Assessing Changing Employment Trends Driving Commercial Real Estate Development

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About This Report

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Executive Summary

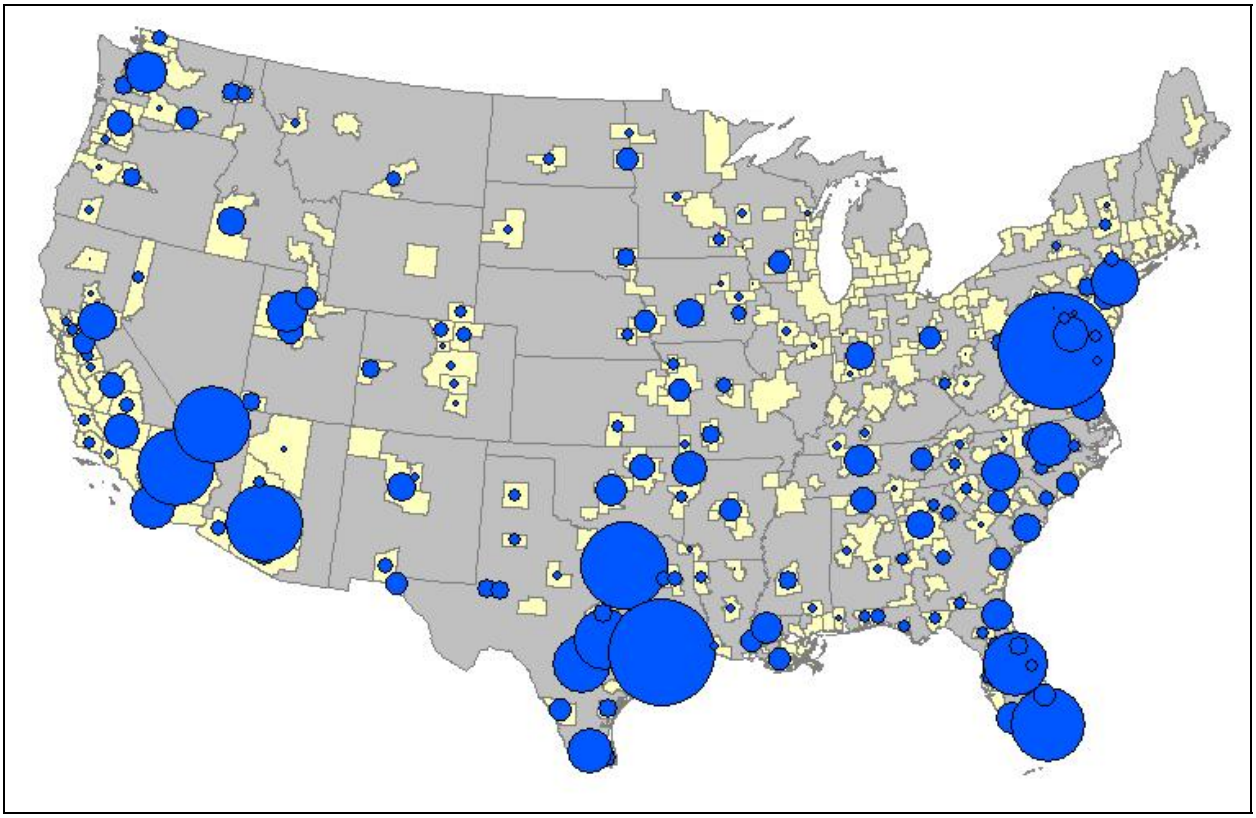
Trends in employment are very important to developers, lenders, and others interested in the health of the commercial real estate industry. From January 2000 through December 2007, total employment in the U.S. rose at an average annual rate of 0.7 percent. *Office employment* rose 0.9 percent annually, as the nation's workforce shifted increasingly into services. In contrast, *industrial employment* declined an average of -2.6 percent a year.

The Demand for Office and Industrial Space

The demand for office or industrial space is related to the number of office or industrial workers that firms employ as well as the price of space. A demand study of the office market focusing on a cross section of metropolitan areas shows a price elasticity of -0.62 and an employment elasticity of 1.12. These results indicate that office demand is relatively unresponsive to a change in rents, thus, a 1 percent increase in office rent is associated with a -0.62 percent decline in the demand for space. On the other hand, because office demand is very responsive to a change in employment, a 1 percent rise in employment is associated with a 1.12 percent increase in space demand.

A similar study of the demand for industrial space yields a price elasticity of -1.15 and an employment elasticity of 0.54. These results indicate that the demand for industrial space is very responsive to a change in rents: a 1 percent increase in industrial rent is associated with a 1.15 percent decline in the demand for space. On the other hand, industrial demand is relatively unresponsive to a change in employment: a 1 percent rise in industrial employment is associated with a 0.54 percent increase in space demand.

Net Job Growth in Metro Areas, 2000-09



Trends in Employment Growth

Looking at employment growth in 293 MSAs reveals there were a total of 2.5 million net new jobs created between January 2000 and June 2009. Most of these jobs were in cities on the East Coast, in Texas, and in the West. Washington, D.C., with a net gain in jobs of 346,800, had the largest number of net new jobs. It was followed by Houston and Dallas-Fort Worth with gains of 307,800 and 213,600 respectively. Among cities that lost employment during 2000-09, Detroit was the biggest loser, followed by Chicago and San Francisco. Interestingly, seven of the top 20 job losing metro areas are in the Sunbelt, which is normally considered an area of strong job growth.

Looking at the office market, the top 10 largest generators of office market jobs are all in the Sunbelt. The Washington, D.C., area is first, creating 118,700 net new office jobs since 2000. It is followed by Houston and Miami, where 54,400 and 52,400 office jobs were generated.

In the industrial sector, the total number of industrial jobs declined by 3.7 million since 2000 in the 293 MSAs tracked. Not all cities lost industrial jobs, although the magnitude of their job gains has been modest. Industrial employment gains have been concentrated in cities in the Sunbelt and the far west. The biggest gainers are Las Vegas, with 3,500 net new industrial jobs and Bakersfield, Calif., and Fort Walton Beach, Fla., with 2,900 and 1,700 respectively.

Recession Induced Changes

Since the recession began in December 2007, only 21 of the 293 metro areas (seven percent) have recorded increases in employment. Ten of the 21 MSAs that have had employment gains are in Texas. The largest employment gain since the onset of the recession has been in Austin, Texas with an increase of 5,900 jobs. It is followed by McAllen, Texas (3,300); Killeen, Texas (2,900); Odessa, Texas (2,700); and Kennewick, Wash. (2,700).

The biggest employment losses recorded since the recession started have been in the country's largest metro areas: Los Angeles (-293,300), New York (-243,100) and Chicago (-237,500). Large losses also have been recorded in formerly rapidly growing areas of the Sunbelt like Phoenix (-187,900), Atlanta (-152,000) and Miami (-141,700).

Office employment has increased in only 13 of the 293 cities (4 percent) since the recession began. The largest of these very modest increases have been in Austin, Texas (4,800), Charleston, S.C. (1,100), and Fayetteville, Ark. (700). The biggest declines in office employment have been in New York (-131,200), Los Angeles (-104,200), and Chicago (-90,900).

Patterns of Metropolitan and Nonmetropolitan Growth

Overall employment in metropolitan counties grew 0.68 percent annually during 2000-07, while non-metropolitan areas increased just 0.37 percent. Within metropolitan counties, the growth of total employment was substantially more rapid in counties on the metropolitan fringe than in larger, center city counties. Total employment grew 0.63 percent annually in center-city counties, compared to an increase of 1.56 percent in counties on the metro fringe. However, the higher gains in fringe areas came off a much lower employment base. The absolute number of jobs created in central city counties was more than seven times as large.

Since the onset of the recession, U.S. employment from the household survey has fallen at an average annual rate of -4.85 percent. The fall off in employment has been more than twice as rapid in metropolitan counties than in non-metropolitan areas. Within metro areas,

the decline in jobs has been most rapid in counties on the metropolitan fringe. However, outside metropolitan areas, the pattern has been exactly reversed, with more outlying areas sustaining smaller rates of job loss. By far the most rapid rates of job loss have occurred in the eastern half of the country and on the west coast. Areas of employment gain are concentrated in the middle of the country, west of the Mississippi.

Factors Fostering Growth and Decline

A look at metro areas since 2000 shows wide variation in the rate of employment growth. An analysis of 293 metropolitan areas reveals that six factors were most important in determining the pace of metro growth during 2000-09.

Positive Factors

1. High percent of the workforce with advanced degrees (masters and above)
2. High racial/ethnic diversity of the population

Negative Factors

3. High marginal income tax rate
4. High percent of employment in manufacturing
5. Large population
6. High per capita income (PCI)

The pace of metro employment growth since the start of the recession in 2007 was found to be dependent on a somewhat different set of factors. Here five factors were found to be most significantly related to the pace of growth:

1. High marginal income tax rate
2. High percent of employment in manufacturing
3. Large population
4. High per capita income
5. Large percentage of owner-occupied housing

In each case, the five factors listed above were found to be negatively associated with employment growth, that is, in those areas where the five factors are highest, metro growth is slowest.

The analysis also examined whether the same factors similarly influence the growth of office and industrial employment during 2000-09. Although the correlation between the growth in total employment and the growth of office and industrial employment is quite high, the factors that shape the growth of employment in office and industrial employment are not exactly the same as those that influence the growth of employment overall. In the case of office employment, only manufacturing intensity, population size and per capita income were found to significantly affect the growth of office employment. As with total employment growth, the three factors were negatively associated with the growth of office employment.

For industrial employment growth, the only two factors found to significantly affect growth rates were manufacturing intensity and population size. Both factors were negatively associated with the growth of industrial employment.

Assessing the Potential for Future Growth

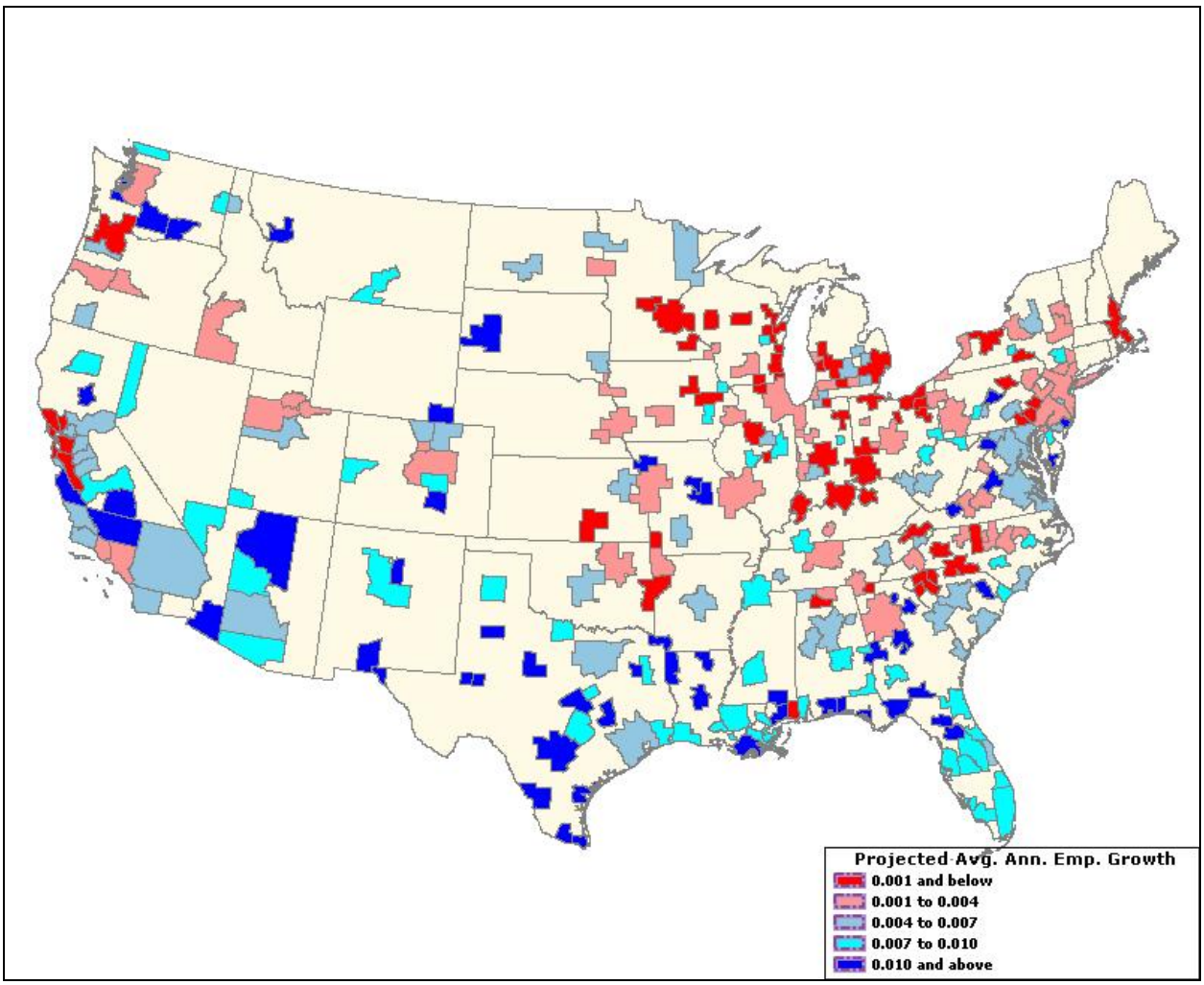
Using updated economic and demographic information, the analysis ranks each of the 293 metro areas in terms of its prospects for future employment growth. The areas of highest growth potential are mainly in the southern half of the country, although cities of slow potential growth are also in the south and far west. The highest potential growth areas are

Laredo, Texas and McAllen, Texas. The lowest potential growth areas are Elkhart-Goshen, Ind., and Sheboygan, Wis.

Among the nation's 50 largest metro areas, San Antonio, Texas; Las Vegas, Nev.; Orlando, Fla.; and Miami, Fla., are ranked as the areas of highest growth potential. These cities have no state income tax, a low percentage of employment in manufacturing and high racial and ethnic diversity.

The areas of lowest potential are San Jose, Calif.; Minneapolis-St. Paul, Minn.; Cincinnati, Ohio; and Milwaukee, Wis. While San Jose has a large fraction of its work force with advanced degrees and a high index of diversity, these advantages are offset by California's high state income tax and the area's high involvement in manufacturing. The low rankings for Minneapolis, Cincinnati and Milwaukee stem from the areas' high state taxes and manufacturing involvement coupled with low diversity and a relatively small percentage of workers with advanced education.

Projected Potential Employment Growth
(high potential shown in shades of blue, low potential in shades of red)



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Chapter 1: Introduction

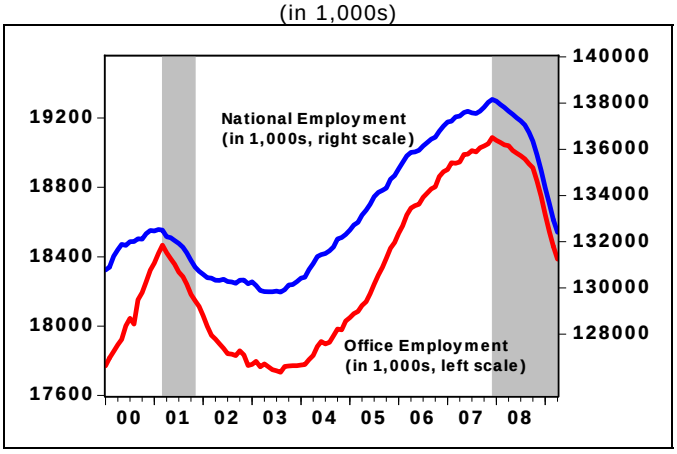
Commercial real estate is necessary to provide workspace for those who are employed in the process of production, whether in manufacturing, management, sales, or services. Because the principal function of commercial real estate is to provide workspace, trends in employment are very important to developers, lenders, and others interested in the health of the commercial real estate industry.

National Employment Trends

From January 2000 through December 2007, total employment in the United States rose at an average annual rate of 0.7 percent. *Office employment* rose 0.9 percent annually, as the nation's workforce shifted increasingly into services. In contrast, *industrial employment* declined an average of -2.6 percent a year. [1]

The U.S. economy entered the current recession in December 2007, according to the National Bureau of Economic Research. Since the downturn began, national employment has fallen -4.7 percent through June 2009, with *office employment* dropping -7.4 percent (Figure 1.1) and *industrial employment* -13.5 percent (Figure 1.2).

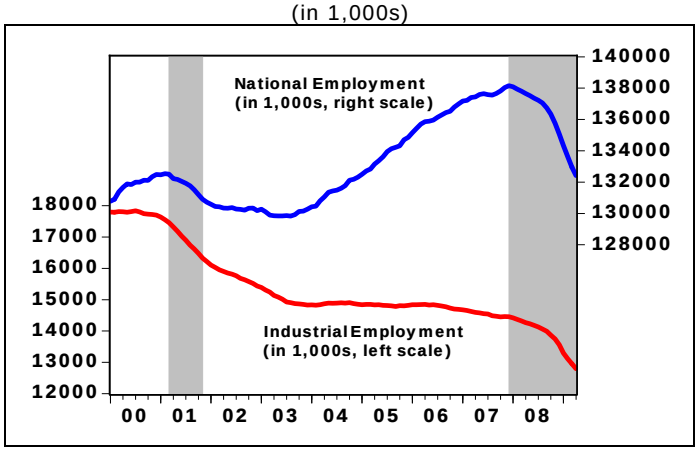
Figure 1.1: Employment Trends: Office Employment
(in 1,000s)



Note: Shaded areas represent periods of economic recession as delineated by the National Bureau of Economic Research.
Source: Bureau of Labor Statistics

[1] Here *office employment* is defined as employment in: 1) information services, 2) finance, insurance and real estate, and 3) professional and business services (NAICS codes 50, 55, and 60). *Industrial employment* is employment in manufacturing and warehousing (NAICS codes 30 and 493). All employment data are seasonally adjusted.

Figure 1.2: Employment Trends: Industrial Employment
(in 1,000s)

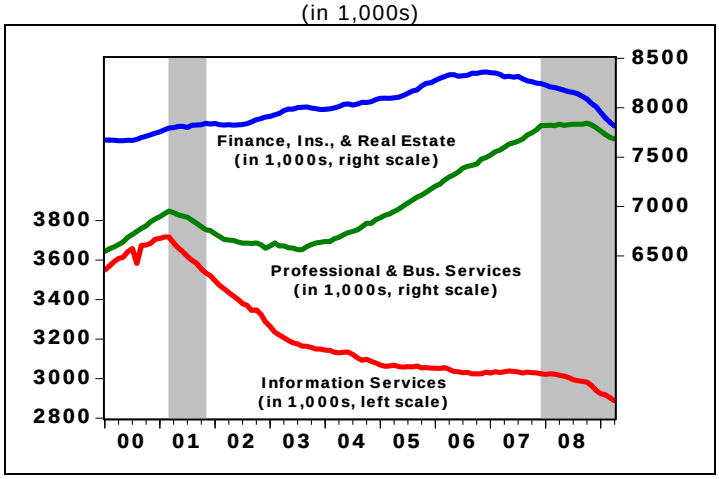


Note: Shaded areas represent periods of economic recession as delineated by the National Bureau of Economic Research.
Source: Bureau of Labor Statistics

Office Employment

Figure 1.3 shows the major components of office employment: 1) information services; 2) finance, insurance and real estate services (FIRES); and 3) professional and business services (NAICS codes 50, 55, and 60). From January 2000 through December 2007, employment in information services fell -2.0 percent annually, while FIRES employment rose 0.9 percent and employment in professional and businesses services surged 2.3 percent. But since the onset of the current recession, information services has dropped -6.1 percent, FIRES -5.9 percent, and business services -8.2 percent.

Figure 1.3: Major Components of Office Employment
(in 1,000s)



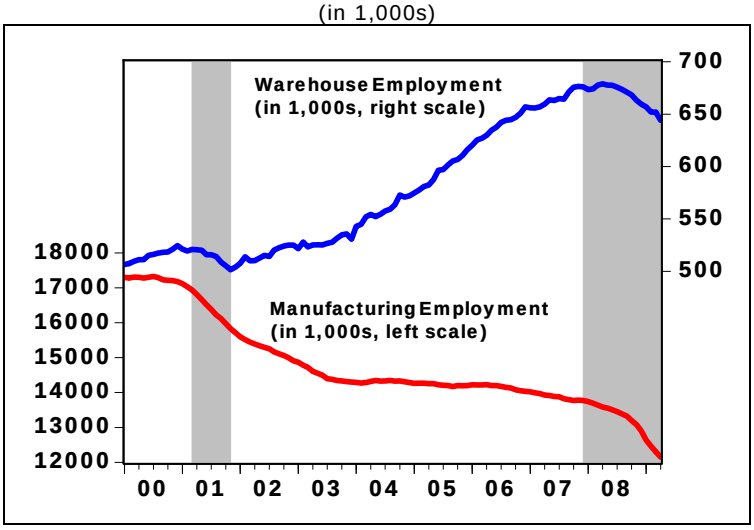
Note: Shaded areas represent periods of economic recession as delineated by the National Bureau of Economic Research.
Source: Bureau of Labor Statistics

Industrial Employment

Figure 1.4 shows the major components of industrial employment: 1) manufacturing employment and 2) warehouse employment. Industrial employment is dominated by manufacturing employment, which accounted for 95 percent of the total (11,854,000 jobs) in June 2009, while warehouse employment was just five percent (643,200 jobs) of all industrial jobs. From January 2000 through December 2007, manufacturing employment fell at an average rate of -2.8 percent annually, while warehouse employment gained 3.7

percent a year. Since the start of the recession, manufacturing employment is down -14.0 percent and warehouse employment -4.9 percent.

Figure 1.4: Major Components of Industrial Employment
(in 1,000s)



Note: Shaded areas represent periods of economic recession as delineated by the National Bureau of Economic Research.
Source: Bureau of Labor Statistics

Chapter 2: The Demand for Office and Industrial Space

The demand for any good or service, whether office space or oranges, is determined by its price and other factors like consumer income, tastes and preferences, etc. The demand for office or industrial space, unlike the demand for oranges, is a derived demand, that is, office or industrial space is desired because it is necessary for the production of some other good or service, not for the utility that it provides to the consumer directly. The quantity demanded of a product or service with a derived demand is related to its price and the level of output of the product or service from which demand is derived. Fertilizer is an example of a product with a derived demand. Farmers want fertilizer to help grow crops, not for their own consumption. The demand for fertilizer is a function of its price and the planned level of crop output. Similarly, the demand for office or industrial space is related to the number of office or industrial workers that firms employ as well as the price of space.

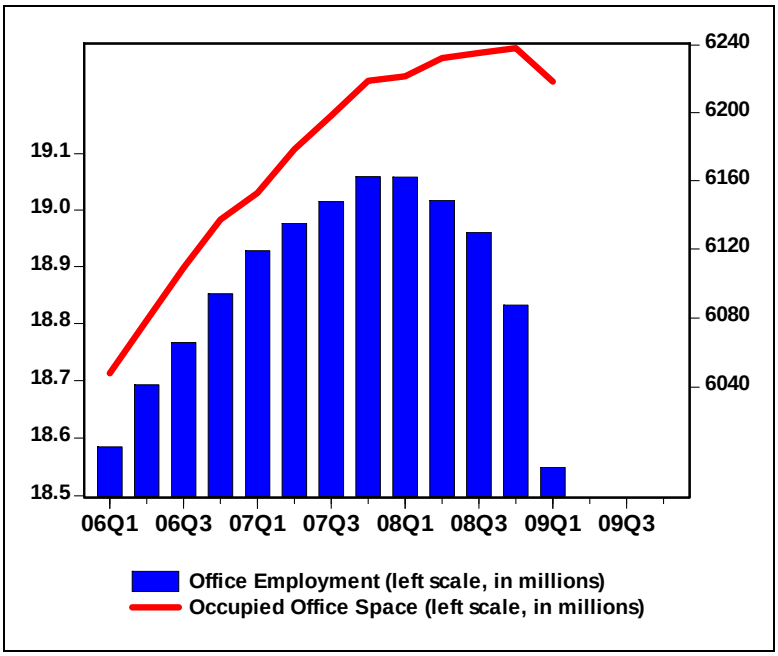
Employment and the Demand for Office Space

A number of past studies have related the demand for office real estate to the level of employment. In this case, the level of employment is a proxy for the level of output of the products or services that office space is needed to produce. DiPasquale and Wheaton (1995) assert that employment in particular sectors is the primary driver of office space demand. Wheaton (1987) has shown that 75 percent of U.S. office space is occupied by firms in Finance, Insurance and Real Estate (NAICS code 55) and Business and Professional Services (NAICS code 60).

Early studies of office space often used a set space-employment ratio to project future office demand. Kimball and Bloomberg (1987) used the ratio of 250 square feet of office space per office worker, which they obtained from the Building Owners and Managers Association (BOMA) annual office market surveys. Similarly, Howland and Wessel (1994) used a ratio of 347 square feet per worker, which they took from an earlier study by Gruen and Gruen (1986). A similar methodology was employed by Maisel (1989) and Malizia (1991).

