# Employment dynamics of individual companies versus multicorporations

Individual companies dominated employment growth during the recent expansion; in contrast, multicorporations were responsible for all the job losses during the recent contraction

Shail Butani, George Werking, and Vinod Kapani Jobs! Jobs! Jobs! The U.S. economy had tremendous job growth during most of the 1990s. Between March 1992 and March 2001, the private sector added 21.5 million jobs, an average gain of 2.4 million jobs per year, and unemployment rates slid to about 4 percent. In contrast, between March 2001 and March 2003, the economy entered a contraction period, losing approximately 3.5 million jobs, that is, an average loss of 1.75 million jobs per year, with unemployment rates edging upwards to about 6 percent. Subsequently, the job market rebounded, with a gain of 786,000 jobs between March 2003 and March 2004, while the unemployment rate ticked to just below 6 percent.

The sharp contrast from the prolonged expansion period to the contraction period has left many questions to consider, such as: What kind of employers created the jobs that led to the job boom and extremely low unemployment rates in the 1990's? Were these single establishment employers or parts of large nationwide multiestablishment companies? Were the employers who led the expansion also leading the downturn of jobs from March 2001 through March 2003? Who were the employers leading the growth in jobs during the turning point period from March 2003 through March 2004? This research provides answers to these and other questions.

This article classifies employers as singleversus multi-establishment firms, which are further broken down into continuous establishments—those in existence during the past and current year in March—and newly opened or closed establishments. All measures are disaggregated by major industrial sectors. The analysis uses traditional measures of net job gains and net job losses to profile the employment contribution by type of employer during the expansion period, March 1992 through March 2001; the contraction period, March 2001 through March 2003; and the recent post-contraction period, March 2003 through March 2004.

The analysis uses over-the-year measures of change from March to March to eliminate any large seasonal variations. We have selected the month of March because it is the traditional reference month for anchoring employment numbers for many Bureau of Labor Statistics programs to the universe counts from the Quarterly Census of Employment and Wages (QCEW). Finally, we discuss the difference between longitudinal and cross-sectional analyses and the importance of using longitudinal analysis to answer the types of questions posed earlier.

## The database of employers

The data used for this study are from the BLS longitudinal database (commonly known as the LDB) for the March 1992 through March 2004 period. The primary data source for the longitudinal database is the quarterly contributions reports filed by employers with their State's unemployment insurance agency. Data for both private and public sector workers and establishments are reported to BLS after the data go through several stages of refinement by the State agencies as part of the BLS QCEW program. BLS and the States have instituted many quality control procedures, but ultimately, the accuracy

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of the longitudinal database is, to a great extent, a function of the quality of microdata being reported to the States. Employment reported by these sources is covered by unemployment insurance laws and these data provide a virtual census (98 percent) of employees on nonfarm payrolls. In an average quarter, this rich and comprehensive database includes about 8 million records.

Among other data elements, the longitudinal database has information about establishments' State, county, industry code, single- or multi-establishment employer status, employment for each month of the quarter, and total quarterly wages.

The quarterly unemployment insurance files are generally transmitted by the States to BLS 5 months after the end of the quarter. BLS processes these files through various edits and links records to previous quarters. The purpose of record linkage is to match, to the extent possible, worksites or establishments that were in continuous operations from one quarter to another, thereby separating them from the worksites

that have opened or closed during the quarter.<sup>3</sup> Record linkage is an important step for longitudinal analysis.

When studying the effects of establishment openings and closings on employment change, we have used the net of openings minus closings rather than examining openings and closings separately.<sup>4</sup> Business employment dynamics data from BLS show that, although both openings and closings individually contribute large employment changes, the net effect is small because the employment from openings and closings mostly offset each other.

# Concepts and definitions

For the most part, the terms and concepts used in this article are the same as those used in the quarterly publication of BLS Business Employment Dynamics (BED) data.<sup>5</sup> For ease of reading, we include some definitions as well as define some new terms and concepts. (See box.)

# **Definitions and concepts**

Establishment or reporting unit. An economic unit, such as a farm, mine, factory, or store, which provides goods or services. It is typically at a single physical location and engaged in one, or predominantly one, type of economic activity for which a single industrial code may be applied.

Continuous establishments. Establishments that have positive employment in March during 2 consecutive years.

*Openings*. Employment generated by establishments that had zero employment in March<sub>t-1</sub> and positive employment in March<sub>t</sub>.

Closings. Employment loss by establishments that had positive employment in March<sub>t-1</sub> and zero employment in March<sub>t</sub>.

Net openings minus closings of establishments. Net employment change from openings minus closings of establishments from  $March_{t-1}$  to  $March_t$ .

Employer Identification Number (EIN). A number assigned by the Federal Government for Federal income tax purposes. An employer identification number covers one or more establishments within or across States.

Single establishment employers. Employers that operate from one location nationwide or, specifically, employer identification numbers that report having one location nationwide.

Multi-establishment employers. Employers that operate from more than one business location nationwide or, more specifically, employer identification numbers that report having more than one location nationwide.

*Employers and firms*. These terms are synonymous.

