-ethnic group. Measures of fit comparing nonnested models (specifically, measures of difference in BIC)

[14] All count variables are logged to correct for heteroscedasticity or skewness. Because it is possible for households to have no employed adults, the variable *lnempadults* takes the value log(1 + employed adults). Similarly, the variable *lnkids* takes the value log(1 + kids).

provided weak support for some measures of accessibility above others for some racial-ethnic groups, but no tests provided strong support for any models that fit better than those that used accessibility measured to all low-skill jobs.[15] The statistical significance of the variables remained stable across the models (whether spatial job accessibility was measured to low-skill jobs or low-skill female jobs, for example). Thus, I report and discuss only the results for models using accessibility measured to all low-skill jobs (see Table 4).

The effect of spatial job accessibility to low-skill jobs is statistically significant and negatively associated with unemployment for native-born black, foreign-born Mexican, and foreign-born Vietnamese women. That is, women from these groups who live in neighborhoods with higher levels of spatial accessibility to low-skill jobs have lower levels of unemployment than do women who live in neighborhoods with lower levels of accessibility. Spatial accessibility has no significant effect on unemployment for immigrant Chinese, Korean, Salvadoran, or Guatemalan women.

Recall that this study tested for the *effects* of spatial accessibility on employment outcomes, not absolute levels of accessibility. Some groups for which accessibility is not significant actually have lower levels of relative spatial job accessibility (Salvadorans, for example) than do groups for which spatial accessibility is significant (Mexicans, for example). This finding suggests that improved spatial accessibility among Salvadorans would not necessarily be associated with lower levels of unemployment.

Spatial job accessibility must also be evaluated in conjunction with competing labor supply. For all groups, the effect of competing labor supply has the expected positive effect; that is, living near greater concentrations of other less-educated workers is associated with a higher likelihood of unemployment. The effect is statistically significant, however, only for foreign-born Mexicans.

Although the positive effect of competing labor supply mitigates the (statistically significant) negative effect of spatial job accessibility on joblessness for native-born blacks and foreign-born Vietnamese, the effect of spatial job accessibility nevertheless outweighs that of competing labor supply. This is not the case for foreign-born Mexicans, for whom the effect of competing labor supply overwhelms that of spatial job accessibility. This finding seems to indicate that although better spatial job accessibility aids Mexican women in securing employment, these women experience greater competition for nearby jobs, given their residence in areas of the city that are densely populated by other less-educated workers. While spatial job accessibility may matter, so does the number of these accessible jobs relative to the local population.

Access to a car is statistically significant for four of the seven groups. That is, the higher the car-to-adult ratio of the household, the less likely a woman is to be unemployed. This finding holds for native-born black, Mexican, Guatemalan, and Vietnamese women, but not for Chinese, Korean, or Salvadoran women. This pattern mirrors the effect of spatial accessibility with the exception of the Guatemalans. The finding seems to indicate that for groups with no significant spatial accessibility or car effect, spatial and transportation accessibility are not associated with employment outcomes.

The effect of living in an ethnic-enclave neighborhood varies among groups. While the effect of enclave residence on unemployment is in the expected direction (negative) for Chinese, Guatemalan, and Salvadoran women, it is nevertheless statistically insignificant. Surprisingly, the results for Mexican and Vietnamese immigrant women point to detrimental effects of residence in an ethnic enclave on women's unemployment (residence in an ethnic enclave is positively and significantly associated with unemployment). Both Mexican

[15] The results of these models and fit statistics are available from the author on request. Model parameters remain stable when the different measures of accessibility are substituted.

Table 4

Model Parameters Reported as Log Odds (Standard Errors in Parentheses)