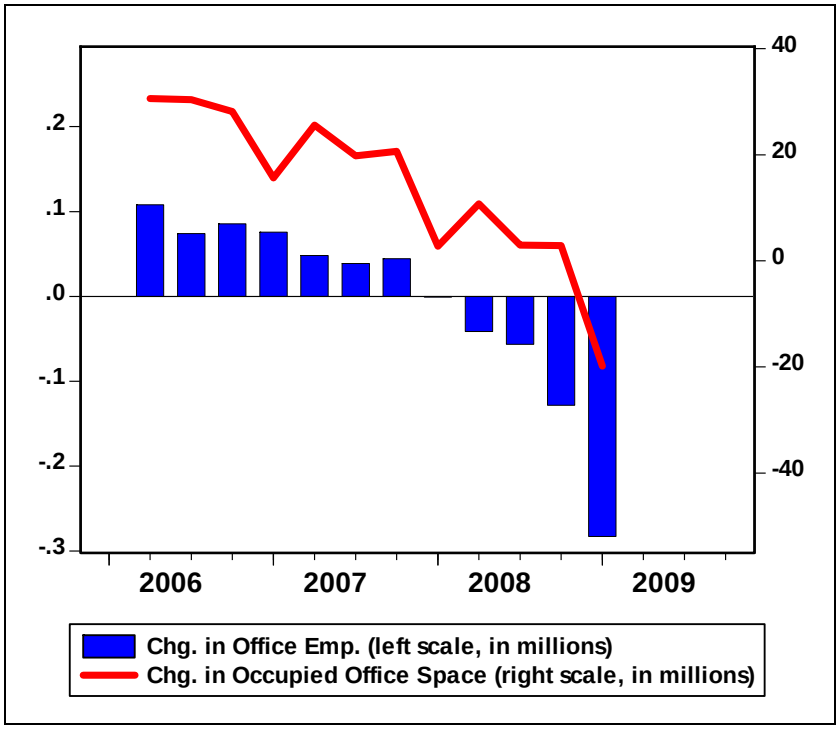
Figures 2.1 and 2.2 show the association between office employment and occupied office space. It is clear that both the level and change in office employment are closely related to the level and change in occupied office space.

Figure 2.1: Office Employment & Occupied Space



Source: CoStar data base and Bureau of Labor Statistics

Figure 2.2: Changes in Office Employment & Occupied Space



Source: CoStar data base and Bureau of Labor Statistics

CoStar compiles a quarterly survey of the national office market. Table 2.1 shows data from CoStar's 2009.2 nationwide survey of office market tenants. The survey shows substantial variation in space usage by sector.[2] For example, finance, insurance and real estate tenants occupy 22.7 percent of office market space and have an average of 302.3 square feet of office space per employee. In contrast, tenants working in the transportation sector occupy just 1.5 percent of the nation's office space and have only 189.5 square feet of space per employee. **Overall, across all sectors, the CoStar survey indicates the weighted average amount of office space per employee is 312.7 square feet.**

[2] This is the point made by Rabianski and Gibler (2007).

Table 2.1: Office Space Utilization by Sector, 2009.2

Sector	Sq. Feet per Employee	Percent of Occupied Space
Finance/Ins./RE	302.3	22.7%
Services	337.0	13.5%
Business Services	275.1	12.0%
Manufacturing	314.3	11.3%
Law Firms	413.0	8.9%
Medical	269.7	6.2%
Government	321.1	5.7%
Retail/Wholesale	324.3	5.6%
Communications	275.5	4.2%
Agri/Mining/Utilities	335.3	3.6%
Engineers/Archit.	284.9	3.1%
Accountants	283.1	1.7%
Transportation	189.5	1.5%
Weighted Average	312.7	100.0%

Source: CoStar Group, *The CoStar Office Report, National Office Market*, Second Quarter 2009.

Table 2.2 shows the variation in office space per employee in 20 major metropolitan markets. Space usage ranges from a low of 249 square feet in Phoenix to 424 square feet in San Francisco. The average across all 20 areas is 338 square feet.

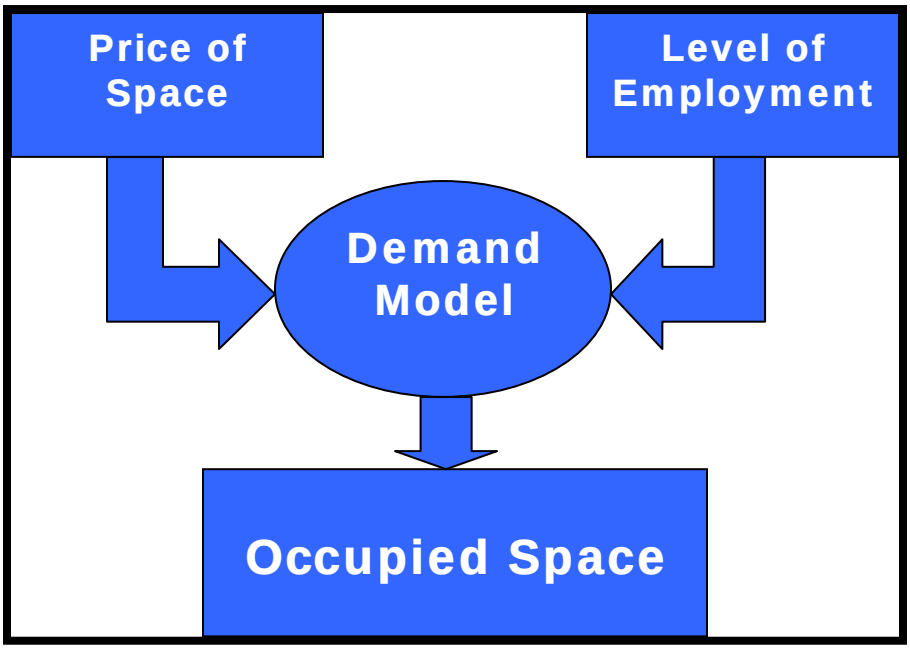
Table 2.2: Office Space Utilization by Metropolitan Area, 2007

FIPS	Metropolitan Area:	Office Employment (in 1,000s)	Occupied Space (sq. ft.)	Rent per Sq. Ft.	Occupied Space per Employee
12060	Atlanta-Sandy Springs-Marietta, GA	659.0	223,897,935	$19.11	340
12580	Baltimore-Towson, MD	295.9	99,474,410	$22.26	336
16980	Chicago-Naperville-Joliet, IL-IN-WI	1,011.9	329,603,675	$18.29	326
19100	Dallas-Fort Worth-Arlington, TX	773.4	254,365,933	$19.69	329
19740	Denver-Aurora-Broomfield, CO	356.6	123,907,651	$20.00	347
19820	Detroit-Warren-Livonia, MI	464.8	138,679,178	$19.66	298
26420	Houston-Sugar Land-Baytown, TX	563.0	224,011,926	$20.98	398
31100	Los Angeles-Long Beach-Santa Ana, CA	1,432.6	491,163,483	$30.16	343
33100	Miami-Fort Lauderdale-Pompano Beach, FL	576.5	192,300,204	$27.29	334
33460	Minneapolis-St. Paul-Bloomington, MN-WI	442.5	139,905,343	$15.38	316
35620	New York-Northern New Jersey-Long Island, NY-NJ-PA	2,378.1	934,007,113	$33.95	393
37980	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	700.4	223,811,148	$22.64	320
38060	Phoenix-Mesa-Scottsdale, AZ	484.6	120,573,031	$25.04	249
41180	St. Louis, MO-IL	308.8	103,740,075	$18.24	336
41740	San Diego-Carlsbad-San Marcos, CA	331.2	93,038,579	$31.44	281
41860	San Francisco-Oakland-Fremont, CA	581.2	246,501,644	$28.01	424
42660	Seattle-Tacoma-Bellevue, WA	432.1	140,398,782	$26.84	325
45300	Tampa-St. Petersburg-Clearwater, FL	354.9	89,023,491	$20.77	251
47900	Washington-Arlington-Alexandria, DC-VA-MD-WV	929.0	386,688,535	$33.23	416
71650	Boston-Cambridge-Quincy, MA-NH	672.8	266,588,587	$24.45	396
	Average			$23.87	338

Source: CoStar data base and Bureau of Labor Statistics

Academic studies have constructed formal econometric models of office market demand and supply that simulate the workings of the office market. These models have been reviewed by McDonald (2002). They reveal that the level of occupied office space is influenced by the price of space, or rent, and the level of employment (Figure 2.3).

Figure 2.3: Econometric Models of the Office Market



The rental elasticity of demand shows the responsiveness of space usage to a change in rents. If the absolute value of the elasticity is equal to 1, a 1 percent increase in rents is associated with a 1 percent decline in space usage. If the absolute value of the elasticity is less than 1, for example, -0.5, a 1 percent rise in rents is associated with a -0.5 percent decline in the demand for space. Similarly, if the absolute value of the demand elasticity is greater than 1, for example, -1.5, then a 1 percent rise in rents is associated with a -1.5 percent decline in demand.

Likewise, the elasticity of demand with respect to employment shows the responsiveness of the demand for space to a change in office employment. If the elasticity is less than 1, then demand responds less than proportionally to a change in employment. And if the elasticity is greater than 1, demand responds more than proportionally to a change in employment. If the elasticity of demand with respect to employment, for example, was 1.1, then a 1-percent increase in employment would be associated with a 1.1 percent increase in the demand for space.

Rosen (1984) estimated office demand for San Francisco using data for 1961-83. Employment was measured as employment in finance, insurance and real estate (FIRE). He reports an employment elasticity of 1.86 and a rental elasticity of demand of -0.18.

Heckman (1985) estimates a model using data from 14 cities for 1979-1983, but the study did not have data on the quantity of occupied office space and, hence, was unable to calculate a demand elasticity. The model reports that office supply is very responsive to the 10-year growth rate in employment.

Pollakowski, Wachter and Lynford (1992) estimated an office demand function on the basis of data for 21 cities for 1981-90. While employment was very significant in their model, they reported that the rent variable was not statistically significant. Following Rosen (1984), they measured employment as employment in the FIRE sector. They report that office demand increases from 144 to 261 square feet for every office worker employed.

Clapp, Pollakowski and Lynford (1992) estimate an office model based on Boston data, but their study did not have data on rents. FIRE employment was found to be a significant driver of office demand. The elasticity of occupied space with respect to employment varies between 0.27 and 0.67, thus, a 1 percent increase in employment is associated with a 0.27 to 0.67 percent rise in occupied space.

Hendershott, Lizieri and Matysiak (1999) drawing on data from the London market for 1977-96 find a price elasticity of office demand of -0.18. They also find that employment measured as total employment in finance and business services is a statistically significant determinant of office demand. The elasticity of office demand with respect to employment is 0.66.

Wheaton, Torto and Evans (1997) also estimate a model of the London office market using data for 1970-95. Office demand is found to respond strongly to changes in office employment. They find that the amount of office space demanded per office worker averages 292 square feet minus 0.92 times rent. They report a demand elasticity of office space demand per worker to be -0.20.

McDonald (2002) using data from the London office market reported by Hendershott, Lizieri and Matysiak (1999) but with a somewhat different model estimates a price elasticity of -0.23 and an employment elasticity of 0.69.

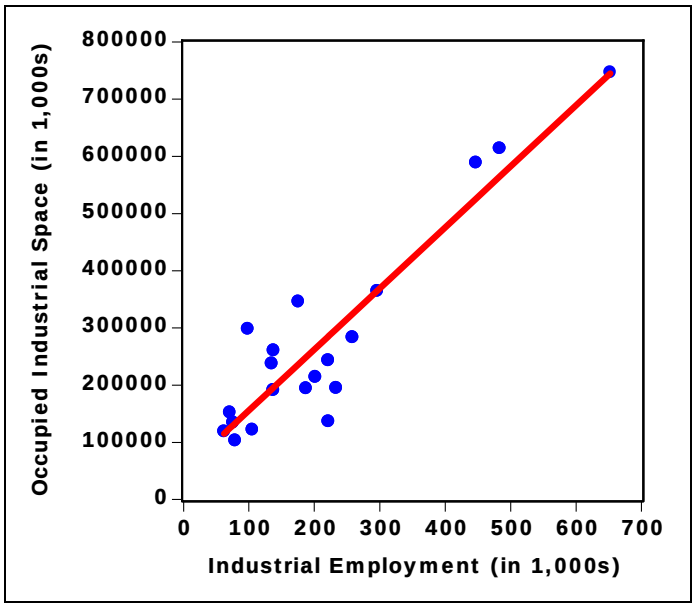
Applying the same model developed by McDonald (2002) to the cross section of 20 metropolitan areas shown in Table 2.2 yields a price elasticity of -0.62 and an employment elasticity of 1.12.[3] **These results indicate that office demand is relatively unresponsive to a change in rents,** thus, a 1 percent increase in office rent is associated with a -0.62 percent decline in the demand for space. On the other hand, **office demand is very responsive to a change in employment:** a 1percent rise in employment is associated with a 1.12 percent increase in space demand.

[3] The statistical estimates of the model are available from the author on request.

Employment and the Demand for Industrial Space

Figure 2.4 illustrates the positive correlation between industrial employment and occupied industrial space, using data for a cross section of 20 major metropolitan markets in 2007. The relationship suggests that as areas grow, an average of 1,067 square feet of new industrial space is needed to accommodate every new industrial job.

Figure 2.4: Industrial Employment & Occupied Space, 2007



Source: CoStar data base and Bureau of Labor Statistics

Although the correlation illustrated in Figure 2.4 is strong, Table 2.3 shows substantial variation in occupied industrial space per employee across markets. Space usage ranges from a low of 617 square feet in Boston to 3,025 square feet in Miami. The average across all 20 areas is 1,453 square feet.

Table 2.3: Industrial Space Utilization by Metropolitan Area, 2007

FIPS	Metropolitan Area:	Industrial Employment (in 1,000s)	Occupied Space (sq. ft.)	Rent per Sq. Ft.	Occupied Space per Employee
12060	Atlanta-Sandy Springs-Marietta, GA	175.5	346,246,157	$3.47	1,973
12580	Baltimore-Towson, MD	71.1	152,343,779	$5.23	2,141
71650	Boston-Cambridge-Quincy, MA-NH	221.5	136,750,827	$6.16	617
16980	Chicago-Naperville-Joliet, IL-IN-WI	483.4	614,001,479	$4.68	1,270
19100	Dallas-Fort Worth-Arlington, TX	296.5	364,737,372	$3.77	1,230
19740	Denver-Aurora-Broomfield, CO	75.8	134,615,832	$4.77	1,776
19820	Detroit-Warren-Livonia, MI	258.3	283,792,102	$4.67	1,099
26420	Houston-Sugar Land-Baytown, TX	233.4	195,157,121	$5.13	836
31100	Los Angeles-Long Beach-Santa Ana, CA	652.3	747,108,836	$8.04	1,145
33100	Miami-Fort Lauderdale-Pompano Beach, FL	98.6	298,125,121	$8.01	3,025
33460	Minneapolis-St. Paul-Bloomington, MN-WI	201.6	214,262,678	$5.30	1,063
35620	New York-Northern New Jersey-Long Is. NY-NJ-PA	447.3	588,766,898	$6.64	1,316
37980	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	221.3	243,668,880	$4.57	1,101
38060	Phoenix-Mesa-Scottsdale, AZ	137.2	191,390,640	$7.09	1,395
41740	San Diego-Carlsbad-San Marcos, CA	105.5	122,044,937	$9.26	1,157
41860	San Francisco-Oakland-Fremont, CA	137.9	260,623,431	$7.10	1,890
42660	Seattle-Tacoma-Bellevue, WA	187.6	194,322,508	$6.01	1,036
41180	St. Louis, MO-IL	134.9	237,714,794	$4.53	1,762
45300	Tampa-St. Petersburg-Clearwater, FL	79.2	103,371,191	$6.07	1,305
47900	Washington-Arlington-Alexandria, DC-VA-MD-WV	62.2	119,002,619	$8.11	1,914
	Average			$5.93	1,453

Source: CoStar data base and Bureau of Labor Statistics

In the industrial market, as in the office market, the level of space per employee is influenced by the cost of space, or the level of industrial market rents. Applying the model that was developed by McDonald (2002) for the office market, to the cross section of 20 metropolitan areas shown in Table 3 yields a price elasticity of -1.15 and an employment elasticity of 0.54.[4]

These results indicate that the demand for industrial space is very responsive to a change in rents: a 1 percent increase in industrial rent is associated with a -1.15 percent decline in the demand for space. On the other hand, industrial demand is relatively unresponsive to a change in employment: a 1 percent rise in industrial employment is associated with a 0.54 percent increase in space demand.

Academic studies of the industrial market by Wheaton and Torto (1990), Thompson and Tsolacos (2000), and others have shown that the demand of industrial space is related to industrial employment; however, over time, because of the rapid rise in worker productivity, the demand for space can grow even as industrial employment declines. This phenomenon is illustrated in the Atlanta and Dallas markets during the past two decades (Table 2.4).

In the Atlanta area, during the 1990s, occupied industrial space rose 2.6 percent annually, while industrial employment grew an average of only 0.3 percent each year. Space per employee increased from 707.5 square feet in 1990 to 886.5 square feet in 2000, a gain of 2.3 percent a year. In the 2000s, the differential between the growth of occupied space and employment widened even more, as rising worker productivity required more space per employee. From 2000 to 2009, occupied space rose 2.1 percent annually, while industrial employment actually declined -2.5 percent a year. Space per employee jumped

[4] The statistical estimates of the model are available from the author on request.

dramatically, rising from 886.5 square feet in 2000 to 1,339.9 in 2009, an annual average growth rate of 4.7 percent a year.

Table 2.4: Industrial Space Utilization in the Atlanta & Dallas Markets, 1990-2009

	Atlanta Market			Dallas Market		
Time Period	Occupied Industrial Space	Industrial Employment	Space per Employee	Occupied Industrial Space	Industrial Employment	Space per Employee
1990.1	243,000,000	343.4837	707.5	209,000,000	189.2719	1,104.2
2000.1	314,000,000	354.2122	886.5	296,000,000	209.4762	1,413.0
2009.1	377,000,000	281.3554	1,339.9	349,000,000	156.0534	2,236.4
% Chg. 1990-00	2.6%	0.3%	2.3%	3.5%	1.0%	2.5%
% Chg. 2000-09	2.1%	-2.5%	4.7%	1.8%	-3.2%	5.2%

Source: CoStar data base and Bureau of Labor Statistics

The Dallas area experienced a similar jump in space per employee in the 2000s. From 1990 through 2000, average space per worker grew 2.5 percent a year, but it surged 5.2 percent a year in the 2000s, as industrial employment declined and occupied space continued to expand.

The same trends evident in the Atlanta and Dallas markets have become evident nationwide. From 2006.1 through 2009.1, occupied industrial space nationally rose 0.9 percent annually, while industrial employment fell -4 percent a year. The trend suggests fewer workers producing more output with more space per employee.

With the onset of the current recession, industrial output and employment have fallen and the demand for industrial space has turned negative, dropping -0.3 percent from 2008.1 through 2009.1. **When the recovery comes and industrial output begins to grow, it is expected that the demand for industrial space will also recover, even though industrial employment may continue to fall.**

Chapter 3: Metropolitan Employment Trends

An understanding of city employment trends is very important to developers, lenders and others interested in the health of the commercial real estate industry. Analysis of the magnitude of job gains and losses allows employment changes to be directly tied to changes in the demand for office and industrial property as discussed in the previous section. For example, if on average every office job requires an estimated 338 square feet, then an increase in office employment of 1,000 can be projected to increase the demand for office space by 338,000 square feet. Likewise, if every industrial job requires 1,453 square feet, then an increase in industrial employment of 1,000 can be estimated to raise the demand for industrial space by 1,453,000 square feet.

This section draws on employment data from a sample of 293 metropolitan statistical areas (MSAs) for which continuous monthly data could be obtained from the Bureau of Labor Statistics (BLS) for January 2000 through June 2009. All monthly data are seasonally adjusted to allow comparisons over various monthly time periods.

The Magnitude of Employment Gains and Losses, 2000-2009

Looking at the 293 MSAs reveals there were a total of 2.5 million net new jobs created between January 2000 and June 2009. Most of these jobs were in cities on the East Coast, in Texas and in the West (Figure 3.1).

Figure 3.1: Net Job Growth in Metro Areas, 2000-09

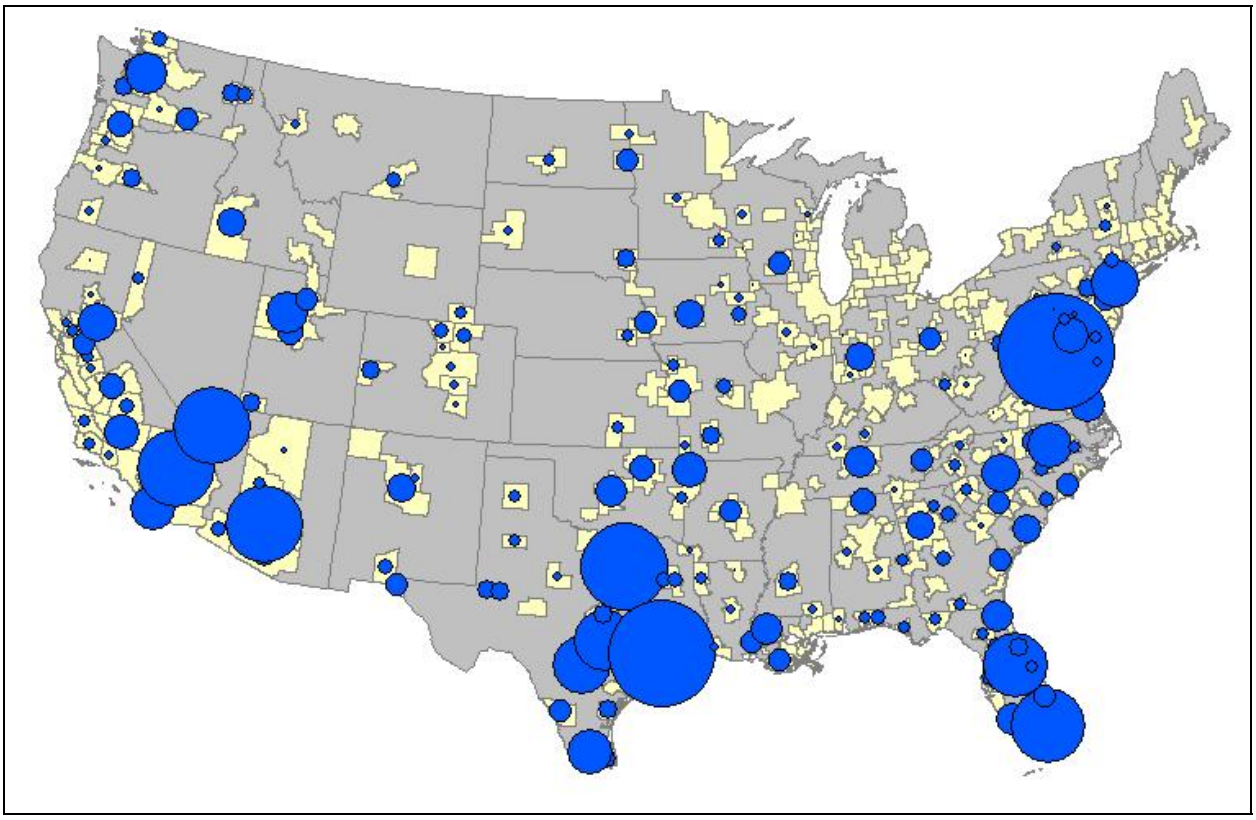


Table 3.1 lists the 20 highest job-creating cities. Washington, D.C., with a net gain in jobs of 346,800, is first, followed by Houston and Dallas-Fort Worth, with gains of 307,800 and 213,600 respectively.

Table 3.1: Top Employment Generating MSAs, 2000-09
(in 1,000s)

Rank	FIPS	MSA Name	Job Gain
1	47900	Washington-Arlington-Alexandria, DC-VA-MD-WV	346.8
2	26420	Houston-Sugar Land-Baytown, TX	307.8
3	19100	Dallas-Fort Worth-Arlington, TX	213.6
4	40140	Riverside-San Bernardino-Ontario, CA	179.6
5	38060	Phoenix-Mesa-Scottsdale, AZ	176.5
6	29820	Las Vegas-Paradise, NV	176.3
7	33100	Miami-Fort Lauderdale-Pompano Beach, FL	156.7
8	36740	Orlando-Kissimmee, FL	122.0
9	12420	Austin-Round Rock, TX	119.8
10	41700	San Antonio, TX	107.7
11	35620	New York-Northern NJ-Long Island, NY-NJ-PA	78.9
12	39580	Raleigh-Cary, NC	70.6
13	41740	San Diego-Carlsbad-San Marcos, CA	70.0
14	32580	McAllen-Edinburg-Mission, TX	66.0
15	41620	Salt Lake City, UT	63.7
16	42660	Seattle-Tacoma-Bellevue, WA	63.2
17	40900	Sacramento--Arden-Arcade--Roseville, CA	55.7
18	16740	Charlotte-Gastonia-Concord, NC-SC	53.7
19	12580	Baltimore-Towson, MD	48.5
20	22220	Fayetteville-Springdale-Rogers, AR-MO	48.0

Table 3.2 lists the 20 biggest job-losing cities. Detroit is first, followed by Chicago and San Francisco. Interestingly, seven of the top 20 job losers are in the Sunbelt, which is normally considered an area of strong job growth. The once rapidly growing areas of San Francisco and San Jose, Calif., have suffered from the collapse of the information technology (IT) and housing bubbles, while cities such as Hickory and Greensboro, N.C., have struggled to cope with the shift of textile and furniture manufacturing overseas.

