# Location trends of large company headquarters during the 1990s

**Thomas Klier and William Testa**

Metropolitan areas highly value the presence of company headquarters, and local governments tend to actively pursue and attract them. The keen competition among Chicago, Dallas-Ft. Worth, and Denver in April and May 2001 in the wake of Boeing's announcement that it would relocate its headquarters from Seattle highlighted the perceived benefits, including prestige, that the presence of a well-known company can confer on a metropolitan area. Of course, there are also tangible benefits. Headquarters employ a sizable and highly skilled white-collar work force and generate local demand for numerous specialized business services such as accounting and legal. In addition, headquarters often play a major role in corporate giving, as well as what are generally referred to as corporate citizen activities (Schwartz, 1997). It is not unusual to find that the landscape of a town has been defined by the presence of one or more corporate headquarters. For example, Columbus, Indiana, is dominated by public buildings designed by noted architects, courtesy of Cummins Engine and other local donors. Similarly, Eli Lilly, headquartered in Indianapolis, supports numerous local charities and public programs through the Lilly Endowment.

In this article, we provide information on recent locational trends for company headquarters, which will be helpful to policymakers as they design development efforts and expenditures. We document changes in the spatial distribution of corporate headquarters of large U.S. domiciled corporations during the most recent decade. In order to perform this analysis, we use a comprehensive set of data on publicly traded companies—specifically companies employing more than 2,500 people worldwide. We allocate headquarters to the 50 most populous metropolitan areas for 1990 and 2000 and examine the spatial changes that have taken place across 1) individual metro areas, 2) U.S. Census regions, and 3) the distribution of metro areas with respect to their population size. To identify and disentangle spatial changes, we further examine the sources and nature of headquarters growth across metropolitan areas using both simple data displays and *multiple regression* analysis. The regression analysis allows us to distinguish among competing factors in their influence on the location of headquarters.

Because policymakers are interested in attracting footloose headquarters, and perhaps nurturing small local companies as they grow to become large ones, we also document the extent and nature of headquarters turnover or "churn" for three sample cities—New York, Chicago, and San Francisco—between 1990 and 2000. We find a high degree of turnover and migration of headquarters, but an even higher degree of headquarters growth that has come about as small local companies have grown large. This result implies that policies to assist the growth of local indigenous firms of smaller size may be more beneficial than policies aimed at recruitment of footloose companies.

Policymakers and site selection professionals will also be interested in the evidence we provide as to where headquarters are now emerging. Several broad spatial shifts in headquarters location have been observed prior to the 1990s. One of the persistent characteristics of the U.S. economy has been the concentrated location of large company headquarters in a relatively small number of large metropolitan areas. That is not surprising if one considers the nature of headquarters operations. Headquarters employ highly skilled professionals and they demand ready access to high-level business services, such as legal, financial, and advertising—all of which tend to be found in large

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metropolitan areas. Furthermore, since headquarters facilities must control and administer an often far-flung organization, ready access to state-of-the art communications infrastructure, as well as personal transportation—that is, air transportation and connections—are a necessity in today's economy. As a result of these demands, a relatively small number of metro areas enjoy a comparative advantage in hosting headquarters.

Our findings on headquarters location are generally consistent with those of earlier studies. Large metropolitan areas continue to have a comparative advantage in hosting headquarters of large companies. In fact, our analysis reveals no change in the overall share of large company headquarters domiciled in the 50 largest U.S. metropolitan areas between 1990 and 2000. However, there have been significant shifts within this distribution of metropolitan areas. Among the 50 largest metropolitan areas, those with population between 1 million and 2 million experienced the largest growth in population in the 1990s and developed concentrations of large company headquarters. In contrast, New York, the largest metropolitan area, continued its long-term trend of slowly losing dominance in terms of headquarters count. More generally, we find no evidence that the very largest metropolitan areas increased their share of corporate headquarters during the decade. Indeed, the share of headquarters domiciled in the five largest metropolitan areas fell from 36 percent in 1990 to 33 percent in 2000.

This shrinkage at the top of the distribution is something of a surprise, because the rapid globalization trends during the 1990s were predicted to give rise to an increased concentration, that is, a few global headquarters cities. The reasoning goes that, as trade, transportation, and communications barriers fall, as they did in the 1990s, the potential market size of large companies grows. At the same time, the complexity of the corporate control functions for these companies increases. As a result, headquarters will increasingly locate in a small number of cities having abundant and specialized business and financial services or in cities with very intense concentrations of such industries. In these places, the firm administering a national or international market can stay abreast of innovation and otherwise acquire the information, ideas, and assistance it needs to succeed. Furthermore, headquarters will find it advantageous to locate near others of their ilk, again supporting the trend toward concentration in a small number of services-intensive metro areas. To some degree, this tendency was borne out in our multiple regression analysis; those metropolitan areas containing high concentrations of financial services activity were favored with greater headquarters gains over the decade of the 1990s. However, our finding that the most populous cities continue to lose share may also mean that the technological advances and falling costs of travel and communication have improved the ability of headquarters located in smaller cities to gather information and services and to administer their far-flung global markets and operations.

Another reason that large cities have not done better is that population and associated markets have been shifting to mid-tier cities, especially in the South and West. Headquarters locations often follow shifting markets; indeed, we find that a regression variable reflecting market growth—specifically, population growth—tends to correlate with headquarters growth. A variable indicating that the metropolitan area is located in the South census region is also significantly related to headquarters growth. While the West gained population as well, it did not gain headquarters to the same extent as the South. Apparently, in addition to the beneficial effects of local market growth, several prominent urban areas in the South have matured as commercial centers. In particular, Atlanta, Houston, Nashville, and Southeast Florida laid claim to much of the region's increase in corporate headquarters.

We also find that, since regions tend to specialize in certain industries, headquarters concentration has tended to grow along with metro areas and their specialized industries. Large headquarters often emerge in the cities and regions in which successful new companies or industries grow. This is especially so for young industries and companies that rely heavily on research and development (R&D) and new technologies, for which close communication between the central office, lab, and production operations is essential. For example, we would expect the emergence of high-technology industries in Silicon Valley to have been accompanied by the growth of large corporate headquarters in the San Francisco Bay area, and this has in fact been the case. This metropolitan area did remarkably well in increasing its tally of corporate headquarters during the 1990s, garnering most of the growth of companies associated with the so-called new economy. In fact, just under half of the increase in headquarters there during the decade resulted from the growth of existing companies.[1] More generally, we find that the shift in the geographic distribution of high-tech industry headquarters over the decade is unlike the overall trend displayed for all industries. That is, high-tech headquarters are becoming more concentrated in large metropolitan areas rather than dispersing toward the smaller and medium-sized cities.

Financial companies—especially banks—have also bucked the general trend by shifting toward larger

metropolitan areas. In this instance, profound deregulation has encouraged firm consolidation and market expansion. In response, the now-larger companies have chosen to locate their headquarters in larger metropolitan areas.