Longitudinal analysis time periods. The longitudinal analysis is based on over-the-year employment changes from one March to the next; results of the analysis may change if measurements are taken over a 2- or 5-year period.

Expansion period. March 1992 through March 2001.

Contraction period. March 2001 through March 2003.

Combined period. March 1992 through March 2003.

Turning point year. First positive over-the-year employment growth following the contraction period. Note: This is not the official period for business cycles established by the National Bureau of Economic Research.

Recent turning point year. March 2003 through March 2004.

Previous turning point year. March 1992 through March 1993.

One main concept is that all employers are classified by employer identification numbers (EIN) rather than by establishment. Moreover, all employers are reclassified or realigned at the beginning of each annual period in their appropriate categories. The single- versus multi-status code is retained to the end of that period for measuring over-theyear change. For example, a single account number in March 1994 became a multi-account number by March 1995. Then, for the March 1994 through March 1995 period, the employer identification number is treated as a single account for measuring over-the-year change. In the March 1995 through March 1996 period, it is treated as a multi-account. Conceptually, the growth or decline of an account should be attributable to its initial classification. Thus in the example, it is the single employer identification number account that has experienced a change and became a multi-account number, and vice versa in other cases. It is important to note that the annual realignment process moves substantial employment between single- and multi-employer identification number accounts.

# Job dynamics: single versus multi-firms

During the March 1992 through March 2003 period, single establishment employers made up an average 43 percent of all employment while multi-establishment employers represented 57 percent of employment. (See chart 1.) However, over the entire period, the contribution to employment growth from these two categories is far different from their proportional share of employment, with single establishment firms accounting for 75 percent of the job growth and multi-establishment firms accounting for 25 percent.

Differences between single and multi-firms or employers become even more pronounced as we examine job dynamics during the expansion and contraction periods. During the expansion period, both single and multi-establishment employers contributed to employment growth. Single establishment employers contributed 61 percent of the growth, whereas multi-establishment employers contributed 39 percent of the growth. The contraction period, however, presents a very different picture of how the U.S. job market operated. Somewhat surprisingly, the single establishment employers continued to show some job growth even during the contraction period. Only multi-establishment firms experienced overall job loss.

Next, we consider whether employment change during expansions and contractions comes from continuous establishments or whether it comes from the net of openings minus closings of establishments.<sup>7</sup>

Single establishment firms. During the expansion and contraction periods, both single continuous establishments and net of openings minus closings of single establishments

showed consistent growth. (See chart 2.) The single continuous establishments contributed about 51 percent of the total employment growth during the expansion period and a gain of about 5 percent during the contraction period. For the combined period, single continuous establishments contributed about 62 percent of total private employment growth. This growth is even more noteworthy given that single continuous establishments represent only about 41 percent of total private employment.

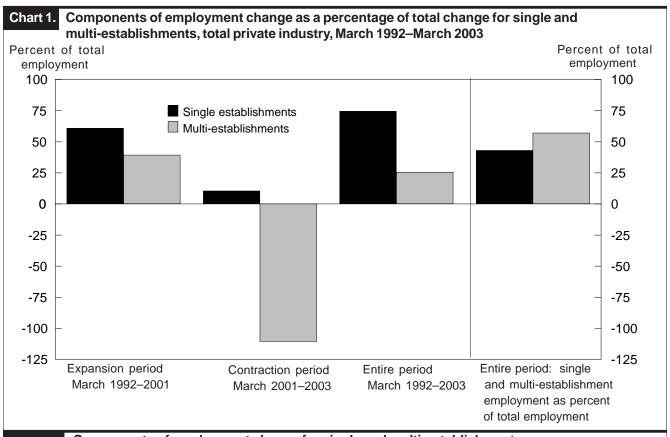
The contribution of employment growth from single net openings minus closings of establishments was also positive during both periods. During the expansion period, these establishments contributed about 10 percent to employment growth, and during the contraction period, their contribution was 5 percent. Over the combined period, employment from single net openings minus closings of establishments contributed 13 percent of total growth.

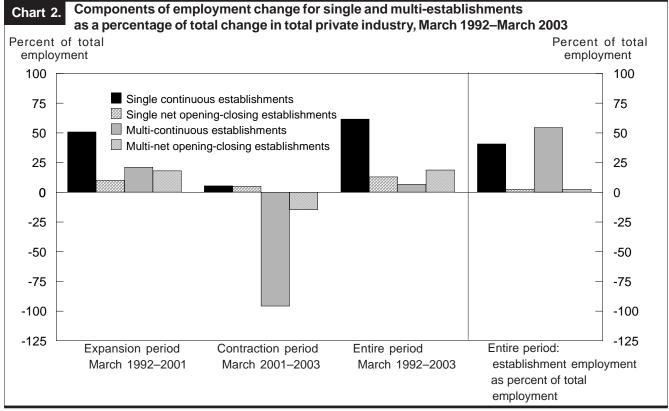
Multi-establishment firms. Multi-establishment employers appear to have operated quite differently from single establishment employers. Many large multicompanies have a number of identical (same size, same product) establishments and they expand by opening new locations, with the continuous establishments maintaining employment levels within a fixed range.

