Four Perspectives on Urban Hardship

RICHARD P. NATHAN
CHARLES F. ADAMS, JR.

The decennial census allows us to take a closer look at the social and economic conditions of the country than we can get at any other time. In this article we focus on fifty-five large cities to study developments in urban hardship conditions in the 1970s primarily using decennial census data. Our analysis indicates that in the 1970s these fifty-five cities lost ground relative to their suburbs; that the most distressed cities lost ground relative to other cities; and that the problem of concentrated poverty increased and is correlated with the worsening problems of the most distressed large cities.

Unfortunately, decennial census data are slow to emerge and take time to assess. These problems with studying urban conditions are compounded by a lack of data for the intervening years between the decennial censuses. We have done our best in this article to update the analysis of urban conditions and present more recent data that suggest the hardship conditions of large cities persist into the 1980s and in fact are getting worse.

The primary purpose of this article is to combine four perspectives on urban conditions, each portraying a different spatial view. The first perspective can be likened to an aerial photograph where we look at how central cities relate to their surrounding metropolitan areas. For this purpose, we have updated the composite index used in our earlier work that contrasts social and economic conditions in cities with their outlying suburbs.[1] The second perspective focuses on central cities

[1] Richard P. Nathan and Charles F. Adams, Jr., "Understanding Central City Hardship," *Political Science Quarterly* 91 (Spring 1976): 47–62.

RICHARD P. NATHAN is provost of the Rockefeller College of Public Affairs and Policy at the State University of New York, Albany, and director of the Rockefeller Institute of Government. CHARLES F. ADAMS, JR. is associate professor and director of doctoral studies at the School of Public Policy and Management at Ohio State University.

themselves and assesses relative hardship conditions across the fifty-five central cities in our analysis. The third and fourth perspectives focus on parts of the city—poor neighborhoods and the central business district (CBD). These four lenses provide what we feel is a fuller picture of urban conditions and offer a better understanding of the dynamics of change in America's large cities.

The fifty-five urban areas studied in this article are the most populous central cities and suburbs of standard metropolitan statistical areas (SMSAs) with 1970 populations over 500,000. Because of our special interest in city-suburb comparisons, we omitted eleven cities with very large or very small suburban areas in the SMSA—where the central city comprised over 75 percent or less than 18 percent of the total SMSA population. The suburban areas studied are the SMSA minus the central city.[2]

Metropolitan Area-wide Perspective

The metropolitan area index uses six factors equally weighted to compare city and suburban areas. The six factors are: *Unemployment*, percent of the civilian labor force unemployed; *Dependency*, persons less than eighteen or over sixty-four years of age as a percent of total population; *Education*, percent of persons twenty-five years of age or more with less than twelfth-grade education; *Income level*, per capita income; *Crowded housing*, percent of occupied units with more than one person per room; and *Poverty*, percent of families below 125 percent of low-income level.[3]

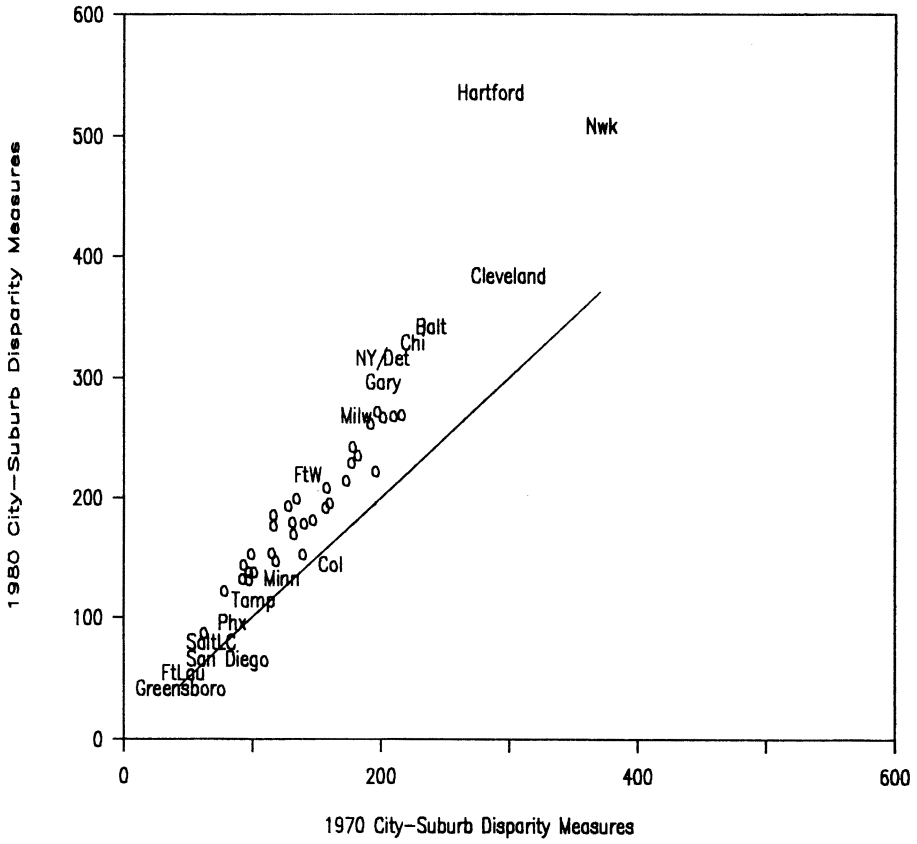
We constructed the index so that values greater than 100 indicate cities comparing unfavorably with their adjoining suburbs in hardship conditions, and vice versa for values below 100. Table 1 shows that from 1970 to 1980 there was a substantial increase in the degree of hardship disparity between cities and suburbs.[4] Figure 1, a scatterplot of city-suburb hardship measures in 1970 and 1980, depicts this widening gap between most of the cities and outlying suburbs. The names of the ten cities where the disparity measures increased by the largest increment between 1970–1980 are shown in the figure, as are the names of the cities registering

[2] The same 55 SMSAs are included in the analysis for 1970 and 1980. For Dallas and Fort Worth, which were consolidated into one SMSA as of 1980, the original 1970 SMSA configurations were used in the 1980 analysis.

[3] The data sources and methods used to construct the indices are explained in the appendices.

[4] It should be noted that by the nature of the index, between-period comparisons are affected not only by changes in hardship conditions for individual cities, but also by changes in the minimum and maximum values used in constructing the index. As a check on the effects due to changes in extreme values for the six hardship indicators between 1970 and 1980, the 1980 city-suburb hardship index was recomputed using 1970 minimums and maximums. The index values obtained were very close to those reported in Table 1, both in the range of scores and the placement of individual cities within the index. Hence, the shift toward greater city-suburb hardship disparity between 1970 and 1980 can be interpreted as primarily reflecting changes in hardship conditions for individual cities rather than as a product of changes in the extreme values for the six indicators.

