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Outward Bound: The Decentralization of Population and Employment

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with the assistance of Amy Davidson and Denise Hines

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Abstract

During the 1990s, U.S. population and employment have grown most quickly at the lower density fringes of metropolitan areas and in certain non-metropolitan locations such as the Rocky Mountain West. Due largely to domestic in-migration, population growth rates in lower density counties are approaching those experienced during the 1970s' "rural renaissance." These areas now contain a significant share of the nation's jobs, including many types of jobs normally associated with higher density locations such as services, retail trade, and government. Nevertheless, not all low density areas have flourished. Many in the Great Plains, Appalachia, and the Mississippi Delta continue to experience net losses and an aging population. At the same time, many high density core areas have been buoyed by economic restructuring and foreign immigration. Though increasing at only modest rates, these locations are no longer suffering the substantial declines experienced during the 1970s. Annual data further reveal that population growth has strengthened in high density counties since 1995, especially in California.

Within metropolitan areas, suburban population growth continues to dramatically outpace city growth. Yet, a number of cities which lost population in the early 1990s now show some improvement. Continued foreign immigration, decreasing crime rates, modest construction activity, and an increase in the young population due to the aging of the echo baby boom all bode well for higher density core areas. It is doubtful, however, that these forces can withstand the combination of economic, technological, and demographic trends, which continue to push people and jobs to the outer edges of metropolitan areas and beyond.

Outward Bound: The Decentralization of Population and Employment

by

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Introduction

After a pause during the 1980s, the movement of population and employment toward lower density, outlying areas has rebounded to near 1970s' levels--levels which inspired the term "rural renaissance." With the fastest growth occurring on the outer fringes of Southern and Western metropolitan areas and in the Rocky Mountain states, this decentralization is spurred by a combination of economic, demographic, and technological trends which are likely to continue into the future. At the same time, economic restructuring and an influx of foreign immigrants to more densely settled core areas have helped to buffer many large cities from continued domestic out-migration (especially in the Northeast) and have insured that many large metropolitan areas will not face the severe population losses that they suffered during the 1970s. An understanding of these trends in population settlement and spatial job re-distribution is crucial to effective land use planning, business decision-making, and public policy development.

This paper examines changes in population and employment growth, primarily at the county level,¹ from 1970 through the 1990s. It addresses the questions:

1. Which geographic areas have experienced the strongest population growth, and how have these patterns changed over time? How do these high growth areas differ according to metropolitan status, proximity to metropolitan boundaries, population density, census region, and population size?
2. What is the relative importance of the components of population growth (natural increase, domestic migration and international migration) for different geographic areas?

¹ To maintain consistency over time, certain counties have been combined. See Appendix A for a description of these consolidations.

3. How have trends in overall job growth varied across geography? How has the distribution of jobs by sector changed regionally and what do these changes suggest for future economic stability and growth?

Major findings include:

1. Population decentralization has revived in the 1990s, with non-metropolitan counties growing much more rapidly than during the 1980s.
2. Although metropolitan counties as a whole are still experiencing slightly faster growth than non-metropolitan counties, this growth is largely concentrated in lower density, suburban fringe areas, away from the center city core.
3. Population growth continues to be strongest in the West and the metropolitan South, but the 1980s declines in Midwest non-metropolitan areas have been reversed.
4. The components of population growth for high and low density counties differ dramatically. High density areas, particularly those in the Northeast and West, have lost population due to domestic out-migration while gaining population from natural increase and foreign immigration. Lower density areas, in general, have benefited from both natural increase and domestic in-migration, with growth from foreign immigration limited at best.
5. Not all lower density counties are prospering. Many counties in the Great Plains, the Mississippi Delta, and Appalachia are experiencing continued net losses of population. High growth counties tend to be on the edges of metropolitan areas in the South and West, in the Rocky Mountain states, and in areas that are retirement destinations, commuting communities, or near natural amenities.

6. Job growth has been strongest at metropolitan fringes and in lower density areas. These counties now contain relatively large shares of jobs in sectors normally associated with higher density areas, such as services, retail trade, and government.

7. Higher density metropolitan areas have benefited from foreign immigration and industrial restructuring, making it less likely that they will suffer the population losses they experienced during the 1970s. Population growth has strengthened in high density counties since 1995, especially in California.

8. Nevertheless, demographic, economic, and technological trends all favor continued outward movement of population and employment in the future.

After discussing the importance of population and employment spatial patterns, this paper traces the history of population decentralization through each of the past three decades. It then decomposes the underlying components of growth and reveals how these components differ in importance over time and across geography. An examination of the decentralization of job growth and its relationship to population growth follows. The paper concludes with an assessment of economic and demographic trends and their likely influence on future patterns of spatial location.

The Importance of Understanding Spatial Patterns of Population and Employment Growth

A clear understanding of population and employment spatial patterns is vital for a wide range of planning, business and public policy purposes. Locational choices drive demand for construction, infrastructure, and services--public as well as private. These choices have major implications for land use planning, and they have associated environmental impacts. The clustering of population and jobs in relatively dense communities or their wide distribution over the landscape determines the need for new public facilities such as schools and fire stations and affects the amount of open space available for conservation or recreation. It also influences the trade-off between public transportation versus private auto use, with its attendant pressure for new road construction, pollution and

congestion problems. In the private sector, decisions concerning facility location, market potential, advertising, and even production techniques benefit from knowledge of population settlement patterns. In the residential construction industry, for example, the most cost effective building techniques may vary according to whether building takes place on a centralized site or over a more widespread area. Certainly, infrastructure costs will differ.