Unlike single firms, during the expansion period, multi-establishment firms had approximately equal growth between the multi-continuous establishments and the net openings minus closings of establishments (chart 2). The multi-continuous establishments contributed about 21 percent to the growth during the expansion period. In contrast, they contributed 96 percent of the total job decline during the contraction period. During the combined period, the multi-continuous establishments account for less than 7 percent of total gain in employment.

Correspondingly, employment growth from net openings minus closings among multi-establishment firms was 18 percent during the expansion period. The employment loss from closings of their less profitable establishments exceeded the employment gains from openings during the contraction period. This loss was about 15 percent. For the combined period, the growth from net openings minus closings of multi-establishment firms accounted for 19 percent of the gain.

Thus far, the analysis of employment dynamics among single and multi-establishment employers reveals that single continuous establishments dominated employment growth during the expansion period and continued to grow even during the contraction period. In contrast, multi-continuous establishments show a much stronger cyclical pattern and were responsible for virtually all of the net job losses during the contraction period. The next section examines these dynamics over the 2003–04 recovery as the U.S. economy begins to enter a period of employment growth.





# Job dynamics: the turning point year

To understand the differences between the recent recovery period and the recovery period following the 1991 recession, we compare the turning point years following the two contraction periods. Chart 3 shows the details of over-the-year employment changes from March 1992 through March 2004. During the March 2003 through March 2004 turning point year, job growth is less than that of any of the years during the expansion period. The total employment gain (786,000) for this recent turning point year is about half the employment gains (1.5 million) during the previous turning point year, March 1992 through March 1993.

Growth from the single continuous establishments (750,000) for the recent turning point year is in line with the corresponding growth (878,000) during the previous turning point year, as is the growth from net openings minus closings of establishments. Thus, single establishment firms exhibited similar patterns during each of the turning point years. The major difference in total job growth arose from the behavior of the multi-establishment firms.

For the recent turning point year, net openings minus closings of multi-establishment firms had a gain (936,000) almost three times the size of the previous turning point year (349,000) and twice the size of the average gain during the expansion period. The openings component returned to the highs of the expansion period, whereas the closings component tapered, following the large losses during the contraction period. (See chart 4.)

The most striking difference between the two turning point periods, however, is in the behavior of the multi-continuous establishment component as shown in chart 3. During the previous turning point year, the continuous establishment component was essentially flat following the 1991 recession. In the recent turning point year, however, this component continued with large losses (that is, 1.1 million jobs) even while the other components turned positive. These persistent contractures of continuous multi-establishments have significantly hampered the current economic recovery.

# Job dynamics: industrial sector

Description of data. To better understand how job gains and losses in industries are affected, we examine data by industrial sector, which are also broken down by single- or multi-establishments employers. Within each category, the data are further broken into continuous establishments and net of openings minus closings of establishments for the expansion, contraction, and combined period. Chart 5 shows the average yearly employment change during expansion and contraction periods for major industry sectors and table A–1 provides additional data. Chart 6 shows the percent of total

private employment by major industry sector, providing a frame of reference from which to measure employment change.

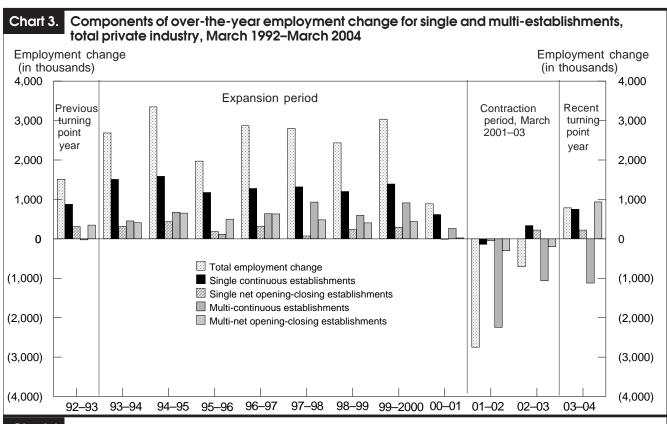
Single establishment firms. During the expansion period, the single continuous establishments had modest to healthy growth in all sectors. Net openings minus closings resulted in strong gains in professional and business services and leisure and hospitality sectors, but there were also small losses due to closings in the manufacturing sector and the trade and transportation sector. During the contraction period, most sectors experienced losses—especially manufacturing. These losses were, however, more than offset by continued strong growth in financial activities; education and health services; the remaining components of the service sector; and firms that initially do not have an industrial code or are unclassified (table A–1). For the combined period, all sectors except nondurable manufacturing had modest to healthy gains. All components of the service sector and construction had very strong gains.