Overall, then, our findings for the 1990s suggest that the largest urban areas continue to be highly preferred as headquarters locations. However, we identify a changing trend in the distribution of large headquarters across metropolitan areas. This trend implies that the second tier of metropolitan areas may begin to enjoy greater success in the competition for headquarters. The evidence shows that corporate headquarters are dispersing to mid-sized metropolitan areas and following shifting population and markets, especially toward the South. We also find that, for all metro areas, policies that emphasize the nurturing and growth of local companies rather than, or in addition to, recruitment of firms from outside the area may be beneficial. Our research indicates that company headquarters do not migrate so much as they grow and decline.

## Literature review

The growth and locational patterns of large corporate headquarters have been a subject of research since the latter half of the twentieth century (see Lichtenberg, 1960, Evans, 1973, and Quante, 1976, for a synopsis of earlier work). Studies have examined various periods and drawn on a variety of data sources. Generally, the work utilizing large data sets tends to be cross-sectional, whereas studies tracking the distribution of headquarters over time tend to rely on Fortune 500 data. Horst and Koropeckyi (2000) and Holloway and Wheeler (1991) base their time-series analysis on data for Fortune 500 companies. Holloway and Wheeler (1991) conduct their empirical analysis for the 1980s using annual data for that decade. Horst and Koropeckyi (2000) utilize the same data from 1975 through 1999 (in five-year intervals). Shilton and Stanley (1999) utilize data for all publicly traded companies, regardless of company size, and Davis (2000) draws on data from the *Survey of Auxiliary Establishments* (U.S. Bureau of the Census).

A common finding in all these papers is the high degree of concentration among headquarters. For example, Shilton and Stanley (1999) report that 40 percent of their sample is located in only 20 U.S. counties. They explain this stylized fact by the comparative advantage of cities to support headquarters operations. In fact, Horst and Koropeckyi (2000) report a strengthening of that effect during the 1990s as evidenced by a substantial drop in Fortune 500 headquarters located in non-metropolitan counties. In addition, the advantage of certain cities in hosting headquarters seems to depend little on the historical and perhaps serendipitous presence of individual companies. For example, despite Boston's ongoing strength as a domicile of Fortune 500 companies headquarters, only two of the 15 present in 1999 had been there since 1975 (Horst and Koropeckyi, 2000).

What exactly are the competitive advantages of large cities? The central function of corporate headquarters is the acquiring and dissemination of information. The demand side of the profit equation requires that corporate headquarters stay abreast of emerging developments in their markets. Meanwhile, the competitive supply or cost element of the profit equation suggests that firms must adapt new production technologies and management strategies. In turn, both of these categories of activities will often require dissemination of information and administration to a wide-ranging geography of operations. Thus, major airports represent a critical infrastructure for corporate headquarters, along with major highways, and telecommunications (Dow Jones, Inc., 1977). Air connections allow headquarters personnel to travel to direct their own operations both domestic and international, as well as to interact with others in their industry at conventions and trade shows (Boyle, 1990). Significantly, a major airport also brings meetings, conventions, suppliers, and customers into the home city.

Several other features of the headquarters as a learning operation also imply a need for the large scale of a metropolitan area. The learning curve of technology is often shortened by proximity to other similar firms, as firms learn of new ideas through interaction. For example, Walcott (2001) documents the location of both health and bio-tech firms in proximity to Eli Lilly in Indianapolis (and in other production centers and emerging markets) as contributing to the company's successful acquisition of information. Accordingly, the clustering of firms can reflect a competitive advantage (Porter, 2000; Glasmeier, 1988). Professionals and highly skilled personnel are also more easily recruited and retained in cluster locations (Dow Jones, 1977). This follows as job mobility and advancement are enhanced by the information and career advancement opportunities that proximity to a host of firms and jobs provide to both the primary worker and, often, to the spouse (Ady, 1986).

The persistent concentration of headquarters in certain individual cities that contain important business service sectors, such as New York and Chicago, also points to the ready access to purchased services as enabling factors for the concentration of headquarters. Concentrations of business service firms, such

as media, law, accounting, and consulting, in large cities may enable firms to achieve cost and price advantages by shopping among a host of nearby business service providers. Possibly these services are purchased by headquarters and subsequently delivered to branch operations throughout the organization (see Ono, 2001).

So too, the purchase of business services can be part of the organization's learning functions. Companies also learn and acquire services effectively from sources outside of their own industry. Lichtenberg (1960) observed the following 40 years ago: "Like producers of unstandardized products, the central office executives 'produce' answers to unstandardized problems, problems that change frequently, radically, and unpredictably. … These problems are solved quickly only by consultation with a succession of experts. But … most central offices would find it inefficient if not impossible to staff themselves internally with all of the specialized personnel and services that they must call on from time to time to solve their problems. Nor is it convenient to transport the experts to their plants or maintain effective contact by telephone or letter. … All of these considerations dictate a concentration of central offices in a tight cluster near each other and near their 'suppliers'."

In recent years, however, we have seen a loosening of the location ties of business services industry and corporate headquarters. In particular, the phenomenon of outsourcing, along with advances in communication and air travel, may be facilitating a shift of large corporate headquarters *away* from the very large metropolitan areas that once dominated. Sassen (2001a) observes that many of the largest cities worldwide—particularly London, New York, and Chicago—have been losing numbers of headquarters of the world's largest companies for over three decades, even while business service industries there continue to grow.[2] She hypothesizes that the outsourcing of complex service functions by global headquarters operations has been accelerating, and that this has liberated corporate headquarters to locate in any number of places that may be strategic for administration or control of the company's establishments. Drucker (1989) once advised firms to "sell the mail room," while Sassen now claims that they are selling both the mail room and the board room. Hence, the locational concentration of complex business services rather than headquarters themselves has become the key feature by which to identify dominant "global cities."[3]

It is not only outsourcing of business services that may be liberating corporate headquarters from large cities. Technological changes are inexorably lowering the costs of communications and travel to corporate headquarters themselves. While globalization and technological changes are expanding potential markets for companies and increasing the complexity of management operations, they are also enabling cheaper and more effective communication across the world and across the spectrum of a company's facilities. The need for face-to-face communication to efficiently solve the most complex problems and the most delicate negotiations may never be eliminated by electronic communication (Quante, 1976). However, the use of remote communications is certainly accelerating (Townsend, 2001). As a result, administration from smaller and more remote locations may be easier than before. For now, the tensions between firm complexity/scope and better communications technology may be partly offsetting each other in terms of their effects on headquarters location and city size.

