The Presence of Organizational Resources in Poor Urban Neighborhoods: An Analysis of Average and Contextual Effects

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Abstract
Wilson (1987) and others argue that poor neighborhoods lack important organizational resources the middle class takes for granted, such as childcare centers, grocery stores and pharmacies. However, this approach does not distinguish poor neighborhoods from segregated neighborhoods, ignores immigration and neglects city differences. Using Department of Commerce and 2000 Census data for zip codes in 331 MSA/PMSAs, we estimate HGLM models predicting the number of each of 10 organizational resources. We find that, (1) on average, as the poverty rate of a neighborhood increases, the number of establishments increases slightly; (2) as the proportion of blacks increases, the number of establishments decreases; (3) as the proportion of foreign-born increases, so does the number of establishments. Finally (4), metropolitan context matters: poor neighborhoods have more establishments in cities with low poverty rates, and in cities in the South and West, than in other parts of the country. Findings suggest reevaluating the de-institutionalized ghetto perspective as a theory of the effects of black segregation and depopulation, rather than poverty concentration, and approaching neighborhood poverty from a conditional perspective.

Introduction

In Messner and Rosenfeld's (2001) widely referenced book on crime, the authors quote a police officer who describes the physical conditions of a poor Chicago neighborhood: "Do you see any hardware stores? Do you see any grocery stores? Do you see any restaurants? Any bowling alleys? There is nothing here.... Everything we take for granted – a laundromat, a cleaner's, anything. It's not here." (2001:33) The description captures a common conception of poor urban neighborhoods (Wilson 1987, 1996; Goering and Feins 2003): that they are scarce in the organizational resources basic to day-to-day living that the middle class takes for granted, such as grocery stores, hardware stores, pharmacies, laundries and childcare centers. As Wilson (1995:9-10) argued, "poverty in ghetto neighborhoods has sapped the vitality of local business and other institutions, and it has led to fewer... movie theaters, bowling alleys, restaurants, public parks and playgrounds, and other recreational facilities." Is this actually the case?

The question speaks to pressing sociological and policy concerns. Researchers have suggested that businesses and organizations contribute to the vitality of neighborhoods,

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increase informal social control, help keep crime at bay, and even contribute to health. Peterson, Krivo and Harris (2000) found that a greater number of recreation areas reduces violent crime rates in very poor neighborhoods. Yen and Kaplan (1999) found that the prevalence of supermarkets and clinics is positively associated with health and well being. If these resources were, in fact, scarce in poor neighborhoods, they would constitute an important intermediary mechanism for the relationship between neighborhood poverty and lower life chances – part of the "black box" of neighborhood effects (Sampson, Morenoff and Gannon-Rowley 2002; Small and Newman 2001; Jencks and Mayer 1990).

In addition, answering this question would help understand the implications of a major ongoing policy experiment. Moving to Opportunity (MTO), a federal housing program that provides vouchers for residents seeking housing assistance, assesses the effect of moving to middle-class neighborhoods (Goering, Feins and Richardson 2003). MTO analysts have speculated that these neighborhoods have greater organizational resources than poor areas (Ludwig, Duncan and Ladd 2003:156; Ellen and Turner 2003:325).

Despite the significance of our question, few published studies have answered it, and most of these examine a few resources, such as childcare centers or supermarkets, and focus only on a few cities or towns. No published studies have tested the proposition on a large cross-section of metropolitan areas and with respect to multiple resources. We examine this question based on data from each of 10 organizational resources in every populated zip code in 331 metropolitan areas in the United States. We estimate hierarchical generalized linear models predicting the number of establishments, and examine both average and contextual effects.

Literature and Hypotheses

By "organizational resource" we refer to any establishment that has a physical location and offers services or sells goods basic to day-to-day living.[1] Because our empirical tests focus on for-profit establishments, the literature review centers on businesses – not on non-profits, state-funded organizations or public areas such as parks.

De-institutionalization

The relationship between neighborhood poverty and resources is discussed in several bodies of work. It finds one of its clearest theoretical expositions in the de-institutionalization argument of Wilson (1987, 1996; Wacquant and Wilson 1993). For Wilson (1987, 1996), the de-institutionalization of neighborhoods is the product of middle-class flight and the ensuing concentration of poverty. Because middle-class residents economically sustain neighborhood establishments, their absence undermines the latter's stability and survival.

This work is a refined expression of several elements of the early ecological theories of the Chicago School (Park, Burgess and McKenzie 1925). The latter viewed cities as fundamentally market-driven entities in which competition among businesses and groups resulted in natural areas – specifically, a set of increasingly affluent, concentric circles that radiated outwardly from a central business district. (See Sampson and Morenoff 1997 for a recent critique.) One strand of the Chicago tradition was the social disorganization perspective (Shaw and McKay 1969), which, as part of a theory of cross-sectional neighborhood differences in crime, posited a relationship between neighborhood conditions and the presence of organizations and businesses. Poor, ethnically heterogeneous, residentially unstable neighborhoods were unable to sustain businesses and organizations because they lacked economic stability and social organization.

Wilson's work reflects these origins in two ways. First, it relies on a market-driven approach to business viability, which is thought to depend primarily on the presence of middle-class constituents or patrons in the neighborhood. The presence of *customers* determines viability.[2] Second, it is based mostly on empirical research in the city of Chicago, with little assessment of the impact of variable conditions across cities. This perspective informs the first hypothesis:

> *H1: The number of establishments in the neighborhood will decrease as the poverty level increases, other factors held constant.*

Some evidence supports the hypothesis. Ethnographic works in Chicago and Philadelphia depict neighborhoods deprived of businesses and organizations (Anderson 1999; Duncan 1987). Most quantitative tests of this hypothesis have focused on particular establishments rather than businesses as a whole. For example, several studies have focused on childcare centers. Consistent with the hypothesis, Siegel and Loman (1991:28) find that zip codes in Illinois with the "highest concentrations of low-income families" are less likely than others to have childcare centers. Queralt and Witte (1998) find that the supply of full-day centers in suburban Massachusetts is significantly lower in "socioeconomically distressed neighborhoods." (1998:40) Others have studied financial institutions. Pollard (1996) finds that the number of banks in South Central Los Angeles decreases as the proportion of poor and non-white residents in the community increases. However, Graves (2003), using data from metropolitan Louisiana and Cook County, Illinois, uncovered that "payday lenders" such as check-cashing establishments are especially likely to be found in low-income, non-white neighborhoods. Studying grocery stores and restaurants in four states, Morland et al. (2002) find that the number increases as the median house value and number of white residents increases. Finally, research on "negative" businesses such as bars and liquor stores finds that poverty increases prevalence (Morland et al. 2002). All of these studies, however, are based on a handful of cities or regions.

Poor Neighborhoods vs. Black Neighborhoods

The de-institutionalized ghetto perspective has become a theory of the effects of neighborhood poverty. However, given some of the data it embraces, the theory may also be construed as one on the effects of poverty concentration in black neighborhoods. Citing research in Chicago by Drake and Clayton (1945), Wacquant and Wilson (1993) suggest that predominantly black neighborhoods in the past were racially segregated but class integrated, resulting in organizationally rich and stable communities. The reduction in structural barriers as a result of civil rights mobilization in the 1960s and 1970s allowed black middle-class residents to move out of the inner-city, resulting in a concentration of black poor left behind (Quillian 1999; Jargowsky 1997). As Wilson (1996:54) writes, the "absence of working- and middle-class blacks... deprives ghetto neighborhoods of key resources, including structural resources... such as residents with income to sustain neighborhood services." This theory is based on conditions relating to the particular history of African Americans. Thus, one could hypothesize:

> *H2: Other factors held constant, as the proportion of residents who are black increases, the number of establishments in the neighborhood will decrease.*

In fact, it is possible that proportion black accounts for much of the negative effect of

proportion poor. In addition, there could be an interaction effect:

> *H3: Other factors held constant, as the proportion of residents who are black increases, the negative association between neighborhood poverty and the number of establishments will increase.*[3]

There are few tests of these particular hypotheses. Wacquant and Wilson cite ethnographic work in Chicago by Duncan (1987), who reports that residents' depictions of black communities speak of "how the street used to be filled with stores, theaters and nightclubs.... [Today] [s]ome stores, currency exchanges, bars, and liquor stores continue to exist.... [Yet] [i]n terms of physical structures, many stores are boarded up and abandoned. A few buildings have bars across the front and are closed to the public." (Wacquant and Wilson 1993: 31) Anderson (1999) reports similar findings in Philadelphia. We know of no statistically representative tests of these propositions.