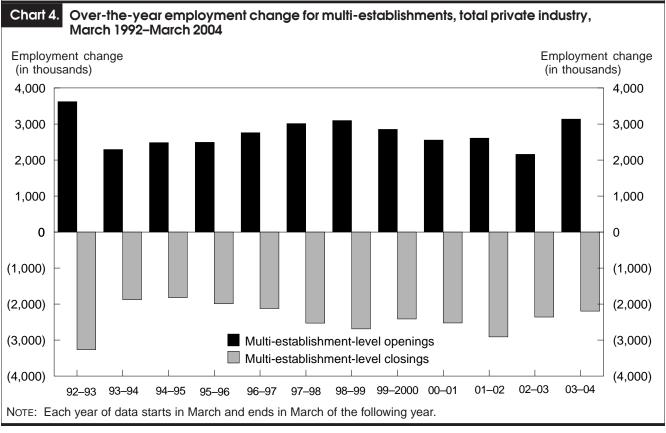
Multi-establishment firms. During the expansion period, the multi-establishment employers experienced solid growth in all sectors except in natural resources and mining and in manufacturing. During the contraction period, the three major sectors with the heaviest job losses from multi-continuous establishments were manufacturing; trade and transportation; and professional and business services. Not surprisingly, these sectors also had a high concentration of multi-establishment employment. (See chart 6.) Also during the contraction period, multi-continuous establishments in all sectors experienced employment loss; the major exception was the education and health services sector, which had a gain of about 300,000 jobs.

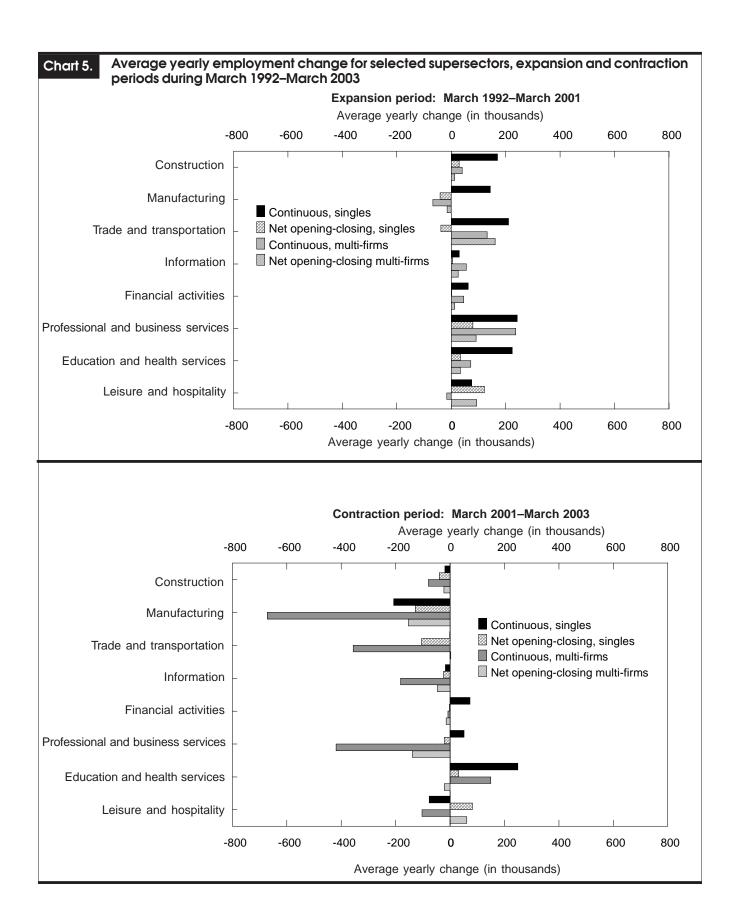
# Longitudinal versus cross-sectional

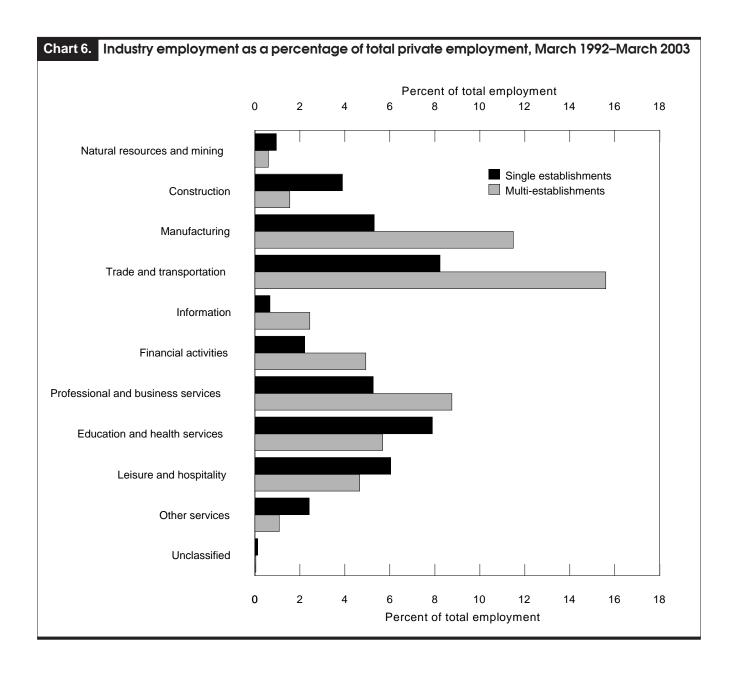
Thus far we have based our analysis on a longitudinal methodology; that is, an employer is classified at the beginning of the period, and its over-the-year employment change is measured using the beginning period classification. At the beginning of the next year, the employer is "reclassified" according to its new status and another over-the-year change is measured; these over-the-year changes are then aggregated over the entire economic period.