Still, headquarters concentrations may be shifting toward metro areas that do not rank at the top of the size distribution. Horst and Koropeckyi (2000) and Holloway and Wheeler (1991) analyze the change over time in the concentration of headquarters location across metropolitan areas. Both studies find evidence of redistribution among the headquarters cities away from New York to mostly mid-size metropolitan areas. In 1955, the first year the Fortune 500 list was compiled, the New York metro area was home to 31 percent of all company headquarters on the list, the vast majority of which were located right in the city (28 percent of all Fortune 500 headquarters). While the metro area share of national headquarters remained stable until the early 1970s, the city began to lose headquarters to its surrounding areas in the mid-1960s. For the last 30 years, the share of headquarters domiciled in the New York metro area has been steadily declining. By 1999, it had fallen to 10 percent of Fortune 500 companies (see Quante, 1976, and Horst and Koropeckyi, 2000).

Of course, the location of company headquarters has also been affected by the varying fortunes of industries and lines of business over time. As Holloway and Wheeler (1991) clearly establish, shifts in headquarters dominance by city size are related less to relocations of existing headquarters than to the growth of local companies that become large enough to be included in the Fortune 500 list. This implies that the indigenous growth of stellar companies and emerging industry clusters are an important explanatory factor in the shifting of headquarters concentration.[4] Of course, this effect is symmetric with respect to industry decline. However, as an added wrinkle, a continued concentration of corporate headquarters has been observed to lag behind the decline of its overall industry in a

region (Rees, 1978). For example, corporate headquarters of large manufacturing companies tended to remain in large Northeast and Midwest cities long after their production capacity had migrated south and west. In sum, previous studies have documented a strong central tendency for headquarters to locate in large urban areas. However, the distribution of headquarters among regions and along the size hierarchy of urban places has been less stable, and the underlying reasons more elusive. Accordingly, the data must tell their own story for the 1990s.

## Data

In order to document recent location patterns of large company headquarters, we analyze Compustat data on publicly traded companies for the years 1990 and 2000. The data represent a panel of all public companies whose shares are traded in the U.S., with the exception of American Depository Receipts (ADRs), closed-end mutual fund and index shares, and pre-Financial Accounting Standards Board (FASB) companies.[5] Active companies are either publicly traded or are required to file with the Securities and Exchange Commission. Similar to the previous literature, this article focuses on the headquarters of large companies. We define a company to be large if its total employment worldwide is at least 2,500.[6]

The data do not identify information on employment located at the headquarters site itself. However, data from the *Census of Enterprise Statistics* (U.S. Department of Commerce, 1992) are somewhat helpful in identifying employment at so-called auxiliaries, which are defined as separate establishments of multi-establishment companies that perform administration, management, research, and other supporting functions. These data report the average employment at auxiliary establishments to be 68, while companies with auxiliaries averaged 1,555 domestic employees overall. Most, but not all, of these auxiliaries are headquarters. Since the companies in our data set are only modestly larger in total employment size, their average headquarters size is also likely to be modestly larger. A recent survey by Aksoy and Marshall (1992) of 20 major international firms domiciled in the United Kingdom, employing as many as 150,000, reported only two head offices with more than 300 employees. (Furthermore, headquarters employment for these large U.K. companies declined appreciably during the 1980s and early 1990s.)

In this article we aggregate headquarter locations by metropolitan areas. In particular, we use the most extensive definitions of metropolitan areas available, the so-called consolidated metropolitan statistical area (CMSA).[7] Thus, our results are not affected by relocations of headquarters from a central city to a suburban location within the same metropolitan area. We believe that these metropolitan areas largely share common locational attributes that are considered in the headquarters siting decision. Some of the important attributes include hub airports, access to business service firms, and a common skilled labor pool. Using our company-wide employment cutoff of 2,500 employees results in 1,397 metropolitan-area based records for 1990 and 1,805 records for 2000, about 22 percent of all records in the database.[8] Hence, our sample is considerably larger than the Fortune 500, yet it includes essentially all the 2000 Fortune 500 companies.

## Geography of headquarters

The distribution of large company headquarters across U.S. metropolitan areas is highly concentrated. In 1990, only 47 percent of the 276 metropolitan areas were home to at least one large company headquarters facility; in 2000, the figure was 52 percent. Even among headquarters-occupied metropolitan areas, the distribution of headquarters is highly skewed. However, the list of metro areas that are home to most company headquarters hardly changed during the 1990s. Both at the beginning and at the end of the last decade, the 50 most populous metropolitan areas were home to 87 percent of all large company headquarters (see table 1).[9] There was considerable variation in the growth of headquarters during the decade among the largest metropolitan areas. Ten of the largest 50 metropolitan areas showed no net gain of headquarters. On the other hand, the ten fastest growing metropolitan areas experienced a net increase in headquarters of at least 100 percent (see table 2).

It turns out that among the 50 largest metropolitan areas, those with population between 1 million and 2 million (ranked 23–50 in table 2) experienced the largest growth in both population and large company headquarters during the last decade (see table 1). In contrast New York, the largest metropolitan area, continued its long-term trend of slowly losing dominance in terms of headquarters count. Despite this erosion, even at the end of the 1990s New York was home to more than twice as many headquarters of large companies than the runner-up metropolitan area, Chicago.

Figure 1 shows the distribution of headquarters and population among metropolitan areas by quartiles (defined by population) in the year 2000.[10] Notice the remarkable concentration of headquarters—in absolute terms as well as relative to the concentration of population—in quartile 1, the 69 most populous metropolitan areas. The top quartile (labeled quartile 4 in

**TABLE 1**

**Population and headquarters across metro areas**

| | Percent of population | | Percent of headquarters | | % Change, 1990–2000 | |
|---|---|---|---|---|---|---|
| | 1990 | 2000 | 1990 | 2000 | Population | Headquarters |
| Top 5 metro areas | 28 | 27 | 36 | 33 | 11 | 19 |
| Top 5 excl. New York | 18 | 18 | 20 | 19 | 12 | 29 |
| Rank 6 to 22 | 28 | 29 | 36 | 38 | 16 | 35 |
| Rank 23 to 50 | 15 | 16 | 15 | 16 | 18 | 45 |
| Top 50 | 71 | 72 | 87 | 87 | 14 | 30 |
| Remainder | 28 | 28 | 14 | 13 | 13 | 23 |
| All | 100 | 100 | 100 | 100 | 14 | 29 |

Sources: Compustat, Census Bureau, and authors' calculations.

the figure) of metropolitan areas contain 78.6 percent of population and 92.1 percent of the large publicly traded company headquarters. This corroborates for the decade of the 1990s the agglomerative pull of large metropolitan areas found in previous studies.

An alternative, more comprehensive, way to characterize the geographic distribution of headquarters location across metropolitan areas is by means of a *Lorenz curve*. A Lorenz curve graphs cumulative frequency distributions. It shows the degree to which a distribution is concentrated by the distance between the actual distribution and the 45 degree line, which represents an egalitarian distribution. Figure 2 shows the concentration of headquarters among the 50 most populous metro areas. It graphs the cumulative distribution of headquarters on one axis versus the cumulative distribution of metropolitan areas on the other axis. In that distribution, each metro area is treated as an equally weighted entity. The shape of the plotted line reveals the degree of concentration in the distribution of headquarters. For example, if each of the largest 50 metropolitan areas contained the same number of corporate headquarters, the graph line would be identical to the 45 degree line. In contrast, to the extent that some metropolitan areas host disproportionate numbers of headquarters, the graph curve will be bowed out toward the "southeast," away from the 45 degree line. Figure 2 shows these curves for both 1990 and 2000 to illustrate changes in the concentration of headquarters within the largest 50 metropolitan areas. The various panels show curves for all headquarters and headquarters classified by selected major industry group (we chose a few prominent industries).

