Threshold Effects and the Expected Benefits of Attracting Middle-Income Households to the Central City

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Abstract

This article looks at the two primary expected benefits of efforts to bring back, or retain, middle-income households in the central city: (1) improved fiscal conditions caused by increasing the tax base and (2) decreased socioeconomic isolation of central-city low-income households. We examine the causal linkages reputed to produce these two benefits in light of the relatively limited relevant theoretical and empirical research.

Although stressing that this work is only tentative and intended to be provocative, we cautiously conclude that thresholds matter. That is, it is likely that the number of middle-income households in a given area must exceed a certain threshold for significant benefits to accrue. The geographic scale of this area, the threshold that applies, and the time needed for benefits to appear depend on the particular causal linkage at issue. In the last section, we derive implications for research and policy evaluation.

Keywords: Cities; Community development; Policy

Introduction

Over the past four decades, the transformation of large cities has been characterized by the suburbanization of America's middle-income households. During the same period, deteriorating inner-city areas have experienced ever greater fiscal and social distress.[1] Much of this distress is believed to result from the continued out-migration of middle-income households from the

[1] In this article, the term *inner-city areas* refers to urban core areas of concentrated poverty and deterioration. The term *central city* refers to the municipal jurisdiction.

central city to the metropolitan periphery (Nelson 1988; Varady and Raffel 1995, chap. 1).[2]

It was in response to this belief that public efforts were promoted in the 1970s to attract suburban middle-income households back to the central city.[3] In reviewing the experience of programs over the past 20 years, Varady and Raffel (1995) find that (1) some middle-income households may be willing to live in cities, (2) certain central-city neighborhoods may be attractive to middle-income households, and (3) cities may need to implement housing and education initiatives to attract these households. Varady and Raffel admit that efforts to attract middle-income residents may be best suited to small and medium-sized cities without long histories of social and racial conflict. Despite limited success, the belief persists that reversing the out-migration of middle-income households or attracting suburban middle-income residents will ameliorate the continued distress in many large urban areas.[4]

This belief is not surprising. As we amplify below, the out-migration of upper-income households has had a double impact on inner-city residents: fiscal and social. Fiscally, the loss of middle- and upper-income households has affected central cities in two ways. It has decreased the demand for housing, thus

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[2] We use the term *middle income* here as a generic term to mean only non-poverty-level households, especially those that are nonelderly and have one or more members employed.

[3] The term *gentrification* became popular at this time to indicate the revitalization of central-city low-income neighborhoods by the arrival of upper-income households. Although gentrification was promising as a means of revitalizing inner-city areas, some feared that it would lead to the displacement of low-income residents, who would be priced out of revitalized areas (Laska and Spain 1980; Palen and London 1984). In the 1970s and 1980s, some such displacement occurred, but not in the magnitude and on the scale originally feared (Nelson 1988).

[4] In recent years, urban scholars have been debating the relationship between cities and suburbs. The debate has focused on whether the cities depend on the suburbs for economic vitality, or the suburbs on cities, or whether there is some type of interdependence. In their study of Cleveland, Bingham and Kalich (1996) find the newly developed downtown area to be dependent on the suburbs for its survival. Cleveland based its downtown revitalization efforts on commercial real estate development. Downtown employers rely on middle-income white-collar workers, who typically live in the suburbs. Because most of Cleveland's new downtown office space is leased, Bingham and Kalich highlight the risk that downtown employers may choose to move to the suburbs where such workers live. Attracting these workers to central-city areas may discourage employers from locating in the suburbs, thus strengthening Cleveland's downtown revitalization efforts.

reducing its value and the city's tax base. Also, this loss has left inner-city residents with weakened political power to attract public resources from state legislatures to their neighborhoods. Socially, the loss of middle- and upper-income households has weakened basic institutions and left high concentrations of low-income inner-city residents with no middle-class role models to emulate and with few means of learning about employment opportunities often located in the metropolitan periphery (Wilson 1987, 1996). As a result of these impacts, inner-city residents are likely to live isolated from the mainstream of society, and this socioeconomic isolation is thought to perpetuate their condition and lead them to make counterproductive choices (Galster and Killen 1995; Wilson 1996, chap. 3). It follows that efforts to revitalize inner-city areas by attracting, or retaining, middle-income households are expected to achieve two primary benefits: (1) improvements in the central city's fiscal condition and (2) decreases in the socioeconomic isolation of low-income inner-city households (Varady and Raffel 1995, chap. 1).

The goal of this article is to examine conceptually the causal linkages reputed to produce these two expected benefits from the perspective that thresholds matter—that the number of middle-income households in a given area must exceed a certain threshold for significant benefits to accrue. What the geographic scale of this area is and what threshold applies depend on the particular causal linkage at issue. For instance, only a few middle-income households may be needed to provide mainstream role models to their central-city neighbors. In contrast, the minimum number of middle-income households needed to support basic social institutions (e.g., a church) may be greater, but they can reside in a larger geographic area than the immediate vicinity of the church. These examples imply the need to reach different thresholds, or concentrations of middle-income households over relevant areas, depending on the type of benefit considered. We emphasize at the outset that the views expressed in this article are speculative and are intended to be provocative, not definitive.

Expected benefits from revitalization efforts

Two types of important benefits are expected from efforts to attract or retain middle-income households to the central city: fiscal and social.

Fiscal benefits

The possible relationships between middle-income settlement in the central city and the expected fiscal benefits are shown in figure 1. Expected fiscal benefits are both direct and indirect. Direct benefits are those that may be directly attributable to the presence and actions of middle-income households that choose central-city living. Indirect benefits are those expected to result from the actions of other parties that respond to middle-income settlement. Thus, the presence of middle-income households can be considered a necessary but not sufficient condition for indirect benefits to occur.