	Native-Born Blacks	Mexicans	Chinese	Koreans	Salvadorans	Guatemalans	Vietnamese
access[a]	–.1153**	–0.0677**	–0.0982	–0.1564	–0.0321	–0.0652	–0.3291*
	(.0422)	(.022)	(.1981)	(.1549)	(.0791)	(.0975)	(.1288)
edsupp	0.0598	0.1229**	0.2518	0.1768	0.1581	0.0339	0.1847
	(.0856)	(.0454)	(.3054)	(.2689)	(.1286)	(.1759)	(.2166)
enclave	0.0536	0.4051**	–[d]	+[d]	–0.0557	–0.2455	0.4144*
	0.0785	(.0563)			(.1018)	(.1471)	(.2047)
perpov	1.806**	0.8856**	–0.1401	0.6872	0.3745	0.8007	–0.3099
	(.3384)	(.2182)	(1.7576)	(1.2793)	(.5334)	(.7914)	(1.2151)
coh2	NA[c]	–0.2675**	–[d]*	–[d]	–0.3262**	–0.2489	–0.0878
		(.0517)			(.1025)	(.1592)	(.1929)
coh3	NA[c]	–0.3778**	–[d]	–[d]	–0.2365	–[d]*	–[d]*
		(.0546)			(.1419)		
coh4	NA[c]	–0.3017**	–[d]*	–[d]	–[d]	–[d]	+[d]*
		(.0589)					
coh5	NA[c]	–0.408**	–[d]	–[d]	–[d]*	–[d]	–[d]
		(.076)					
eng	NA[c]	–0.4021**	–[d]**	–[d]	–0.2091*	–0.423**	–0.5421**
		(.0397)			(.0982)	(.1489)	(.1879)
age	–0.0730**	–0.0921**	–0.2679**	–0.0756	–0.1026**	–0.1003**	–0.2119**
	(.0201)	(.0114)	(.0741)	(.0735)	(.0279)	(.0372)	(.0515)
age2	0.0003	0.0011**	0.003**	0.0007	0.0013**	0.0012*	0.0026**
	(.0003)	(.0002)	(.0009)	(.0009)	(.0004)	(.0005)	(.0006)
couple	–0.3846**	0.0831*	–[d]	–[d]	0.1164	0.0894	–0.157
	(.0838)	(.0391)			(.0831)	(.126)	(.1953)
othinc	0.0047*	0.0007	–0.0019	0.0013	–0.004*	–0.0083*	–0.0006
	(.0021)	(.0004)	(.0045)	(.0033)	(.0018)	(.0034)	(.0025)
lnkids	0.4799**	0.2761**	0.0531	–0.1443	0.2623**	0.3683**	0.4139*
	(.0733)	(.0348)	(.2707)	(.2833)	(.0888)	(.1203)	(.1754)
kids3	0.1745*	0.1253**	+[d]	+[d]	0.3117**	0.2379	+[d]
	(.0837)	(.0396)			(.1015)	(.1375)	
lnadults	–0.4487**	0.5834**	1.1567**	0.0067	0.6484**	0.4366	0.6735*
	(.1187)	(.0778)	(.4297)	(.4673)	(.1682)	(.2397)	(.3138)
lnempad	–0.4817**	–0.8807**	–1.558**	–0.6245	–0.843**	–0.582**	–1.2402**
	(.1193)	(.0632)	(.3647)	(.3661)	(.1381)	(.2194)	(.2354)
femhelp	0.1584	–0.5315**	–[d]*	–[d]*	–0.4026**	–0.4067*	–[d]**
	(.1343)	(.048)			(.1195)	(.181)	
kids*femhelp	–0.4351**	NS[b]	NS[b]	NS[b]	NS[b]	NS[b]	NS[b]
	(.1407)						
car/adult ratio	–1.1305**	–0.394**	0.3644	–0.4959	–0.2319	–0.682**	–0.4987*
	(.094)	(.056)	(.3144)	(.3635)	(.1429)	(.1986)	(.2585)
constant	1.0873*	–0.0232	2.8698	–0.4424	0.0787	0.4803	1.412
	(.4392)	(.2463)	(1.8307)	(1.8935)	(.6828)	(.898)	(1.2862)
Model χ^2	596.11	1058.80	80.93	25.35	133.45	112.84	132.96
Log likelihood	–3125.6394	–11969.692	–297.5083	–325.0466	–2025.7834	–950.1042	–527.727
N	8,033	30,057	1,336	1,587	5,220	2,498	1,623

* $p < .05$, ** $p < .01$.

[a] Access to all low-skill jobs (< high school education).

[b] NS = Not significant and dropped.

[c] NA = Not applicable.

[d] The coefficient value but not the sign was suppressed by the Census Bureau.

and Vietnamese women who reside in enclave neighborhoods are approximately 1.5 times more likely to be unemployed as are their nonenclave-residing counterparts.