For the year 2000, we find that the degree of concentration of headquarters among the largest metropolitan areas is quite similar across the various sectoral breakdowns, with about 60 percent of headquarters residing in the largest ten metro areas, as measured by the number of headquarters. One notable exception to that general finding is the high-tech manufacturing sector, which is significantly more concentrated (about 80 percent of headquarters are found in the ten largest, by headquarters, metropolitan areas). Over the past 25 years, high-tech industries, such as computing and telecommunications equipment and software, have grown rapidly and displayed an acute tendency to concentrate heavily in a few metro areas, such as San Jose, Raleigh–Durham, Austin, and Boston. Young industries characterized by a high degree of innovation and competition appear to be loath to spatially separate their headquarters activity from their R&D or their production plants (Malecki, 1980).

A comparison of Lorenz curves for headquarters for 1990 and 2000 also illustrates that corporate headquarters have become more ubiquitous across medium-sized metropolitan areas—spreading to less headquarters-intensive areas. This trend is consistent across major industry groups with two exceptions. High-tech manufacturing shifts outward along part of its distribution—with the more headquarters-intensive MSAs gaining share of high-tech activity from 1990 to 2000. The same can be said for the finance, insurance, and real estate (FIRE) sector, only to a more pronounced degree. Upon further investigation, the increase in concentration of headquarters in that sector can be explained by an increase in the concentration of headquarters in the banking sector. This presumably is a response to regulatory changes—largely loosening—beginning in the early 1980s and continuing through the 1990s. So called deregulation has encouraged banks to grow in size which has, in turn, shifted the distribution at the top of the industry even further toward larger banks. Regulatory changes have allowed banks to enter new product lines, which has acted to increase their size and, in some instances, to merge with other, nonbanking, financial firms.

**TABLE 2**

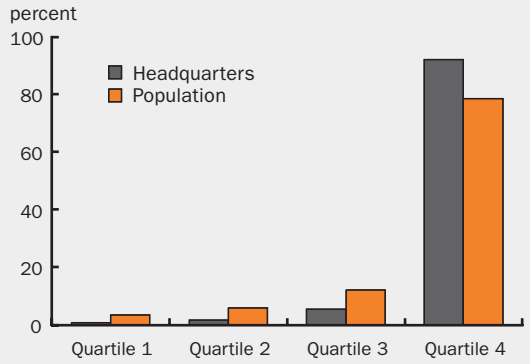
## Top 50 metro areas, by 2000 population

| Rank | Metro area | Population (000s) | HQs | Net change HQ number | Net change HQ % |
|---|---|---|---|---|---|
| 1 | New York–Northern New Jersey–Long Island, NY–NJ–CT–PA CMSA | 21,200 | 239 | 16 | 7.2 |
| 2 | Los Angeles–Riverside–Orange County, CA CMSA | 16,374 | 85 | 4 | 4.9 |
| 3 | Chicago–Gary–Kenosha, IL–IN–WI CMSA | 9,158 | 109 | 13 | 13.5 |
| 4 | Washington–Baltimore, DC–MD–VA–WV CMSA | 7,608 | 66 | 22 | 50.0 |
| 5 | San Francisco–Oakland–San Jose, CA CMSA | 7,039 | 91 | 39 | 75.0 |
| 6 | Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD CMSA | 6,188 | 70 | 15 | 27.3 |
| 7 | Boston–Worcester–Lawrence, MA–NH–ME–CT CMSA | 5,819 | 66 | 11 | 20.0 |
| 8 | Detroit–Ann Arbor–Flint, MI CMSA | 5,456 | 34 | 1 | 3.0 |
| 9 | Dallas–Fort Worth, TX CMSA | 5,222 | 76 | 18 | 31.0 |
| 10 | Houston–Galveston–Brazoria, TX CMSA | 4,670 | 70 | 29 | 70.7 |
| 11 | Atlanta, GA MSA | 4,112 | 53 | 25 | 89.3 |
| 12 | Miami–Fort Lauderdale, FL CMSA | 3,876 | 31 | 16 | 106.7 |
| 13 | Seattle–Tacoma–Bremerton, WA CMSA | 3,555 | 19 | –1 | –5.0 |
| 14 | Phoenix–Mesa, AZ MSA | 3,252 | 23 | 12 | 109.1 |
| 15 | Minneapolis–St. Paul, MN–WI MSA | 2,969 | 50 | 12 | 31.6 |
| 16 | Cleveland–Akron, OH CMSA | 2,946 | 35 | –4 | –10.3 |
| 17 | San Diego, CA MSA | 2,814 | 18 | 8 | 80.0 |
| 18 | St. Louis, MO–IL MSA | 2,604 | 39 | 12 | 44.4 |
| 19 | Denver–Boulder–Greeley, CO CMSA | 2,582 | 27 | 12 | 80.0 |
| 20 | Tampa–St. Petersburg–Clearwater, FL MSA | 2,396 | 20 | 9 | 81.8 |
| 21 | Pittsburgh, PA MSA | 2,359 | 21 | 0 | 0.0 |
| 22 | Portland–Salem, OR–WA CMSA | 2,265 | 13 | –1 | –7.1 |
| 23 | Cincinnati–Hamilton, OH–KY–IN CMSA | 1,979 | 23 | 5 | 27.8 |
| 24 | Sacramento–Yolo, CA CMSA | 1,797 | 2 | 1 | 100.0 |
| 25 | Kansas City, MO–KS MSA | 1,776 | 19 | 1 | 5.6 |
| 26 | Milwaukee–Racine, WI CMSA | 1,690 | 26 | 5 | 23.8 |
| 27 | Orlando, FL MSA | 1,645 | 9 | 7 | 350.0 |
| 28 | Indianapolis, IN MSA | 1,607 | 11 | –1 | –8.3 |
| 29 | San Antonio, TX MSA | 1,592 | 9 | 4 | 80.0 |
| 30 | Norfolk–Virginia Beach–Newport News, VA–NC MSA | 1,570 | 6 | 2 | 50.0 |
| 31 | Las Vegas, NV–AZ MSA | 1,563 | 13 | 5 | 62.5 |
| 32 | Columbus, OH MSA | 1,540 | 21 | 7 | 50.0 |
| 33 | Charlotte–Gastonia–Rock Hill, NC–SC MSA | 1,499 | 14 | 3 | 27.3 |
| 34 | New Orleans, LA MSA | 1,338 | 7 | –1 | –12.5 |
| 35 | Salt Lake City–Ogden, UT MSA | 1,334 | 5 | –2 | –28.6 |
| 36 | Greensboro–Winston–Salem–High Point, NC MSA | 1,252 | 16 | 9 | 128.6 |
| 37 | Austin–San Marcos, TX MSA | 1,250 | 2 | 1 | 100.0 |
| 38 | Nashville, TN MSA | 1,231 | 25 | 16 | 177.8 |
| 39 | Providence–Fall River–Warwick, RI–MA MSA | 1,189 | 6 | 2 | 50.0 |
| 40 | Raleigh–Durham–Chapel Hill, NC MSA | 1,188 | 4 | 2 | 100.0 |
| 41 | Hartford, CT MSA | 1,183 | 12 | –2 | –14.3 |
| 42 | Buffalo–Niagara Falls, NY MSA | 1,170 | 6 | 0 | 0.0 |
| 43 | Memphis, TN–AR–MS MSA | 1,136 | 10 | 2 | 25.0 |
| 44 | West Palm Beach–Boca Raton, FL MSA | 1,131 | 13 | 11 | 550.0 |
| 45 | Jacksonville, FL MSA | 1,100 | 7 | 2 | 40.0 |
| 46 | Rochester, NY MSA | 1,098 | 6 | 0 | 0.0 |
| 47 | Grand Rapids–Muskegon–Holland, MI MSA | 1,089 | 9 | 5 | 125.0 |
| 48 | Oklahoma City, OK MSA | 1,083 | 6 | 2 | 50.0 |
| 49 | Louisville, KY–IN MSA | 1,026 | 10 | 4 | 66.7 |
| 50 | Richmond–Petersburg, VA MSA | 997 | 21 | 6 | 40.0 |