In the public policy arena, the spatial distribution of people and jobs has important ramifications for tax revenues, for the potential benefits of regional governance, and for the employment possibilities of less mobile population groups, to name just a few examples. The continued emphasis of welfare reform on moving from welfare to work means that the spatial mismatch between jobs and certain population groups will be increasingly critical. The movement of jobs, particularly jobs which do not demand high levels of education, to the lower density fringes of metropolitan areas, threatens the employment opportunities of central city and inner suburb residents who do not have auto access. Additionally, housing policy makers must take into account the continued population movement away from central cities and from the Northeast and Midwest, as these changes may lead to decreased demand for older structures typical of these areas. For all these reasons, careful consideration of past and current trends in the location of people and jobs is crucial to future planning by both public and private decision-makers.

Historical Population Movement and the Migration South and West

For well over a century, settlement patterns in the US have reflected three predominant trends:

- movement away from the Northeast and Midwest regions of the country toward the West, and more recently toward the South
- movement away from rural areas toward more urbanized areas
- movement away from central cities toward suburbs and the outer fringes of metropolitan areas

The Northeast and Midwest regions have lost population share for over a hundred years (Exhibit 1). In 1850, the Northeast contained 37.2 percent of the US population; by 1998 it held less than 20 percent. Except for a pause during the decades flanking the turn of the century when millions of foreign immigrants streamed into Northeast cities, this decline has been steady. The Midwest, which at first gained population from the Northeast, faced similar declines beginning a few decades later. For most of this period, the West was the only region with an appreciable increase in population share, gaining steadily as the U.S. increased its land area and settlers flocked to the frontier. In 1990, for the first time, the West contained a larger proportion of the population than did the Northeast. Beginning in the 1970s, the South, which had maintained a roughly constant population share for a century, grew dramatically, spurred by an influx of retirees, employment seekers and foreign immigrants. By 1998, the Southern population share once again approximated pre-Civil War levels.

During the 1990s, all of the states experiencing rapid population growth were located in the South and West (Exhibit 2). The Rocky Mountain states, fueled by migrants from economically troubled California, grew fastest, led by Nevada's blazing 45 percent population increase. In contrast, West Virginia, Pennsylvania, Maine, and New York grew by less than 2 percent between 1990 and 1998, and Connecticut, North Dakota, and Rhode Island actually lost population. The South and West's dominance is further underscored by the fact that they contained all of the 1990's fastest growing metropolitan areas (Exhibit 3). Warmer climates, inexpensive land, lower population densities, growing employment opportunities, the spread of air-conditioning, and physical amenities such as mountains and ocean have all lured domestic migrants to the South and West. Coupled with relatively high levels of foreign immigration and natural population increase, these regions have and continue to increase their shares of the U.S. populace.

Movement away from rural areas, and particularly farms,² is the second, long-term trend characterizing population settlement patterns. The percent of the population living in rural areas fell from 60 percent in 1900 to 27 percent in 1990 (Exhibit 4). Technological

² Rural areas are defined as the open countryside or in places with fewer than 2500 residents that are not located in an urbanized area.

advances of the 19th century contributed to the decline of rural areas both by promoting industrialization and factories which drew people to the cities for jobs and by making farm machinery more productive, thereby reducing the need for farm labor. Following a brief plateau during the Great Depression, movement away from rural areas accelerated in the 1940s and 1950s as Southern blacks surged northward to fill industrial jobs. By the 1970s, rural population share had stabilized and even grown modestly, contributing to the “rural renaissance” discussed below. Over the long term, however, movement away from rural areas has been the norm.

Evan as large numbers of people migrated from rural areas toward cities, city residents were moving outward to suburban areas and even further to non-metropolitan fringes. Transportation innovations such as the horsecar, railroad, and streetcar allowed middle and upper class workers (and even some working classes) to move away from the central city, which often contained much of the pollution of industry as well as poor laborers who could not afford to commute. Promoted heavily by land developers, the suburbs became the idealized location for those who could afford to move, in sharp contrast to many European countries where the well-off preferred to reside in center cities, and the poorer classes remained on the outskirts. Suburbanization intensified after World War II with the wider availability of the automobile, extensive highway development, and government insured housing programs making homeownership more widely affordable. Exhibit 5 illustrates this increasing suburbanization using Chicago as an example. In 1900, 81 percent of the population lived in the city portion of the metropolitan area, dropping to just 37 percent by 1990³.

More recently, additional technological developments have allowed jobs and employment centers to move further out from dense urban cores. Advances in computing and telecommunications have prompted many firms to move back offices to less costly, outlying areas. Call centers, direct mailing companies, and businesses using Internet technology for marketing and sales are among those likely to locate at the urban fringe or beyond. Similarly, certain types of workers are increasingly able to telecommute or commute to satellite offices, at least for some portion of the workweek.

³ The Chicago metro area boundaries are held constant using 1950 definitions, approximately the midpoint of the time series.

For decades, the inward movement from rural to urban areas and the outward movement from cities to suburbs and the non-metropolitan fringe occurred simultaneously. By the 1970s, however, the rural population stabilized and, for the first time, non-metropolitan population growth exceeded metropolitan growth, bringing forth the so-called “rural renaissance.”

