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Metropolitan Development and Internal Migration in the United States, 1965-1980: A Developmental Perspective

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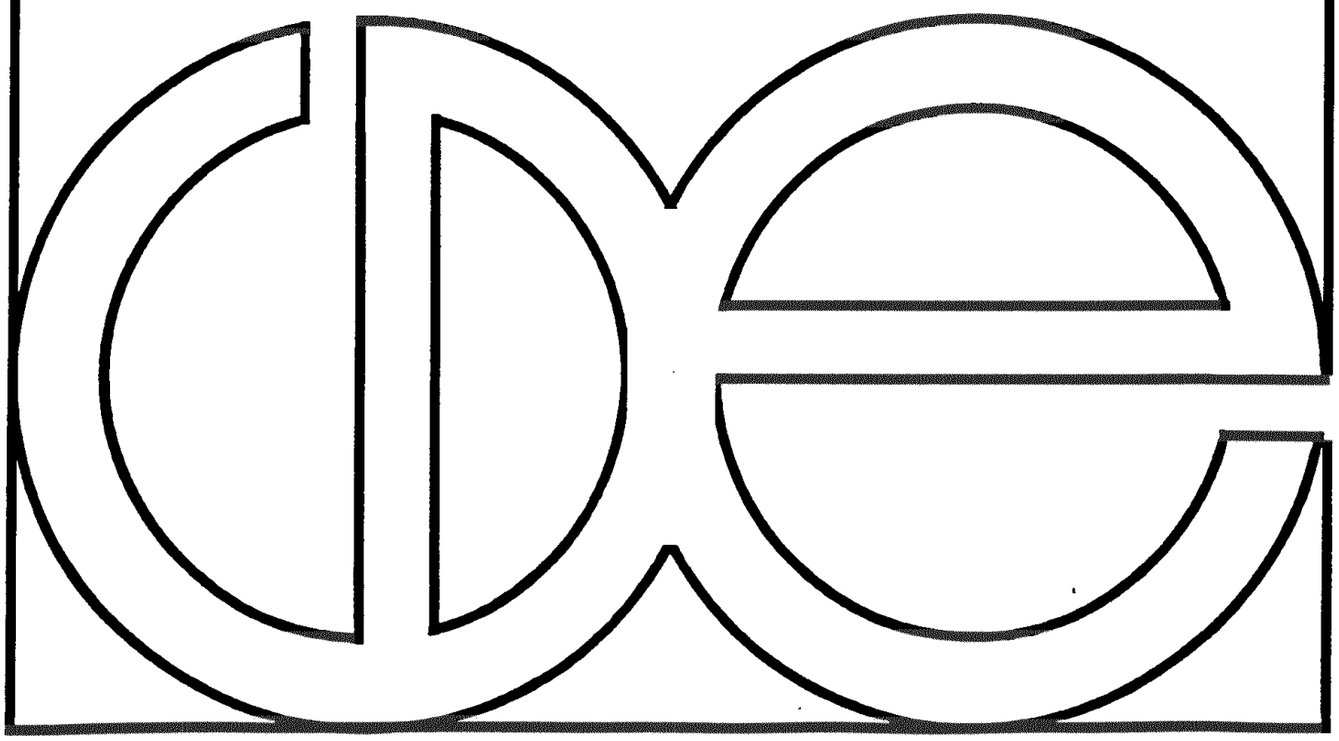

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Introduction

During the early-1970s something peculiar happened. For the first time in the industrialized history of the U.S., proportionately more people moved from metropolitan to nonmetropolitan areas than vice versa. Like the "baby boom" before it, this "migration turnaround" prompted a deluge of competing theories and empirical studies.

In the ensuing debate, one question rose above all others: Did this "turnaround" reflect a historic and fundamental shift in nonmetropolitan America, or merely a continuation of traditional metropolitan expansion? As academic studies accumulated, it became clear that both positions were, in fact, correct (Morrill, 1980).

Scholars now agree that the turnaround resulted from two distinct processes: (1) the continued growth of peripheral settlements within commuting range of large cities; and (2) a more recent growth of remote rural and small urban places. Unfortunately, most empirical studies have focused on only one of these two processes, leaving intellectual synthesis to the reader.

In reconsidering trends associated with the turnaround, however, a handful of scholars have suggested that both metropolitan expansion and remote growth may actually reflect advanced stages of a single process of metropolitan development—one that begins with centralization and proceeds through suburbanization and eventual deconcentration of urban populations into more peripheral areas (Hall & Hay, 1980; Korcelli, 1983; van den Berg et al., 1982; Wilson, 1986). Here "remote" and "peripheral" refer to counties that are nonadjacent to established metropolitan areas. Hence, deconcentration in these areas may spawn new metropolitan areas as well as contribute to nonmetropolitan growth.

Within this context I argue that a model of metropolitan development can improve our understanding of population redistribution trends by systematically linking intra-metropolitan developments to broader patterns of internal migration. This perspective differs from dominant theories of internal migration in that it stresses issues of internal social organization rather than economic restructuring and technological change. In the empirical analysis that follows, I use a European model of metropolitanization to examine U.S. migration data for the 1965-70 and 1975-80 periods. Before assessing the results, however, we must first consider the theoretical gap that motivates this research.

Theoretical Perspectives

The hollow consensus that surrounded the "turnaround" by the early-1980s did not result from intellectual lethargy. Careful statistical work by reputed scholars simply failed to pinpoint any single factor, or group of factors, as the principal explanation (e.g., see Beale, 1977; McCarthy & Morrison, 1979). This ambiguity prompted British geographers Peter Hall and Dennis Hay to proclaim the turnaround "one of the major demographic puzzles in the contemporary United States" (1980:12). Efforts to solve this puzzle led to two dominant perspectives on internal migration in the U.S.

The first, the "deconcentration perspective," argues that the U.S. was entering a new era of social development by the 1970s—one characterized by a socio-economic "convergence" of urban and rural places (Hawley & Mazie, 1981; Kasarda, 1980; J.F. Long, 1981). In his seminal work, Wardwell (1977, 1980) explained that declining transportation costs, increasing personal affluence, and fundamental shifts in the industrial landscape were interacting to decrease the importance of distance in the social organization of space. He believed that as this era of "convergence" progressed, the nation would move toward a state of socio-spatial equilibrium in which migration streams would become increasingly random with respect to origin and

destination (Wardwell, 1977). The implication was that large metropolitan areas would continue to deconcentrate as historical developments allowed more residents to take "the City" with them to less densely settled areas (Long, 1981).

At the micro-level this perspective rested upon the shoulders of the "residential consumer." Scholars summoned polls of residential life to argue that Americans had long preferred to live in low-density areas (see Fuguitt & Brown, 1989; Long, 1981; Fuguitt & Zuiches, 1975). But it was only during the 1970s, with historic social and economic developments, that a growing number of Americans could finally act upon this preference and move out of large metropolitan areas. As this subpopulation grew, the argument went, people would begin to "consume" a wider variety of places, which included nonmetropolitan areas.

Initial empirical work tended to support this view. In his study of 1965-70 and 1975-80 migration data, Frey (1987) predicted that migrants would continue to filter down the metropolitan hierarchy and thus induce population declines in many of the nation's largest metropolises (see also Frey, 1990). But the continued blurring of town and country ultimately proved a weak foundation upon which to build a theory of internal migration. Aside from the class bias embedded within the consumer metaphor, the deconcentration perspective could account neither for the initial timing of the turnaround nor for its subsequent reversal during the 1980s. Evidence from the mid-1980s revealed that people were no longer moving down the metropolitan hierarchy, nor were metropolitan areas continuing to deconcentrate across regions. Thus the era of "convergence" vanished as quickly as it had appeared, with little discernible shift in residential preferences (see Fuguitt & Brown, 1989).