FIGURE 1*



* Note: Most of the cities shown in Figure 1 can be identified by the city-suburb disparities scores shown in Table 1. Several cities were omitted from the figure to make it legible. The cities appearing above the 45 degree line shown in the figure grew more disparate from their suburbs in 1980 than in 1970.

the smallest-increment change or becoming less disparate from their outlying suburbs. Most of the other cities are represented on the diagram by symbols. The number of metropolitan areas with index values greater than 200 (the value used in our original article to indicate significant hardship disparity) increased from nine in 1970 to twenty-four in 1980, or from approximately 16 percent to 44 percent of the areas included in the analysis. Correspondingly, the number of cities comparing favorably to their adjoining suburbs (index values below 100) decreased from thirteen in 1970 to six in 1980.[5]

[5] A second version of the 1980 index, abstracting from SMSA boundary changes between 1970 and 1980, was also constructed. It indicated an even more pronounced increase in city-suburb hard-

TABLE 1

Index of City-Suburb Hardship Disparity for 55 of the Largest SMSA's, 1970 and 1980

City	Region	1980 City-Suburb Hardship Index	1970 City-Suburb Hardship Index	Change* in Ranking 1980–1970
Hartford	NE	536 (1)	285 (3)	−2
Newark	NE	509 (2)	371 (1)	1
Cleveland	NC	385 (3)	299 (2)	1
Baltimore	S	343 (4)	239 (4)	0
Chicago	NC	330 (5)	225 (5)	0
New York	NE	317 (6)	193 (13)	−7
Detroit	NC	317 (7)	196 (12)	−5
Gary	NC	297 (8)	202 (8)	0
Dayton	NC	274 (9)	197 (10)	−1
St. Louis	NC	271 (10)	216 (6)	4
Atlanta	S	270 (11)	210 (7)	4
Rochester	NE	269 (12)	202 (9)	3
Milwaukee	NC	269 (13)	181 (16)	−3
Philadelphia	NE	264 (14)	192 (14)	0
Buffalo	NE	245 (15)	178 (17)	−2
Boston	NE	238 (16)	182 (15)	1
San Jose	W	232 (17)	177 (18)	−1
Richmond	S	225 (18)	196 (11)	7
Akron	NC	223 (19)	148 (25)	−6
Springfield	NE	221 (20)	150 (24)	−4
Ft Worth	S	220 (21)	143 (27)	−6
Youngstown	NC	217 (22)	173 (19)	3
Miami	S	211 (23)	158 (22)	1
Denver	W	202 (24)	134 (30)	−6
New Orleans	S	198 (25)	160 (21)	4
Birmingham	S	196 (26)	128 (33)	−7
Louisville	S	194 (27)	157 (23)	4
Providence	NE	188 (28)	116 (37)	−9
Kansas City	NC	184 (29)	147 (26)	3
Sacramento	W	182 (30)	131 (32)	−2
Cincinnati	NC	181 (31)	140 (28)	3
Grand Rapids	NC	179 (32)	116 (38)	−6
Jersey City	NE	172 (33)	132 (31)	2
Toledo	NC	156 (34)	115 (39)	−5
Pittsburgh	NE	155 (35)	139 (29)	6
Syracuse	NE	155 (36)	99 (43)	−7
Indianapolis	NC	149 (37)	118 (36)	1
Omaha	NC	146 (38)	93 (46)	−8
Columbus	NC	145 (39)	161 (20)	19
Allentown	NE	140 (40)	101 (42)	−2
San Francisco	W	140 (41)	97 (45)	−4
Dallas	S	134 (42)	92 (47)	−5

continued

TABLE 1 (*continued*)

City	Region	1980 City-Suburb Hardship Index	1970 City-Suburb Hardship Index	Change* in Ranking 1980–1970
Minneapolis	NC	133 (43)	123 (35)	8
Portland	W	133 (44)	97 (44)	0
Norfolk	S	124 (45)	78 (50)	−5
Tampa	S	115 (46)	101 (41)	5
Houston	S	113 (47)	90 (48)	−1
Los Angeles	W	112 (48)	102 (40)	8
Oklahoma City	S	110 (49)	125 (34)	15
Phoenix	W	96 (50)	84 (49)	1
Seattle	W	89 (51)	62 (53)	−2
Salt Lake City	W	77 (52)	68 (52)	0
San Diego	W	70 (53)	74 (51)	2
Ft Lauderdale	S	50 (54)	46 (54)	0
Greensboro	S	42 (55)	44 (55)	0

* No sign indicates an improved ranking in city-suburb hardship disparity between 1970 and 1980, and a negative sign indicates a worsened city-suburb disparity ranking.

It should be noted that the disparity index measures relative, not absolute, hardship conditions. Moreover, for both cities and suburbs, there were some improvements between 1970 and 1980 in the hardship factors as we measured them. For cities, housing conditions became less crowded, and there were improvements in the educational and age-dependent characteristics of city residents. Poverty and employment conditions worsened, however. Suburbs showed gains in all but unemployment conditions. On balance, the suburban gains were substantially greater than those of cities, the result being a significant worsening of city-suburb hardship disparity.

One finding about city-suburb disparities in our earlier study was the disproportionate number of high-disparity metropolitan areas in the Northeast and North Central regions of the country. This pattern persists in 1980, although the proportion of Northeast and North Central areas drops somewhat, from around 80 percent to 70 percent. Hence, between 1970 and 1980, city-suburb disparities not only became more pronounced, they also became somewhat more pervasive.

The Central City Perspective

The second perspective used in this paper compares hardship conditions between the fifty-five cities. Using the same six measures of social and economic condi-

ship disparity. In effect, for most places the hardship characteristics of newly added suburban area tend to compare less favorably to those of suburban areas defined as of 1970.

TABLE 2

Intercity Hardship Index, 1980

City	*1980 Intercity Hardship Index*	*Change in Index 1980–1970*	*Change in Rank 1980–1970**
Newark	86.1	−0.8	0
Gary	66.7	−3.6	−2
Detroit	65.1	6.1	−7
Hartford	63.0	6.5	−10
Jersey City	62.9	5.7	−7
Miami	61.5	−0.4	1
St Louis	60.1	−17.1	5
Cleveland	55.9	−5.5	−1
Baltimore	55.6	−6.3	3
Buffalo	54.4	−4.2	−1
Youngstown	53.8	−7:8	4
Birmingham	51.4	−10.2	4
Providence	50.7	−2.3	−3
Chicago	50.3	1.0	−8
New Orleans	49.3	−24.6	12
Philadelphia	49.1	−1.9	−2
New York	48.5	2.8	−11
Dayton	47.8	0.2	−6
Springfield	47.3	−4.5	2
Louisville	46.9	−9.7	7
Atlanta	46.3	−2.8	−2
Cincinnati	44.5	−9.6	7
Rochester	44.0	−3.5	−2
Toledo	40.3	−0.8	−12
Akron	40.2	−4.1	−5
Grand Rapids	38.6	−11.5	5
Tampa	38.0	−12.3	7
Syracuse	37.2	−4.2	−6
Milwaukee	35.5	−8.3	−3
Norfolk	35.4	−8.6	−1
Boston	34.8	−10.6	2
Los Angeles	34.7	−3.7	−8
Richmond	33.5	−12.7	6
Allentown	33.4	4.2	−17
Sacramento	33.2	−17.2	16
Pittsburgh	33.0	−14.3	10
Ft Worth	31.7	−11.7	4
Indianapolis	30.5	−9.9	1
Kansas City	28.2	−10.7	0
Salt Lake City	26.8	−10.4	−3
Phoenix	25.7	−14.5	3
Columbus	24.2	−10.6	−4

continued

TABLE 2 (*continued*)

City	1980 Intercity Hardship Index	Change in Index 1980–1970	Change in Rank 1980–1970*
Omaha	23.8	−11.2	−2
San Jose	21.9	−19.3	9
Portland	21.6	−16.3	4
Dallas	20.6	−12.5	−1
Greensboro	20.0	−8.4	−6
Houston	19.8	−18.0	6
Oklahoma City	19.0	−16.0	5
San Francisco	18.2	−10.3	−2
Ft Lauderdale	17.8	−5.2	−4
San Diego	17.7	−15.1	4
Denver	17.1	−12.6	3
Minneapolis	16.3	−13.5	5
Seattle	7.5	−20.6	1

* No sign indicates an improved ranking in the intercity hardship index between 1970 and 1980, and a negative sign indicates a worsened intercity hardship ranking.

tions, the city hardship index provides values ranging from 0 (the lowest possible degree of comparative hardship) to 100 (the highest possible degree of comparative hardship). The results appear in Table 2.

As was the case in 1970, a disproportionate share of the most distressed cities in 1980 are in the Northeast and North Central regions of the country. Of the twenty-two cities in the top two quintiles of the intercity hardship index for 1980, sixteen are in these two regions. Among the fifty-five cities, Newark ranks at the top of the city hardship index in both 1970 and 1980. The city had the worst ranking in three of the six hardship factors used to generate the 1980 index (income, education, and poverty).