Table 3.2: Largest MSA Employment Losses, 2000-09
(in 1,000s)

Rank	FIPS	MSA Name	Job Loss
1	19820	Detroit-Warren-Livonia, MI	-455.8
2	16980	Chicago-Naperville-Joliet, IL-IN-WI	-228.1
3	41860	San Francisco-Oakland-Fremont, CA	-141.8
4	41940	San Jose-Sunnyvale-Santa Clara, CA	-138.0
5	17460	Cleveland-Elyria-Mentor, OH	-130.7
6	35380	New Orleans-Metairie-Kenner, LA	-102.2
7	14460	Boston-Cambridge-Quincy, MA-NH	-81.2
8	31100	Los Angeles-Long Beach-Santa Ana, CA	-71.3
9	33340	Milwaukee-Waukesha-West Allis, WI	-57.2
10	19380	Dayton, OH	-51.1
11	45780	Toledo, OH	-46.9
12	24340	Grand Rapids-Wyoming, MI	-44.3
13	25860	Hickory-Lenoir-Morganton, NC	-38.7
14	49660	Youngstown-Warren-Boardman, OH-PA	-34.7
15	22420	Flint, MI	-32.3
16	31140	Louisville-Jefferson County, KY-IN	-24.7
17	21140	Elkhart-Goshen, IN	-23.3
18	15940	Canton-Massillon, OH	-21.9
19	24660	Greensboro-High Point, NC	-20.4
20	29620	Lansing-East Lansing, MI	-20.2

Looking at the office market in Table 3.3, the top 10 generators of office market jobs are all in the Sunbelt. The Washington, D.C., area is first, creating 118,700 net new office jobs since 2000. It is followed by Houston and Miami where 54,400 and 52,400 office jobs were generated.

Table 3.3: Top Office-Employment MSAs, 2000-09
(in 1,000s)

Rank	FIPS	MSA Name	Job Gain
1	47900	Washington-Arlington-Alexandria, DC-VA-MD-WV	118.7
2	26420	Houston-Sugar Land-Baytown, TX	54.4
3	33100	Miami-Fort Lauderdale-Pompano Beach, FL	52.4
4	40140	Riverside-San Bernardino-Ontario, CA	43.1
5	19100	Dallas-Fort Worth-Arlington, TX	40.6
6	29820	Las Vegas-Paradise, NV	37.0
7	12420	Austin-Round Rock, TX	35.4
8	36740	Orlando-Kissimmee, FL	32.1
9	42660	Seattle-Tacoma-Bellevue, WA	21.6
10	41700	San Antonio, TX	21.5

The largest office employment losses since 2000 listed in Table 3.4 have been sustained in Detroit, where office employment dropped by 137,400, and in New York and Chicago, where office employment declined by 108,100 and 88,800 respectively. But large losses also have been registered in Sunbelt areas such as San Francisco (-80,100); Los Angeles (-58,400); Atlanta (-53,500); San Jose (-44,900); and Denver (-20,200).

Table 3.4: Biggest Office Employment Losses, 2000-09
(in 1,000s)

Rank	FIPS	MSA Name	Job Loss
1	19820	Detroit-Warren-Livonia, MI	-137.4
2	35620	New York-Northern NJ-Long Island, NY-NJ-PA	-108.1
3	16980	Chicago-Naperville-Joliet, IL-IN-WI	-88.8
4	41860	San Francisco-Oakland-Fremont, CA	-80.1
5	31100	Los Angeles-Long Beach-Santa Ana, CA	-58.4
6	12060	Atlanta-Sandy Springs-Marietta, GA	-53.5
7	41940	San Jose-Sunnyvale-Santa Clara, CA	-44.9
8	14460	Boston-Cambridge-Quincy, MA-NH	-43.7
9	17460	Cleveland-Elyria-Mentor, OH	-30.8
10	19740	Denver-Aurora-Broomfield, CO	-20.2

In the industrial sector, the total number of industrial jobs declined by 3.7 million since 2000 in the 293 MSAs tracked. But not all cities lost industrial jobs, although the magnitudes of their job gains have been modest. Industrial employment gains have been concentrated in cities in the Sunbelt and the far west. Table 3.5 shows the biggest gainers are Las Vegas with 3,500 net new industrial jobs and Bakersfield, Calif., and Fort Walton Beach, Fla., with 2,900 and 1,700, respectively.

Table 3.5: Largest Industrial Employment Gains, 2000-09
(in 1,000s)

Rank	FIPS	MSA Name	Job Gain
1	29820	Las Vegas-Paradise, NV	3.5
2	12540	Bakersfield, CA	2.9
3	23020	Fort Walton Beach-Crestview-Destin, FL	1.7
4	22020	Fargo, ND-MN	1.1
5	33260	Midland, TX	0.8
6	41100	St. George, UT	0.7
7	11100	Amarillo, TX	0.6
8	22380	Flagstaff, AZ	0.6
9	34900	Napa, CA	0.6
10	17660	Coeur d'Alene, ID	0.5

Industrial job losses in many cities have been huge, especially in the country's largest metro areas. Table 3.6 shows the biggest loss of industrial jobs is in Los Angeles, where the number of jobs declined by 268,600. It is followed by New York and Chicago, with losses totaling 251,700 and 217,600 respectively. Substantial losses were recorded even in vibrant Sunbelt cities like San Jose, Dallas and Atlanta.

Table 3.6: Largest Industrial Employment Losses, 2000-09
(in 1,000s)

Rank	FIPS	MSA Name	Job Loss
1	31100	Los Angeles-Long Beach-Santa Ana, CA	-268.6
2	35620	New York-Northern NJ-Long Island, NY-NJ-PA	-251.7
3	16980	Chicago-Naperville-Joliet, IL-IN-WI	-217.6
4	19820	Detroit-Warren-Livonia, MI	-214.8
5	14460	Boston-Cambridge-Quincy, MA-NH	-98.2
6	37980	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	-89.6
7	41940	San Jose-Sunnyvale-Santa Clara, CA	-85.2
8	19100	Dallas-Fort Worth-Arlington, TX	-80.3
9	17460	Cleveland-Elyria-Mentor, OH	-79.5
10	12060	Atlanta-Sandy Springs-Marietta, GA	-61.3

Employment Gains and Losses During the Recession, 2007-2009

According to the National Bureau of Economic Research, the United States economy entered recession in December 2007. From December 2007 through June 2009, total employment losses in the 293 MSAs have totaled 4.5 million. Since the recession began, only 21 of the 293 metro areas (7 percent) have recorded increases in employment. Ten of the 21 MSAs that have had employment gains are in Texas. The largest employment gain since the onset of the current recession has been in Austin, Texas with an increase of 5,900 jobs. It is followed by McAllen, Texas (3,300); Killeen, Texas (2,900); Odessa, Texas (2,700); and Kennewick, Wash. (2,700).

The biggest employment losses recorded since the recession began have been in the country's largest metro areas (Figure 3.2 and Table 3.7): Los Angeles (-293,300); New York (-243,100); and Chicago (-237,500). Large losses also have been recorded in formerly rapidly growing areas of the Sunbelt like Phoenix (-187,900); Atlanta (-152,000); and Miami (-141,700).

Figure 3.2: Net Job Losses in Metro Areas, 2007-09

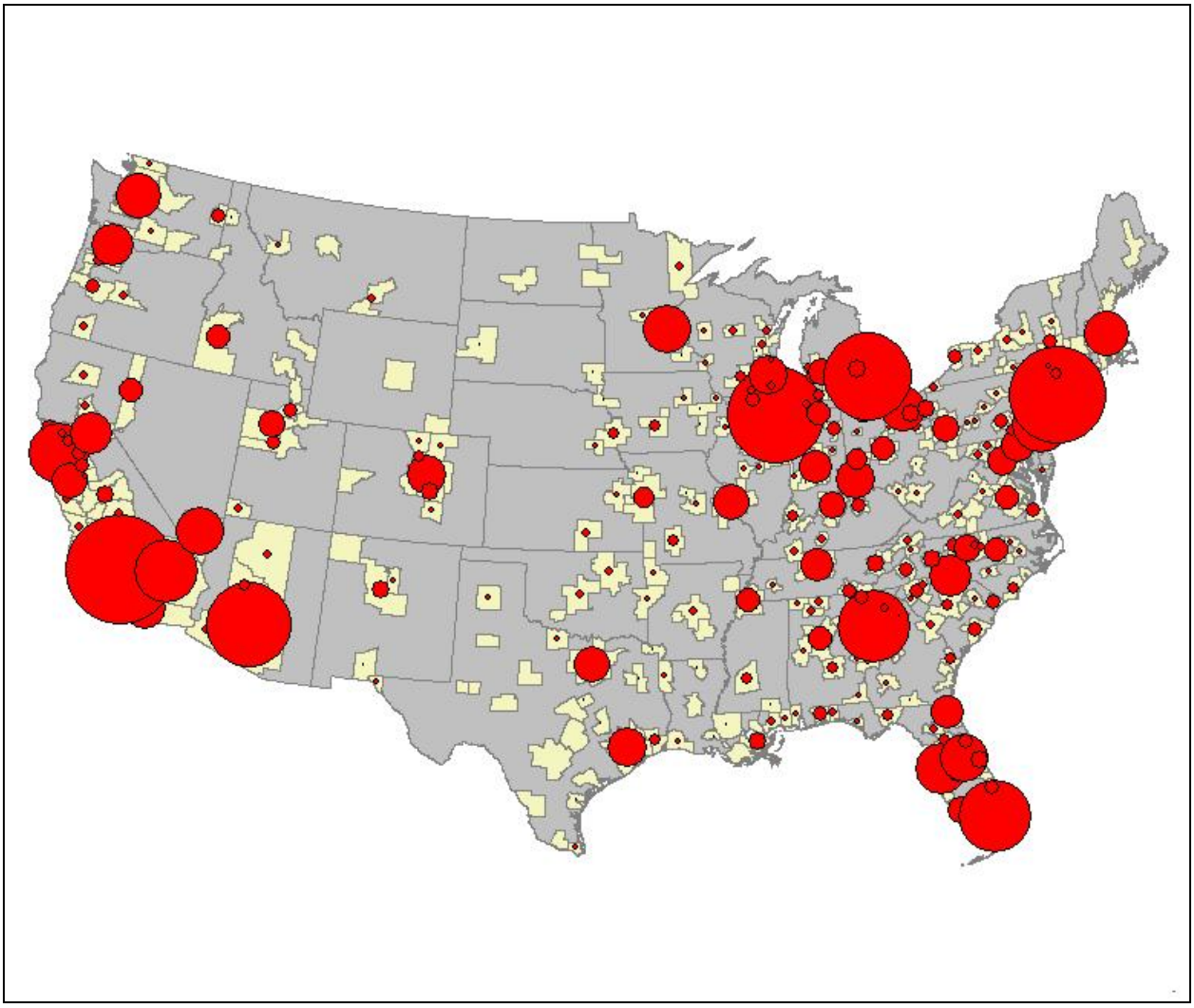


Table 3.7: Largest Employment Losses During the Recession, 2007-09
(in 1,000s)

Rank	FIPS	MSA Name	Job Loss
1	31100	Los Angeles-Long Beach-Santa Ana, CA	-293.3
2	35620	New York-Northern NJ-Long Island, NY-NJ-PA	-243.1
3	16980	Chicago-Naperville-Joliet, IL-IN-WI	-237.5
4	19820	Detroit-Warren-Livonia, MI	-200.1
5	38060	Phoenix-Mesa-Scottsdale, AZ	-187.9
6	12060	Atlanta-Sandy Springs-Marietta, GA	-152.0
7	33100	Miami-Fort Lauderdale-Pompano Beach, FL	-141.7
8	40140	Riverside-San Bernardino-Ontario, CA	-112.8
9	41860	San Francisco-Oakland-Fremont, CA	-107.1
10	37980	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	-98.9

Office employment has increased in only 13 of the 293 cities (four percent) since the recession began. The largest of these very modest increases have been in Austin, Texas (4,800); Charleston, S.C. (1,100); and Fayetteville, Ark. (700). The biggest declines in office employment have been in New York (-131,200); Los Angeles (-104,200); and Chicago (-90,900).

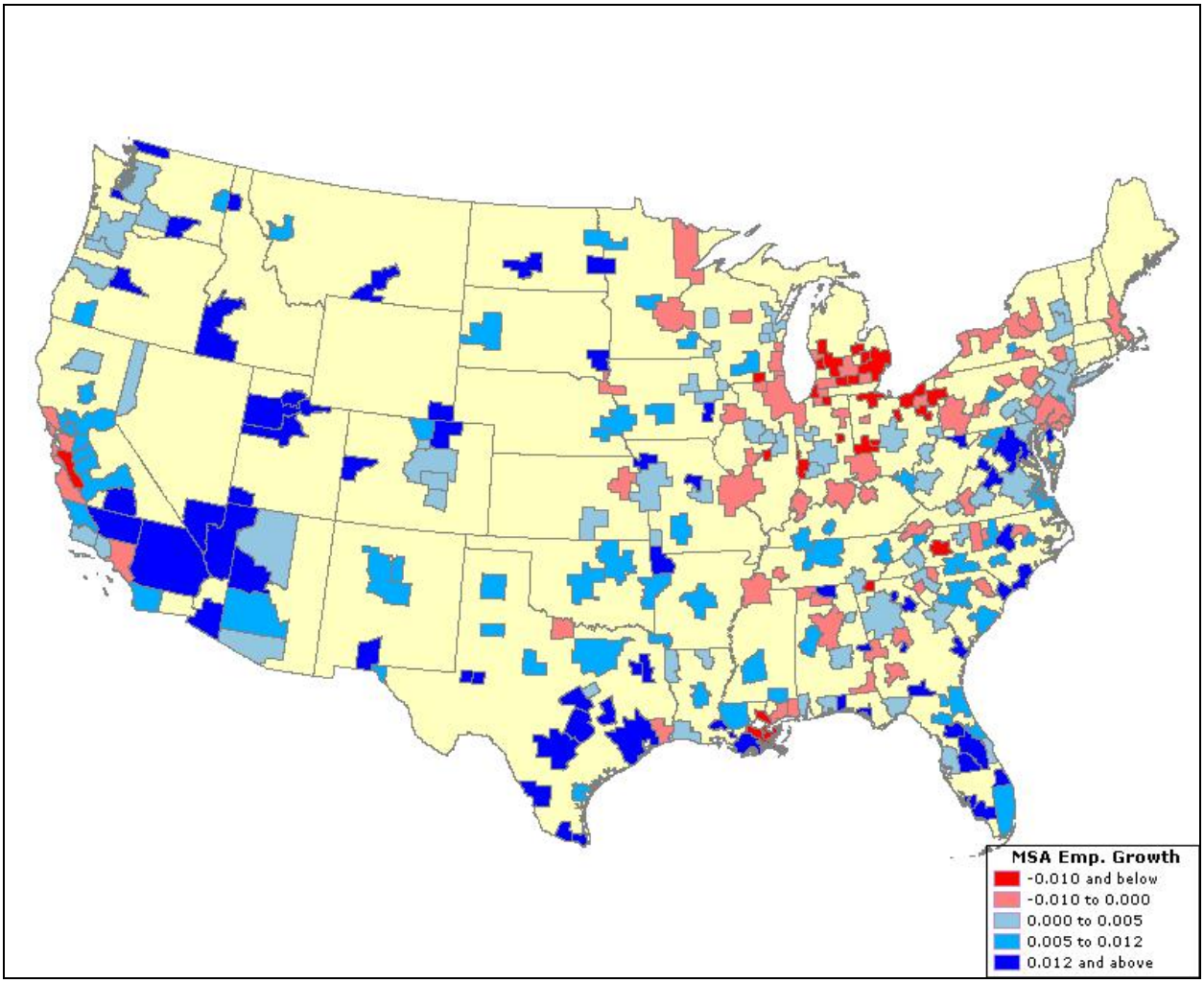
Only two of the 293 cities have recorded gains in industrial employment since the recession's onset. These cities are San Luis Obispo/Paso Robles, Calif., and Greeley, Colo., registering increases of just 100 industrial workers each. The biggest drops in industrial employment have been in Detroit, where 68,500 jobs have been lost since December 2007, and in Los Angeles where 62,200 jobs have been cut.

Trends in Employment Growth

Rates of employment growth reflect the strength and direction of current trends in employment change. In discussions of employment growth, it is useful to recall the "simple 70 rule."[5] This rule states that the number of years for employment to double can be approximated by dividing 70 by the annual employment growth rate. For example, if area employment grows at 2 percent annually, it will double in 35 years (70/2% = 35).

Another reason to focus on employment growth rates is that they relate directly to the concept of the elasticity of real estate demand with respect to employment that was discussed in the previous section. If, for example, the elasticity of office demand with respect to employment equals 1, then a 1 percent increase in employment can be estimated to lift the demand for office space by 1 percent.

Figure 3.3: Annual Average Rates of Growth, 2000-09



[5] See, http://en.wikipedia.org/wiki/Rule_of_72

Since 2000, the most rapid rates of employment growth have been recorded in smaller metro areas in the South and West (Figure 3.3). The most rapidly growing areas are St. George, Utah; McAllen, Texas; Laredo, Texas; and Coeur d'Alene, Idaho (see Table 3.7). The most rapid rates of job loss have been registered in areas spread all across the country, both in slow-growing areas of the Midwest and in formerly rapidly-growing areas of the Sunbelt. The most rapid rate of employment decline has been in Hickory, N.C., which has been buffeted by the collapse of the furniture and textile industries. It is followed by Detroit and Flint, Mich., which have suffered from the decline of the auto industry.

Table 3.7: Average Annual Rates of Employment Growth, 2000-09

Rank	FIPS	MSA Name	Job Gain/Loss
		10 Most Rapidly Growing Areas	
1	41100	St. George, UT	4.67%
2	32580	McAllen-Edinburg-Mission, TX	3.83%
3	29700	Laredo, TX	3.04%
4	17660	Coeur d'Alene, ID	3.02%
5	36220	Odessa, TX	2.93%
6	33260	Midland, TX	2.91%
7	24300	Grand Junction, CO	2.88%
8	34060	Morgantown, WV	2.86%
9	22220	Fayetteville-Springdale-Rogers, AR-MO	2.82%
10	13460	Bend, OR	2.68%
		10 Most Rapidly Declining Areas	
1	25860	Hickory-Lenoir-Morganton, NC	-2.44%
2	19820	Detroit-Warren-Livonia, MI	-2.41%
3	22420	Flint, MI	-2.24%
4	21140	Elkhart-Goshen, IN	-2.07%
5	35380	New Orleans-Metairie-Kenner, LA	-1.88%
6	27100	Jackson, MI	-1.86%
7	40980	Saginaw-Saginaw Township North, MI	-1.81%
8	35660	Niles-Benton Harbor, MI	-1.73%
9	26100	Holland-Grand Haven, MI	-1.71%
10	41940	San Jose-Sunnyvale-Santa Clara, CA	-1.53%

Surprisingly, the two areas recording the most rapid growth in office employment are in Wisconsin: Oshkosh and Eau Claire (Table 3.8).[6] They are followed by Yuma, Ariz.; St. George, Utah; and Waterloo/Cedar Falls, Iowa.

The most rapid declines in office employment have been in Jackson, Tenn.; Detroit, Mich.; and Toledo, Ohio. Declines have been recorded not only in areas of the upper Midwest but also in once rapidly-growing cities in the South and West.

Table 3.8: Average Annual Rates of Office Employment Growth, 2000-09

Rank	FIPS	MSA Name	Job Gain/Loss
		10 Most Rapidly Growing Areas	
1	36780	Oshkosh-Neenah, WI	13.95%
2	20740	Eau Claire, WI	6.73%
3	49740	Yuma, AZ	6.10%
4	41100	St. George, UT	5.89%
5	47940	Waterloo-Cedar Falls, IA	5.47%
6	32580	McAllen-Edinburg-Mission, TX	4.74%
7	13460	Bend, OR	4.73%
8	36500	Olympia, WA	4.58%
9	29460	Lakeland-Winter Haven, FL	4.40%
10	14540	Bowling Green, KY	4.26%
		10 Most Rapidly Declining Areas	
1	27180	Jackson, TN	-3.49%
2	19820	Detroit-Warren-Livonia, MI	-2.94%
3	45780	Toledo, OH	-2.88%
4	42100	Santa Cruz-Watsonville, CA	-2.83%
5	12980	Battle Creek, MI	-2.61%
6	35660	Niles-Benton Harbor, MI	-2.58%
7	34740	Muskegon-Norton Shores, MI	-2.43%
8	28740	Kingston, NY	-2.32%
9	11460	Ann Arbor, MI	-2.29%
10	19140	Dalton, GA	-2.25%

[6] Oshkosh and Eau Claire are both examples of communities that have transitioned from manufacturing to services, registering strong gains in information, finance, and business service employment, albeit both communities started from a small office-employment base. Both also have benefited from having expanding branch campuses of the University of Wisconsin.

The most rapid growth of industrial employment has occurred in Fort Walton Beach, Fla.; Midland, Texas; and St. George, Utah (Table 3.9);[7] while the most rapid declines have been in Flint, Mich.; Muncie, Ind.; and Ann Arbor, Mich. Although most of the cities registering the large declines are in the Midwest, some Sunbelt areas like El Paso, Texas and Hickory, N.C. have recorded very rapid rates of industrial job loss also.

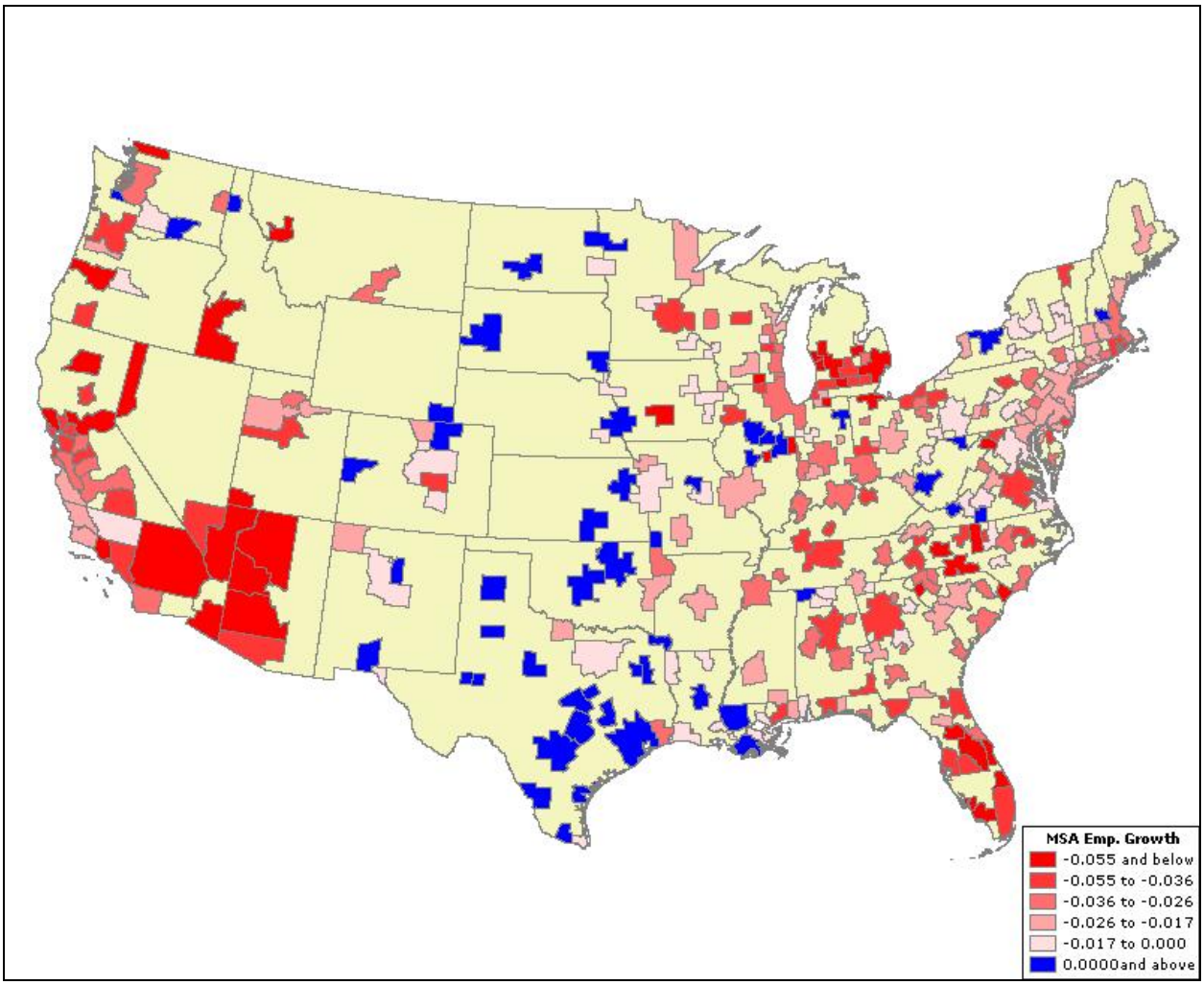
Table 3.9: Average Annual Rates of Industrial Employment Growth, 2000-09

Rank	FIPS	MSA Name	Job Gain/Loss
		10 Most Rapidly Growing Areas	
1	23020	Fort Walton Beach-Crestview-Destin, FL	5.69%
2	33260	Midland, TX	3.64%
3	41100	St. George, UT	2.75%
4	12540	Bakersfield, CA	2.53%
5	22380	Flagstaff, AZ	2.03%
6	29820	Las Vegas-Paradise, NV	1.71%
7	22020	Fargo, ND-MN	1.41%
8	36220	Odessa, TX	1.25%
9	17660	Coeur d'Alene, ID	1.20%
10	34060	Morgantown, WV	1.05%
		10 Most Rapidly Declining Areas	
1	22420	Flint, MI	-12.47%
2	34620	Muncie, IN	-9.42%
3	11460	Ann Arbor, MI	-9.18%
4	21340	El Paso, TX	-8.25%
5	40980	Saginaw-Saginaw Township North, MI	-7.92%
6	19820	Detroit-Warren-Livonia, MI	-7.92%
7	27500	Janesville, WI	-7.39%
8	44220	Springfield, OH	-7.34%
9	49660	Youngstown-Warren-Boardman, OH-PA	-7.28%
10	25860	Hickory-Lenoir-Morganton, NC	-6.97%

[7] Fort Walton Beach-Destin, FL has recorded growth in a number of manufacturing industries including food processing, computers & electronics, transportation manufacturing, and metallic and non-metallic fabrication.