Property taxes. Property taxes are the major source of revenue for American cities. Although other sources, such as local sales and income taxes, are increasingly being used, cities still rely heavily on local property taxes to finance their local public expenditures (Ladd and Bradbury 1988). Middle-income resettlement in the central city is expected to have a direct effect on property tax revenues by increasing the demand for middle-quality housing, thus raising housing prices in this submarket and forestalling abandonment in the lower-quality submarket.[5] In theory, this increasing demand will be met by a combination of three supply responses over time: (1) intensified home maintenance in the middle-quality submarket, (2) upgrading of some lower-quality dwellings, and (3) new construction of middle-quality dwellings (Rothenberg et al. 1991). Although these supply responses will tend to dampen the original home price inflation in the middle-quality submarket triggered by in-migration of middle-income households, the unambiguous net effect will be to raise the aggregate assessed values of residences in the central-city jurisdiction, thereby permitting greater tax revenue collections from any given effective property tax rate.[6]

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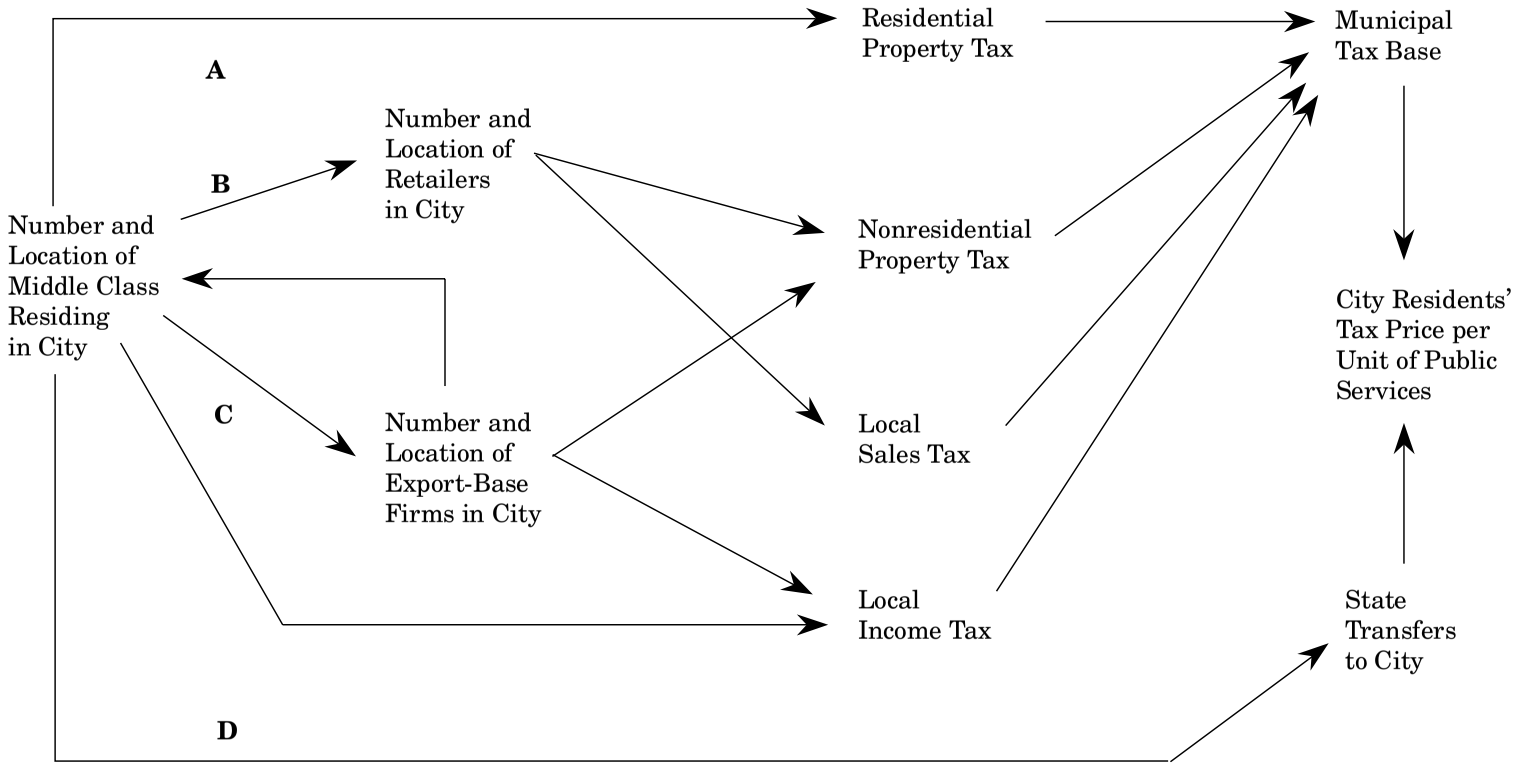
[5] If middle-income households moving to central-city areas exhibit the same desire for homeownership as their suburban counterparts, increases in housing prices may not be trivial. In a recent study, Rohe and Stewart (1996) found that, after controlling for housing stock characteristics, household characteristics, and metropolitan statistical area–level economic factors, a 5 percent change in the homeownership rate in a census tract is associated with a $4,000 increase in the mean single-family property value over a 10-year period. For a discussion of other potential impacts from increasing the number of homeowners in central-city areas, refer to Rohe and Stegman (1994a, 1994b).

[6] Property tax revenues are calculated by multiplying the property tax rate by the property tax base, the value of all residential and business property in a jurisdiction. The local property tax rate is inversely related to the size of the tax base. As Ladd and Bradbury (1988) describe, city officials are likely to

Figure 1. **Hypothesized Relationships between Middle-Class Settlement and Fiscal Capacity of a City**



Note: All relationships hypothesized as direct, with threshold effects: A = housing upgrading; B = retail demand; C = image; D = political demand.

Local income tax. In most cities with local income taxes, it is the location of employment, not residence of the employee, that determines where income taxes will be levied.[7] Thus, to the extent that having more middle-income households living in the central city leads to an increase in central-city employment, it will increase the city's income tax base.

State transfers. The number of middle-income households residing in the city may also directly affect the magnitude of state transfers to central-city areas. As these households left the city, causing state legislative districts to be reapportioned, the balance of power in state legislatures shifted in favor of the suburbs. Today, the state legislatures can be said to be dominated by suburban interests (Burchell, Listokin, and Pashman 1994). Bringing back or retaining middle-income households may be expected to reverse the trend and somewhat shift the balance of power back to the cities, resulting in greater state transfers to cities.[8]

Fiscal benefits from retail establishments. Two types of indirect benefits are expected that are derived not directly from middle-income settlement but from retail firms established or retained to serve middle-income households. First, nonresidential property tax revenues are expected to increase. Increased demand for retail space will bid up nonresidential rents and, consequently, property values and thus the tax base. Second, more revenues from local sales taxes are expected thanks to increasing retail activity in the central city, whether produced by sales to residents or nonresidents.