As to patterns of change between 1970 and 1980, there was a general trend toward somewhat lower comparative hardship values. Of the fifty-five cities, only seven moved up in the index (hardship conditions comparing more closely to the worst-case city), while index values for the other forty-six cities declined.[6] While this trend is a move in the right direction—though again it is important to note that the index measures relative not absolute hardship conditions—such improvements did not accrue uniformly. When the fifty-five cities were grouped by quintile from highest to lowest hardship ranking, substantially greater improvements in comparative hardship conditions were observed among cities at the lower end of the intercity hardship index. This suggests a widening in the gap between the best and worst off cities. In 1970 the average hardship value for the highest hardship cities was 2.2 times that for the lowest hardship cities; by 1980, comparative

[6] The 1980 intercity hardship index was also computed using 1970 minimums and maximums, and the results showed a similar downward shift in index values between 1970 and 1980.

hardship conditions in the worst off cities had increased to 3.5 times those in the best off cities. Hence, not only did hardship disparities between cities and suburbs grow between 1970 and 1980, but social and economic conditions among the largest American cities also became more disparate.

The third column in Table 2 shows changes in the hardship rankings of individual cities. Such movements are of interest because they reflect changes not only relative to the sample as a whole, but also in relation to subgroups within it (that is, how better off cities are performing in relation to other better off cities and similarly for the more distressed cities).

Of the fifty-five cities, ten had significant changes in hardship rankings, either worsening or improving by eight places or more. The six cities with the largest increase in their relative hardship rankings between 1970 and 1980 were Allentown, Toledo, New York, Hartford, Los Angeles, and Chicago. In 1970, for example, Los Angeles ranked 40th on our urban hardship index; in 1980, the city ranked 32nd, due to comparatively weak showings in education, crowded housing, and poverty. In the case of crowded housing, there was an increase from 8.4 to 13.0 in the percent of the city's occupied housing units with more than one person per room. This compares to a decline from 7.7 percent to 5.2 percent in the average for all fifty-five cities in this analysis. In terms of the poverty rate, cities generally had a greater proportion of their population below poverty in 1980 than in 1970, but the percentage-point increase for Los Angeles was substantially above the group-wide average (a 3.8 percentage-point increase for Los Angeles versus an average percentage-point increase of 2.9 for all fifty-five cities).

The four cities whose hardship rankings improved by the largest increments between 1970 and 1980 are Sacramento, New Orleans, Pittsburgh, and San Jose. New Orleans had the third worst score in the composite urban hardship index for 1970. By 1980, it ranked 15th. Underlying this improvement were comparatively favorable developments in unemployment, education, income, and crowded housing. While still clustered among the more badly off cities (with poverty and crowded housing conditions nearly one-and-a-half times the average for all fifty-five cities), developments in New Orleans were sufficiently favorable to remove it from among the very worst off (quintile 1) cities included in the analysis.

As to the regional distribution of cities with significant changes in hardship rankings between 1970 and 1980, the pattern is again familiar. Most of the cities showing significant improvement are in the South and West, and those whose rankings worsened are mainly in the Northeast and North Central regions. There are exceptions, however, with Los Angeles losing ground and Pittsburgh making substantial improvement. Hence, changes in hardship ranking over time are not strictly accounted for on the basis of region. Other forces appear to be at work.

The Dynamics of Central City Hardship

In our earlier study of city-suburb disparity, we suggested that the dynamics of growth in areas with high city-suburb disparity are highly adverse to cities. "It

is in these metropolitan areas that flight to the suburbs is likely to be exacerbated as out-migration from central cities causes further deterioration in the social and economic conditions of the central city."[7] Other researchers have developed this theme. Katherine Bradbury, Anthony Downs, and Kenneth Small, for example, describe a series of "self-reinforcing" processes associated with the relationship between cities and their suburbs that are likely to contribute to the further deterioration of cities.[8]

We tested this idea of a dynamic with the updated hardship indices for 1980. The evidence appears to support it. When the cities are categorized according to prevailing city hardship conditions in 1970, a distinct pattern emerges indicating substantially smaller improvements between 1970 and 1980 for those cities characterized by significant city-suburb disparity. Among the twenty-two cities characterized as high-hardships cities in 1970 (ranking in the top two quintiles of the city hardship index), nine faced significant city-suburb hardship disparity (scoring over 200 on the city-suburb hardship disparity index). For these nine cities, city hardship scores improved by 4 percent on average between 1970 and 1980. By comparison, the thirteen high-hardship cities faced with only moderate city-suburb hardship disparity in 1970 (scoring between 100 and 200 on the city-suburb disparity index) fared much better in the 1970s. For these cities, city hardship scores improved by an average of 15 percent between 1970 and 1980.

Similar results were obtained for cities in the middle quintile of the 1970 city hardship index. Among these cities, five faced significant city-suburb hardship disparity in 1970, above the 200 cutoff. The city hardship scores for these cities improved by 5 percent between 1970 and 1980. This compares to an average improvement of 22 percent for five other moderate hardship cities that faced only moderate (below the 200 cutoff) city-suburb disparity in 1970.

As a further test of the dynamic effect that city-suburb disparity may have on central city hardship, we performed a statistical analysis using ordinary least squares. In this analysis, changes in city hardship between 1970 and 1980 for all fifty-five cities were regressed on 1970 city-suburb hardship disparity, with and without a dichotomous variable for region. The results appear in Appendix 2. Briefly summarized, this analysis shows a consistent pattern wherein high city-suburb hardship disparity is positively correlated with changes in intercity hardship scores between 1970 and 1980; the greater the disparity in city-suburb hardship as of 1970, the less well a city is likely to perform in the intercity hardship index between 1970 and 1980.

A similar and somewhat surprising result was obtained for suburban areas. As in the case for cities, changes in intersuburban hardship scores between 1970 and 1980 were regressed on 1970 city-suburb hardship disparity, with and without a dichotomous variable for region. For the suburbs, a consistent and even stronger

[7] Nathan and Adams, "Understanding Central City Hardship," 58.

[8] Katherine L. Bradbury, Anthony Downs, and Kenneth A. Small, *Urban Decline and the Future of American Cities* (Washington, D.C.: The Brookings Institution, 1982), chap. 9.

association is indicated between city-suburb hardship disparity and changes in intersuburban hardship score between 1970 and 1980.

These results suggest that city-suburb hardship disparity works not only to the long-term disadvantage of the city, but also to its surrounding suburban area. Hence, the effects of such disparity manifest themselves not as a simple zero-sum game between city and suburb, but as a more complex negative-sum game for the metropolitan area as a whole. Among the policy implications suggested by these results is the case for more aggressive state and regional interventions to redress city-suburban hardship disparity.

Poverty Impaction Perspective

The third perspective in this analysis focuses on more specific aspects of urban hardship, drawing on insights from recent studies of the urban underclass. William Julius Wilson,[9] Erol R. Ricketts and Isabel V. Sawhill,[10] Mark Hughes,[11] and others have examined the spatial dimensions to urban poverty in the inner city. John DiIulio has described underclass areas as "home to exceedingly high concentrations of predatory street criminals, people who hit, rape, rob, burglarize, and murder."[12]

As the urban poor become more concentrated in urban neighborhoods, their problems become more intractable. Wilson writes of a "social isolation" and attendant structural constraints and opportunities that are the consequence of poverty concentration—"constraints and opportunities that include the kinds of ecological niches that the residents of these neighborhoods occupy in terms of access to jobs and job networks, availability of marriageable partners, involvement in quality schools, and exposure to conventional role models."[13]

We use as a measure of social isolation, which we call poverty impaction, the proportion of a city's poor living in poor neighborhoods or what the Census Bureau calls extreme poverty areas; census tracts have 40 percent or more of their residents below poverty. Mary Jo Bane and Paul Jargowski have studied extreme poverty areas in the country's largest cities. They focus on the 40 percent census tracts because they appear "to capture those neighborhoods in which the poor are relatively isolated from their better off neighbors."

