Construction job growth in the Sunbelt has been a complex story, but in most periods the suburbs, exurban areas, and even the rural areas performed better in both the Sunbelt and the Frostbelt.

Retail trade is the only other of the seven sectors analyzed where jobs grew faster than private jobs overall in the 31-year span (2.35 percent vs. 2.25 percent). The Frostbelt experience is straightforward; growth was fastest in the suburbs of the middle-sized metro areas in every period. Performance in the Sunbelt was more varied, but growth was faster in the suburbs and exurban areas. Wholesale activities increasingly serve large-scale regional or national markets. It is no surprise, therefore, that wholesale jobs tended to grow fastest in the rural areas of both regions. Another slower growing sector with substantial exurban and rural growth was transportation and public utilities.

Changes in the status of the manufacturing sector during the 20th century are well known; manufacturing is highly decentralized compared with services and other sectors, typically explained by weakening agglomeration opportunities in cities. Manufacturing often functioned as a "leading sector", inducing substantial rural growth in other employment sectors. But manufacturing has been leaving population centers ever since the highway system gave truck transport dominance over rail or waterways (in dollar value of freight shipped). An increasing "footlooseness" in the manufacturing sector means that businesses are much more likely to follow the locational preferences of their workers than to determine them. The strength of household preferences for suburban and exurban settings is well known and is a governing determinant of industrial location.

In addition, manufacturing was the only one of the seven major economic sectors that *declined* absolutely through the 31-year span. But most of the decline was in the Frostbelt, and there were positive signs of growth in the Sunbelt. Nevertheless, in both regions manufacturing firms continued to relocate out of the core centers.

The overall history of sectoral employment change confirms the importance of exurban and rural, and sometimes suburban, growth across all sectors. The signs of any recentralization of employment are negligible.

Conclusions

What preliminary conclusions can we draw? First, Frostbelt-Sunbelt migration remains a powerful trend. Climate counts. Second, the facts do not support the idea of a "return to the cities," "regeneration," or any resurgence of compact development, so often mentioned in recent years in the media and by planners. While pockets of spontaneous development activity exist in various core areas, these are statistically few and are overwhelmed by the widespread decentralization trends documented here. Third, the dominant trends show an ebb and flow over time between growth in exurban and in suburban locations. Suburban growth tended to be concentrated in the middle-sized metro areas. Exurban areas and rural counties usually performed better than core counties. Consistently, the core counties of the largest metro areas have fared worst, even in the most recent period (1995-99) when they did a little better. Fourth, most firms no longer have to seek locations in traditional high-density centers to achieve agglomeration economies; they can either do without them or find them in low-density regions – Silicon Valley is perhaps the first and most famous example. Finally, most planners who seek the holy grail of "smart growth" are, somewhat desperately, attempting to counter the potent market trends that favor more dispersal. Given their extent, as monitored here, planned reversals would be very costly.

**Figures 1b - 1e and 2b - 2e are available on the Lusk Center web site.

http://www.usc.edu/lusk/research/briefs/index.html

Real Estate Research Brief

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The Continuing Decentralization Of People And Jobs In The United States

Introduction

The census of 2000 reported that since 1990 the U.S. population had grown by slightly more than 13 percent. Most of the nation's cities did not grow by this much, while most of their suburbs grew by as much or more. Of the largest 50 cities, only 13 exceeded national population growth (of the top 20, only four did). Predictably all of these were in the Sunbelt states.

The census occurs every ten years and simply provides snapshots. This report offers a fuller picture of how population and employment in the 3,132 counties of the U.S. are decentralizing. We base this on an analysis of a 31-year series of annual data from the Regional Economic Information System (REIS) by the Bureau of Economic Analysis (BEA, U.S. Department of Commerce) that describes population, as well as employment and income for seven major economic sectors for all counties for the years 1969-1999. The employment data, which cover both full-time and part-time jobs reveal several major economic trends over the 31-year period: the wage and salary employment share fell (from 86.5 percent to 83.4 percent), while the nonfarm proprietors' share rose (from 10.5 percent to 15.2 percent); the services sector's share of jobs grew significantly (from 18.4 percent to 31.6 percent); the share of jobs in finance, insurance, and real estate (FIRE) also expanded (from 6.5 percent to 7.9 percent); at the same time, the shares of farming and manufacturing jobs fell (from 4.4 percent to 1.9 percent and from 22.6 percent to 11.8 percent, respectively). Smaller or less widely recognized adjustments include an increase in agricultural services, forestry, and fishing, a rise in the share of construction jobs, a drop in transportation and public utilities employment, an increase in retail trade jobs, and a fall in the share of government work (mainly reflecting a decline in the armed forces); wholesale trade jobs maintained a near constant share.

