

Evolution and Current Conditions of the U.S. Metropolitan System 3

A metropolitan region (metro) is a complex techno-politico-socio-economic system, with attributes that result from ongoing decisions by individuals, governmental bodies, and business firms. These decisions are shaped in no small part by the technological possibilities of the time. Not only does the shape of metros reflect changes in systems and organization of production, but the structure and function of metros themselves influence the performance of the economic system.

Today, advanced industrial economies are in the midst of a technological revolution, driven by advances in microelectronics technologies. It is not clear whether this is on the order of a shift from an industrial to an information economy, as some speculate, or a more modest, but still important shift from one technology system to another. However, it does suggest that a new form of metro is emerging, in ways with potentially profound benefits to some places and costs to others.

In preparation for the discussion in chapters 4-7 on how this latest wave of technological change is reshaping American metropolitan areas, this chapter provides background on historical and current conditions in U.S. cities and metros. It first presents an overview of how technological change has affected the historical development of U.S. metropolitan areas. It then discusses the current spatial distribution of households and industry in the U.S.

TECHNOLOGY AND STAGES OF AMERICAN URBAN GROWTH

Because technological change in the United States has not been a continuous process, but rather one in which clusters of technological innovations emerge in particular periods, many believe that development of the cities and metros in the United States has pro-



ceeded in a discontinuous rather than linear fashion.¹ Urbanization has been driven by technology transitions that redefine urban hierarchies and bring new types of specialization to the urban economic base. As a result, the pattern of urbanization has not been a smooth evolution to the conditions of the present, but has been marked by major transformations from one form of city to another.

New technology changes the spatial distribution of industry and people in several ways. First, the widespread distribution of new types of physical infrastructure make new locations accessible and cheaper. For example, the building of the interstate highway system allowed manufacturers traditionally dependent upon rail and ship to locate in other areas. Today, widely deployed advanced telecommunications infrastructure may allow some information processing firms to locate in more peripheral areas than they might otherwise (see chapter 7).

Second, industries or demographic cohorts with different locational patterns grow or decline at different rates. For example, increases in agricultural productivity, largely a result of mechanization and application of biochemical processes, resulted in declining farm employment, leading in turn to the migration of 24 million persons from rural areas to metropolitan areas between 1922 and 1954.² More recently, the increase in central city employment in the late 1970s and 1980s was due in large part to the absolute and relative employment growth in sectors such as legal services, banking, and other producer services.³ For example, the doubling of legal service jobs from 1977 to 1987, an industry heavily concentrated in large urban area downtowns, contributed to the turnaround of the decline or stagnation of many cen-

tral cities in the 1980s.⁴ These new legal jobs required an estimated 120 million square feet of new office space—the equivalent of three Chicago central business districts.

Third, as discussed in chapters 4-6, location of jobs can also change as technology, product mix, and industrial organization change. Technology can be particularly important in this process, since it can alter the nature and mix of inputs, including type and quantity of labor, materials, energy, land, and buildings needed. As these change, optimal locations also change.

Finally, technologies can influence where people live, in turn influencing where firms locate, particularly residential employment that serves local markets (see chapter 7). For example, the development of air conditioning made large sections of the South and West attractive to millions more people. Medical technology advances have enabled a larger share of the population to live longer after retirement, allowing the retirement population of states like Florida, Texas, California, and Arizona to expand significantly. Social Security, and the ability to take it wherever you go, was also a very significant factor in the expansion of these places. Today, many claim that technologies to facilitate telecommuting from home will further increase residential dispersion.

The importance of technological change is not to suggest that other socioeconomic and public policy factors have not also played, and will continue to play, important roles. Crime, single-parent families, teenage pregnancies, welfare dependency, and drug availability all contribute to urban problems and, by extension, economic and residential spatial patterns. Likewise, public policy interventions, such as the building of the interstate highway system, use of investment tax

¹ John Borchert, "American Metropolitan Evolution," *Geographical Review*, vol. 57, 1967, pp. 301-32.

² James Heilbrun, *Urban Economics and Public Policy* (New York, NY: St. Martin's Press, 1987).

³ Thierry J. Noyelle and Thomas Stanback, Jr., *The Economic Transformation of American Cities* (New York, NY: Rowman and Allenheld, 1984); William Beyers, *The Producer Services and Economic Development in the United States*, Final Report to the U.S. Department of Commerce, Economic Development Administration, 1989.

⁴ Barney Warf and Chand Wije, "The Spatial Structure of Large U.S. Law Firms," *Growth and Change*, vol. 22, No. 4, Fall 1991, pp. 157-74.

credits for new facilities, the location of public housing, and tax and other policies that create advantages for home ownership all have helped to form the present patterns of urbanization (see chapter 8). Nevertheless, technology plays an important enabling role in shaping metropolitan areas.

All four kinds of technological change noted above have had considerable impact on urban form and life in the United States. In fact, as a result of these technology systems changes, some urban scholars argue that there are distinct historical periods of urbanization.⁵ These can be classified as follows:

■ Artisan and Craft City, 1820-1870

The period of the first industrial city in the United States was from approximately 1820 to 1870. An overwhelmingly rural society had only a few large trading centers that were predominantly “walking cities,” with little reason for space between work and home, between social classes, or between races. There was little functional separation of land uses, production was not centralized, and there was little social segregation. Early manufacturing was tied largely to craft or labor-intensive primitive machines. Because surface transport was primitive, the foci of activity were ports and docks, and desirability of locations decreased with increasing distance from the center, where churches, public buildings, and the homes of the most prominent citizens were clustered. Scattered dam-site mill towns were built in the 1820s and 1830s as the domestic textile industry grew, bringing a different building pattern.

■ Early Industrial City, 1870-1920

It was the growth of the manufacturing economy from 1870 to 1920 that transformed urban structure. Manufacturing replaced cotton as the nation’s leading growth sector in the years between 1842 and 1859, and as the full U.S. industrial rev-

olution unfolded, the national market was broadened by canals and railroads, factory organization of production beyond the textile industry, and the replacement of a self-sustaining rural economy by commercialized agriculture.

The northeastern industrial belt lay at the heart of a national rail network, with processing centers at rail nodes. Accompanying urban impacts included concentration of production and circulation around central business districts, separation and specialization of land uses, and the outward thrust of residential areas of the high-status groups, first to country estates and later to garden suburbs, leaving behind the working classes in the inner city. Technologies, including transportation (railroads and steam-powered ocean vessels), new materials (steel), new industrial processes (Taylorism), new energy sources (electricity), and new communications technologies (telegraph and telephone), allowed urban centers to spread more widely across the nation and permitted larger scale industrialization. The densities of population and activities in urban centers made investments in urban rail centers (long distance and commuter) financially viable. Coinciding with this came the change from an urbanism made up of mill towns and mercantile ports to one characterized by the classic core-oriented industrial city.

During this period, the dominant flow of migrants was from rural to urban areas, as early stage agricultural mechanization took hold and industrialization proceeded at a rapid pace. Initially this flow, plus European immigration, produced a concentration (or absolute centralization) of population in the urbanized core of the young metropolis, while population in the surrounding rural-urban fringe (the ring) declined in many places. Within cities, electric streetcars and train lines contributed to suburbanization of residences. Water and sewer systems and advances in public health made high urban densities safer. At the beginning of the period, 1870, about one-fourth of all Americans

⁵ This section is based on a report prepared for the Office of Technology Assessment. Brian Berry, “Classification Systems for U.S. Cities,” 1995.

lived in urban places—by the end, 1920, over half were in cities.

■ Mass-Production Metropolis, 1920-1970

The period 1920 to 1970 saw the emergence of a new form of city—a third stage of industrialism and urbanism. A wave of technologies—including the new transportation technologies of automobiles and airplanes; new infrastructure technologies, including widespread diffusion of electricity, highways, and water systems; mass production manufacturing technologies; and importantly, agricultural mechanization—drove the change. In addition, newly rationalized, vertically integrated corporations with a national market emerged.

Air travel, long-distance communications, and truck transport began to recast regional relationships, allowing large-scale urban development to spread farther south and west. Arterial highways, then limited access parkways, then interstate highways, tied metropolitan regions and finally the entire nation together. Widespread electrification allowed industry much greater locational freedom, stimulating much of southern and western industrialization. In addition, the development of air conditioning made living and working in hot southern and western climes more tolerable. Agricultural mechanization led to significant decreases in agricultural labor, with concomitant migration from rural to urban areas.

During this period, growth continued to concentrate in metropolitan areas, while some growth spilled over the existing urban boundary into the rural fringe. This brought about widespread suburbanization and a relative decentralization of population to the formerly rural fringe. Congestion and rising land values in the urbanized core, the construction of a national highway system, Veterans Administration and Federal Housing Administration subsidies for single-family

homes, investment tax credits for new infrastructure, and a shortage of suitable development sites encouraged firms and households to move outward. In the latter stage of this phase, as the out-migration of population from the core began to exceed both in-migration from other regions and natural increase, the population of many urban cores began to decline (a situation of absolute decentralization), in some instances very rapidly. Migration of blacks, displaced by agricultural mechanization in the South, coupled with housing segregation and the construction of concentrated low-income housing, led to the creation of an increasing number of black ghettos, particularly in northern-midwestern central cities.

Within metropolitan areas, cities were reshaped by the automobile. Initially, streetcars created radial extensions from urban cores. Increasing automobile use caused residential locations to expand significantly, leading to patterns of “bedroom suburbanization.” Residential suburbanization during this time meant the development of many suburbs as basically bedroom communities largely dependent on the core city, although some local service functions (e.g., retail, personal services) grew in the suburbs. Steel girder buildings, electric elevators, and telephone communications facilitated intensified use in the central business district through the construction of skyscraper office towers.

■ Post-Industrial Metropolis, 1970-Present

The next phase of urban development, beginning in approximately 1970, can be characterized as post-industrial metropolitan development, where business spreads throughout the metropolis; residential growth moves to the outer suburbs and ex-urban areas;⁶ some parts of some central cities, especially central business districts (CBDs), revive while others decline; and many sections of

⁶ Exurban counties are defined as counties adjacent to metropolitan areas with significant commuting to the metro, but below the levels that would make them officially part of the metropolitan area. Richard Morrill, “Population Redistribution within Metropolitan Regions in the 1980s: Core, Satellite and Exurban Growth,” *Growth and Change*, Summer 1992, pp. 277-302.

older central cities and inner suburbs, particularly those formerly dependent on mass production manufacturing, stagnate or decline. In this period of metropolitan growth, old dichotomies between cities and suburbs have given way to a more spatially diversified and complex ordering of economic space. Core technologies underlying this stage, as discussed in chapter 4, are information and telecommunications technologies, particularly as applied to industry in both manufacturing and services. New transportation technologies, including development of long-distance passenger jets and completion of the interstate highway system are also important. The development and widespread diffusion of these technologies are contributing to a spatial restructuring of metropolitan economies. For example:

- Some metropolitan areas dependent upon older technologies and industries, particularly low-technology manufacturing, stagnate and decline. Others successfully make the transition to technologically based manufacturing or producer services industries and continue to grow.
- Many central cities experience slow growth or decline in employment and population. Moreover, such decline now spreads to an increased number of older, inner suburban areas.
- Most central city economies restructure, shifting from an economy based on goods production, distribution, and retail trade, to one based on producer services, often employing a high share of managerial and professional workers. In addition, industries such as universities, hospitals, government, and tourism (e.g., hotels, museums, airports), become more important to core economies.
- In part due to the decline or stagnation of urban core economies, coupled with an increased shift to a white-collar occupational structure, both poverty rates and ghettoization increase.

Moreover, minorities make up a large and growing share of most central cities.

- A large share of outer suburbs and exurban areas grow rapidly, both in terms of employment and population. Low-density residential development spreads even farther outward, leading to large, sprawling metropolitan areas.
- Metropolitan economies become “polycentric,” with concentrations of business activity in many different parts of the area and the fastest growth taking place in suburban “edge cities.” However, in many places this growth is relatively uneven, with some parts of the metro growing and others stagnating.

DESCRIBING THE POST-INDUSTRIAL METROPOLIS

This section describes metropolitan development patterns in the United States over the last two decades. It examines the economic and demographic changes from three aspects: interregional changes, central cities and inner-suburbs, and outer suburban and exurban areas.

■ Inter-Metropolitan and Inter-Regional Economic Trends

Urban/Rural Growth

During the 1970s, after decades of relative decline, population and employment rose faster in rural areas than in metropolitan.⁷ There are a number of reasons given for the growth in rural employment and population in the 1970s. These include energy and minerals price increases (natural resource industries are more concentrated in rural areas), the relative decline of urban manufacturing and growth in rural manufacturing, increased numbers of retirees living in rural areas and the rise of amenities in smaller places that allowed rural preferences to be realized, and finally,

⁷ Metropolitan areas include Metropolitan Statistical Areas (MSA's) and Primary MSA's (PMSA's). MSA's include cities (defined as political units) and contiguous groups of cities with more 50,000 in population. PMSA's are component metropolitan areas of larger Consolidated MSA's (CMSA's). U.S. Census Bureau, *Statistical Abstracts of the United States* (Washington, DC: 1993), pp. 37-39.