Since the start of the recession, only 21 metro areas have recorded positive rates of employment growth. These are shown in Figure 3.4 in blue. Of these areas, 10 are in Texas. The most rapid rates of growth have been in Odessa, Texas (0.86%) and Midland, Texas (0.67%). The greatest rates of job loss have been in Elkhart-Goshen, Ind. (-3.75 %); Prescott, Ariz. (-2.65%); Dalton, Ga. (-2.58%); Cape Coral/Fort Myers, Fla. (-2.51%); Reno-Sparks, Nev. (-2.25%); and Detroit-Warren-Livonia, Mich. (-2.15%).

Figure 3.4: Annual Average Rates of Growth, 2007-09



Only 17 metro areas have recorded positive growth in office employment since the recession began. The leaders are Mansfield, Ohio (1.17%) and Grand Forks, N.D. (0.68%). The biggest rates of office employment decline are in Prescott, Ariz. and Dalton, Ga., where big losses amounting to -5.71 percent and -4.68 percent, respectively, have been recorded.

Only two cities have registered growth in industrial employment since the beginning of the current downturn. Very modest gains have been recorded in San Luis Obispo/Paso Robles, Calif. (0.39%) and Greely, Colo. (0.20%). The greatest rates of industrial employment decline are in Flint, Mich. and Eugene, Ore., where huge declines of -9.81 percent and -7.09 percent have been recorded.[8]

[8] Losses in Eugene, OR have been linked mainly to problems in the forestry and wood product industries.

Chapter 4: The Pattern of Metropolitan and Nonmetropolitan Growth

Since the middle of the past century there has been an increasing decentralization of jobs and people, as growth has shifted outward away from older metropolitan centers, toward locations in the suburbs and beyond. Beginning in the 1970s, population and employment growth rebounded in more rural, non-metropolitan areas across the nation (Beale 1975), but by the 1980s, the trend has reversed, with non-metropolitan areas again lagging the growth of metropolitan centers (Johnson, 1993).[9]

Within metropolitan areas, many have decried the trend of decentralization because of the low density pattern of urban sprawl which it fosters and have sought ways to restore the vibrancy of center cities (Katz and Muro, 2003). Beginning slowly in the 1990s and accelerating in the current decade, there has been a movement of people and jobs back to some major cities, which leaders in government and industry have sought to encourage. This rebirth of the city is associated with an increase in the number of households without children, as people in their 20s and 30s have postponed having children and the number of "empty nesters" has swelled as the children of the baby boomers have left home (Moulton 1999). Many of the growing number of childless young adults and empty nesters have sought to live and work in urban centers because of the more stimulating social and cultural environment that they believe is to be found there. This trend has fostered an expansion of up-scale urban housing across the country.[10]

The Pattern of Employment Growth, 2000-07

Table 4.1 looks at the pattern of employment growth in counties across the country during 2000-07. By far the largest number of new jobs was created in metropolitan, center-city counties, far outpacing the number of jobs created in metro fringe areas or in non-metro counties. Out of the 5.8 million new jobs created nationwide during 2000-07, 4.7 million (81 percent) were in metropolitan, center-city counties. Just 11 percent were in metropolitan fringe areas and only 8 percent in non-metro areas. The Office of Management and Budget (OMB) defines Metropolitan Statistical Areas (MSAs, or metropolitan areas) as counties of 50,000 or more population, plus adjacent counties that are highly integrated with the core areas as evidenced by the level of in- and out-commuting.

Overall employment in metropolitan counties grew 0.68 percent annually during the 2000-07 period, while non-metropolitan areas increased just 0.37 percent. Within metropolitan counties, the growth of total employment was substantially more rapid in counties on the metropolitan fringe than in larger, center city counties. Total employment grew 0.63 percent annually in center-city counties, compared to an increase of 1.56 percent in counties on the metro fringe. However, the higher gains in fringe areas came off a much lower employment base. The absolute number of jobs created in central city counties was more than seven times as large.

Within non-metropolitan areas, OMB distinguishes Micropolitan Statistical Areas as being those that include counties that have a population of 10,000 to 50,000 plus the adjacent counties that are economically integrated with the micropolitan core counties. Micropolitan counties grew 0.47 percent annually during 2000-07, while smaller, more outlying non-micropolitan areas gained just 0.18 percent. Within micropolitan areas, center city areas gained 0.46 percent annually, while employment in micropolitan fringe counties rose 0.67 percent. However, the faster growth on the micropolitan fringe came off a much lower employment base.

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[9] For definitions of the terms used in Table 1, see Office of Management and Budget (2000).

[10] See, for example, Sheila Muto, "Apartment Builders Set Sights in Los Angeles, *Wall Street Journal*, Wednesday, March 14, 2001, p. B8.

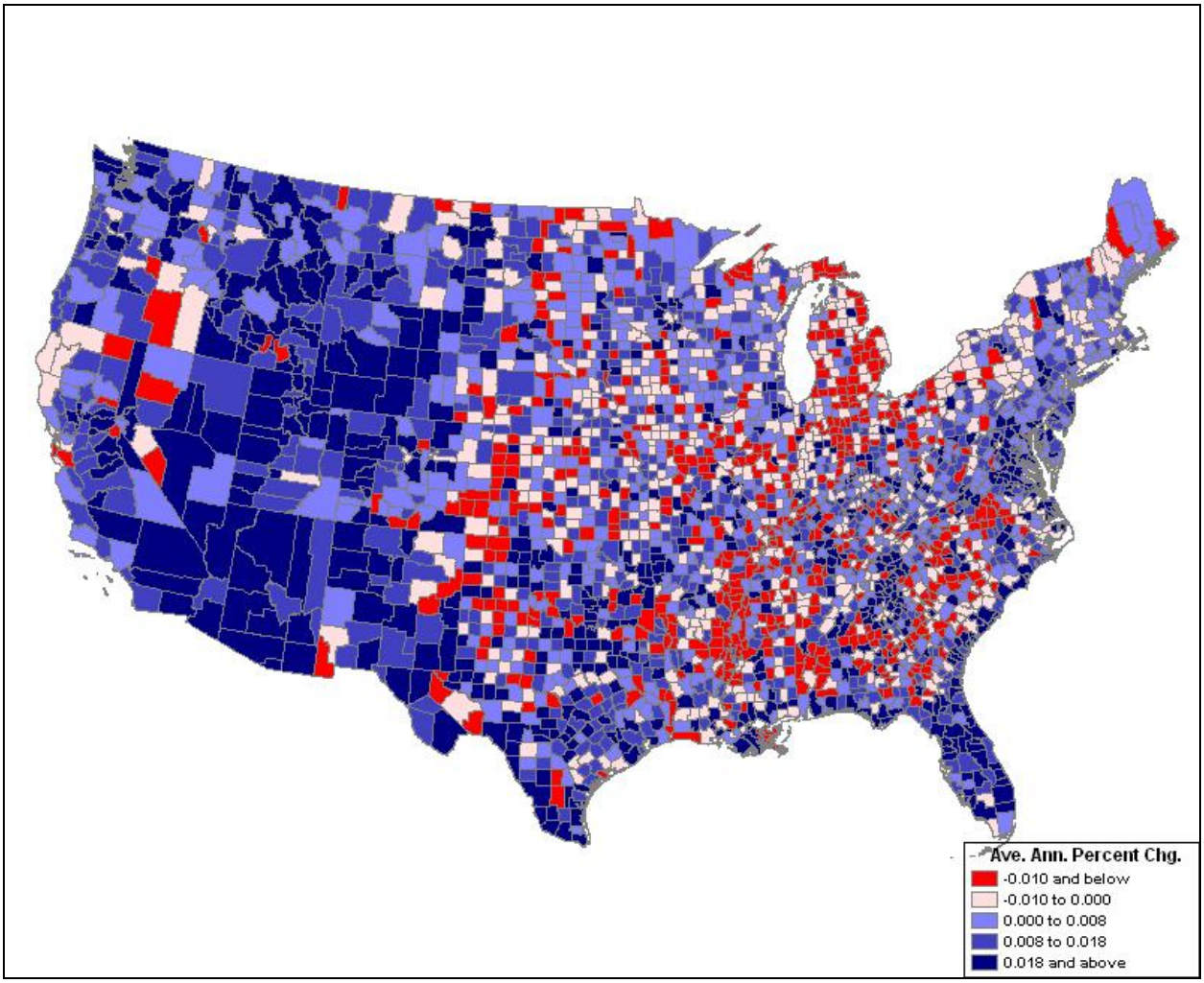
Table 4.1: Metropolitan and Non-metropolitan Employment Growth, 2000-07

Region	2007	2000	Change	Avg. Ann. % Chg.
US Total	133,034,615	127,220,225	5,814,390	0.64%
Metropolitan Counties	114,834,090	109,481,547	5,352,543	0.68%
Metropolitan Center-City Counties	108,464,991	103,767,578	4,697,413	0.63%
Metropolitan Fringe Counties	6,369,099	5,713,969	655,130	1.56%
Non-Metropolitan Counties	18,200,525	17,738,678	461,847	0.37%
Micropolitan Counties	11,907,636	11,523,966	383,670	0.47%
Micropolitan Center-City Counties	11,594,801	11,225,500	369,301	0.46%
Micropolitan Fringe Counties	312,835	298,466	14,369	0.67%
Non-Micropolitan Counties	6,292,889	6,214,712	78,177	0.18%

Source: U.S. Bureau of Labor Statistics, tabulations by the author.

Figure 4.1 maps the pattern of employment growth across the country during 2000-07. By far the most rapid growth (shown in shades of blue) has occurred in the western half of the country and on the coasts. Areas of employment decline (shown in shades of red) are concentrated in the Midwest and the South, inland from the coasts.

Figure 4.1: County Employment Growth, 2000-07



Changes in the Pattern of Employment Growth, 2007-09

The data shown in Table 4.1 are from the Bureau of Labor Statistics (BLS) employer survey. These data show employment by country and industry, based on place of work. However, the data from the employer survey at the county level are released with a considerable lag.

The BLS compiles another set of employment statistics which are based on a monthly nationwide survey of households. These data reflect employment by place of residence but do not show employment by industrial sector. Nevertheless, the household survey data provide a more timely measure of employment at the county level than that available from the employer survey.

Table 4.2: An Alternative Measure of Metro/Non-metro Employment Growth, 2000-09

Region	Apr. 2009	Dec. 2007	Jan. 2000	Avg. Ann. % Change 2007-09	2000-07
US Total	135,994,174	145,320,350	140,077,603	-4.85%	0.47%
Metropolitan Counties	113,745,717	122,283,566	117,777,869	-5.28%	0.48%
Metropolitan Center-City Counties	104,740,218	112,327,176	108,225,168	-5.11%	0.47%
Metropolitan Fringe Counties	9,005,500	9,956,390	9,552,701	-7.25%	0.52%
Non-Metropolitan Counties	22,248,457	23,036,784	22,299,734	-2.58%	0.41%
Micropolitan Counties	13,689,262	14,288,843	13,830,532	-3.16%	0.41%
Micropolitan Center-City Counties	13,166,350	13,754,308	13,313,907	-3.22%	0.41%
Micropolitan Fringe Counties	522,912	534,535	516,625	-1.64%	0.43%
Non-Micropolitan Counties	8,559,195	8,747,941	8,469,202	-1.62%	0.41%

Note: Data are for Apr. 2009, Dec. 2007, and Jan. 2000, all seasonally adjusted
Source: U.S. Bureau of Labor Statistics, seasonal adjustments and tabulations by the author.

Table 4.2 shows the pattern of employment growth across metro and non-metro areas using county data from the household survey.[11] From 2000 through 2007, employment growth was more rapid in metro areas (0.48 percent annually) than in non-metro counties (0.41 percent annually), but the difference is not as great as in Table 4.1. The smaller difference in metro and non-metro growth rates in Table 4.2 reflects the greater convergence of the growth of population.

Within metro counties, the growth during 2000-07 again was more rapid in counties on the metropolitan fringe. Within micropolitan counties, growth also was slightly more rapid in fringe counties. In contrast with Table 4.1, Table 4.2 shows no difference in the employment growth in micropolitan and non-micropolitan counties.

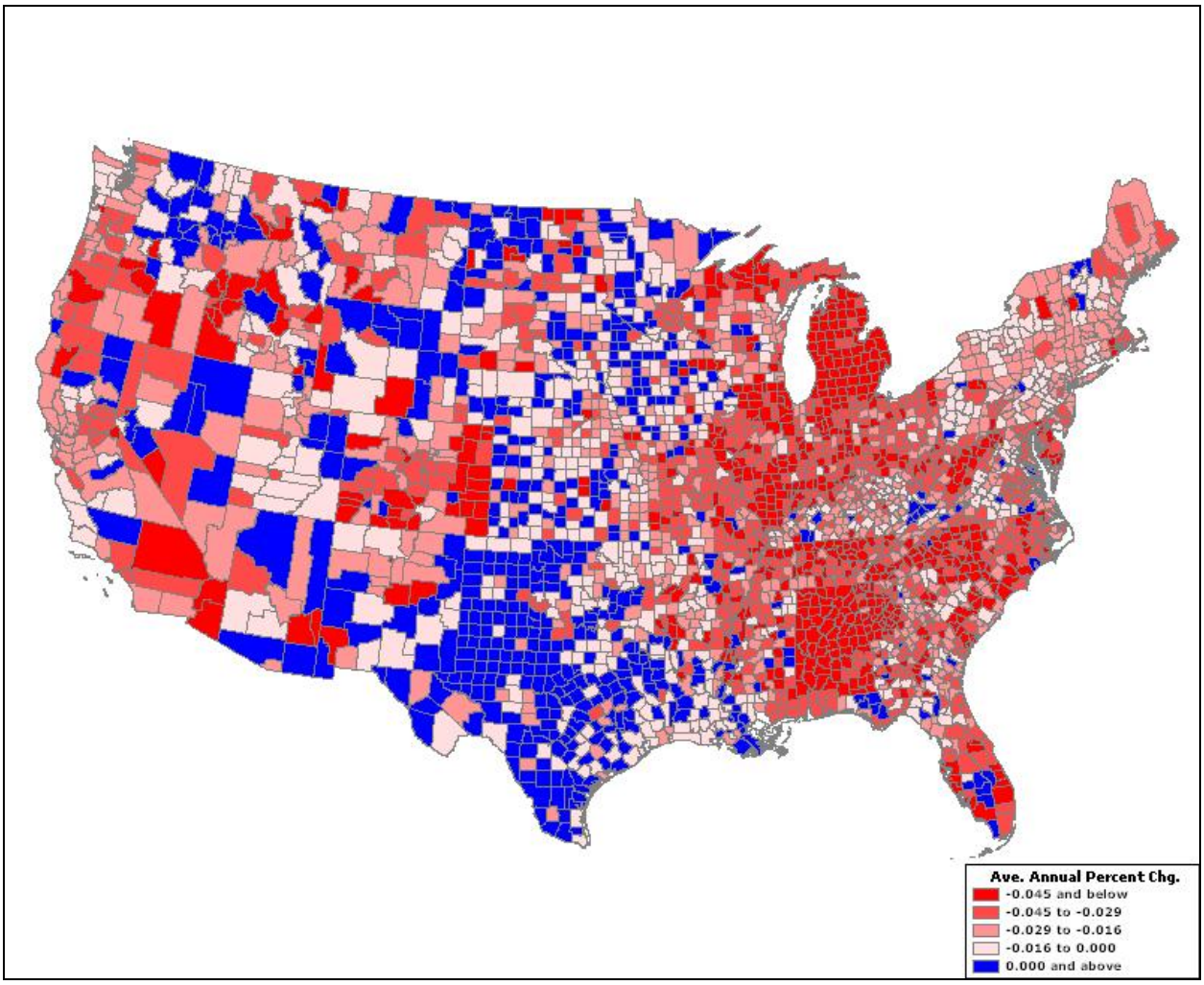
Since the onset of the recession in December 2007, U.S. employment from the household survey has fallen at an average annual rate of -4.85 percent. The fall-off in employment has been more than twice as rapid in metropolitan counties than in non-metropolitan areas. Within metro areas, the decline in jobs has been most rapid in counties on the metropolitan fringe. This phenomenon has led a recent study by the Brookings Institution to dub the current downturn the "crabgrass recession."[12] However, outside metropolitan areas the pattern has been exactly reversed, with more outlying areas sustaining smaller rates of job loss.

Figure 4.2 maps the pattern of employment losses across the country during 2007-09. By far the most rapid rates of job loss (shown in shades of red) have occurred in the eastern

[11] The data are seasonally adjusted monthly employment data for Apr. 2009, Dec. 2007, and Jan. 2000.
[12] See, Patterson (2009).

half of the country and on the west coast. Areas of employment gain (shown in blue) are concentrated in the middle of the country, west of the Mississippi.

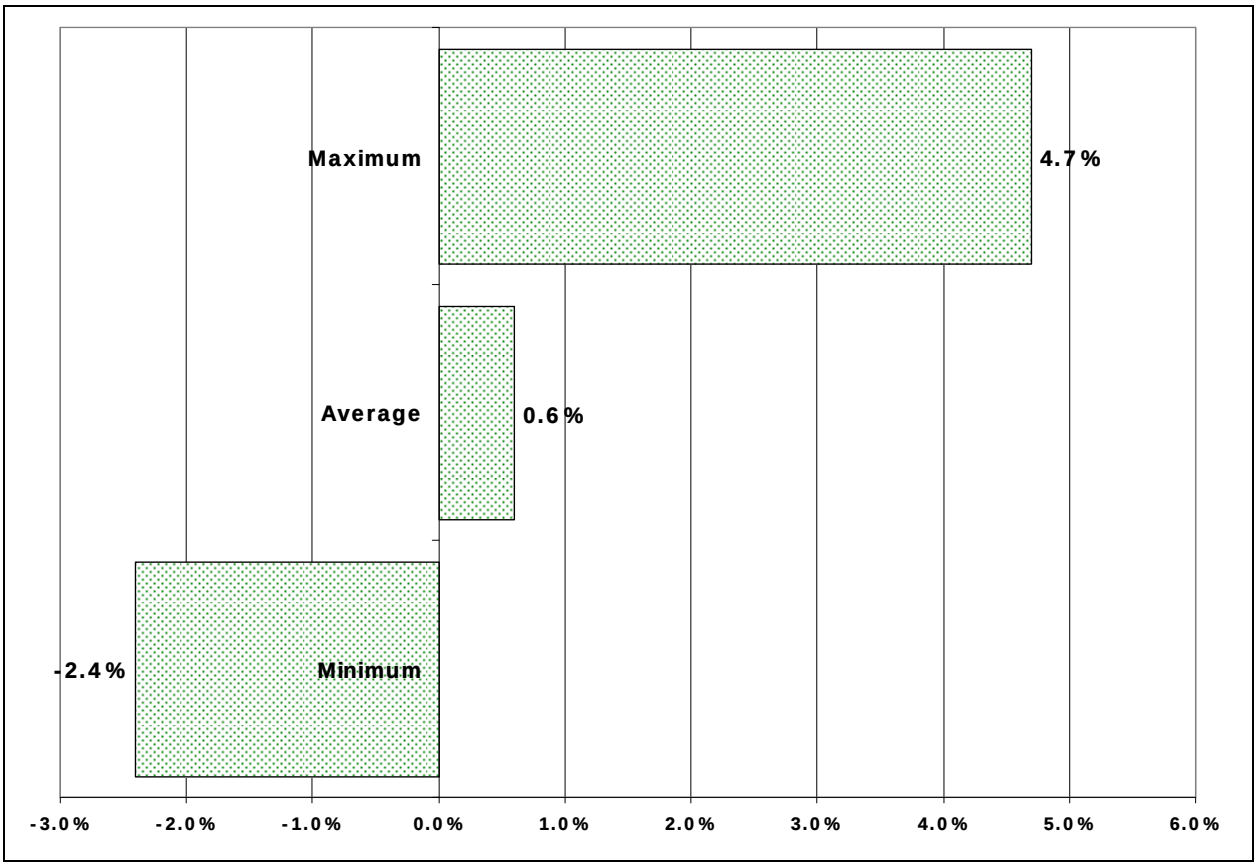
Figure 4.2: County Employment Growth, 2007-09



Chapter 5: Factors Fostering Employment Growth and Decline

There is wide variation in the rate of employment growth across cities. Figure 5.1 illustrates the distribution of growth rates in total employment among 293 metropolitan areas from January 2000 through June 2009.

Figure 5.1: Employment Growth Rates, 2000-09



The rates of annual employment growth range from a low of -2.4 percent in Hickory-Lenoir-Morganton, N.C. to a high of 4.7 percent in St. George, Utah. The average for the 293 metropolitan areas is 0.6 percent annually.

Studies of Employment Growth

The determinants of metropolitan employment growth have been widely studied within the economics literature [see, for example, Neidercorn and Kain (1963) and Mills and McDonald (1992)]. Economic studies have tended to focus on the effects of education and tax policy.

Economists' emphasis on education derives from the human capital literature developed by Becker (1975) and others. Metropolitan areas with more educated workers are thought to grow more rapidly because more educated workers are able to acquire knowledge and better ways of doing things, both in the classroom and on the job, more rapidly than those who are less educated (Carlino, 1995). In addition, interactions among higher educated workers in urban areas are thought to speed the adoption and diffusion of better ways of doing things throughout the area more quickly (Gottlieb and Fogarty, 2003).

A high level of education is an important component Richard Florida's (2004) concept of the *creative class*. According to Florida, the *creative class* includes scientists, engineers, architects, writers, professors, and others whose job it is to formulate and develop new

ways of doing things. Florida's research shows that the *creative class* fires more rapid growth in those cities and regions where its members choose to congregate most.

Interest in the tax and spending policies of local and state governments and their effects on economic growth can be traced to the work of Charles Tiebout (1956). Tiebout advanced the view that individuals and firms seek out those communities that offer the best public services at the lowest prices. For example, households concerned about the quality of local public schools are likely to move to those areas where school quality is highest and tax rates are the lowest.[13] Likewise, firms will seek out communities that offer the array of public services that are most important to them while seeking to minimize the taxes they pay.

Illustrative of studies examining the determinants of growth is the work of Robert Barro (1991) who looks at the factors fostering growth in real per capita gross domestic product (GDP) among 98 countries from 1960 through 1985. He finds that the pace of growth is significantly shaped by the level of school enrollment in 1960, which proxies for the level of human capital in each country. Higher school enrollment rates are related to more rapid growth. Growth is negatively related to the initial level of per capita GDP, suggesting that the gap between poorer and more wealthy countries tends to narrow over time. And growth is negatively related to size of government consumption as a fraction of GDP, indicating that greater government involvement in the economy fosters distortions such as high taxes which retard the pace of growth.

Glaeser, Scheinkman and Shleifer (1995) examine the determinants of income and population growth in a sample of 203 cities from 1960 through 1990. They report that income and population growth move together and both are related to the initial level of schooling. Areas where the initial level of schooling of the population is higher tend to grow more rapidly in subsequent periods. They also report that growth is negatively related to the initial level of unemployment and the percent of employment in manufacturing.

The relationship between the level of educational attainment at the bachelor's degree level and subsequent growth has been studied by Gottlieb and Fogarty (2003). Drawing on a sample of 267 metropolitan areas, they find that both employment growth and the growth of real per capita income from 1980 through 1997 are positively and significantly related to the percent of the population with at least 4 years of college in 1980.

Wasylenko and McGuire (1985) examine state employment growth during 1973-80. They report that higher income tax rates, utility rates, and wages along with high overall rates of state taxation all act to retard employment growth. Higher spending on education and higher per capita income, however, foster more rapid growth.

A unique feature of the Wasylenko and McGuire study is their focus on employment growth in specific sectors of the economy. They report, for example, that employment growth in finance, insurance and real estate (FIRE) and services (SER) is negatively related to wage levels and utility rates and positively related to per capita personal income. Growth in service employment is negatively related to income tax rates, but growth in FIRE employment is not.

Bartik (1991) has examined 84 studies undertaken since 1979 that look at the effect of taxes on employment and other measures of business activity. He concludes that taxes have a large and significant negative effect. His conclusion is corroborated in a similar study by Phillips and Goss (1995). Literature surveys by Ladd (1998) and Barro (2008) also reach essentially the same conclusion.

[13] See, Jud (1985) and Jud and Bennett (1986).

An Analysis of Employment Growth

Figure 3.3 maps the sample of 293 MSA growth rates shown in Figure 5.1 above. As discussed in Chapter 3, most of the rapidly growing metro areas (shown in blue) are concentrated in the South and West, while most of the declining areas (shown in red) are in the Northeast and Midwest, with a few scattered throughout the South away from the coasts.