The "regional restructuring" perspective offers an alternative view of contemporary migration. Instead of emphasizing socio-economic convergence and residential preferences, this perspective highlights recent shifts in industrial organization as well as the different functions that individual

areas perform within a changing world economy (Bluestone and Harrison, 1982; Castells, 1985; Noyelle and Stanback, 1984). Here the basic idea is not that physical space is becoming less important, but that it is being reorganized by post-industrial modes of production.

In a major work in this area, Noyelle and Stanback (1984) emphasize three key economic changes of the past quarter-century. First, they assert that consumer markets have grown beyond regional and national boundaries; second, public sector activities continue to increase, particularly with respect to human capital formation; and third, very large, multi-product, often multi-locational corporations have begun to emerge with increasing regularity. Together, these three developments are supposed to drive an era of deindustrialization, not convergence. Hence, the turnaround reflected not some fundamental and pervasive shift in social organization, but rather a selective depopulation of metropolitan areas that depend heavily upon traditional manufacturing.

According to this perspective, economic dislocations associated with changing industrial organization will continue to push people out of "core" manufacturing areas into service-oriented, urban economies based elsewhere. The premise is that as business services and knowledge-based activities continue to fuel new metropolitan growth, they will also displace the benefits of traditional urban agglomerations. Areas functioning as headquarter sites or exporters of advanced services will continue to grow as their markets grow. Smaller areas engaged strictly in routine production, however, face almost certain decline as foreign products continue to saturate domestic markets for manufactured goods and low-level services.

Evidence from the 1980s tends to confirm this view. In a preliminary analysis of 1990 census data, Frey and Speare (1992) found that the two major reversals of the 1970s—the migration turnaround and movement down the urban hierarchy—reverted to more traditional patterns of metropolitanization during the 1980s. Even "core" cities like New York, Philadelphia, and Boston regained population during this period as state and local development programs

encouraged growth in financial service industries. Cities with high concentrations of heavy industry, however, such as Detroit, Cleveland, and Pittsburgh, continued to experience population declines. Meyer's (1990) analysis of nineteenth-century industrial metropolises, however, warns against ascribing too much of this "restructuring" to strictly contemporary events. Variations in urban-industrial development as early as the 1880s, which saw some areas arise as inter-regional "controllers and coordinators of exchange" and others arise as centers for local and regional markets, may still reverberate to this day.

Recent evidence notwithstanding, the deconcentration and regional-restructuring perspectives are more compatible than extant literature suggests. Although the latter downplays metropolitan deconcentration, both perspectives predicted short-term declines for industrial manufacturing centers, and both invoke locational preference to explain regional variation. For the deconcentration perspective, this preference rests with the residential consumer; for the regional-restructuring perspective, it presumably rests with a managerial elite. Consequently, both perspectives privilege extra-local processes in their explanation of internal migration. In contrast, I argue that while technology and changing market geography undoubtedly shape population redistribution, local development remains a critical piece of the puzzle.

Previous studies of subnational redistribution trends have shown that local processes play an important role in internal migration. For example, Morrill (1980) found that recent patterns of intra-state deconcentration correspond to the historical geography of American industrialization. In a similar analysis, Wilson (1986) found that some regions of the U.S. actually experienced migration turnarounds as early as 1940 and that the timing of these regional "reversals" corresponds to historical patterns of urbanization. Together, these two studies suggest that migration flows between metropolitan and nonmetropolitan areas are related to the timing and extent of urban-industrial development in the U.S. Moving their analyses down in scale, I

contend that these same flows may reflect shifts in the development of individual metropolitan areas. In other words, even the state and regional trends that Morrill and Wilson identify may hide important variation among individual metropolitan areas—variation that may be influencing national redistribution trends.

This is where a developmental model of metropolitanization can provide renewed insight.

Developmental Perspective

Conceptually, a developmental model subdivides the process of metropolitanization into four distinct stages, which reflect differential growth (decline) patterns between an area's central city and its suburbs (see Figure 1). During the first stage, "urbanization," a growing number of people concentrate in an urban core (or cores) at the expense of the hinterland.[1] This concentration provides businesses with the advantages of economic agglomeration[2] and residents with subsequent job opportunities and easier access to diverse goods and services. As a growing division of labor interacts with technological innovations, it creates conditions under which particular industries flourish, often with employment opportunities outpacing urban concentration. Hence with time, the urban population continues to grow and, along with relative decreases in transportation costs, contributes to territorial expansion.

This physical expansion eventually leads to a second developmental stage, "suburbanization." During this stage, the model assumes that competition among land uses in the central city will increase and, in turn, generate "spillover" effects that include the transfer of

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[1] Throughout the article I use quotation marks to distinguish the four developmental stages—"urbanization," "suburbanization," "desuburbanization," and "reurbanization"—from more generic usage.

[2] Scholars sometimes subdivide agglomeration economies into three conceptual components: economies of scale, localized economies, and urbanization economies. Generally, we would expect the first two components to develop first, then the third.

residences and jobs to the periphery. Government subsidies and infrastructural improvements in the metropolitan fringe typically facilitate this deconcentration, as increasing traffic congestion and rising property values encourage central-city residents to seek the suburban "good life" (Frisbie & Kasarda, 1988). Over time, this centrifugal drift of people and jobs is reinforced by the direct settlement of inter-regional migrants into newly developing suburbs. Ultimately, these dual flows of suburban in-migration shift the locus of metropolitan growth from the central city (cities) to the suburbs.

Suburbanization of course possesses a strong political dimension as well. Fact is, without the ability of non-central-city residents to incorporate themselves, there simply could be no suburbs. In this study, however, I ignore the social and political motivations for incorporation and instead focus upon the fact that suburban space continues to expand, restricting central-city growth. Thus from this perspective, "suburbanization" is important because it represents a stage in which growing shares of migrants and jobs effectively decentralize from an established metropolitan core.

As this process of decentralization persists, the metropolitan area eventually passes into a stage of "desuburbanization." During this third stage of development, people and jobs continue to decentralize, but they also begin to contribute to a process of metropolitan deconcentration. Historically, this deconcentration has favored adjacent, nonmetropolitan counties, but it may also contribute to the growth of more remote places. The principal point, however, is that "desuburbanization" involves a net out-migration from the entire metropolitan area, which results in overall population decline.

We can think of this third stage as having two phases: (1) absolute decentralization and (2) relative decentralization. During the first phase, the suburban population continues to grow but cannot compensate for central-city losses. Central-city residents are likely to continue moving

to surrounding suburbs, but metropolitan out-migration from both sectors results in net population loss. During the second phase, the suburbs as well as the central city begin to experience net out-migration, although the central city still accounts for the majority of net population loss.

Evidence from the U.S. and Europe indicates that "desuburbanization" represents a common denouement in metropolitan development. Nevertheless, a fourth and final stage remains theoretically possible—"reurbanization." In many industrialized countries, local and federal officials are now trying to stem the massive outflows of people from older, larger metropolitan areas. Whether their efforts to rehabilitate housing, to attract new businesses, and to restore tarnished images will suffice to halt deconcentration remains to be seen. Public policy, however, remains only one potential source of "reurbanization." It is also conceivable that for older, declining areas like St. Louis, Detroit, and Baltimore, a limit exists to how much a central-city population can decline before it ultimately stabilizes. Unless the suburbs of these cities grow indefinitely, these areas may eventually "reurbanize," even if only through relative centralization—a process in which the suburbs experience greater net declines than the central city. Another potential source of "reurbanization" lies in immigration, which still tends to favor traditional central-cities over all other areas.

Regardless of the source, "reurbanization" depicts an alternative to sustained decline. If persistent, this stage has the potential to revitalize inner cities and perhaps even lead to a second pass through the developmental cycle; if not, it is unlikely to have any real effect. In either event, one thing is certain. As more areas pass through the first three developmental stages, "reurbanization" will become increasingly important to scholars and planners alike. As the fourth stage of development, "reurbanization" also completes our conceptual model of metropolitanization.