TABLE 3-1: Population change for regions and metropolitan categories, 1970-90

Region and metropolitan category ^a	Population 1990 (millions)	Percentage change	
		1970-80	1980-90
<i>North</i>			
Large	62.9	-0.9	2.8
Small and mid-size	25.6	5.2	3.3
Rural	22.6	8.0	0.1
<i>South</i>			
Large	28.2	23.4	22.3
Small and mid-size	31.9	20.9	13.4
Rural	24.9	16.3	4.6
<i>West</i>			
Large	33.8	20.0	24.2
Small and mid-size	10.8	32.2	22.8
Rural	8.1	30.6	14.1
<i>U.S. totals</i>			
Large	124.8	8.1	12.1
Small and mid-size	67.9	15.5	10.8
Rural	56.0	14.3	3.9
<i>Region totals^b</i>			
North	111.1	2.2	2.4
South	85.0	20.1	13.3
West	52.7	24.0	22.2
<i>Total</i>	<i>248.7</i>	<i>11.4</i>	<i>9.8</i>

^aLarge metropolitan areas (MAs) include 39 CMSAs and MSAs with 1990 populations exceeding 1 million.

^bThese regions are consistent with standard census definitions where the North region represents the combined Northeast and Midwest census regions. When an individual MA overlaps regions, its statistics are assigned to the region where its principal central city is located

SOURCE: Compiled by William Frey, "The New Urban Revival in the United States," *Urban Studies*, vol. 30, Nos. 4/5, 1993

improved transport (e.g., completion of the interstate highway system) and communications that made many rural areas more accessible to industry.⁸

Many expected this trend to continue in the 1980s. In 1980, a Presidential Commission report on urban issues⁹ reflected the widely held view of the time that as new technologies and new modes for distribution of consumer goods made heretofore exclusively urban amenities and jobs accessible to low-density rural and small city locations, Americans, known to prefer these locations,

would choose them over congested larger metropolises.¹⁰ Yet, this predicted movement of people and jobs to smaller cities and rural areas did not take place; indeed, the opposite occurred (see table 3-1). Rather than continued reconcentration of population away from large metropolitan areas to smaller metropolises, and from both large and small metropolises to non-metropolitan locations, in the 1980s the largest metropolises gained population faster than smaller metropolises, and these grew at a rate considerably slower than their rate of growth in the 1970s. Non-metropolitan areas

⁸William H. Frey, "The New Urban Revival in the United States," *Urban Studies*, vol. 30, No. 4/5, 1993.

⁹President's Commission on a National Agenda for the Eighties, *Urban America in the Eighties: Perspectives and Prospects*, Report on the Panel on Policies and Prospects for Metropolitan and Nonmetropolitan America (Washington, DC: U.S. Government Printing Office, 1980.)

¹⁰J.M. Wardwell and D.L. Brown, "Population Redistribution in the United States During the 1970's," in D. L. Brown and J.M. Wardwell, eds., *New Directions in Urban-Rural Migration* (New York, NY: Academic Press, 1980), pp. 1-35.

had a rate of growth much below the level of the 1970s. Overall, the percent of the civilian labor force living in metropolitan areas increased from 79.1 percent in 1976 to 81.1 percent in 1990.¹¹

However, since 1990, there has been a small rebound in rural growth. Between 1990 and 1994, population grew 0.9 percent per year, faster than in the '80s, but still less than the 1.1 percent in metro areas.¹² The share of the civilian labor force working in metropolitan areas declined slightly to 80.7 percent in 1994, while the share in rural areas increased slightly.

There are two important aspects to this rural growth. First, over half (53 percent) of the labor force growth in non-metropolitan areas occurred in non-metropolitan areas adjacent to metropolitan areas.¹³ In part, as discussed in chapter 4, this rural growth is stimulated by business suburbanization that allows workers to live in rural areas and commute to metros for employment. Second, much of the growth is fueled by the increasing number of retirees. Between 1970 and 1989, the population over age 65 grew 54 percent, compared to an increase of 19 percent for the rest of the population. Many of these retirees chose locations in the South and the West in non-metro areas with significant amenities. In fact, when classified by type of county, counties classified as retirement destinations grew faster (10.7 percent) between 1990 and 1994 than any other county type, and almost three times as fast as rural areas in total (3.9 percent).¹⁴

Inter-Metropolitan Differences

America is neither predominantly an urban nor a rural nation, but rather a metropolitan nation where the majority of the population lives and works in large urbanized areas that include both historic central cities and inner and outer rings of suburban development. A metropolitan area (metro) is defined by the U.S. Bureau of the Census as "a large population nucleus, together with adjacent communities that have a high degree of economic and social integration with that nucleus."¹⁵

In 1990, 75 percent or 193 million Americans lived in either large or small metropolitan areas; more than half the population, 126 million people, lived in the 40 largest metropolitan areas (population of 1 million or above), and 43 percent lived in the top 25 metros (population of 1.5 million or above).¹⁶ While the central city population of the largest 25 metros has changed very little since 1950, the suburban population has risen sharply (see figure 3-1). In 1950, metropolitan population was almost twice as great as central city population, meaning that urban and suburban populations were approximately equal. By 1990, the metropolitan population had surged to nearly four times central city population.

In the 1980s, both the population and civilian workforce of large metros (over 1 million population) grew slightly faster than smaller metros, consistent with the urbanization trends of the 1980s (see table 3-1). The share of the workforce living in large metros increased slightly from 49.9

¹¹ Economic Research Service, Department of Agriculture, based on data supplied by the Bureau of Labor Statistics, U.S. Department of Labor, 1995.

¹² Kenneth M. Johnson and Calvin L. Beale, "The Rural Rebound," *American Demographics*, July 1995, pp. 46-55.

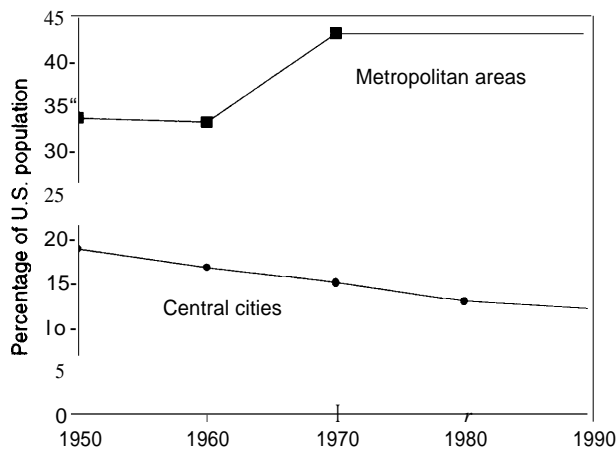
¹³ Economic Research Service, op. cit. footnote 11.

¹⁴ Ibid.

¹⁵ U.S. Bureau of the Census, *Current Population and Housing Survey* (Washington, DC: U.S. Government Printing Office, 1992).

¹⁶ Frey, op. cit., footnote 8.

FIGURE 3-1: The 25 Most Populated Metropolitan Areas and Their Central Cities as a Percentage of Total U.S. Population



SOURCE: U.S. Census Bureau, State and Metropolitan Area Data Book, 1991.

percent in 1976 to 50.5 percent in 1994; however, all of that growth was a result of workforce growth in fringe, as opposed to core, counties of metro areas.¹⁷ More recently, consistent with the technological trends discussed in chapters 4-7, growth has been fastest in small and medium-sized metros, which gained 2.7 million workers between 1990 and 1994, compared to 1.4 million for large metros.

Not all metropolitan areas grew, however. About half of the largest 25 metros experienced decline or little to no growth between 1970 and 1990, even as the other half incurred substantial growth (table 3-2). In fact, five (13 percent) of the largest 40 metropolitan areas lost population between 1980 and 1990 (Detroit, Pittsburgh, Cleveland, Buffalo, and New Orleans), and 49 (22 percent) of the 228 next largest metros also shrank. For example, the city of Pittsburgh's population declined by 30 percent between 1970 and 1990, while the metropolitan population fell by 4 percent.

With the exception of New Orleans, four of the five declining large metros, and a large majority of the declining smaller metros, have much in common. Many were based on older industries that experienced considerable employment loss in the last 15 years, including tires, automobiles, and steel, or were centers for the excavation and refining of copper, coal, aluminum, and oil. Moreover, 30 of the 54 declining small metros (55 percent) are located in six states (Ohio, Pennsylvania, Iowa, Michigan, New York, and West Virginia) whose economies have been rooted in natural resources or manufacturing. Many of these declining, smaller metros are still dominated by their historic, industrial-era cores, whereas many larger metros, in spite of declining center cities, are growing because people and jobs are locating in the suburbs. In short, there appears to be increasing divergence in economic health between metropolitan areas: some areas have been able to grow as they increased linkages to global markets and/or assumed more specialized roles and functions; other less fortunate areas have been less successful and have stagnated or declined.

Metropolitan areas, and in particular, larger areas, grew in the 1980s for several reasons. First, many of the industries concentrated in rural areas grew slowly in the 1980s, meaning that national growth tended to be concentrated in urban areas. For example, employment in agriculture, mining, and manufacturing all declined between 1977 and 1992. In contrast, as discussed below, employment in services, particularly producer services, which have been concentrated in major metropolitan areas, grew significantly (see chapter 5).

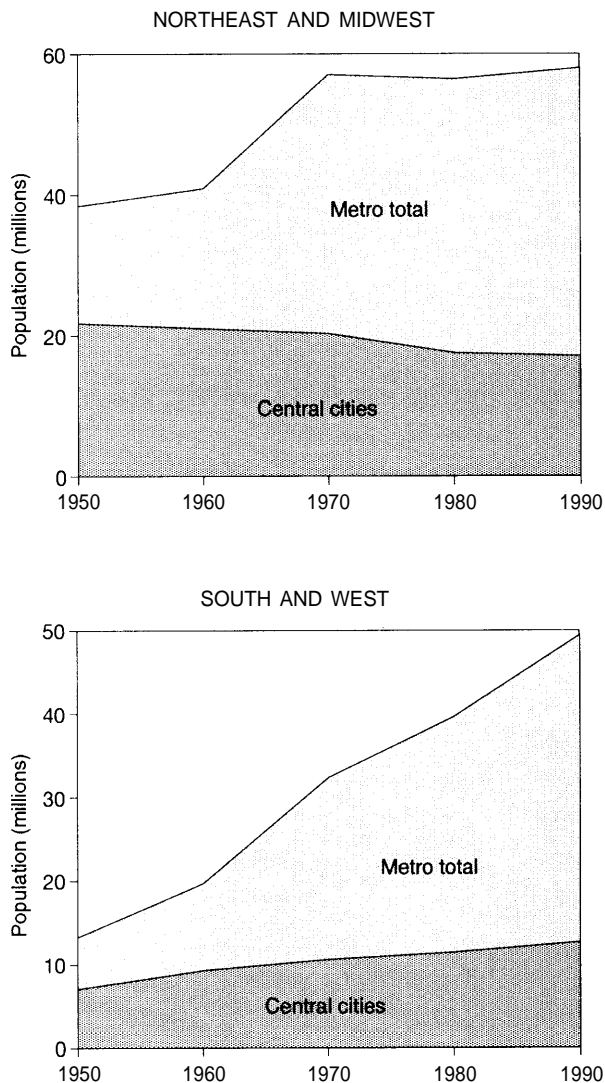
Second, the growth of the minority population, either through immigration or through natural increase (i.e., higher fertility rates), boosted growth in many metropolitan areas, particularly the largest. Between 1980 and 1990 the minority population in the largest metropolitan areas (over 1 million) grew 37 percent, compared to 27 percent in smaller metros. The white population is growing faster in mid-size metropolitan areas (7.1

¹⁷ Economic Research Service, op. cit., footnote 11.

TABLE 3-2: Population change in the 25 largest metropolitan areas, 1970-90

Region and metropolitan area	1990 population (1000s) Metropolitan area	Metropolitan central city(s)	metropolitan area percentage change		Central city change		Suburban change	
			1970-80	1980-90	1970-80	1980-90	1970-80	1980-90
North								
New York	18,087	7,323	-3.6	3.1	-10.4	3.5	1.7	2.8
Chicago	8,066	2,784	2.0	0.9	-10.8	-7.4	11.8	7.1
Philadelphia	5,899	1,586	-1.2	3.8	-13.4	-6.1	5.1	8.0
Detroit	4,665	1,028	-0.7	-1.9	-20.5	-14.6	8.4	2.5
Boston	4,172	574	0.8	5.0	-12.2	2.0	3.4	5.5
Cleveland	2,760	506	-5.5	-2.6	-23.6	-11.9	0.5	-0.3
Minneapolis-St. Paul	2,464	641	7.8	15.3	-13.8	-0.1	20.8	21.9
St. Louis	2,444	397	-2.2	2.8	-27.2	-12.4	6.5	6.4
Pittsburgh	2,243	370	-5.2	-7.4	-18.5	-12.8	-1.8	-6.3
Cincinnati	1,744	364	2.9	5.1	-15.1	-5.5	10.0	8.3
Milwaukee	1,607	628	-0.3	2.4	-11.3	-1.3	8.9	4.8
Kansas City	1,566	435	4.4	9.3	-11.6	-2.9	13.8	14.8
South								
Washington	3,924	607	6.9	20.7	-15.7	-4.9	14.4	27.0
Dallas-Fort Worth	3,885	1,454	14.6	32.5	4.2	12.8	47.3	48.2
Houston	3,711	1,631	43.0	19.7	29.3	2.2	61.1	38.1
Miami	3,193	359	40.1	20.8	3.5	3.4	47.9	23.4
Atlanta	2,834	394	27.0	32.6	-14.1	-7.3	44.1	42.4
Baltimore	2,382	736	5.3	8.3	-13.2	-6.4	19.4	16.5
Tampa-St. Petersburg	2,086	519	46.0	28.1	3.3	1.7	80.4	40.4
West								
Los Angeles	14,532	3,485	15.2	26.4	5.4	17.4	19.0	29.5
San Francisco-Oakland	6,253	1,096	12.9	16.5	-5.4	7.6	18.3	18.6
Seattle	2,559	516	14.0	22.3	-7.0	4.5	22.4	27.7
San Diego	2,498	1,111	37.1	34.2	25.6	26.8	49.2	40.7
Phoenix	2,122	983	55.4	40.6	35.2	24.5	85.8	58.3
Denver	1,848	468	30.7	14.2	-4.3	-5.1	55.6	22.6

SOURCE: Compiled by William Frey, "The New Urban Revival in the United States," *Urban Studies*, vol.30, Nos. 4/5, 993.