For comparison, we examine a cross-sectional analysis that provides a snapshot of the economy at the beginning of a time period (for example, March 1992) and another snapshot at the end of the time period (for example, March 1993), and then a change is calculated. The primary difference between the two measures is that under longitudinal analysis, the employment change is calculated "before" the firms are reclassified, whereas under cross-sectional analysis, the employment change is calculated "after" the reclassification









has taken place. Although this may seem like a subtle distinction, it can lead to substantially different results.

On the one hand, the longitudinal analysis indicates that single firms created most of the jobs over the combined period. From March 1992 through March 2003, single establishment employers contributed about 13.5 million jobs, and multiemployers contributed 4.6 million jobs. (See appendix table A–2.) A cross-sectional analysis, on the other hand, shows that single-firms employment grew by about 4.4 million, whereas multi-firms grew by 13.7 million. Thus, the two different analytical approaches produce opposite conclusions as to who created the most jobs.

The reason for the large discrepancy between the measures of change is that the longitudinal analysis measures of change reflect only the individual firm employment change (that is, economic change), whereas the cross-sectional analysis measures of change reflect both the individual firm employment change and the firm's annual reclassification change.

Consider, for example, a tabulation cell that had only a single establishment employer with employment of 100 in March 1994 that became a multi-establishment employer by opening another location during the course of the year, and in March 1995, it had 140 employees. Then, under longitudinal analysis for the cell, the single employer category would show

an employment growth of 40 employees and the multiestablishment cell would show no change. Under crosssectional analysis, however, the single establishment employer cell would show a loss of 100 employees (due to the firm's reclassification from single- to multi-establishment employer) and the multi-establishment employer cell would show a gain of 140 employees coming again from the reclassification shift.

The reclassification changes occur for various reasons,<sup>8</sup> but these classification change units (that is, units moving from single- to multi-status or from multi- to single status) generally have very small employment changes over the year and contribute very little to the annual total economic change measures (chart 7). Their effect comes as they are reclassified each year and total employment is moved out of one cell and into the other. The employment shift from single- to multi-status establishment employers is always much larger than the shift from multi-establishment to single establishment employers. Over the combined period, a net of 9.0 million jobs shifted out of singles and into the multi-establishment employer category (chart 8, table A–2).

Looking at the apparent contradictory results between longitudinal versus cross-sectional analysis, we see from chart 8 that this is because of the 9.0 million net employment shift due to reclassification. From an economic change perspective, longitudinal analysis indicates that single establishment firms grew by 13.5 million over the combined period and multi-establishment firms grew by 4.6 million. However, when the reclassification change is added to the economic change under cross-sectional analysis, the result is reversed. Thus, when attempting to answer the question—Who creates the most jobs?—the longitudinal analysis is the proper method because its measures include only economic change and are unaffected by reclassification change.

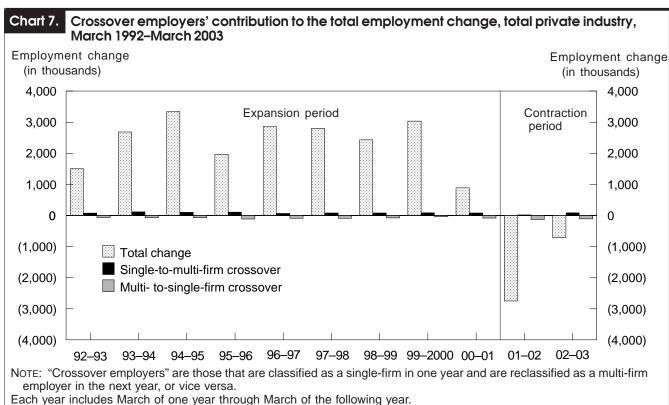
# Summary of results

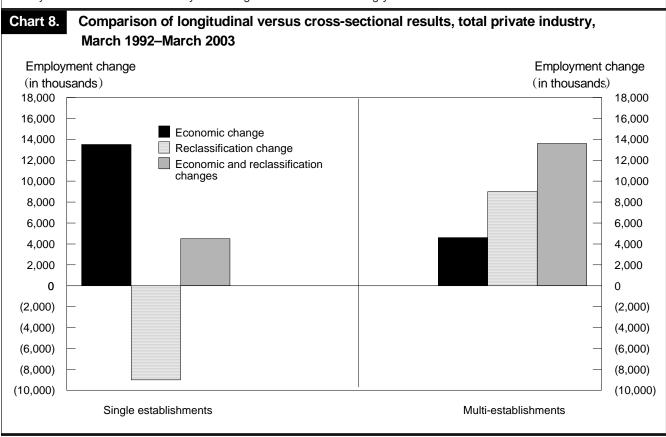
- Single establishment employers compose approximately 43 percent of total employment and, over the combined period, contributed about 75 percent of the total growth. Of this growth, about 62 percent came from continuous establishments and about 13 percent from net openings minus closings of establishments. During the expansion period, single continuous establishments contributed more than 50 percent of the total growth. Even during the contraction period, single firms contributed to employment growth.
- Multi-establishment employers compose 57 percent of the total employment. Over the combined period, they contributed only 25 percent of the total growth. During the contraction period, multi-continuous