Fiscal benefits from improved city image. In the long run, we expect to see a different type of indirect fiscal effect resulting

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choose the level of local public expenditures in response to demand from their voters. City officials must collect property taxes to pay for any part of the cost of these services that is not covered by other revenue sources. Thus, for a given level of service, the larger the tax base, the lower the tax rate can be.

[7] One notable exception is Washington, DC, where the city tax can be collected only from those who live in the District of Columbia.

[8] Middle-income in-migration may reduce government funding. An influx of middle-income residents may affect the level of funding from, or eligibility for, some federal assistance programs for the poor. For instance, other things being equal, HOME funding decreases as the proportion of low-income households decreases. HOME funding is terminated if that proportion falls below a certain threshold. In contrast, Community Development Block Grant funding is not dependent on the proportion of low-income households being above a certain threshold. The net overall impact is unclear. Any loss of federal assistance may be small relative to the fiscal gains resulting from middle-income in-migration.

from middle-income settlement. Successful efforts to attract or retain middle-income households may change the image of the city as a place to do business. As a result, operations such as headquarters or branches of export-base firms may choose a city location for reasons of prestige. If this occurs, the city's fiscal health can be expected to improve because of higher nonresidential property taxes (due to higher demand for prime commercial sites) and local income tax revenues (due to a growing city-based workforce).[9]

Cumulative causation. The fiscal benefits of middle-income settlement may also have a synergistic effect. Increases in the municipal tax base and in the amount of state transfers to cities may make cities more fiscally attractive. These increases are likely to reduce the tax rate or per capita price per unit of public service provided, which in turn may attract more middle- and upper-income households, thus cumulatively reinforcing the expected fiscal benefits just described.

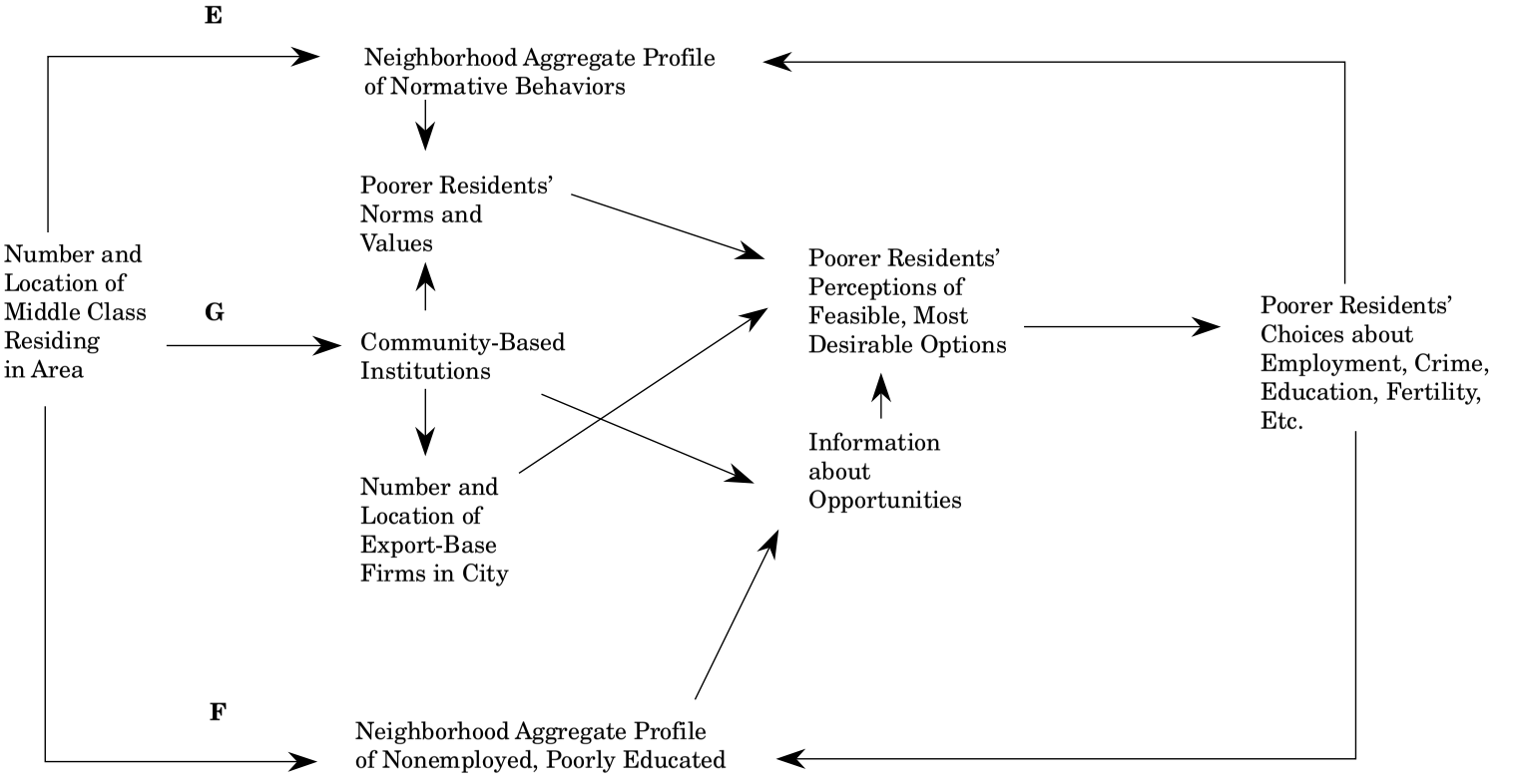
Social benefits

The possible relationships between middle-income settlement in particular lower-income neighborhoods and the expected social benefits are shown in figure 2. The social benefits alleged here flow from an implicit model of decision making in which people make choices about employment, crime, education, and other factors on the basis of what they perceive as the most desirable options available to them, given their norms, values, and skills and the information about alternative opportunities they have available at the time of their decision. (For a more thorough treatment of this topic, see Galster and Killen 1995.) Of course, norms, values, skills, and information are not immutable, but rather are affected by the sociological and institutional structures of the neighborhood in which the decision makers live. It is these sociological and institutional structures that the in-migration of the middle class into a poorer neighborhood reputedly alters by reducing the "social isolation" of its original residents.

In particular, middle-income settlement in the inner city is expected to result in three major social benefits. Directly, the presence of stable working households will provide role models to central-city residents that are expected to reinforce mainstream

[9] Times Square in New York City may be a recent example of how an improved image can facilitate the transformation of an area and thus lead to greater fiscal revenues from the area.