To understand how this typology works, consider the Chicago metropolitan area. Using constant 1983 metropolitan definitions, "Chicagoland's" population grew from about 5.5 million to over 6 million between 1960 and 1970. During this time its central-city population actually declined by over 150,000 people, due almost exclusively to out-migration.. Thus, during the 1960s the Chicago metropolitan area experienced a stage of "suburbanization." During the next decade, however, Chicago's central city sustained even greater losses, which resulted in a net decline for the entire metropolis. So even though Chicago's suburban population continued to grow, the metropolis as a whole entered into a stage of "desuburbanization."

In the analysis that follows, this identification procedure is repeated for each metropolitan area in the continental U.S. Once these developmental stages are identified, we can begin to assess how changes in the socio-spatial organization of individual metropolises influence broader patterns of internal migration.

Data & Methods

In pursuing this task, the current study examines migration data compiled by the U.S. Census Bureau for two five-year periods: 1965-70 and 1975-80. While this limited timeframe restricts our ability to generalize, it also answers a common call for both pre- and post-turnaround data in investigations of contemporary internal migration (Poston & Frisbie, 1984). To examine flows to and from individual Metropolitan Statistical Areas (MSAs), I subdivide the inter-county migration streams according to both adjacency status and whether migrants crossed state lines. For cases where an adjacent county is located in a different state, adjacency status overrides inter-state status. Census Tract Volumes for Individual Metropolitan Areas provide supplemental information for intra-county movers.

To identify stages of development for each MSA, I use data from the 1960, 1970, and 1980 population censuses. Here, I rely upon constant 1983-MSA definitions published by the Office

of Budget and Management in an effort to adhere to a basic principle of demographic analysis: Measure historical change for the same territorial units for all periods (Fuguitt et al., 1988). The use of "end-of-period" definitions also minimizes problems associated with nonmetropolitan counties that were declared metropolitan as a result of subsequent censuses (see Long, 1981; Long & DeAre, 1982). This retrospective approach is important because it captures reclassified counties, which are typically among the fastest-growing areas (Brown, 1979). The drawback, however, is that for the 1965-70 period, this strategy renders the concept of "metropolitan" more ambiguous than it already is. This ambiguity arises because 1983-definitions include nonmetropolitan counties that were redesignated as metropolitan after the 1970 and 1980 censuses.

The potential bias that this approach introduces varies across cases. For MSAs that have experienced no boundary changes since 1960, no bias exists. For newly designated or expanding areas, however, the use of constant 1983-definitions may result in overestimation of the suburban population for the earlier time period. The potential for suburban inflation occurs because I use historically-specific central-city boundaries (i.e., current at each census) to calculate intra-metropolitan populations for each time period. Thus, any inflation of an MSA's total population due to reclassification accrues to its suburbs, not to its central city.

The resulting universe consists of 294 metropolitan areas located in the continental United States (247 MSAs; 47 PMSAs). This number falls short of the official 327 MSAs for four reasons. First, the use of New England County Metropolitan Areas (NECMAs) results in the "loss" of fourteen MSAs that were officially designated using Minor Civil Divisions. Second, four MSAs are dropped because they lack a central city. Third, five MSAs are merged with existing areas in order to maintain historical consistency. And fourth, ten MSAs are dropped because of a lack of consistent data.

To assess the relationship between metropolitan development and specific patterns of internal migration, I use "efficiency measures" both as a descriptive tool and dependent variable in Ordinary Least Squares (OLS) regression analysis. Statistically, an efficiency measure is simply the ratio of net migration (in-migrants minus out-migrants) to total gross migration (in-migrants plus out-migrants) for a particular inter-regional exchange.

$$E_{ij} = ((m_{ij} - m_{ji})/(m_{ij} + m_{ji})) * 100$$

Where, E_{ij} = Migration efficiency
m_{ij} = Migration from region i to region j
m_{ji} = Migration from region j to region i

When the numbers of in-migrants and out-migrants are roughly equal, the migration efficiency ratio remains small. Under these circumstances the two gross flows effectively negate one another so that little if any net population change results in either region. When this measure is high (in either a positive or negative direction), however, the inter-change is considered "efficient," which means that the migration inter-change is efficiently redistributing people from one region to another (Gober, 1993; Shryock & Siegel, 1972: 656).

Since the developmental model is concerned with the migration experience of MSAs as they "mature" organizationally rather than as they grow in absolute size, efficiency measures are superior to traditional net and gross statistics. This is because as a standardized measure, an efficiency ratio "controls" for the size of a given migration stream, which we know to be tied to the size of regions involved. This standardization is important conceptually because the developmental perspective asserts that relative variations in migration experience should exist across developmental stages, not size categories.

Results

Results of empirical analysis appear in two sections. The objective of the first is to test the validity of the developmental model itself. Here I subdivide the metropolitan universe by stages of development and then assess the subsequent patterns of intra-regional organization in light of established historical and geographical trends. In the second section, the objective is to understand how these intra-regional differences relate to broader patterns of internal migration. More formally, it seeks to clarify the demographic nexus that binds the two distinct processes of metropolitanization and national population redistribution.

Stages of Development

To assess the developmental model, we must first identify each MSA by its stage of development. Using population counts from the respective censuses, we find that the majority of MSAs experienced "suburbanization" during the 1960s and 1970s—i.e., the entire metropolitan population grew, and the suburban component accounted for the majority of this growth (see Table 1). Between the 1960s and 1970s, the proportion of MSAs in this second stage of development increased from 62 to 70 percent (n=182 to n=207), echoing the well-documented trend of suburban growth in post-war America. This suburban expansion also reflects a concomitant drop in the percentage of "urbanizing" MSAs across the two time periods, from 31 percent in 1960-70 to 20% in 1970-80. Because we expect the proportion of metropolises in more advanced stages to increase with time, this trend lends prima facie support for the development model.

From previous research we also expect the proportion of MSAs in the more advanced stages of development to vary by geographic region. A cross-classification of MSAs by developmental stage and census region provides preliminary evidence of such geographic variance. Results in Figure 2 show that between 1960 and 1980, "desuburbanization" remained more prevalent in East

and North-Central; whereas "urbanization" tended to be more common in the South and West.

Implicit within this geographic variation is the importance of urban-industrial development in U.S. The fact is, individual MSAs have arisen during different historical periods, characterized by distinct demographic pressures, technological bases, and socio-political constraints. To assess this historical variation, I employ a common "age" proxy (census-year in which an MSA's central-city population reached 50,000) to cross-classify MSAs by six historical periods: 1790-1870, 1880-1900, 1910 -1940, 1950-1960, 1970-1980, and "Not Yet," which refers to MSAs with central-city populations that had not reached 50,000 by 1980. By introducing this historical dimension, we can begin to consider how variations in metropolitan development differ across time as well as space.

A cross-classification of MSAs by "age" and stage of development shows that the proportion of "urbanizing" MSAs generally increases as we approach 1970-1980, with a concomitant drop in the proportion of "urbanizing" MSAs across the two time periods (see Figure 3). Moreover, the proportions of "desuburbanizing" MSAs are highest in the oldest age-categories. In fact, by the 1970s nearly half of all MSAs that experienced "desuburbanization" were in the oldest age-category, which again conforms to the general logic of the developmental model.

The youngest MSAs, however, present a curious anomaly. Contrary to expectations, the vast majority of these areas appear to have bypassed the first stage of development and to have entered directly into a stage of "suburbanization." This pattern may depict a new process of metropolitan development, or it may simply reflect increasingly liberal metropolitan definitions adopted after 1970 (see Beale, 1984). Regardless, if we examine intra-metropolitan flows we find that all but one of these "youngest" MSAs exhibited patterns of decentralization for both 1965-70 and 1975-80. This finding suggests that these areas do in fact possess an established central city.

Decentralization has not translated into vast expanses of thinly settled space, however. While, on average, central-city populations in the "youngest" MSAs accounted for only thirty percent of the metropolitan population between 1960 and 1980, official "Urbanized Areas" accounted for over seventy percent. So while these suburban areas grew, they also contributed to a more general process of urbanization. This "urbanization of the suburbs" marks a potential shift in the way we conceptualize metropolitan development in the years to come (Hughes, 1991).