Immigrant Entrepreneurship

A second reason to question the de-institutionalized ghetto perspective stems from the research on immigrant enclaves. Ethnic enclave theory has argued that businesses in urban neighborhoods flourish as a result of immigrant entrepreneurship (Portes and Bach 1985; Aldrich and Waldinger 1990). Urban immigrants, who often have few socio-economic resources, are theorized to avoid the secondary labor market of low wages and dead-end jobs by finding jobs or becoming entrepreneurs in the enclave economy (Kasarda 1989). This economy is partly characterized by the spatial concentration of businesses even in high poverty neighborhoods. The underlying assumption is that although customers matter, *entrepreneurs* are critical – their presence underlies the prevalence of establishments in neighborhoods.[4]

Two interrelated hypotheses follow:

> *H4: The number of establishments will increase as the proportion of residents who are foreign-born increases, other factors held constant.*

A related argument would qualify the impact of poverty, suggesting that the high presence of immigrants attenuates the expected negative effects of poverty. Thus:

> *H5: As the proportion of residents who are foreign-born increases, the negative association between poverty level and the number of establishments will decrease, other factors held constant.*

Researchers have found evidence consistent with this perspective. Research on the spatial concentration of ethnic businesses has analyzed enclaves at the metropolitan level, finding that clustering of ethnic businesses provides both a labor pool and a ready market (Logan, Alba and McNulty 1994). Klinenberg (2002) compares predominantly (native) black and predominantly Mexican poor neighborhoods in Chicago and describes greater prevalence of establishments in the latter. However, the test relevant to our question has not been undertaken. Most studies examine the propensity for entrepreneurship among immigrants, not the effect of immigrant presence on the number of establishments. Thus, though there is strong evidence that immigrants have higher self-employment rates than non-immigrants (Kasarda 1989; Light and Rosenstein

1995), it has not been shown that their presence increases the number of establishments in neighborhoods, poor or otherwise. For example, immigrant entrepreneurs may constitute too small a portion of neighborhood populations to affect the total number of establishments or their businesses may be located in neighborhoods different from where they live.

The Metropolitan Context

A final issue is that the presence of establishments in neighborhoods may depend on the city. Wilson (1987, 1996) and others (e.g., Jencks and Peterson 1991; Danziger, Sandefur and Weinberg 1994) have suggested that city-level conditions, such as economic shifts from the manufacturing to the service sector and their impact on low-skilled job availability affect the neighborhood concentration of poverty. However, the perspective has largely ignored whether and how city conditions directly affect the prevalence of establishments in neighborhoods, focusing instead on the impact on the number of jobs and/or average wages. Metropolitan conditions are implicitly assumed to affect the number of establishments only indirectly, by increasing the concentration of poverty. As a result, the perspective does not ask whether very poor neighborhoods will resemble each other across different cities. That this issue has not been addressed may be due to the theory's reliance on empirical work conducted in a single city, Chicago (Sampson and Morenoff 1997).

The Chicago School in general has been criticized at length for theorizing about "the city" on the basis of Chicago research (Dear 2002; Samspon and Morenoff 1997; Waldinger and Bozorgmehr 1996). A recent attempt to address this problem empirically was the Multi-City Study of Urban Inequality, which, based on major surveys conducted in Atlanta, Boston, Detroit and Los Angeles, examined the spatial concentration of poverty, networks, employment and discrimination from a comparative perspective (O'Connor, Tilly and Bobo 2001). Nevertheless, none of these works has tested specifically whether the presence of establishments in poor neighborhoods varies significantly across cities (Jargowsky 1997).

Most neighborhood poverty research assumes and tests only an overall neighborhood poverty effect, uncovered with nationally representative datasets such as the Panel Study of Income Dynamics or the National Longitudinal Survey of Youth (e.g., Brooks-Gunn, Duncan and Aber 1997a, 1997b). Often implicitly, the research assumes a single neighborhood effect "size" regardless of urban context. We hypothesize that, depending on the city, the poverty effect may be large, small or even positive. Indeed, finding an association, at the national level, equal to zero may simply mask significantly negative associations in some cities and significantly positive ones in others. We present two hypotheses:

> *H6: The average number of establishments per neighborhood will vary significantly from city to city, other factors held constant.*

> *H7: The association between proportion poor and the number of establishments in the neighborhood will vary significantly from city to city.*

Finally, we expect this variation to be associated with demographic and economic factors. Underlying this expectation is the notion that there is no single "neighborhood effect," positive or negative, only effects conditional on metropolitan context. We hypothesize:

> *H8: The association between proportion poor and the number of establishments will depend on the city's demographic and economic conditions.*

Specifically, we examine the effects of city-level proportion black and proportion immigrant, population density, the poverty and unemployment rates, and region.

Data and Approach

Data

We test these hypotheses employing a dataset compiled from several sources. The County Business Patterns section of the U.S. Census assembles data from several governmental sources on all businesses and organizations in the United States that have a payroll. Businesses and organizations are identified by more than 1,000 North American Industry Classification System (NAICS) codes. The office makes some of these data, such as the number of businesses, available at the zip code level. No data are available below the zip code level. We obtained the data for the year 2000.

Our second source was the 2000 U.S. Census, Summary File 3, which contains demographic data at the zip code level and the level of the Metropolitan Statistical Area (MSA) and Primary Metropolitan Statistical Area (PMSA).[5] Because zip codes are U.S. postal designations with no natural relationship to MSA/PMSAs, they were matched to metropolitan areas using GIS technology, following a "centroid" approach (using Arcview). We calculated the geographic center of every zip code, and matched the zip code to the metropolitan area that contained that center. Zip codes partly within metropolitan areas but with centers outside those boundaries were excluded. The result is a two-level dataset containing a tabulation of every establishment with a payroll, by zip code (n = 13,736), for every metropolitan area (n = 331) in the United States.

Two data issues are important. First, the census does not make available at the zip level any information on establishments that have no payroll. For example, if a couple opened a bakery and hired only their child to help occasionally, this store would not be included unless the child was on a formal payroll. (The census labels these establishments "non-employers.") The absence of these data could lead to an under-estimation of the number of resources in poor neighborhoods. We assess this possibility in our analysis. Second, the smallest geographic unit with available data is the zip code. Depending on the issue, some zip codes may be too large. For studies of neighborhood socialization in poor areas, tracts, with populations of about 4,000 are probably the most appropriate (among the publicly available data sources for multiple cities). For example, in studies of the influence of educated adult role models for youth, zip codes are probably too large (Cutler and Glaeser 1997). For studies of economic issues, such as job availability and industry sector dominance, tracts are probably too small and zip codes may be more appropriate because regions of economic activity are wider than those of social neighborhood activity. For example, for supermarkets, the modal number per tract will often be zero, given tracts' small size. Thus, the use of zip data as opposed to tract data may be increasingly appropriate as we are concerned with economic well-being and increasingly inappropriate as we are concerned with social well-being. We assess this issue in our analysis.

Analytical Strategy

There are three issues to determine: the organizational resources to be selected; the dependent variables of interest, and the specific models to be estimated. We begin with the first.

There are more than 1,000 types of establishments in all sectors and industries in the NAICS system. The vast majority – establishments including mining companies, gun manufacturers and golf courses – bear no substantive relationship to our question. Based on the literature, we employed three criteria for selection: (1) the establishment should be an organizational resource basic and important in day-to-day living (this would exclude liquor stores and bowling alleys); (2) it should have no *a priori* class association (this would exclude high-end boutiques and dry cleaning services, though not coin-operated laundries that happen to provide dry cleaning); (3) it should not be a non-profit organization or a governmental entity. (Many non-profits target poor neighborhoods [Cohen 2001]; this would also exclude parks and public pools.) Furthermore, for reasons of space and manageability, we limited the number of resources to the 10 we identified as most pressingly in need of empirical assessment. The resulting list follows: banks, childcare centers, convenience stores, credit unions, pharmacies, hardware stores, laundries (coin-operated), grocery stores, grooming stores (barbershops, nail salons and beauty salons), and restaurants.[6] We selected the 10 establishments before running empirical tests.

The top panel of Table 1 exhibits the summary statistics for the organizational resources. For hardware stores, credit unions, banks and laundries, the median number of resources is zero; for convenience stores and pharmacies, it is 1, while for restaurants, the highest, it is 5. There is high variability across the organizations, as the highest number of hardware stores is 11, while that of restaurants is 376. Note that these are raw figures, unadjusted for the zip code's area (which, as shown in the bottom panel, varies widely). There is also great variability in each organization across zip codes; in every case, the standard deviation is higher than the mean. Estimates will account for the high variances.

Our dependent variable is the number of organizations of each type in the zip code. Some scholars have suggested that poor neighborhoods have not only fewer resources but also resources of lower quality (Wilson 1995:9-10). Though quality is important, we only address prevalence in this study.