Thus, this study yields no support for the hypothesized benefits of residence in an ethnic enclave on immigrant women's unemployment but instead points to detrimental effects of such residence on joblessness for some immigrant groups. Furthermore, the results offer no support for the hypothesized ill effects of living in a black concentrated neighborhood on the employment prospects of native-born black women. No statistically significant association was found between residence in a black concentrated neighborhood (measured by demographic characteristics alone) and higher rates of joblessness among native-born black women.

Neighborhood poverty exerts a statistically significant effect for two groups: native-born black women and Mexican immigrant women. In both cases, neighborhoods with higher percentages of households in poverty were positively associated with higher rates of female unemployment. Recall that I tested for interaction effects between the demographic and class characteristics of neighborhoods (*enclave*perpov*) and that these interaction terms were not statistically significant.[16] At least for the purposes of making an argument for Los Angeles in 1990, unemployment among native-born black women is associated with the class, rather than the racial, composition of their neighborhoods. But this finding must be interpreted with caution. Although living in a "black enclave" yields no discernible harmful effect on native-born black women's employment outcomes, neither does it yield a discernible beneficial effect (as hypothesized for immigrant enclaves by virtue of their social capital).

The likelihood of unemployment increases with the number of children in a household (a statistically significant effect) for all groups except Koreans and the Chinese. The positive association between being unemployed and having young children is also statistically significant for native-born blacks, foreign-born Mexicans, and foreign-born Salvadorans. The number of adults in a household is positively associated with unemployment and is statistically significant for Mexican, Chinese, Salvadoran, and Vietnamese women. While not statistically significant, the effect is also positive for the two remaining immigrant groups: Koreans and Guatemalans. The results for native-born black women stand in sharp contrast to this pattern for immigrants. For these native-born women, the likelihood of unemployment falls with the number of adults in the household (a statistically significant effect).

The effect of other household income is negative and statistically significant only for Salvadorans and Guatemalans. As other household income rises, these immigrant women are less likely to be unemployed. A more prosperous immigrant household may be a proxy for motivation to work or connections to the opportunity to work. Either may be important for immigrant women's employment outcomes. However, the direction of this association between other household income and immigrant women's unemployment requires more theoretical examination. The statistically significant effect of other household income is reversed for native-born black women. As other household income rises, these women are more likely to be unemployed. This finding may reflect higher reservation wages (the minimum wage for which a person is willing to work). Other sources of household income may allow these black women to remain

[16] Since Wilson's (1987, 1996) concentration-effect hypothesis explicitly addresses neighborhoods of high poverty (areas with poverty rates greater than 40 percent), the results may differ if the interaction between enclave residence and poverty was calculated using a poverty variable coded to reflect three levels of poverty: 0 to 20 percent, 10 to 20 percent, and greater than 40 percent. Thus, the interaction between enclave residence and high poverty (poverty rate greater than 40 percent) may prove significant. I thank a reviewer for this suggestion.

unemployed while they hold out for better jobs during their search for employment.

The most striking effects for their uniformity among groups are that of additional employed adults in the household and the presence of female help. For all groups, the likelihood of unemployment falls with each additional employed adult (a statistically significant association).[17] The likelihood of unemployment also decreases (statistically significantly) for all groups with the presence of a nonworking woman in the household. For native-born blacks, this effect depends on the presence of children (the interaction effect of female help and children). For black women with children, the presence of another woman's help decreases the likelihood of unemployment.

Among immigrants, the effect of English language proficiency is negative and statistically significant for all groups except Koreans. Although negative, the statistically insignificant effect for Koreans may reflect the high rate of employment of Korean women in family businesses for which English is not likely a prerequisite. For all groups except Koreans, the effect of age is negative and statistically significant. Time in the United States is generally associated with lower rates of unemployment. While not all cohort effects are statistically significant, the trend tends to be linear: as immigrant women spend more time in the United States and become more acclimated to the U.S. labor market, they tend to experience lower rates of joblessness.