Such conceptual reevaluation is of course what the "reurbanization" stage is all about. While statistically negligible, MSAs in this stage of development depict an alternative to sustained deconcentration and thus are emblematic of future possibilities. Survey these areas, however, and we are struck by their relative anonymity rather than their social potential. They include places like Abilene, Pueblo, and Yakima; not Pittsburgh, Detroit, or Cleveland. Moreover, in five of these seven MSAs, "reurbanization" resulted from annexation rather than a relative re-population of the central city. Hence at present, "reurbanization" appears to be more an artifact of cartographic jockeying than a legitimate stage of metropolitan development.

The fact that none of these areas "reurbanized" during both time periods also raises an important question of "devolution." While the developmental model posits a unidirectional process of metropolitanization, we know that some MSAs may actually move backward rather than forward through the developmental sequence. A cross-tabulation of stages for the respective time periods reveals that while the number of MSAs that "evolved" more than doubled the number that "devolved" (75 versus 34), the latter still accounted for roughly twelve percent of the entire metropolitan universe. So although roughly nine out of ten MSAs conformed to patterns consistent with the developmental model (i.e., sustained a single stage of development or evolved), we must interpret the evolutionary logic of the model with caution. In summary though, it appears that the developmental model offers a valid means of considering patterns of

intra-metropolitan redistribution. Thus far, evidence tends to affirm previous research on regional and historical variations in metropolitan development and, at the same time, hint at the significance of local development for broader redistribution trends. In the next section, I examine statistical relationships between the different developmental stages and specific migration interchanges within the U.S.

Migration Patterns

Turning first to inter-metropolitan streams, evidence reported in Table 2 suggests that a definite relationship exists between an MSA's stage of development and the origins of its in-migrants. For the 1975-80 period, the percentage of in-migrants that came from other MSAs consistently increased across stages. This systematic gain implies that as an MSA develops internally, it also begins to draw relatively fewer people from nonmetropolitan areas, regardless of these areas' adjacency status. This finding provides loose support for the developmental model, which posits that nonmetropolitan sources of growth are most important during initial phases of "urbanization" and then decline as an MSA matures.

Destination percentages for metropolitan out-migrants paint much the same picture. Table 2 reveals that the percentage of metropolitan out-migrants who moved to another MSA between 1975 and 1980 increased steadily across developmental stages. (Conversely, the percentage of out-migrants destined for nonmetropolitan areas decreased.) Numbers for the 1965-70 period (not shown here) reveal much the same pattern, with roughly three-quarters of all metropolitan out-migrants to another MSA. So not only did more mature MSAs attract relatively fewer nonmetropolitan migrants between 1965 and 1980, they sent relatively fewer of their own residents to these areas. This migratory pattern is particularly revealing when one recalls that nonmetropolitan counties outnumber metropolitan counties nearly five to one.

But origin and destination percentages can often be misleading because they describe gross rather than net migration flows. For example, when we see in Table 2 that "reurbanizing" MSAs sent nine percent of their out-migrants to nonmetropolitan counties in other states, we miss the fact that these same out-migrants outnumbered in-migrants nearly three to one. Because this analysis is concerned with the relative imbalance of particular metropolitan-based streams, the remainder of this analysis employs efficiency ratios as a measure of internal migration.

To distinguish among different streams, I subdivide both the metropolitan and nonmetropolitan universe into three exclusive categories, which correspond to the adjacency and inter-state statuses of constituent counties. Results in Table 3 show that relatively few of these inter-changes were efficient between 1965 and 1980 and that the more efficient streams involved MSAs in the last two stages of development. For example, in 1975-1980 the efficiency measure for the inter-change between "desuburbanizing" MSAs and the entire nonmetropolitan universe equalled -29.5. This ratio means that, on average, 29.5 percent of all turnover between a given "desuburbanizing" MSA and nonmetropolitan America resulted in net population gain for the nonmetropolitan sector. The ratio for the 1965-1970 period is much smaller (0.4), however, which indicates that out-migration from "desuburbanizing" MSAs was counterbalanced by nonmetropolitan in-migration during this period. Gober (1993) uses the imagery of a sieve to describe such inefficient flows, whereby a significant number of people may pass back and forth between two regions with little subsequent change in population distribution.

Turning to inter-metropolitan streams, we find the efficiency measures to be more consistent across the two time periods. For both 1965-70 and 1975-80, MSAs in the last two stages efficiently redistributed populations to all non-adjacent metropolitan counties. The largest ratio was -41.9 for the inter-change between "reurbanizing" areas and metropolitan counties in other states. This ratio means that 41.9 percent of all turnover between these regions resulted in net

population gain for MSAs in other states. Judging from recent trends, much of this gain favored suburban areas, which suggests that a significant proportion of recent suburbanization has resulted from people moving from the central city of more mature MSAs to the suburbs of less mature MSAs in other states.

Now consider efficiency ratios for the more traditional pattern of suburbanization—i.e., flows between central cities and their suburbs (bottom of Table 2). In all but one of these intra-metropolitan streams, central cities acted as efficient redistributors of migrants to surrounding suburbs. This finding means that even during "urbanization," which is characterized by a process centralization, central cities sent significant numbers of metropolitan residents to their respective suburbs. Hence, we may deduce that the bulk of the central-city's relative growth during this initial stage of development resulted from substantial in-migration from outside the MSA. Efficiency measures for the second and third stages suggest that these extra-local sources of centralization eventually decline as the MSA matures, while the relative proportion of central-city residents heading for the surrounding suburbs increases.

"Ordinary Least Squares" regression techniques provide a more rigorous assessment of these descriptive patterns of internal migration. Before proceeding, however, "reurbanizing" MSAs must be dropped from the analysis because they account for so few cases. Next, dummy variables are constructed for the remaining stages and then used as independent variables to predict the efficiency measures reported in Table 3. According to the developmental model, we expect deconcentration to increase across stages, reflecting the socio-demographic maturation of individual metropolitan areas. Statistically, this expectation means that "urbanizing" MSAs should exhibit generally positive coefficients (especially in exchanges with nonmetropolitan counties) and that these coefficients should become increasingly negative across subsequent stages of development. In interpreting the coefficients, however, it is important to remember that statistical

significance does not imply migration efficiency; rather it reflects the explanatory power of the developmental stages.

With this last point in mind, the coefficients reported in Table 4 for the 1965-70 period lend general support to the developmental perspective. That is, "urbanizing" metropolises in the pre-turnaround period exhibit net gains in their exchanges with nonmetropolitan areas, and the expected cross-stage pattern generally holds. The increasingly negative coefficients across stages suggest that as a metropolis "matures," it experiences different migratory relations with other regions. For example, in exchanges with the entire nonmetropolitan universe for 1965-70, "suburbanizing" and "desuburbanizing" MSAs exhibit coefficients of -4.43 and -13.12 respectively. Since these numbers reflect deviations from the efficiency ratio of "urbanizing" MSAs (14.78), we may conclude that MSAs in these latter stages were increasingly inefficient recipients of nonmetropolitan migrants between 1965 and 1970. More generally, standard F-tests reveal that the developmental model is a good predictor of metropolitan-based internal migration streams for 1965-70.

For the 1975-80 period I calculate similar coefficients, but this time include the earlier efficiency measure as an independent variable. Why include the 1965-70 measure? Two reasons. First, this "lagged dependent variable" allows us to examine change in migration "efficiency" over time. Second, it provides a statistical means of "controlling" for past levels of migration. Both aspects are important because we generally expect that an area's current migration experience partially depends upon past experience. Here the primary question is still whether the coefficients for 1975-80 conform to the cross-stage patterns found in 1965-70.

Judging from the regression results reported in Table 4, it appears that they do. Despite the shifts in sign that result from the lagged model, the coefficients become increasingly negative and statistically significant across developmental stages. With respect to nonmetropolitan streams,

these numbers indicate that a fairly consistent pattern of relative deconcentration persisted across developmental stages for the 1975-80 period. If we solve the regression equation for total nonmetropolitan exchanges for each stage, we obtain estimated efficiency ratios of -6.94, -11.85, and -19.75, which indicate increasingly efficient outflows of metropolitan residents to nonmetropolitan areas during the late-1970s.