A forty percent poverty rate in a census tract is sufficiently far above the average poverty

[9] William Julius Wilson, *The Truly Disadvantaged: the Inner City, the Underclass, and Public Policy* (Chicago: University of Chicago Press, 1987).

[10] Erol R. Ricketts and Isabel V. Sawhill, "Defining and Measuring the Underclass," presentation at the American Economic Association meetings, December 1986.

[11] Mark Alan Hughes, *Poverty in Cities* (Washington, D.C.: National League of Cities, 1989).

[12] John J. DiIulio, Jr., "Crime and the Underclass," *Public Interest*, forthcoming. Also see DiIulio and Mark Alan Hughes, "The Real Underclass," paper presented at the October 1988 meeting of the Association of Public Policy Analysis and Management in Seattle.

[13] Wilson, *The Truly Disadvantaged*, 61.

rates in the large cities that tracts with that degree of concentration are very unlikely to have occurred by chance. In a census tract with a poverty rate above 40 percent, a large proportion of a poor person's neighbors, in many cases a majority, will also be poor.

This cutoff also seems to accord with perceptions of city residents about which areas of the city are ghettos.[14]

Table 3 shows poverty impaction rates for the thirty-nine cities in our analysis for which comparable poverty data were available in both 1970 and 1980.[15] Nearly 35 million people lived in these cities in 1970. Of this total, 5,203 thousand people (15 percent of the population) earned less than the 1969 poverty level. Approximately 787 thousand people lived in extreme poverty areas for a combined poverty impaction rate of 15.1 percent. By 1980 the population in the thirty-nine cities had declined by 6.2 percent to 32.8 million; however, the number of poor people earning less than the poverty level in 1979 grew—from 5.2 million to over 5.8 million. The number of poor people living in extreme poverty neighborhoods grew even faster—from 787 thousand to 1,450 thousand for a combined poverty impaction rate of 24.8 percent in 1980.

Poverty impaction rates are worse among poor blacks than poor whites. Whereas in 1970, 6.3 percent of the poor white population in the thirty-nine cities lived in extreme poverty neighborhoods, the corresponding figure for the poor black population was 26.1 percent. By 1980, the poverty impaction rates for both blacks and whites had gotten worse. About 9.4 percent of poor white people and 37 percent of poor black people in these thirty-nine cities lived in extreme poverty neighborhoods.

Ten of the thirty-nine cities had poverty impaction rates equal to or greater than 20 percent in 1970. By 1980, nineteen of these cities had at least 20 percent of their poverty population living in poor neighborhoods. Eight of the ten cities with poverty impaction rates over 20 percent in 1970 were in the South and two were in the North Central region. By 1980, this pattern had shifted, with eleven of the nineteen cities having poverty impaction rates over 20 percent in the Northeast and North Central regions.

It is important to keep perspective. Although concentrated crime and crack problems of the urban underclass are on the rise, the areas involved—and it is geography that counts—are relatively small in terms of their share of the total population. In 1970, 2.3 percent of the total population in the thirty-nine cities lived in extreme poverty neighborhoods; by 1980 the proportion had increased to 4.4 percent.

[14] Mary Jo Bane and Paul Jargowski, "Urban Poverty Areas: Basic Questions Concerning Prevalence, Growth and Dynamics," discussion paper prepared for the Committee on National Urban Policy, National Academy of Sciences, 29 February 1988, 9.

[15] Data for 1980 were taken from U.S. Census Bureau, *Poverty Areas in Large Cities*, subjects report, (PC80-2-8D) (Washington, D.C.: U.S. Government Printing Office, February 1985). Data for 1970 are from the Bureau's *Low-Income Areas in Large Cities*, subjects report, 2 pt. 9, vol. 2 (Washington, D.C.: U.S. Government Printing Office, June 1973).

TABLE 3

Poverty Concentration for 1970 and 1980

City	Percent Poor in Extreme Poverty Areas 1980	Percent Poor in Extreme Poverty Areas 1970	Change 1970–1980	Poor in Extreme Poverty Areas as a Percent of City's 1980 Population
Newark	48.6	17.2	31.4	15.9
Atlanta	41.5	31.6	9.9	11.4
Cincinnati	40.4	34.5	5.9	8.0
New Orleans	38.5	46.3	−7.7	10.2
New York	34.4	11.3	23.1	6.9
Baltimore	34.1	28.0	6.1	7.8
Louisville	33.2	27.3	6.0	6.4
Tampa	33.2	29.1	4.1	6.2
Chicago	32.2	15.3	17.0	6.5
Philadelphia	30.7	15.7	15.0	6.3
Cleveland	29.4	23.2	6.3	6.5
Norfolk	28.0	41.3	−13.3	5.8
Birmingham	26.0	32.0	−5.9	5.7
Columbus	24.9	7.2	17.8	4.1
Pittsburgh	24.2	15.9	8.3	4.0
St Louis	23.6	19.5	4.1	5.1
Buffalo	20.4	2.1	18.3	4.2
Miami	20.3	10.0	10.3	5.0
Detroit	20.0	10.7	9.3	4.4
Phoenix	17.9	16.0	1.9	2.0
Dallas	15.7	20.0	−4.3	2.2
Milwaukee	15.2	8.1	7.1	2.1
Minneapolis	15.0	8.1	6.9	2.0
Toledo	15.0	9.2	5.8	2.0
Omaha	13.9	6.2	7.7	1.6
Denver	12.1	16.8	−4.7	1.7
Ft Worth	10.6	17.5	−6.9	1.5
Kansas City	10.3	6.7	3.6	1.4
Houston	10.1	9.9	0.2	1.3
Indianapolis	9.1	3.9	5.2	1.0
Rochester	8.7	1.4	7.3	1.5
Los Angeles	8.7	9.7	−1.0	1.4
Oklahoma City	7.6	17.6	−10.0	0.9
Boston	7.6	14.2	−6.6	1.5
San Francisco	5.3	3.1	2.2	0.7
Portland	5.1	4.1	0.9	0.7
Seattle	4.3	6.0	−1.7	0.5
San Diego	1.6	1.7	−0.1	0.2
San Jose	0.0	4.9	−4.9	0.0

Among the thirty-nine cities, New York stands out for having the most poor people living in extreme poverty neighborhoods, over 479,000 people in 1980. This accounted for 33 percent of all the poor people who lived in extreme poverty areas in the thirty-nine cities under study. Newark, Atlanta, and Cincinnati are distinguished by poverty impaction rates exceeding 40 percent. In terms of changes between 1970 and 1980, eight cities registered increases of 10 percentage points or more, including two (Newark and New York) with increases exceeding 20 percentage points. Only two cities (Norfolk and Oklahoma City) had appreciable reductions in the concentration of poor people in extreme poverty areas. We found a correlation between intercity hardship and poverty impaction of +.48 (significant at the .01 level) for 1970 and a correlation of +.72 (significant at the .01 level) for 1980.[16]

In sum, among cities with comparatively greater urban hardship conditions, there is a relatively greater concentration of poverty; and the strength of this association increased substantially in the 1970s. Referring to these conditions, Isabel Sawhill notes a reinforcement effect associated with the urban underclass:

> Such growth is disturbing and raises compelling questions about the dynamics of the process. It may be that some inner-city areas become so devoid of stable families, well-functioning schools, and employed adults that they make "escape" into the middle class extremely difficult and thereby become breeding grounds for another generation of poor people with little hope of becoming part of the mainstream.[17]

Central Business District Perspective

The fourth perspective in this analysis focuses on the economic condition of cities. Earlier work involving a composite measure of economic indicators suggested that in the latter part of the 1970s urban economic conditions grew more disparate.[18] We concentrate on a particular part of the city, the central business district. The analysis draws on Census of Business data reported for the quinquennial census in 1972, 1977, and 1982.