Figure 2. **Hypothesized Relationships between Middle-Class Settlement and Social Benefits to Neighborhoods**



Note: Threshold effects: E = social norms; F = information; G = institutional support.

values and behavioral norms regarding education, employment, and family structure (Wilson 1987). Also directly, working households are expected to provide information about mainstream employment opportunities, the lack of which is cited as an obstacle to economic advancement among inner-city residents (O'Regan and Quigley 1995).[10] Indirectly, middle-income families will help sustain basic social institutions (churches, clubs, schools, etc.) that strengthen and stabilize a neighborhood by providing information, training, resources, and constructive norms (Wilson 1987).[11]

Threshold effects on the realization of expected benefits

While the existence of the aforementioned causal connections between middle-income settlement in the central city and various fiscal and social benefits seems straightforward and conventional, the precise nature of these connections has not been carefully probed. Thus, we revisit the fiscal and social benefits described above from the perspective that thresholds matter (i.e., that a minimum concentration of middle-income households over a relevant geographic area is needed for the realization of substantial benefits). We emphasize again that, given the extremely limited empirical evidence on thresholds, our comments are often speculative.

Thresholds

The central hypothesis of this article is that thresholds are important. We contend that the number of middle-income households residing in the area relevant for a particular benefit must reach a certain level before a substantial amount of the benefit will accrue. These requisite concentrations over relevant geographic areas are referred to as thresholds. More precisely, for the purpose of this article, a *threshold* is defined as the point after which a change in an expected benefit associated with a given change in middle-income settlement in a particular

[10] See Kain (1992) and Kasarda (1989) for reviews of the literature on the impacts of housing market discrimination and segregation on the employment and earnings of African-American workers, especially those living in central-city areas.

[11] Wilson (1987) believes that these families are able to provide an institutional stability because of their greater economic and educational resources, especially during economic downturns.

geographic area is significantly greater than that predicted by a linear projection. That is, at the threshold, the marginal increase in an expected benefit resulting from a given increment in middle-income residents will be noticeably greater because of the number of middle-income households already present in the relevant area. Short of this number, the marginal expected benefit to be gained from adding one more middle-income household will likely be smaller. Two alternative examples of threshold effects are expressed in figure 3.

Four aspects of thresholds are important to discuss before proceeding: geographic scale, absolute or relative impacts, pattern of relationship, and time of impacts. *Geographic scale* refers to the geographic area over which the middle-income households are measured to specify the value of the independent variable that then is related to the fiscal or social benefit (dependent variable). *Absolute or relative impacts* considers whether the appropriate way to measure the independent variable is as the absolute number or as the proportion of all households in the relevant area that are middle-income households. *Pattern of relationship* refers to the functional form of the nonlinear relationship manifested between the independent and dependent variable; this relationship can be continuous (pattern X in figure 3) or discontinuous (pattern Y). *Time of impacts* concerns whether it is the flow of middle-income households into an area during some specified period that produces the nonlinear impact, or whether it is the stock of such households (measured either absolutely or proportionately) that matters.

Thresholds in the realization of fiscal benefits

We hypothesize four thresholds related to the realization of specific fiscal benefits: housing upgrading threshold, retail demand threshold, image threshold, and political demand threshold. The causal linkages where we believe that these thresholds are relevant are identified with the letters A, B, C, and D, respectively, in figure 1.

Housing upgrading threshold. The existence of a threshold of housing upgrading (neighborhood reinvestment) is supported by both theoretical and empirical studies. On the basis of earlier work by Granovetter (1978), Taub, Taylor, and Dunham (1984) posit that property owners are motivated by personal financial gain that can be influenced by the uncertain collective behavior of other owners nearby. This view suggests that the optimal upkeep investment strategy varies across individuals and

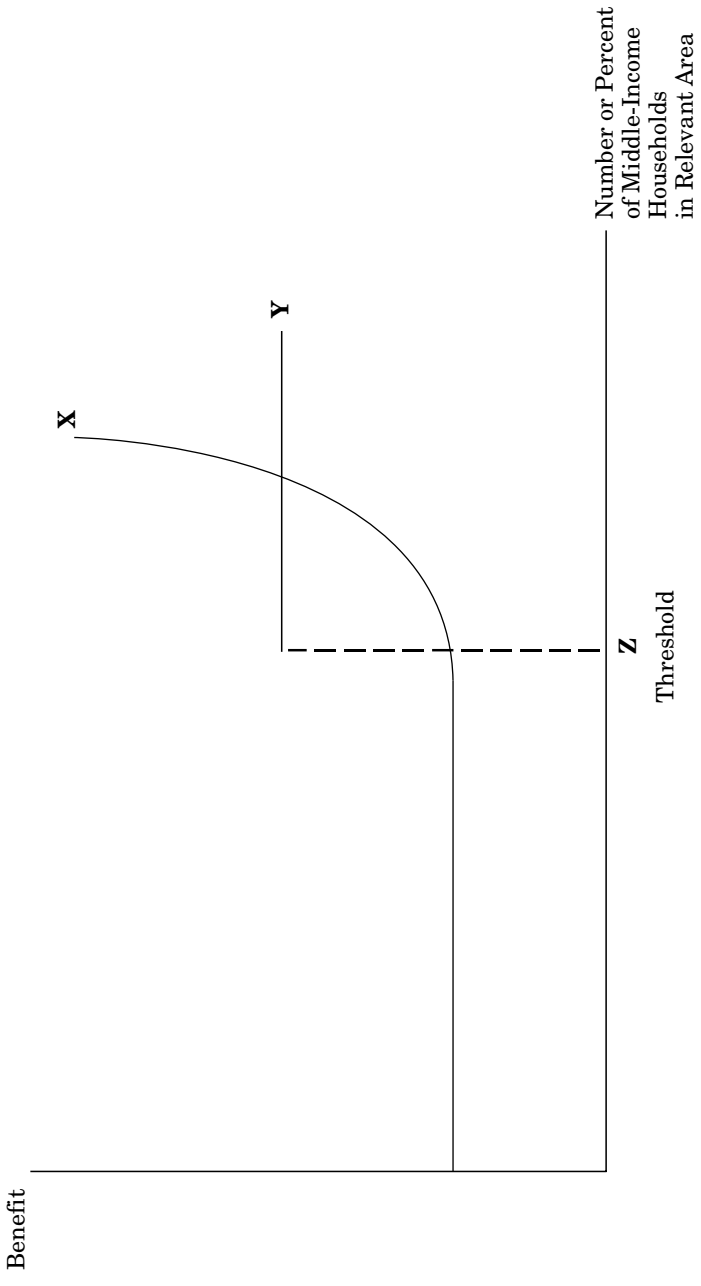


Figure 3. **Examples of Two Types of Threshold Effects at Point Z**

according to the behavior of proximate others. Although the precise relationship differs according to the risk aversion of the property owner, each is assumed to be more disposed to reinvest if he or she perceives others in the neighborhood doing so.[12] From an owner's perspective, the threshold point is that proportion of others in the block or block face whose investing will trigger a given individual to invest as well.