To further examine the factors that shape employment growth in cities, this analysis draws on the sample of 293 metropolitan areas. The analysis reveals the following six factors as most important in determining the pace of metro growth, 2000-09:[14]

<u>Positive Factors</u>

1. High percentage of workers with advanced degrees (masters and above),
2. High racial/ethnic diversity in the population,

<u>Negative Factors</u>

3. High marginal income tax rate,
4. High percent of employment in manufacturing,
5. Large population, and
6. High per capita income (PCI).

All of the six factors were measured as of 2000, so they may be interpreted as determinant of subsequent employment growth.

Corroborating previous studies, this analysis finds that the initial level of human capital in an area (measured here by the percent of the workforce with advanced degrees) is a strong positive factor fostering future employment growth. The analysis also finds that the initial racial diversity of the population is important.[15] Higher diversity appears to encourage more rapid employment growth. Exactly why this is true is subject to speculation. It may simply be that a more diverse labor force is associated with more abundant, lower-cost labor because the diversity index is much higher for cities in the south and west where the inflows of Hispanics immigrants has been highest.

Higher marginal income tax rates are found to be negatively associated with the rate of employment growth.[16] This finding supports the results reported in numerous similar studies of taxs and growth. It clearly indicates that talent and enterprise is discouraged in areas where tax rates are high.

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[14] The statistical details of the analysis are available from the author on request.

[15] The diversity index reports the percentage of times two randomly selected people would differ by race/ethnicity. Working with percents expressed as ratios (e.g., 63 percent = 0.63), the index is calculated in three steps: 1) Square the percent for each group, 2) Sum the squares, and 3) Subtract the sum from 1.00.

Eight groups were used for the index:

1. White, not Hispanic;
2. Black or African American;
3. American Indian and Alaska Native (AIAN);
4. Asian;
5. Native Hawaiian and Other Pacific Islander (NHOPI);
6. Two or more races, not Hispanic;
7. Some other race, not Hispanic; and
8. Hispanic or Latino.

People indicating Hispanic origin who also indicated Black, AIAN, Asian, or NHOPI were counted only in their race group (0.5 percent of the population). They were not included in the Hispanic group.

See, U.S. Census Bureau, *The Geography of U.S. Diversity*, 2000.

[16] State maximum marginal tax rates for 2000 are taken from the TAXSIM model developed by the National Bureau of Economics Research, http://www.nber.org/~taxsim.

Larger fractions of initial employment in the manufacturing sector also are associated with slower growth. During the past three decades, the U.S. economy has undergone a massive transition of the workforce from manufacturing to services, and those areas of high manufacturing intensity have had a difficult time overcoming their manufacturing losses.

Lastly, this analysis reveals that population size and higher per capita income (PCI) are negatively correlated with rapid growth. This finding supports that of Barro and Salai-Martin (1992) and others who have found a convergence of area growth rates over time. The results suggest that market forces operate to encourage the more rapid growth of smaller, less-wealthy cities over time.

The analysis also examined whether the same six factors similarly influence the growth of office and industrial employment. Although the correlation between the growth in total employment and the growth of office and industrial employment is quite high, the factors that shape the growth of employment in office and industrial employment are not exactly the same as those that influence the growth of employment overall.[17] In the case of office employment, only manufacturing intensity, population size, and per capita income were found to significantly affect the growth of office employment. As with total employment growth, the three factors were negatively associated with the growth of office employment.

For industrial employment growth, the only two factors found to significantly affect growth rates were: manufacturing intensity and population size. Both factors were negatively associated with the growth of industrial employment.

Recent Changes

Beginning in December 2007, the U.S. economy entered a period of recession. To examine the factors fostering growth or decline during the recent downturn, this analysis examined the pattern of employment change in the same 293 metropolitan areas from December 2007 through June 2009.

As shown in Chapter 3, Figure 3.4 maps the annualized percentage changes in MSA employment using seasonally adjusted total employment numbers for the 293 metro areas from December 2007 through June 2009. The growing areas (shown in blue) are concentrated in Texas and the Midwest. The declining areas (shown in various shades of red) are spread across the country, with many of the most rapidly declining areas located in formerly rapidly growing sections of the South and West.

The pace of total employment growth during the recession was found to be significantly related to:[18]

1. High marginal income tax rate
2. High percent of employment in manufacturing
3. Large population
4. High per capita income (PCI)
5. Large percentage of owner-occupied housing

In each case, the factors were found to be negatively associated with employment growth. The significance of the percent of owner-occupied housing reflects the impact of the housing bust. In those cities where the percent of home ownership was highest, recent employment growth has been slowest.

[17] Looking across the 293 metropolitan areas from January 2000 through December 2007, the correlation between total employment growth and office growth is 0.64 and that between total growth and industrial growth is 0.58.

[18] The statistical details of the analysis are available from the author on request.

Recent office employment growth was found to be negatively associated with the same five factors with the exception of the income tax variable. Office growth was not significantly affected by higher tax rates.

The growth of industrial employment during the downturn was found to be affected only by the percent of employment in manufacturing. The higher the percent of area employment in manufacturing, the slower the recent growth of industrial employment was found to be.

Chapter 6: Assessing the Potential for Future Growth

This chapter applies the employment growth model discussed in the previous chapter to assess the potential future employment growth of the 293 metro area sample. To do this, data for the six growth factors discussed in the previous chapter were updated to reflect the most recent estimates for:[19]

1. Percent of the workforce with advanced degrees (masters and above),
2. Diversity of the population,
3. Marginal income tax rate,
4. Percent of employment in manufacturing,
5. Population, and
6. Per capita income (PCI).

Ranking Potential Future Employment Growth

Using these data, the analysis ranked the future employment growth of each of the 293 areas. Figure 6.1 maps the 293 metro areas. The areas of highest growth potential are shown in shades of blue. Those areas with the lowest potential growth prospects are shown in red. The blue areas are scattered mainly across the southern half of the country, although red areas appear in the south and far west.

[19] Demographic and economic data for 2009 were obtained from ESRI, see http://www.esri.com/data/esri_data/index.html. State tax rate data were taken from the National Bureau of Economic Research, see http://www.nber.org/~taxsim/state-rates/

Figure 6.1: Potential Future Employment Growth

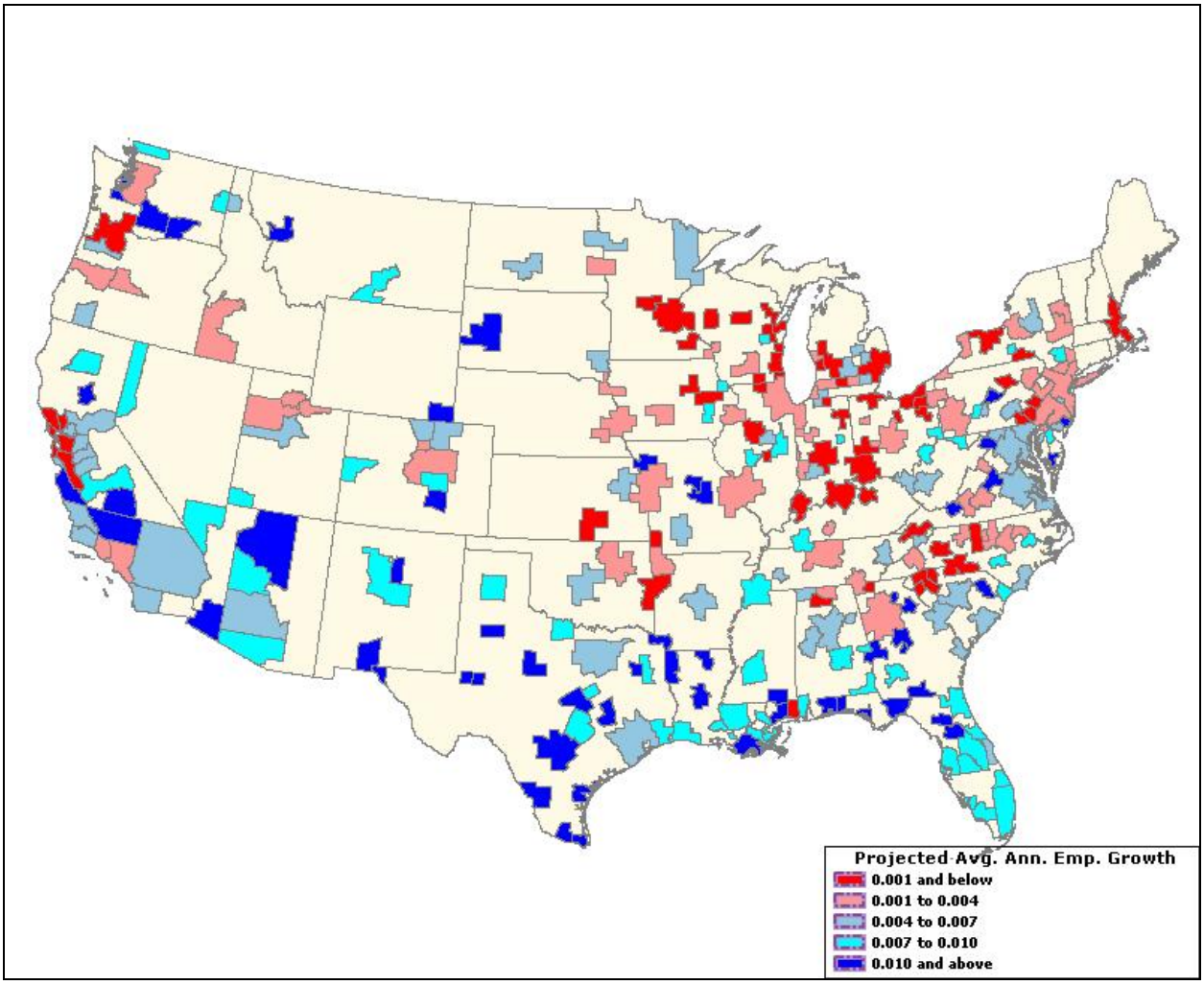

Table 6.1 lists top 20 areas of highest growth potential and the 20 areas of lowest potential. A complete ranking of all 293 metro areas is shown in Appendix A.2. The highest potential growth areas are Laredo, Texas and McAllen, Texas. The lowest areas of potential growth are Elkhart-Goshen, Ind. and Sheboygan, Wis.

Table 6.1: Twenty Areas of Highest and Lowest Growth Potential

High Growth Areas:			Low Growth Areas:		
Rank	**FIPS**	**Area**	**Rank**	**FIPS**	**Area**
1	29700	Laredo, TX	274	31900	Mansfield, OH
2	32580	McAllen-Edinburg-Mission, TX	275	41060	St. Cloud, MN
3	15180	Brownsville-Harlingen, TX	276	34900	Napa, CA
4	10780	Alexandria, LA	277	37700	Pascagoula, MS
5	29740	Las Cruces, NM	278	15940	Canton-Massillon, OH
6	46660	Valdosta, GA	279	33340	Milwaukee-Waukesha-West Allis, WI
7	49740	Yuma, AZ	280	16300	Cedar Rapids, IA
8	12020	Athens-Clarke County, GA	281	49620	York-Hanover, PA
9	17780	College Station-Bryan, TX	282	24580	Green Bay, WI
10	26380	Houma-Bayou Cane-Thibodaux, LA	283	48620	Wichita, KS
11	36220	Odessa, TX	284	33460	Minneapolis-St. Paul-Bloomington, MN-WI
12	31180	Lubbock, TX	285	39540	Racine, WI
13	41540	Salisbury, MD	286	11540	Appleton, WI
14	23580	Gainesville, GA	287	41940	San Jose-Sunnyvale-Santa Clara, CA
15	17980	Columbus, GA-AL	288	48140	Wausau, WI
16	23540	Gainesville, FL	289	19140	Dalton, GA
17	10180	Abilene, TX	290	26100	Holland-Grand Haven, MI
18	21340	El Paso, TX	291	25860	Hickory-Lenoir-Morganton, NC
19	49420	Yakima, WA	292	43100	Sheboygan, WI
20	45220	Tallahassee, FL	293	21140	Elkhart-Goshen, IN

Growth of the Nation's 50 Largest Metro Areas

Table 6.2 ranks the growth potential of nation's 50 largest metro areas, based on estimated population in 2009. San Antonio, TX, Las Vegas, Nev., Orlando, Fla., and Miami, Fla. are the four areas of highest growth potential. These areas have no state income tax, a low percentage of employment in manufacturing, and high racial and ethnic diversity.

The areas of lowest potential are San Jose, Calif., Minneapolis-St. Paul, Minn., Cincinnati, Ohio, and Milwaukee, Wis. While San Jose has a large fraction of its work force with advanced degrees and a high index of diversity, these advantages are offset by California's high state income tax and the area's high involvement in manufacturing. The low rankings for Minneapolis, Cincinnati and Milwaukee stem from the areas' high state taxes and manufacturing involvement coupled with low diversity and a relatively small percentage of workers with advanced education.

Table 6.2: Potential Growth of the Nation's 50 Largest Metro Areas

Rank	FIPS	Area	Growth	Diversity	% Mfg.	Tax Rate	Population	PCI*	Adv. Ed.
1	41700	San Antonio, TX	1.2%	75.7	5.3%	0.00	2,070,440	$22,478	12.6%
2	29820	Las Vegas-Paradise, NV	1.0%	71.0	2.8%	0.00	1,974,024	$27,277	9.5%
3	36740	Orlando-Kissimmee, FL	1.0%	67.0	4.0%	0.00	2,138,587	$26,918	11.9%
4	33100	Miami-Fort Lauderdale-Pompano Beach, FL	1.0%	72.7	3.9%	0.00	5,549,666	$27,692	16.8%
5	35380	New Orleans-Metairie-Kenner, LA	0.9%	58.6	6.8%	3.92	1,166,214	$21,392	12.5%
6	46060	Tucson, AZ	0.9%	72.2	7.3%	4.93	1,009,801	$25,717	21.6%
7	27260	Jacksonville, FL	0.8%	52.7	5.0%	0.00	1,392,346	$28,209	12.7%
8	32820	Memphis, TN-MS-AR	0.8%	57.5	7.8%	0.00	1,321,291	$25,394	10.8%
9	45300	Tampa-St. Petersburg-Clearwater, FL	0.8%	53.0	5.7%	0.00	2,793,774	$27,296	13.8%
10	12420	Austin-Round Rock, TX	0.7%	73.3	7.2%	0.00	1,690,631	$31,873	17.7%
11	13820	Birmingham-Hoover, AL	0.7%	48.2	7.9%	3.25	1,124,423	$24,636	13.0%
12	36420	Oklahoma City, OK	0.6%	54.5	6.3%	6.29	1,223,526	$24,824	12.0%
13	26420	Houston-Sugar Land-Baytown, TX	0.6%	79.2	9.3%	0.00	5,904,050	$26,741	12.6%
14	40140	Riverside-San Bernardino-Ontario, CA	0.6%	83.2	8.4%	9.86	4,245,576	$21,251	14.0%
15	47260	Virginia Beach-Norfolk-Newport News, VA-NC	0.6%	58.4	7.2%	5.83	1,683,121	$25,561	14.1%
16	40900	Sacramento—Arden-Arcade—Roseville, CA	0.5%	69.9	4.4%	9.86	2,167,481	$28,435	15.8%
17	40060	Richmond, VA	0.5%	54.5	6.3%	5.83	1,237,700	$28,880	14.6%
18	12580	Baltimore-Towson, MD	0.5%	54.6	5.2%	4.83	2,701,909	$31,235	19.5%
19	47900	Washington-Arlington-Alexandria, DC-VA-MD-WV	0.5%	70.0	2.0%	5.83	5,448,329	$39,574	25.6%
20	38060	Phoenix-Mesa-Scottsdale, AZ	0.5%	69.3	7.1%	4.93	4,393,462	$28,270	14.7%
21	19100	Dallas-Fort Worth-Arlington, TX	0.4%	71.8	9.5%	0.00	6,436,964	$29,848	12.6%
22	41740	San Diego-Carlsbad-San Marcos, CA	0.4%	78.6	7.7%	9.86	3,092,622	$28,629	19.6%
23	34980	Nashville-Davidson—Murfreesboro—Franklin, TN	0.4%	41.9	9.2%	0.00	1,569,429	$29,729	12.4%
24	19740	Denver-Aurora-Broomfield, CO	0.4%	59.5	5.6%	4.77	2,552,104	$34,438	17.3%
25	41620	Salt Lake City, UT	0.3%	45.8	8.8%	6.14	1,125,230	$26,411	10.4%
26	39580	Raleigh-Cary, NC	0.3%	55.2	6.0%	8.50	1,110,356	$33,594	18.6%
27	37980	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	0.3%	53.8	7.5%	3.07	5,899,373	$31,452	16.9%
28	38300	Pittsburgh, PA	0.3%	23.7	8.3%	3.07	2,380,528	$26,561	14.2%
29	35620	New York-Northern New Jersey-Long Island, NY-NJ-PA	0.3%	75.2	4.8%	7.25	19,040,471	$33,445	20.7%
30	12060	Atlanta-Sandy Springs-Marietta, GA	0.3%	62.5	6.6%	5.83	5,543,990	$32,080	16.8%
31	16980	Chicago-Naperville-Joliet, IL-IN-WI	0.2%	70.0	10.2%	3.00	9,756,941	$30,299	17.1%

Table 6.2: Potential Growth of the Nation's 50 Largest Metro Areas (continued)

Rank	FIPS	Area	Growth	Diversity	% Mfg.	Tax Rate	Population	PCI*	Adv. Ed.
32	28140	Kansas City, MO-KS	0.2%	43.3	7.7%	5.91	2,039,459	$29,859	14.1%
33	15380	Buffalo-Niagara Falls, NY	0.2%	36.9	10.4%	7.25	1,137,794	$26,040	15.1%
34	31100	Los Angeles-Long Beach-Santa Ana, CA	0.1%	87.4	10.7%	9.86	13,357,529	$26,795	15.6%
35	42660	Seattle-Tacoma-Bellevue, WA	0.1%	49.8	10.7%	0.00	3,428,566	$34,715	16.2%
36	18140	Columbus, OH	0.1%	37.4	7.7%	7.18	1,788,356	$29,894	13.1%
37	41180	St. Louis, MO-IL	0.1%	39.4	9.2%	5.91	2,850,518	$28,566	14.3%
38	26900	Indianapolis-Carmel, IN	0.1%	37.7	10.0%	3.40	1,739,161	$30,549	12.3%
39	16740	Charlotte-Gastonia-Concord, NC-SC	0.1%	54.4	9.1%	8.50	1,740,257	$30,827	12.2%
40	41860	San Francisco-Oakland-Fremont, CA	0.1%	79.0	6.7%	9.86	4,354,010	$41,511	24.9%
41	19820	Detroit-Warren-Livonia, MI	0.1%	50.0	11.5%	3.90	4,500,595	$30,124	16.6%
42	31140	Louisville-Jefferson County, KY-IN	0.0%	33.4	11.3%	6.18	1,262,276	$27,733	12.2%
43	40380	Rochester, NY	0.0%	40.3	13.1%	7.25	1,043,862	$27,728	16.1%
44	17460	Cleveland-Elyria-Mentor, OH	0.0%	45.8	12.3%	7.18	2,116,514	$28,122	13.7%
45	14460	Boston-Cambridge-Quincy, MA-NH	-0.1%	45.3	8.6%	5.30	4,512,381	$38,192	21.7%
46	38900	Portland-Vancouver-Beaverton, OR-WA	-0.1%	45.4	11.7%	9.10	2,233,323	$29,562	16.2%
47	17140	Cincinnati-Middletown, OH-KY-IN	-0.1%	29.7	10.7%	7.18	2,150,855	$29,451	13.3%
48	33340	Milwaukee-Waukesha-West Allis, WI	-0.2%	51.0	15.0%	6.75	1,544,127	$30,354	11.9%
49	33460	Minneapolis-St. Paul-Bloomington, MN-WI	-0.4%	36.3	10.9%	8.09	3,314,039	$35,798	14.0%
50	41940	San Jose-Sunnyvale-Santa Clara, CA	-0.6%	81.9	18.4%	9.86	1,857,839	$44,432	25.4%
Averages			0.4%	57.2	8.2%	4.91	3,334,316	$29,608	15.4%

*Note: PCI is per capita income.

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References

Joshua Barro, *2009 State Business Tax Climate Index*, Background Paper, Tax Foundation, no. 58 (October 2008).

Robert J. Barro, "Economic Growth in a Cross Section of Countries," *The Quarterly Journal of Economics*, vol. 106, no. 2 (May 1991), pp. 407-443.

Robert J. Barro and Xavier Sala-i-Martin, "Convergence," *Journal of Political Economy*, vol. 100, no. 2 (April 1992) pp. 223-251.

Timothy J. Bartik, "The Effects of State and Local Taxes on Economic Development: A Review of Recent Research," *Economic Development Quarterly*, vol. 6, no. 1 (February 1992), pp. 102-111.

Calvin L. Beale, *The Revival of Population Growth in Nonmetropolitan America*, RES-605, US Department of Agriculture (Washington, DC: US Government Printing Office, 1975).

Gary Becker, *Human Capital, 2nd ed.* (New York: Columbia University Press, 1975).

Gerald A. Carlino, "Do Education and Training Lead to Faster Growth in Cities?" *Business Review of the Federal Reserve Bank of Philadelphia* (January/February, 1995), pp. 15-22.

John Clapp, Henry O. Pollakowski and Lloyd Lynford, "Intrametropolitan Location and Office Market Dynamics," *Journal of the American Real Estate and Urban Economics Association*, vol. 20, no. 1 (Spring 1992), pp. 229-257.

Denise DiPasquale and William C. Wheaton. *The Economics of Real Estate Market* (Englewood Cliffs, NJ: Prentice-Hall, 1995).

Richard Florida, *The Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life* (New York: Basic Books, 2004).

Edward L. Glaeser, Jose A. Scheinkman, and Andrei Shleifer, "Economic Growth in a Cross-Section of Cities," *Journal of Monetary Economics*, vol. 36 (1995), pp. 117-143.

Paul D. Gottlieb and Michael Fogarty "Educational Attainment and Metropolitan Growth," *Economic Development Quarterly*, vol. 17, no. 4, (November 2003), pp. 325-336.

Gruen Gruen & Associates, *Employment and Parking in Suburban Business Parks: A Pilot Study*, (Washington, DC: Urban Land Institute, 1986).

John S. Hekman, "Rental Price Adjustment and Investment in the Office Market," *AREUEA Journal,* vol. 13, no. 1 (Spring 1985), pp. 32-47.

Patric H. Hendershott, Colin M. Lizieri and George A. Matysiak, "The Workings of the London Office Market," *Real Estate Economics,* vol. 27, no. 2 (Summer 1999), pp. 365-387.

Marie Howland and David S. Wessel, "Projecting Suburban Office Space Demand: Alternative Estimates of Employment in Offices," *Journal of Real Estate Research,* vol. 9, no. 3 (Summer 1994), pp. 369-389.

Kenneth M. Johnson, "Demographic Change in Nonmetropolitan America, 1980 to 1990," *Rural Sociology*, vol. 58 (1993), pp. 347-365.

G. Donald Jud, "A Further Note on Schools and Housing Values," *AREUEA Journal* (now *Real Estate Economics*) vol. 13, no. 4 (Winter 1985), pp. 452-462.

G. Donald Jud and D. Gordon Bennett, "Public Schools and the Pattern of Intra-Urban Residential Mobility," *Land Economics*, Vol. 62, No. 4 (November 1986), pp. 362-370.

J.R. Kimball and Barbara S. Bloomberg, "Office Space Demand Analysis," *Appraisal Journal,* vol. 55, no. 4 (October 1987), pp. 567-577.

Helen F. Ladd, *Local Government Tax and Land Use Policies in the United States: Understanding the Links* (Northampton, MA: Edward Elgar, 1998)

Sherman J. Maisel, "Demand for Office Space," Working Paper 89–161, (Berkeley, CA: Center for Real Estate and Urban Economics, 1989).

Emil E. Malizia, "Forecasting Demand for Commercial Real Estate Based on Economic Fundamentals of U.S. Metro Markets," *Journal of Real Estate Research,* vol. 6, no. 3 (1991), pp. 251-265.

John F. McDonald, "A Survey of Econometric Models of Office Markets," *Journal of Real Estate Literature*, vol. 10, no. 2 (2002), pp. 223-242.

Edwin S. Mills and John F. McDonald, *Sources of Metropolitan Growth* (New Brunswich, NJ: Rutgers University, Center for Urban Policy Research, 1992).

Jennifer Moulton, "Ten Steps to a Living Downtown," (Washington, DC: The Brookings Institution, Center on Urban and Metropolitan Policy, Discussion Paper, October 1999).

Sheila Muto, "Apartment Builders Set Sights in Los Angeles, *Wall Street Journal*, (Wednesday, March 14, 2001), p. B8.

John H. Neidercorn and John F. Kain, "An Econometric Model of Metropolitan Development," *Papers in Regional Science*, vol. 11, no. 1 (December 1963), pp. 121-143.

Office of Management and Budget Office of Management and Budget (OMB), *Standards for Defining Metropolitan and Micropolitan Statistical Areas*, *Federal Register* Notice (65 FR 82228 - 82238), December 27, 2000, http://www.whitehouse.gov/omb/fedreg/metroareas122700.pdf.

Donald R. Patterson, "Crabgrass Recession Overruns the Suburbs," *News & Record*, July 23, 2009, p. 1.

Joseph M. Phillips and Ernest P. Goss, "The Effect of State and Local Taxes on Economic Development: A Meta-Analysis," *Southern Economic Journal*, vol. 62, no. 1 (July 1995), pp. 320-333.