Discussion

This study examined the effects of spatial and social accessibility on less-educated minority and immigrant women's joblessness. A key task of the analysis was to test simultaneously, but independently, the effects of a neighborhood's geographic accessibility to jobs and its social attributes. Comparisons of native-born black women and immigrant women are of particular interest, since native-born blacks and immigrants have been contrasted on the capacities of their social networks and the social characteristics of their neighborhoods. Research on immigrant labor markets provides substantial evidence that ethnic networks are primary in connecting immigrants to jobs. In contrast, higher unemployment among native-born blacks has been attributed to their poor social contacts to employment. In addition, black and immigrant neighborhoods have been described as having opposite influences on residents' employment outcomes. In brief, immigrant-enclave neighborhoods have been described as beneficial, while the effects of black "ghetto" neighborhoods have been described as deleterious.

As I discussed in this article, these contrasts raise questions about whether groups that experience high rates of unemployment suffer from a spatial or a social mismatch in the labor market. Research that has identified a spatial-mismatch effect on the employment outcomes of blacks may have missed the effect of a social mismatch. Correspondingly, research that has focused on the primacy of ethnic networks for immigrants' employment outcomes may have missed an additional spatial effect, especially for immigrant women. This study built in measures of both and found that both matter for certain groups, although no uniform "black or immigrant" pattern emerges. I discuss the three major findings of this study next.

First, better spatial job accessibility to low-skill jobs is associated with lower unemployment among less-educated native-born black, foreign-born Mexican, and foreign-born Vietnamese women. No statistically significant association was found among the remaining immigrant groups. Although these data cannot explain why spatial accessibility matters for some groups but not for others, it seems likely that black, Mexican, and Vietnamese women do not have adequate recourse to different job-search methods that may help their Chinese, Korean, Guatemalan, and Salvadoran coun-

[17] The effect for Korean women is statistically significant at the .10 level.

terparts overcome the constraints of physical distance. Spatial accessibility becomes all the more important, then, for these women's ability to obtain employment.

Alternatively, women from the groups for which spatial job accessibility has no effect on unemployment may be so narrowly channeled into certain jobs in the Los Angeles economy that spatial access matters little when only a few jobs are open to these women (a phenomenon that is due, in part, to social networks). For example, one in five Guatemalan and Salvadoran women in Los Angeles is employed as a domestic (Parks 2002). In contrast, native-born black and Mexican women are less concentrated and more dispersed across industries (Parks 2002). These women also have higher rates of labor force participation than do Chinese or Korean immigrant women. As more and more women from these groups enter the labor market, jobs that are easily obtained through social networks may become saturated, pushing the overflow of these women into other sectors. Spatial accessibility may then matter more.

Second, the findings cast doubt on the theorized relationship between black concentration effects at the neighborhood level and the joblessness of less-educated black women. While living in a black concentrated neighborhood is positively associated with unemployment in the models for native-born black women, the association is statistically insignificant. This finding raises questions about the appropriateness of extrapolating the theorized negative effects of poor, black neighborhoods on native-born black women's joblessness. Granted, much of the research on neighborhood effects has focused on the labor market outcomes for black men. This study provided evidence that these effects should remain gendered in their implications, and future researchers should openly acknowledge such theories' gendered biases. That is, these theories may apply to black men, but not to black women.

Alternatively, this study may have not found a negative black-neighborhood effect if this effect is a proxy for poor spatial job accessibility in other studies. The spatial job accessibility of a neighborhood is a characteristic of that neighborhood, and if not controlled independently, it will be captured in a more general "neighborhood" variable. The same holds true for neighborhood poverty. In this study, the spatial accessibility and poverty characteristics of black neighborhoods exerted statistically significant effects on black women's joblessness. Thus, class and space operate as the salient "neighborhood" effects on black women's joblessness.

In addition, no evidence in support of the expected salutary effects of residence in an ethnic enclave on unemployment was found for any of the immigrant groups. In fact, the results point to detrimental effects of such residence for Mexican and Vietnamese women, for whom residence in an ethnic enclave is positively and significantly associated with unemployment. This finding raises the same caution for scholars of immigration as stated earlier: theories must recognize their inherent gender bias. Ethnic enclaves may "work" for immigrant men, but not for immigrant women.

Third, this study identified a key association between employment and social accessibility provided through the household for less-educated native-born black and immigrant women. For all groups of women in this study, the likelihood of unemployment decreases as the number of employed adults in the household increases. I argue that this finding reflects, in part, the role that strong ties and place-based knowledge play in connecting less-educated minority and immigrant women to employment. Women who live in households with other employed adults have access to a larger set of employment contacts that may help facilitate their search for and acquisition of jobs.