An even more rigorous evaluation of the developmental model controls for both the region and size of individual metropolitan areas, as these variables have long been central to theories of metropolitan change. Here I employ the same efficiency measures as dependent variables, but in the place of developmental stages, I use nine "stage-age" interaction terms. These interaction terms are intended to illuminate the evolutionary-historical conditions that I believe shape the migration experiences of individual metropolises. Because relative deconcentration remains a primary concern, I have chosen the cross-category with the most efficient net in-migration to serve as the reference category (i.e., the youngest, "suburbanizing" MSAs located in the South with populations between 100,000 and 250,000). Hence, statistical significance refers to conditions under which net migration tends to be relatively inefficient or "efficiently" negative.

Looking at the least-squares coefficients for 1965-70 reported in Table 5, we find that "desuburbanizing" areas deviated significantly from the reference category in terms of nonmetropolitan flows, and as expected, these coefficients are negative. Here the variation across age-categories also indicates that metropolitan age constitutes an important dimension when considering patterns of internal migration, even when one controls for the effects of size and region. This historical variation is also significant with respect to inter-metropolitan flows, which indicates that even within developmental stages the older an MSA is, the less likely it is to experience efficient in-migration.

If we substitute sample percentages for the region and size variables in the regression

equation, we can obtain a clearer picture of what these coefficients mean for MSAs in different stage-age categories. For instance, consider the graph at the top of Figure 4. Looking at the lines for nonmetropolitan flows, we find that on average all metropolitan areas tended to experience net gains in nonmetropolitan migration between 1965 and 1970, regardless of cross-classification. Hence, "desuburbanization" during this period resulted almost exclusively from inter-metropolitan exchanges, not metropolitan deconcentration to nonmetropolitan areas.

Now consider coefficients for the 1975-80 period reported in Table 6. Using the same variables as in Table 5, we find that the migration experience of "older desuburbanizing" areas deviated significantly from that of the "youngest suburbanizing" areas in terms of both metropolitan and nonmetropolitan exchanges. While few of the coefficients for the "urbanizing" areas are significant, their signs indicate that younger MSAs tended to experience greater net migration gains. Of course, this pattern is not particularly surprising given the underlying circumstances. In fact, new areas are often designated metropolitan precisely because they experience rapid and substantial population growth.

For visual clarity return to Figure 4. Again using sample percentages to control for the effects of size and region for each MSA, we observe a clear reversal in nonmetropolitan inter-changes in comparison 1965-70 figures. Whereas inter-metropolitan flows exhibited roughly the same pattern over the two time periods, efficiency measures for nonmetropolitan inter-changes became increasingly negative. Between 1975 and 1980, metropolises in virtually all cross-classifications actually experienced net losses to nonmetropolitan America. This drop was particularly acute in desuburbanizing areas, however, where the reversal in efficiency measures for nonmetropolitan inter-changes helped to push average net migration from roughly -14,000 in 1965-70 to roughly -90,000 in 1975-80.

To recap, this section sought to elucidate the relationship between intra-metropolitan development and broader patterns of internal migration. From OLS analysis we learned that the developmental model is generally a good predictor of distinct inter-regional exchanges. Results showed that between 1965 and 1980 more mature MSAs tended to be more efficient redistributors of people to other regions as they tended to draw relatively fewer migrants from nonmetropolitan American. This statistical relationship persisted even after controlling for the effects of the size and region of individual MSAs, although flows to nonmetropolitan areas varied across the two time periods. During 1965-70, "desuburbanizing" MSAs were more efficient redistributors of people to other metropolitan areas; whereas in 1975-80, they were more efficient redistributors to nonmetropolitan areas.

Summary and Discussion

While scholars have long recognized the importance of internal migration for metropolitan development, few empirical studies have turned the looking-glass around and asked how metropolitan development influences internal migration. In pursuing precisely this task, this study applied and assessed a developmental model of metropolitanization with respect to recent internal migration trends. Generally, I hypothesized that the relative size and direction (or "efficiency") of various metropolitan-based streams would loosely correspond to distinct stages of intra-metropolitan development.

While an extended time-series analysis would have been the ideal means of testing this argument, results here provide general support for the developmental perspective. For example, between 1965-70 and 1975-80, we found a systematic increase in the number of MSAs that experienced more advanced stages of development, although "reurbanization" remains more ideal than real. Furthermore, a definite relationship appears to exist between developmental stages and various inter-regional exchanges.

With respect to metropolitan-nonmetropolitan exchanges, results revealed that "desuburbanizing" metropolises were more inclined to experience relative deconcentration than areas in either two preceding stages. This finding suggests not only that the "turnaround" may have been linked to the number of MSAs that experienced "desuburbanization" during the early-1970s, but that future turnarounds should not be unexpected, given the number of "suburbanizing" areas at risk of entering this next stage of development.

Analyses of inter-metropolitan streams offered further refinement of this initial finding. Results suggest that as individual MSAs enter more advanced stages of metropolitanization, they begin to draw relatively fewer people from nonmetropolitan areas. One implication is that less "mature" areas tend to rely more heavily upon nonmetropolitan sources of growth; another implication is that as MSAs "mature" they become more interconnected with other metropolitan areas. These diverse patterns of internal migration suggest that the idea of an American "system of cities," or "urban hierarchy," still holds relevance for the movement of people as well as goods and services (see Berry, 1964; Wilson, 1984). Moreover, this system appears to respond to changes in intra-regional organization as well as to broader patterns economic restructuring.

Returning to the theoretical issues raised at the outset, we may now reconsider our understanding of contemporary internal migration. While the results of this study do not refute the regional-restructuring perspective, they do encourage us to consider intra- as well as inter-metropolitan dynamics. Regional restructurists implicitly argue that we should view MSAs as interdependent organizational forms, shaped by changing patterns of production and consumption. Based upon the evidence presented here, I maintain that the internal dynamics of metropolitan settlement also affect inter-regional patterns of migration.

In advancing this argument, however, I do not claim that the American metropolis constitutes a settlement pattern rather than a particular array of economic functions. Clearly it

comprises both, which is precisely my point. To understand the structures and processes that underlie population redistribution, we must study both sides of the metropolitan coin. In the foregoing analysis, I attempted to show that a process of metropolitanization—one that begins with centralization and proceeds through suburbanization and eventual deconcentration of urban populations into more peripheral areas—systematically influences the redistribution of people to and from various regions.

To the extent that this argument withstood empirical scrutiny, we may complement existing theories of internal migration with a renewed understanding. In short, the demographic restructuring of individual MSAs continues to play a key role in shaping national redistribution trends. This dynamic link between intra- and inter-regional streams suggests that regional restructuring over the past quarter-century may have acted as both cause and consequence of local restructuring processes, particularly "desuburbanization." Future analyses should strive to specify and refine our knowledge of the myriad mechanisms that underlie this dynamic inter-connection.

References

Beale, C.L. 1977. "The Recent Shift of United States Population to Nonmetropolitan Areas, 1970-1975." International Regional Science Review 2:113-122.

Beale, C.L. 1984. "Poughkeepsie's Complaint or Defining Metropolitan Areas." American Demographics January:29-47.

Berry, Brian J.L. 1964. "Cities as Systems within Systems of Cities." Papers and Proceedings of the Regional Science Association 13:147-63.

Bluestone, B. and B. Harrison. 1982. The Deindustrialization of America. New York: Basic Books.

Brown, David L. 1979. "Metropolitan Reclassification: Some Effects of the Characteristics of the Population in Metropolitan and Nonmetropolitan Counties." Rural Sociology 44:791-801.

Castells, Manuel. 1985. "High Technology, Economic Restructuring and the Urban-Regional Process in the United States." In High Technology, Space and Society. Beverly Hills, CA: Sage.