The Rural Renaissance of the 1970s

Following decades of population growth which favored metropolitan over non-metropolitan areas, the much heralded “rural renaissance” of the 1970s saw non-metropolitan population growth surge forward. The annualized average growth rate during the 1970s for non-metropolitan areas was 13.3 persons per thousand (ppt) versus 10.1 ppt for metropolitan areas (Exhibit 6)⁴. Within metropolitan areas, those counties which had been added recently (since 1970) to the metropolitan area grew exceptionally fast (23.3 ppt). This fact is not surprising-- it is the high growth of these new, mostly suburban counties which led them to be incorporated into metropolitan areas or become entirely new metropolitan areas. Correspondingly, within non-metropolitan areas, those counties just outside of and *adjacent* to the metropolitan area boundaries grew most strongly (14.3 ppt), although even non-adjacent counties grew faster than the national average.

Studies of population decentralization have historically utilized the metropolitan and non-metropolitan classification of counties. Metropolitan statistical areas (MSAs or metropolitan areas) are defined by the Office of Management and Budget and have a population nucleus of 50,000 and over. They generally consist of a city and its immediate suburbs, together with adjacent communities having a high degree of economic and social integration with the nucleus.⁵ We further divide non-metropolitan counties into those adjacent to metropolitan area boundaries and those more far-flung, nonadjacent counties. As population changes, OMB redefines old metropolitan areas and creates new ones. For example, over the 1970-1984 period, 13 counties were added to the Atlanta metropolitan area.

⁴ County population estimates used in this paper are from the U.S. Bureau of the Census. They are estimated using a demographic components of change model that incorporates information on natural increase (births and deaths) and net migration (net domestic migration and net movement from abroad). Additional information on the methodology used to produce these population estimates is contained in Current Population Reports P25-1127 and on the Census Internet site with a URL of "<http://www.census.gov/population/www/method.html>".

In a period of rapid decentralization, the fastest growing counties are those on the outer fringes of metropolitan areas--those most likely to be redefined from non-metropolitan to metropolitan. Thus, allowing metropolitan definitions to change over time will tend to overstate the growth of metropolitan areas and understate the growth of non-metropolitan areas when compared to analysis that holds metropolitan area definitions constant. We use constant 1984 metropolitan boundaries for the bulk of this paper, approximately the midpoint of the 1970-1998 timeframe analyzed. Exhibit 7 maps the metropolitan county classes in detail.

Metropolitan classifications are helpful as a first step in the analysis of decentralization, but they also have some serious drawbacks. Metropolitan area boundaries are only rough proxies of the intensity of an area's development. Because metropolitan areas are defined in terms of whole counties, portions of those counties, sometimes large portions, may be rural in character. Secondly, metropolitan areas differ greatly from each other. For example, New York (population of 17.7 million and population density of 2,308 per square mile) and Casper, WY (population of 75,000 and density of 14 per square mile) are both metropolitan areas. Lastly, designation as a metropolitan area brings with it certain political and funding advantages so, at times, metropolitan areas are created by Congressional mandate, as opposed to fulfilling the normal qualifications.

An alternative county classification is by population density (population per square mile). County classifications according to population density and metropolitan status are correlated but not synonymous. We define five classes based on population density in 1984. Each density class contained roughly the same number of people in 1984. For example, the lowest density class (I) was comprised of 2,186 low density counties and contained approximately the same population as the 38 counties which make up highest density class (V). These classes are mapped in Exhibit 8 and defined as follows:

⁵ "Patterns of Metropolitan Area and County Population Growth: 1980 to 1984," U.S. Bureau of the Census.

<u>Density Class</u>	<u>Maximum Population Density in Class (population/square mile)</u>	<u>Number of Counties in Class</u>
I (low)	75	2,186
II	245	591
III	728	198
IV	1,866	73
V (high)	63,309	38

As population increases over time, county density classes will change. It is therefore important to use the density classes as defined at one point in time when exploring population growth rates. Appendix B illustrates the difference in growth rates resulting from use of 1984 versus 1990 density class definitions. As expected, use of 1990 density classes shows faster population growth for higher density counties. It is these rapidly growing counties which are attaining higher population density and hence being reclassified. In this report we maintain constant 1984 density classes, but the overall pattern of population growth by density remains similar regardless of the definition used.

Regardless of metropolitan status, lower population density counties grew fastest during the 1970s (Exhibit 9). In fact, within metropolitan areas, the 417 lowest density counties grew at an annual average rate of 24 ppt while the 38 densest counties (see Appendix C for a list of these counties) actually experienced annual population decline of 3.4 ppt. While the disparity between high and low density counties was not nearly as extreme for non-metropolitan areas, lower density counties in these locales were also the fastest growing.

Regionally, the 1970's "non-metropolitan turnaround" resulted from impressive non-metropolitan area population increases in all regions (though strongest in the South and West), and exceptionally weak growth or loss in Northeast and Midwest metropolitan areas which counterbalanced gains in Southern and Western metropolitan areas (Exhibit 10). Overall population increases were greatest in the West, particularly in non-metropolitan areas. The South also experienced above national average growth, although its metropolitan component led. The Northeast and the Midwest both lagged substantially behind the national

average. In the Northeast, annual population growth was only 0.2 ppt. However, this aggregate statistic masks significant differences by metropolitan status. The Northeast's metropolitan counties declined by 0.9 ppt per year while its non-metropolitan counties grew by 9.4 ppt. A similar, though less extreme, pattern occurred in the Midwest. There, annual metropolitan growth was a paltry 2.7 ppt while non-metropolitan growth was 7.1 ppt. Interestingly, the Northeast actually had higher non-metropolitan growth during the 1970s than did the Midwest.