FIGURE 3-2: Population Change in Central Cities and Metropolitan Areas

NOTE: Population figures for the largest 13 metropolitan areas in the Northeast and Midwest and the largest 12 in the South and West in 1990

SOURCE: U S Census Bureau, State and Metropolitan Area Data Book, 1991

percent) than in larger metros (3.8 percent), indicating that the nation's large metros are becoming more minority. ¹⁸

Inter-Regional Differences

In addition to differences in growth between different-sized metros, there have also been differences in growth between regions of the country. The West and the South have been gaining population and employment faster than the East and the Midwest for decades. Yet, there has been some lessening of differences between northeastern and midwestern metros and so-called Sunbelt metros in the Southeast, Southwest, and West. Importantly, many large metros in the North and Midwest reversed the decline in population of the 1970s in the 1980s. Large metros in the South and West continued, however, to grow faster than those in the North (see figure 3-2). Still, employment growth in the 1980s favored metropolitan areas of the South and particularly the West, while employment growth in the Northeast and Midwest was 94 and 93 percent, respectively, of the national average. ¹⁹

However, such simple North-South or coast-heartland dichotomies appear to be becoming less critical as some southern and coastal metropolitan areas (e.g., Los Angeles, Houston, Boston) that appeared to be immune to recession have undergone cyclical and structural difficulties in the last decade, while some northern and interior cities remain healthy or have rebounded to some extent (e.g., New York in the 1980s, Minneapolis, Columbus). Places that did well in the '80s, such as California and Massachusetts, grew slower in the '90s, and some midwestern metros are growing rapidly. Between 1990 and 1994, the Midwest reversed a decade of slow workforce growth, and grew as fast as the nation as a whole (4 percent). The Northeast, however, continued its pattern of slower employment, actually losing 1.3 percent of

¹⁸ The Asian Population more than doubled from 3.5 to over 7 million. Hispanics grew by more than half—from 14.6 million to 22.3 million. Blacks, numerically the largest minority, increased by 3.5 million over the 1980s, to almost 30 million people. Frey, op. cit., footnote 8.

¹⁹ Economic Research Service, op. cit., footnote 11.

its employed workforce.²⁰ These regional growth patterns have varied for a number of reasons, including: changes in defense spending, which tended to be concentrated along the coasts;²¹ changes in the value of the dollar which disproportionately affects places dependent upon trade, such as the industrial Midwest; and changes in energy and natural resource prices, which affect many western and mountain areas.

One reason for the growth of population in coastal locations in the 1980s is that many of the large coastal metros—New York, Los Angeles, San Francisco, Miami, and Houston—were ports of entry for immigration from Asia, Africa, the Caribbean, and Central and Latin America, accounting for 43 percent of national minority growth. Twenty percent of the nation's 1980s total minority population growth—a 2.8-million increase—occurred in the Los Angeles metro, then home to 12 percent of the nation's total minority population. New York's minority population increased by 1.4 million.²²

■ Central City and Older, Inner Suburban Economic Trends

The 1980s growth of large metropolitan areas is not synonymous with, but is nonetheless related to, the fate of historic core cities. Whereas most of the 40 largest metropolitan areas grew (on average 1.9 percent), half of the central cities continued to decline in population. However, of the 18 central cities that lost population in the 1970s, four—New York, Boston, San Francisco-Oakland, and Seattle—grew in the 1980s, and all of the other 14

cities, except Denver, lost population at a slower rate than in the earlier decade (see table 3-2). Many other cities have lost population. Of the 196 cities in the United States with more than 100,000 residents in 1990, 65 lost population since 1970. For example, since 1970, the population of Richmond, Virginia, declined from 250,000 to just over 200,000, while the total population in the metropolitan region increased from 676,000 to 866,000.²³ Overall, population of the 25 largest American cities in the 1980s grew annually by a modest 0.5 percent, compared with a 5.3 percent decline in the 1970s; and the top 40 cities grew 3.3 percent in the 1980s, compared with a 3.0 percent decline in the 1970s. The share of U.S. population living in the largest 25 central cities declined from approximately 18 percent in 1950 to 13 percent in 1990.

Metros with minimal population growth generally had declining central city populations, while the central city population of most growing metros held steady or grew as well.²⁴ One study of the 60 largest metropolitan areas found that between 1970 and 1987, suburban population growth rates were higher in metros with higher central city population growth, and central city populations grew faster if suburban jurisdictions were also growing faster.²⁵

Total central city populations in the largest 13 Northeast and Midwest metros declined each decade from 1950 to 1990 (figure 3-2), and metropolitan population rose sharply during the 1960s and then plateaued from 1970 to 1990. In contrast, the central cities in the South and West have had slow

²⁰ Ibid.

²¹ U.S. Congress, Office of Technology Assessment, *After the Cold War: Living With Lower Defense Spending*, OTA-ITE-524 (Washington, DC: U.S. Government Printing Office, February 1992).

²² Frey, op. cit., footnote 8.

²³ U.S. Census Bureau, op. cit., footnote 7.

²⁴ Growth in these latter cities may be due in part to the fact that many of these cities are what David Rusk refers to as elastic cities that have grown through annexation to incorporate new areas of development. David Rusk, *Cities Without Suburbs* (Baltimore: Johns Hopkins Press, 1994).

²⁵ Peter D. Linneman and Anita A. Summers, "Patterns and Processes of Employment and Population Decentralization in the U.S., 1970-1987," Wharton Real Estate Center Working Paper #106, October 1991.

population growth (figure 3-2). However, some of these central cities of the South and West grew by annexation, thus making it appear as if their central areas gained population, when in fact they have not.²⁶

A number of factors are involved in explaining population loss in some cities, including: smaller household size; increased commercial space in the CBD that displaces population; and abandoned or vacant land, for which precise data are often unavailable. Recent studies discuss the increasing number of single persons, childless couples, or single-parent households that now comprise the populations of core cities.²⁷ Household size in the largest 40 metros decreased over the 20-year period by 16.5 percent, but housing units increased by 28 percent, indicating that fewer people occupied more housing. Perhaps the most interesting aspect of these data, however, is that core counties in the Detroit, Cleveland, St. Louis, Baltimore, Pittsburgh, Buffalo, Hartford, and Rochester metros lost population and housing units, indicating that many housing units were not in use or were abandoned. For example, in Philadelphia, where population declined by 23 percent from 1950 to 1990, there were 27,000 vacant residential structures and 15,800 parcels of vacant land, most of which were abandoned.²⁸

The difference between central city and suburbs is not always stark. In fact, many older, inner suburbs have also lost populations and jobs. Moreover, some suburbs, particularly outer suburbs, have grown quickly in housing and employment, some of it in clusters of offices referred to as

edge cities, while others, particularly older, inner suburbs, have not grown. Of 3,000 suburban jurisdictions in the largest 60 PMSAs, the range of differences between one suburban area and another was extreme—e.g., employment growth rates between 1980 and 1986 as high as 106 percent and as low as negative 47 percent, with 27 percent of suburban communities losing employment from 1980 to 1986.²⁹ A 1987 HUD study indicates that even in revived or prosperous metropolises like Boston and Los Angeles there were many suburbs—perhaps 30 percent—in decline.³⁰

There are generally two kinds of economically troubled suburbs. First, many places defined as suburbs are in fact older, somewhat smaller, industrial towns and cities now part of much larger metropolitan areas: characteristically, they have a high incidence of considerable poverty, unemployment, and abandoned and aging housing. Many of these older suburban cities with declining manufacturing-based economies, such as Camden and Patterson, New Jersey; East St. Louis, Illinois; Gary, Indiana; and Hamtramck, Michigan, are in as bad or even worse shape than parts of the inner central city. Second, there are also older inner suburbs to which, for a variety of reasons, new industry has not moved and that have attracted many low-income residents. Such suburbs are often places in which persons leaving ghetto neighborhoods in the inner city “spill over” into proximate suburban jurisdictions. In both cases, these suburban jurisdictions often lack the resources to adequately deal with the problems facing them.³¹

²⁶ Rusk, op. cit., footnote 24.

²⁷ L.S. Bourne, “Close Together and Worlds Apart: An Analysis of Changes in the Ecology of Income in Canadian Cities,” *Urban Studies*, vol. 30, No. 8 (1993), pp. 1293-1317. Bourne discusses the inner city as place with high concentration of elderly, young, and single-parent households.

²⁸ Philadelphia City Planning Commission, *Vacant Land in Philadelphia*, January 1995.

²⁹ Linneman and Summers, op. cit., footnote 25.

³⁰ Scott A. Bollens, “Municipal Decline and Inequality in American Suburban Rings, 1960-1980,” *Regional Studies*, vol. 22, 1988, pp. 277-285.

³¹ Ibid.

Central City Economies

Central cities that increased in population in the 1980s tended to be those that had managed a successful transition from an older industrial economy to an advanced service economy via specialization as locations for corporate headquarters; finance, insurance, and real estate (FIRE); and related producer services (e.g., law, advertising, and hotels). This was especially the case for so-called global cities (e.g., New York, Los Angeles, San Francisco, Chicago) that served as command and control centers for global corporations and for operations of global financial institutions and related businesses,³² but also cities such as Boston, Dallas, Minneapolis, Seattle, and San Jose, whose regions specialized in high-tech manufacturing. As discussed below and in chapter 9, the mismatch between the types of jobs in these advanced service cities and the skills of the local labor force, who are often not well suited to the needs of this economy, has increased in many places. Older cities in regions where transition to these service and high-tech manufacturing sectors did not advance, or was not sufficiently centralized, tended to continue declining.

Most central city economies can be divided into two components, the Central Business District (CBD) and the rest of the central city (RCC). The definition of the inner city is sometimes also used to refer to areas with high minority and poverty concentrations in the central city. During the 1980s, employment in the CBD of most central cities grew slowly at about 1 percent annually, compared to 3.4 percent for suburbs.³³ While manufacturing and retail employment declined in the CBDs of the largest 60 metropolitan areas be-

tween 1976 and 1986, FIRE and business services grew, and as a result, total employment grew.³⁴

The RCC of many central cities grew faster in employment than CBD employment between 1976 and 1986. However, cities where the opposite was true tended to be larger and older cities (e.g., Chicago, Boston, Baltimore, Milwaukee, Philadelphia, Pittsburgh, St. Louis) that had experienced overall difficulties, but some CBD revival.³⁵ It does appear that the CBD and the RCC are in competition for jobs—as gains in CBD growth were correlated with losses in the RCC.³⁶

For example, a study of employment in metropolitan Milwaukee supports the view that the inner city and not the entire central city is the area of the metro which is most “at risk.” Manufacturing is still important to the entire Milwaukee metro (22.6 percent of jobs are in manufacturing) and especially to the inner city (31 percent of its employment base), but manufacturing jobs in the latter declined, and the best manufacturing jobs that are left are held by skilled employees, many of whom are older. Otherwise, most industries (e.g., FIRE, government) are underrepresented in the inner city, allowing the conclusion that “the inner city is not a very important source of metropolitan employment.”³⁷

In part because of their high costs of doing business, central city economies appear to be heavily dependent upon job creation through expansions or new startups, as opposed to attraction of new industry. Historically, central city economies have been sustained by their role as creators of new jobs (either through expansion or new firm startup), and when this function declines, the central city

³² See Mitchell Moss, “Telecommunications, World Cities, and Urban Policy,” *Urban Studies*, vol. 24, 1987, pp. 534-546.

³³ Linneman and Summers, op. cit., footnote 25.

³⁴ Given the difficulty in defining central city boundaries, developing data on employment change in CBDs is difficult. The Wharton data are among the most recent.

³⁵ Linneman and Summers, op. cit., footnote 25.

³⁶ Ibid.

³⁷ This section is based on a report prepared for the Office of Technology Assessment. Sammis White, *Changing Spatial Patterns of Employment Location: Milwaukee, Wisconsin, 1979-1994*, July 1995.

economy declines. For example, no new jobs were created in the Milwaukee CBD from 1979 to 1994 due to large firms moving in (2,700 were lost due to relocation outside the CBD), while the CBD created 6,600 jobs due to expansions and 381 from new firm formation.³⁸ For all firms, the city lost 30,000 jobs through movement to the suburbs alone, and gained approximately 11,500 from firms moving into the city. Similarly, in New York between 1976 and 1986, almost 160,000 jobs relocated out of Manhattan, while only 36,000 moved in, for a net loss of 120,000. For New York City as a whole, 163,000 jobs moved out, and 37,000 jobs moved in, for a net loss of 126,000. In contrast, over the same period Manhattan added 456,000 jobs from new startups and expansions, a large share of these in business services and FIRE.³⁹

Sectoral Change

Central-city economies are losing certain types of employment faster than others, and in the process are becoming more specialized in services in general, and advanced services in particular. They are generally losing blue collar jobs, including construction, particularly in the Northeast and Midwest.