Galster (1987) explores a variant of this upgrading threshold effect for homeowners. Unlike absentee owners, homeowners are, in principle, subject to social pressures to conform to neighborhood norms for appropriate home maintenance levels and will suffer loss of utility (via sanctions) should they violate these norms. Empirical evidence from two independent samples of homeowners strongly supports this proposition. Neighborhoods (defined as census tracts) that have lower-than-average aggregate levels of social cohesion apparently do not convey this threat of sanctions effectively and thus have no independent effect on upkeep. In neighborhoods with higher-than-average levels of cohesion, however, the potential impact is great, as long as the owner in question feels a sense of identification and commonality with neighbors. Once these two preconditions (i.e., thresholds) are met, subsequent increases in aggregate neighborhood cohesion or the individual's sense of identification are associated with dramatically enhanced levels of home upkeep. This outcome is perfectly consistent with a formal model of the behavioral impact of threatened loss of reputation due to violating social custom (Akerloff 1980).

Galster (1987) and Akerloff (1980) provide evidence of the existence of a housing upgrading threshold operating over the scale of a block face to perhaps a census tract. We posit that the flow of middle-income households into such an area during a relatively short period (say, a few years) that leads to a critical proportion of the dwellings in the area being improved is the key to producing similar upgrading by other owners there, probably analogous to the X pattern shown in figure 3. In the presence of this threshold, the increase in property tax revenues to be realized from middle-income settlement can be expected to be significantly greater when the number of such households in a given

[12] Depending on the composition of threshold points in a neighborhood, certain classical gaming strategies like the "prisoners' dilemma" are possible, but only as a special case. In contexts with high degrees of mutual reassurance (i.e., low threshold points for all), aggregate upgrading becomes probable when some exogenous factor (like public investments) encourages one individual to upgrade. Taub, Taylor, and Dunham (1984) define "relevant area for activity" as the block or block face.

neighborhood is large enough to trigger the housing upgrading behavior of existing owners.

Retail demand threshold. It is well established in regional economics (e.g., Thompson 1965) that retail activities require a minimum population in their market area to provide sufficient demand for their goods and services to make them profitable. The spatial extent of an activity's market area will depend on the density of households, their incomes and preferences, the extent of competition from substitute retailers, and the degree of specialization of the retail activity. This fact implies that different numbers of middle-income households over relevant areas are needed to support different levels of retail activity. Here it is the absolute number or stock of such households (i.e., the magnitude of purchasing power) that an area attains, not the flow or proportion of them in the area, that is the relevant specification of the independent variable. We believe that the relationship between this variable and the benefit of a new retail facility is best represented by the Y pattern in figure 3.

Additional synergism may set in if "localization economies" begin to form. This occurs whenever even competitive retailers cluster together to draw large numbers of prospective customers to an area by promising diverse selections of goods and services. Examples include strips of auto dealerships and concentrations of clothiers in retail malls. All consumers in the area, poor and nonpoor alike, will then benefit not only from the enhanced selection but also from lower prices and better service spawned by the intensified local competition (Thompson 1965).[13]

These well-established views support the existence of a retail demand threshold. For a hypothetical inner-city neighborhood that has been largely abandoned and where most remaining occupants have low incomes, demand thresholds probably cannot be reached for fairly extensive geographic areas for a wide variety of retail activities, such as restaurants, banks, and even grocery stores. Thus, bringing middle-income households back to such a neighborhood is unlikely to produce much specialized retail revitalization until the threshold for a particular, less specialized, small-scale retail activity is surmounted. Past that point, thresholds for increasingly specialized retail activities will be exceeded, and nontrivial renewal of commercial activity

[13] There is also a negative side to this argument. Beyond a certain point, the growth of retail activity in an area may deter middle-income households from considering or actually living there because of congestion and changes in the area's character.

should be observed. It is only after the threshold points have been reached that the expected fiscal benefits to be derived from increased retail activities (greater nonresidential property tax and local sales tax revenues) are likely to be realized.

Image threshold. The existence of an image threshold is implied but not directly supported by the relevant research literature. The basic contention is that business establishments (e.g., export-base firms) consider both objective and subjective factors when assessing locations for facility expansion or construction. Objective factors include transportation, energy, and labor costs; taxes; and the quality and type of public services. Subjective factors include the perception of the quality of life, or what we call the "image" of a location.

It is clear that firms consider subjective perceptions when making location decisions. At one possible extreme, visions of crime, abandonment, boredom, and despair in an inner-city area will act as a disincentive. At the other extreme, visions of a safe, well-maintained, vibrant, buoyant community may provide a setting consistent with the image firms want to portray.[14] Such perceptions are, of course, related also to a firm's profits inasmuch as potential employees will need to be compensated for working (and possibly living) in cities with low quality of life through higher wage and benefit packages (Rosen 1979).

Lynn (1994) makes similar points:

> Factors comprising the social environment [of a city] may enter subliminally into location decisions, causing unfavorable environments to be eliminated from consideration before actual location analysis is initiated. A deteriorating social environment affects business decision making directly and indirectly. Direct effects include high labor costs and uncertain labor supply, lack of security for property, and rising levels of taxation to finance redistribution from wealthier to

[14] We do not know much about how images of central cities are formed or, once formed, how they change. We would speculate as follows. Clearly, most of our central cities have a wide range of neighborhoods or sectors delineated by quality of life, but we believe that it is the relative incidence of the low- and high-quality-of-life sectors that conveys the dominant image of the city. Boston and San Francisco, for example, have in most people's minds a predominance of the latter, and hence a positive image. We believe it is fundamentally because they have a paucity of concentrated-poverty neighborhoods and, in the case of Boston, large areas of revitalization activity. Detroit and Newark represent opposite examples.