- establishments contributed virtually all (down 96 percent) of the employment loss.
- Total job growth during the recent turning point year (March 2003 through March 2004) was about onehalf of the previous turning point year (March 1992 through March 1993). The job gains from single continuous establishments and the net openings minus closings of establishments were about the same level for the 2 turning point years.
- Multi-continuous establishments had substantial job losses of 1.1 million jobs for the current turning year, compared with nearly 0 in the previous turning point year. In contrast, the gains from net openings minus closings of multi-establishment employers were at a very high level and three times the level in the previous turning point year with openings reaching a peak and closings, although substantial, remaining relatively low.
- During the expansion period, single firms had modest to healthy growth in all industrial sectors coming from the continuous establishments and strong gains in the service sector from net openings minus closings of establishments.
- For the contraction period, the most significant observation is that the single continuous establishments posted strong growth in the education and health sector, as well as some growth in the financial activity sector.
- Multi-establishment employers experienced solid growth in most industrial sectors during the expansion period. Employment growth during this period was split almost evenly between continuous establishments and openings minus closings of establishments. During the contraction period, the employment loss in all sectors except education and health services was mostly generated by multicontinuous establishment operations.
- Longitudinal analysis shows that, over the combined period, the growth from single establishment employers accounted for 13.5 million jobs, and the growth from multi-establishment employers contributed 4.6 million jobs.

### **Future directions**

BLS recently established a longitudinal database that allows researchers to understand better the U.S. labor market. Several ideas for further research have emerged from this study. For example, a micro-level longitudinal analysis of multicontinuous establishments could provide a detailed profile of





multi-establishment employers, including their pattern of employment changes, especially the steep decline during the contraction period.

An analysis of the data by size of employer, broken down by single and multi-employers would be valuable. It is likely that the growth pattern differs for the two employer types by size class.

Also of interest would be an analysis by growth or decline in employment by age of firm and by size class for single and multi-employers, separately as well as combined.

#### **Notes**

ACKNOWLEDGMENT: The authors would like to thank many persons in the BLS Office of Employment and Unemployment Statistics for contributing their thoughts and ideas. The authors would like to acknowledge especially Paul Grden and Jenny Lin for their valuable contributions towards programming and processing the data and for the visual displays of the data in chart and table formats.

- $^{1}$  During the expansion period, total change for single establishment firms is 13.1 million and 8.4 million for multi-establishment firms, or a total growth of 21.5 million for the private sector. See appendix table A–1.
- $^2$  During the, contraction period, total change for single establishment firms is 362,000 and a loss of 3,827,000 for multi-establishment firms, or a total loss of 3.5 million jobs in the private sector. See appendix table A–1.
- <sup>3</sup> For an in-depth description of the record linkage methodology, see K. Robertson, L. Huff, G. Mikkelson, T. Pivetz, and A. Winkler, "Improvements in Record Linkage Processes for the Bureau of Labor Statistics' Business Establishment List," *Proceedings for the 1997 Record Linkage Workshop and Exposition* (Office of Management and Budget, 1997).
- <sup>4</sup> Data for various types of openings and closings were tabulated separately and then appropriate subtraction was done to obtain net openings minus closings statistics.
- <sup>5</sup> For additional details about definitions, see Richard Clayton, Jason Faberman, Akbar Sadeghi, James Spletzer, and David Talan, "Business Employment Dynamics," *Monthly Labor Review*, April 2004, pp. 29–

- 42. Also, quarterly Business Employment Dynamics data are available on the Internet at www.bls.gov/bdm/home.htm.
- <sup>6</sup> When referring to data for all years within a period, the statistics are derived by summing the annual employment or employment changes within that economic period and domain and then performing appropriate arithmetic operations.
- <sup>7</sup> The employment generated by openings that occur in the recent time period becomes part of either the continuous or closings population in the subsequent time period. For example: The employment generated by openings in the March 1994–March 1995 period becomes either part of the continuous population or employment loss from closings for the March 1995–March 1996 period. Thus, statistics on the change from the continuous population and net employment from openings minus closings are dependent upon the time period over which the change is measured. For example: The employment gains from single continuous establishments over the entire expansion period of 9 years (same establishments with positive employment in March 1992 and in March 2001) is expected to be different than the sum of the nine annual employment changes.
- <sup>8</sup> There are three major reasons for the movement between single and multi-employers. They are: 1) business expansion or contraction; 2) business mergers, acquisitions, and consolidations; and 3) business changes in reporting practices, such as when a multi-establishment employer that used to report all of its operations from one location has started to provide data by breaking out its operations into two or more locations. Similarly, contracting firms might close or sell establishments