Manufacturing is no longer an economic activity identified with the central city. Decline of manufacturing employment in high-cost urban areas, particularly in the Midwest and Northeast, is not new. However, its severity and speed is new. Between 1979 and 1994, manufacturing employment declined by 47,000 in the Milwaukee central city and inner-ring suburbs, but increased by 13,000 in outer-ring suburbs. In the 1980s, the 28 largest central counties of the Northeast and Midwest regions lost a total of nearly 1 million manufacturing jobs (see table 3-3 and figure 3-3).⁴⁰ A large share of manufacturing is now located in the outer suburbs and exurbs of major metropolitan areas.⁴¹ In the early 1960s such plants were generally located in central cities and inner suburbs, but as metro areas grew, manufacturing decentralized.

Wholesaling and retailing are two other major industrial sectors that were once predominantly urban, but now are primarily suburban. (see figures 3-4, 3-5, and table 3-4). In New York, for example, with retail-rich Manhattan at its core, two-thirds of all retail is located in the suburbs. In Milwaukee between 1979 and 1994, retailing and wholesaling jobs declined by over 11,000 in the central city, but increased by 28,000 in the sub-

TABLE 3-3: Employment Change in Largest Central Counties; 1980-90

Region	Total	Manufacturing	Services
Northeast/Midwest (28 counties)	1,634,000	-971,000	2,605,000
South/West (35 counties)	6,026,000	-17,000	6,043,000

SOURCE: John D. Kasarda, "Industrial Restructuring and the Changing Location of Jobs," *State of the Union: America in the 1990s, Volume 1: Economic Trends*, Reynolds Farley (ed.) (New York, NY: Russell Sage Foundation, 1995)

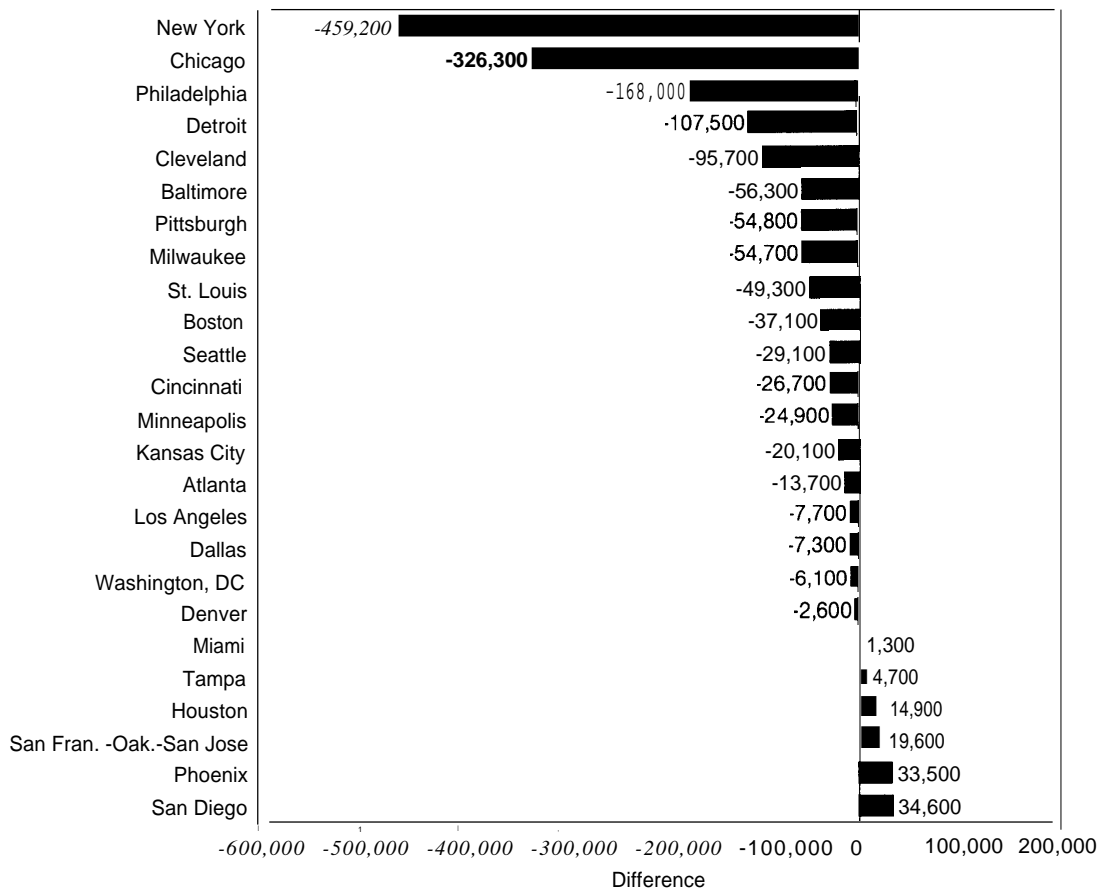
³⁸ One hundred and eighty-nine new jobs were created in the inner-city from industry attraction, while 1,225 were created from expansion and 1,730 from new firm formation. (Ibid).

³⁹ Stephen Leshinski and Apryl Priestly, memorandum, "Regional Employment Relocations" October 12, 1990, Port Authority of New York and New Jersey.

⁴⁰ John D. Kasarda, "Industrial Restructuring and the Changing Location of Jobs," in Reynolds Farley (ed.), *State of the Union* (New York, NY: Russell Sage Foundation, 1995), pp. 23-26.

⁴¹ Arthur C. Nelson, William J. Drummond, and David S. Sawicki, "Exurban Industrialization: Implications for Economic Development Policy," *Economic Development Quarterly*, vol. 9, No. 2, May 1995.

FIGURE 3-3: Central City Employment Change by Industry: Manufacturing (1967-1987)



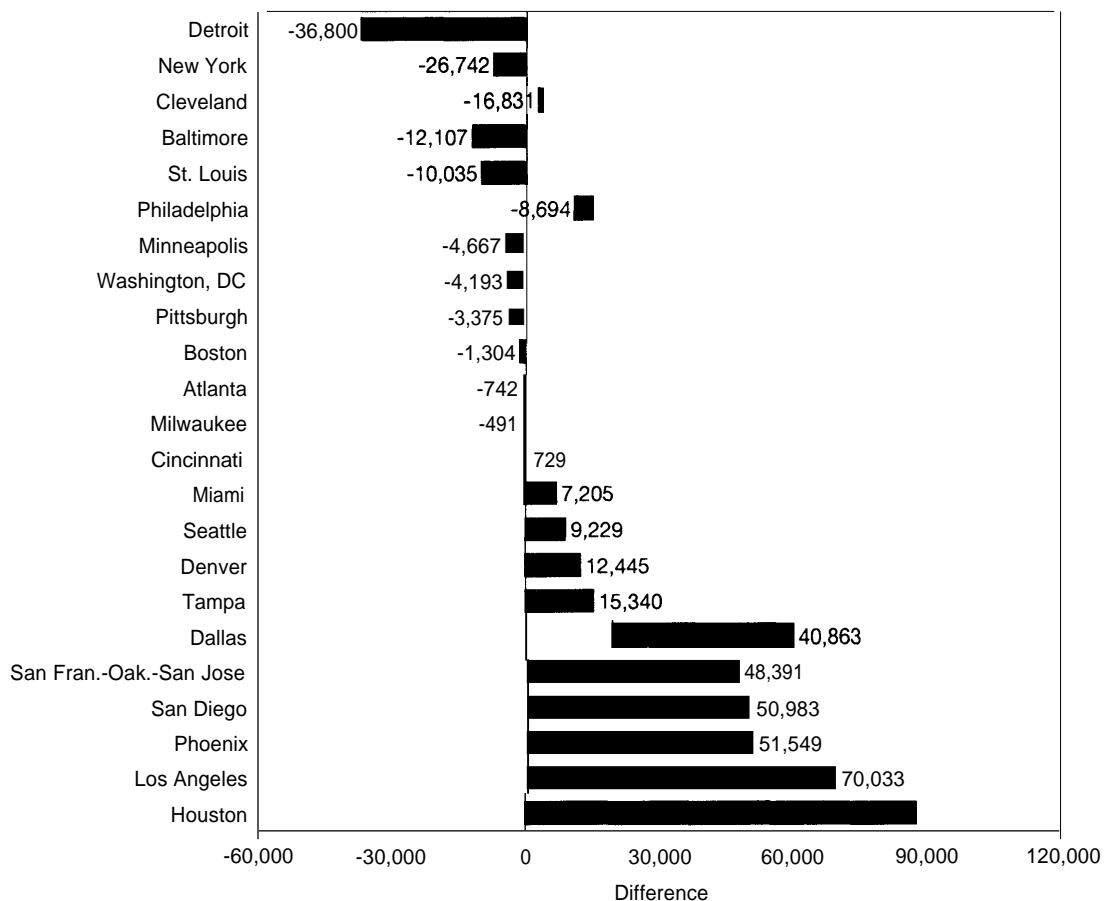
SOURCE: U.S. Bureau of the Census, City and County Data Book, 1974, 1994.

urbs, particularly the outer-ring suburbs.⁴² In part, retailing followed the market—when people moved to the suburbs, so did retailing. However, it was probably not until the 1980s that some large department stores, for example, closed their city flagship stores. Likewise, as a greater share of the population, generally consumers with higher incomes, moved to the suburbs, many consumer services became predominately suburban industries.

Wholesaling also moved to the suburbs, as discussed in chapter 5, in part to be near beltways and interstate highways and to gain access to larger parcels of low cost land (see table 3-4). During the past two decades, most of the growth in warehousing and distribution activity has occurred on the periphery of America's metropolitan areas, rather than in the urban core. For example, while overall employment in Manhattan grew by 8 percent

⁴²White, op. cit., footnote 37.

FIGURE 3-4: Central City Employment Change by Industry: Retail Trade (1967-1987)



SOURCE: U.S. Bureau of the Census, City and County Data Book, 1974, 1994. Data was unavailable for Chicago and Kansas City

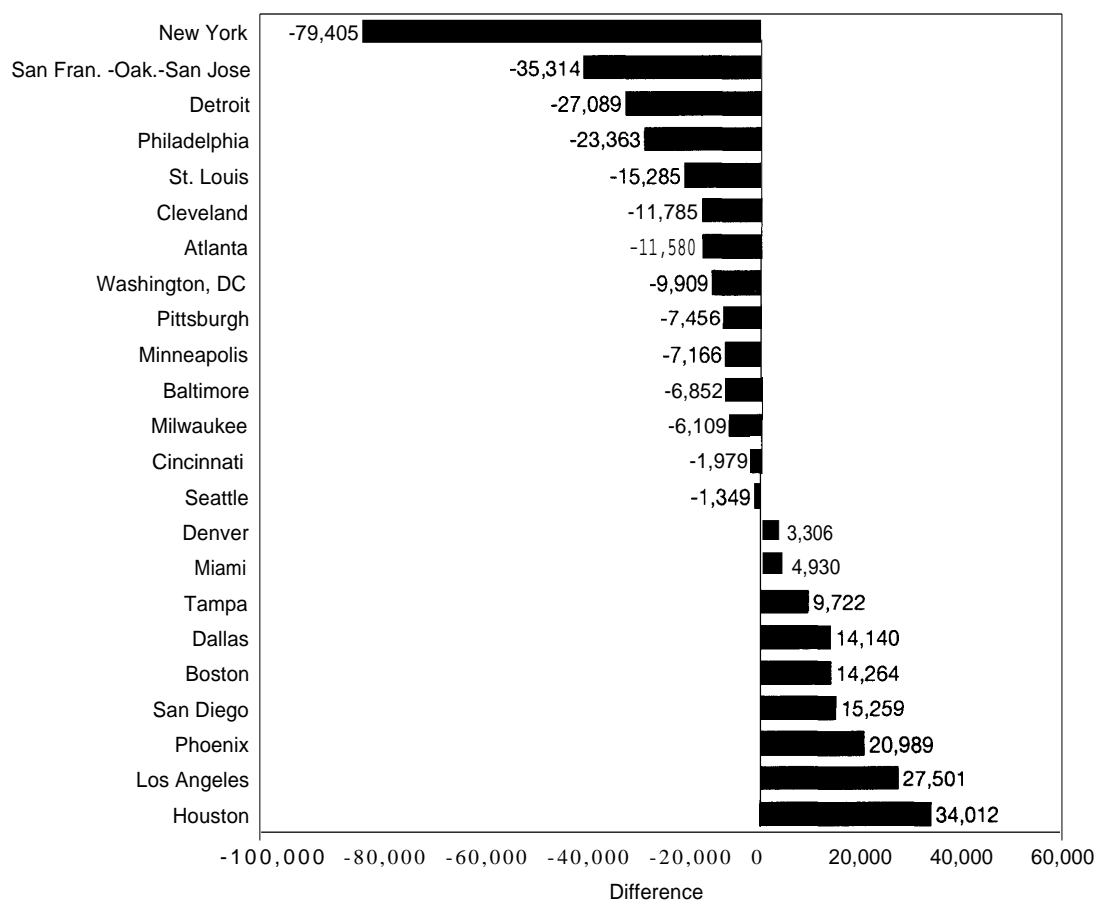
between 1979 and 1989, employment in wholesaling declined by 14 percent (see table 3-5). In the 26 counties surrounding the city, in contrast, wholesaling employment grew by 31 percent—a gain of more than 100,000 jobs.