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We use these data to study agglomeration economies and their evolution, that is, how people and jobs have clustered geographically over time. People may choose to live and work in clusters for a number of reasons, including opportunities for social interaction and economic interactions. Economists and others have made much of agglomeration economies as a source of economic growth because interactions facilitated by proximity spawn and develop ideas. The clustering of high-tech firms in Silicon Valley and the clustering of the film industry in the Los Angeles area are examples of such agglomeration economies. But clustering may be costly because it can become too dense, resulting in congestion.

The benefits of dispersal are expanded by increased connectivity, i.e., cheaper modes of moving people, goods, and (especially) ideas. The marginal costs of moving the latter are now close to zero. This is confirmed by our analysis which reveals substantial decentralization, much of it away from metropolitan areas in general and especially from their cores.

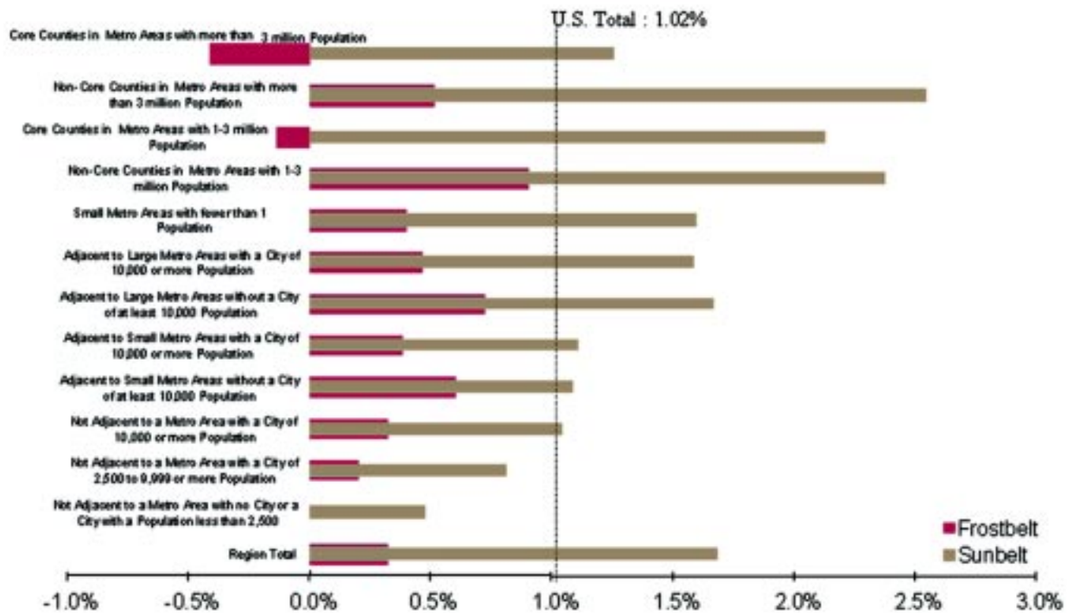
We divided the 831 metropolitan counties into five categories: (i) the core counties of the largest (> 3 million) metro areas (MSAs or CMSAs); (ii) their suburbs (noncore counties); (iii) the core counties of middle-sized (1-3 million) metro areas; (iv) their suburbs; and (v) those counties constituting the small (< 1 million) metro areas. All data aggregations based on political boundaries are problematic. With this in mind, we often refer to noncore areas as "suburbs," although it is clear that there are also many areas in core counties that exhibit suburban characteristics.