> lower-income residents and neighborhoods. Indirect effects are reflected in the declining habitability of the area, including its amenities, the condition of its physical structures, and the general security and comfort of workers and residents. The latter often take the form of negative "perceptions" that dissuade a firm's executives and professional employees from wanting to work in the area. (p. 248)

Lynn hints at the existence of the image threshold effect by stating, "At some point between self-sustaining stability or growth and irreversible decline, social structures and the social environment are apt to assume overriding importance, greater even than variables reflecting direct costs" (p. 248).

The existence of an image threshold suggests that, once established, the image of a city will be resistant to marginal change until a certain level of revitalization has been reached. We know from the psychology of information processing that people (and, in this case, firms) rarely actively search for up-to-date information, instead operating on the basis of previously acquired information and habit. Their image of the world may be periodically updated by information obtained passively through the various media and perhaps by idiosyncratic firsthand observation. But long-standing impressions are unlikely to be cognitively challenged unless persistent or dramatic conflicting evidence accumulates. When that happens, the individual typically tries to reduce cognitive dissonance by actively acquiring additional information that will confirm one of the competing views (Simon 1957).

In the case of city images, we believe that it will take a significant influx of middle-income households into large fractions of formerly concentrated-poverty neighborhoods to provide that crucial threshold of cognitive dissonance for prospective investors. Here the threshold's area of relevance is related to the share of neighborhoods in the city that have dramatically improved the perceptions they generate about the quality of life there.[15] Within each neighborhood, the share of middle-income households probably will be most important as a signal of positive image. The pattern we hypothesize for this image threshold is represented by X in figure 3.

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[15] Cities can promote their image through booster activities such as the "I Love New York" campaign.

These contentions suggest the existence of an image threshold. It is only after this threshold has been reached that the expected fiscal benefits to be derived from firms locating in inner-city areas are likely to be realized.

Political demand threshold. The existence of a political demand threshold is not derived from the research literature; rather, it is a speculative threshold, albeit one that seems sensible to posit. There are two aspects to this issue. First, if middle-income in-migration to the central city achieves a significant net population increase in the jurisdiction, the municipality will eventually be granted more legislative representatives. Obviously, such redistricting will not happen unless a significant threshold of absolute population growth is exceeded within the boundary of some original central-city state legislative district. At this point, we predict a threshold effect as portrayed by Y in figure 3.

Second, there is a strong negative correlation between poverty and political participation, political influence in extra-electoral dimensions (e.g., campaign contributions, informal advisory influence, access), and thus political power. A corollary is that one municipality will exert less clout in the state legislature than another of equal population if the former has a significantly higher rate of poverty, all else being equal. Further, we speculate that the benefit of increased political power in the state legislature associated with a municipality's reduction in its rate of poverty is nonlinear, even when total municipal population is held constant. As the income level represented in a given electoral district rises, it is likely that the minimal level of influence associated with its previous poverty status will only improve once its average income rises (i.e., its poverty rate falls) past some noticeable amount.[16] This could occur with either the percentage or the absolute number of middle-income households surpassing the threshold, probably producing a pattern like X in figure 3.

To sum up, the existence of this (assumed) political demand threshold would delay the realization of expected fiscal benefits

[16] There is an important caveat to this second line of argument. A jurisdiction with a long-standing concentration of poverty may well have evinced an equally long-standing record of returning a representative to the state legislature. This representative would have accumulated seniority and thereby powerful committee assignments. If this hypothetical jurisdiction were to have substantial numbers of new, nonpoor in-migrants, the representative might have a greater likelihood of being unseated. Then the jurisdiction would lose the political power associated with having a representative with much seniority. We are indebted to Hal Wolman for bringing this point to our attention.

(i.e., larger state transfers to cities) until significant concentrations of middle-income households over relevant electoral areas have been achieved.

Thresholds in the realization of social benefits

Three types of thresholds are expected to affect the realization of specific social benefits: social norms, information, and institutional support. These effects pertain to arrows E, F, and G in figure 2.

Social norms threshold. Sociologists have long demonstrated the importance of social interaction in shaping an individual's attitudes, values, and behaviors (e.g., Simmel 1971; Weber 1978).[17] More recently, economists have incorporated the role of social norms into neoclassical models of economic behavior (e.g., Akerloff 1980; Galster 1987). The tenet of this "collective socialization" approach is that a social group can influence others to conform to its customs, norms, and behaviors to the degree that (1) the individual comes in social contact with the group and (2) the group can exert more powerful threats or inducements to conform to its positions than competing groups.

These two preconditions imply the existence of a threshold. If the individuals comprising the group in question are scattered thinly over urban space, they are less likely to be able either to convey their positions effectively to others with whom they might come in contact or to exert much pressure to conform. It is only when a group reaches some critical mass over a predefined area that it is likely to become an effective vehicle for shaping others.[18] Past this threshold, as more members are recruited, the group's power to sanction those outside it likely grows nonlinearly. This situation is especially likely when the positions of the group become so dominant as to become normative in the area.

One representative illustration of how this dynamic might occur comes in the area of crime. Murphy, Shleifer, and Vishny (1993)

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[17] It is important to note that the impact of social interaction on promoting desirable norms of behavior may be limited by the fact that many middle-income neighborhoods are characterized by what has been called "moral minimalism" (Baumgartner 1988). In neighborhoods so characterized, neighbors are just acquaintances and strangers rather than friends. In the absence of bonds of friendship, social interaction between relative strangers may not have strong effects on shaping an individual's attitudes, values, and behaviors.

[18] Fischer (1975) raises a similar point.

have developed a model demonstrating how a criminal subgroup can create synergism that encourages a dominant criminal culture in a neighborhood. As the number of criminals in an area grows, three things may happen simultaneously. First, revenues from noncriminal activities will be reduced as crime siphons away a portion. Second, the number of individuals who monitor, report, or directly discourage criminal behavior will fall (relatively and perhaps absolutely). Finally, the stigma associated with criminal activity will be eroded as crime becomes normative. In concert, these three factors likely interact to alter in a nonlinear fashion the economic and social payoffs from crime relative to noncriminal activities, and the successful recruitment of criminals will escalate dramatically.