This finding also illuminates another scale at which the "accumulation of disadvantage" operates, beyond that described by Tienda and Stier (1996) for individuals. Tienda and Stier used the term *accumulation of disadvantage* to refer to the gap in experience that accrues over a worker's lifetime, building on the empirical insight that "prior employment experience strongly influences

future labor market outcomes" for individuals (p. 147; see also Clogg, Eliason, and Wahl 1990). As workers accumulate more gaps in labor market experience, they are more likely to experience joblessness in the future. The current study's findings seem to indicate that the same process of accumulation occurs at the household level as well—a "household accumulation of disadvantage." As households accumulate labor market experience, their members become better off in the labor market. Although this supposition requires more theorizing and testing, these results seem to point to the transfer of labor market experience among household members, operationalized as the transfer of information about and contacts for employment.

Other household effects are also consistent among groups. Particularly noteworthy is the finding that the presence of a nonworking woman in the household decreases the likelihood of unemployment. This finding likely reflects the greater ability of these women to juggle the demands of home and work, providing them with an "in-house" flexibility in relation to day care and other family issues. These women may be able more easily to take jobs with rigid work rules or variable schedules and to keep these jobs when someone else can be relied upon to deal with household emergencies. Women without such help often risk losing their jobs if they must suddenly leave work to attend to a household emergency or if they cannot meet an employer's request for a more flexible schedule.

These findings raise questions for further research. Why neighborhood effects differ among groups necessitates further explanation, as do the differences in unemployment by national-origin group and ethnicity that are shown in Table 2. Labor market theory is silent on the latter question, while sociological explanations of neighborhood effects, especially those of ethnic enclaves, do not hold for all groups in this study. Fully accounting for these group differences is beyond the scope of this study, but provides a course for further research that may best be explored through qualitative methods.

In addition, while joblessness is an important measure of disadvantage in the labor market, other researchers have pointed out the many variants of labor market disadvantage experienced by native-born black and immigrant women (McLafferty and Preston 1992; Waldinger 2001). Waldinger (2001, 83) observed that "less-skilled African Americans face a penury of jobs. . . . By contrast, immigrants, the least skilled of whom are far less schooled than the most poorly educated of African Americans, find an abundance of jobs but at pitifully low wages." The brutal labor market reality for many immigrant women in Los Angeles combines both high unemployment and low wages. Future research needs to explore further these multiple and different labor market liabilities.

I conclude with a note on the possible policy implications of this study. The results indicate that the most substantive and statistically significant association with higher rates of employment among less-educated minority women is the number of employed adults in the household. They suggest that unemployment policies aimed at individuals have important consequences for other workers at home—a multiplier effect of sorts. Thus, households with no employed adults offer a strategic point of intervention.

One policy response that resonates with this finding is to improve the social capital of unemployed women. However, this course of action as a policy response or intervention raises several concerns.[18] First, studies on immigrant labor markets have identified the role and purpose of social capital specifically: it provides information about jobs. If this is, in fact, what living with other employed adults provides, then policy should look for ways to provide such information to unemployed women who lack it. Innovative approaches to labor market inter-

[18] See also DeFilippis (2001) and Portes (1998) for a critique of policy responses that draw uncritically from research on social capital.

mediaries, particularly intermediaries that focus on job placement, provide an important course of action that addresses social accessibility. Second, a simplistic "building" of social capital that leverages household ties may put women at the very disadvantage that researchers have connected to strong ties—they are generally a poor means by which to gain access to high-quality employment, especially for immigrant women (Zhou and Logan 1989).

Finally, policy makers should be mindful that spatial accessibility still matters for the employment outcomes of many women, including many immigrant women for whom, it has been argued, ethnic networks trump spatial obstacles in obtaining jobs. Furthermore, the accessibility of local jobs matters for other reasons than improving one's chances of being employed. Ong and Blumenberg (1998), for example, found that welfare recipients who work close to home earn more than do those with long commutes. Whether through local job development or the provision of reliable transportation, addressing spatial job accessibility remains an important policy response for the employment outcomes of less-educated women.

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