Note: HQ indicates headquarters.
Sources: See table 1.

**FIGURE 1**

**Headquarters and population by MSA quartiles, 2000**




Sources: Compustat, Census Bureau, and authors' calculations.

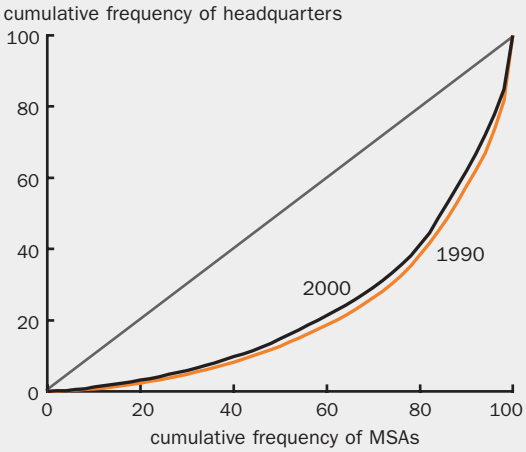
Presumably, the tendency of larger organizations to prefer headquarters locations in larger metropolitan areas has thus brought about the shift observed in figure 2, panel C. In addition, deregulation has loosened restrictions that had been placed on banks to serve markets across state lines, or within states, across county lines, and other boundaries. This has facilitated geographic consolidation of markets in the banking sector, often through a merger.[11] For example, the merger between Banc One of Columbus and NBD-First Chicago in 1998 resulted in a headquarters choice of Chicago. These industry-specific events produced a headquarters location trend in the 1990s that was the opposite of that of most industries in which mid-sized metropolitan areas were the relative gainers.

Mid-sized metropolitan areas were the gainers not only because of headquarters choices, but also because they grew faster in population size. They emerged as sizable markets so that their companies and headquarters grew along with them. Nonetheless, the growing prominence of mid-sized metropolitan areas does not account for the entire shift of headquarters toward these places. Figure 3 illustrates the distribution for headquarters across all industries, as well as for population for the largest 50 metro areas in 1990 and 2000. We can see that headquarters are more concentrated among metro areas than population. This is true for both 1990 and 2000. However, during the 1990s the relative difference between the distribution of headquarters and population narrowed. This is demonstrated in panel B of figure 3, which plots the vertical distance between both distributions at both points in time. While the contour of that distance has not changed much, it narrowed across the entire range of the distribution

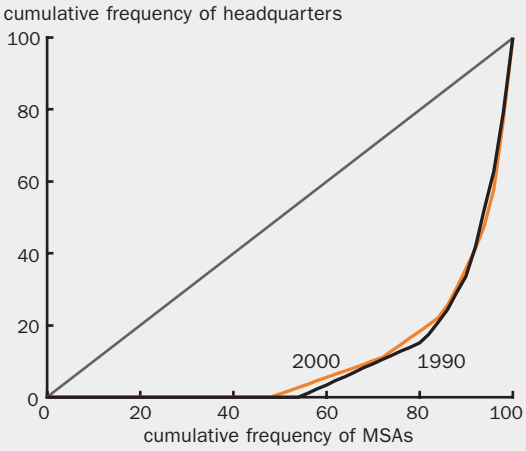
**FIGURE 2**

**Distribution of headquarters among 50 largest metro areas**

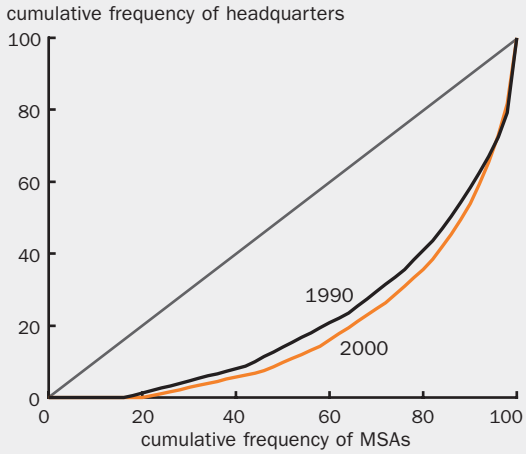
**A. All**




**B. High-tech manufacturing**




**C. Finance, insurance, and real estate**



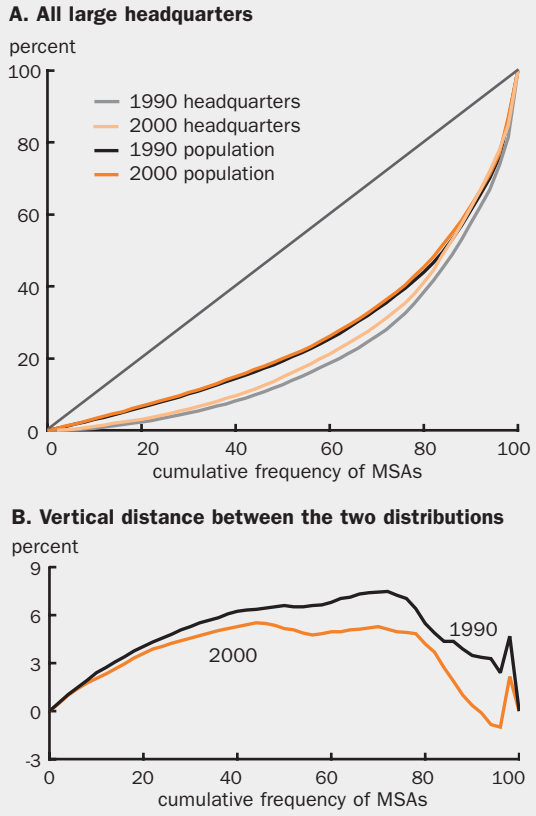

Sources: Compustat, Census Bureau, and authors' calculations.

during the decade. In addition, from panel A of figure 3 we can tell that that movement was driven in large part by a redistribution of headquarters as opposed to a redistribution of population.