Henry O. Pollakowski, Susan M. Wachter, and Lloyd Lynford, "Did Office Market Size Matter in the 1980s? A Time-Series Cross-Sectional Analysis of Metropolitan Area Office Markets," *Journal of the American Real Estate and Urban Economics Association,* vol. 20, no. 1 (Spring 1992), pp. 303-324.

Joseph S. Rabianski and Karen M. Gibler, "Office Market Demand Analysis and Estimation Techniques: A Literature Review, Synthesis and Commentary," *Journal of Real Estate Literature*, vol. 15, no. 1 (2007), pp. 37-56.

Kenneth T. Rosen, "Toward a Model of the Office Building Sector," *AREUEA Journal,* vol. 12, no. 3 (1984): 261-269.
Charles Tiebout, "A Pure Theory of Local Public Expenditures, *Journal of Political Economy*, vol. 64, no. 5 (October 1956), pp. 416-424.

Robert Thompson and Sotiris Tsolacos, "Projections in the Industrial Property Market Using a Simultaneous Equation System," *Journal of Real Estate Research*, vol. 19, no. 1/2 (2000), pp. 165-188.

Michael Wasylenko and Therese McGuire, "Jobs and Taxes: The Effect of Business Climate on States' Employment Growth Rates," *National Tax Journal*, vol. 38, no. 4 (December 1985), pp. 497-511.

William Wheaton, "The Cyclic Behavior of the National Office Market," *AREUEA Journal,* vol. 15, no. 4 (Winter 1987), pp. 281-299.

William C. Wheaton, Raymond G. Torto and Peter Evans, "The Cyclic Behavior of the Greater London Office Market," *Journal of Real Estate Finance and Economics,* vol. 15, no. 1 (July 1997), pp. 77-92.

William C. Wheaton and Raymond Torto, "An Investment Model of the Demand and Supply for Industrial Real Estate," *AREUEA Journal,* vol. 18, no. 4 (Winter 1990), pp. 430-436.

Appendix A.1: MSA Employment, 2000-09

(in 1,000s)

FIPS	Name	2000 Total	2000 Industrial	2000 Office	2007 Total	2007 Industrial	2007 Office	2009 Total	2009 Industrial	2009 Office
10180	Abilene, TX	62.1	3.5	8.2	66.7	3.3	9.6	66.8	3.0	9.1
10420	Akron, OH	331.3	59.5	58.2	342.3	45.9	71.7	330.1	39.6	67.8
10500	Albany, GA	64.6	9.3	n.a.	64.7	6.6	n.a.	62.2	6.1	n.a.
10580	Albany-Schenectady-Troy, NY	434.5	28.8	88.1	451.5	22.9	91.5	441.8	21.2	89.1
10740	Albuquerque, NM	351.6	26.9	88.1	396.1	22.8	92.6	382.3	19.3	89.9
10780	Alexandria, LA	60.3	n.a.	n.a.	66.6	n.a.	n.a.	66.9	n.a.	n.a.
10900	Allentown-Bethlehem-Easton, PA-NJ	319.5	54.6	61.3	345.8	39.9	66.7	334.3	35.8	63.0
11020	Altoona, PA	61.0	10.6	4.4	62.6	7.6	4.9	59.8	6.9	4.7
11100	Amarillo, TX	102.6	11.4	14.4	113.0	13.0	16.9	111.2	12.1	16.3
11260	Anchorage, AK	145.2	2.4	30.6	169.4	2.2	33.9	170.0	2.0	33.8
11340	Anderson, SC	66.4	17.8	n.a.	64.6	13.3	n.a.	61.7	12.0	n.a.
11460	Ann Arbor, MI	201.3	30.8	40.1	198.2	17.2	35.9	187.6	12.4	32.2
11500	Anniston-Oxford, AL	50.6	10.3	6.7	53.4	7.4	7.9	50.9	7.0	7.5
11540	Appleton, WI	114.1	28.1	17.6	118.7	22.7	23.2	114.1	21.2	22.2
11700	Asheville, NC	161.1	27.9	20.4	177.6	20.7	25.1	168.7	18.2	21.6
12020	Athens-Clarke County, GA	74.5	n.a.	6.3	85.2	n.a.	6.9	84.6	n.a.	6.4
12060	Atlanta-Sandy Springs-Marietta, GA	2,273.9	210.4	647.9	2,456.7	173.4	659.2	2,304.7	149.2	594.4
12100	Atlantic City-Hammonton, NJ	144.0	3.8	15.2	149.7	3.6	16.1	140.3	2.8	15.2
12220	Auburn-Opelika, AL	45.2	7.1	4.8	54.9	6.8	7.5	53.0	5.9	6.3
12260	Augusta-Richmond County, GA-SC	207.7	30.1	38.9	216.4	23.2	41.7	211.1	21.1	40.8
12420	Austin-Round Rock, TX	656.3	79.2	144.9	770.2	59.1	175.5	776.1	51.2	180.3
12540	Bakersfield, CA	191.3	10.7	32.3	238.8	13.5	37.2	233.1	13.5	35.4
12580	Baltimore-Towson, MD	1,234.5	96.0	268.5	1,321.2	70.8	298.6	1,283.0	67.1	283.4
12940	Baton Rouge, LA	339.7	29.6	60.5	376.3	26.4	71.2	375.7	25.0	68.2
12980	Battle Creek, MI	62.4	15.3	7.3	59.0	13.2	6.7	54.6	11.9	5.6
13140	Beaumont-Port Arthur, TX	160.4	23.4	20.9	164.4	23.1	23.1	158.6	21.0	22.4
13380	Bellingham, WA	69.7	9.2	8.0	85.5	9.3	11.0	82.7	7.9	10.7
13460	Bend, OR	51.5	5.5	8.7	70.7	5.4	14.5	66.3	4.6	13.6
13740	Billings, MT	66.1	n.a.	7.4	81.2	n.a.	9.6	77.7	n.a.	9.2
13780	Binghamton, NY	118.4	23.3	18.9	114.8	17.9	16.9	112.0	16.6	15.9
13820	Birmingham-Hoover, AL	514.5	53.0	117.7	531.6	43.4	118.3	509.7	38.9	111.1
13900	Bismarck, ND	51.4	2.8	8.7	60.4	2.8	10.6	61.3	2.2	10.6
13980	Blacksburg-Christiansburg-Radford, VA	69.8	n.a.	n.a.	71.2	n.a.	n.a.	70.9	n.a.	n.a.
14020	Bloomington, IN	79.9	10.0	10.2	83.6	9.7	11.5	82.6	8.4	11.1
14060	Bloomington-Normal, IL	90.9	8.0	28.4	91.1	5.6	30.9	91.2	5.4	30.7
14260	Boise City-Nampa, ID	221.9	35.2	41.8	275.1	29.8	60.0	251.9	23.7	54.5

14460 Boston-Cambridge-Quincy, MA-NH	2,510.4	360.8	683.7	2,497.7	278.8	677.8	2,429.2	262.6	640.0
14500 Boulder, CO	158.8	24.6	42.7	168.2	18.3	47.8	161.5	16.6	43.5
14540 Bowling Green, KY	53.8	9.1	4.5	62.4	10.0	6.9	58.6	7.3	6.7
14600 Bradenton-Sarasota-Venice, FL	239.2	22.1	47.8	278.9	17.4	67.2	253.3	15.6	57.2
14740 Bremerton-Silverdale, WA	73.5	1.8	6.1	86.8	2.0	7.7	81.6	1.9	7.1
15180 Brownsville-Harlingen, TX	105.7	12.1	11.6	126.2	7.6	15.5	124.1	6.3	15.6
15380 Buffalo-Niagara Falls, NY	556.8	84.1	100.6	550.0	59.7	112.2	539.0	54.9	110.7
15500 Burlington, NC	63.7	18.6	10.5	61.3	11.0	10.4	57.9	9.4	8.8
15940 Canton-Massillon, OH	188.1	45.6	25.2	173.6	30.8	25.1	166.2	27.6	23.6
15980 Cape Coral-Fort Myers, FL	163.1	6.7	33.3	226.0	5.9	44.2	199.0	4.6	38.9
16300 Cedar Rapids, IA	132.3	21.9	29.3	139.1	22.3	28.5	137.8	21.6	28.1
16580 Champaign-Urbana, IL	111.9	11.8	14.9	113.0	10.0	15.6	114.0	9.5	15.2
16620 Charleston, WV	145.8	9.5	28.4	151.4	6.4	25.9	149.5	5.7	24.9
16700 Charleston-North Charleston-Summerville, SC	262.8	23.7	46.8	301.3	23.1	61.7	292.6	20.9	62.7
16740 Charlotte-Gastonia-Concord, NC-SC	756.6	108.9	194.0	868.6	81.2	236.4	810.3	72.0	211.2
16820 Charlottesville, VA	87.7	n.a.	9.0	102.6	n.a.	12.1	99.2	n.a.	11.8
16860 Chattanooga, TN-GA	236.3	44.4	43.0	247.9	34.4	47.2	238.9	31.1	47.1
16940 Cheyenne, WY	37.6	1.6	6.2	44.8	1.7	6.6	44.5	1.6	6.4
16980 Chicago-Naperville-Joliet, IL-IN-WI	4,557.9	643.0	1,159.1	4,567.2	479.7	1,161.2	4,329.8	425.4	1,070.3
17020 Chico, CA	68.5	n.a.	9.2	75.9	n.a.	10.9	72.4	n.a.	10.3
17140 Cincinnati-Middletown, OH-KY-IN	1,016.3	148.4	216.8	1,051.9	120.4	240.7	1,003.6	102.1	228.2
17300 Clarksville, TN-KY	76.3	15.7	10.3	85.0	13.3	12.2	81.0	11.1	10.9
17460 Cleveland-Elyria-Mentor, OH	1,136.0	199.0	243.0	1,069.9	141.8	233.3	1,005.3	119.5	212.2
17660 Coeur d'Alene, ID	41.9	4.0	7.3	57.0	4.8	10.1	55.5	4.5	9.5
17780 College Station-Bryan, TX	81.7	5.8	9.9	93.1	5.5	10.3	92.0	5.0	10.0
17820 Colorado Springs, CO	244.5	24.8	66.3	261.5	16.5	66.3	249.2	13.8	61.1
17860 Columbia, MO	81.9	n.a.	n.a.	92.7	n.a.	n.a.	91.9	n.a.	n.a.
17900 Columbia, SC	340.7	37.6	69.1	367.6	31.3	78.9	360.2	29.4	75.6
17980 Columbus, GA-AL	125.5	n.a.	28.3	121.7	n.a.	29.6	119.4	n.a.	27.5
18140 Columbus, OH	904.6	101.6	223.7	945.3	76.1	242.5	923.9	70.1	234.3
18580 Corpus Christi, TX	164.2	13.4	26.5	180.7	11.3	27.5	179.2	10.1	26.7
19100 Dallas-Fort Worth-Arlington, TX	2,717.7	355.2	698.3	2,976.3	293.4	774.6	2,931.3	274.9	738.9
19140 Dalton, GA	78.0	33.1	10.1	77.1	28.5	10.3	67.7	24.2	8.1
19340 Davenport-Moline-Rock Island, IA-IL	188.5	29.8	32.0	189.6	26.0	37.7	187.7	25.8	35.2
19380 Dayton, OH	432.9	79.6	79.5	401.6	50.8	83.6	381.8	40.6	77.4
19460 Decatur, AL	58.6	16.5	7.8	59.3	13.8	9.1	55.4	11.7	8.3
19500 Decatur, IL	60.8	14.8	6.9	55.2	11.9	6.5	53.1	10.6	5.9
19660 Deltona-Daytona Beach-Ormond Beach, FL	145.9	10.8	22.4	172.6	10.0	29.1	161.1	8.4	25.2
19740 Denver-Aurora-Broomfield, CO	1,194.0	93.5	360.0	1,254.0	75.8	362.3	1,199.8	68.8	339.9
19780 Des Moines-West Des Moines, IA	289.9	22.0	81.5	325.7	19.8	99.0	319.8	18.5	97.2

19820 Detroit-Warren-Livonia, MI	2,201.8	395.3	556.9	1,946.1	249.1	492.0	1,746.0	180.6	419.6
20020 Dothan, AL	60.4	10.5	7.4	62.6	7.2	8.3	60.3	6.3	7.7
20100 Dover, DE	55.3	5.9	6.3	66.4	3.7	7.3	62.8	3.2	6.1
20220 Dubuque, IA	52.7	n.a.	n.a.	56.0	n.a.	n.a.	53.4	n.a.	n.a.
20260 Duluth, MN-WI	131.6	10.2	15.8	134.0	8.8	16.2	129.4	7.4	15.5
20500 Durham-Chapel Hill, NC	258.4	43.8	46.0	289.4	41.9	51.9	284.3	37.0	50.0
20740 Eau Claire, WI	77.0	13.6	7.6	83.9	11.1	14.7	80.9	10.2	14.1
21140 Elkhart-Goshen, IN	129.3	64.9	10.7	128.3	61.0	12.5	106.0	44.1	10.9
21340 El Paso, TX	254.5	39.6	39.6	277.9	20.2	48.2	275.6	17.5	48.0
21500 Erie, PA	135.1	33.8	18.7	133.3	23.8	20.3	127.8	20.6	19.1
21660 Eugene-Springfield, OR	144.7	21.8	25.5	157.2	19.7	28.2	147.0	13.6	26.5
21780 Evansville, IN-KY	179.7	36.4	29.5	178.1	31.9	26.1	171.6	28.2	25.3
22020 Fargo, ND-MN	102.1	7.9	20.5	120.9	9.4	25.5	123.1	9.0	25.5
22180 Fayetteville, NC	116.3	14.8	16.2	129.5	10.2	19.6	127.1	9.1	18.7
22220 Fayetteville-Springdale-Rogers, AR-MO	158.6	35.9	32.2	208.6	31.9	44.1	206.5	30.1	44.8
22380 Flagstaff, AZ	57.8	3.0	4.4	65.9	3.7	5.6	60.6	3.6	5.0
22420 Flint, MI	167.0	32.3	24.4	147.2	15.3	23.4	134.7	9.1	21.3
22500 Florence, SC	88.8	n.a.	n.a.	89.0	n.a.	n.a.	87.1	n.a.	n.a.
22520 Florence-Muscle Shoals, AL	56.9	11.7	6.4	56.9	7.4	7.5	54.9	7.3	6.5
22660 Fort Collins-Loveland, CO	121.0	14.5	23.4	137.5	12.0	26.3	134.2	11.0	24.9
22900 Fort Smith, AR-OK	115.2	31.3	17.5	126.0	25.9	18.9	122.9	22.5	18.7
23020 Fort Walton Beach-Crestview-Destin, FL	69.3	2.5	17.0	83.2	4.4	19.2	79.8	4.2	18.1
23060 Fort Wayne, IN	218.2	45.4	40.2	216.2	36.9	36.9	207.0	29.9	35.4
23420 Fresno, CA	268.3	28.0	43.4	305.0	27.6	49.7	292.6	25.4	47.6
23540 Gainesville, FL	121.9	5.6	19.0	135.8	5.2	19.4	131.4	4.6	18.1
23580 Gainesville, GA	64.7	n.a.	n.a.	78.6	n.a.	n.a.	74.6	n.a.	n.a.
24020 Glens Falls, NY	51.7	7.6	6.2	55.2	6.6	7.3	53.5	6.5	7.1
24220 Grand Forks, ND-MN	48.5	3.7	4.8	53.8	4.6	5.7	53.7	3.8	5.9
24300 Grand Junction, CO	49.8	4.0	8.4	64.5	3.3	10.2	65.2	3.0	9.9
24340 Grand Rapids-Wyoming, MI	409.1	91.6	82.2	390.6	70.9	84.3	364.8	60.6	76.0
24540 Greeley, CO	67.0	11.1	11.1	82.4	10.8	13.4	80.5	11.0	12.3
24580 Green Bay, WI	161.8	33.8	27.3	170.2	30.7	30.7	164.8	28.1	29.4
24660 Greensboro-High Point, NC	365.0	81.2	74.6	373.4	62.4	76.5	344.6	53.5	70.5
24780 Greenville, NC	68.8	9.6	10.4	78.8	7.2	10.3	75.9	6.2	9.4
24860 Greenville-Mauldin-Easley, SC	303.0	57.9	64.2	320.1	42.9	76.1	310.5	40.5	74.1
25060 Gulfport-Biloxi, MS	111.2	7.9	n.a.	111.9	6.2	n.a.	107.8	5.5	n.a.
25180 Hagerstown-Martinsburg, MD-WV	94.0	13.6	17.5	103.1	10.0	19.1	98.9	9.0	18.3
25420 Harrisburg-Carlisle, PA	319.2	36.6	64.9	331.6	32.1	70.9	320.8	28.5	66.3
25500 Harrisonburg, VA	56.0	14.9	n.a.	63.8	11.2	n.a.	62.4	10.1	n.a.
25620 Hattiesburg, MS	54.1	5.1	n.a.	61.2	4.8	n.a.	60.1	4.0	n.a.

25860 Hickory-Lenoir-Morganton, NC	185.0	78.6	15.3	161.4	48.4	16.9	146.3	39.6	14.0
26100 Holland-Grand Haven, MI	120.5	44.0	15.8	113.2	34.5	16.0	102.3	29.9	13.5
26180 Honolulu, HI	407.7	12.4	81.0	457.3	11.9	92.4	442.6	11.3	88.9
26380 Houma-Bayou Cane-Thibodaux, LA	75.8	n.a.	n.a.	97.1	n.a.	n.a.	97.1	n.a.	n.a.
26420 Houston-Sugar Land-Baytown, TX	2,223.9	229.0	483.2	2,581.9	237.5	561.8	2,531.7	227.6	537.6
26580 Huntington-Ashland, WV-KY-OH	109.7	12.2	n.a.	120.7	10.0	n.a.	117.9	8.6	n.a.
26620 Huntsville, AL	184.0	36.9	40.7	213.7	32.7	55.3	209.9	28.8	55.0
26900 Indianapolis-Carmel, IN	852.9	112.1	188.5	920.3	97.3	210.3	883.1	87.9	188.2
26980 Iowa City, IA	79.1	n.a.	5.6	90.6	n.a.	5.4	89.3	n.a.	4.7
27060 Ithaca, NY	57.8	4.3	5.0	64.4	3.8	5.3	64.3	3.3	5.1
27100 Jackson, MI	64.6	12.5	4.8	58.1	9.3	7.5	54.0	7.9	6.6
27140 Jackson, MS	241.4	21.3	49.0	262.9	20.2	50.6	257.1	17.4	48.7
27180 Jackson, TN	61.9	14.3	9.2	62.1	10.7	7.0	59.5	9.4	6.6
27260 Jacksonville, FL	559.0	39.2	156.1	632.2	32.5	161.2	596.5	29.9	151.4
27500 Janesville, WI	70.7	19.7	7.6	69.9	13.3	8.6	64.3	9.5	7.9
27620 Jefferson City, MO	77.0	n.a.	n.a.	80.0	n.a.	n.a.	77.3	n.a.	n.a.
27740 Johnson City, TN	74.6	13.7	11.9	82.1	10.0	14.8	79.2	8.7	14.0
27780 Johnstown, PA	61.3	7.8	5.0	62.2	4.9	6.7	59.9	4.5	5.9
27900 Joplin, MO	75.9	17.4	n.a.	80.3	15.2	n.a.	79.8	13.4	n.a.
28020 Kalamazoo-Portage, MI	148.9	31.6	23.5	145.0	22.3	25.0	137.1	19.6	22.2
28140 Kansas City, MO-KS	977.5	94.7	260.9	1,016.9	81.8	267.1	997.7	73.9	261.0
28420 Kennewick-Pasco-Richland, WA	74.2	6.0	19.6	92.4	6.4	23.8	95.1	6.4	23.9
28660 Killeen-Temple-Fort Hood, TX	108.9	9.9	16.8	124.3	8.6	19.4	127.2	7.7	18.8
28700 Kingsport-Bristol-Bristol, TN-VA	121.4	31.9	14.7	123.7	24.1	15.6	119.2	21.4	15.0
28740 Kingston, NY	64.5	6.4	9.7	63.6	4.2	8.3	62.0	3.7	7.7
28940 Knoxville, TN	300.2	44.3	56.2	337.0	36.6	64.5	322.8	30.1	63.8
29100 La Crosse, WI-MN	72.1	11.1	10.7	75.4	9.7	11.1	73.0	8.6	10.7
29140 Lafayette, IN	94.3	20.2	11.8	94.9	17.0	10.7	95.7	15.1	10.3
29180 Lafayette, LA	128.6	9.6	23.6	151.7	10.3	30.1	150.7	9.7	29.3
29340 Lake Charles, LA	87.5	11.7	n.a.	93.8	9.1	n.a.	91.9	9.1	n.a.
29420 Lake Havasu City-Kingman, AZ	40.0	3.2	5.0	52.5	3.6	7.1	47.2	3.2	5.9
29460 Lakeland-Winter Haven, FL	177.5	23.7	28.5	212.1	22.1	46.8	199.0	19.7	42.9
29540 Lancaster, PA	225.7	56.6	32.4	239.4	42.4	35.0	228.7	38.2	31.7
29620 Lansing-East Lansing, MI	237.7	28.9	40.7	228.0	21.3	38.4	217.5	15.1	35.7
29700 Laredo, TX	67.5	2.0	8.3	89.4	1.4	10.3	89.7	1.1	9.9
29740 Las Cruces, NM	57.0	3.1	8.1	69.0	3.2	9.5	67.9	3.0	9.7
29820 Las Vegas-Paradise, NV	681.6	20.0	119.8	930.8	26.2	175.2	858.0	23.5	156.8
30460 Lexington-Fayette, KY	253.7	41.4	47.4	258.3	35.4	48.5	246.9	32.2	43.4
30620 Lima, OH	58.9	13.3	5.2	55.4	8.4	4.6	53.6	7.7	4.3
30700 Lincoln, NE	162.3	18.3	33.2	172.7	15.3	34.9	170.9	13.7	33.5

30780 Little Rock-North Little Rock-Conway, AR	321.9	33.5	66.6	348.8	24.7	73.1	343.3	23.1	69.3
30980 Longview, TX	82.4	12.2	10.3	97.2	13.9	13.9	96.0	12.5	13.6
31100 Los Angeles-Long Beach-Santa Ana, CA	5,402.6	850.6	1,424.5	5,624.6	644.2	1,470.3	5,331.3	582.0	1,366.2
31140 Louisville-Jefferson County, KY-IN	622.3	96.9	114.9	626.1	76.1	127.9	597.6	65.6	125.5
31180 Lubbock, TX	120.3	7.2	23.0	129.5	5.1	23.0	130.2	4.7	22.3
31340 Lynchburg, VA	106.4	26.6	n.a.	109.0	16.9	n.a.	109.3	15.7	n.a.
31420 Macon, GA	103.2	n.a.	19.4	101.2	n.a.	20.1	97.5	n.a.	19.9
31540 Madison, WI	317.4	36.4	59.0	348.1	32.0	74.7	340.4	29.2	71.7
31900 Mansfield, OH	61.4	16.5	6.8	57.5	12.6	6.1	54.2	10.7	6.5
32580 McAllen-Edinburg-Mission, TX	153.7	12.2	15.8	216.4	7.9	25.8	219.7	6.3	24.5
32780 Medford, OR	73.1	8.0	11.0	83.3	7.6	13.5	78.5	6.3	13.4
32820 Memphis, TN-MS-AR	620.2	65.1	114.5	640.6	51.7	124.2	619.8	47.1	118.3
32900 Merced, CA	51.6	10.7	6.3	58.8	9.4	7.1	55.7	9.2	6.8
33100 Miami-Fort Lauderdale-Pompano Beach, FL	2,114.3	136.2	499.1	2,412.6	97.1	595.4	2,270.9	86.2	551.5
33260 Midland, TX	53.3	1.9	8.7	67.9	2.9	12.6	70.0	2.7	12.6
33340 Milwaukee-Waukesha-West Allis, WI	864.3	165.7	189.7	856.9	133.0	191.2	807.1	116.9	171.5
33460 Minneapolis-St. Paul-Bloomington, MN-WI	1,734.1	235.9	441.4	1,795.2	200.4	448.7	1,723.9	181.7	421.4
33540 Missoula, MT	50.3	n.a.	4.7	57.4	n.a.	6.1	54.2	n.a.	5.9
33660 Mobile, AL	178.1	19.5	33.3	184.7	16.4	34.9	181.7	15.7	35.1
33700 Modesto, CA	143.0	22.1	24.3	159.3	23.1	23.0	150.6	21.9	21.3
33740 Monroe, LA	76.8	10.4	6.6	79.1	7.8	7.7	78.0	6.6	7.9
33860 Montgomery, AL	167.9	17.3	31.2	180.8	20.2	34.6	173.8	17.5	33.2
34060 Morgantown, WV	48.0	3.5	3.1	61.6	4.1	4.5	62.8	3.9	4.5
34620 Muncie, IN	58.0	9.7	6.4	53.1	5.4	7.6	50.9	3.8	7.7
34740 Muskegon-Norton Shores, MI	65.1	15.5	7.1	64.9	12.8	6.4	60.0	11.1	5.6
34820 Myrtle Beach-North Myrtle Beach-Conway, SC	104.8	n.a.	n.a.	125.8	n.a.	n.a.	117.0	n.a.	n.a.
34900 Napa, CA	56.6	10.1	9.3	65.2	11.8	9.5	60.5	10.7	8.4
34940 Naples-Marco Island, FL	95.1	2.9	18.9	129.2	3.1	25.2	116.9	2.7	23.8
34980 Nashville-Davidson--Murfreesboro--Franklin, TN	695.1	96.3	156.9	768.6	77.1	169.9	733.0	65.2	159.6
35380 New Orleans-Metairie-Kenner, LA	619.9	46.6	116.9	530.3	36.8	105.6	517.7	35.5	97.4
35620 New York-Northern NJ-Long Island, NY-NJ-PA	8,306.4	646.9	2,390.1	8,628.5	440.0	2,413.2	8,385.4	395.2	2,282.1
35660 Niles-Benton Harbor, MI	71.9	18.2	10.2	65.2	14.2	8.7	61.0	12.3	8.0
36100 Ocala, FL	85.7	11.2	13.9	105.7	9.2	16.3	98.6	6.9	15.4
36220 Odessa, TX	48.6	3.7	6.9	61.2	4.4	7.6	63.9	4.2	7.8
36260 Ogden-Clearfield, UT	173.8	25.2	25.0	203.6	22.9	33.4	194.1	20.2	31.4
36420 Oklahoma City, OK	531.4	53.2	112.1	573.3	37.2	122.9	567.7	35.5	114.8
36500 Olympia, WA	84.7	3.6	7.9	103.0	3.4	12.1	102.9	3.2	12.0
36540 Omaha-Council Bluffs, NE-IA	436.7	35.1	108.4	467.2	34.0	117.8	459.8	32.2	112.1
36740 Orlando-Kissimmee, FL	902.0	52.6	219.7	1,098.4	43.7	281.1	1,024.0	40.1	251.8
36780 Oshkosh-Neenah, WI	91.0	n.a.	4.6	94.2	n.a.	16.0	92.8	n.a.	15.9