Frey, William H. 1987. "Migration and Depopulation of the Metropolis: Regional Restructuring or Rural Renaissance?" American Sociological Review 52(April):240-257.

Frey, William H. 1990. "Metropolitan America: Beyond the Transition." Population Bulletin. 45(2):1-49.

Frey, William H. and Alden Speare. 1992. "The Revival of Metropolitan Population Growth in the United States: An Assessment of Findings for the 1990 Census." Population and Development Review 18(1):129-146.

Frisbie, W. Parker and John D. Kasarda. 1988. "Spatial Processes." Pp. 629-666 in The Handbook of Modern Sociology, edited by Neil J. Smelser.

Fuguitt, Glenn V. and David L. Brown. 1989. "Residential Preferences and Population Redistribution: 1972-1988." Demography 27:589-600.

Fuguitt, Glenn V., Tim B. Heaton, and Daniel T. Lichter. 1988. "Monitoring the Metropolitanization Process." Demography 25:115-128.

Fuguitt, Glenn V. and Paul R. Voss. 1979. Growth and Change in Rural America. Washington, DC: Urban Land Institute, p.6.

Fuguitt, Glenn V. and James J. Zuiches. 1975. "Residential Preferences and Population Redistribution." Demography 12(3):491-504.

Gober, Patricia. 1993. "Americans on the Move." Population Bulletin 48(3).

Hall, Peter and Dennis Hay. 1980. Growth Centers in the European Urban System. Berkeley: University of California.

Hawley, A.H. and S.M. Mazie, Eds. 1981. Nonmetropolitan America in Transition. Chapel Hill: University of North Carolina Press.

Hughes, Holly. 1991. "Suburban Center Cities and the Multicentered Metropolitan Community." CDE Working Paper 91-40, Center for Demography and Ecology, University of Wisconsin, Madison.

Kasarda, J.D. 1980. "Redistribution Trends for National Urban Policy." Social Science Quarterly 61:373-396.

Korcelli, Piotr. 1983. The Turnaround of Urbanization in Developed Countries. Laxenburg, Austria: International Institute for Applied Systems Analysis.

Long, J. F. 1981. Population Deconcentration in the United States. Washington, DC: Government Printing Office.

Long, Larry and Diane DeAre. 1982. "Repopulating the Countryside: A 1980 Census Trend." Science 217:1111-1116.

McCarthy, K.A. and P.A. Morrison. 1979. The Changing Demographic and Economic Structure of Nonmetropolitan Areas in the 1970s. In Rand Paper Series, P-6062. Santa Monica, CA.

Meyer, David R. 1990. "The Rise of the Industrial Metropolis: The Myth and the Reality." Social Forces 68(3):731-752.

Morrill, Richard L. 1980. "The Spread of Change in Metropolitan and Nonmetropolitan Growth in the United States, 1940-1976." Urban Geography 1:118-129.

Noyelle, Theirry J. and Thomas M. Stanback. 1984. The Economic Transformation of American Cities. Totowa, NJ: Rowman & Allanheld.

Poston, Dudley L. and W. Parker Frisbie. 1984. "Ecological Models of Migration." In Texas Population Research Center Papers, No. 6.004. Austin, TX.

Shryock, Henry and Jacob S. Siegel. 1971. The Methods and Materials of Demography. Vol. 2. Washington, DC: Government Printing Office.

Van den Berg, L., R. Drewett, L.H. Klaassen, A. Rossi, and C.H.T. Vijverberg. 1982. Urban Europe: A Study of Growth and Decline. Oxford: Pergamon Press.

Wardwell, J.M. 1977. "Equilibrium and Change in Nonmetropolitan Growth." Rural Sociology 42:156-179.

Wardwell, J.M. 1980. "Toward a Theory of Urban-Rural Migration in the Developed World." In New Directions in Urban-Rural Migration, edited by D.L. Brown and J.M. Wardwell. New York: Academic.

Wilson, Franklin D. 1984. "Urban Ecology: Urbanization and Systems of Cities." Annual Review of Sociology 10:283-307.

Wilson, Franklin D. 1986. "Temporal and Subnational Variation in the Reversal of Migration Flows between Metropolitan and Nonmetropolitan Areas: 1935-80." Social Forces 65:501-523.

Table 1: Cross-classification of Developmental Stages, 1960-80

	1970-80				
	Urban	Suburb	Desub	Reurb	Total
1960-70					
Urban	38	51	1	-	90 (31%)
Suburb	16	143	21	2	182 (62%)
Desub	3	9	4	-	16 (5%)
Reurban	2	4	-	-	6 (2%)
Total	59	207	26	2	294
	(20%)	(70%)	(9%)	(1%)	(100%)

r= .275 @ p < .01

Table 2: Origin and Destination Percentages for Migrants Moving to and from MSAs in Different Developmental Stages, 1975-80.

Stage		Type of County: Adjacent Nonmet	Nonadj. Nonmet Same State	Nonmet Diff. State	Other Met	Total
Origin Percentages of Metropolitan In-migrants						
Urbanization	(n=59)	6%	10	13	71	100
Suburbanization	(n=207)	4	7	11	78	100
Desuburbanization	(n=6)	2	6	10	82	100
Reurbanization	(n=4)	2	2	5	91	100
Destination Percentages of Metropolitan Out-migrants						
Urbanization	(n=59)	7	10	13	70	100
Suburbanization	(n=207)	4	9	13	74	100
Desuburbanization	(n=6)	2	5	10	83	100
Reurbanization	(n=4)	1	2	9	89	100

Table 3: Mean Efficiency Measures for Migration Streams Involving MSAs at Different Stages of Development, 1965-80 (N=294)

MSA STAGE	METROPOLITAN COUNTIES*				NONMETROPOLITAN COUNTIES*			
	Adj.	Non-Adj. Same State	Another State	Total	Adj.	Non-Adj. Same State	Another State	**Total**
1965-70:								
Urban	3.9	5.7	0.9	2.7	13.4	18.8	13.7	15.7
Suburb	-1.8	-1.9	0.9	-0.5	4.1	8.4	11.3	9.9
Desub	-3.3	-32.2	-24.5	-21.5	5.4	4.5	-7.0	0.4
Reurb	-25.6	-33.0	-19.0	-24.9	6.1	5.4	7.6	6.6
1975-80:								
Urban	1.1	2.6	7.3	4.8	-4.3	5.5	3.2	2.4
Suburb	1.0	2.5	9.0	5.3	-3.7	-6.8	-2.6	-4.1
Desub	-7.5	-11.6	-31.7	-18.8	-15.5	-27.6	-33.3	-29.5
Reurb	15.8	-35.8	-41.9	-17.1	6.0	15.2	-47.8	-29.8

* Denominators for the different streams change due to changing inter-regional geography. Positive values indicate that the net flow favors the respective metropolitan area.

Intrametropolitan Migration from Central City to Suburb, 1965-80

MSA STAGE	1965-70	1975-80
Urban	-27.0	-28.4
Suburb	-43.0	-45.1
Desub	-37.7	-50.0
Reurb	5.2	-36.0

* Negative values favor suburbs.

Table 4: Regression Coefficients for the Association between Stages of Metropolitan Development and Efficiency Measures for Select Inter-Area Migration Streams, 1965-80.

MSA STAGE[a]	METROPOLITAN COUNTIES				NONMETROPOLITAN COUNTIES			
	Adj.	Non-Adj. Same State	Another State	Total	Adj.	Non-Adj. Same State	Another State	Total
1965-70 (N=288):								
Urban. (Constant)	3.28*	-0.75	-5.75**	-3.24*	12.88**	15.43**	10.23**	14.78**
Suburb.	-1.75	-0.93	5.04*	3.72*	-9.15**	-5.47*	1.01	-4.43*
Desub.	-7.51*	-24.63**	-17.09**	-17.43**	-5.58	-12.19*	-16.82**	-13.12**
Signif. F=	2.45	15.06**	13.09**	18.83**	10.05**	4.05*	11.83**	9.73**
1975-80 (N=292):								
E.M.$_{1965-70}$	0.73**	0.66**	0.65**	0.55**	0.51**	0.72**	0.55**	0.85**
Urban. (Constant)	-0.79	6.75**	11.47**	8.71**	-9.11**	-5.26*	-0.91	-7.79**
Suburb.	3.02	-4.08	-8.00**	-4.20*	2.38	-6.17*	-8.24**	-4.91**
Desub.	0.32	-13.91**	-29.85**	-19.81**	-2.97	-8.49*	-25.98**	-12.81**
Signif. F=	73.45**	73.79**	75.95**	76.53**	31.08**	67.59*	36.67**	92.62**

a: "Reurbanization" was dropped from the regression equations because it accounted for so few cases.