The 2,301 nonmetro counties were divided into seven categories, using the USDA's 1993 Urban Influence Codes. Four categories are for counties adjacent to metro areas: (i) adjacent to larger metropolitan areas (defined for the nonmetro analysis as > 1 million); (ii) adjacent small metro areas; (iii)with a city > 10,000 people, (iv) without a city of > 10,000 people. Three categories are for counties *not* adjacent to a metro county: (i) with a city of >10,000 people, (ii); with a city of 2,500 to 9,999; (iii) without an urban place > 2,500 people. The first four of these nonmetro counties may be defined as exurban and the last as rural.

Basing the analysis of agglomeration economies on county data has its drawbacks. Counties can be very large with considerable heterogeneity. In addition, counties vary significantly in size, typically as one moves west; they are likely to underbound a metropolitan region in the east and overbound it in the west. Furthermore, the BEA now designates counties throughout the 31-year period in terms of their 1999 OMB (Office of Management and Budget) metro-nonmetro status; similarly, we have used 1998 population estimates to categorize metro areas into size groups, while the USDA (United States Department of Agriculture) codes reflect 1990 commuting patterns. We have no data source that treats each year's observations in terms of that year's particular designations. The inference is that the BEA convention results in a slight classification bias in favor of metropolitan growth: the counties reclassified from nonmetro to metro were typically the fast-growing counties.

Clearly, our analysis would benefit from data for smaller spatial units. But these are available only sporadically, for example, from the decennial Census and or from the quinquennial Economic Censuses. County Business Patterns data at the zip code level are available on an annual basis but only since 1994. These data have no sectoral detail and less coverage than the REIS data used in this paper (for example, nonfarm proprietors are absent from the CBP totals). Moreover, they suffer from numerous zip code redefinitions, making them much harder to use. Finally, the recent change in industrial classifications from SICs to the NAICS (North American Industrial Classification Scheme), and the difficulty of constructing correspondence tables, will slow down any investigations (especially time series analysis) of sectoral detail.

Figure 1a. Sunbelt and Frostbelt Population Growth Rates, 1969-1999



The broad overall trends in U.S. settlement patterns are well known, and include the following:

i. The westward movement of population and employment, in more recent decades to the Sunbelt.

ii. Persistent rural-urban migration of jobs and people to the cities.

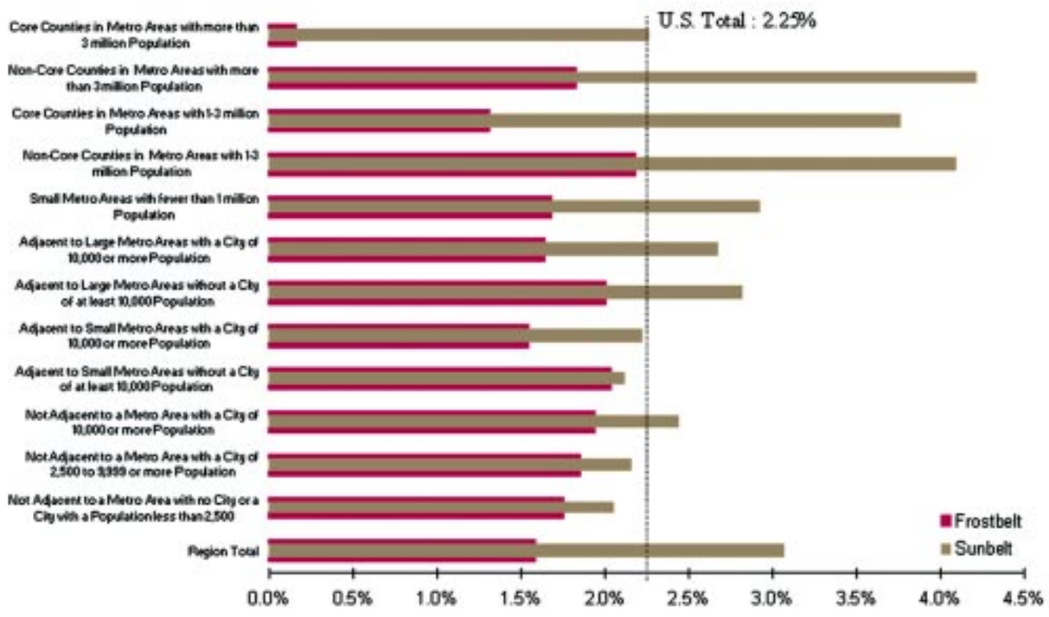
iii. Suburbanization (and, more recently, exurbanization) out of cities.