37100 Oxnard-Thousand Oaks-Ventura, CA	270.0	40.4	64.1	295.7	36.9	65.6	275.5	33.4	59.4
37340 Palm Bay-Melbourne-Titusville, FL	189.6	25.2	42.6	213.3	24.3	47.6	198.8	22.2	44.5
37460 Panama City-Lynn Haven-Panama City Beach, FL	63.3	3.3	10.5	76.2	3.6	15.6	72.9	3.0	14.3
37620 Parkersburg-Marietta-Vienna, WV-OH	71.1	n.a.	n.a.	73.2	n.a.	n.a.	71.6	n.a.	n.a.
37700 Pascagoula, MS	58.5	19.1	n.a.	59.0	15.9	n.a.	56.8	15.8	n.a.
37860 Pensacola-Ferry Pass-Brent, FL	153.8	9.1	28.3	171.1	6.8	34.0	161.5	5.9	30.9
37900 Peoria, IL	180.3	34.6	28.1	188.4	31.6	33.7	184.3	28.0	33.3
37980 Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	2,728.0	292.1	684.8	2,820.4	220.7	712.2	2,721.5	202.5	671.1
38060 Phoenix-Mesa-Scottsdale, AZ	1,554.6	161.3	419.0	1,918.9	135.2	506.4	1,731.0	123.5	439.5
38300 Pittsburgh, PA	1,138.7	130.1	231.0	1,148.7	99.5	248.4	1,119.3	88.4	241.3
38900 Portland-Vancouver-Beaverton, OR-WA	958.3	146.4	216.1	1,041.3	129.5	231.4	982.0	114.8	213.3
38940 Port St. Lucie, FL	100.7	5.7	17.8	132.7	6.1	23.0	122.3	5.4	20.2
39100 Poughkeepsie-Newburgh-Middletown, NY	238.9	31.4	32.5	256.5	21.5	35.9	250.2	19.1	34.8
39140 Prescott, AZ	49.4	3.3	5.8	64.1	3.3	7.6	56.0	2.7	5.7
39340 Provo-Orem, UT	152.7	18.7	32.5	190.8	20.0	38.1	179.9	17.6	35.7
39380 Pueblo, CO	55.2	4.5	8.4	59.0	4.5	8.9	57.3	4.1	8.3
39540 Racine, WI	82.2	24.0	10.9	80.5	18.8	10.5	77.0	17.5	9.8
39580 Raleigh-Cary, NC	432.8	39.6	110.4	523.4	33.3	131.5	503.3	29.3	126.8
39660 Rapid City, SD	56.5	4.7	8.7	61.3	3.3	9.5	60.7	2.6	9.2
39740 Reading, PA	171.1	42.2	27.9	174.4	30.9	29.9	167.6	27.8	28.3
39820 Redding, CA	58.4	3.5	9.0	63.9	2.9	10.1	59.1	2.5	8.9
39900 Reno-Sparks, NV	191.0	13.4	32.8	222.1	14.5	41.8	198.3	13.0	36.5
40060 Richmond, VA	582.0	57.2	147.4	633.1	41.9	155.6	608.9	36.5	146.1
40140 Riverside-San Bernardino-Ontario, CA	970.7	124.4	143.6	1,263.1	131.8	206.7	1,150.3	110.5	186.7
40220 Roanoke, VA	162.3	24.1	33.3	163.1	16.9	33.2	159.5	15.9	32.0
40340 Rochester, MN	96.8	16.0	9.7	106.8	12.1	9.6	105.5	11.0	9.0
40380 Rochester, NY	528.4	104.5	93.6	515.3	71.3	93.1	510.4	66.2	91.8
40420 Rockford, IL	164.3	44.9	24.4	161.9	34.3	27.7	153.3	29.0	26.7
40580 Rocky Mount, NC	67.0	16.3	5.2	65.3	10.6	5.9	62.2	9.2	5.2
40900 Sacramento--Arden-Arcade--Roseville, CA	784.0	48.1	176.6	899.1	39.9	192.0	839.8	36.2	171.3
40980 Saginaw-Saginaw Township North, MI	99.0	20.1	14.9	88.8	11.5	15.1	83.3	9.2	13.9
41060 St. Cloud, MN	94.7	17.9	11.4	102.8	17.2	14.5	100.7	15.4	14.2
41100 St. George, UT	32.4	2.3	3.9	54.3	3.3	7.3	50.0	3.0	6.8
41140 St. Joseph, MO-KS	51.2	n.a.	n.a.	59.5	n.a.	n.a.	58.9	n.a.	n.a.
41180 St. Louis, MO-IL	1,333.6	175.9	291.6	1,363.5	133.1	307.2	1,316.4	117.6	299.3
41420 Salem, OR	139.9	16.4	18.7	153.1	14.6	22.2	144.7	11.5	19.9
41500 Salinas, CA	126.8	8.8	22.1	129.3	6.2	19.6	124.6	5.7	18.4
41540 Salisbury, MD	49.1	n.a.	n.a.	55.9	n.a.	n.a.	53.7	n.a.	n.a.
41620 Salt Lake City, UT	554.2	56.7	148.8	643.0	58.5	172.1	617.9	53.4	162.4
41700 San Antonio, TX	740.8	55.5	167.0	847.9	48.6	195.4	848.5	42.6	188.5

41740 San Diego-Carlsbad-San Marcos, CA	1,179.0	124.5	298.0	1,308.5	105.9	333.5	1,249.0	97.6	317.8
41860 San Francisco-Oakland-Fremont, CA	2,081.1	175.8	636.9	2,046.3	138.3	588.8	1,939.2	128.6	556.7
41940 San Jose-Sunnyvale-Santa Clara, CA	1,011.6	240.0	287.5	918.7	168.3	256.4	873.5	154.8	242.5
42020 San Luis Obispo-Paso Robles, CA	92.1	7.1	14.3	104.1	6.1	15.5	100.0	6.3	14.4
42060 Santa Barbara-Santa Maria-Goleta, CA	162.5	16.0	31.5	174.3	13.2	34.3	169.2	12.9	33.2
42100 Santa Cruz-Watsonville, CA	96.0	9.1	18.2	94.7	6.1	14.7	88.5	5.2	13.8
42140 Santa Fe, NM	57.7	1.4	7.6	65.0	1.0	10.1	63.1	0.9	9.2
42220 Santa Rosa-Petaluma, CA	182.4	29.4	34.0	190.8	21.9	35.8	177.4	20.0	32.9
42340 Savannah, GA	135.4	16.9	20.1	161.1	14.9	27.6	155.3	14.0	24.8
42540 Scranton--Wilkes-Barre, PA	259.1	44.3	43.5	263.1	33.0	43.9	253.2	29.5	41.9
42660 Seattle-Tacoma-Bellevue, WA	1,633.8	217.1	387.7	1,761.4	190.3	432.6	1,697.0	175.1	409.3
43100 Sheboygan, WI	63.4	26.8	5.6	64.3	22.9	7.3	61.2	20.7	7.1
43340 Shreveport-Bossier City, LA	169.9	17.3	24.9	181.3	13.6	27.9	178.6	10.3	27.7
43580 Sioux City, IA-NE-SD	76.1	16.2	9.9	75.8	13.2	8.5	74.9	12.3	8.2
43620 Sioux Falls, SD	117.8	13.7	26.2	135.0	13.2	31.2	134.1	12.5	30.1
43780 South Bend-Mishawaka, IN-MI	151.1	24.6	24.0	143.9	19.8	22.6	139.7	16.9	21.1
43900 Spartanburg, SC	127.5	36.2	n.a.	129.3	27.5	n.a.	124.5	25.4	n.a.
44060 Spokane, WA	192.6	21.7	32.8	219.3	18.8	38.8	209.4	16.0	35.8
44100 Springfield, IL	114.7	4.1	20.2	111.9	3.4	21.3	109.7	3.3	20.4
44180 Springfield, MO	178.8	23.8	28.4	201.3	18.2	36.0	195.5	14.7	35.3
44220 Springfield, OH	57.3	12.9	n.a.	52.5	7.4	n.a.	51.4	6.2	n.a.
44300 State College, PA	69.3	7.8	5.0	74.8	4.6	6.3	73.0	4.0	5.6
44700 Stockton, CA	181.3	27.2	27.8	210.4	26.3	30.1	200.5	26.0	28.0
45060 Syracuse, NY	324.8	44.5	56.0	324.6	32.5	59.3	319.2	29.4	58.0
45220 Tallahassee, FL	165.5	5.1	28.7	179.4	4.6	31.8	173.4	4.0	29.7
45300 Tampa-St. Petersburg-Clearwater, FL	1,151.4	94.8	320.6	1,250.4	77.1	365.2	1,168.3	68.0	336.2
45460 Terre Haute, IN	78.3	13.4	8.5	73.6	12.2	8.3	70.9	10.7	8.6
45500 Texarkana, TX-Texarkana, AR	53.6	5.6	5.8	57.6	5.1	7.0	57.1	4.4	6.9
45780 Toledo, OH	347.8	63.0	55.7	325.0	46.4	50.4	301.0	36.4	42.2
45820 Topeka, KS	113.5	7.8	21.3	110.8	7.6	19.5	109.3	6.5	18.5
45940 Trenton-Ewing, NJ	213.0	11.6	54.9	241.7	9.5	60.4	236.5	9.0	60.2
46060 Tucson, AZ	345.2	32.3	66.4	384.1	27.8	75.8	361.9	26.0	68.4
46140 Tulsa, OK	400.8	55.4	90.4	431.9	52.6	98.3	428.3	48.5	93.8
46220 Tuscaloosa, AL	89.3	15.1	9.7	98.7	15.1	13.2	95.6	13.6	13.2
46340 Tyler, TX	83.7	11.0	12.3	94.8	9.0	14.5	95.9	8.2	14.5
46540 Utica-Rome, NY	137.0	19.0	23.1	133.7	12.8	19.7	132.2	11.7	18.8
46660 Valdosta, GA	48.0	n.a.	n.a.	56.7	n.a.	n.a.	55.4	n.a.	n.a.
46700 Vallejo-Fairfield, CA	113.2	10.2	16.7	127.1	9.6	18.0	120.0	9.1	16.2
47220 Vineland-Millville-Bridgeton, NJ	61.0	12.6	5.8	62.3	9.1	6.8	60.6	8.6	6.1
47260 Virginia Beach-Norfolk-Newport News, VA-NC	717.5	65.4	152.0	772.5	57.2	160.5	761.6	53.3	159.6

47300 Visalia-Porterville, CA	96.7	11.8	13.0	114.5	11.9	15.6	109.7	10.7	15.2
47380 Waco, TX	104.4	19.5	16.5	106.6	15.5	17.0	106.0	14.5	16.5
47580 Warner Robins, GA	46.5	n.a.	n.a.	58.6	n.a.	n.a.	58.2	n.a.	n.a.
47900 Washington-Arlington-Alexandria, DC-VA-MD-WV	2,621.9	80.4	801.3	3,001.7	61.8	929.9	2,968.7	58.1	920.0
47940 Waterloo-Cedar Falls, IA	84.6	16.5	6.9	89.9	17.2	12.1	88.3	15.4	11.5
48140 Wausau, WI	69.4	19.1	10.6	73.1	17.7	11.1	69.1	15.9	10.3
48540 Wheeling, WV-OH	66.9	5.5	n.a.	68.1	4.3	n.a.	67.8	3.9	n.a.
48620 Wichita, KS	294.3	73.5	46.3	306.2	66.5	48.5	301.1	61.1	48.0
48660 Wichita Falls, TX	60.7	8.7	7.2	62.0	8.2	7.8	59.9	6.9	7.6
48700 Williamsport, PA	54.6	13.5	n.a.	53.8	10.4	n.a.	51.5	9.3	n.a.
48900 Wilmington, NC	118.3	12.5	19.2	147.7	9.2	26.4	139.3	8.9	24.5
49020 Winchester, VA-WV	49.3	n.a.	n.a.	57.2	n.a.	n.a.	53.7	n.a.	n.a.
49180 Winston-Salem, NC	208.5	38.7	40.3	219.9	28.4	42.8	210.9	24.8	39.0
49420 Yakima, WA	74.5	11.1	4.0	79.0	8.9	4.3	76.5	7.9	3.8
49620 York-Hanover, PA	170.5	45.6	24.0	183.5	37.9	25.6	177.8	35.6	23.8
49660 Youngstown-Warren-Boardman, OH-PA	256.6	54.0	33.2	237.3	35.7	33.0	221.9	26.4	31.2
49740 Yuma, AZ	40.3	2.6	4.4	54.3	2.5	8.0	50.7	2.0	7.8

Note: The table shows seasonally adjusted employment in 1,000s for Jan. 2000, Dec. 2007, and June 2009.
Source: U.S. Bureau of Labor Statistics, seasonal adjustment by the author.

Table A.2: MSA Ranking of Potential Growth

Rank	FIPS	Name	Growth	DIV	%MFG1	Tax Rate	Pop.	PCI	Adv Ed
1	29700	Laredo, TX	2.03%	38.6	1.32%	0.00%	249,277	$12,759	8.43%
2	32580	McAllen-Edinburg-Mission, TX	1.95%	50.3	3.04%	0.00%	756,510	$12,009	8.22%
3	15180	Brownsville-Harlingen, TX	1.80%	50.1	5.54%	0.00%	408,253	$12,965	9.89%
4	10780	Alexandria, LA	1.69%	49.3	0.00%	3.92%	153,932	$17,940	9.17%
5	29740	Las Cruces, NM	1.65%	75.4	4.55%	5.55%	211,800	$17,667	18.09%
6	46660	Valdosta, GA	1.63%	57.6	0.00%	5.83%	133,783	$19,221	10.58%
7	49740	Yuma, AZ	1.60%	78.6	3.12%	4.93%	200,859	$19,665	13.42%
8	12020	Athens-Clarke County, GA	1.56%	54.3	0.00%	5.83%	192,490	$21,833	21.31%
9	17780	College Station-Bryan, TX	1.56%	67.3	5.64%	0.00%	207,431	$20,584	16.88%
10	26380	Houma-Bayou Cane-Thibodaux, LA	1.55%	43.6	0.00%	3.92%	204,970	$18,045	5.54%
11	36220	Odessa, TX	1.54%	75.9	7.04%	0.00%	132,503	$18,385	4.49%
12	31180	Lubbock, TX	1.54%	73.8	3.80%	0.00%	272,554	$21,637	10.99%
13	41540	Salisbury, MD	1.51%	53.8	0.00%	4.83%	123,933	$22,307	13.34%
14	23580	Gainesville, GA	1.49%	66.5	0.00%	5.83%	186,789	$22,438	11.94%
15	17980	Columbus, GA-AL	1.48%	61.1	0.00%	5.83%	295,869	$20,891	12.08%
16	23540	Gainesville, FL	1.48%	55.3	3.65%	0.00%	265,316	$23,608	22.39%
17	10180	Abilene, TX	1.48%	60.3	4.78%	0.00%	161,642	$20,793	10.09%
18	21340	El Paso, TX	1.46%	61.8	6.80%	0.00%	764,168	$16,357	9.56%
19	49420	Yakima, WA	1.40%	81.2	10.99%	0.00%	238,921	$18,132	12.16%
20	45220	Tallahassee, FL	1.39%	57.6	2.40%	0.00%	367,174	$25,711	19.85%
21	31420	Macon, GA	1.39%	54.6	0.00%	5.83%	234,007	$21,951	11.20%
22	18580	Corpus Christi, TX	1.38%	73.9	5.96%	0.00%	421,939	$20,858	9.66%
23	33260	Midland, TX	1.37%	71.1	4.09%	0.00%	128,606	$24,952	7.54%
24	47580	Warner Robins, GA	1.37%	53.8	0.00%	5.83%	137,079	$24,081	13.26%
25	28660	Killeen-Temple-Fort Hood, TX	1.36%	72.5	6.56%	0.00%	389,964	$20,948	10.94%
26	22500	Florence, SC	1.34%	52.5	0.00%	7.09%	200,425	$21,503	9.80%
27	42140	Santa Fe, NM	1.34%	73.9	1.39%	5.55%	146,937	$31,004	27.36%
28	13980	Blacksburg-Christiansburg-Radford, VA	1.33%	24.5	0.00%	5.83%	158,608	$21,708	18.84%
29	17020	Chico, CA	1.27%	51.6	0.00%	9.86%	221,957	$21,664	14.85%
30	28420	Kennewick-Pasco-Richland, WA	1.26%	66.5	7.17%	0.00%	242,500	$23,428	15.48%
31	37860	Pensacola-Ferry Pass-Brent, FL	1.24%	46.9	3.70%	0.00%	464,805	$23,688	15.75%
32	16940	Cheyenne, WY	1.24%	40.1	3.62%	0.00%	88,680	$25,682	11.51%
33	17860	Columbia, MO	1.23%	33.7	0.00%	5.91%	166,216	$25,588	21.09%
34	14740	Bremerton-Silverdale, WA	1.23%	39.7	2.32%	0.00%	248,248	$27,325	19.05%
35	25620	Hattiesburg, MS	1.22%	45.3	6.71%	4.93%	139,585	$18,521	12.57%
36	16820	Charlottesville, VA	1.22%	42.0	0.00%	5.83%	197,869	$28,650	26.62%
37	22380	Flagstaff, AZ	1.21%	65.2	5.83%	4.93%	132,145	$23,085	15.07%
38	39380	Pueblo, CO	1.21%	69.8	7.24%	4.77%	158,804	$21,372	13.17%
39	41700	San Antonio, TX	1.20%	75.7	5.32%	0.00%	2,070,440	$22,478	12.58%
40	45500	Texarkana, TX-Texarkana, AR	1.19%	49.2	8.15%	0.00%	136,858	$20,778	8.97%
41	37460	Panama City-Lynn Haven-Panama City Beach, FL	1.18%	39.0	4.36%	0.00%	171,160	$24,103	11.94%
42	33540	Missoula, MT	1.18%	17.0	0.00%	7.11%	106,831	$22,278	15.18%
43	36500	Olympia, WA	1.18%	38.2	3.24%	0.00%	249,435	$27,472	21.04%
44	41140	St. Joseph, MO-KS	1.16%	19.9	0.00%	5.91%	124,638	$21,977	8.67%
45	25060	Gulfport-Biloxi, MS	1.14%	45.7	5.42%	4.93%	237,444	$19,460	9.72%
46	49020	Winchester, VA-WV	1.14%	23.3	0.00%	5.83%	125,525	$23,932	12.29%
47	43340	Shreveport-Bossier City, LA	1.13%	54.9	5.97%	3.92%	393,983	$19,990	9.92%

48	11260	Anchorage, AK	1.13%	54.4	1.29%	0.00%	375,043	$30,998	14.19%
49	46340	Tyler, TX	1.13%	61.8	8.90%	0.00%	202,787	$22,264	10.31%
50	12540	Bakersfield, CA	1.12%	84.1	5.75%	9.86%	830,563	$18,465	10.26%
51	39660	Rapid City, SD	1.10%	32.3	4.73%	0.00%	123,933	$24,508	9.81%
52	27620	Jefferson City, MO	1.09%	24.0	0.00%	5.91%	148,037	$23,936	10.11%
53	36100	Ocala, FL	1.09%	45.1	7.36%	0.00%	341,870	$22,125	13.51%
54	12100	Atlantic City-Hammonton, NJ	1.08%	69.1	2.15%	6.37%	279,172	$26,022	8.81%
55	41500	Salinas, CA	1.08%	86.7	4.46%	9.86%	425,668	$24,934	19.57%
56	33740	Monroe, LA	1.08%	50.8	9.31%	3.92%	173,860	$18,905	11.20%
57	47300	Visalia-Porterville, CA	1.07%	85.9	10.19%	9.86%	440,882	$16,177	8.74%
58	44300	State College, PA	1.07%	24.8	5.58%	3.07%	146,233	$23,248	21.45%
59	23020	Fort Walton Beach-Crestview-Destin, FL	1.07%	44.2	5.39%	0.00%	198,924	$27,231	16.84%
60	38940	Port St. Lucie, FL	1.06%	50.0	4.57%	0.00%	427,695	$28,057	18.61%
61	29820	Las Vegas-Paradise, NV	1.05%	71.0	2.77%	0.00%	1,974,024	$27,277	9.54%
62	33660	Mobile, AL	1.05%	52.9	8.75%	3.25%	410,457	$18,828	10.55%
63	13740	Billings, MT	1.04%	23.1	0.00%	7.11%	153,163	$23,766	10.73%
64	15980	Cape Coral-Fort Myers, FL	1.04%	46.8	2.45%	0.00%	645,899	$30,609	20.57%
65	19660	Deltona-Daytona Beach-Ormond Beach, FL	1.04%	43.6	5.38%	0.00%	515,563	$25,100	16.45%
66	24300	Grand Junction, CO	1.04%	35.4	4.61%	4.77%	144,466	$22,585	12.12%
67	26980	Iowa City, IA	1.04%	28.1	0.00%	6.06%	148,272	$28,458	19.22%
68	34820	Myrtle Beach-North Myrtle Beach-Conway, SC	1.02%	39.6	0.00%	7.09%	264,423	$25,440	10.85%
69	29180	Lafayette, LA	1.02%	47.4	6.41%	3.92%	260,628	$20,752	7.95%
70	39140	Prescott, AZ	1.02%	36.7	4.91%	4.93%	229,282	$25,448	25.52%
71	37620	Parkersburg-Marietta-Vienna, WV-OH	1.01%	7.4	0.00%	6.50%	162,239	$22,082	9.42%
72	12220	Auburn-Opelika, AL	1.01%	45.8	11.78%	3.25%	134,676	$19,861	19.50%
73	29460	Lakeland-Winter Haven, FL	1.00%	56.3	7.74%	0.00%	600,417	$22,936	10.64%
74	34940	Naples-Marco Island, FL	0.99%	60.3	2.35%	0.00%	331,285	$38,183	22.24%
75	36740	Orlando-Kissimmee, FL	0.98%	67.0	4.00%	0.00%	2,138,587	$26,918	11.86%
76	20100	Dover, DE	0.98%	51.2	5.43%	6.13%	158,496	$23,983	12.73%
77	41100	St. George, UT	0.97%	24.1	6.11%	6.14%	143,764	$19,899	13.23%
78	27060	Ithaca, NY	0.97%	38.8	5.21%	7.25%	102,365	$26,477	25.47%
79	11100	Amarillo, TX	0.96%	63.8	11.45%	0.00%	246,179	$22,082	9.92%
80	29420	Lake Havasu City-Kingman, AZ	0.96%	41.3	7.08%	4.93%	206,357	$21,141	12.16%
81	10740	Albuquerque, NM	0.96%	76.5	5.40%	5.55%	871,152	$26,212	18.02%
82	33100	Miami-Fort Lauderdale-Pompano Beach, FL	0.96%	72.7	3.86%	0.00%	5,549,666	$27,692	16.82%
83	34060	Morgantown, WV	0.96%	16.1	6.39%	6.50%	120,138	$19,990	17.63%
84	20220	Dubuque, IA	0.96%	10.9	0.00%	6.06%	93,886	$25,067	8.32%
85	23420	Fresno, CA	0.95%	87.6	8.86%	9.86%	936,063	$18,440	10.87%
86	47380	Waco, TX	0.95%	68.9	14.00%	0.00%	229,890	$20,326	9.83%
87	12940	Baton Rouge, LA	0.95%	52.1	6.73%	3.92%	782,691	$20,787	10.71%
88	35380	New Orleans-Metairie-Kenner, LA	0.93%	58.6	6.80%	3.92%	1,166,214	$21,392	12.49%
89	48660	Wichita Falls, TX	0.92%	54.5	12.21%	0.00%	149,498	$21,404	8.59%
90	27140	Jackson, MS	0.92%	53.5	6.88%	4.93%	546,813	$21,774	12.78%
91	20020	Dothan, AL	0.91%	44.1	10.75%	3.25%	142,172	$19,940	10.04%
92	46060	Tucson, AZ	0.89%	72.2	7.30%	4.93%	1,009,801	$25,717	21.61%
93	26180	Honolulu, HI	0.89%	77.6	2.54%	8.04%	914,430	$28,239	14.04%
94	10500	Albany, GA	0.88%	54.0	9.89%	5.83%	165,976	$20,430	10.21%
95	29340	Lake Charles, LA	0.87%	46.5	9.83%	3.92%	196,203	$20,125	7.64%
96	39820	Redding, CA	0.87%	36.0	4.29%	9.86%	183,135	$21,632	11.89%
97	44100	Springfield, IL	0.85%	27.2	3.09%	3.00%	207,388	$28,521	13.97%
98	16580	Champaign-Urbana, IL	0.85%	42.4	8.50%	3.00%	223,787	$25,741	21.15%