Examination of population growth rates of individual metropolitan areas sheds further light on regional disparities (Exhibit 11). Every major Northeastern metropolitan area lost population during the 1970s, as did half of large Midwestern metropolitan areas. In contrast, excluding Baltimore/Washington, every Southern metropolitan area grew by more than an annual average of 20 ppt. In the West, metropolitan areas in the southern portion grew particularly quickly.

Many factors underlay the "rural renaissance" of the 1970s. Technological change, transportation advances, and the decline of industrial jobs all made distance a less important factor in situating employment centers and residential areas. Low density areas offered cheap land for operations such as warehousing. The Southeast, with its relatively low-wage, non-union workforce, attracted manufacturing firms during the recession. Rural mining and oil industries had large employment gains as a result of the oil crisis. An international food shortage temporarily bolstered farm areas and staunched outmigration⁶. The coming of age of the large baby boom generation (the leading edge of which was 25-35 during the 1970s) seemed to coincide with tastes and preferences which favored open space. Substantial retiree populations moved toward warmer, Southern climates. In addition, growth of metropolitan areas was depressed by large population losses from a few high density, mostly Northeastern cities. Metropolitan population growth in the West and South and in low density areas continued to be strong.

⁶ Frey, William H. "The New Geography of Population Shifts: Trends Toward Balkanization" in State of the Union: America in the 1990s. Reynolds Farley, ed. Russell Sage Foundation. New York. 1995, p. 280.

The Non-Metropolitan Demise of the 1980s

Almost as dramatic as the “rural renaissance” of the 1970s was its apparent demise during the 1980s when rural area population growth weakened and several high density metropolitan areas stabilized. Annual metropolitan area growth (10.7 ppt) rose slightly over 1970’s levels, but non-metropolitan growth plummeted to just 5.2 ppt, down from 13.3 ppt. The change was particularly dramatic for those non-metropolitan counties most distant from metropolitan area boundaries. These “non-adjacent” counties saw annual growth rates of 11.8 ppt during the 1970s but actually lost population during the 1980s. Growth dropped off dramatically in the lowest density, outlying counties. Fastest growth was concentrated among the middle density counties and in the low density portions of metropolitan areas. Notably, the highest density counties, while still posting the lowest overall increases of all density classes, moved from population losses to gains.

Regionally, growth continued to be strongest in the West. Unlike during the 1970s, however, Western non-metropolitan growth fell off substantially and was dominated by continued strong metropolitan advances. This pattern was replicated in the South and the Midwest, although with much lower growth rates in the latter region. In fact, non-metropolitan growth in the Midwest actually became negative in the 1980s, pulled down by losses in non-adjacent counties. The Northeast was the only region in which non-metropolitan growth (4.8 ppt annually) during the 1980s continued to lead metropolitan growth (3.2 ppt). The turnaround in Northeast metropolitan counties from losing 0.9 ppt annually to gaining 3.2 ppt was enough to lift total population growth in the Northeast above that of the Midwest. New York, for example, declined by 3.9 ppt during the 1970s but revived to post an increase of 3.2 ppt in the 1980s. All major metropolitan areas in the Northeast except Pittsburgh went from population losses during the 1970s to gains during the 1980s, and a number of Midwestern metropolitan areas saw progress as well.

In contrast with the 1970s, economic conditions in the 1980s discouraged decentralization. The strong dollar reduced demand for American goods abroad, eliminating small-town manufacturing jobs. Agricultural surpluses led to plunging prices and rural outmigration. Falling petroleum prices reversed the previous economic boom in large oil

patch areas--including Texas, Oklahoma and Louisiana.⁷ Federal dollars were also withdrawn from nonmetropolitan areas. Some analysts estimate that, during the 1980s, “over 8 billion dollars were cut from nonmetropolitan development programs, such as FMHA business loans, Economic Development Administration, Community and Development Block Grants, and over 6 billion from General Revenue Sharing.⁸” At the same time economic restructuring turned to favor large metropolitan areas, including those in the Northeast and Midwest, some of which were further aided by increasing foreign immigration.

The 1990s: A Return to Decentralization, With Caveats

Following the disparate experiences of the 1970s and 1980s, the future of decentralization was unclear in the early 1990s. Indeed, leading researchers in the field published the following contrasting claims:

In retrospect, the rural renaissance was an aberration of the 1970s.”

William Frey⁹

“The rural slowdown of the 1980s was a response to a set of national economic conditions that included a prolonged rural recession, a farm crisis, and faster job growth in metropolitan areas. In retrospect, it now seems likely that these conditions caused a short-term interruption in a general non-metropolitan growth trend that began in the 1970s.”

Kenneth M. Johnson and Calvin L. Beale¹⁰

⁷ Ibid.

⁸ Falk, William and Thomas Lyson, “Restructuring Local Labor Markets,” pp. 257-278, in J. Singelmann and F.A. Deseran (eds.) Inequalities in Labor Market Areas. Boulder. Westview Press. 1993.

⁹ Frey, p. 282.

¹⁰ Johnson, Kenneth M. and Calvin L. Beale. “The Rural Rebound Revisited” in *American Demographics*, July 1995.