As center cities lost industries like manufacturing, retail, wholesale, and consumer services, producer services in many places filled the gap (e.g., financial services, advertising, accounting,

law).⁴³ (See figure 3-6 and table 3-4.) Many of these industries rely upon face-to-face contact and the need to be near other industries or government agencies (e.g., many parts of the legal industry locate downtown to be near courts and government agencies that formulate and manage regulations). A major reason for the growth in producer services in central counties since the 1970s is that they were already specialized in industries, part-

⁴³ Producer services is a generic industrial category that also includes business services. Legal and financial services are also producer services. Business services include accounting, marketing, advertising, public relations, etc.

FIGURE 3-5: Central City Employment Change by Industry: Wholesale Trade (1967-1987)



SOURCE: U.S. Bureau of the Census, City and County Data Book, 1974, 1994 Data was unavailable for Chicago and Kansas City

icularly financial services and business services, that grew faster than the national economy.⁴⁴

The importance of producer services to the current and future economic viability of the central city cannot be underestimated. In 1984, the core counties of the 24 largest metros housed 66 percent of law offices with more than 50 employees,

75 percent of investment and securities offices with more than 50 employees, and 39 percent of all jobs in information-intensive industries (see figure 3-7). In nine major metros white-collar services constituted between 20-40 percent of central city economies in 1970, but as much as 40-60 percent of the these same economies in 1990.⁴⁵

⁴⁴For example, core counties of metropolitan areas over 1 million population gained 2.5 million jobs in producer services between 1974 and 1985, but 1.9 million of those jobs were due to the fact that these counties were already specialized in these fast-growing industries. See Amy Glasmeier and Marie Howland, *From Combines to Computers* (Albany, NY: State University of New York, 1995).

⁴⁵Kasarda, op. cit., footnote 40. The metros include New York, Philadelphia, Boston, Baltimore, St. Louis, Atlanta, Dallas, Denver, and San Francisco.

TABLE 3-4: Distribution of Employment Within Metropolitan Areas

Industry	SIC CODE	Percentage of employees in the metropolitan area working in the core county			Change in percentage share: 92-85	Change in core county employment (thousands)	
		1974	1985	1992		1974-92	1985-92
Museums, Zoos and Botanical Gardens	84	87%	83%	79%	-3.9	11	3
Security Brokers	62	91	85	78	-7.3	107	28
Air Transportation	45	87	75	78	3.1	82	58
Advertising	731	86	78	72	-5.9	17	-11
Legal Services	81	69	68	67	-1.0	211	90
Water Transportation	44	72	66	65	-1.5	-23	-16
Accounting	872	73	63	62	-0.9	106	51
Transportation Services	47	78	65	61	-3.9	45	13
Finance, Insurance, Real Estate-Administration	679	77	65	58	-7.7	-4	-31
Trans., Communication, Utilities-Administration	497	68	61	56	-5.0	-17	-42
Banking	60-61	67	64	56	-7.4	177	4
Real Estate	65	66	60	55	-5.1	52	-7
Educational Services	82	57	56	55	-1.1	213	68
Hotels	70	63	58	55	-3.7	76	10
Insurance Carriers	63	71	60	53	-6.9	-31	24
Communications	48	64	57	52	-4.7	-31	-29
Management and Public Relations	8740	63	53	50	-2.5	124	43
Membership Organizations	86	61	53	50	-2.8	122	66
Services Administration	899	76	53	49	-4.2	46	27
Total Administration		65	55	49	-5.4	-116	-212
Health Services	83	54	50	49	-1.0	983	567
Wholesale Trade	50	64	55	49	-5.4	78	-40
Social Services	83	59	51	48	-2.4	217	100
Electric, Gas and Sanitary Services	49	62	53	48	-5.5	2	-2
Trucking & Warehousing	42	61	49	46	-3.4	-26	12
Engineering & Architectural	871	58	49	43	-6.0	89	16
Manufacturing	20-39	54	47	43	-2.0	-1,550	-775
Construction	15-19	52	43	40	-2.8	-168	-122
Retail	53-59	51	44	41	-2.7	405	80
Computer & Data Processing	737	53	41	33	-7.8	113	29

NOTE Data are for 15 of the 25 largest metropolitan areas: Atlanta, Baltimore, Boston, Chicago, Cleveland, Dallas, Denver, Detroit, Houston, Los Angeles, Minneapolis, New York, Pittsburgh, and San Francisco-Oakland-San Jose, Washington, DC.

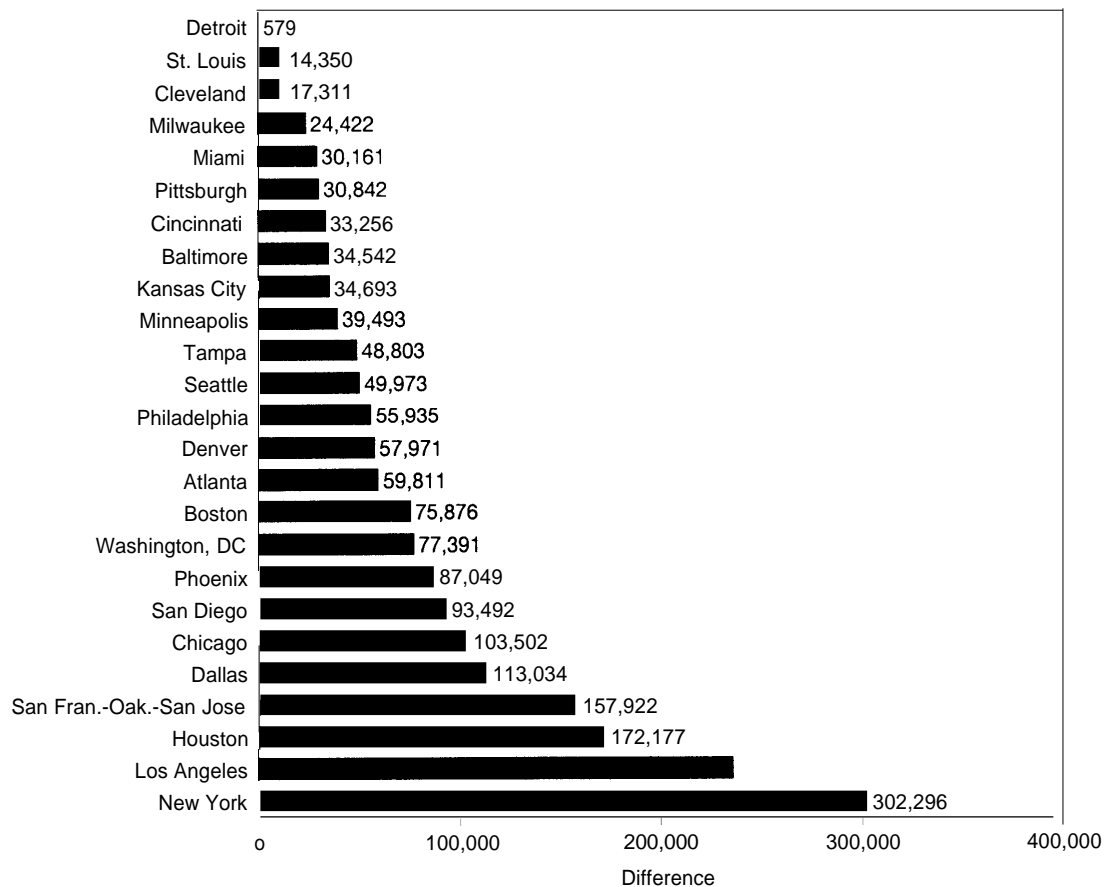
SOURCE: U.S. Census Bureau, County *Business Patterns* 1974, 1985, 1992.

TABLE 3-5: Wholesaling Employment in the New York Region

	1979	1989	Percent
Manhattan	190,800	163,500	-14,3
Other boroughs	88,5000	90,000	1.7
Inner suburbs	161,700	190,300	17,7
Intermediate suburbs	118,100	169,700	43,7
Outer suburbs	69,100	97,200	40.7

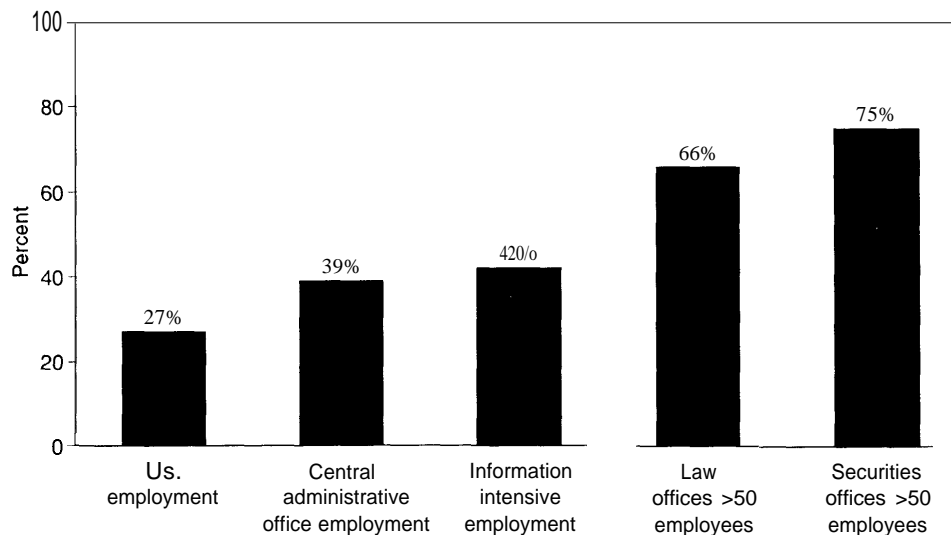
SOURCE Data from U.S. Department of Commerce, Bureau of Economic Analysis.

FIGURE 3-6: Central City Employment Change by Industry: Taxable Services (1967-1987)



SOURCE U S Bureau of the Census, City and County Data Book, 1974, 1994.

FIGURE 3-7: Share of Total U.S. Employment in Core Counties of the 24 Largest Metros for Selected Sectors, 1984



SOURCE: M.P. Drennan, "Information Intensive Industries in Metropolitan Areas of the United States of America," *Environment and Planning A*, vol. 21, No. 12, 1989

However, particularly in core counties of larger metros, the rate of growth is slower than in the suburbs or mid-size metros even though employment in producer services has grown in central cities. Between 1974 and 1985, core counties of the largest 40 metros gained 2.5 million producer services jobs, but they would have to gain an additional one million to keep pace with growth in the rest of nation.⁴⁶ In fact, the fastest growth in producer services has been in the suburbs, and often in cities of 25,000 to 49,999 that are located within metropolitan areas—i.e., in suburban cities that are part of larger MSAs.⁴⁷

Some of this gain is due to relocations. For example, while central cities housed approximately 42 percent of corporate headquarters in 1984, by

the early 1990s this number had decreased to 29 percent, as many corporate headquarters relocated to the suburbs or to smaller metros (see table 3-4).⁴⁸ The most famous relocation is probably that of Sears, which in the late 1960s built the world's tallest building as its central Chicago headquarters, and then in the late 1980s moved its Merchandise Group to Schaumburg, a northwestern Chicago suburb, leaving much of the Sears Tower empty. Over one-quarter of new employment in the New Jersey suburbs of New York in finance, insurance, and real estate between 1976 and 1986 was due to relocations out of Manhattan.⁴⁹ In addition to the relocation of some more complex functions outside the core, many routinized functions of producer service industries—so-

⁴⁶ Glasmeier and Howland, op. cit., footnote 44.

⁴⁷ Marie Howland, "Producer Services," *Economic Development Commentary*, Fall 1991, p. 7.

⁴⁸ Thomas Stanback, *The New Suburbanization: Challenge to the Central City* (Boulder, CO: Westview Press, 1991).

⁴⁹ Memorandum, Stephen Leshinski and Apryl Priestley, "Service Sector Study Update: Manhattan Job Generation," Port Authority of New York and New Jersey, July 25, 1990.

called “back-office” operations that do not require the face-to-face contact provided by the core—are often located in the suburbs to avoid the higher transaction costs of the central city.

The loss of intrametropolitan share is a cause of concern, particularly since the loss of manufacturing, wholesaling, and retailing has made producer services the mainstay of the center city’s economy. This loss may mean that the central city is slowly losing the very economic activities upon which its economy has depended for the last 30 years. If this is true, it would be a clear indicator of core city decline. As discussed in chapters 4 and 5, the rise of information technologies (such as e-mail, faxes, video-phones, and networking) is likely to have a decentralizing effect on many producer service sectors, enabling many firms to move out of high-cost, congested cores to the suburbs where they are closer to their workforce. It may mean that the suburbs are growing much faster than central cities, and that economic functions heretofore concentrated primarily in the central city are now distributed throughout the metropolitan area.

But the decentralization of some kinds of producer services may not necessarily denote the economic autonomy of the suburb, nor its independence from the central city for some kinds of specialized business services. One study of corporate service linkages in New York, Los Angeles, and Chicago suggests that even where central administrative or corporate headquarters have relocated to the suburbs, they still rely on world-class producer services located in large center cities.⁵⁰ It is not clear whether this relationship holds true for other large cities. Another study of 60 metro areas for two different periods (1976-80 and 1980-86) concluded that suburban employment growth translated into city employment growth and continues to do so, “probably because suburban employment utilizes the services of cen-

tral city-based agents such as banks, lawyers, accountants, and consultants.”⁵¹ In contrast, the study found that while central cities benefit from employment expansion in the suburbs, suburbs now benefit less from employment expansion in the central city. This study’s conclusion and the above discussion of corporate linkages in New York, Chicago, and Los Angeles are only apparently contradictory, in that it is quite possible for suburban employment to exceed that of the center city in a variety of sectors, but still depend on the center city for some kinds of specialized business services. This, indeed, is what appears to be the case, and it indicates the subtle and complex character of the present relation between cities and suburbs.