However, the more detailed analysis made possible by the huge REIS data set (over one million observations on employment alone) suggests a much more complex picture. Although only the highlights are discussed in this Report, they are revealing.

Population

U.S. population growth from 1969 to 1999 averaged a little over 1 percent per year (Figure 1a). Was there an unequivocal redistribution of people towards cities? The answer is more complex than a simple urbanization trend or even a post-1970 "counterurbanization" phenomenon. The fastest growth occurred in the suburbs of the middle-sized metro areas (1.63 percent; average annual growth rates are used throughout). The second-fastest growth occurred in the exurbs of the large metro areas without a city of 10,000 or more (1.22 percent). Close behind were the suburbs of the largest metro areas (1.18 percent). The three other categories that grew faster than the national average were core counties of the middle-sized metros (1.1 percent), small metro areas (1.1 percent), exurbs of the large metros with a city of 10,000 or more (1.04 percent).

Figure 2a. Sunbelt and Frostbelt Private Employment Growth Rates, 1969-1999



The major population losers were the core counties of the largest metro areas (-0.52 percent), exurban areas of the small metro areas, and rural counties. There was an overall redistribution of population towards the urban areas but not to the core counties of the largest metropolitan areas. Growth was strong in the suburbs as well as in the exurban areas of the large metropolitan areas.

A complication is that the 31-year pattern was not a steady trend but was subject to clear swings. Our approach to taming a large data set was to divide the period into four intervals (**Figures 1b-1e). These correspond roughly to urban and rural dominance in terms of private employment growth. Whereas considerable literature exists that comments on the "rural renaissance" of the 1970s (which many took be to be a reversal of longstanding urbanization trends) and the "urban revival" of the 1980s, we find that there were swings in population and employment growth that do not match the Census years. The period 1969-76 showed predominantly rural growth, 1976-88 showed a change favoring metropolitan (if more suburban) growth, 1988-95 was a period reminiscent of the first (a "rural rebound"), while 1995-99 again signaled growth (at least in terms of employment) that is distinctly more urban (a possible explanation is that the boom years benefited the cities by mopping up unemployment in the core counties).

The highest population growth in the first period was in the noncore counties of the middle-sized metros; all of the exurban and two of the three rural groups as well as the smallest metro areas significantly surpassed the national rate of 1.12 percent. The suburbs of the largest metros lagged and the core areas of the largest metro areas lagged even more. Some have labeled these trends a "rural revival." While not completely false, this label ignores the existence of both lagging rural areas and some strongly growing metro areas and their suburbs.

Data for the second period (1976-88) signal a clear change. National population growth had fallen to 0.98 percent with only four areas exceeding this rate: the noncore counties of the middle-sized metros were still the growth leaders (1.49 percent), followed by the core counties of the same areas (1.20 percent), the noncore counties of the largest metros (1.21 percent) and the small metro areas (1.01 percent). The label "urban revival" for this period is inaccurate; although the exurban and rural counties fell behind, population growth in the core counties of the largest metro areas continued to lag.

In the third period, 1988-95, noncore counties in middle-sized metro areas were still the growth leaders (1.67 percent), while all the other metro area groups except for the core counties of the largest urban areas grew faster than the national average. However, the exurban areas of the large metro areas also did well (the "rural rebound"), while population growth in other nonmetropolitan area groups faded.

The final period, 1995-1999, followed the same pattern, except that the national population growth rate again slipped below 1 percent, as did population growth in the smallest metro areas (0.73 percent). However, what distinguishes these two recent periods is the differential pattern of their job growth performance.

Employment

Alternating periods of clear dominance in metro or nonmetro growth are much more evident for employment than for population. National job growth over the 31 years averaged 2.25 percent, substantially higher than population growth because of the well-documented increase in female labor force participation (Figure 2a). The county group leaders are similar to for population: the noncore counties of the middle-sized metro areas grew fastest (3.09 percent), followed by the suburbs of the largest metro areas (2.58 percent), the core counties of the middle-sized metro areas (2.57 percent), the exurbs of the large metros (without a city of 10,000 or more; 2.43 percent), and the smallest metro areas (2.37 percent).