The third issue is our estimation strategy. We estimate hierarchical generalized linear models (HGLM) in which the outcome variable is modeled as a Poisson process with over-dispersion (Snijders and Bosker 1999; Raudenbush and Bryk 2002; Long 1997; McCullagh and Nelder 1989). The number of establishments is modeled as a function of both zip-level and metropolitan-level variables. See Appendix for details of model specification. Our independent variables are listed in the bottom panel of Table 1. The main ones are (1) the proportion of all persons in the zip code who are poor, (2) proportion black, and (3) proportion foreign born. The poverty slope is estimated as a random effect. We also control for the following: (4) population density (logged), because some neighborhoods are primarily residential, while others are primarily business zoned; (5) residential instability, measured as the proportion of residents who were living in a different house than they had been in 1995; (6) central city location, because neighborhoods located in inner city areas may have more businesses than those in suburban sections of metropolitan areas (see Jackson 1985)[7]; and (7) ethnic make-up, measured as proportions non-Hispanic black, non-Hispanic Asian and Hispanic. These controls are modeled as "fixed" effects (i.e., constant across cities) (Raudenbush and Bryk 2002). We also include interaction terms between percent poor and percent black (to test H3) and between percent poor and percent foreign (to test H5).[8] While including appropriate controls, we avoid the "kitchen-sink" approach to controls because it may produce well known (though often ignored) estimation problems (Lieberson 1985). In the first portion of the analysis, all level-1 variables are centered on the group mean. Thus, coefficients for level-1 predictors refer to deviations from the city mean. Since our main interest is in the presence and direction of statistical associations with poverty, we present most findings in terms of

Table 1: Summary Statistics for Variables Employed

Dependent variables*	Median	Min	Max	Mean/%	S.D.	N
Hardware stores	0	0	11	.69	1.00	13,736
Grocery stores	2	0	58	3.62	4.90	13,736
Convenience stores	1	0	42	1.62	2.38	13,736
Pharmacies	1	0	195	2.19	3.27	13,736
Savings Banks	0	0	92	.93	1.95	13,736
Credit unions	0	0	15	.83	1.53	13,736
Childcare centers	2	0	51	3.70	4.39	13,736
Restaurants	5	0	376	9.88	12.46	13,736
Laundries	0	0	18	.76	1.43	13,736
Grooming stores	2	0	153	5.12	7.27	13,736

Independent variables*	Mean/%	S.D.	N
Zip-level			
Area (as exposure measure)	44.70	105.95	13,736
Percent poor	10.80	9.07	13,736
Percent foreign born	8.18	10.67	13,736
Percent Latino	8.99	15.72	13,736
Percent non-Latino white	76.37	25.22	13,736
Percent non-Latino black	9.54	17.53	13,736
Percent non-Latino Asian	2.60	5.40	13,736
Percent moved in previous 5 years	43.72	12.34	13,376
Population density, logged	6.18	2.02	13,736
Located in central city (1/0)	20.5		13,376
MSA/PMSA-level			
Percent poor	12.39	4.38	331
Percent foreign born	7.38	7.43	331
Unemployment rate	5.74	1.74	331
Percent non-Latino black	10.33	10.55	331
Population density, logged	5.52	.97	331
South	39.9		331
Northeast	18.1		331
Midwest	22.7		331
West	19.3		331

* The summary statistics are not adjusted for zip code area.

coefficient sizes and associated standard errors. The Poisson coefficient represents the increase in the log odds of the outcome variable associated with a one unit increase of the predictor. The anti-log of the coefficient is a multiplier of the expected number of organizations associated with a one-unit increase in the predictor (Long 1997).[9]

Results

Main Effects[10]

Figure 1 displays the mean number of organizations of each type by zip poverty level. The zip codes are sorted by poverty and divided into quintiles; the top quintile shows the average number of establishments in poorest fifth of all zip codes. At the base of the figures are zero-order correlations between the zip poverty rate and number of establishments. The figure shows small, positive relationships between poverty and presence of resources for most of the organizations. (All correlations are statistically significant at the .01 level.) For eight of the resources, the relationship is positive; for banks and grooming stores, it is negative. In poorer neighborhoods in the nation's metropolitan areas, there are fewer banks and grooming stores but more hardware stores, grocery stores, convenience stores, pharmacies, credit unions, childcare centers, restaurants and laundries.

Table 2 exhibits the coefficients for percent poor, percent black and percent foreign-born on the log of the expected number of establishments, after controls. All coefficients, except poverty, are entered as fixed; the intercept is entered as random. The table presents unit-specific models, which show the expected change in log number of establishments associated with a one-unit change in a given predictor, after holding constant the other predictors and the random intercept (Raudenbush and Bryk 2002:334). The results provide little support for the de-institutionalized ghetto perspective as an overall depiction of poor neighborhoods. A 1 percentage point increase in proportion poor slightly increases the log number of resources in the zip code, depending on the resource, by between .019 (for restaurants) and .039 (for convenience stores). This translates into a 1.9 percent increase in the number of restaurants to a 4 percent increase in convenience stores. For childcare centers and grooming stores, the association is not significant. (Because these figures are based on models with interaction terms, it is important to be clear on the meaning of the random coefficients. For example, in the case of restaurants, .019 is the portion of the association with proportion poor that does not depend on [i.e., interact with] either proportion foreign-born or proportion black.[11]) Because we do not have data on establishments that have no payroll ("non-employers"), this is a conservative test of the poverty effect. If these particular, informal establishments are more likely to be found in poor neighborhoods, then the positive poverty effect is expected to be higher.

Table 2 shows that proportion black is consistently associated with fewer resources, suggesting that Wilson's account is a story of segregated black neighborhoods, not high poverty neighborhoods. The coefficient ranges from a .006 to a .019 reduction in the log number of establishments. The exception is childcare centers, where the log number of establishments increases by .006, which translates into .6 percent. The interaction terms suggest that, for a few resources, proportion poor and proportion black interact, such that high poverty neighborhoods have the expected fewer number of resources if they have high proportions of African Americans.

Finally, Table 2 shows a positive and statistically significant association with proportion foreign born. As shown, a 1 percentage point increase in that variable increases the log number of resources, between .004 for pharmacies and .010 for banks. (These coefficients reflect the portion of the foreign-born association that does not depend on proportion poor.) The exceptions are childcare centers and restaurants, for which the proportion foreign-born coefficient is

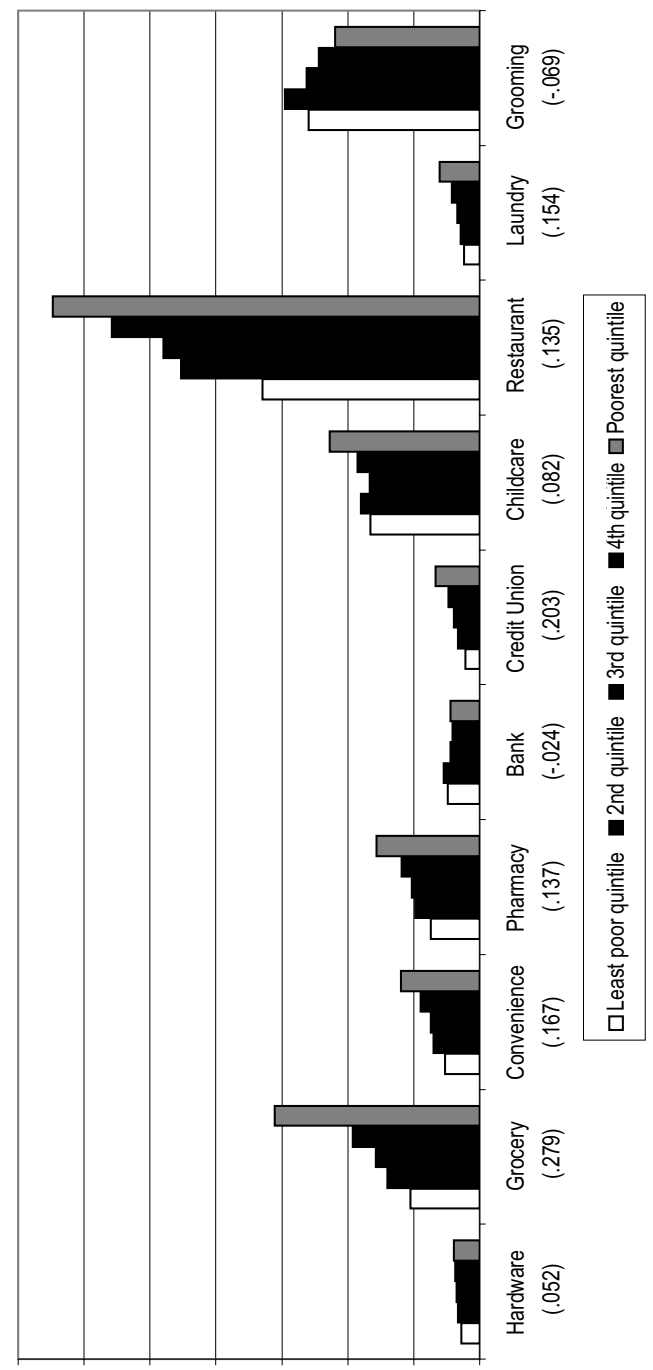

Figure 1. Mean Number of Establishments in Zip Code, by Zip Poverty Level

Table 2: Effects of Zip Code Level Variables on Log Number of Establishments in Zip Code, All Metropolitan Areas (Unit-specific Models)

	Hardware	Grocery	Convenience	Pharmacy	Bank	Credit Union	Childcare	Restaurant	Laundry	Grooming
Zip Code Level Variable										
Proportion poor	.024*** (.002)	.028*** (.001)	.039*** (.002)	.024*** (.002)	.022*** (.004)	.034*** (.003)	.001 (.002)	.019*** (.002)	.023*** (.002)	-.001 (.002)
Proportion black	-.014*** (.001)	-.006*** (.000)	-.006*** (.001)	-.011*** (.001)	-.019*** (.001)	-.007*** (.001)	.006*** (.001)	-.010*** (.001)	-.006*** (.001)	-.018*** (.001)
Proportion foreign born	.006* (.002)	.006*** (.001)	.002 (.002)	.004* (.002)	.010** (.003)	.004 (.005)	-.003* (.001)	-.005** (.002)	.005** (.002)	.005** (.002)
Prp poor * Prp black	-.0000 (.0001)	.0000 (.0000)	-.0003*** (.0001)	-.0002*** (.0000)	-.0000 (.0001)	-.0000 (.0001)	.0002*** (.0000)	-.0002** (.0001)	-.0003*** (.0001)	.0000 (.0001)
Prp poor * Prp foreign born	.0001 (.0001)	-.0001* (.0001)	-.0004** (.0001)	-.0002** (.0001)	-.0003 (.0002)	-.0011*** (.0002)	.0001 (.0001)	-.0004*** (.0001)	-.0005*** (.0001)	-.0001 (.0001)
Intercept	-4.366*** (.064)	-3.016*** (.070)	-3.940*** (.085)	-3.552*** (.073)	-4.751*** (.101)	-4.439*** (.069)	-2.907*** (.072)	-2.059*** (.072)	-4.814*** (.081)	-2.937*** (.085)
Log likelihood	-20,740	-23,556	-24,976	-25,408	-26,457	-28,930	-23,947	-35,909	-21,286	-31,132

HGLM random-intercept models with log link function. All predictors, except for proportion poor, are entered as fixed; all are centered on the group mean. One metropolitan area lacked sufficient information for estimation of random effect; thus, it is not included in the estimates. Includes zip-level controls for percent Asian, percent Latino, logged population density, central city location and residential instability. Models adjusted for variable zip code area and for over-dispersion. The coefficients for the interaction terms are small (because they multiply two [rescaled] figures originally ranging from 0 to 100); thus, we present four digits after the decimal for the interaction terms.