From a late 1990s vantage point, this decade resembles the 1970s more closely than it does the 1980s. Non-metropolitan population growth (9.3 ppt annually) has rebounded impressively and pulled close to that of metropolitan areas (10.3 ppt). Those non-metropolitan counties adjacent to metropolitan area boundaries continue to grow fastest, and lower density counties have revived. Within each metropolitan category, the lowest density areas are once again the fastest growing, with the low density metropolitan counties leading the pack. On the other hand, high density counties, which actually lost population during the 1970s, have been able to maintain positive growth during the 1990s. In fact, all large metropolitan areas except Pittsburgh have grown since 1990. Thus, the 1990s have shown a return to decentralization but without the drastic retrenchment of inner city cores which marked the 1970s.

Regionally, the West returned to a pattern much like the 1970s, albeit with slower metropolitan growth. Non-metropolitan growth once again came to dominate, and the West continued to reign as the fastest grower overall. Non-metropolitan growth also revived in the South. Unlike the other regions, the Midwest experienced faster 1990's growth than during the 1980s in both metropolitan and non-metropolitan areas, with non-metropolitan areas switching from population loss to gain and metropolitan areas growing much faster than during the previous two decades. The Midwest once again surpassed the Northeast in total growth and almost every large metropolitan area in the Midwest grew at its fastest rate in decades. Minneapolis/St. Paul was an exception, experiencing a slight softening of its rapid 1980s increase. Growth in the Northeast fell back in all areas but, unlike during the 1970s, metropolitan growth continued on the positive side of the ledger.

The strengthening of decentralization during the 1990s is further illustrated by comparing growth rates of counties divided into "urban-rural continuum" groupings developed by the U.S. Department of Agriculture, Economic Research Service (ERS). This scheme classifies metropolitan counties into four groups and non-metropolitan counties into six groups (Exhibit 12) according to population size, proximity to metropolitan centers, and urban/rural status. The data reveal that *central* counties of large metropolitan areas (those with a million or more population) experienced slower growth during the 1990s than during the 1980s and, in fact, grew at the slowest pace of any county type. Other metropolitan counties, however, experienced increasing growth, with fringe counties growing fastest of all.

Within non-metropolitan areas, all county types grew more quickly in the 1990s than in the 1980s. Counties which are completely rural or which have very small urban populations switched from population losses in the 1980s to gains in the 1990s. The strongest growth occurred in counties which were completely rural or with small urban populations adjacent to metropolitan areas, but all adjacent counties increased significantly. Analysis using “urban-rural continuum codes” reinforces findings that growth has picked up in both non-metropolitan areas and in low-density or “fringe” portions of metropolitan areas.

Annual Trends in the 1990s

The recent availability of annual county-level population estimates allows for more timely tracking of spatial trends. Exhibits 13a and 13b show population growth for each year of the 1990s by metropolitan area and population density classifications. Though some fluctuation in estimates is to be expected year to year, these charts indicate a notable trend since 1995. Non-adjacent counties show a discernible weakening in growth, as do adjacent counties to a lesser extent. This weakening is also reflected in the softening of growth in the least dense counties. Concurrently, growth in metropolitan areas and the highest density counties has strengthened. Exhibits 14a and 14b present growth trends for the highest and lowest density counties by region. All regions exhibit a decline in growth for the lowest density counties, though the drop is especially steep in the West. Similarly, the recent growth in high density counties is exceptionally notable in the Western counties. Western counties in this class are: San Francisco, CA; Orange, CA; Los Angeles, CA; and Denver, CO. It is likely that the recent recovery in the California economy is responsible for much of these changes. Two measures of the California recovery are shown in Exhibit 15. After declining each year since 1990, employment revived during 1993-94 and has grown since. At the same time, population losses due to domestic out-migration have eased considerably since 1994. Because many of the outmigrants from California had gone to low density Mountain States locations, the California recovery may explain much of the drop off in Western low-density areas as well.

Population growth in high density, non-Western counties has also strengthened in the last few years, though in the Midwest this only reflects a slowing of population loss. This strengthening, coupled with weaker growth in the lowest density counties may presage a period of more equal growth rates among counties with differing population density. It is unlikely, however, that high density core areas will ever achieve growth rates seriously approaching those of lower density outlying areas.

Components of Population Change

In the aggregate, population growth rates of metropolitan and non-metropolitan counties have been similar since 1990 (10.3 and 9.3 ppt.). However, the underlying causes of growth in these two areas differ dramatically. Population growth or decline is the net result of domestic migration, foreign immigration and natural increase (births less deaths). These components may be inter-related. For example, high foreign immigration may lead to high levels of natural increase if the immigrants have high fertility rates and a young age structure. Domestic migration may be inversely correlated with foreign immigration if native-born residents prefer not to live near immigrants. Understanding which components are driving population growth or decline is crucial to assessing the impacts of population change on needed services such as schools, hospitals, and bi-lingual programs, as well as on tax revenue and future growth.

Over the 1990s, the first decade for which county based information for all three components of growth have been tabulated, lower density counties, particularly those on the outskirts of metropolitan areas, have reaped the greatest gains from domestic in-migration. Exhibit 16 shows the change in population due to each component as a percentage of the 1990 total population for the area. Domestic in-migration was responsible for a six percent increase in population for lower density metropolitan counties between 1990-1998; while domestic out-migration contributed an 11.5 percent loss in the population of high density metropolitan areas. This inverse correlation between population growth and density held true in each census region (Exhibit 17) with high density counties in the Northeast and West losing especially high shares of their initial 1990 population. Close examination of annual data since 1990 reveals that the high levels of out-migration from high density areas have slowed, though they still remain high at approximately 550,000 per year (Exhibit 18).