Unfortunately, there is little empirical work that provides insights into the nonlinear effects of social norms (i.e., a social norms threshold). There is a growing literature on measuring the impacts of various neighborhood social conditions on outcomes for youth (for reviews, see Galster and Killen 1995; Haveman and Wolfe 1994). Although many of these studies identify strong links between neighborhood socioeconomic status and particular sorts of outcomes for youth, controlling for family background characteristics, virtually none have tested for nonlinear relationships, and those that have done so come to different conclusions. The most direct support comes from Crane (1991), who analyzed data from the 1970 census-based Public Use Microdata Sample (PUMS) file linked to geographic indicators. He found that rates of dropping out of high school were substantially higher if the percentage of workers in the census block group holding professional or managerial jobs was less than approximately 3.5 percent, suggesting a clear threshold. This result held for both genders and for blacks and whites, although not for Hispanics.[19]

The effects of social norms, however, may not be consistent across population subgroups. For instance, Duncan (1994) analyzed National Longitudinal Study of Youth data to ascertain the

[19] It should be noted, however, that Clark (1992) failed to replicate the nonlinear Crane relationship using 1980 data and a somewhat richer model (but limited only to males and where neighborhood was defined for a larger area, census tracts, instead of census block groups). Clark found that only when the neighborhood share in managerial occupations exceeded 50 percent did males' dropout rates begin to fall noticeably. Moreover, she found that only when a neighborhood's poverty rate dropped from 5 to 0 percent did males' dropout rates decline significantly. These results proved robust across race and ethnic groups, though black males appeared to benefit less than others from living in nonpoverty areas.

degree to which educational attainment of black and white, male and female youths was related to census tract percentages of (1) households earning less than $10,000, (2) households earning more than $30,000, (3) individuals who were black, (4) families with children headed by women, and (5) adult women working at least 26 weeks per year. He found evidence that affluent neighbors conferred substantial school attainment benefits on all groups except for black males; affluent neighbors appeared to benefit black males only if those affluent neighbors were themselves black.[20]

In summary, these studies, although not fully corroborated, provide some evidence of the existence of a social norms threshold.[21] If such a threshold exists, only after it has been reached (i.e., only after the proportion of middle-income households over a relatively small multiblock area has reached a certain level) will the expected social norms benefit materialize, probably with a pattern analogous to X in figure 3. More important, the literature seems to suggest differential effects of collective social norms across subpopulations. This is an important consideration for efforts to attract middle-income households to inner-city areas. In terms of the adoption of mainstream social norms, white middle-income households may have little impact on the adoption of such norms by black inner-city males.

Information thresholds. The existence of information thresholds is hinted at in the literature. Wilson (1987, 1996) popularized the thesis that black-occupied neighborhoods in decaying central cities were isolated from mainstream employment opportunities not only because such jobs were increasingly distant but because their means of learning about vacancies in such jobs were eroded. The main source of this erosion was the decreasing number of residents in the neighborhood who were themselves employed, inasmuch as employed persons are a prime source of job information. Kasinitz and Rosenberg (1993) studied a

[20] Unfortunately, Duncan did not test for nonlinear relationships (i.e., the presence of what we refer to as thresholds).

[21] In contrast, the downside of this threshold effect has been examined in the research literature. For instance, Wallace and Wallace (1990) argue that the destruction of social networks and social disintegration are due, in part, to the gradual withdrawal of municipal services from poor neighborhoods. This withdrawal results in the outbreak of contagious urban decay and forced migration, which in turn further destroys essential social networks and causes social disintegration. Further neighborhood deterioration, in turn, leads to further reduction of neighborhood services. The Wallaces reached this conclusion on the basis of an analysis of the planned reduction of health services and fire safety in New York City neighborhoods.

low-income Brooklyn neighborhood and concluded that the source of unemployment was not lack of proximate jobs but lack of social networks that connected laborers to jobs. They noted, "Networks serve at least three functions in the labor market. First, they provide specific information about the availability of job openings and how to pursue them. Second, they provide role models of successful employees. Third, and perhaps most important, they can provide direct sponsorship" (p. 67).

O'Regan and Quigley (1995) have provided a rigorous test of this hypothesis.[22] They found that the percentage of employed adults and nonpoor individuals in the tract provided significant additional explanatory power on the probability of employment among youths aged 16 to 18, controlling for family and job accessibility characteristics. This proved true for white, black, and Hispanic youths, although O'Regan and Quigley were unable to distinguish whether job information, role models, or peer influences may have been operative. Perhaps most relevant here is the fact that the authors did uncover evidence of significant nonlinearities in neighborhood impacts, such as the percentages of poor people and blacks in an area. They concluded, however, that their model appeared not to be significantly enhanced by the addition of such nonlinearities.

If information thresholds exist, as suggested in the limited literature, they would delay the realization of expected social benefits until critical proportions of middle-income households over relevant areas are achieved. The only rigorous test thus far suggests that the relevant area may be as large as a census tract. The information benefit produced may well follow a pattern like X in figure 3.

Institutional support thresholds. The existence of institutional support thresholds is suggested in the literature. The argument was popularized by Wilson (1987), but the argument presented here rests on an analogy with retail demand thresholds. Just as retailers need to exceed a threshold of purchasing power within their market area before their businesses can be profitable, charitable and community-based organizations (CBOs) need to exceed a threshold of donations of time, expertise, and money before they can be viable. An influx of middle-income households is likely to provide infusions of all these elements, but it will

[22] O'Regan and Quigley used the 1990 PUMS data for youths living in the four largest metropolitan areas of New Jersey, linked to census tract and a rich array of transportation and job location data from the Census Transportation Planning Package.

take more than a minimum number of middle-income households before the revitalization or creation of CBOs, churches, and other voluntary associations will be noticeably stimulated. The relevant area for this threshold will vary according to the institutional activity in question and the religious, cultural, occupational, life-cycle stage, and labor-force participation characteristics of the middle-income in-migrants in question. As with the retail demand threshold, it is the absolute number of middle-income households that will matter, producing a relationship like Y in figure 3.[23]

Distribution of prospective benefits from middle-class resettlement in the inner city

In this article, we have attempted to critically examine the conventional claims of fiscal and social benefits resulting from middle-class households returning to the inner city. Thus far we have attempted to present clearly the expected paths of causation and posit that benefit thresholds probably exist along many of these paths. Here we consider briefly whether the poor are likely to reap major benefits (net of any costs imposed) if a middle-class household threshold of one sort or another is exceeded.