*p < .05 **p < .01 ***p < .001 (two-tailed tests)

negative, and credit unions and convenience stores, for which it is not significant. With respect to the poverty-foreign-born interaction, the interpretation must take into account the uncovered poverty association. As shown in the fifth row of the table, the interaction is negative and significant in all but two cases. This suggests that a high proportion of immigrants might reduce the number of establishments when they are very poor, lacking the minimum capital to generate the organizational resources hypothesized by enclave theory.[12]

Size Matters

With respect to size, Table 2 may mask important relationships. In the table, both a hardware store with 10 employees and a large Home Depot with several hundred would be counted as one establishment. However, it is possible that the relationship between poverty and the presence of establishments is different among small hardware stores and large chains. Large, established stores may steer clear of high poverty areas. This possibility is considered in Table 3.[13] We divided establishments into three categories based on number of employees: small (1 to 19 employees), medium (20 to 99), and large (100 or more). We find that as neighborhood poverty increases, the number of small establishments increases, except for childcare centers and grooming stores. The middle panel shows that the relationship between neighborhood poverty and the number of mid-sized establishments is mixed. In five cases, it is positive; in two cases, again childcare centers and grooming stores, the effect is negative and statistically significant; in the rest, it is not significant. The bottom panel shows that the relationship is mixed among large establishments as well. Large grocery stores and large laundries are, indeed, scarcer in high poverty neighborhoods; however, none of the other resources are, and large banks, credit unions and childcare centers are especially likely to be found there. Thus, the findings suggest that the associations are most consistently positive for small establishments, and mixed or insignificant for others.

Contextual Effects

All analyses to this point have focused on average effects across cities, statistically controlling for city differences but also disregarding them. These figures may mask important contextual factors. For example, Table 2 may show the (average) poverty coefficient for number of childcare centers to be statistically insignificant even if it is positive and statistically significant in some cities, but negative and statistically significant in others. Below we examine between-city variation in two ways.

First, we assess whether the number of establishments in the average neighborhood (regardless of its poverty level) varies from city to city, the issue posited in Hypothesis 6. Table 4 presents the proportion of the total variance in the expected log number of establishments that is accounted for by the between-city variance based on a zip code with the mean log number of establishments (Snijders and Bosker 1999). (These are area-adjusted.) The overwhelming majority of the variance in the number of each organizational resource (for the average zip code) is taking place within cities, not between them.[14] In only one organization, hardware stores, the between-city estimate for an average neighborhood is more than 10 percent. In the rest, it is below that figure, and seven organizations have figures below 5 percent. Thus, the distribution of organizational resources across zip codes (at the mean) does not depend very much on metropolitan characteristics; rather, it is associated with zip-level factors. It is noteworthy that our unit is the zip area. The smaller the geographic unit the higher the expected variance, which suggests that the between-city variances might, in fact,

Table 3: Effects of Zip Code Level Variables on Log Number of Establishments in Zip Code, All Metropolitan Areas, by Establishment Size (Unit-specific Models)

	Hardware	Grocery	Convenience	Pharmacy	Bank	Credit Union	Childcare	Restaurant	Laundry	Grooming
Zip Code Level Variable										
Small Establishments										
Proportion	.026***	.043***	.035***	.030***	.011***	.032***	-.003**	.022***	.020***	-.006**
Poor	(.002)	(.001)	(.002)	(.002)	(.004)	(.003)	(.001)	(.002)	(.002)	(.002)
Proportion	-.012***	-.003***	-.006***	-.011***	-.019***	-.006***	.006***	-.011***	-.006***	-.019***
Black	(.001)	(.001)	(.001)	(.001)	(.002)	(.001)	(.000)	(.001)	(.001)	(.001)
Proportion	.007*	.012***	.006**	.007**	.006	.008	.000	-.002	.006***	.003
Foreign Born	(.003)	(.001)	(.002)	(.002)	(.004)	(.005)	(.002)	(.002)	(.002)	(.002)
Medium Establishments										
Proportion	-.003	.019***	.019***	.002	.026***	.023***	-.006**	.006***	-.004	-.024***
Poor	(.005)	(.002)	(.006)	(.004)	(.005)	(.006)	(.002)	(.001)	(.048)	(.006)
Proportion	-.024***	-.010***	-.018***	-.010***	-.019***	-.010***	.000	-.007***	.010	-.035***
Black	(.003)	(.001)	(.003)	(.002)	(.002)	(.003)	(.001)	(.001)	(.022)	(.003)
Proportion	.006	.002	.014*	-.001	.019***	.010	-.014***	-.008***	.090	.013*
Foreign Born	(.007)	(.002)	(.007)	(.004)	(.005)	(.010)	(.003)	(.002)	(.061)	(.006)
Large Establishments										
Proportion	.012	-.021***	-.022	-.002	.050***	.020*	.029***	.003	-.071***	-.010
Poor	(.016)	(.002)	(.060)	(.010)	(.012)	(.010)	(.008)	(.008)	(.027)	(.022)
Proportion	-.078***	-.010***	-.031	-.006	-.019*	-.010	.000	-.002	.016*	-.097***
Black	(.014)	(.001)	(.049)	(.004)	(.009)	(.007)	(.004)	(.003)	(.007)	(.019)
Proportion	.090***	-.000	-.089	.031**	.034	.023	-.012	.003	.108***	-.006
Foreign Born	(.017)	(.003)	(.080)	(.011)	(.022)	(.018)	(.011)	(.011)	(.012)	(.019)

HGLM random-intercept models with log link function. All predictors entered as fixed and centered on the group mean. One metropolitan area lacked sufficient information for estimation of random effect; thus, it is not included in the estimates. Includes zip-level controls for central city location, percent Asian, percent Latino, logged population density, residential instability, and interaction terms for proportion poor x proportion black and proportion poor x proportion foreign born. Models adjusted for variable zip code area and for over-dispersion.
*p < .05 **p < .01 ***p < .001 (two-tailed test)

Table 4: Proportion of Variance in Log Number of Establishments Taking Place between Metropolitan Areas (Based on Values at the Mean)*

	Variance Component	*Percent Between Metropolitan Areas*
Hardware Stores		
between	.657	10.56
within	5.563	
Grocery Stores		
between	.803	2.76
within	28.317	
Convenience Stores		
between	1.006	5.60
within	16.951	
Pharmacies		
between	.075	.38
within	19.857	
Banks		
between	.097	.24
within	40.380	
Credit Unions		
between	.272	1.10
within	24.487	
Childcare Centers		
between	.743	3.12
within	23.105	
Restaurants		
between	.581	.52
within	111.452	
Laundries		
between	.941	9.11
within	9.395	
Grooming		
between	.980	1.99
within	48.160	

* In linear hierarchical models, this figure would be the intraclass correlation. It denotes the proportion of the total variance accounted for by the group level; it is also the correlation between the values of two randomly drawn zip codes in a randomly drawn MSA/PMSA (Snijders and Bosker 1999:16ff). In the linear case, ICC = $Var(u_{0j})/(Var(u_{0j}) + Var(r_{ij}))$. However, in Poisson models the level-1 variance is a function of the expected mean. Specifically, in our case, $Var(r_{ij}) = \sigma^2/(m_{ij}\lambda_{ij})$. Thus, there is no single ICC as such (Germán Rodríguez, personal communication). The figures above are the within and between variances when evaluated for a zip code with the average log number of establishments and average exposure.