In addition to producer services, three other industries help support many central city economies. First, cultural and educational institutions, including museums, zoos, universities, teaching hospitals, and medical centers, all have important historical associations with the center city and often find it difficult to move (though some cultural institutions are beginning to establish suburban branches) (see table 3-4). Major university medical centers and hospitals located in central cities further enhance the picture of the central city as a place that specializes in the kind of information and know-how essential in today’s economy; and there are many attempts not only to stress the important medical and research capacities of university teaching hospitals, but also their potential contribution to the economy in the form of commercially profitable ventures in bio-chemistry and bio-medicine. For example, both Pittsburgh and Baltimore have made much of their teaching hospitals (University of Pittsburgh Medical Center; Baltimore’s Johns Hopkins and the Maryland General hospital) in developing an economic development strategy for their respective cities. In Milwaukee, one of the only sectors to add jobs

⁵⁰ Alex Schwartz, “Corporate Service Linkages in Large Metropolitan Areas: A Study of New York, Los Angeles, and Chicago,” *Urban Affairs Quarterly*, vol. 28, No. 2, 1992, pp. 276-296.

⁵¹ Linneman and Summers, *op. cit.*, footnote 15, pp. 41-42.

faster in the central city than the suburbs was hospitals.⁵²

Second, industries that reflect the role of the central city as a center of tourism and conventions (i.e., hotels and airports) are still important.⁵³ Tourism is a growing source of employment for many central cities, particularly those endowed with certain kinds of amenities, such as museums, zoos, and historic sites, that allow the city to sell itself as a place of amusement, pleasure, and recreation. During the 1970s and '80s, scores of central cities developed downtown shopping malls and new hotel complexes.⁵⁴

Third, for certain cities that are state capitals, have Federal or state installations or courts, or the national capital, government services are also important because government tends to stay in his-

torically established locations. For example, the Milwaukee CBD, as well as the downtowns in the six largest Ohio cities, specialize in government (as well as education and medicine).⁵⁵

Poverty and Race

At the same time that central city economies have lost blue collar jobs and gained producer services jobs employing a higher percentage of college educated workers who commute in from the suburbs, their populations have become poorer and increasingly minority (see table 3-6). As discussed in chapter 9, the economic decline of some urban core economies accompanied by the increased specialization in information-based services in most has contributed to the economic difficulties of the poor in central cities and inner

TABLE 3-6: Selected Statistics for 94 Large U.S. Cities^a

	1960	1970	1980	1990
Population as percent of U.S.	26.1%	22.5%	20.9%	20.1%
Percent minority population	18.9	24.1	37.1	40.1
Unemployment rate	5.5	4.7	7.3	8.1
Percent employed in manufacturing	25.3	22.1	17.4	14.0
Median family income as percent of U.S. median family income	106.7	100.4	92.6	87.5
Family poverty rate	17.2	11.0	13.6	15.1
Percent population in census tracts with more than 40% poverty	8.0	5.1	8.1	10.8
Female headed families with own children as percent of all families	7.9 ^b	10.4	13.8	14.5

^aBased on the 100 Largest MSA Central Cities in 1980 with the exception of Anchorage; Fort Lauderdale; Jackson, MS; Jersey City, Newark; and Amarillo for which tract-level data was not available in 1960.

^bEstimated.

SOURCE: U.S. Census data for 1960, 1970, 1980, and 1990, as compiled by John D. Kasarda, *Urban Underclass Database Machine Readable Files*, Social Science Research Council, New York, 1992 and 1993 (except as noted). Calculations by U.S. Department of Housing and Urban Development

⁵²The others were transportation services, security and commodity brokers, and legal services.

⁵³For a variety of interesting discussions concerning the center city "marketed" as a center of culture, tourism, entertainment, and education, see Gerry Kearns and Chris Philo, (eds.), *Selling Places: The City as Cultural Capital, Past and Present* (New York, NY: Pergamon Press, 1993).

⁵⁴Bernard J. Frieden, "The Downtown Job Puzzle," *The Public Interest*, vol. 97, Fall, 1989, pp. 71-86.

⁵⁵Richard D. Bingham and Deborah Kimble, "The Industrial Composition of Edge Cities and Downtowns: the New Urban Reality," Unpublished Paper, Maxine Levin College of Urban Affairs, Cleveland State University, 1994; also White, op. cit., footnote 37.

suburbs.⁵⁶ Metropolitan and urban economic decline contributes to increased poverty and unemployment rates.⁵⁷

Such sectoral changes are reflected in the transformation in educational levels of central city employees (regardless of place of residence). For instance, in Baltimore the proportion of jobs held by those without a high school diploma decreased from 48 to 15 percent between 1970 and 1990. The proportion held by high school graduates increased slightly from 29 to 32 percent. But both those with some college and college degrees increased from 10 to 26 percent and from 12 to 27 percent, respectively.⁵⁸ In a sample of 10 cities the number of jobs held by people with less than a high school diploma declined by 602,000 while those jobs held by college graduates increased by 1,126,000.⁵⁹ (See box 3-1.) These central city jobs are increasingly filled by suburbanites where educational attainment is higher. Stanback, looking at the four largest U.S. cities, found that educa-

tional attainment was somewhat lower than in the suburbs in New York, Los Angeles, Chicago, and Philadelphia, with about a 10 percent difference in share of the population with more than two years of college.⁶⁰

These changes also appear to be related to increases in unemployment rates in central cities. Unemployment among both white and black males without a high school degree increased in central cities between 1968 and 1992, but was most pronounced for blacks. For example, for black males aged 16 to 64 out of school, without a high school degree, and living in the central cities of 22 of the largest metropolitan areas, depending on the census region, unemployment increased from between 13 to 26 percent in 1968-70, to between 52 to 63 percent in 1990-92.⁶¹ For those with a high school degree but no college, the rates increased from between 11 and 13 percent in 1968-70 to 22 to 43 percent in 1990-92. In other words, in many

⁵⁶ Timothy J. Bartik, *Economic Development and Black Economic Success*, Upjohn Institute Technical Report No. 93-001 (Kalamazoo, MI: Upjohn Institute for Employment Research, January 1993), p. 6. Black concentration in slow-growing metros, Bartik argues, may help to explain disparities in income and economic opportunity between blacks, other minorities, and whites.

⁵⁷ "Poverty in Urban Neighborhoods," in *The Urban Institute Policy and Research Report* (Fall 1993), pp. 11-13. Mark Alan Hughes makes the similar argument that ghettos are not rooted in racial or ethnic differences, but in structural conditions relating to metropolitan decentralization that impact certain inner-city neighborhoods in extreme ways, denuding them of economic and social vitality and creating an environment of "isolated deprivation." See Mark Alan Hughes, "Formation of the Impacted Ghetto: Evidence from Large Metropolitan Areas, 1970-1980," *Urban Geography*, vol. 11, No. 3, 1990, pp. 265-284. Hughes identifies white ghettos in Cleveland's inner city that suffer from the same deprivation and for the same reasons as black ghettos.

⁵⁸ By comparison, for the country as a whole: the proportion of jobs held by those without a high school diploma fell from 36.1 percent to 13.3 percent over the same period; those with a high school diploma increased slightly from 38.1 percent to 39.2 percent; those with some college increased from 11.8 to 20.8 percent; and those with a college degree increased from 14.1 percent to 26.5 percent. What this shows is that the number of jobs for people without a high school diploma dropped much more precipitously and the number of jobs for those with some college increased to a greater extent in Baltimore than in the U.S. as a whole.

⁵⁹ The 10 cities surveyed are Baltimore, Boston, Chicago, Cleveland, Detroit, Los Angeles, New York, Philadelphia, St. Louis, and Washington, DC. Kasarda, op. cit., footnote 40.

⁶⁰ Stanback, op. cit., footnote 48.

⁶¹ If adjusted for periods of the business cycle, actual rates of increase in employment may be somewhat smaller given that 1990-92 was a period of recession, and 1968-70 was a period of economic growth. John Kasarda, "Industrial Restructuring and Changing Job Locations," draft chapter, forthcoming in "Industrial Restructuring and the Changing Location of Jobs," in Reynolds Farley (ed.), *State of the Union* (New York, NY: Russell Sage Foundation, 1995), pp. 23-26.

BOX 3-1: Economic Change and the District of Columbia

There is growing concern among many federal policymakers about the fiscal crisis and weakened economy of the District of Columbia. The evolution of the District's economy is representative of the changes that have occurred in many urban economies in the last decade. Two larger economic trends have affected the health of many U.S. cities: the shift of economic opportunities from one region to another, and the shift of people and jobs from central cities to outlying suburbs. It is the latter that has played a role in the difficulties the District faces.

In fact, the region's population grew 23 percent (815,000) between 1980 and 1991, ninth fastest of the largest 20 metropolitan areas in the country. Region-wide employment grew 2.7 percent between 1989 and 1994, and in 1991 the region had the second lowest unemployment rate of these 20 metropolitan areas.

The second trend—the shift in jobs and populations outward from core cities to outlying suburban location—has affected virtually all metropolitan areas including Washington's. Yet, unlike many central cities of large metropolitan areas, the District gained jobs in the 1980s (10.8 percent increase). However, jobs in the suburbs increased by 51.5 percent, or approximately 775,000 jobs. As a result, the District's economy has become a smaller component of the region's economy, with employment declining from 44 percent of the metropolitan economy in 1970 to 30 percent in 1988 to 28 percent in 1994 (see table A). Since 1989, however, the District has lost jobs. From 1989 to 1994, the District lost 27,000 jobs, while the region as a whole gained 61,000 jobs. Virtually all of the District's job loss was in the private sector, although this is likely to change as the federal government downsizes.

TABLE A: Employment Changes in the District and the Region

	1989	1994	Growth rate, %	Change in jobs
Total jobs—District	695,000	667,900	3.9	-27,000
Total jobs—region	2,281,000	2,343,000	2.7	61,700
Government jobs—District	276,500	275,000	-0.5	-1,500
Government jobs—region	595,000	622,300	4.5	26,800
Private jobs—District	418,000	392,000	-6.1	-25,500
Private jobs—Region	1,610,000	1,720,000	2.1	34,900

SOURCE: Bureau of Labor Statistics, *Employment and Earnings*, 1990 and 1995.

Shifting Occupational Structure

Not only has the District lost jobs since the late-1980s, its employment structure has shifted significantly. From 1980 to 1990 jobs in the District held by high school dropouts declined by 25 percent while those held by college graduates increased by 43 percent. The proportion of job holders in the District without a high school degree declined from 23 percent in 1970 to 7 percent in 1990, while those with college experience increased from 46 percent to 72 percent.¹ Jobs in the District increasingly require higher levels of educational attainment.

While some of the improvement in educational levels of city job holders is due to increases in better educated District residents, much of the increase in college jobs was absorbed by suburban commuters. As a result, less educated District residents, particularly minorities, fell farther behind. Among 10 large central cities, the District has the highest index of dissimilarity between the educational distribution of District jobs and the educational levels of District residents. While 72 percent of the District job

(continued)

¹ John D. Kasarda, "Industrial Restructuring and the Changing Location of Jobs, *State Of the Union: America in the 1990s, Volume 1: Economic trends*, Reynolds Farely (ed.) (New York, NY: Russell Sage Foundation, 1995).

BOX 3-1: Economic Change and the District of Columbia (Cont'd.)

TABLE B: Educational Requirements of District Jobs and Educational Attainment of District Residents

	Educational distribution (percent)			
	High school	High school graduates	Some college	College graduates
Jobs	7	21	25	47
White residents	2	7	14	78
Black residents	26	40	20	14
Hispanic residents	50	21	10	19

SOURCE: John D. Kasarda, "Industrial Restructuring and the Changing Location of Jobs," *State of the Union: America in the 1990s, Volume 1: Economic trends*, Reynolds Farely (ed.) (New York, NY: Russell Sage Foundation, 1995)

holders have some college experience, only 34 percent of black District residents, who accounted for 65 percent of the population in 1990, have some college experience (see table B).

There are three reasons for the increasing education mismatch between minority District residents and District jobs. First, improvements in education levels for District minorities have not kept pace with education levels of whites. Second, jobs in the District as well as nationwide have required more education,

Third, relative to the rest of the region's economy, the District has been gaining higher skilled jobs and losing lower skilled jobs. For example, the sectors employing the most people in the District include legal services, education, membership organizations, social services, and health services, which all employ high levels of managers, professionals, technical, and sales staff. In fact, of the sectors in which the District increased its share of region-wide employment from 1985 to 1992, legal services, educational services, and health services, only the latter employed a moderate share of lower-skilled workers (table C).

In contrast, jobs that might employ lower skilled District residents at relatively good wages, such as manufacturing, wholesale trade, and transportation and utilities, have been declining, in part because the suburbs, and particularly the distant suburban counties such as Loudon, Prince William, and Frederick counties, are gaining jobs as these sectors spatially disperse.