*: $p < .05$

**: $p < .01$

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Table 5: Regression Coefficients Reflecting the Association between Stage-Age Interaction Terms and Efficiency Measures for Select Inter-Area Migration Streams, Controlling for the Size and Region of Respective Metropolitan Areas, 1965-70 (N=288).

	METROPOLITAN COUNTIES				NONMETROPOLITAN COUNTIES			
MSA STAGE[a]	Adj.	Non-Adj. Same State	Another State	Total	Adj.	Non-Adj. Same State	Another State	Total
(Constant[b])	-1.05	-3.44	6.28**	4.26*	10.51**	15.29**	15.41**	17.12**
Stage-Age Terms								
Urb/<1940	-1.97	1.04	-9.80*	-8.56**	0.32	-1.33	-2.14	-1.21
Urb/1940-60	0.20	-9.42	-9.80**	-10.07**	1.10	-3.80	-3.16	-1.92
Urb/1960-P.	3.73	7.85*	-8.16*	-2.18	8.67*	4.24	-2.06	2.05
Sub/<1940	-5.19	-5.71	-7.41*	-8.57**	-4.33	-5.59	2.02	-2.92
Sub/1940-60	2.92	-2.56	-6.22	-5.41	-3.87	-2.25	-2.81	-3.49
Dsb/<1940	-8.18	-27.83**	-22.95**	-24.01**	0.82	-14.07*	-15.08**	-11.85**
Dsb/1940-60	-2.05	-30.21**	-24.11**	-22.71**	-4.89	-12.40	-13.06*	-11.47*
Dsb/1960-P.	-16.12	-8.57	-19.00	-20.00*	10.91	13.12	-18.62*	3.35
Region								
New England	6.97*	10.82**	-9.11**	0.30	-9.25**	-7.97*	-14.96**	-12.78**
Midwest	3.97*	4.73	-10.04**	-3.04	-4.95*	2.51	-4.03*	-3.85*
West	4.12	6.56*	5.32	5.10*	-1.42	-2.61	0.12	-1.95
Size								
1 Million+	1.06	5.15	9.61**	7.78**	-4.18	-8.79*	-0.16	-1.85
250K-1M	4.45*	2.86	1.40	2.50	0.04	2.03	-1.55	0.23
< 100K	-1.61	-8.34	-7.55*	-11.04**	6.04	0.02	-3.72	-0.08

a: "Reurbanization" was dropped from this analysis because it accounted for so few cases.

b: Constant: Youngest-Suburbanizing-Southern MSAs with populations of 100,000-250,000 (on average, the cross-classification with the highest growth rates).

*: $p < .05$

**: $p < .01$

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Table 6: Regression Coefficients Reflecting the Association between Stage-Age Interaction Terms and Efficiency Measures for Select Inter-Area Migration Streams, Controlling for the Size and Region of Respective Metropolitan Areas, 1975-80 (N=292).

MSA STAGE[a]	METROPOLITAN COUNTIES Adj.	Non-Adj. Same State	Another State	Total	NONMETROPOLITAN COUNTIES Adj.	Non-Adj. Same State	Another State	Total
(Constant[b])	1.33	4.30	14.40**	11.51*	-0.30	4.57	10.57**	7.29**
Stage-Age Terms								
Urb/<1940	-9.53*	-7.14	-3.17	-8.84**	-8.18	-2.36	-1.71	-2.58
Urb/1940-60	-4.60	-8.72	0.37**	-6.70*	-2.84	2.33	6.14	1.93
Urb/1960-P.	-0.98	6.00	-2.03	1.82	5.05	3.91	-0.95	1.56
Sub/<1940	-6.02*	-6.19	1.62	-4.80**	-2.26	-3.82	5.07	-2.20
Sub/1940-60	0.71	-8.78*	3.43	-2.51	0.05	-4.71	4.94	-0.10
Dsb/<1940	-13.73**	-17.37**	-14.02**	-16.47**	-11.60*	-6.46	-2.79	-10.01**
Dsb/1940-60	2.07	-25.90**	-21.10**	-20.34**	-14.81	-29.32**	-5.90*	-13.53*
Dsb/1960-P.	-20.00	-11.01	-5.61	-12.82	-14.61	-24.98	-3.15*	-15.11
Region								
New England	6.26*	8.95**	-27.50**	-9.94**	0.98	-3.76	-32.97**	-14.10**
Midwest	5.17*	3.96	-27.15**	-11.23	-0.16	2.35	-21.60**	-7.67**
West	7.74	8.17*	2.20	7.49**	-1.59	-4.46	-7.74**	-4.88*
Size								
1 Million+	-1.69	-5.78	0.99	-2.06	-7.57	-25.32**	-13.42**	-15.02**
250K-1M	4.98*	-0.17	-3.68	-0.30	-3.57	-3.59	-8.37**	-4.44*
< 100K	-2.13**	-10.06*	-0.38*	-7.35	6.94	7.70	6.31	6.94*

a: "Reurbanization" was dropped from this analysis because it accounted for too few cases.

b: Constant: Youngest-Suburbanizing-Southern MSAs with populations of 100,000-250,000 (on average, the cross-classification with the highest growth rates).

*: $p < .05$

**: $p < .01$

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Figure 1. Stages of Metropolitan Development

Stage of Development	Classification Type	Population Change Characteristics		
		Central City	Suburbs	Met Area
1. Urbanization	a. Absolute Centralization	+ +	-	+
	b. Relative Centralization	+ +	+	+ + +
2. Suburbanization	a. Relative Decentralization	+	+ +	+ + +
	b. Absolute Decentralization	-	+ +	+
3. Desuburbanization	a. Absolute Decentralization	- -	+	-
	b. Relative Decentralization	- -	-	- - -
4. Reurbanization	a. Relative Centralization	-	- -	- - -
	b. Absolute Centralization	+	- -	-

Source: Van den Berg, Leo et al., 1982. *Urban Europe: A Study of Growth and Decline*