Table 5: Variances across Metropolitan Areas in Slopes for Proportion Poor in Zip Code

	Hardware	*Grocery*	*Convenience*	*Pharmacy*	*Bank*	*Credit Union*	*Childcare*	*Restaurant*	*Laundry*	*Grooming*
Proportion Poor Slope										
Variance Across Cities	.0000	.0001***	.0003***	.0001	.0011***	.0002	.0002***	.0001	.0001***	.0002**
Chi-sqrd (330 df)	362.74	672.65	549.06	319.12	528.70	293.77	783.35	351.48	427.23	423.71

Variances based on HGLM random-intercept models in Table 2.
*p < .05 **p < .01 ***p < .001 (two-tailed tests)

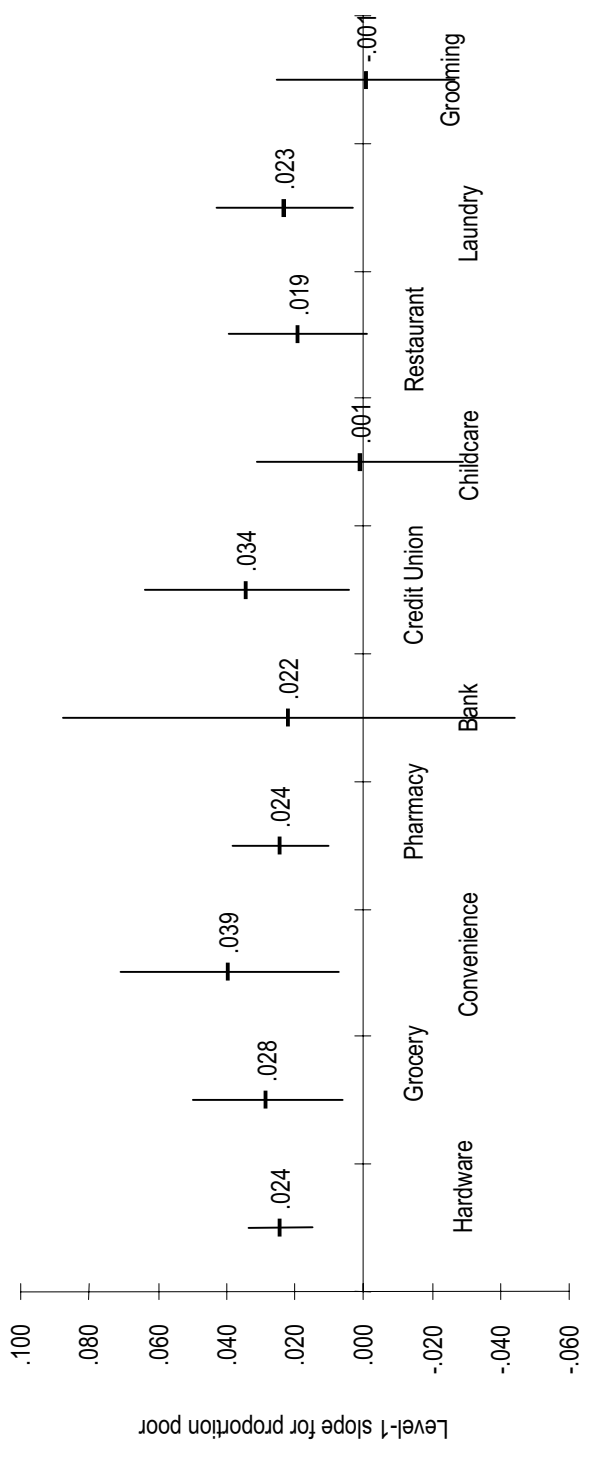

Figure 2. Range Across Metropolitan Areas in Effect of Proportion Poor in Zip Code on Log Number of Establishments/ Two Standard Deviations Above and Below the Mean Slope

be lower if units such as census tracts were employed.

The second issue regards the slopes for poverty. The figures in Table 4 say little about the *association* between poverty and the number of establishments, which could, in fact, vary widely by city. (This refers to Hypothesis 7.) We examine this possibility in Table 5, which shows the "random effects" for the poverty coefficient; that is, it shows the variance across cities in the unit-specific slopes for the variable. The models are identical to those in Table 2. As shown, for most organizational resources, the random effect is statistically significant: cities differ significantly in their slopes for neighborhood poverty.

To present these relationships more intuitively, we show the two standard deviations across cities around the level-1 slope for poverty. Figure 2 displays the mean poverty slope and the interval at two standard deviations (not standard errors) above and below the mean slope across cities; it presents the range of coefficients across 95 percent of the cities. Consider hardware stores. The average effect of zip-level poverty on the log number of hardware stores in the zip code is .024. In the city with the highest effect (among 95 percent of cities), it is .034; in the city with the smallest effect, it is .015.

There are three issues to examine in Figure 2. The first is whether the variation across cities in the poverty slope is large or small. If it is very small, this would suggest a remarkably consistent relationship, across cities, between neighborhood poverty and the number of establishments. The second is whether, for any given establishment, the slope is negative for a substantial portion of the 330 metropolitan areas, regardless of whether the average slope is positive. If so, this would offer support for the notion that poor neighborhoods are deprived of these institutions, but only among a substantial minority of cities. The third is to compare the standard deviations across organizations to determine whether the variability in the poverty slope depends on the establishment.

For most establishments, there is considerable range across cities in the poverty slope. For six of the establishments, the effect of poverty is positive in all cities. For the other four, it is negative in at least some cities; for banks, childcare centers and grooming stores, it is negative in either a large minority or a small majority of cities, as expected by the de-institutionalized poor neighborhoods perspective. This suggests that whether high poverty neighborhoods are deprived of organizations or not depends greatly from city to city.

Contextual Effects of Level-2 Variables

Our last set of models examines metropolitan-level predictors of the poverty slope. In Table 6, we examine the impact of metropolitan-level economic and demographic factors on the neighborhood poverty slope. These models differ slightly from the previous ones. In the previous analyses, we were interested in comparing poor to less-poor neighborhoods within a given city; our current aim is to compare poor neighborhoods in one city to equally poor neighborhoods in others. Thus, Table 6 presents models in which all level-1 variables are centered on the grand mean and shows population average models with robust standard errors (Raudenbush and Bryk 2002). We examine several variables at the metropolitan level: metropolitan proportion black and proportion immigrant, the poverty rate, the unemployment rate, population density (logged), and region (with South as the omitted category). We estimate the effects of these variables on the intercept (i.e., the number of establishments in the average neighborhood) and on the poverty slope. For simplicity, Table 6 only shows the effect on the poverty slope.

As shown in the table, the most consistently significant variables are the metropolitan poverty rate and region. High poverty rates at the metropolitan level may be a proxy for poor economic conditions such as a city-wide recession, large budget deficits, low wages or slow economic growth. Under these conditions, establishments in high poverty neighborhoods are

Table 6: Effects of Metropolitan-Level Variables on Slope for Effect of Zip-Level Proportion Poor on Log Number of Establishments (Population Average Models with Robust Standard Errors)

	Hardware	*Grocery*	*Convenience*	*Pharmacy*	*Bank*	*Credit Union*	*Childcare*	*Restaurant*	*Laundry*	*Grooming*
Metropolitan Level Variables										
Effect on Proportion Poor Slope of:										
Proportion black in city	.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)	-.000 (.000)	-.000 (.000)	-.000** (.000)	-.000 (.000)	.000 (.000)	-.000 (.000)
Proportion foreign born in city	.000 (.000)	-.000 (.000)	.000 (.000)	-.000 (.000)	-.001*** (.000)	.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)	.000 (.000)
Proportion poor in city	-.003*** (.001)	-.000 (.001)	-.002** (.001)	-.002*** (.001)	-.004*** (.001)	-.003*** (.001)	-.000 (.001)	-.001*** (.000)	-.002*** (.001)	-.000 (.001)
Unemployment rate in city	.004** (.001)	.005* (.003)	.001 (.001)	.005*** (.001)	.003 (.002)	.002 (.002)	.001 (.001)	.001 (.001)	.003 (.002)	-.001 (.001)
City population density (ln)	.001 (.002)	.007* (.003)	-.004 (.002)	.000 (.002)	-.003 (.004)	-.004 (.003)	-.006** (.002)	-.003 (.002)	-.004 (.002)	-.005* (.002)
Region:										
Northeast	-.011* (.005)	-.015* (.007)	-.023*** (.006)	-.012** (.004)	-.014 (.011)	-.037*** (.006)	-.019*** (.006)	-.021*** (.003)	-.023*** (.001)	-.018*** (.004)
West	-.003 (.005)	-.017* (.007)	-.006 (.006)	-.009* (.004)	.008 (.009)	-.014*** (.008)	-.012** (.004)	-.001 (.004)	-.002* (.005)	-.004 (.005)
Midwest	-.015*** (.004)	-.005 (.006)	-.009 (.005)	-.017*** (.003)	-.024** (.008)	-.031*** (.005)	-.019*** (.004)	-.023*** (.003)	-.017*** (.005)	-.029*** (.004)

HGLM random-intercept models with log link function. All level-1 predictors, except for proportion poor, are entered as fixed. Four metropolitan areas lacked sufficient information for estimation of random effect on poverty slope; thus, they are not included in the estimates. Includes zip-level controls for percent black, percent foreign-born, percent Asian, percent Latino, logged population density, central city location, residential instability and interaction terms for proportion poor x proportion black and proportion poor x proportion foreign born. Models adjusted for variable zip code area and for over-dispersion. Variables are centered on the grand mean.

*p < .05 **p < .01 ***p < .001 (two-tailed tests)

likely to do worse than under robust economies. In cities in the Northeast and Midwest, the association between neighborhood poverty and the number of establishments is either smaller (if positive) or more negative than in cities in the South and (often) the West. This suggests that the poverty perspective is most likely to be accurate among rustbelt cities, consistent with prior work (Jargowsky and Bane 1991).

Discussion

This study is the first test of the de-institutionalization hypothesis based on nearly all U.S. metropolitan areas and a large sample of establishments. We have presented a number of findings. Because of their implications, we outline them clearly below, categorized into *average* and *contextual* effects.