Different growth and reorganizational experiences across industries also become important in understanding the regional shifts in headquarters that have taken place. In examining the shifts among the four major regions as defined by the U.S. Bureau of the Census,[12] we find that at the beginning of the decade, both the Northeast and the Midwest regions were the most headquarters-intensive among the four. That is not surprising as the industry structure of the Northeast and Midwest reflects their rich manufacturing history. Even though manufacturing plants spread beyond their regions' boundaries long ago, many of the country's headquarters of industrial companies continued to be located there in 1990 (see Rees, 1978). As these industries' companies decline in size and importance or are acquired by overseas companies, these headquarters are evaporating. So too, with a lag, headquarters sometimes follow their operating manufacturing plants to Sun Belt locales.[13] As a result, both the Northeast and Midwest regions—but especially the Northeast—continued to shed such headquarters during the 1990s. Figure 4 illustrates the U.S. geography of all large company headquarter locations in the year 2000.[14]

**FIGURE 3**

**Distribution of headquarters and population**




Sources: Compustat, Census Bureau, and authors' calculations.

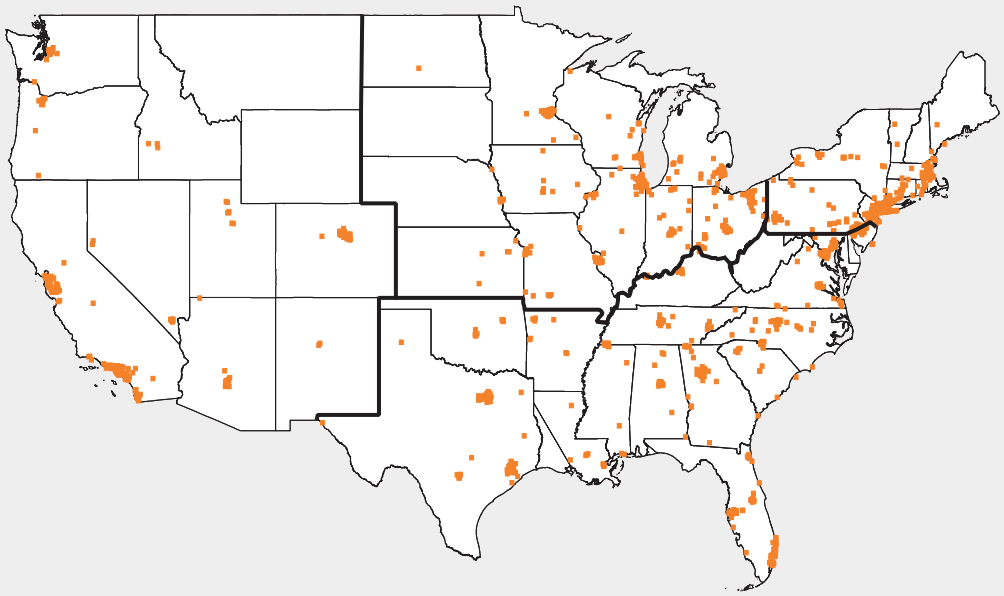
Figure 5 clearly shows the 1990s to be the decade of the South. While leading the country in population share at the beginning of the decade, it represented just over 25 percent of all large company headquarters. But during the 1990s the number of headquarters domiciled in the South grew much faster than its population share. In fact, at the end of the decade that region's share of headquarters had virtually pulled even to its share of population. Apparently, in addition to the beneficial effects of local market growth, several prominent urban areas in the South have matured as commercial centers. In particular, Atlanta, Houston, Nashville, and Southeast Florida laid claim to much of the region's increase in corporate headquarters (see figure 6).

In contrast, the West continued to grow its population at a faster rate than its headquarters. Hence, it remains the least headquarters-intensive region on a per capita basis, despite the tremendous growth in high-tech manufacturing in the 1990s (see figure 7). High-tech manufacturing—defined at the 3-digit SIC level as pharmaceuticals, computers and office equipment, communication equipment, electrical components, and aircraft and parts—behaved very differently from the rest of manufacturing during the 1990s.[15] The West experienced the strongest growth in high-tech manufacturing headquarters, leaving it with the highest share at the end of the decade, ahead of the Northeast. The Midwest, on the other hand, experienced an almost commensurate drop in its share. Underlying that phenomenon is the well-known growth of the high-tech sector during the 1990s, a large part of which occurred in and around Silicon Valley. The "rest" of manufacturing experienced little change in its regional distribution; the Midwest region's share remained essentially unchanged, whereas the Northeast lost share and the South gained share.

The role of regional industry specialization can be seen in examining the individual components of growth and decline for a few representative metropolitan areas. (see table 3). Table 3, panel A starts in 2000 and looks at the history of large headquarters over the previous ten years. We distinguish the following categories: 1) survivor in same metropolitan area with same company name and as large company; 2) indigenous company that grew during decade above 2,500 employees; 3) company is the result of merger involving companies listed separately in 1990—merged

**FIGURE 4**

**Where the headquarters are, 2000**

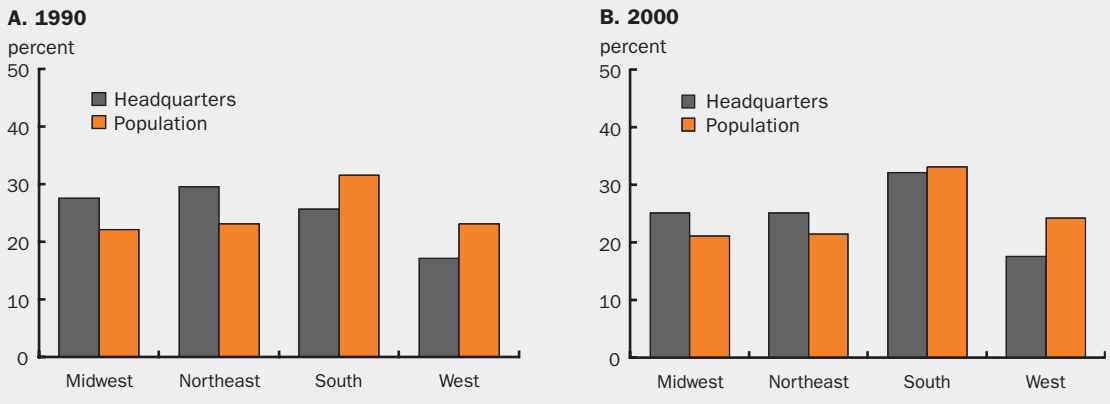


Note: Figure includes boundaries of four census regions: West, Midwest, South, and Northeast.
Sources: Compustat, Census Bureau, and authors' calculations.