Population Loss

The District has lost more than 53,000 residents between 1980 and 1992, a loss of over 8 percent. In 1960, the District's population was 37 percent of the region's population; in 1994 its percentage of the region's population was 15.5 percent.

The District's population is not only declining, but has recently also been getting poorer. While the percentage of the population classified as in poverty declined from 19.4 percent in 1985 to 16.5 percent in 1991, it increased to 18.5 percent in 1992. Middle-class people of all races and ages from 25 through 65 are leaving the city. Nearly 25 percent of the District's households had incomes less than \$15,000 annually, and nearly 40 percent less than \$25,000 annually, reflecting in part the large share of female-headed single-parent households, elderly persons over 65, and single-person households in the District. Fifty-three percent of the District's children, even when not classified as below the poverty line, live in poverty areas, and half of the persons (49,000) afflicted by poverty are in long-term poverty, i.e., they have been poor for eight or more years.

(continued)

² Ibid.

BOX 3-1: Economic Change and the District of Columbia (Cont'd.)

TABLE C: Sectoral Composition of the District Economy

Percentage of jobs in the metropolitan
area located in the District

	1974	1985	1992	
% of region's private sector jobs	%	%	%	Jobs
Total	34%	26%	23%	
Legal services	68	69	72	29,600
Educational services	73	68	69	37,900
Membership organizations	73	60	53	41,100
Hotels	56	48	44	14,500
Social services	61	47	41	17,800
Health services	18	31	37	61,700
Services to buildings	53	42	31	10,300
Management and public relations	40	28	26	13,200
Real estate	46	36	24	11,200
Communications	38	29	21	10,100
Banking	35	33	19	9,700
Retail	24	17	14	49,200
Manufacturing	24	17	10	13,800
Wholesale	31	13	10	7,800
Total private sector jobs	309,000	364,000	407,000	

SOURCE: U.S. Census Bureau, *County Business Patterns*, 1974, 1985, and 1992

The District also performs poorly on a wide range of socio-economic indicators. Of 31 central cities studied in 1989, the District ranked 26 out of 31 with respect to infant mortality, 13 out of 31 in regard to crime, 11 out of 31 in regard to per capita income, 20 out of 31 concerning per capita tax revenues, and 26 out of 31 with respect to per capita expenditures.

large cities over 40 percent of black males with no college education are unemployed.

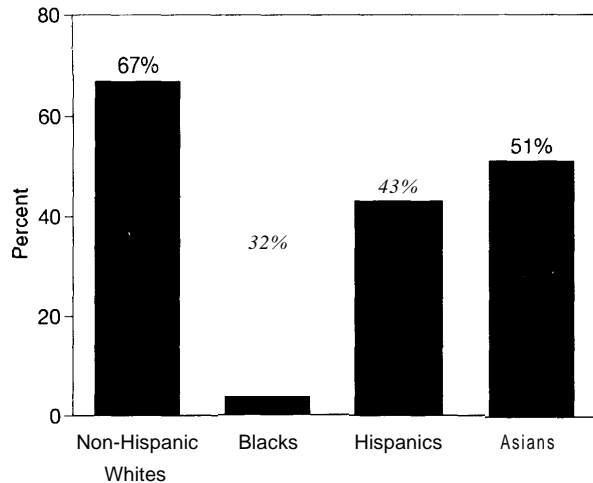
Though there are many difficulties in measuring poverty,⁶² it is clear that both poverty and

ghettoes are growing in America and America's cities. The number of people in poverty increased from 29 million in 1980 to 39 million in 1993.⁶³

⁶²The principal difficulty is that most measurements of poverty rely on the national Consumer Price Index (CPI), which does not take into account regional and local variations in standard of living. For example, people in New York City who make considerably more money than people living in Atlanta may in fact be worse off because of the high cost of living in New York as opposed to Atlanta. The national CPI cannot account for all these variations, so it may appear, for example, that there are fewer people in New York "below the poverty line," whereas in fact, because of the actual rather than statistical CPI, more people in New York are in poverty. Moreover, on occasion elements that makeup the national CPI are understated or overstated. Between 1970 and 1980 the increase in the cost of home ownership and general price levels were overstated (by about 6.5 percent), which caused the poverty rate to be overestimated by about 11 percent, or an additional 1.5 percent of the population was determined to be below the poverty line. An additional problem is that comparing poverty data over time is complicated by changes in the boundaries of census tracts and metropolitan areas. See John Weicher, "Measuring Poverty and Progress," *Cato Journal*, vol. 7, (Winter, 1987), pp. 715-730.

⁶³General Accounting Office "Community Development: Comprehensive Approaches Address Multiple Needs but Are Challenging to Implement," (Washington, DC: U.S. General Accounting Office, February 1995).

FIGURE 3-8: Proportion of U.S. Metropolitan Population Residing in Suburbs (1990)



SOURCE: William H. Frey, "Minority Suburbanization and Continued 'White Flight' in the U.S. Metropolitan Areas: Assessing Findings from the 1990 Census," *Research in Community Sociology*, Vol. 4, 1994, pp. 15-42.

Of the 40 largest cities, 29 had poverty rates in 1990 above the national average and 11 of these have rates 1.5 times greater. A slightly larger percentage of whites, blacks, Hispanics, and Asians were poor in 1990 than in 1980, while the poverty rate in the largest 71 cities increased from 16.1 percent to 18.2 percent over the period.⁶⁴ Moreover, the poor are more concentrated in central ci-

ties than in suburbs. The central city poverty rate (18 percent) was approximately 10 percentage points higher than suburbs in 1990.

In addition to being concentrated in central cities, poverty is also concentrated within certain urban neighborhoods, variously described as poverty areas, poverty neighborhoods, or ghettos.⁶⁵ Not all those who are poor live in poverty neighborhoods or ghettos, and not all those who live in such neighborhoods are poor. Similarly, though poor blacks and/or poor Hispanics comprise the population most often residing in these areas, not all ghettos are minority ghettos.⁶⁶ However, the share of the black poor in metro areas who live in ghettos increased from 37.2 to 45.4 percent—indicating an increasing isolation of the black poor from the black and white middle class.⁶⁷

While minorities make up about one quarter of the nation's population, their share in central cities is considerably higher. (see figure 3-8) Eleven of the top 25 cities in the nation are "minority-majority" municipalities, and Dallas and St. Louis (49.6 percent and 49.9 percent minority population, respectively) are close to being minority-majority cities. Moreover, 22 of the central cities of the largest 25 metropolitan areas lost white population during the '80s.⁶⁸ For example, Chicago's white population declined 18 percent, Miami's 34 percent, and Detroit's 40 percent.⁶⁹

⁶⁴ Sue G. Neal and Harold L. Bunce, "Socioeconomic Change in Distressed Cities During the 1980s," *Cityscape*, Vol. 1, No. 1, August 1994.

⁶⁵ The various descriptions sometimes also determine how an area with a high concentration of poverty is defined — e.g., Weicher defines poverty neighborhoods as "contiguous census tracts, each having 20 percent of its population below the poverty line," whereas Jargowsky defines ghettos as places where at least 40 percent of the population is below the poverty line. See John C. Weicher, "How Poverty Neighborhoods are Changing," in Laurence E. Lyre, Jr. and Michael G.H. McGeary (eds.), *Inner-City Poverty in the United States* (Washington, D. C.: National Academy Press, 1990); and Paul A. Jargowsky, "Ghetto Poverty among Blacks in the 1980s," in *Journal of Policy Analysis and Management*, vol. 13, No. 2, 1994, pp. 288-310.

⁶⁶ Indeed, during the 1980s the number of neighborhoods with whites in the majority, and with poverty rates of at least 40 percent grew by 141 percent, whereas black poverty neighborhoods grew by only 49 percent. White ghettos have a high rate of growth because they start from a small base; of the 11 million persons who lived in urban ghettos in the United States in 1990, seven out of eight were members of minority groups, six million of these were blacks. Jargowsky, *ibid.*

⁶⁷ *Ibid.*

⁶⁸ Frey, *op. cit.*, footnote 8, table 7.

⁶⁹ *Ibid.*

■ Suburban and Exurban Economic Trends

The spatial form of U.S. metropolitan areas has evolved significantly in the last 20 years. The once standard view of cities as consisting of a major central business district, an inner ring of low-income residents, and an outer ring of more affluent suburban residents, no longer adequately describes most U.S. metros. Today the suburb, so defined, is rare. Residential development has extended even beyond the metropolitan periphery to low-density “exurban” locations. What were once bedroom suburbs have been replaced by a metropolitan area outside the central city that is increasingly urbanized, and, like the core, is a place not only for residences but for businesses and employment. Many people both live and work in the suburbs and rarely visit the central city; others still commute to the core for work, but find that other economic functions such as retail, personal, business, consumer, and social services are available in the suburbs. This suburban job growth has led some to argue that “downtown,” by which they mean a diversified center of economic activity that includes offices and retail, has relocated to the suburbs⁷⁰ or, specifically, to business and commercial centers in the suburbs known as “edge cities” that in some cases are larger than the central business district.⁷¹

Yet this picture needs shading: suburbs are still growing with respect to central cities, but at a slower rate. Outer suburbs and exurbs adjacent to and likely to become part of the metro area are

growing at the fastest rate, as might be expected given their available vacant land. And some inner suburbs are beginning to suffer from the same problems and the population decline that has long affected many central cities.⁷²

Population Growth and Density

Since the 1970s the majority of Americans in metropolitan areas have lived in the suburbs.⁷³ By 1993 the proportion of suburban to central city residents for the entire nation reached 63 percent to 37 percent,⁷⁴ in the top 25 metros 75 percent of the population resides in suburbs; and in the top 40 metros 71 percent is suburban.

In spite of growth, suburban population densities are still considerably below central city densities; however, over time, there appears to have been a slight evening out. In 1980, for example, the difference between central city densities and metro area densities for the largest 40 metros was approximately 10 to 1, whereas in 1990, with more or less the same land area but a higher metro population, the difference in density for the same group of cities was about 9 to 1.⁷⁵ This is due in part to the fact that some central cities have been losing population. For example, the population density in the city of Chicago fell from 16,000 persons per square mile in 1950 to 12,000 in 1990. But also densities in outer, established suburbs appear to be increasing as infill and multi-family homes increase. For example, population density tripled from 400 to 1,200 in Chicago suburbs from 1950 to 1990.⁷⁶ Between 1980 and 1990, popula-

⁷⁰ T.J. Baerwald, “The Emergence of a New Downtown,” *Geographical Review*, vol. 68, 1983, pp. 308-318.

⁷¹ Joel Garreau, *Edge City: Life on the New Frontier* (New York, NY: Doubleday, 1991).

⁷² Bollens, op. cit., footnote 30.

⁷³ Suburban residents outnumbered central city residents by 53 percent to 47 percent by the early 1970s.

⁷⁴ Frey, op. cit., footnote 8.

⁷⁵ In the 1970s, many metropolitan areas expanded through the addition of adjacent, often rural counties to the definition of the MSA. As a result, population densities decreased in the 1970s for many metros, as less dense areas were now included as part of the metropolitan area. Far fewer counties were added in the 1980s.

⁷⁶ Between 1980-1990, when population in the Chicago metro area grew by 1.6 percent, 90 units of local government in the city of Chicago or its inner suburbs lost 700,000 population, whereas 165 units of local government, all in the suburban or metropolitan exurban areas of the Chicago metropolis, gained one million residents (discussions with officials from the Northeastern Illinois Planning Commission, Chicago - October 1994).

tion density of the largest 40 metropolitan areas increased 14 percent, from 456 persons per square mile to 523.⁷⁷

However, exurban and satellite city development is increasing, as low-density development spreads outward from outer suburbs in metropolitan areas. The fastest growing sections of many metropolises are now the low-density exurban areas at furthest distance from the central city. A recent study of seven major metropolitan areas, Los Angeles, Boston, Minneapolis, Atlanta, Phoenix, Detroit, and Houston, concluded that in every case but one—Phoenix⁷⁸—the exurban areas of the metro grew much faster than either inner suburbs, outer suburbs, or the central city.⁷⁹ Similarly, between 1980 and 1990, satellite metros (smaller metropolitan areas adjacent to larger metros in consolidated metropolitan areas) grew faster in population (17.2 percent) than suburbs (13.8) or central counties of large metros (8.4).⁸⁰

This decentralization of residencies results in the physical size of metropolitan areas increasing, and because new development is low density, it results in a reduction of overall metropolitan population density. Measuring changes in population density is difficult, in large part because population and land area statistics are not collected for the actual developed area of a metropolitan area, but rather for a somewhat arbitrarily defined set of counties intended to coincide with development patterns. However, some metropolitan-specific information does indicate the extent of population

dispersion. For example, the Philadelphia area, with a population of 3.7 million that is only 100,000 larger than in 1960, is spread out over a land area 32 percent larger than in 1960, representing the development of 125,000 acres of open space. In Chicago, while the region's population grew only 4 percent, the residential land area expanded 50 percent.

Business Suburbanization

One reason for the exurban population increase is the increasing rate of business suburbanization, which lets workers live even farther out in cheaper homes. In the last two decades, an increasing share and variety of metropolitan employment has located in the suburbs (see table 3-4).⁸¹ The pattern of suburban business location is diverse and complex and differs from metro to metro and within metros. Businesses locate in metropolitan areas to take advantage of the benefits metros offer,⁸² but their precise location in the suburbs may result from a number of causes, including factor cost differentials (price of land and rent, taxes, etc.), labor supply, commuting patterns, the layout of roads and highways, etc.⁸³ High costs stemming from congestion in the core as well as an increasing ability offered by technology to gain from metropolitan-wide advantages (communications, labor supply, etc.), have led suburban locations to be increasingly cost effective (see chapter 4). For example, between 1976 and 1986, 123,000 jobs were relocated out of Manhattan, with about 55

⁷⁷ These measures, however, hold counties constant between 1980 and 1990 and may not include the newly developed area at the edge of the metros.