Average Effects

- Contrary to expectations, as the poverty rate of a neighborhood increases, the number of establishments increases.
- As the proportion black increases, the number of establishments decreases.
- As the proportion foreign-born of a neighborhood increases, the number of establishments increases.
- For small establishments, the number of establishments increases with neighborhood poverty; for larger ones, the relationship is mixed – notably, the number of large grocery and large laundries decreases with neighborhood poverty.

Contextual Effects

- The relationship between neighborhood poverty and the number of establishments depends significantly on the city, such that it is more positive in some cities than others, and even negative for a few resources in some cities.
- Poorer neighborhoods have more establishments in cities with stronger economic conditions and in the South and West.

Collectively, these findings add subtlety to sociological theories about the effect of neighborhood poverty and to policy considerations regarding the status of poor neighborhoods. Below we expand on our theoretical and policy contributions.

Contributions to Theory

This paper's first theoretical contribution is the documentation of a *conditional perspective* on the impact of neighborhood poverty (Small 2004). There are at least two different assumptions about the impact of neighborhood poverty and the conditions of poor neighborhoods. In one, neighborhood poverty is an institution ("the ghetto") with a set of expected characteristics (graffiti, unemployed young men assembled on street corners) that repeat themselves from city to city; in another, neighborhood poverty is a condition that only leads to certain outcomes (whether the presence of graffiti or the absence of organizational resources) when it occurs in conjunction with other factors. The first model assumes that the ghetto is an institution much like an ethnic enclave, with a predictable set of attributes such as a paucity of organizational resources. The second model assumes that neighborhood poverty is conditional, such that there is no "neighborhood poverty effect," positive or negative, large or small, independent of city context. Much of the research follows the first

theoretical assumption (e.g., Jencks and Peterson 1991; Brooks-Gunn, Duncan and Aber 1997a, 1997b; Furstenberg et al. 1999), attempting to discover whether there is or is not an effect of neighborhood poverty. Our results are inconsistent with that approach. Poor neighborhoods in most cities are not de-institutionalized ghettoes.

The positive effect of neighborhood poverty may be understood in light of several issues. One is the difference between poverty and segregation. Much of the work supporting the de-institutionalization thesis has been based on ethnographic research in predominantly black neighborhoods in Chicago. The de-institutionalization perspective argues strictly for economic, not racial, effects. However, its empirical support has stemmed from studies of blacks, such that it was often unclear whether it applied to most poor neighborhoods or only to predominantly black ones. Our findings suggest that predominantly black neighborhoods constitute special cases, as suggested by Clark (1965), Kasarda (1989), Massey and Denton (1993), and others, whereby the effects of segregation and institutional (and interpersonal) discrimination are strong enough to temper the effects that other differences between cities might have on the number of observed resources (Immergluck 2002).

A related issue is population density, for which our models controlled. The story of institutional deterioration in Wilson (1987, 1996) was not just about poverty (in a black neighborhood) but also about depopulation – i.e., the departure of the (black) middle class. This picture differs from that in densely-populated, high-poverty neighborhoods in cities such as New York, where a prevalence of small establishments is more likely than not. Our findings in Table 2 suggest that, on average, this pattern is more common than the alternative. Indeed, in models that did not account for population density (available upon request) the poverty coefficient was smaller and more likely to be negative. Thus, we would conclude that de-institutionalization is associated more with segregation and depopulation than with concentrated poverty.

Our study made clear the significance of city-level factors for the impact of neighborhood poverty, a perspective few researchers have adopted. In the first years of the neighborhood poverty research resurgence, there was some focus on rust-belt cities as different from the rest, but not much more large-scale research into between-city differences in neighborhood poverty (e.g., Jencks and Peterson 1991; Jargowsky and Bane 1991; Small and Newman 2001). Jargowsky (1996) more recently reported great diversity in poor neighborhoods across cities with respect to teen births, school dropouts and other factors, issues which seem worth probing further. We find that poor neighborhoods in cities of the South and West have consistently more establishments than those in other regions, and that those in economically depressed cities do worse than others. Generally, our findings suggest that ethnographic studies should be interpreted less as snapshots of conditions in average poor neighborhoods than as conditional accounts of high poverty in particular cities with unique characteristics.

Finally, our findings question the assumption that only clients drive the presence of establishments, a market-based perspective on establishment survival. The de-institutionalized ghetto perspective focused primarily on the impact of the poverty of potential clients – in poor neighborhoods, clients had less discretionary income, making the stability of organizational resources precarious. We point the lens toward city-level political and economic conditions. Businesses do not rely exclusively on customers' pockets; they also enjoy government incentives and direct aid such as tax breaks, grants for entrepreneurship in certain areas, vouchers to clients for services such as childcare, mandates such as the Community Reinvestment Act of 1977, and others (Logan and Molotch 1987). In addition to the free market, the state affects the distribution of establishments in poor neighborhoods. In New York City, for example, high poverty neighborhoods demonstrate a higher probability of having affordable childcare centers than low poverty neighborhoods, in part because of the influence of federal and city subsidy programs (Small and Stark 2005). In this sense, our findings reinforce a long-standing critique of the free-market assumptions of the Chicago School (Sampson and Morenoff 1997).

Contributions to Policy

Our findings have implications about policy approaches to neighborhood poverty. One of the most important policy demonstrations in recent years has been the Moving to Opportunity (MTO) experiments, which test the effect of moving low-income individuals from poor to non-poor neighborhoods (Goering and Feins 2003). Relocation approaches assume, among other things, that neighborhood poverty constrains individuals' capacity to gain access to important resources (Wilson 1987, 1996). Neighborhood poverty is likely to have such an effect among organizational resources, such as schools, tied directly to the tax structure of an area. But for most basic organizational resources, as our study shows, neighborhood poverty does not have such an effect in most cities. This suggests that an umbrella policy approach toward increasing resource access among the poor is unlikely to be effective unless policy makers carefully assess, rather than assume, neighborhood circumstances (McDermott forthcoming); policies would probably be more effective if they were targeted to city level conditions.

Nevertheless, our research points to a number of complex issues that should be addressed before translating these results into policy prescriptions. One important issue is assessing the quality of resources. Just as the quantity of resources in poor neighborhoods depends partly on the city, we would expect the quality to do so, at least in part because quality varies dramatically from resource to resource. In addition, even within organizations, there are not always obvious quality metrics, which calls for careful theoretical reasoning. For example, a grocery store in a middle-class neighborhood might have more select products, but it may also be pricier, it may not offer ethnic-specific goods, and it may not accept WIC. Finally, changes over time should be explored further. One reason for the difference between poor neighborhoods with a high proportion of blacks and other poor neighborhoods may be the historical development of poor black neighborhoods (Wilson 1987). In general, processes such as transformation in the economy or in the tax code also have an impact on the constitution of poor neighborhoods.

Notes

1. Some researchers have referred to these as "neighborhood institutions," and to the process as the institutional deterioration of the inner city (Wacquant and Wilson 1993:33). We exclude from discussion non-organizational resources that are sometimes considered "neighborhood institutions" – such as a dense social network in the community – which some have argued are prevalent in poor neighborhoods (Stack 1974).

2. Notably, not all aspects of Wilson's overall theory rely on market factors; e.g., the argument that the departure of middle class blacks from the inner city was driven not by the market but by political transformations (Wilson 1987, 1996).

3. This study does not purport to test Wilson's comprehensive theory of the effect of neighborhood poverty, only the hypotheses noted. We do not test, for example, whether this effect is due to changes in the inner city during the 1970s and 1980s.

4. A heated debate has ensued about whether enclave economies refer to the place immigrants work or live (Wilson and Portes 1980; Sanders and Nee 1987; Nee and Sanders 1987; Portes and Jensen 1987; Portes and Jensen 1989). If the two overlap significantly, then the hypothesis presented above holds. If they do not, then enclave theory would not necessarily predict a high prevalence of resources; that is, a high proportion of poor

immigrants who live together but work in different locations would not be expected to sustain organizational resources any more than a high proportion of poor natives.

5. We divided each Consolidated MSA into its component PMSAs and used these, along with the MSAs in the rest of the country. This yielded 331 MSA/PMSAs, because of missing data for Puerto Rico.

6. The NAICS codes are the following: banks (522120), identified as "savings institutions," which excludes commercial banks, mortgage brokers, monetary authorities and other financial institutions; childcare centers (624410), identified as "child day care services;" convenience stores (445120); credit unions (522130); drug stores or pharmacies (446110); hardware stores (444130); coin-operated laundries and dry-cleaners (812310), which excludes dry-cleaners with no coin-operated laundry; grocery stores (445110), which excludes convenience stores; grooming stores, a variable combining barbershops (812111), nail salons (812113) and beauty salons (812112); and limited-service restaurants (722211), which excludes cafeterias and snack bars. We recognize that a few of these establishments, particularly childcare centers, may often be non-profits. The NAICS coding system does not distinguish these establishments along profit orientation; such research would probably have to be conducted based on studies of specific establishment types. Also note that we deliberately exclude schools and hospitals. These have extremely wide ranges in size, administrative control, profit orientation and specialization; for these reasons, they should be studied separately.

7. The Office of Management and Budget define the category of "central city" following official standards published in the Federal Register Notice. "In each metropolitan statistical area and consolidated metropolitan statistical area, the largest place and, in some cases, additional places are designated as 'central cities' under the official standards. A few primary metropolitan statistical areas do not have central cities. The largest central city and, in some cases, up to two additional central cities, are included in the title of the metropolitan area (MA)." Zip codes were matched to central cities employing the same "centroid" approach by which zip codes were GIS matched to metropolitan areas. (http://www.census.gov/geo/www/cob/ma_metadata.html). See also (U.S. Department of Commerce 1994).