entity in MSA as listed; 4) company relocated; 5) company newly established, and 6) other. Panel A shows interesting differences and similarities across the three metropolitan areas. First, the incidence of companies relocating across metropolitan areas, while big news in the business press, does not affect the distribution of headquarters in a noticeable way. For all three metropolitan areas, between 7 percent and 10 percent of the headquarters active in 2000 had moved since 1990.[16] On the other hand, we can see strong differences in the degree of churn across these three metropolitan areas. San Francisco, the center of the Internet and high-tech expansion of the last decade, finds itself with 57 percent of its large headquarters in 2000 either having been started during the decade (26 percent)[17] or growing above the large company threshold (31 percent).

**FIGURE 5**

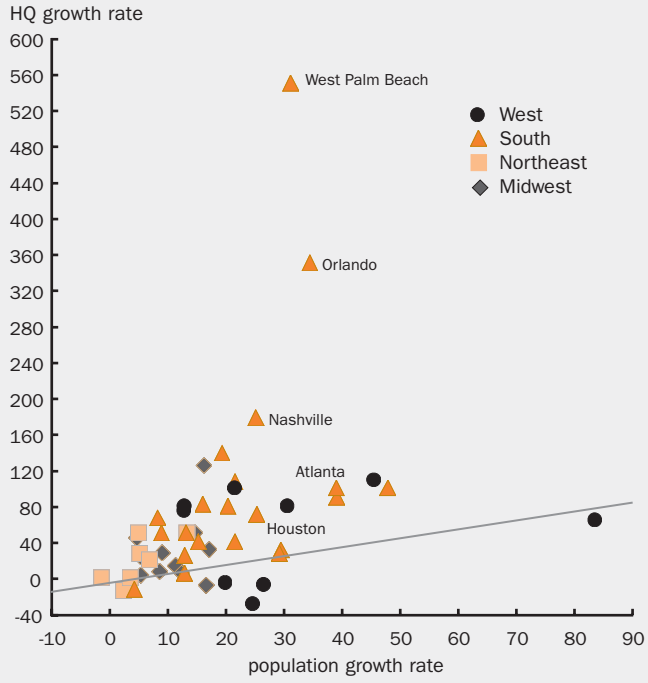
**Distribution of headquarters and population by region**




Sources: Compustat, Census Bureau, and authors' calculations.

**FIGURE 6**

**Population and headquarters growth in 1990s, 50 largest MSAs**




Sources: Compustat, Census Bureau, and authors' calculations.

Neither New York nor Chicago approaches these numbers. By the same token, the latter two are characterized by larger survival rates of large company headquarters.

Table 3, panel B traces the 1990 headquarters to the year 2000. The table distinguishes the following categories: 1) survivor in same metropolitan area with same company name and as large company; 2) indigenous company whose employment fell below 2,500 over the decade; 3) company is the result of merger involving companies listed separately in 1990—merged entity in MSA as listed; 4) company is result of merger involving companies listed separately in 1990—merged entity in different MSA; 5) company relocated to different MSA; 6) company went out of business; and 7) other. Again, similarities dominate. About half of the 1990 headquarters survived in the same metro area. With the exception of New York, we find relocation of companies to be a rather rare occurrence, involving between 5 percent and 8 percent of the companies.

## Model

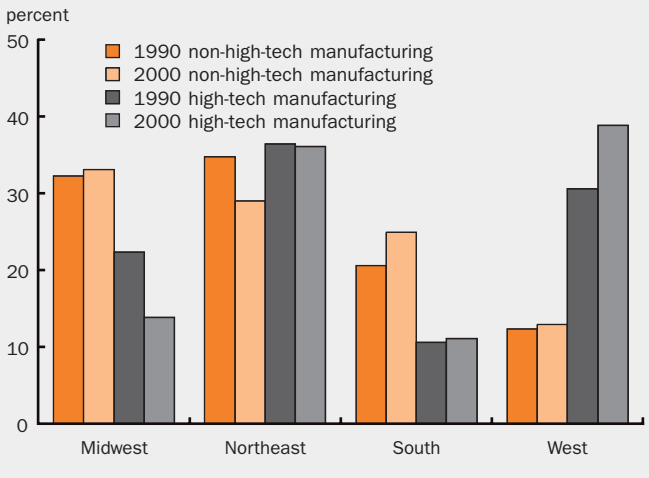
To more rigorously test the relationship between the factors discussed above and the change of headquarters at the MSA level, we use multiple regression analysis. Below, we briefly explain the variables and present the results. The dependent variable in our model is the percentage change in the number of headquarters in a metropolitan area. In order to minimize the effect of a small base at the start of the decade, we use only the 50 most populous metropolitan areas (see table 2).[18]

The descriptive data presented earlier suggest a number of influences on the change in the concentration of headquarters during the last decade. The high degree of concentration of headquarters among a relatively small number of metro areas suggests the existence of a scale effect in hosting headquarter operations. That effect is measured in our model by the level of population. While the coefficient for this variable should reflect the scale effect, we estimate the model only for the largest metro areas, so it should also pick up the redistribution from the largest to the medium-sized metro areas. Hence, the expected sign is ambiguous.

We also include a variable measuring the percent change in population during the decade. This variable

**FIGURE 7**

**Non-high-tech vs. high-tech manufacturing headquarters by region**




Sources: Compustat, Census Bureau, and authors' calculations.

**TABLE 3**

**Churn rate of headquarters**

**A. Looking back from 2000**

| Categories | Chicago | New York | San Francisco |
|---|---|---|---|
| | (- - - - - - - - - - - - - - - percent - - - - - - - - - - - - - - -) | | |
| Survivor | 49 | 41 | 30 |
| Growth | 12 | 10 | 31 |
| Merged or acquired | 12 | 18 | 5 |
| Moved in | 6 | 10 | 5 |
| New | 17 | 20 | 26 |
| Other | 4 | 2 | 2 |

**B. Looking forward from 1990**

| Categories | Chicago | New York | San Francisco |
|---|---|---|---|
| Survivor | 55 | 44 | 52 |
| No longer large | 3 | 6 | 2 |
| Merged/acquired stayed | 8 | 20 | 4 |
| Merged/acquired left | 18 | 7 | 27 |
| Moved out | 5 | 14 | 8 |
| Out of business | 8 | 8 | 4 |
| Other | 1 | 2 | 4 |

Note: Total may not add to 100 due to rounding
Source: Compustat.

should capture the shifting of markets away from the traditional centers of commerce and population and show a positive sign. We might also see such a response to growing population because the universe of large companies is increasingly composed of service rather than manufacturing companies.[19] In addition, service companies tend to be more regional than national or international in market scope. However, various past studies argue that headquarters need not follow markets. That is because enhanced communication technology may allow control and oversight functions to be conducted from afar.