⁷⁸ Phoenix is one of those Sunbelt cities that still annexes its suburbs.

⁷⁹ Alden Speare, Jr., *Changes in Urban Growth Patterns, 1980-1990* (Cambridge, MA.: Lincoln Institute of Land Policy, 1993), pp. 15-16.

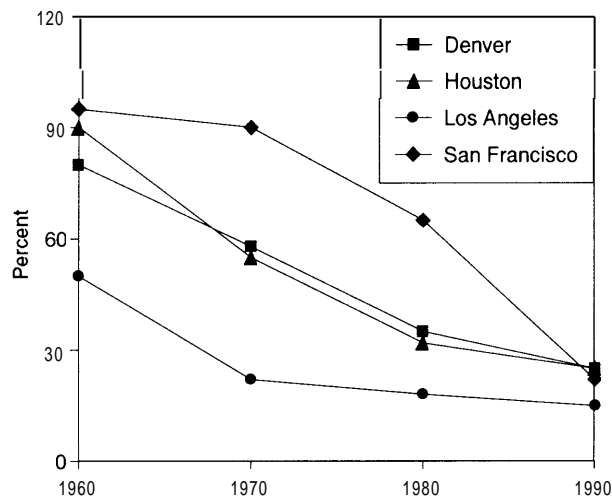
⁸⁰ Morrill, op. cit., footnote 6.

⁸¹ Stanback, op. cit., footnote 48.

⁸² In other words, they want to be near the conveniences, amenities, institutions, opportunities for learning, and information and infrastructure that can be found in metro areas (metro-wide or urbanized agglomeration effects), or they seek specifically to be near other firms that make or sell similar products and that are organized in industrial or business clusters. See Howland, op. cit., footnote 47; and Stanback, op. cit., footnote 48, esp. pp. 57-81.

⁸³ Gary Pivo, "The Net of Mixed Beads: Suburban Office Development in Six Metropolitan Regions," *APA Journal*, Autumn 1990, pp. 457-468.

FIGURE 3-9: Percent of Metropolitan Office Space Located in the Central Business District



SOURCE: Gary Pivo, "The Next Mixed Beads, Suburban Office Development Regions," *APA Journal*, (Autumn, 1990), pp 457-468

percent going to the suburbs of New York and New Jersey, and the rest moving outside the metro area.⁸⁴ In Milwaukee, the central city lost 14,000 jobs between 1979 and 1994, inner-ring suburbs gained 4,800, and outer-ring suburbs gained 82,000.⁸⁵ Between 1989 and 1993, albeit a recessionary period, downtowns in the six largest Ohio cities lost an average of 7.17 percent of employment, while suburban business centers gained 2.1 percent, although even some older ones lost employment.⁸⁶

Though no metropolitan areas are the same, in general the economies of metropolitan areas are becoming less monocentric (most economic activity located in one place—the central business district); and instead more polycentric, where economic activity is located in many centers throughout the metropolitan area. The common vision of the metropolitan area as a place with one economy, located among downtown skyscrapers and inner-ring factories, no longer describes the metropolis common to America at the end of the 20th century. For example, 57 percent of office stock is located in the suburbs, up from 25 percent in 1970 (see figures 3-9 and 3-10).⁸⁷

However, there are several patterns of office development.⁸⁸ On the one hand, there is the phenomenon of specialized economic activities located in high concentrations in industrial and office parks and retail malls in a variety of so-called "edge city" clusters. Garreau identifies 181 such edge cities, located in 34 metropolitan areas around the country.⁸⁹ In six metropolitan areas, Pivo found that the largest 10 percent of office clusters in the suburbs (areas where two or more offices are closer than one quarter mile) contain over 40 percent of the office space, while the largest 25 percent contain over half.⁹⁰ Thus, while most office space is in larger clusters, some is in much smaller clusters, sometimes of only two or three office buildings with several hundred thousand square feet.⁹¹ One study of Dallas-Ft. Worth found that while 60 percent of all jobs in the region

⁸⁴Leshinski and Priestly, op. cit., footnote 39.

⁸⁵White, op. cit., footnote 37.

⁸⁶Richard D. Bingham and Deborah Kimble, "The Industrial Composition of Edge Cities and Downtowns: the New Urban Reality," Unpublished Paper, Maxine Levin College of Urban Affairs, Cleveland State University, 1994.

⁸⁷Pivo, op. cit., footnote 83. Also, Neil Pierce, *Citistates: How Urban America Can Prosper in a Competitive World*, (Washington, D.C.: Seven Locks Press, 1993).

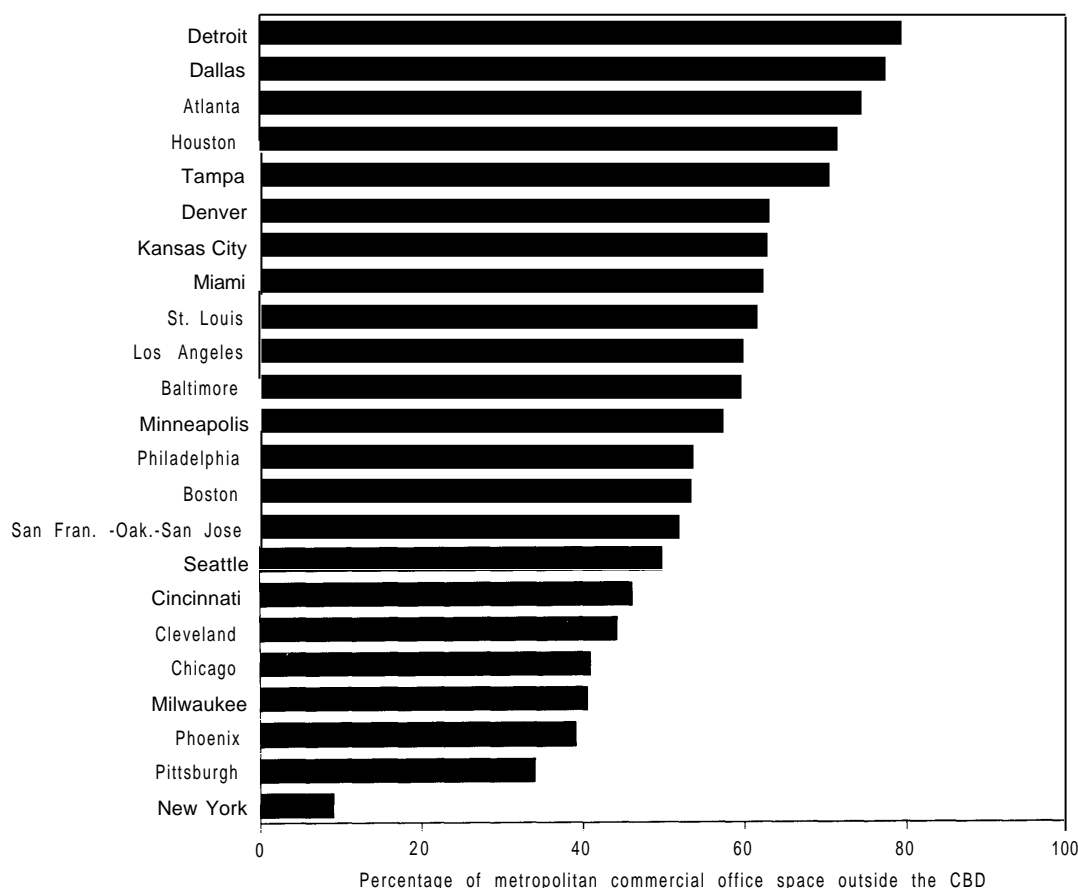
⁸⁸See Robert Cervero *America's Suburban Centers: The Land Use-Transportation Link*, (New York, NY: Unwin Hyman, Ltd., 1989).

⁸⁹See Garreau, op. cit., footnote 71. The term edge city was coined by Garreau, but the concept of concentrated perimeter development belongs to many other analysts, including Cervero, Hartshorn and Muller, Fishman, etc.

⁹⁰These areas were Los Angeles, Houston, Seattle, Denver, Toronto and San Francisco.

⁹¹Pivo, Op. cit., footnote 83.

FIGURE 3-10: Percentage of Commercial Office Space Outside the Central Business District (CBD) in 1988



SOURCE: U.S. Bureau of the Census, State and Metropolitan Area Data Book, 1991

are concentrated at 5 percent of the work sites, 40 percent are concentrated in the remaining 95 percent of work sites.⁹² Presumably, functions in these dispersed offices have less need of a high level of face-to-face contacts enabled by location in the central business district. Moreover, while some clusters may be large, compared to the size

of the central business district they are small. The largest of these clusters, at 3.5 to 6.5 million square feet, are still one-fifth to one-tenth the size of the region's central business districts, and the average square foot of office per acre in these clusters was more than four times lower than the region's central business districts.⁹³

⁹²Brian Berry, Donald A. Hicks, and Paul Waddell, *State of the Region 1992*, (Dallas, TX: Bruton Center for Development Studies, university of Texas at Dallas).

⁹³Pivo, op cit., footnote 83.

Just as suburban economies are different from central city, so suburban “edge cities” appear to be different from each other. In Ohio, for example, such edge cities contain employment in the aggregate that is more diverse than the employment in the state’s major central cities (Dayton, Cincinnati, Cleveland), but each edge city is itself quite specialized: 20 percent of the edge cities concentrate on manufacturing; wholesale and retail trade is found in 22 percent of these perimeter centers of economic activity; 27 percent specialize in personal and producer services; and some are centers for hospitals, social and government services.⁹⁴

In some metropolitan areas growth has been relatively even, but in many metropolitan areas growth is spatially uneven.⁹⁵ Some suburbs are growing rapidly at rates much higher than the central city and also much higher than their respective metropolitan area generally, while some suburbs, as discussed above, are losing jobs. In suburban Chicago, for example, three densely developed centers of suburban employment—O’Hare Airport, Schaumburg, and central Du Page county—accounted for 27 percent of total net employment growth in metropolitan Chicago in the 1980s.⁹⁶ And though their employment density was much lower than Chicago’s central business district (average employment density of 126,000 per square mile), these three “edge cities” did reach densities of about 30,000 workers per square mile.⁹⁷ Moreover, the counties in which they were located experienced high employment growth in the 1980s—northwestern Cook county and Du Page county accounted for 65 percent of the decade’s metro employment growth of 394,000 jobs, or roughly 257,000 jobs. If one adds to these figures

for suburban Chicago employment growth in the 1980s, the employment growth in the central business district—from 491,000 to 522,000 jobs, or an increase of 31,000—and the fact that the city of Chicago as a whole experienced a slight job loss (20,000 jobs), the uneven aspect of suburban economic development becomes a bit clearer. The suburbs are growing very fast and to a certain extent unevenly.

Similarly, northwest Atlanta employment growth is densely concentrated in several perimeter activity centers.⁹⁸ At the same time, the southern suburbs, which are predominately black, are very sparsely developed or declining. The city of Atlanta’s share of the metropolitan region’s jobs declined from 40 percent in 1980 to 28 percent in 1990. However, the northern, predominately white, suburbs gained all the share that the city lost, exacerbating spatial mismatch for minorities concentrated in the central city and southern part of the city.

CONCLUSION

The spatial and economic structure of U.S. metropolitan areas has undergone considerable change in the last 20 years. Growth is much more diffuse, but also more uneven, at both the intra- and inter-metropolitan levels. In other words, an increased number of metros now vie for growth, and the dominance of a few traditional large cities is giving way to what some term concentrated dispersal to a larger number of metropolitan areas. Yet, this decentralization is highly selective and uneven, and not all places will be able to succeed, particularly those that have not managed the transition to the post-industrial metropolis.

⁹⁴ Bingham and Kimble, op. cit., footnote 86.

⁹⁵ Robin Bloch, “The Metropolis Inverted: the Rise and Shift to the Periphery and the Remaking of the Contemporary City,” Ph.D. dissertation, UCLA (1994).

⁹⁶ John F. McDonald and Paul J. Prather, “Suburban Employment Centres: The Case of Chicago,” *Urban Studies*, vol. 31, No. 2 (1994), 201-218.

⁹⁷ Ibid.

⁹⁸ Keith Ihlandfeldt, “The Spatial Mismatch Between Jobs and Residential Locations Within Urban Areas,” *Cityscape*, vol. 1, No. 1, August 1994. Ihlandfeldt uses data from Atlanta that shows the growth of jobs in its northern suburbs, and the lack of jobs in its southern suburbs.

Similar patterns are occurring within metropolitan areas. The historic dominance of the central city is giving way to a much more dispersed pattern of growth as economic activity spreads unevenly throughout the metropolitan areas in other nodes and centers (what some term edge cities). Some sections of the metro, usually a select group of outer suburbs and even exurban locations, are growing quickly and becoming home to fast-

growing companies, while other sections, particularly many parts of the central city and inner suburbs, are suffering job loss, disinvestment, and poverty. As discussed in the next four chapters, the technological revolution based on telecommunications and information technologies now underway is likely to exacerbate and accelerate these trends, leading to both positive and negative outcomes.