8. Preliminary tests showed that addition of the two interaction terms induced multicollinearity. We re-scaled the predictors before creating the interaction terms, based on Smith and Sasaki (1979), to reduce the effect of multicollinearity to a minimum. Let X1*X2 = X3. The interaction term, X3, is thought of as a special case of (X1-c)*(X2-d) where c and d equal zero. If c and d are set to the means of X1 and X2 respectively, the new interaction term X3* will be less collinear with X1 and X2, provided Var(X3*) < Var(X3). Smith and Sasaki (1979:23) demonstrate it is possible to identify the values of c and d that result in the smallest possible variance of the multiplicative term. Doing so minimizes the multicollinearity due to the interaction term without changing the total explained variance or the coefficient for the interaction term, and with a minimal (or no) effect on other estimated parameters. Resulting correlations are available upon request.

9. Even though our data contain the entire population of zip codes in the entire population of large cities, we treat our data as a sample and present standard errors. This approach, sometimes referred to as model-based inference, assumes that even censuses should be considered samples, given that they contain measurement error and they are subject to chance. As Deming and Stephan (1941:45) write, "A census

describes a population that is subject to the variations of chance, because it is only one of the many possible populations that might have resulted from the same underlying system of social and economic causes." An alternative approach, sample-based inference, assumes that a census directly measures the population. From the latter perspective, standard errors are irrelevant when presenting data such as ours. This is a statistical and philosophical debate; it does not affect the actual models estimated, only their interpretation. For the current practical purposes, the reader following the sample-based approach may simply ignore the standard errors and assess the coefficients and their signs. For classic treatments of this issue, see Deming and Stephan (1941) and Hartley and Sielken (1975).

10. We use the term "effects" in accordance with established practice in the HLM literature. We note, however, that we do not make causal statements based on these data. The questions we ask are descriptive, not causal – that is, we ask whether poor neighborhoods do, in fact, exhibit the characteristics attributed to them.

11. The coefficients for the variables of interest do not differ substantially when models with and without interactions are compared. To conserve space we only present the full model with interaction terms on Table 2.

12. Of course, we cannot state this unequivocally because we do not have individual-level data on the characteristics of the immigrants.

13. The models in Table 3 were estimated with proportion poor as fixed. This was necessary because of convergence difficulties regarding medium and large establishments. This should be taken into account when comparing point estimates to those in Table 2. Our main conclusions were no different when proportion poor in Table 2 was estimated as fixed. Results are available upon request.

14. The between-city variance, though small, is statistically significant for all 10 establishments (not shown).

References

Aldrich, Howard E., and Roger Waldinger. 1990. "Ethnicity and Entrepreneurship." *Annual Review of Sociology*. 16:111-35.

Anderson, Elijah. 1999. *Code of the Street*. Norton.

BrooksGunn, Jeanne, Greg Duncan and J. Lawrence Aber, editors. 1997a. Neighborhood Poverty: Volume I: Context and Consequences for Children. Russell Sage.

_____. 1997b. Neighborhood Poverty: Volume II: Policy Implications in Studying Neighborhoods. Russell Sage.

Clark, Kenneth. 1965. *Dark Ghetto: Dilemmas of Social Power*. Harper & Row.

Cohen, Cathy J. 2001. "Social Capital, Intervening Institutions, and Political Power." Pp. 267-289. *Social Capital and Poor Communities*. Susan Saegert, J. Philip Thompson and Mark R. Warren, editors, Russell Sage.

Cutler, David, and Edward Glaeser. 1997. "Are Ghettos Good or Bad?" *Quarterly Journal of Economics*. 112:82762.

Danziger, Sheldon H., Gary D. Sandefur and Daniel H. Weinberg. 1994. *Confronting Poverty: Prescriptions for Change*. Russell Sage.

Dear, Michael. 2002. "Los Angeles and the Chicago School: Invitation to a Debate." *City and Community*. 1(1):5-32.

Deming, Edwards W., and Frederick F. Stephan. 1941. "On the Interpretation of Censuses as Samples." *Journal of the American Statistical Association*. 36(213):45-49.

Drake, St. Clair, and Horace R. Cayton. 1945. *Black Metropolis: A Study of Negro Life in a Northern City*. Harcourt, Brace and Company.

Duncan, Arne. 1987. "The Values, Aspirations, and Opportunities of the Urban Underclass." B.A. honors thesis, Harvard University.

Ellen, Ingrid Gould, and Margery Austin Turner. 2003. "Do Neighborhoods Matter and Why?" Pp. 313-38. *Choosing a Better Life? Evaluating the Moving to Opportunity Social Experiment*. John Goering and Judith D. Feins, editors. Urban Institute Press.

Furstenberg, Frank F., Thomas D. Cook, Jacquelynne Eccles, Glen H. Elder and Arnold Sameroff. 1999. *Managing to Make It: Urban Families and Adolescent Success*. University of Chicago Press.

Gamm, Gerald. 1999. *Urban Exodus: Why the Jews Left Boston and the Catholics Stayed*. Harvard University Press.

Goering, John, and Judith D. Feins. 2003. *Choosing a Better Life? Evaluating the Moving to Opportunity Social Experiment*. Urban Institute Press.

Goering, John, Judith Feins and Todd M. Richardson. 2003. "What Have We Learned about Housing Mobility and Poverty Deconcentration?" Pp. 3-36. *Choosing a Better Life? Evaluating the Moving to Opportunity Social Experiment*. John Goering and Judith D. Feins, editors. Urban Institute Press.

Graves, Steven M. 2003. "Landscapes of Predation, Landscapes of Neglect: A Location Analysis of Payday Lenders and Banks." *Professional Geographer*. 55(3):303-317.

Hartley, H.O., and R.L. Sielken, Jr. 1975. "A 'Super-population Viewpoint' for Finite Population Sampling." *Biometrics*. 31:411-22.

Ihlanfeldt, Keith R., and Madelyn V. Young. 1994. "Intrametropolitan Variation in Wage Rates: The Case of Atlanta Fast-Food Workers." *The Review of Economics and Statistics*. 76(3):425-433.

Immergluck, Dan. 2002. "Redlining Redux - Black Neighborhoods, Black-owned Firms, and the Regulatory Cold Shoulder." *Urban Affairs Review*. 38(1):22-41.

Jackson, Kenneth T. 1985. *Crabgrass Frontier: The Suburbanization of the United States*.Oxford University Press.

Jargowsky, Paul. 1997. *Poverty and Place: Ghettos, Barrios, and the American City*. Russell Sage.

_____. 1996. "Beyond the Street Corner: The Hidden Diversity of High-Poverty Neighborhoods." *Urban Geography*. 17(7):579-603.

Jencks, Christopher, and Susan Mayer. 1990. "The Social Consequences of Growing up in a Poor Neighborhood." Pp. 111186. *Innercity Poverty in the United States*. Lawrence Lynn and Michael McGreary, editors. National Academy Press.

Jencks, Christopher, and Paul E. Peterson, editors. 1991. *The Urban Underclass*. Brookings Institution.

Kasarda, John D. 1989. "Urban Industrial Transition and the Underclass." *Annals of the American Academy of Political and Social Science*. 501(Jan):26-47.

Klinenberg, Eric. 2002. *Heat Wave: A Social Autopsy of Disaster in Chicago*. University of Chicago Press.

Lieberson, Stanley. 1985. Making it Count: The Improvement of Social Research and Theory. University of California Press.

Light, Ivan, and Carolyn Rosenstein. 1995. *Race, Ethnicity and Entrepreneurship in Urban America*. Aldine de Gruyter.

Logan, John R., and Richard D. Alba. 1999. "Minority Niches and Immigrant Enclaves in New York and Los Angeles: Trends and Impacts." Pp. 172-193. *Immigration and Opportunity: Race, Ethnicity and Employment in the United States*. Frank D. Bean and Stephanie Bell-Rose, editors. Russell Sage.

Logan, John R., Richard D. Alba and Thomas L. McNulty. 1994. "Ethnic Economies in Metropolitan Regions: Miami and Beyond." *Social Forces* 72(3):691-724.

Logan, John R., and Harvey L. Molotch. 1987. *Urban Fortunes: The Political Economy of Place*. University of California Press.

Long, J. Scott. 1997. *Regression Models for Categorical and Limited Dependent Variables*. Sage.

Ludwig, Jens, Greg J. Duncan and Helen F. Ladd. 2003. "The Effects of MTO on Children and Parents in Baltimore." Pp. 153-75. *Choosing a Better Life? Evaluating the Moving to Opportunity Social Experiment*. John Goering and Judith D. Feins, editors. Urban Institute Press.

Massey, Douglas, and Nancy Denton. 1993. *American Apartheid*. Harvard University Press.

McCullagh, P., and J.A. Nelder. 1989. *Generalized Linear Models*. Second edition. Chapman & Hall.

McDermott, Monica. Forthcoming. *Working-Class White: The Making and Unmaking of Race Relations*. University of California Press.

Messner, Steven J., and Richard Rosenfeld. 2001. *Crime and the American Dream*. Wadsworth.