Concurrently, in-migration to low density areas has weakened slightly. In the West, these dynamics appear to be best explained by the recovery of California's economy, with the high domestic outmigration between 1993 and 1995 slowed by the greater ability of California cities to retain residents in more recent years.

Although high density areas are the big losers in terms of domestic migration, they greatly benefit from foreign immigration. Immigration was responsible for a six percent increase in the population of high density cores over the 1990s, while contributing only a 1 percent increase to lower density areas. This finding is consistent with the historical pattern of foreign immigrants settling first in cities where they can enjoy the benefits of ethnic enclaves. Most recent annual data suggests that the impact of foreign immigration is slowly increasing in lower density areas, reflecting the findings of some researchers that certain new immigrant groups, particularly Asians, are now beginning to bypass the cities and settle immediately in the suburbs¹¹.

Population growth due to natural increase is more uniform across county types, though there is still variation. Generally, natural increase plays a stronger, more positive role in high density metropolitan areas. This phenomenon is partially due to the younger age structure of the population living in cities. High natural increase is also due to large number of immigrants in many cities, particularly Hispanics, who have high fertility rates. Secondly, women in rural areas have traditionally had children at an earlier age than those in metropolitan areas¹². Therefore, the impact of the "echo-boom" (the children of the baby boom) has already been felt in rural locations while it continues in more metropolitan areas where delayed marriage and childbearing are more common. Third, the traditionally higher birth rates of rural women have been declining, while those of urban women have been increasing. Lastly, many low density areas, particularly in the Midwest, have a relatively large share of their population in older ages, leading to a situation in which deaths more strongly offset births. Recent data shows that all areas are experiencing a slowing in natural increase, due to a decline in births since 1990 as well as an aging population. This national

¹¹ Kasarda, John D., et. al. "Central-City and Suburban Migration Patterns: Is a Turnaround on the Horizon?" in *Housing Policy Debate*, Volume 8, Issue 2. Fannie Mae Foundation, 1997.

¹² Johnson, Kenneth M. and Calvin L. Beale, July 1995.

trend should persist for some time, with natural increase continuing to have a more positive effect in higher density cores.

Diverging Fortunes of Non-Metropolitan and Low Density Areas

While many low density, non-metropolitan counties have seen rapid growth in the 1970s and again in the 1990s, this experience has not been uniform. The fastest growing counties are of two types: strong growing suburbs on the fringes of high density Southern and Western metropolitan areas and outlying areas in the Rocky Mountain and Southwest states (Exhibit 19). These areas have benefited greatly from domestic in-migration; the Mountain states particularly from California outmigrants. In sharp contrast, many low density counties in the Great Plains, Appalachia, and the Mississippi Delta have shown net population loss over the 1990s, continuing a trend they began much earlier. These counties benefit little from foreign immigration, often lose young domestic migrants, and many actually face net population decrease--deaths exceeding births. Between 1990 and 1997, 619 non-metropolitan counties (26 percent) lost population due to natural decrease. Of these, 54 percent were in the Midwest and 37 percent were in the South.

The differing fortunes of non-metropolitan areas are further revealed by analysis of population growth using the Department of Agriculture's Economic Research Service (ERS) categorization of non-metropolitan counties into six "economic types" and five "policy types" (Exhibit 20, see Appendix D for definitions of types). All economic types experienced faster population growth over the 1990s than during the 1980s, further emphasizing the rebound in decentralization. Nevertheless, while farming and mining dependent counties went from population losses during the 1980s to population gains, their growth rates lagged considerably behind those that were services or government dependent. Similarly, within the policy type typology, retirement destination counties continued to have the strongest growth, increasing by 22.9 ppt annually from 1990 to 1998. Counties in which federally owned lands made up 30 percent or more of the land area in 1987 increased their population dramatically as well. These counties tend to be low density areas of the West. Those areas classified as "persistent poverty" or "transfers-dependent" did show positive growth in the 1990s, but it was dramatically slower than counties of other policy types.

The future of counties that persistently lose population deserves special attention. Residents of these areas face the loss of tax base, services, and community. While the overall national trend is toward population decentralization, it is important to remember those low density, outlying areas which are not benefiting from this process.

Central Cities and Suburban Growth

The decentralization of population can be seen not only in the outward movement of people toward non-metropolitan and lower density counties, but also in the movement of metropolitan area residents from central city to suburban areas. City and suburban distinctions more finely classify geography within county boundaries, but they do have analytical drawbacks of their own. Central cities are defined by political boundaries, not according to such criteria as population density or commuting patterns used in defining metropolitan areas. Many Northeast cities have long since stopped adding geographic area through annexation while this process continues in several Southern and Western cities. Therefore, the city of San Antonio encompasses 333 square miles and 73.1 percent of its metropolitan area's population. The city of Boston, on the other hand, occupies just 48 square miles and 12.2 percent of the population. Keeping this caution in mind, analysis of the population growth of individual cities and suburbs can still be fruitful.

Exhibit 21 plots central city versus suburban¹³ growth from 1990-98 for metropolitan areas with 1990 population over 1 million. In every area except Charlotte, suburban growth outpaced city growth. Not surprisingly, the fastest growing cities and suburbs are found exclusively in the South and West, with the exception of considerable increases in the Indianapolis suburbs. Cities losing population are predominantly in the Northeast and Midwest, with Buffalo, Hartford, Providence, and Pittsburgh losing both city and suburban population.