Several cities in this study have made notable and highly visible progress in the 1970s in promoting CBD retail activity. Faneuil Hall Marketplace in Boston and the Gallery at Market East in Philadelphia opened in the latter part of the decade and have become symbols of urban revitalization. One author, who is a developer, described the return of retailing downtown as "the essential glue of the city, the

[16] It should be noted that while poverty impaction and poverty rates (as reflected in the hardship index) share common elements, they are not synonymous. That is, a relatively high rate of poverty in a city does not necessarily mean that the poverty population is highly concentrated in particular neighborhoods in the city.

[17] Isabel Sawhill, "What About America's Underclass," *Challenge* 31 (May/June 1988): 29.

[18] James W. Fossett and Richard P. Nathan, "The Prospects for Urban Revival" in Roy Bahl, ed., *Urban Government and Finance: Emerging Trends*, vol. 20, Urban Affairs Annual Review (Beverly Hills, Calif.: Sage Publications, 1981), 84.

fuel that will truly fire the renaissance that is so surely on the way. . . . "[19] Others are more skeptical about the role of large-scale economic development initiatives as catalysts for urban revitalization. Anthony Downs points to "the conservative belief that more vigorous private economic growth can solve city problems," and goes on to reject the proposition that from such growth, "benefits will 'trickle down' to those people who are presently destitute or unemployed. . . ."[20]

From our analysis there would appear to be some association between growth in retail sales activity in CBDs and changes in intercity hardship conditions. Taking a measure of the overall strength of association between CBD growth and changes in hardship scores, a correlation of –.27 (significant at the .05 level) was obtained.[21] While not a very strong association, the evidence seems to argue that CBD retail sales growth cannot be dismissed as an unimportant influence on comparative hardship conditions. Such developments appear to have some bearing on the socioeconomic trends that underlie a city's comparative hardship standing. Initiatives to revitalize CBD retail activity would seem to have some impact at the margin, perhaps encouraging in-migration or reducing out-migration of middle- and upper-income segments of the population.

For the disadvantaged within these cities, however, the benefits are less obvious. In the case of Boston, a city that improved its hardship standing between 1970 and 1980 and also registered relatively high CBD retail sales growth, the divisions between a booming downtown and stagnant or decaying neighborhoods have been acknowledged by the mayor and others.[22]

And in Philadelphia, despite impressive retail development initiatives during the 1970s, the city still lost ground in its comparative hardship standing. The city registered relatively strong CBD retail sales growth between 1972 and 1982 (13th highest among the fifty-three cities for which data were available), but reportedly lost 172,000 jobs previously held by high school dropouts and gained 39,000 for college graduates over the period from 1970 to 1984.[23] For the disadvantaged residents of Philadelphia, economic initiatives tied to retail sales and other sectors of the city's economy appear to have had little benefit and may have hurt.

[19] Mathias J. DeVito, "Retailing Plays the Key Role in Downtown Renaissance," *Journal of Housing* 37 (April 1980): 198.

[20] Anthony Downs, "The Future of Industrialized Cities" in Paul E. Peterson, ed., *The New Urban Reality* (Washington, D.C.: Brookings Institution, 1985), 284.

[21] Data on CBD retail sales growth between 1972 and 1982 were available for only 53 of the 55 cities in this study. The source of this information was the U.S. Census Bureau, *Census of Retail Trade,* (Washington, D.C.: U.S. Government Printing Office, various years).

[22] Matthew L. Wald, "Mayor Assesses Boston: Progress and Problems," *New York Times*, 12 January 1987.

[23] John D. Kasarda, "Contemporary U. S. Migration and Urban Demographic-Job Opportunity Mismatches" in *Internal Migration—Population Changes in the United States to the 21st Century,* hearings before the Joint Economic Committee of the U.S. Congress, Subcommittee on Economic Resources, Competitiveness, and Security Economics, second sess., 18 September 1986 (Washington, D.C.: U.S. Government Printing Office, 1987) 80, table 7.

Combining the Four Lenses

Having examined cities from the four perspectives, we need now to combine these lenses. Table 4 shows the fifty-five cities ranked on the basis of 1980 hardship ratings. The cities are grouped by quintiles ranging from highest hardship (quintile 1) to the lowest hardship group (quintile 5). For each city, rankings are shown in the table for the four perspectives viewed in this analysis. A ranking of 1 indicates the city scored in the least favorable quintile, while a ranking of 5 denotes a score in the most favorable quintile. Again, these characterizations reflect relative, not absolute measures.

Looking first at the cities in the highest hardship category, overall indications for future developments are generally negative. The majority of these cities place in the bottom two quintiles of the first two indicators, the city hardship measure and the city-suburb disparity measure. Only in the case of St. Louis is there a positive indication of future improvement reflected in the substantial gains the city made in comparative hardship conditions between 1970 and 1980. It should be noted, however, that the city entered the 1980s with extremely high city-suburb hardship disparity and a relatively high level of poverty concentration.

The indications from the 1980 poverty concentration and central business district figures are more mixed. Four of the highest hardship cities are in the bottom two quintiles (high poverty concentration); one, Jersey City, is in the top quintile (low poverty concentration). Similarly, six of these cities compare unfavorably and are in the bottom two quintiles for CBD growth; while three (Hartford, Miami, and Cleveland) are in the top two quintiles. While the question remains about how such gains in retail sales activity translate into overall improvements in comparative hardship conditions, cities have been trying to capitalize on the effects of economic development successes. Hartford, for example, which registered strong CBD retail sales growth between 1977 and 1982, has placed demands such as "linkage fees" on downtown developers to compensate for what are perceived to be the economic dislocations caused by downtown growth. As one Hartford official reportedly observed, "Unless we create some visible bridge to close the vast gulf between the downtown world and the rest of the city, then downtown and what it needs will be treated as the enemy."[24]

Turning to the cities in the relatively high hardship group, the indicators again are not very favorable. The majority of the cities ranked in the bottom quintiles for hardship improvement between 1970 and 1980, city-suburb disparity, and poverty concentration as of 1980. An exception is New Orleans, which made a substantial improvement in comparative hardship conditions between 1970 and 1980. New Orleans also places in the middle range for city-suburb disparity in 1980 and CBD retail growth between 1977 and 1982. The city does, however, have one of the highest concentrations of poor people living in poor neighborhoods.

[24] Peter Waldman, "Cities Are Pressured to Make Developers Share Their Wealth," *Wall Street Journal*, 10 April 1987.

TABLE 4

Summary of City Hardship Conditions and Indicators of Future Developments

		Indicators of Future Developments*			
Cities	Hardship Index 1980	Change in Intercity Hardship 1970–1980	City-Suburb Disparity 1980	Poverty Concentration 1980	CBD Growth 1977–1982
Highest Hardship					
Newark	86.1	1	1	1	3
Gary	66.7	2	1	3	1
Detroit	65.1	1	1	3	2
Hartford	63.0	1	1	na	4
Jersey City	62.9	1	3	5	2
Miami	61.7	1	3	3	5
St Louis	60.1	5	1	2	2
Cleveland	55.9	2	1	2	5
Baltimore	55.6	3	1	1	4
Buffalo	54.4	2	2	3	2
Youngstown	53.8	3	2	na	1
Relatively High Hardship					
Birmingham	51.4	3	3	2	2
Providence	50.7	2	3	4	na
Chicago	50.3	1	1	1	4
New Orleans	49.3	5	3	1	3
Philadelphia	49.1	1	2	2	4
New York	48.5	1	1	1	5
Dayton	47.8	1	1	1	4
Springfield	47.3	2	2	2	4
Louisville	46.9	3	3	1	2
Atlanta	46.3	2	1	1	2
Cincinnati	44.5	3	3	1	3
Middle Group					
Rochester	44.0	2	2	4	3
Toledo	40.3	1	4	3	1
Arkon	40.2	2	2	4	1
Grand Rapids	38.6	4	3	4	1
Tampa	38.0	4	5	1	1
Syracuse	37.2	2	4	2	2
Milwaukee	35.5	3	2	3	3
Norfolk	35.4	3	5	2	3
Boston	34.8	4	2	5	5
Los Angeles	34.7	2	5	4	4
Richmond	33.5	4	2	2	3
Relatively Low Hardship					
Allentown	33.4	1	4	na	2
Sacramento	33.2	5	3	5	5
Pittsburgh	33.0	5	4	2	3

continued

TABLE 4 (*continued*)