99	33860	Montgomery, AL	0.84%	53.8	10.28%	3.25%	371,467	$21,963	13.84%
100	39900	Reno-Sparks, NV	0.83%	59.8	6.65%	0.00%	434,359	$29,909	12.18%
101	30980	Longview, TX	0.83%	55.0	13.71%	0.00%	207,509	$20,652	7.93%
102	24780	Greenville, NC	0.83%	58.4	8.48%	8.50%	178,404	$22,218	13.51%
103	22180	Fayetteville, NC	0.82%	68.5	7.66%	8.50%	355,628	$22,419	10.54%
104	27260	Jacksonville, FL	0.82%	52.7	5.05%	0.00%	1,392,346	$28,209	12.69%
105	13380	Bellingham, WA	0.81%	34.9	9.97%	0.00%	197,077	$24,847	15.79%
106	27780	Johnstown, PA	0.80%	12.2	7.64%	3.07%	145,753	$21,007	9.50%
107	17300	Clarksville, TN-KY	0.79%	52.7	14.07%	0.00%	266,582	$21,421	12.92%
108	44060	Spokane, WA	0.79%	24.9	7.93%	0.00%	467,976	$23,818	14.41%
109	32820	Memphis, TN-MS-AR	0.78%	57.5	7.83%	0.00%	1,321,291	$25,394	10.76%
110	28740	Kingston, NY	0.77%	34.8	6.16%	7.25%	185,691	$26,852	23.74%
111	36780	Oshkosh-Neenah, WI	0.76%	17.4	0.00%	6.75%	164,712	$28,286	8.41%
112	17820	Colorado Springs, CO	0.76%	51.3	5.74%	4.77%	629,871	$28,339	20.36%
113	45300	Tampa-St. Petersburg-Clearwater, FL	0.75%	53.0	5.70%	0.00%	2,793,774	$27,296	13.80%
114	48540	Wheeling, WV-OH	0.75%	10.9	5.97%	6.50%	146,246	$20,971	9.76%
115	34620	Muncie, IN	0.75%	22.6	8.51%	3.40%	114,929	$23,929	14.19%
116	13140	Beaumont-Port Arthur, TX	0.74%	59.2	13.70%	0.00%	384,000	$21,111	6.78%
117	12420	Austin-Round Rock, TX	0.74%	73.3	7.20%	0.00%	1,690,631	$31,873	17.68%
118	11460	Ann Arbor, MI	0.74%	48.0	6.54%	3.90%	354,827	$33,528	30.65%
119	46220	Tuscaloosa, AL	0.74%	52.1	14.21%	3.25%	205,684	$20,312	13.20%
120	22420	Flint, MI	0.73%	45.8	8.10%	3.90%	436,900	$24,543	13.88%
121	11500	Anniston-Oxford, AL	0.73%	40.5	13.90%	3.25%	112,585	$19,907	10.65%
122	32900	Merced, CA	0.72%	86.9	16.10%	9.86%	258,323	$17,200	9.89%
123	45940	Trenton-Ewing, NJ	0.71%	66.2	3.81%	6.37%	370,793	$34,880	18.31%
124	24220	Grand Forks, ND-MN	0.71%	23.4	7.47%	5.41%	97,376	$23,442	9.29%
125	45820	Topeka, KS	0.70%	40.2	6.50%	6.51%	233,005	$25,049	12.11%
126	14060	Bloomington-Normal, IL	0.69%	29.5	6.15%	3.00%	168,342	$28,462	13.06%
127	27740	Johnson City, TN	0.69%	14.5	11.27%	0.00%	196,190	$21,654	12.66%
128	41420	Salem, OR	0.68%	58.6	8.63%	9.10%	392,886	$22,687	14.03%
129	16620	Charleston, WV	0.68%	14.9	3.99%	6.50%	305,215	$23,662	10.75%
130	24540	Greeley, CO	0.68%	65.1	13.57%	4.77%	258,855	$22,778	15.56%
131	40980	Saginaw-Saginaw Township North, MI	0.68%	52.4	12.10%	3.90%	203,518	$22,447	10.17%
132	14020	Bloomington, IN	0.67%	20.3	10.98%	3.40%	186,480	$22,655	20.38%
133	29620	Lansing-East Lansing, MI	0.67%	39.9	8.04%	3.90%	461,515	$25,829	17.03%
134	44700	Stockton, CA	0.67%	84.3	10.82%	9.86%	692,792	$21,047	9.68%
135	14600	Bradenton-Sarasota-Venice, FL	0.67%	38.2	6.30%	0.00%	721,598	$32,346	21.03%
136	13900	Bismarck, ND	0.67%	13.6	3.92%	5.41%	106,149	$26,599	7.69%
137	13820	Birmingham-Hoover, AL	0.66%	48.2	7.91%	3.25%	1,124,423	$24,636	13.00%
138	42340	Savannah, GA	0.66%	56.0	9.21%	5.83%	342,999	$24,573	11.91%
139	47220	Vineland-Millville-Bridgeton, NJ	0.65%	74.0	14.20%	6.37%	157,336	$21,457	7.56%
140	36420	Oklahoma City, OK	0.64%	54.5	6.29%	6.29%	1,223,526	$24,824	12.05%
141	26420	Houston-Sugar Land-Baytown, TX	0.64%	79.2	9.32%	0.00%	5,904,050	$26,741	12.64%
142	40140	Riverside-San Bernardino-Ontario, CA	0.64%	83.2	8.42%	9.86%	4,245,576	$21,251	14.04%
143	12260	Augusta-Richmond County, GA-SC	0.63%	56.2	10.13%	5.83%	540,692	$23,480	13.65%
144	46700	Vallejo-Fairfield, CA	0.63%	80.2	7.56%	9.86%	426,258	$27,985	14.49%
145	42020	San Luis Obispo-Paso Robles, CA	0.62%	58.0	6.32%	9.86%	268,570	$28,393	17.73%
146	26580	Huntington-Ashland, WV-KY-OH	0.62%	10.7	7.49%	6.50%	284,039	$20,604	11.44%
147	22520	Florence-Muscle Shoals, AL	0.61%	30.0	13.70%	3.25%	143,978	$20,594	12.44%
148	42060	Santa Barbara-Santa Maria-Goleta, CA	0.61%	76.7	7.54%	9.86%	419,408	$29,110	18.08%
149	39340	Provo-Orem, UT	0.60%	29.7	10.01%	6.14%	521,746	$20,464	14.44%

150	16700	Charleston-North Charleston-Summerville, SC	0.59%	53.7	7.36%	7.09%	645,729	$25,820	13.94%
151	47260	Virginia Beach-Norfolk-Newport News, VA-NC	0.59%	58.4	7.17%	5.83%	1,683,121	$25,561	14.06%
152	42100	Santa Cruz-Watsonville, CA	0.59%	73.6	6.34%	9.86%	261,476	$35,356	25.41%
153	17660	Coeur d'Alene, ID	0.55%	14.0	7.88%	7.89%	141,814	$22,048	10.70%
154	37340	Palm Bay-Melbourne-Titusville, FL	0.55%	39.1	11.35%	0.00%	556,684	$27,672	19.08%
155	40900	Sacramento--Arden-Arcade--Roseville, CA	0.55%	69.9	4.43%	9.86%	2,167,481	$28,435	15.83%
156	25180	Hagerstown-Martinsburg, MD-WV	0.55%	22.9	9.32%	4.83%	272,335	$23,256	12.61%
157	32780	Medford, OR	0.52%	33.5	8.55%	9.10%	206,929	$24,291	16.09%
158	27180	Jackson, TN	0.52%	49.7	16.21%	0.00%	114,870	$24,508	9.32%
159	25420	Harrisburg-Carlisle, PA	0.52%	33.7	6.90%	3.07%	536,715	$28,211	11.29%
160	40060	Richmond, VA	0.52%	54.5	6.26%	5.83%	1,237,700	$28,880	14.58%
161	22660	Fort Collins-Loveland, CO	0.52%	34.2	8.43%	4.77%	294,032	$29,868	21.80%
162	12580	Baltimore-Towson, MD	0.51%	54.6	5.23%	4.83%	2,701,909	$31,235	19.54%
163	47900	Washington-Arlington-Alexandria, DC-VA-MD-WV	0.51%	70.0	1.99%	5.83%	5,448,329	$39,574	25.63%
164	48900	Wilmington, NC	0.50%	40.8	6.38%	8.50%	359,383	$27,063	13.36%
165	38060	Phoenix-Mesa-Scottsdale, AZ	0.49%	69.3	7.10%	4.93%	4,393,462	$28,270	14.72%
166	17900	Columbia, SC	0.49%	54.3	8.32%	7.09%	738,278	$26,555	13.67%
167	30780	Little Rock-North Little Rock-Conway, AR	0.48%	44.7	6.84%	7.21%	686,372	$26,422	11.58%
168	44180	Springfield, MO	0.48%	15.9	7.75%	5.91%	431,476	$23,178	11.68%
169	28940	Knoxville, TN	0.47%	23.6	9.85%	0.00%	694,103	$26,691	14.45%
170	33700	Modesto, CA	0.47%	78.8	14.45%	9.86%	528,982	$20,310	9.43%
171	43780	South Bend-Mishawaka, IN-MI	0.47%	41.8	12.45%	3.40%	321,878	$24,831	13.33%
172	46540	Utica-Rome, NY	0.46%	23.7	9.18%	7.25%	296,874	$22,564	11.32%
173	11020	Altoona, PA	0.46%	7.2	11.81%	3.07%	126,168	$21,550	7.93%
174	20260	Duluth, MN-WI	0.46%	14.5	5.93%	8.09%	275,248	$24,493	10.39%
175	19100	Dallas-Fort Worth-Arlington, TX	0.44%	71.8	9.45%	0.00%	6,436,964	$29,848	12.59%
176	43620	Sioux Falls, SD	0.42%	18.7	9.78%	0.00%	233,265	$27,746	7.41%
177	41740	San Diego-Carlsbad-San Marcos, CA	0.42%	78.6	7.65%	9.86%	3,092,622	$28,629	19.58%
178	10580	Albany-Schenectady-Troy, NY	0.42%	28.4	4.93%	7.25%	861,092	$29,178	17.33%
179	13460	Bend, OR	0.40%	21.2	7.05%	9.10%	166,648	$27,297	15.50%
180	34980	Nashville-Davidson--Murfreesboro--Franklin, TN	0.40%	41.9	9.15%	0.00%	1,569,429	$29,729	12.39%
181	16860	Chattanooga, TN-GA	0.40%	35.2	13.19%	0.00%	519,281	$25,241	10.43%
182	21660	Eugene-Springfield, OR	0.40%	30.9	9.50%	9.10%	348,196	$24,592	18.02%
183	39100	Poughkeepsie-Newburgh-Middletown, NY	0.39%	46.7	7.95%	7.25%	682,831	$29,727	18.66%
184	19740	Denver-Aurora-Broomfield, CO	0.39%	59.5	5.56%	4.77%	2,552,104	$34,438	17.29%
185	40580	Rocky Mount, NC	0.39%	58.6	15.43%	8.50%	147,371	$21,180	7.07%
186	22020	Fargo, ND-MN	0.37%	18.1	7.83%	5.41%	198,199	$27,221	8.66%
187	14540	Bowling Green, KY	0.37%	30.8	13.72%	6.18%	119,288	$23,442	12.83%
188	28020	Kalamazoo-Portage, MI	0.36%	36.9	14.52%	3.90%	327,916	$24,282	17.35%
189	40220	Roanoke, VA	0.36%	31.9	10.10%	5.83%	302,573	$25,926	11.19%
190	26620	Huntsville, AL	0.36%	47.5	14.17%	3.25%	397,307	$25,679	14.20%
191	41620	Salt Lake City, UT	0.34%	45.8	8.77%	6.14%	1,125,230	$26,411	10.44%
192	19780	Des Moines-West Des Moines, IA	0.34%	32.0	5.95%	6.06%	563,846	$29,933	9.86%
193	30700	Lincoln, NE	0.34%	29.7	8.25%	7.65%	296,078	$27,512	12.96%
194	45460	Terre Haute, IN	0.34%	18.0	15.44%	3.40%	171,763	$21,759	13.30%
195	27100	Jackson, MI	0.33%	28.2	15.03%	3.90%	165,407	$23,178	12.08%
196	25500	Harrisonburg, VA	0.33%	34.1	16.65%	5.83%	121,739	$21,215	11.59%
197	36260	Ogden-Clearfield, UT	0.32%	35.7	10.87%	6.14%	541,948	$24,768	12.08%
198	39580	Raleigh-Cary, NC	0.32%	55.2	6.03%	8.50%	1,110,356	$33,594	18.64%
199	10900	Allentown-Bethlehem-Easton, PA-NJ	0.31%	36.7	10.84%	3.07%	819,084	$28,043	14.76%
200	37980	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	0.30%	53.8	7.49%	3.07%	5,899,373	$31,452	16.94%

201	36540	Omaha-Council Bluffs, NE-IA	0.30%	39.5	7.10%	7.65%	852,034	$28,118	10.96%
202	31340	Lynchburg, VA	0.30%	39.1	14.90%	5.83%	248,088	$22,982	12.07%
203	38300	Pittsburgh, PA	0.29%	23.7	8.30%	3.07%	2,380,528	$26,561	14.22%
204	35620	New York-Northern New Jersey-Long Island, NY-NJ-PA	0.29%	75.2	4.79%	7.25%	19,040,471	$33,445	20.72%
205	12060	Atlanta-Sandy Springs-Marietta, GA	0.28%	62.5	6.64%	5.83%	5,543,990	$32,080	16.84%
206	14500	Boulder, CO	0.28%	42.5	10.35%	4.77%	293,391	$37,001	27.27%
207	44220	Springfield, OH	0.28%	26.9	12.34%	7.18%	140,588	$24,664	11.38%
208	34740	Muskegon-Norton Shores, MI	0.27%	40.9	18.80%	3.90%	176,789	$21,026	9.99%
209	45060	Syracuse, NY	0.27%	28.7	9.41%	7.25%	650,974	$25,958	14.00%
210	46140	Tulsa, OK	0.26%	52.4	12.03%	6.29%	931,394	$25,102	10.20%
211	30620	Lima, OH	0.26%	32.2	14.96%	7.18%	105,679	$22,251	7.46%
212	19340	Davenport-Moline-Rock Island, IA-IL	0.25%	36.1	13.72%	3.00%	379,780	$25,567	9.67%
213	14260	Boise City-Nampa, ID	0.25%	37.9	9.77%	7.89%	616,522	$26,329	12.41%
214	16980	Chicago-Naperville-Joliet, IL-IN-WI	0.25%	70.0	10.16%	3.00%	9,756,941	$30,299	17.09%
215	42540	Scranton--Wilkes-Barre, PA	0.24%	11.2	11.86%	3.07%	553,096	$23,818	11.39%
216	11700	Asheville, NC	0.24%	26.5	10.97%	8.50%	417,590	$24,831	16.20%
217	28140	Kansas City, MO-KS	0.24%	43.3	7.69%	5.91%	2,039,459	$29,859	14.06%
218	29140	Lafayette, IN	0.23%	34.9	17.08%	3.40%	195,701	$24,925	16.72%
219	24020	Glens Falls, NY	0.22%	12.3	12.52%	7.25%	131,172	$24,097	13.57%
220	20500	Durham-Chapel Hill, NC	0.22%	63.9	13.48%	8.50%	493,505	$29,474	21.77%
221	15380	Buffalo-Niagara Falls, NY	0.21%	36.9	10.40%	7.25%	1,137,794	$26,040	15.06%
222	37100	Oxnard-Thousand Oaks-Ventura, CA	0.19%	78.6	12.18%	9.86%	829,343	$31,439	19.98%
223	49180	Winston-Salem, NC	0.18%	52.1	12.21%	8.50%	476,410	$27,283	13.17%
224	43580	Sioux City, IA-NE-SD	0.18%	47.1	17.01%	6.06%	144,593	$23,828	7.97%
225	29100	La Crosse, WI-MN	0.17%	15.0	12.42%	6.75%	132,622	$25,456	10.95%
226	15500	Burlington, NC	0.16%	53.2	16.69%	8.50%	147,797	$24,055	10.18%
227	22220	Fayetteville-Springdale-Rogers, AR-MO	0.15%	41.6	14.81%	7.21%	456,132	$23,403	10.97%
228	21500	Erie, PA	0.15%	25.5	17.30%	3.07%	281,420	$23,013	12.26%
229	49660	Youngstown-Warren-Boardman, OH-PA	0.15%	29.5	13.05%	7.18%	578,425	$23,178	10.67%
230	31100	Los Angeles-Long Beach-Santa Ana, CA	0.14%	87.4	10.70%	9.86%	13,357,529	$26,795	15.58%
231	42660	Seattle-Tacoma-Bellevue, WA	0.14%	49.8	10.71%	0.00%	3,428,566	$34,715	16.21%
232	18140	Columbus, OH	0.14%	37.4	7.68%	7.18%	1,788,356	$29,894	13.10%
233	31540	Madison, WI	0.13%	29.4	9.00%	6.75%	565,769	$31,737	16.66%
234	35660	Niles-Benton Harbor, MI	0.13%	42.3	20.91%	3.90%	162,101	$22,863	15.02%
235	41180	St. Louis, MO-IL	0.13%	39.4	9.15%	5.91%	2,850,518	$28,566	14.31%
236	20740	Eau Claire, WI	0.13%	12.4	12.93%	6.75%	160,336	$24,254	9.72%
237	19380	Dayton, OH	0.13%	35.8	11.02%	7.18%	840,287	$27,471	14.55%
238	26900	Indianapolis-Carmel, IN	0.13%	37.7	9.97%	3.40%	1,739,161	$30,549	12.30%
239	27900	Joplin, MO	0.12%	23.2	17.74%	5.91%	172,475	$20,653	8.99%
240	39740	Reading, PA	0.12%	43.8	16.86%	3.07%	408,598	$26,020	12.18%
241	24860	Greenville-Mauldin-Easley, SC	0.11%	43.0	13.33%	7.09%	629,210	$25,858	11.53%
242	48700	Williamsport, PA	0.10%	16.5	18.96%	3.07%	117,361	$21,884	9.18%
243	22900	Fort Smith, AR-OK	0.09%	44.2	18.94%	7.21%	295,113	$20,275	7.84%
244	28700	Kingsport-Bristol-Bristol, TN-VA	0.09%	9.8	18.52%	0.00%	309,964	$22,310	10.90%
245	45780	Toledo, OH	0.08%	40.1	13.26%	7.18%	659,019	$26,012	12.08%
246	16740	Charlotte-Gastonia-Concord, NC-SC	0.07%	54.4	9.11%	8.50%	1,740,257	$30,827	12.19%
247	41860	San Francisco-Oakland-Fremont, CA	0.07%	79.0	6.68%	9.86%	4,354,010	$41,511	24.87%
248	19820	Detroit-Warren-Livonia, MI	0.07%	50.0	11.54%	3.90%	4,500,595	$30,124	16.62%
249	42220	Santa Rosa-Petaluma, CA	0.06%	61.8	11.62%	9.86%	482,777	$33,834	19.25%
250	30460	Lexington-Fayette, KY	0.06%	34.9	13.13%	6.18%	459,814	$29,053	15.65%
251	19460	Decatur, AL	0.05%	38.6	22.79%	3.25%	150,877	$21,047	10.27%

252	13780	Binghamton, NY	0.05%	21.0	15.25%	7.25%	247,651	$24,283	14.53%
253	31140	Louisville-Jefferson County, KY-IN	0.05%	33.4	11.29%	6.18%	1,262,276	$27,733	12.23%
254	23060	Fort Wayne, IN	0.04%	37.7	16.23%	3.40%	416,848	$26,570	9.81%
255	40380	Rochester, NY	0.02%	40.3	13.11%	7.25%	1,043,862	$27,728	16.14%
256	24340	Grand Rapids-Wyoming, MI	0.01%	40.1	17.20%	3.90%	789,472	$24,756	11.46%
257	40340	Rochester, MN	0.00%	25.5	11.10%	8.09%	187,348	$32,325	14.90%
258	37900	Peoria, IL	0.00%	27.1	16.32%	3.00%	377,829	$26,397	10.23%
259	29540	Lancaster, PA	-0.01%	32.1	16.98%	3.07%	507,066	$25,957	11.17%
260	12980	Battle Creek, MI	-0.02%	37.4	22.36%	3.90%	137,387	$22,510	10.62%
261	27500	Janesville, WI	-0.02%	29.2	15.66%	6.75%	162,500	$26,679	9.98%
262	17460	Cleveland-Elyria-Mentor, OH	-0.02%	45.8	12.28%	7.18%	2,116,514	$28,122	13.65%
263	40420	Rockford, IL	-0.03%	46.9	19.50%	3.00%	358,665	$26,313	10.95%
264	10420	Akron, OH	-0.03%	30.1	12.51%	7.18%	705,572	$28,094	13.08%
265	21780	Evansville, IN-KY	-0.06%	18.7	16.88%	3.40%	355,226	$25,036	9.61%
266	14460	Boston-Cambridge-Quincy, MA-NH	-0.06%	45.3	8.61%	5.30%	4,512,381	$38,192	21.68%
267	11340	Anderson, SC	-0.08%	34.8	20.47%	7.09%	183,887	$22,661	11.86%
268	24660	Greensboro-High Point, NC	-0.09%	53.4	15.73%	8.50%	712,753	$26,741	10.63%
269	19500	Decatur, IL	-0.09%	33.9	21.35%	3.00%	109,615	$25,333	8.50%
270	38900	Portland-Vancouver-Beaverton, OR-WA	-0.10%	45.4	11.73%	9.10%	2,233,323	$29,562	16.15%
271	17140	Cincinnati-Middletown, OH-KY-IN	-0.11%	29.7	10.72%	7.18%	2,150,855	$29,451	13.32%
272	47940	Waterloo-Cedar Falls, IA	-0.12%	20.6	18.29%	6.06%	164,830	$24,638	10.49%
273	43900	Spartanburg, SC	-0.14%	47.1	20.91%	7.09%	281,908	$23,815	11.11%
274	31900	Mansfield, OH	-0.16%	25.6	19.50%	7.18%	126,713	$23,430	6.96%
275	41060	St. Cloud, MN	-0.17%	13.8	15.87%	8.09%	190,048	$25,052	8.85%
276	34900	Napa, CA	-0.18%	68.2	17.95%	9.86%	136,896	$33,664	15.24%
277	37700	Pascagoula, MS	-0.20%	43.5	28.03%	4.93%	158,652	$19,217	10.37%
278	15940	Canton-Massillon, OH	-0.21%	21.4	17.17%	7.18%	410,276	$25,017	11.16%
279	33340	Milwaukee-Waukesha-West Allis, WI	-0.22%	51.0	15.03%	6.75%	1,544,127	$30,354	11.86%
280	16300	Cedar Rapids, IA	-0.26%	16.6	15.92%	6.06%	257,030	$28,564	8.58%
281	49620	York-Hanover, PA	-0.30%	23.6	20.43%	3.07%	431,670	$26,548	11.23%
282	24580	Green Bay, WI	-0.31%	24.9	17.61%	6.75%	308,854	$27,164	7.23%
283	48620	Wichita, KS	-0.34%	48.4	21.83%	6.51%	607,435	$25,306	10.48%
284	33460	Minneapolis-St. Paul-Bloomington, MN-WI	-0.39%	36.3	10.93%	8.09%	3,314,039	$35,798	14.00%
285	39540	Racine, WI	-0.40%	48.1	23.11%	6.75%	197,958	$28,248	11.88%
286	11540	Appleton, WI	-0.45%	17.9	18.88%	6.75%	223,779	$28,489	8.12%
287	41940	San Jose-Sunnyvale-Santa Clara, CA	-0.61%	81.9	18.44%	9.86%	1,857,839	$44,432	25.39%
288	48140	Wausau, WI	-0.61%	17.4	23.91%	6.75%	134,689	$26,447	8.25%
289	19140	Dalton, GA	-0.68%	60.5	35.58%	5.83%	139,226	$20,011	5.98%
290	26100	Holland-Grand Haven, MI	-0.71%	33.7	29.42%	3.90%	268,282	$26,524	14.10%
291	25860	Hickory-Lenoir-Morganton, NC	-0.72%	35.5	27.78%	8.50%	366,649	$22,352	7.58%
292	43100	Sheboygan, WI	-1.21%	25.5	33.99%	6.75%	116,905	$27,301	7.21%
293	21140	Elkhart-Goshen, IN	-1.34%	46.6	42.08%	3.40%	202,609	$24,353	7.06%
		Average	**0.59%**	**45.15**	**9.57%**	**4.83%**	**834,875**	**$25,117**	**13.39%**