More recently, some of the cities which lost population over the early 1990s, such as New York and Boston, appear to have turned around. Whether these recent turnarounds reflect the beginning of an "urban revival," much heralded in various press accounts, remains to be seen. Undoubtedly, some cities have spent large amounts of money to revitalize parts

¹³ For this analysis, "suburban" refers to all areas in the metro area that are outside the named central city or other cities with population of 200,000 or more.

of the inner city and certain neighborhoods have been reclaimed. City crime rates, one of the chief reasons people often cite for fleeing cities, have fallen dramatically (Exhibit 22). Some cities have even begun to see the first residential building activity in years. However, a recent study of city and suburban growth patterns through 1996 concluded that “while not discounting reports of central-city neighborhood turnarounds and selective demographic revitalization, our findings imply that those improvements are limited and that a widespread back-to-the-city movement is not likely in the foreseeable future.”¹⁴ Meanwhile, the Census Bureau reports that, between 1996 and 1997, central cities lost 3 million people due to migration while the suburbs gained approximately 2.8 million.¹⁵

Spatial Distribution of Employment

Overall, the decentralization of the population has been mirrored by the decentralization of jobs. Whether people follow jobs or jobs follow people is the subject of much debate, but, over the long run, they move together. It is perhaps not surprising then that the share of jobs in the Northeast and Midwest has been falling and the share in the South and West has been rising (Exhibit 23). The rates of job growth underlying these changing shares are shown in Exhibit 24¹⁶. Since at least the 1970s, the fastest overall job growth has occurred in the West and South. The 1990s (through 1996) saw a substantial slowing in Western job growth compared with previous decades, no doubt related to the economic difficulties of California. The West fell from the fastest growing region (with an annual average growth rate of 28.3 jobs per thousand (jpt) during the 1980s) to trail the South during the 1990s with just 16.9 jpt. The Midwest, on the other hand, has strengthened its employment prospects during the 1990s, approximately equaling the job growth of the West. The Northeast has fared much more poorly. After its job growth increased during the 1980s, it plummeted to an annual average of just under 3 jpt during the 1990s.

Over the longer term, jobs have been moving away from high density cores. Already by 1970, the suburbs were the principal sources of employment in 9 of the 15 largest

¹⁴ Kasarda, John D., et. al., 1997.

¹⁵ U.S. Bureau of the Census, *Geographical Mobility: March 1996 to March 1997 (Update)*, P20-510.

¹⁶ All employment information is from the Bureau of Economic Analysis's Regional Economic Information System 1969-97 database.

metropolitan areas¹⁷. Now the engine of job growth extends to non-metropolitan areas as well. After falling behind metropolitan areas during the 1980s, non-metropolitan job growth in the 1990s again leads. Like population, employment growth is basically inversely correlated with population density. Over the 1990 to 1996 period, lowest density counties have seen increases of approximately 22 jpt. High density metropolitan areas, on the other hand, have experienced virtually no job growth, significantly less even than during the 1970s. This result suggests that, during the 1970s, people were migrating away from high density cores, but a fair number were continuing to work there. By the 1990s, however, population growth in these high density cores was outpacing job growth. This can be partially explained by the fact that a large share of population growth in high density areas is due to natural increase, children who do not work. Foreign immigrants, who comprise a substantial portion of the population growth in certain cities, tend to have higher fertility rates and are more likely to maintain households with children than do the native-born. Simultaneously, high density cores are losing domestic migrants, many of whom are of working age.

Note, however, that the employment data presented here runs only through 1996. Continued economic expansion through mid 1999 may well have led to some resuscitation of densely settled counties. Indeed annual data shows job growth in these high density areas increasing steadily each year during the 1990s until leveling off in 1995-96 (Exhibit 25). At the same time, job growth in lower density areas has been softening. These trends are likely to be due to the same forces discussed earlier concerning the California economy. Additionally, certain rural areas are currently suffering because of plunging farm prices, partially caused by economic woes of overseas buyers.

Just as the location of jobs has shifted, so have the types of jobs. Since 1970, jobs in the services sector especially, but also in retail sales, have grown dramatically (Exhibit 26). Service jobs have almost tripled over that period. Over the same time, jobs in farming, mining, and even manufacturing have remained constant or even fallen. Further analysis of several representative employment sectors--construction, manufacturing, and services--highlights the disparate experiences of different geographic areas during the 1990s (Exhibit 27). All areas saw significant job growth in the services sector, but once again high density and Northeast areas lagged considerably. The construction and manufacturing sectors

¹⁷ Jackson, Kenneth T. Crabgrass Frontier. Oxford University Press. New York. 1985. P. 267.

exhibited an even stronger inverse relationship between population density and job growth, with high density cores showing an absolute loss of jobs, particularly in the Northeast.