Cities	Hardship Index 1980	Indicators of Future Developments*: Change in Intercity Hardship 1970–1980	City-Suburb Disparity 1980	Poverty Concentration 1980	CBD Growth 1977–1982
Ft Worth	31.7	4	2	4	5
Indianapolis	30.5	3	4	4	1
Kansas City	28.2	4	3	4	3
Salt Lake City	26.8	3	5	5	na
Phoenix	25.7	5	5	3	5
Columbus	24.2	4	4	2	1
Omaha	23.8	4	4	3	1
San Jose	21.9	5	2	5	2
Lowest Hardship					
Portland	21.6	5	4	5	5
Dallas	20.6	4	4	3	3
Greensboro	20.0	3	5	5	2
Houston	19.8	5	5	4	3
Oklahoma City	19.0	5	5	5	5
San Francisco	18.2	3	4	5	4
Ft Lauderdale	17.8	2	5	1	1
San Diego	17.7	5	5	5	5
Denver	17.1	4	3	4	4
Minneapolis	16.3	4	4	3	4
Seattle	7.5	5	5	5	4

* Numbers indicate quintile groupings for each indicator, with 1 denoting the least favorably situated quintile in each case (least improvement in intercity hardship between 1970 and 1980, greatest city-suburb hardship disparity, highest poverty concentration, slowest CBD retail sales growth), and 5 denotes the most favorably situated quintile in each case.

Among the other cities in the relatively high hardship group, Birmingham, Louisville, and Cincinnati place in the middle quintile of improved hardship conditions between 1970 and 1980. Each of these cities is also characterized by moderate levels of city-suburb hardship disparity as of 1980. For Birmingham, these somewhat more favorable indications may reflect the city's aggressive annexation policies. Between 1970 and 1980, Birmingham's land area increased over 20 percent, from 79.5 to 98.5 square miles. More recently, the city moved to expand its boundaries by one-third through annexation; over the next twenty-five years, plans call for a doubling of its land area.[25]

More typical of the relatively high hardship cities, Chicago and Atlanta ranked poorly in terms of improvement in comparative hardship conditions between 1970 and 1980, and both entered the 1980s with high levels of city-suburb disparity and

[25] William E. Schmitz, "Growing Birmingham Irks Neighbors," *New York Times*, 10 October 1986.

high levels of poverty concentration. For Chicago, retail sales in the CBD increased by 17 percent between 1977 and 1982, but this success downtown appears to have had little effect elsewhere in the city. According to one recent report, "[C]onstruction in downtown Chicago—the Loop, State Street and Michigan Avenue—lulled city fathers into a false sense of economic security." And, a local developer observed that, "Life is wonderful along the Lakeshore . . . but the city is rotting."[26]

In Atlanta, nearly all the recently reported growth in the metropolitan area is occurring outside the city's boundaries. The city lacks legal authority to annex, and considerations of a city-county consolidation as a partial strategy for sharing the prosperity are reportedly hung up on suburban opposition and concerns within city hall about vested interests.[27] Atlanta's poverty concentration ratio for 1980 is among the highest of the fifty-five cities in the study. And with regional prosperity, the problem is reportedly getting worse. There is concern about the increasing geographical isolation of the area's affluent (both black and white) and the poor, mostly black residents of the city. Of those city residents who are benefitting from the area's growth, many are reportedly moving to the suburbs, a process that one top official describes as "extremely destructive."[28]

For the cities in the middle group, indicators of future hardship developments are mixed. Moderate to strong improvements in comparative hardship occurred in six of the cities between 1970 and 1980; five were well positioned in terms of city-suburb disparity; and only four of these cities were characterized by relatively high levels of poverty concentration as of 1980. Toledo stands out as placing in the bottom quintile of hardship improvement, slipping twelve places in its comparative hardship standings between 1970 and 1980. More favorable circumstances are indicated, however, in the city's poverty concentration as of 1980 and in city-suburb disparity.

Turning to the cities with relatively low hardship ratings, except for Allentown, all cities evidenced favorable development in comparative hardship conditions between 1970 and 1980. Only two of these cities (Fort Worth and San Jose) evidence weakness in 1980 city-suburb disparity; two cities (Columbus and Pittsburgh) evidence relative weakness in 1980 poverty concentration.

Among these cities, Phoenix stands out as ranking in the most favorable quintile in three of the four indicators. Factors contributing to these favorable circumstances include regional location and an aggressive annexation strategy. Between 1970 and 1980, the city's land area increased by 31 percent, from 247.9 to 324.0 square miles. Indianapolis is also in the group of cities with relatively low hardship ratings, with moderate to comparatively favorable rankings in the first three indicators. While regional location would not seem to be an advantage for this

[26] John Helyar and Robert Johnson, "Chicago's Busy Center Masks Loss of Jobs In Its Outlying Areas," *Wall Street Journal*, 16 April 1986.

[27] John Helyar, "The Fragmentation of Greater Atlanta Raises Vital Questions About Its Future," *Wall Street Journal*, 29 February 1988.

[28] Ronald Smothers, "Atlanta Still on a Roll: But New Doubts Arise," *New York Times*, 14 July 1988.

city, its generally favorable prospects may in part reflect the move to a city-county consolidation at the start of the 1970s.

For the cities in the lowest ratings on the city hardship index, indications for the future appear favorable. The only city evidencing unfavorable developments in comparative hardship conditions between 1970 and 1980 is Fort Lauderdale, which also places among the worst cities in terms of 1980 poverty concentration. All of the cities in this group are well positioned in terms of city-suburb disparity, and all but two (Greensboro and Fort Lauderdale) show moderate to comparatively strong CBD retail sales growth between 1977 and 1982. Indications based on poverty concentration are also generally favorable, with eight of these cities in the top two quintiles (lowest to relatively low concentration).

Looking over the five categories, indications for future hardship developments are clearly more favorable for the cities in the lowest and relatively-low hardship categories. In terms of changes in comparative hardship between 1970 and 1980 and city-suburb disparity as of 1980, the majority of the cities ranking most favorably are located in these two categories. And, in terms of poverty concentration as of 1980, the majority of the most favorably positioned cities are in the lowest and relatively low categories.

The conclusion to be drawn about future hardship disparities among the largest central cities in the United States is not an optimistic one. The gap between the highest and lowest hardship cities increased significantly between 1970 and 1980, and from these indications, a similar pattern can be expected when the results for the 1980–1990 period are analyzed.

Update for the 1980s

Most of the measures used in the four perspectives viewed in this article are derived from the decennial census. An update of city-suburban disparity, urban hardship, and poverty impaction rates by city will not be available until the Census Bureau publishes results from the 1990 census. Nevertheless, available statistical data indicate that the trends identified in this article of significant and increasing disparities in hardship conditions among the nation's large central cities have continued into the 1980s. Cities identified as worst off in terms of our 1980 city hardship measures (quintile 1 shown in Table 5) had the largest percentage loss in population between 1980–1986. Quintile 1 cities also had the highest unemployment rate in 1986 and the lowest per capita income in 1985. Six of the cities in the highest hardship group lost more than 5 percent of their population between 1980–1986. Gary and Youngstown stand out for having the largest percentage loss in population, 10.0 and 9.4 percent reductions respectively during this period. Only two cities in quintile 1 had an increase in population in the 1980s—Miami (7.9 percent growth) and Hartford (1.2 percent).