Much of the foregoing discussion of benefits suggests that the poor will benefit significantly from various aspects of middle-income household resettlement in the inner city. The fiscal effects summarized in figure 1 are likely to benefit lower-income city dwellers in the long run, inasmuch as their tax price per unit of public service will fall. Hypothesized fiscal benefits related to the number and location of retailers and other employers in the inner city also may accrue significantly to lower-income individuals. The time and expense of shopping at distant locales may be reduced, and to the extent that spatial mismatch had limited employment opportunities, access to work may improve substantially. The social benefits summarized in figure 2 are also hypothesized to benefit the poor primarily.

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[23] The ability to secure private goods and services allocated by groups and agencies outside a neighborhood is directly related to the strength of community institutions. As communities grow stronger, they will be more successful in attracting goods and services, which in turn may reinforce the strength of community institutions. Sampson (1996) suggests that interventions should seek to promote community empowerment through (1) overlapping involvement by residents in local organizations and voluntary institutions, (2) horizontal ties among neighborhood institutions, and (3) vertical integration of local institutions with city hall and other extra-local resources.

But the poor may also bear some substantial costs from the in-migration of middle-income households to their city. For example, a contrary fiscal impact may ensue if the real assessed property values of the dwellings occupied by the poor inflate (either because of positive externalities generated by middle-class residences nearby or because of the general improvement in the city's economic health). To the extent that the poor primarily are renters and landlords pass on property tax increases in the form of higher rents, housing affordability will be eroded. If middle-class resettlement primarily takes the form of upgrading housing stock formerly occupied by the poor (as opposed to new construction or conversion of abandoned or nonresidential structures), the poor will bear the additional psychological and financial costs of dislocation. In the short run before the fiscal benefits are realized, the city may find that it must divert its scarce public service resources away from lower-income neighborhoods to those housing the new middle-class in-migrants. Moreover, in the long run, the ability of poorer areas to obtain better public services with lower taxes will depend on the degree to which the extra financial resources provided by the middle-class in-migrants exceed their marginal consumption of these services.

In sum, we do not argue that the benefits and costs of middle-class resettlement in the inner city are borne equally by all groups, or that such resettlement necessarily is of net benefit to the poor. Indeed, the distributional consequences of such a demographic shift can be measured in principle only when the particulars of the situation are specified much more precisely than is possible in this article. Suffice it to note that a long-standing debate continues today about the desirability of attracting the middle class back to the central city as a vehicle for improving the well-being of the poor (cf. Gale 1984; Krumholz and Shatten 1992; Laska and Spain 1980; Monti 1990; Palen and London 1984; Varady and Raffel 1995).

Conclusions: Implications for research and policy

Our main hypothesis is that thresholds are important in realizing benefits from middle-income in-migration to inner-city areas. If the hypothesis is correct, such benefits will accrue to a significant degree only if enough middle-income households move into a specified geographic area to exceed the threshold of the particular benefit at issue. Although scanty, existing theoretical and empirical literature supports the hypothesis and suggests the existence of at least seven specific thresholds. We summarize our

arguments regarding the characteristics of these thresholds in table 1. Important implications for research and policy can be derived from this material, although we stress that our claims should be viewed as only speculative and provocative.

Table 1. **Summary of Hypothesized Thresholds Associated with Resettlement of Middle-Income Households in the Central City**

Threshold	Geographic Scale	Type of Impact	Pattern of Relationship	Does Time of Impact Matter?
Housing	Block face, tract	Relative	X	Yes
Retail	Directly related to specialization of retail activity	Absolute	Y	No
Image	Central city	Relative	X	?
Political				
Redistricting	City/state legislative district	Absolute	Y	No
Clout	City/state legislative district	Relative	X	No
Social norms	Block group, tract	Relative	X	No
Information	Block group, tract	Relative	X	No
Institutional support	Depends on particular institution	Absolute	Y	No

A key unresolved research issue is the need to validate empirically the existence and numerical value of different thresholds. Only two thresholds—housing upgrading (Galster 1987; Taub, Taylor, and Dunham 1984) and retail demand (e.g., Thompson 1965)—have been clearly identified and empirically substantiated in the literature. The evidence presented in support of the contention that other specific thresholds exist was indirect, speculative, or based on nonreplicated empirical work. The empirical details of these other thresholds and the geographic scale over which they operate need to be investigated empirically. Ultimately, a conceptual framework of neighborhood change formulated on the basis of the importance of all these thresholds may prove to be a simple but powerful tool in the study of both neighborhood revitalization and decline.

The material presented suggests that threshold effects are important considerations for at least two aspects of public policy: targeting and program evaluation. Public policies aimed at revitalizing inner cities by attracting middle-income households should target particular inner-city locations to encourage the attainment of critical numbers of middle-income households there. This is because the same number of middle-income households will likely have much less favorable impacts if they are evenly dispersed throughout the central city or distributed in such a way that, wherever they are located, they do not exceed several of the more important thresholds. As summarized in table 1, if a given number of in-migrating middle-income households were spread evenly across the central-city jurisdiction, our analysis suggests that they would have the greatest probability of yielding noticeable benefits in the realms of city image and political clout and perhaps in support of a few new specialized institutions, because the relevant area for summing such households to ascertain whether they have exceeded the threshold is roughly the central-city jurisdiction as a whole. By contrast, if the same number of middle-income households were more spatially concentrated, all the aforementioned benefits would still accrue, but additional benefits might also be forthcoming because other thresholds (housing upgrading, retail, social norms, information, institutional support) might have been substantially exceeded in the neighborhoods where such concentration occurred.

This finding may mean that local policy initiatives will need to be targeted to particular neighborhoods where the promise of attracting a threshold-exceeding number or proportion of middle-income households is achievable. We recognize the often formidable local political constraints on such targeting but are bound to suggest its importance nonetheless. We also recognize that there is an optimal extent of middle-income household concentration. Clearly, one could maximize the retail-generating benefit by having *exclusively* middle-income residents in a given area, but doing so would conflict with the goal of providing role models and information sources to as many lower-income central-city residents as possible.

Thresholds should also be considered when developing performance measures for the evaluation of inner-city revitalization programs. Programs that fail to attract critical masses may show little measurable impact even if they fall only marginally below the threshold; other programs may show dramatic impacts with only marginally more efforts because they have exceeded the threshold. The issue of how evaluations can be designed to best

take cognizance of thresholds should interest the U.S. Department of Housing and Urban Development, which has been mandated to develop performance measures for key revitalization programs such as the Community Development Block Grant, HOME, and the Empowerment Zone/Enterprise Communities programs.

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The authors wish to thank Karen Danielsen and two anonymous referees for helpful suggestions and citations regarding an earlier version of this article.

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