Figure 2: Stage by Census Region, 1960-80

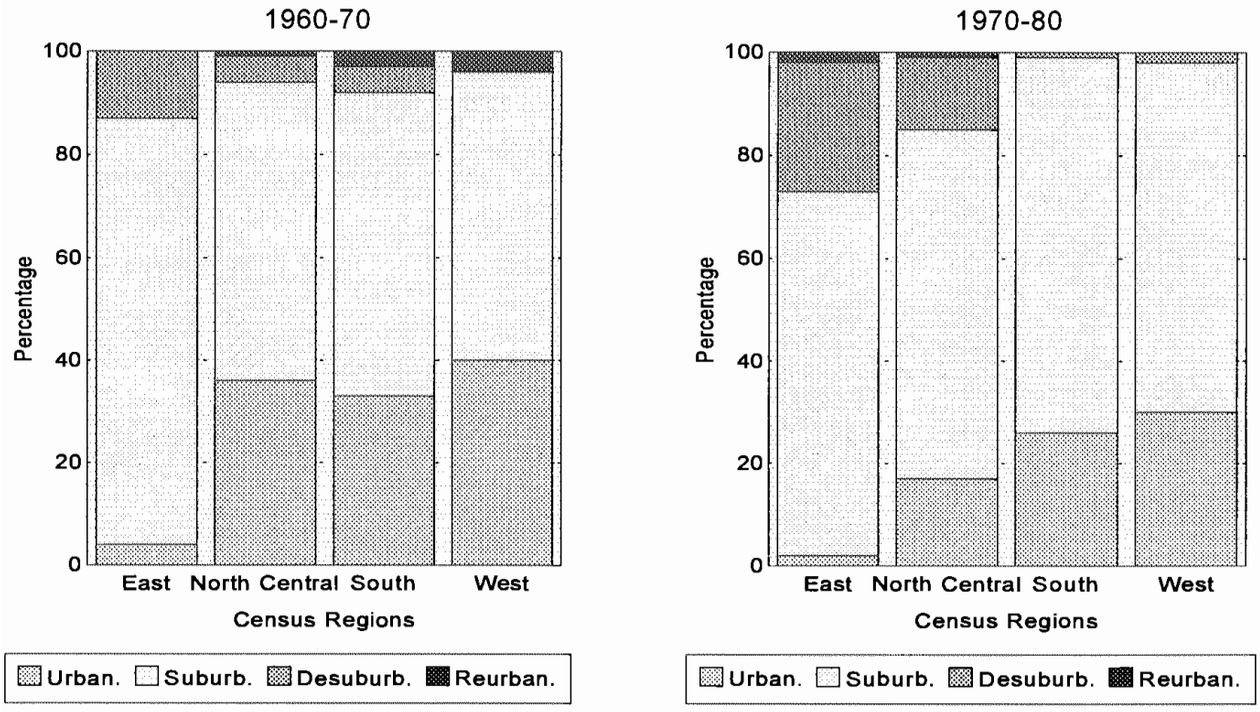


Figure 3: Stage by "Age" of MSA, 1960-80

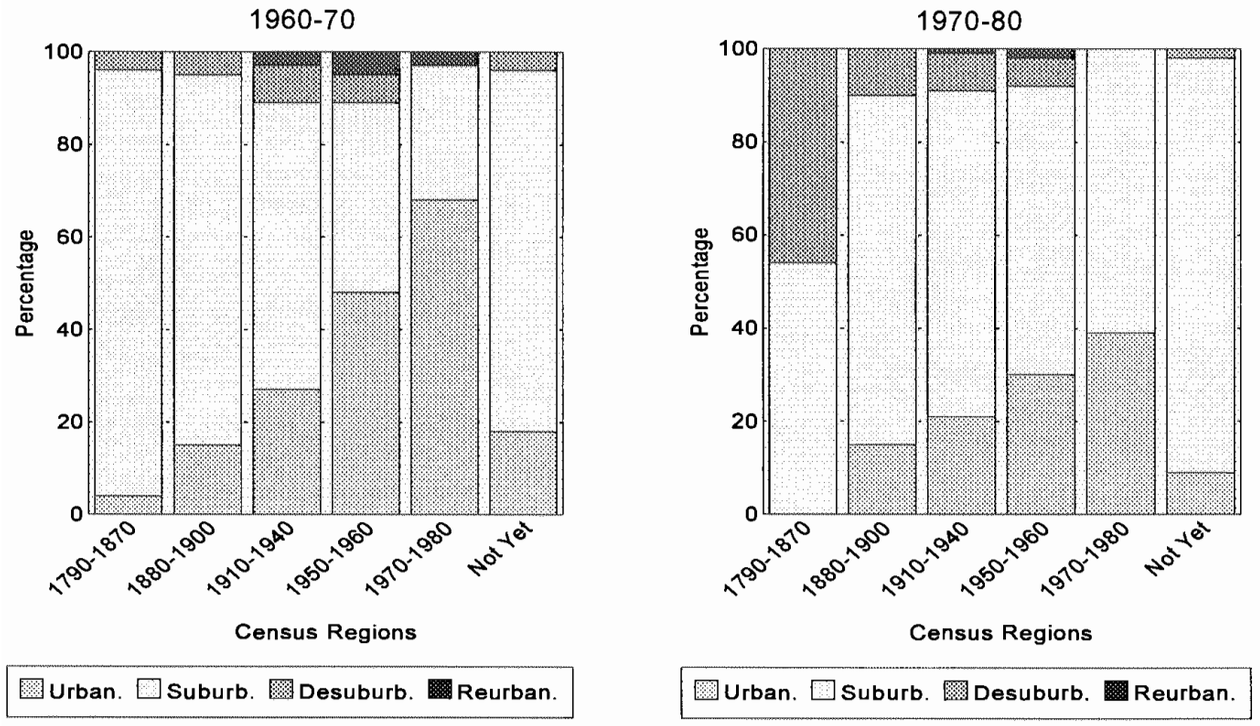
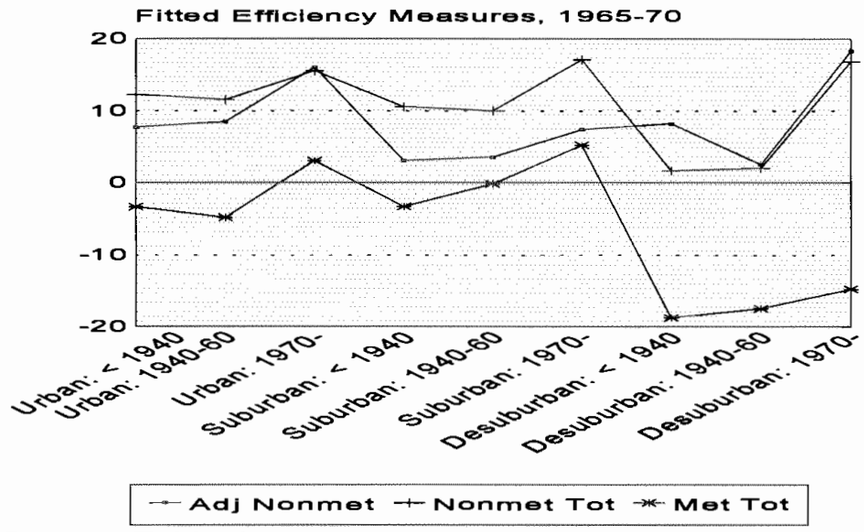
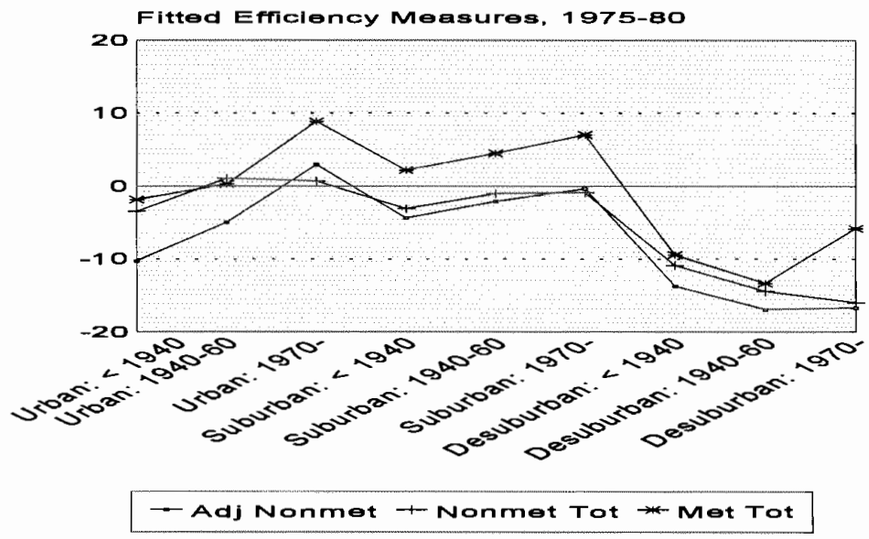


Figure 4: Estimated Efficiency Measures for MSAs in Various Stage-Age Categories Calculated from the Full Regression Equations, 1965-80.



Source: Table 4.



Source: Table 5.

Notes:

1. Sample percentages used to "control" for region and size variables.
2. Years on x-axis refer to "age" of MSA, not to time of migration.

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