Quintile 5 cities, which had the lowest intercity hardship scores in 1980, had the largest percentage increase on average in population between 1980–1986 (6.3

TABLE 5

Updated Measures of Urban Conditions

Cities Ranked by 1980 Intercity Hardship Index	*Percent Population Change 1980–1986*	*1986 Unemployment Rate*	*1985 per Capita Income*
Quintile 1 (highest hardship)	−4.71	10.7%	$8,299
Quintile 2	−1.91	8.0%	$9,416
Quintile 3	−0.40	7.4%	$10,172
Quintile 4	5.18	6.7%	$10,971
Quintile 5	6.28	6.5%	$12,461

Source: U.S. Bureau of the Census, *County and City Data Book, 1988* (Washington, D.C.: U.S. Government Printing Office, 1988).

percent). These cities also had the highest average per capita income in 1985 and lowest average unemployment rate in 1986 compared to the other groups of cities.

Behind these averages are some further distressing signs for better-off cities too. Several of the cities in the lowest hardship quintile came under increasing economic pressure in the 1980s. Seven of the eleven cities in the lowest-hardship group had an increase in unemployment between 1980–1986. Houston, for reasons that are apparent, stands out with the largest percentage-point increase in unemployment compared to all the cities in this study. Between 1980 and 1986, petroleum prices and demand declined; Houston's unemployment rate more than doubled from 4.5 percent in 1980 to 10.9 percent in 1986. Oklahoma City also has experienced higher unemployment in the 1980s.

As a group, the cities with the lowest hardship conditions based on 1980 measures also declined in real per capita income between 1979 and 1985. Four cities accounted for this. Portland had a 10.5 percent decline in real per capita income; in Houston and Seattle, per capita income declined in real terms by 7.3 percent and 6.1 percent respectively. Oklahoma City had a reduction of 2.8 percent.

On the whole, however, most of the cities in the low-hardship quintiles (4 and 5) show signs of continued vitality into the 1980s. For example, Omaha, a quintile 4 city, had an 11.2 percent increase in population between 1980–1986 and a 12.7 percent increase in real per capita income between 1979 and 1985. Phoenix, Sacramento, San Jose, San Diego, San Francisco, Kansas City, and Greensboro—all cities in either quintile 4 or 5—also showed signs of continued vitality and improvement in the 1980s.

We are unable to update the 1980 index measuring the concentration of poor people in extreme poverty areas (census tracts having 40 percent or more of their population below poverty). The Census Bureau's Current Population Survey (CPS) estimates the number of families below poverty living in census tracts having poverty rates of 20 percent or more, which they call "poverty areas." These estimates show a large increase in the concentration of poor families in poverty areas for

TABLE 6

Poverty Area Residence, 1980 and 1986

	No. of Households in Thousands		*Percent Poor in Poverty Areas (census tracts with 20% or more below poverty)*	
	1980	*1986*	*1980*	*1986*
Central city households below the poverty level	2,214	2,840		
Central city households below poverty level and living in poverty areas	884	1,614	39.9	56.8
White central city households below the poverty level	1,109	1,528		
White central city households below the povery level & living in poverty areas	271	661	24.4	43.3
Black central city households below the poverty level	1,042	1,190		
Black central city households below the poverty level & living in poverty areas	601	898	57.7	75.5

Source: Figures for 1980 are from the U.S. Bureau of the Census, Current Population Reports, series P-60, no. 133, *Characteristics of Population Below the Poverty Level: 1980* (Washington, D.C.: U.S. Government Printing Office, 1982), Table 20, "Poverty Area Residence—Poverty Status in 1980 of Families, by Selected Characteristics." Figures for 1986 are also from the Census P-60 series, no. 160, *Poverty in the United States: 1986* (Washington, D.C.: U.S. Government Printing Office, 1988), Table 16.

the period between 1980–1986 (see Table 6).[29] The Bureau estimates that 2,214 thousand families in America's central cities lived below the poverty level in 1980.[30] Of this total, 884 thousand households lived in poverty area neighborhoods having 20 percent or more people below poverty, for a rate of 39.9 percent. By 1986, these Census estimates show an estimated 2,840 thousand central-city families below the poverty level. Of these, 1,614 thousand families were in 20 percent poverty areas for a rate of 56.8 percent.[31] For both white and black families, the estimated number

[29] These published data for 1986 are limited; nonetheless they are a useful updated indicator of this analysis. In their research on urban poverty concentration, Bane and Jangowsky discuss the limitations of these CPS estimates and of the 20 percent cutoff as a definition of concentrated poverty areas. See Bane and Jangowski, "Urban Poverty Areas," 4–5.

[30] This figure and the other poverty area data for 1980 are cited from the U.S. Bureau of Census, Current Population Reports, series P-60, no. 133, *Characteristics of Population Below the Poverty Level: 1980* (Washington, D.C.: U.S. Government Printing Office, 1982). See table 20, *Poverty Area Residence—Poverty Status in 1980 of Families, by Selected Characteristics.*

[31] Poverty impaction rates for 1986 are based on estimates from the U.S. Bureau of Census, Current Population Reports, series P-60, no. 160, *Poverty in the United States: 1986* (Washington, D.C.: U.S. Government Printing Office, 1988). See table 16, *Poverty Area Residence—Poverty Status in 1986 of Families, by Selected Characteristics.*

and percentage of poor people living in poor neighborhoods has increased considerably from 1980 to 1986. (See Table 6). Estimates for 1980 indicated that 24.4 percent of poor white households lived in poor neighborhoods compared to 43.3 percent in 1986, nearly a doubling in the concentration rate. In 1980, an estimated 57.7 percent of the poor black households in central cities lived in 20 percent poverty areas. By 1986, the Bureau estimated that 75.5 percent lived in these neighborhoods.

Cities are complex places. Of necessity, students of urban conditions must be selective. Our interest in this article is in the character and degree of urban hardship in large American cities using four perspectives in a combined analysis. As we see it, the United States does not have a national urban crisis; however, some cities—especially older, declining, large cities with high-crime distressed inner areas—have urban crisis conditions. These conditions deteriorated in the 1970s and show signs of further deterioration in the 1980s.

APPENDIX 1

As in our earlier study, the hardship indices in Tables 1 and 2 were constructed using the following formula applied to each of the hardship indicators:

$$X = ((Y - Y_{min})/(Y_{max} - Y_{min}))100$$

where: X = standardized hardship value for each city to be computed.
Y = unstandardized hardship value for each city (that is, unemployment rate for each city in the case of Table 2, or the ratio of city-to-suburb unemployment rates for each city in the case of Table 1).
Y_{min} = the minimum value for Y across all 55 cities.
Y_{max} = the maximum value for Y across all 55 cities.

From this formula, standardized values are created indicating where each city lies on the continuum ranging from the worst to the best city among the fifty-five. Accordingly, the ratio for each indicator and the average across the six indicators will range from a value of 0 (the city with the lowest hardship rating) to 100 (the city with the highest hardship score).

In order to achieve a consistent interpretation across the six indicators, it was necessary to reverse the order of the transformation in the case of the income variable, subtracting Y_{max} from Y_{min} in the denominator. In this way, the ratio for income again ranges from 0 to 100, with 0 for the city with the lowest hardship rating, and 100 for the city with the highest hardship rating.[32]

In computing the composite city-suburb hardship scores in Table 1, a further adjustment was made in order to distinguish those cities comparing favorably from

[32] This is a different treatment of the income term than in our earlier study where the reciprocal of income or of the ratio of city-to-suburb income was used. While both approaches yield best- and worst-case values of 0 and 100, respectively, use of the reciprocal has a skewing effect on the overall distribution.

those comparing unfavorably to their adjoining suburbs. Specifically, a composite index score was computed for a hypothetical city that was identical to its suburbs along each of the six indicators. This value was then divided into the composite hardship scores for each of the fifty-five cities. With this adjustment, cities with scores below 100 compare favorably to their adjoining suburbs in overall hardship conditions, and those with scores above 100 compare unfavorably.