Two variables control for the sectoral composition of the metropolitan areas. First, we measure the share of manufacturing earnings in all nonfarm earnings (1989 data) in each metropolitan area. We expect a negative sign insofar as the Northeast and Midwest have been losing their dominance in manufacturing production to other regions. However, as documented by Rees (1978) and others, headquarters tend to remain behind, or follow regional demand shifts only with long lags. Second, we compute a comparable share for employment in the FIRE sector to proxy for the degree to which a metro area specializes in the provision of business services. We expect a positive sign for two reasons. First, much of the activity in FIRE industries is of the type purchased and outsourced by headquarters. Purportedly owing to the forces of globalization, headquarters are increasingly seeking to locate where such services are accessible. Second, headquarters of FIRE industries, especially banking, have been rapidly consolidating, forming companies of large size, and perhaps doing so in metropolitan areas that already specialize in such activities. We also control for the regional composition of headquarters growth by a binary variable that measures if the MSA is located in the South, as defined by the census region.

The regression results point to the effect of the change in population as well as the provision of business services in influencing headquarters growth at the metro area level (see table 4). Consistently, these two variables are statistically significant in the three model variations we estimated. We find that headquarters growth is elastic with respect to growth in population: An increase in the growth of population by 1 percent is associated with a 2 percent increase in the growth of headquarters. A 1 percent increase in the earnings share in the FIRE

**TABLE 4**

**Regression results**

| Variables | Model 1 | Model 2 |
|---|---|---|
| Intercept | –0.08<br>(0.62) | –0.72<br>(0.65) |
| Level of population (millions) | –0.061<br>–0.04 | –0.038<br>–0.04 |
| Change in population | **2.14**<br>(0.96) | **2.09**<br>(0.92) |
| Manufacturing share | –0.69<br>(1.79) | 0.83<br>(1.83) |
| FIRE share | **8.95**<br>(5.05) | **9.45**<br>(4.82) |
| South | — | **0.63**<br>(0.27) |
| R-squared | 0.21 | 0.30 |
| Adjusted R-squared | 0.14 | 0.22 |

Notes: Standard errors are in parentheses. Numbers in bold are statistically significant. FIRE is finance, insurance, and real estate.

sector corresponds to a 9.5 percentage point increase in the growth rate of headquarters. Finally, if a metro area is located in the South, we observe headquarters growth that is about 0.6 percent higher than in metro areas located in the rest of the country.

## Conclusion

Headquarters of large companies continue to be desired and actively pursued by states and regions. Our findings for the 1990s provide further evidence to support the historical trend that the largest urban areas are highly preferred as headquarters locations. The momentum of this locational preference apparently continued throughout the decade. However, the evidence does point to some changes in the distribution of large headquarters among sizable metropolitan areas. First, the very largest metropolitan areas witnessed a drain of headquarters to the middle tier of cities during the 1990s. New York City had been experiencing an erosion for several decades, but the trend is more pervasive than that. Apparently, second-tier cities have improving chances of success in the competition for large company headquarters. This tendency for gains among the second tier may surprise some analysts of globalization, who have predicted that the larger and more complex companies that result from globalization would flock to the very largest metropolitan areas in search of the most extensive communications, talent, ideas, and transportation. Further investigation is needed to understand the nature of the shifting distribution of headquarters by size of metropolitan area.

Significant shifts are also taking place among regions and among metropolitan areas. Among large multi-state regions, the South was a big gainer in the 1990s. To some extent, this reflects the shifting of markets and population growth to the South. Yet, the West also gained population but did not experience headquarters gains to the same extent. Apparently, in addition to market growth, the maturing of key urban areas in the South is contributing to the region's attractiveness. Among both metropolitan areas and regions, the performance of indigenous industries and individual companies is also key. Our research clearly shows that company headquarters do not migrate so much as they grow and decline.

NOTES

[1]Of 91 headquarters in the San Francisco Bay area at the end of 2000, 28 represent public companies that grew during the decade and 20 represent companies that went public during the decade.

[2]See Sassen, 2001a, p. 109.

[3]See, for example, Scott, 2001, p. 82.

[4]Microsoft may be one prominent example where a dominant company chose a non-standard indigenous location. In contrast, Gateway Computer's move from North Sioux City, SD, to San Diego, CA, in 1999 attests to the countervailing pull that urban economies can exert on large companies.

[5]Compustat created "pre-FASB" company records upon introduction of FASB rule 94 regarding the accounting of financial service subsidiaries to show consistency between current and historical data.

[6]Our results are robust to lowering the cutoff for large companies to 2,000 employees.

[7]For example, the Chicago CMSA encompasses the primary metropolitan statistical areas of Chicago, IL, Gary, IN, Kankakee, IL, and Kenosha, WI.

[8]In 1990, there are 61 (4.2 percent of all large company records) large company headquarters located outside metropolitan areas; in 2000 there are 66 (3.5 percent).

[9]Horst and Koropeckyi (2000) note that a metro area must have an employment base of at least 750,000 to be considered large enough to develop a strong agglomeration of support services (p. 26).

[10]It is essentially unchanged from 1990.

[11]Federal Reserve Bank of Chicago (2000) and DeYoung et al. (2002).

[12]The four census regions are defined as follows: West: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming; Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin; Northeast: Connecticut, Massachusetts, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont; and South: Delaware, District of Columbia, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Arkansas, Tennessee, Kentucky, Louisiana, Texas, and Oklahoma; also see figure 4.

[13]This continues a trend that has been documented for the 1960s and 1970s; see Rees, 1978.

[14]The figure shows a dot for each headquarters location in the database, regardless of location in metro area. This map represents 1,871 headquarters.

[15]We use the Organization for Economic Cooperation and Development definition of high-tech industries, which is based on R&D intensity (see National Science Board, 2000).

[16]Holloway and Wheeler (1991) identified the dynamics for all the records in their data set. Their finding on the importance of moves very closely matches ours: 10 percent of all additions of headquarters in the top 55 metropolitan areas were due to relocation.

[17]That term is somewhat misleading as start-up is measured relative to the universe of the database; in other words, a private company that was taken public would be classified as a start-up. In fact, 20 of 24 "new" companies in the San Francisco metro area were initial public offerings.

[18]Holloway and Wheeler (1991) estimate a model for 55 metro areas. In order to be included in that set, a metro area had to be host to at least one Fortune 500 headquarters both in 1980 and 1987. Their dependent variable is a measure of the change in corporate dominance, which is measured by the change in the proportion of total Fortune 500 assets held within a metro area.

[19]From 1990 to 2000, the share of service sector companies in our database increased from 9.6 percent to 17.2 percent, while manufacturing companies fell from 43.1 percent to 37.2 percent.

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