The laggards were the rest of the exurban and rural areas and the core counties of the largest metro areas (the latter grew the least, 1.25 percent). Central cities vs. the suburbs is apparently no longer the key issue in the spatial competition for jobs: the more interesting comparisons are among suburbs, exurban areas, and rural counties.

We again broke the 31-year span into the same four periods, roughly denoting shifts between metro and nonmetro private employment growth dominance (**Figures 2b-2e). Growth comparisons over the four time periods corroborate this view. In the first period, 1969-76, nonmetro job growth dominated; rural counties with a city in the 2,500-9,999 range grew fastest (2.73 percent), and all of the nonmetro counties had job growth faster than the national average. These were followed by the suburbs of the middle-sized metros (2.65 percent), the small metro areas (2.34 percent) and the exurban counties. Next came the suburbs of the largest metros and the core counties of the middle-sized metro areas, both of which barely exceeded national job growth. The only lagging areas were the core counties of the largest metro areas.

This pattern changed sharply in the second period, 1976-88. Only three county groups grew faster than the U.S.: the suburbs of the largest metro areas (3.66 percent), the noncore counties of the middle-sized metros (3.35 percent), and the core counties of the middle-sized metros (3.22 percent). The core areas of the largest metros continued to lag behind national trends, however, a key fact that belies the nomenclature of an "urban revival."

Interestingly, the third period (1988-95) is similar to the first. While the suburbs of the middle-sized metro areas were again the growth leaders (2.91 percent), *all* of the exurban and rural county groups grew faster than the U.S. (1.69 percent). The core counties of the middle-sized metros grew somewhat faster (1.93 percent), while the suburbs of the largest metros lagged (1.31 percent). Once again, the core areas of the largest metros grew slowest, indeed almost not at all (0.13 percent).

But this pattern did not persist into the final period (1995-99), which is reminiscent of the second

period: most of the nonmetro counties (except for the large metro exurbs without a city of 10,000) lagged U.S. growth; the middle-sized metro suburbs continued to grow the fastest (3.41 percent), closely followed by their core counties (3.25 percent). The suburbs of the largest metros performed quite well (3.03 percent). But the major change occurred in the core areas of the largest metros. Although they still lagged the national growth rate, they grew faster than in any other period (2.41 percent). In the late years of the economic boom, even the hitherto slow-growing core counties of the large metro areas finally developed buoyant labor markets.

The analysis so far suggests that clustering remains important, as evidenced by the success of the suburbs of middle-sized metro areas. However, significant job growth is also possible in the lower density exurban areas and even in some remote rural areas. But aggregates do not tell the full story. Ways of digging deeper include examining the growth of proprietor employment, sectoral employment, and regional differentials. We perform this in the following sections.

Proprietorships

Proprietorships are one of the three major forms of legal business entities. They tend to be smaller than the other two groups (partnerships and incorporated businesses). In 1997, the IRS reported that there were 17.2 million businesses of this type; more than 72 percent of all enterprises that filed returns were nonfarm proprietorships. Yet they accounted for less than 5 percent of all business receipts in that year. We suggest that the growth of proprietorships can serve as a proxy for the vitality of small, start-up firms. In what spatial settings have they performed best?

In 1999, total U.S. full-time and part-time employment was 163.8 million. The split between wage and salary employees and proprietors was 136.6 million vs 27.1 million. Of the latter, 2.2 million were farm proprietors. The growth of nonfarm proprietors' employment occurred primarily in metro areas and at rates that varied little between metro county types. For the years 1969-99, proprietor employment grew fastest in the suburbs of the middle-sized metros (3.6 percent), but almost as fast in the core and noncore counties of the large and middle-sized metros. Elsewhere, only the small metros exhibited proprietorship growth faster than the national overall rate (2.79 percent).