Morland, Kimberly, Steve Wing, Ana Diez Roux and Charles Poole. 2002. "Neighborhood Characteristics Associated with the Location of Food Stores and Food Service Places." *American Journal of Preventive Medicine*. 22(1):23-29.

Nee, Victor, and Jimy M. Sanders. 1987. "On Testing the Enclave-Economy Hypothesis." *American Sociological Review*. 52:771-73.

O'Connor, Alice, Chris Tilly and Lawrence D. Bobo, editors. 2001. *Urban Inequality: Evidence from Four Cities*. Russell Sage Foundation.

Park, Robert, Ernest Burgess and Robert McKenzie. 1925. *The City*. University of Chicago Press.

Peterson, Ruth D., Lauren J. Krivo and Mark A. Harris. 2000. "Disadvantage and Neighborhood Violent Crime: Do Local Institutions Matter?" *Journal of Research in Crime and Delinquency*. 37(1):31-63.

Pettit, Becky, and Sara McLanahan. 2003. "Residential Mobility and Children's Social Capital: Evidence from an Experiment." *Social Science Quarterly*. 84(3):632-49.

Pollard, Jane S. 1996. "Banking on the Margins: Geographies of Financial Exclusion in Los Angeles." *Environment and Planning A*. 28(7):1209-32.

Portes, Alejandro, and Robert L. Bach. 1985. *Latin Journey: Cuban and Mexican Immigrants in the United States*. University of California Press.

Portes, Alejandro, and Leif Jensen. 1987. "What's an Ethnic Enclave? The Case for Conceptual Clarity." *American Sociological Review*. 52:768-71.

_____. 1989. "The Enclave and the Entrants: Patterns of Ethnic Enterprise in Miami Before and After Mariel." *American Sociological Review*. 54:929-49.

Queralt, Magaly, and Ann Dryden Witte. 1998. "Influences on Neighborhood Supply of Child Care in Massachusetts." *Social Service Review*. March:17-46.

Quillian, Lincoln. 1999. "Migration Patterns and the Growth of High-Poverty Neighborhoods, 1970-1990." *American Journal of Sociology*. 105(1):1-37.

Raudenbush, Stephen W., and Anthony S. Bryk. 2002. *Hierarchical Linear Models: Applications and Data Analysis Methods*. Sage Publications.

Raudenbush, Stephen W., Anthony S. Bryk, Yuk Fai Cheong and Richard T. Congdon, Jr. 2000. *HLM 5: Hierarchical Linear and Nonlinear Modeling*. Scientific Software International, Inc.

Sampson, Robert J. 1999. "What Community Supplies." Pp. 241-292. *Urban Problems and Community Development*. Ron Ferguson and W.T. Dickens, editors. Brookings Institution Press.

Sampson, Robert J., and Jeffrey D. Morenoff. 1997. "Ecological Perspectives on the Neighborhood Context of Urban Poverty: Past and Present." Pp. 1-22. *Neighborhood Poverty: Volume II: Policy Implications in Studying Neighborhoods*. Jeanne Brooks-Gunn, Greg Duncan and J. Lawrence Aber, editors. Russell Sage.

Sampson, Robert J., Jeffrey Morenoff and Thomas Gannon-Rowley. 2002. "Assessing 'Neighborhood Effects': Social Processes and New Directions in Research" *Annual Review of Sociology*. 28:443-78.

Sanders, Jimy M., and Victor Nee. 1987. "Limits of Ethnic Solidarity in the Enclave Economy." *American Sociological Review*. 52:745-73.

Shaw, Clifford R., and Henry D. McKay. 1969. *Juvenile Delinquency and Urban Areas*. Revised Edition. University of Chicago Press.

Siegel, Gary L., and L. Anthony Loman. 1991. *Child Care and AFDC Recipients in Illinois: A Digest of Findings and Conclusions*. St. Louis: Institute of Applied Research.

Small, Mario Luis. 2004. *Villa Victoria: The Transformation of Social Capital in a Boston Barrio*. University of Chicago Press.

Small, Mario Luis, and Katherine Newman. 2001. "Urban Poverty After The Truly Disadvantaged: The Rediscovery of the Family, the Neighborhood, and Culture." *Annual Review of Sociology*. 27:23-45.

Small, Mario Luis, and Laura Stark. 2005. "Are Poor Neighborhoods Resource-Deprived? A Case Study of Childcare Centers in New York." *Social Science Quarterly*. 86(s1):1013-36.

Smith, Kent W., and M.S. Sasaki. 1979. "Decreasing Multicollinearity: A Method for Models with Multiplicative Functions." *Sociological Methods and Research*. 8(1):35-56.

Snijders, Tom A.B., and Roel J. Bosker. 1999. *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modeling*. Sage.

Stack, Carol B. 1974. *All of Our Kin: Strategies for Survival in a Black Community*. Harper & Row.

U.S. Department of Commerce. 1994. *Geographic Areas Reference Manual*. U.S. Department of Commerce. Economics and Statistics Administration. Bureau of the Census.

Wacquant, Loic and William Julius Wilson. 1989. "Poverty, Joblessness, and the Social Transformation of the Inner City." Pp. 70-102. *Welfare Policy for the 1990s.* Phoebe Cottingham and David Ellwood, editors. Harvard University Press.

Waldinger, Roger, and Mehdi Bozorgmehr. 1996. *Ethnic Los Angeles*. Russell Sage.

Wilson, Franklin D. 2003. "Ethnic Niching and Metropolitan Labor Markets." *Social Science Research*. 32(3):429-66.

Wilson, William Julius. 1987. *The Truly Disadvantaged*. University of Chicago Press.

_____. 1995. "The Political Economy and Urban Racial Tensions." *American Economist*. 39(1):3-14.

_____. 1996. *When Work Disappears: The World of the New Urban Poor*. Knopf.

Yen, I.H., and G.A. Kaplan. 1999. "Neighborhood Social Environment and Risk of Death: Multilevel Evidence from the Alameda County Study." *American Journal of Epidemiology*. 149(10):898-907.

Appendix

Below describe our model. Generalized linear models specify a sampling model, a structural model, and a link function. A Poisson distribution is often assumed in estimating a rate (such as homicides per 100,000 persons) or a simple count. In either case, the outcome variable is assumed to reflect a "rate," λ, or expected mean, so that $E(\Upsilon|\lambda) = \lambda$. In a Poisson distribution, the variance is identical to the mean. We make two modifications to these assumptions. First, we consider that, as shown in Table 1, the variance exceeds the mean for all our outcome variables. To adjust for over-dispersion, we assume in our estimates that $Var(\Upsilon|\lambda) = \sigma^2 E(\Upsilon|\lambda)$, and expect $\sigma^2 > 1$. Second, the standard Poisson model assumes constant "exposure" across units. In our case, zip codes vary widely in area, as shown in the first row of the bottom panel of Table 1; thus, we assume a varying exposure, measured by the area in square miles (Raudenbush and Bryk 2002:309ff; McCullagh and Nelder 189:193ff).

We model λ as a function of metropolitan- and zip-level variables, in a hierarchical framework (Raudenbush and Bryk 2002). Hierarchical linear models are systems of simultaneously estimated equations in which the zip-level (neighborhood) and metropolitan-level (city) predictors are modeled independently; in conjunction, they realize the linear predictor η. Given neighborhood *i* in city *j*, we specify the connection between the linear predictor and λ with the log link, whereby, $\eta_{ij} = \log(\lambda_{ij})$ (Long 1997:257). Our main concern is the effect of poverty. Our model takes the following form:

Level 1

$$\eta_{ij} = \beta_{0j} + \beta_{1j}(\textit{Neighborhood\_Poverty})_{ij} + \beta_{2j}(\textit{Proportion\_Black})_{ij} + \beta_{3j}(\textit{Proportion\_Foreign\_Born})_{ij} + \boldsymbol{\beta}_{4j}(\textit{Neighborhood\_Controls})_{ij} + e_{ij}$$

Level 2

$$\beta_{0j} = \Upsilon_{00} + \Upsilon_{01}(\textit{City\_Covariates})_{0j} + \mu_{0j}$$

$$\beta_{1j} = \Upsilon_{10} + \acute{A}\Upsilon_{11}(\textit{City\_Covariates})_{1j} + \mu_{1j}$$

$$\beta_{2j} = \Upsilon_{20}$$

$$\beta_{3j} = \Upsilon_{30}$$

Where β_{0j} is the expected log number of establishments in the average neighborhood in city j; β_{1j} is the average coefficient associated with the neighborhood's poverty level; β_{2j} is the average coefficient associated with the neighborhood's proportion black; β_{3j} is the average coefficient associated with the neighborhood's proportion foreign born; $\boldsymbol{\beta}_{4j}$ is a vector of coefficients associated with neighborhood controls; Υ_{01} is a vector of coefficients associated with city-level controls affecting the average log number of centers per neighborhood, and μ_{0j} is the deviation from that average associated with a particular city. The parameter Υ_{11} is a vector of coefficients associated with city-level controls affecting the effects of zip-level poverty; μ_{1j} is the associated random effect. The model also tests whether the average number of organizational resources per neighborhood varies significantly across cities (H6); the null hypothesis that it does not vary is $\mu_{0j} = 0$. The model also tests, independently, whether the coefficient or slope for neighborhood poverty varies across cities (H7); the null hypotheses that it does not vary is $\mu_{1j} = 0$. Models are estimated using HLM 5.05 software (Raudenbush et al. 2000).