Historically, people moved away from core areas to establish residence in the less dense suburbs and outlying areas but continued to commute to higher density downtown areas. In other words, the share of jobs in lower density counties was less than the share of the population residing there. Advances in technology, transportation, and infrastructure, much of it firmly established during the 1970s but still continuing currently, have led to low density areas now containing many types of jobs in almost equal proportions to their population. Certainly low density areas have higher proportions of total farming and mining jobs than do other areas of the country, but these sectors make up only a small portion of the employment base in these counties. By 1996, the lower density counties (in the two lowest density classes) had only 5 percent of their employment in farming and 1 percent in mining. Furthermore, while they contained 40 percent of the population, between 1970 and 1996 they went from containing 31.4 percent to 41.5 percent of all construction jobs, 29 to 41.1 percent of all manufacturing jobs, 31.6 to 38.1 percent of retail trade jobs and 34.6 to 40.2 percent of all government jobs (Exhibit 28).

Clearly these outlying areas now enjoy a more diversified employment base which should both buffer them from downswings in particular industries and give them a foothold in sectors which are likely to grow in the future. Nevertheless, analysis of decentralization of employment during the 1970s proves that this process is not always a smooth one. In the past, low density areas have grown in spurts, with sharp movements forward followed by periods of consolidation. The uneven nature of decentralization is linked in part to the cyclical nature of growth in manufacturing and other basic industries¹⁸. As lower density areas achieve a different balance of employment, this unevenness should be smoothed.

Outlook

Evidence from this decade suggests that the movement of population and jobs toward the South and West, as well as to less densely populated metropolitan fringes and beyond,

¹⁸ Pollakowski, Henry and William C. Apgar, Jr. "The Ebb and Flow of Nonmetropolitan Employment Growth: A Time Series Cross Sectional Examination of Employment Dispersion." Joint Center for Housing Studies. Working Paper W85-3. 1985.

will be the most predominant trends for the foreseeable future. Many low density areas now have a diversified employment base, and though some may still be subject to cycles in the farming and extractive industries sectors, they are unlikely to be as devastated as in past periods. Technological advances, such as computer networking, videoconferencing, and the Internet will allow for the expansion of telecommuting and the location of backoffices in less expensive, less dense areas while still allowing these workers to keep in contact with colleagues and customers in downtown or other locations.

Demographic forces will further spur continued population decentralization. All age cohorts born between 1920 and 1970 moved away from central cities and toward suburbs as they aged over the 1985-1995 period (Exhibit 29). Take for example the cohort born during the 1950s. In 1985, while aged 25-34, 36.4 percent of this group lived in central cities and 43.6 percent in suburbs. By 1995 when they were aged 35-44, just 30.4 percent lived in cities and 49.5 percent in suburbs. Similarly, each cohort over the age of 35 is more likely to live in non-metropolitan areas the older that they become. Younger age groups decrease or hold constant their share in non-metropolitan areas, reflecting the continued outmigration of the young from certain rural locales, but older cohorts have increased their presence in non-metropolitan areas as they approach or enter retirement. As the bulk of the baby boom generation moves into its forties and fifties, a growing share of the population would be expected to locate in suburbs and non-metropolitan areas.

Foreign immigration, currently the savior of many metropolitan area central cities, will eventually also affect outlying areas as immigrants move away from large central cities (Exhibit 30) While 51.1 percent of immigrants who entered the US during the 1990s lived in the central cities of large metropolitan areas in 1997, only 35 percent of those who entered before 1965 did. The share living in the suburbs exhibits the opposite pattern. Like many past immigrant generations, over time recent immigrants will likely join in the move outward and adopt residential location patterns similar to those of the native-born population.

Nevertheless, not all low density or outlying areas are expected to thrive. Those counties with older age structures which do not benefit by foreign immigration will continue to decline. Elders have very low mobility rates--only 5 percent per year for those over age 65 compared to 32 percent for those aged 20-29. Without population infusions provided by

immigration and births, the aging in place of the elderly will be the key demographic driver in these counties. The fate of areas suffering from outmigration of the young and the aging in place of the old will be a major demographic and public policy issue in the future.

The prospects of high density cores, particularly in the Northeast and Midwest, are also of concern. While some have turned around over the past few years, many continue to lose population and jobs; and with those, tax base and employment opportunities. Whether the claim that the cachet and convenience of urban living will draw empty nesters back into downtowns is true is yet to be seen, but there do exist some factors offering hope for denser city areas. Foreign immigration should continue to help gateway cities such as Los Angeles, New York, Chicago, and Boston because the bulk of foreign immigrants continue to settle first in cities. Although the Immigration Act of 1990 reduced the number of immigrants who may enter under certain caps, the large number of immigrants who have entered and become naturalized since the 1970s, and who may sponsor certain types of relatives regardless of these caps should ensure that immigration will continue to be a major factor in population growth. Secondly, some cities which experienced large population losses in the 1970s have since made changes to restructure their employment bases away from large scale and heavy manufacturing toward technology, services and healthcare. These sectors are less sensitive to cyclical downturns, have smaller physical space needs, and are likely to grow in the future. Thirdly, the growth in the college age population over the next 10 to 15 years brought on by the aging of the echo boom generation should help to insulate cities with large student populations (Exhibit 31). Indeed, the aging of this younger generation should boost cities in general because young people are more likely to reside in cities early in their adult lives. Whether a modest urban revival is actually in the offing, it is unlikely to significantly distort the continued decentralization of population and jobs. As a senior Federal Housing Administration (FHA) official told the 1939 convention of the American Institute of Planners: “Decentralization is taking place. It is not a policy, it is a reality—and it is as impossible for us to change this trend as it is to change the desire of birds to migrate to a more suitable location.”¹⁹

¹⁹ Jackson, Kenneth T. Crabgrass Frontier. Oxford University Press. New York. 1985. P. 90.

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