The story was similar in the first period (1969-76), except that the core counties of the largest metros grew a little more slowly than the national rate (2.34 percent rather than 2.47 percent). This changed in the 1976-88 period, when the core counties of the largest metros performed better than any of the other county groups (4.26 percent), a rare occurrence. In the third period (1989-95), these core counties lagged, while the suburbs of the middle-sized metros again had the fastest growth (2.73 percent). Also, the core counties of both the middle-sized metros also grew more slowly than the national average (2.18 percent). During this period, the exurban areas of the large metros (without a city of 10,000) grew faster than the national average (2.63 percent). In the final period (1995-99), the suburbs of the middle-sized metros led once again (3.28 percent). The other counties of the middle-sized and largest metro areas plus the exurban areas of the large metros also exceeded the national growth rate (2.59 percent). The spatial pattern of entrepreneurial incubation shows a moderate tendency over the years to remain metropolitan rather than nonmetropolitan, but with the suburbs usually predominating.

Using this measure as a proxy for innovation and risk-taking, it is possible to conclude that the suburbs consistently performed well. The core areas did well in some periods, while the exurban areas have featured prominently in recent years. On the other hand, the growth in non-farm proprietorships has not been a rural phenomenon. These findings neither vindicate nor undercut conventional hypotheses about the presence of agglomeration economies as a prerequisite for the incubation of new and small firms.

Frostbelt and Sunbelt Differentials

The REIS data are available for eight major Census regions. We aggregated these into sets that roughly approximate a Frostbelt (New England, Mideast, Great Lakes, Plains) and a Sunbelt (Southeast, Southwest, Rocky Mountain, and the West, including the far from sunny Pacific Northwest). Long-term shifts of people and capital from the former are familiar and well documented. Higher Sunbelt growth rates persist throughout, with the contrasts widening among periods.

In the Sunbelt, population grew at 1.69 percent per year for the 31-year period while the rate for the Frostbelt was merely 0.33 percent. In the Sunbelt, all area groups except for two of the rural categories grew faster than the national average; in the Frostbelt, none did. An analysis of the four sub-periods confirms that the suburban counties were the leaders in both regions. The suburban counties of the largest metros grew faster in the newer Sunbelt metro areas in every period. In the Frostbelt, only the suburban counties of the middle-sized metro areas ever grew faster than the national average, and then only in the two most recent periods.

Private sector employment trends tell a similar story and highlight the importance of exurban and rural growth in the first and third periods in both regions. Sunbelt suburbs were almost consistently the growth leaders. Core counties performed best in the most recent (1995-99) phase.

Fast-paced proprietor employment has already been shown to be somewhat more observable in the metropolitan counties. In the Sunbelt, most growth occurs in the suburbs of the largest metro areas, but occasionally features in the exurban areas. In the Frostbelt, the suburbs usually perform best in terms of proprietor employment growth. However, the core coune

Major Sectors

The REIS series provides employment data for seven major (excluding mining and agricultural services, forestry and fishing) private industrial sectors. For the nation, over the 31 years, employment in four industries grew faster than private employment (2.25 percent): services (3.85 percent), FIRE (2.65 percent), construction (2.49 percent), and retail trade (2.35 percent). The other three sectors lagged behind national job growth: wholesale trade (2.03 percent), transportation and public utilities (1.70 percent), and manufacturing which declined absolutely (-0.19 percent). Because our metric is jobs, we must qualify these descriptors of growth in the sense that industries can hire less labor either because they are declining or because they are becoming more efficient.

Sunbelt services grew fastest in the suburbs of the largest metro areas for the first two periods and in the exurban areas of the large metro areas in the second and third periods. Growth in the core counties of the largest metro areas lagged in the third and fourth periods. Frostbelt services sector growth also was fastest in noncore counties (most often in the suburbs of the middle-sized metros) or in the exurban areas surrounding the large metro areas.

The most visible vigorous exurban and rural growth is for employment in the FIRE sector. For the Sunbelt, this was true in three of the four periods studied, including the most recent periods, where exurban growth surpassed suburban and core county growth. High growth rates also occurred in the most rural areas. Similar patterns also occurred in the Frostbelt areas.

Both the services and FIRE sectors are perceived to be the most dependent on agglomeration economies. If so, they appear able to be found in locations far from the traditional core metro areas. At the same time, low-cost communications have allowed some firms to de-couple back-office from headquarters operations and locate in both a core area and in the periphery.