|   |  | Single companies                 |                        |                                     |                          | Multicorporations                |                        |                                     |                          |  |
|---|--|----------------------------------|------------------------|-------------------------------------|--------------------------|----------------------------------|------------------------|-------------------------------------|--------------------------|--|
| NAICS<br>Code   | Industry   | Beginning<br>employment<br>level | Total<br>change        | Change in continuous establishments | Net<br>opened-<br>closed | Beginning<br>employment<br>level | Total<br>change        | Change in continuous establishments | Net<br>opened-<br>closed |  |
|   | Expansion period:<br>March 1992–March 2001               |                                  |                        |                                     |                          |                                  |                        |                                     |                          |  |
|   | Total private  | 39,940,056                       | , ,                    |                                     | 2,154,702                | 47,084,051                       | 8,435,570              |                                     | 3,893,396                |  |
| 11, 21<br>23  | Natural resources and mining . Construction              | 931,620<br>3,006,560             | 89,272<br>1,797,441    | 68,351<br>1,533,168                 | 20,921<br>264,273        | 602,126<br>1,187,792             | -62,462<br>481,109     |                                     | -27,506<br>114,638       |  |
| 321, 327, 33  | Durable manufacturing                                    |                                  | 911,544                | 1,018,209                           | -106,665                 | 6,766,181                        | -175,466               | 1 '                                 | 45,574                   |  |
| 31, 322, 323,<br>324, 325,                                | Nondurable manufacturing                                 | 2,157,383                        | 21,149                 | 281,462                             | -260,313                 | 4,564,473                        | -568230                | -385,543                            | -182,687                 |  |
| 326<br>321, 327,<br>33: 31, 322,<br>323, 324,<br>325, 326 | Durable and nondurable manufacturing                     | 5,289,593                        | 932,693                | 1,299,671                           | -366,978                 | 11,330,654                       | -743,696               | -606,583                            | -137,113                 |  |
| 42  | Wholesale trade  | 2,003,434                        | 456,113                | 554,191                             | -98,078                  | 2,881,405                        | 505,478                | 509,005                             | -3,527                   |  |
| 44, 45  | Retail trade   | 5,018,616                        | 719,273                | 961,500                             | -242,227                 | 7,530,806                        | 1,680,328              | 282,052                             | 1,398,276                |  |
| 48, 49, 22  | Transportation, warehousing, and utilities               | 1,067,002                        | 379,671                | 382,295                             | -2,624                   | 2,802,873                        | 461,333                | 400,868                             | 60,465                   |  |
| 51  | Information  |                                  | 318,162                | 269,036                             | 49,126                   | 2,010,801                        | 733,544                |                                     | 232,902                  |  |
| 52, 53<br>54, 55, 56                                      | Financial activities<br>Professional and business        | 2,255,742                        | 576,657                | 561,393                             | 15,264                   | 4,251,953                        | 538,655                | 421,496                             | 117,159                  |  |
| 61, 62  | services Education and health                            | 4,391,047                        | 2,910,494              | 2,188,376                           | 722,118                  | 6,181,098                        | 2,964,019              | 2,138,556                           | 825,463                  |  |
| 71, 72  | services<br>Leisure and hospitality                      |                                  | 2,330,290<br>1,776,568 | 2,021,444<br>676,087                | 308,846<br>1,100,481     | 3,769,302<br>3,658,353           | 958,911<br>696,220     |                                     | 308,532<br>843,401       |  |
| 81  | Other services   |                                  | 498,111                | 420,872                             | 77,239                   | 862,269                          | 131,891                |                                     | 69,113                   |  |
| 54, 55, 56,<br>61, 62, 71,<br>72, 81                      | Total services   | 19,676,571                       | 7,515,463              | 5,306,779                           | 2,208,684                | 14,471,022                       | 4,751,041              | 2,704,532                           | 2,046,509                |  |
| 99  | Unclassified   | 35,229                           | 316,655                | 10,314                              | 306,341                  | 14,619                           | 90,240                 | -1,353                              | 91,593                   |  |
|   | Contraction period:<br>March 2001–March 2003             |                                  |                        |                                     |                          |                                  |                        |                                     |                          |  |
|   | Total private  | 45,191,561                       | 362,751                | 188,725                             | 174,026                  | 63,369,516                       | -3,827,008             |                                     | -509,003                 |  |
| 11, 21<br>23  | Natural resources and mining                             | 948,319                          | -8,131                 | -1,733                              | -6,398<br>70,331         | 614,786                          | -32,871                | -15,069                             | -17,802<br>-44,390       |  |
| 23<br>321, 327, 33  | Construction  Durable manufacturing                      | 4,524,179<br>3,426,672           | -117,386<br>-464,664   | -38,055<br>-323,275                 | -79,331<br>-141,389      | 1,941,041<br>7,186,529           | -203,826<br>-1,224,007 |                                     | -44,390<br>-202,966      |  |
| 31, 322, 323,<br>324, 325, 326                            | Nondurable manufacturing                                 | 1,801,879                        | -205,381               | -91438                              | -113,943                 | 4,369,943                        | -425,305               |                                     | -103,393                 |  |
| 321, 327,<br>33: 31, 322,<br>323, 324,<br>325, 326        | Durable and nondurable manufacturing                     | . 5,228,551                      | -670,045               | -414,713                            | -255,332                 | 11,556,472                       | -1,649,312             | -1,342,953                          | -306,359                 |  |
| 42  | Wholesale trade  | 1,994,512                        | -64,890                | -5,978                              | -58,912                  | 3,778,200                        | -179,879               | -94,089                             | -85,790                  |  |
| 44, 45<br>48, 49, 22                                      | Retail trade<br>Transportation, warehousing,             | 5,094,396                        | -91,043                | 13,319                              | -104,362                 | 9,910,358                        | -286,518               |                                     | 164,076                  |  |
|   | and utilities  | 1,258,539                        | -57,105                | -10,239                             | -46,866                  | 3,489,140                        | -239,107               | -166,994                            | -72,113                  |  |
| 51<br>52, 53  | Information Financial activities                         | 710,977<br>2,175,215             | -82,585<br>142,818     | -34,020<br>147,379                  | -48,565<br>-4,561        | 2,978,481<br>5,433,424           | -457,331<br>-44,430    |                                     | -93,054<br>-28,835       |  |
| 54, 55, 56  | Professional and business services                       | 5,767,764                        | 62,737                 | 103,704                             | -40,967                  | 10,709,843                       | _1,114,167             | -837,135                            | -277,032                 |  |
| 61, 62<br>71, 72  | Education and health services<br>Leisure and hospitality |                                  | 563,227<br>11,947      | 499,486<br>-153,209                 | 63,741<br>165,156        | 6,492,804<br>5,148,711           | 256,710<br>-81,328     | 299,929                             | -43,219<br>124,256       |  |
| 81  | Other services   |                                  | 7,908                  | 13,211                              | -5,303                   | 1,222,951                        | -24,042                |                                     | -8,458                   |  |
| 54, 55, 56,   | Total services   | 22,917,652                       | 645,819                | 463,192                             | 182,627                  | 23,574,309                       | -962,827               | -758,374                            | -204,453                 |  |
| 61, 62, 71,   |  |                                  |                        |                                     |                          |                                  |                        |                                     |                          |  |