In computing the intercity hardship scores in Table 2, the per capita income and poverty measures were adjusted for regional cost-of-living differences. Specifically, the income variable for each city was divided by the Bureau of Labor Statistics' (BLS) index of annual budgets at the "intermediate level" of living for a four-person urban family. For the poverty variable, the percent of families below 125 percent of the poverty level was multiplied by the BLS budget index for the "lower level" of living for a four-person urban family.

The cost-of-living adjustments for 1970 and 1980 were based on BLS indexes reported for spring 1970 and autumn 1979, respectively. For 1970, BLS budget indexes were reported for 25 of the 55 cities in the study. For the remaining 30 cities, budget index estimates were based on proximity to cities included in the BLS compilation. For 1980, BLS budget indexes were reported for 22 of the 55 cities.

Data Sources. For 1970, all data on the six hardship indicators were taken or derived from the Bureau of the Census, *County and City Data Book, 1972*, Tables 3 and 6.

For 1980, data on the six hardship indicators were derived from the following sources:

Unemployment rate, per capita income, and dependency population statistics were taken or derived from the Bureau of the Census, *State and Metropolitan Area Data Book, 1982*, tables A and B. For the four New England SMSAs (Boston, Hartford, Springfield, and Providence), unemployment rate, and per capita income statistics were taken or derived from the Bureau of the Census, *1980 Census of Population*, vol. 1, chap. C, "General Social and Economic Characteristics," Tables 120 and 124.

Education and family poverty statistics were taken or derived from the Bureau of the Census, *1980 Census of Population*, vol. 1, chap. C, "General Social and Economic Characteristics," Tables 119 and 125. For Dallas and Ft. Worth SMSAs (constructed on the basis of 1970 county areas), Tables 175 and 181.

Crowded housing statistics were taken or derived from the Bureau of the Census, *1980 Census of Housing*, vol. 1, "Characteristics of Housing Units, General Housing Characteristics," Table 1.

Cost of living adjustment statistics for 1970 were taken from the BLS, *3 Budgets for an Urban Family of Four Persons 1969–70; Supplement to Bulletin 1570–5*, 1972, Tables A-4, A-5. Statistics for 1980 were taken from the BLS, *Handbook of Labor Statistics*, December 1980, Tables 153, 154.

Adjustments for suburban-area boundary changes between 1970 and 1980 were based on SMSA boundary information taken from the Bureau of the Census,

County and City Data Book, 1972, Appendix D, "Area Components of Standard Metropolitan Statistical Areas."

Appendix 2

In this appendix, changes in city hardship between 1970 and 1980 for all 55 cities were regressed on 1970 city-hardship disparity, with and without a dichotomous variable for region. The results are shown in the table to the appendix. In columns 1 and 2, a positive association is indicated between changes in city hardship values and city-suburb disparity in 1970. In column 2, a regional code variable for cities in the South and West is added, yielding a negative and significant coefficient.

Given the general trend toward greater economic growth in the South and West, hardship conditions would be expected to be lower, on average, for cities in these regions. At the same time, the introduction of this regional code variable causes the coefficient for city-suburb disparity to decline in both magnitude and statistical significance. This may reflect the relatively high correlation between region and city-suburb disparity, making it difficult to separate the independent effects of the two factors. This ambiguity notwithstanding, these results provide statistical evidence of a positive association between city-suburb disparity and subsequent changes in city hardship, lending support to the idea of a dynamic process underlying comparative central city hardship conditions.[33]

There is, however, reason to suspect a limit to any such dynamic underlying central city hardship. Significant city-suburb hardship disparity appears to work not only to the disadvantage of the city, but also to the long-term disadvantage of its surrounding suburban area. Taken together, these developments will have a mitigating effect on city-suburb hardship disparity, and, in turn, on the dynamic underlying central city hardship.

The basis to this interpretation is provided in columns 3 and 4 in the table. Using the same format as described above, these equations analyze the behavior of comparative hardship conditions for the suburban areas represented in the analysis.[34] Of particular interest is the positive and significant coefficient for the 1970 city-suburb hardship disparity term in each column.

[33] It might also be argued that higher intercity hardship values in 1970 predispose a city to fare relatively less well between 1970 and 1980. In turn, given the high correlation between intercity and city-suburb hardship in 1970, the city-suburb term in equations 1 and 2 may simply be a reflection of this predisposition. However, when 1970 intercity hardship values were added to each equation, no statistically significant association was evidenced, and the coefficients on the 1970 city-suburb disparity term were essentially unchanged from those reported in the table.

[34] The estimates for suburbs are derived from intersuburb hardship indexes computed for 1970 and 1980, with the latter index based on 1970 SMSA boundaries. Because adjustments for boundary changes could not be made easily for the four New England SMSAs, they were not not included in this analysis. For a more detailed analysis of suburban hardship conditions, see Charles F. Adams, Jr. and James E. Storbeck, "Descriptive Frameworks for Assessing Metropolitan Growth and Change," Proceedings of the Eighteenth Annual Modeling and Simulation Conference, University of Pittsburgh, April 1987.

Several interpretations can be given to this result. To some extent it may simply reflect a spilling-over of worsening city hardship conditions to adjoining suburbs. Such an interpretation would seem especially plausible in metropolitan areas where the central city represents a relatively small share of the total SMSA area and population.[35]

This result also could reflect the limiting influence of market adjustments to city-suburb hardship disparities. To the extent that these disparities trigger migration from city to suburb, suburban housing markets would be expected to tighten and would also become more expensive. Traffic congestion and commuting downtown would also become more difficult. At the same time, city land values would be expected to adjust downward in response to out-migration and to any onerous tax burden differentials resulting from significant differences in the social and economic characteristics of city and suburban resident populations. Combined, these market forces would be expected to reinforce one another and to limit and possibly reverse the effects of city-suburban hardship disparities on intrametropolitan migration flows and development patterns.

A third interpretation would argue for a more interactive process, with a relatively weak city undermining the vitality of the metropolitan area as a whole. Without strong leadership from the central city, the metropolitan area may be more divided and less effective in attracting new industry and wealth into the area. In this interpretation, the consequences of disparity do not manifest themselves as a simple zero-sum game, with better-off suburbs gaining at the expense of the more disadvantaged city. The dynamic is not simply one of moving along a boundary describing city and suburban prosperity as suggested in our earlier hypothesis, but the boundary itself may shift in response to disparity conditions. In effect, as the city goes, so goes the suburb.

This latter interpretation would argue for more attention to fundamental questions about the unique role of the city in influencing the course of metropolitan-wide social and economic prosperity. It would also argue for more aggressive interventions through regional and state-sponsored programs to redress city-suburb hardship disparities.*

[35] Including a variable constructed as the ratio of city to total SMSA population in 1970 yields a negative and statistically significant coefficient in equations 3 and 4. However, the coefficients for the other terms in each equation are not substantially affected by this enhanced specification. Hence, city-suburb hardship disparity does not appear to be operating simply as a proxy for variations in city-suburb population shares.

* The authors wish to express special thanks to John Lago, Dongwook Kim, Yun-Hi Won, and Ronald Fowler for their assistance in this study. Funding was provided by research grants from the Urban Affairs program at Ohio State University and from the Ohio Board of Regents, Urban University Program.

TABLE FOR APPENDIX 2

Ordinary Least Squares Estimates of City-Suburb Disparity Effects on Comparative City and Suburban Hardship.

	Intercity Hardship[a]		*Intersuburb Hardship*[b]	
	(1)	*(2)*	*(3)*	*(4)*
Intercept	−14.3845	−8.6465	−15.7580	−10.1389
	(6.27)	(3.17)	(5.47)	(2.81)
City-Suburb Disparity, 1970	0.0425	0.0223	0.0801	0.0607
	(2.99)	(1.55)	(4.41)	(3.18)
Region (South and West)	–	−5.9935	–	−5.6965
		(3.31)		(2.41)
R^2	0.14	0.29	0.28	0.36

[a] Dependent variable: Change in Intercity Hardship Score, 1970 to 1980.

[b] Dependent variable: Change in Intersuburb Hardship Score, 1970 to 1980.

t statistic in parentheses.