| Table A-1. Continued—Comparison of employment change in single companies and multicorporations |  |  |  |   |  |  |   |  |  |  |
|--|--|--|--|---|--|--|---|--|--|--|
| NAICS<br>Code  |  | Single companies   |  |   |  | Multi-corporations   |   |  |  |  |
|  | Industry   | Beginning<br>employment<br>level                             | Total<br>change  | Change in continuous establishments                     | Net<br>opened-<br>closed                               | Beginning<br>employment<br>level                             | Total<br>change   | Change in continuous establishments        | Net<br>opened-<br>closed                               |  |
|  | Combined period:<br>March 1992–March 2003                                |  |  |   |  |  |   |  |  |  |
| <br>11, 21<br>23<br>321, 327, 33<br>31, 322, 323,<br>324, 325,                                 | Total private  | 39,940,056<br>931,620<br>3,006,560<br>3,132,210<br>2,157,383 | 13,464,151<br>81,141<br>1,680,055<br>446,880<br>–184,232 | 11,135,423<br>66,618<br>1,495,113<br>694,934<br>190,024 | 2,328,728<br>14,523<br>184,942<br>-248,054<br>-374,256 | 47,084,051<br>602,126<br>1,187,792<br>6,766,181<br>4,564,473 | 4,608,562<br>-95,333<br>277,283<br>-1,399,473<br>-993,535 |  | 3,384,393<br>-45,308<br>70,248<br>-157,392<br>-286,080 |  |
| 326<br>321, 327,<br>33: 31,<br>322, 323,<br>324, 325,<br>326                                   | Durable and nondurable manufacturing                                     | 5,289,593  | 262,648  | 884,958   | -622,310   | 11,330,654   | -2,393,008  | -1,949,536                                 | -443,472   |  |
| 42<br>44, 45<br>48, 49, 22   | Wholesale trade<br>Retail trade<br>Transportation, warehousing,          | 2,003,434<br>5,018,616                                       | 391,223<br>628,230                                       | 548,213<br>974,819                                      | -156,990<br>-346,589                                   | 2,881,405<br>7,530,806                                       | 325,599<br>1,393,810                                      | 414,916<br>-168,542                        | -89,317<br>1,562,352                                   |  |
| 51<br>52, 53<br>54, 55, 56   | and utilities Information Financial activities Professional and business | 1,067,002<br>655,689<br>2,255,742                            | 322,566<br>235,577<br>719,475                            | 372,056<br>235,016<br>708,772                           | -49,490<br>561<br>10,703                               | 2,802,873<br>2,010,801<br>4,251,953                          | 222,226<br>276,213<br>494,225                             | 405,901                                    | -11,648<br>139,848<br>88,324                           |  |
| 61, 62   | services<br>Education and health   | 4,391,047  | 2,973,231  | 2,292,080   | 681,151  | 6,181,098  | 1,849,852   | 1,301,421                                  | 548,431  |  |
| 71, 72<br>81<br>54, 55, 56,<br>61, 62, 71,<br>72, 81   | services Leisure and hospitality Other services Total services           | 7,641,099<br>5,392,370<br>2,252,055<br>19,676,571            | 2,893,517<br>1,788,515<br>506,019<br>8,161,282           | 2,520,930<br>522,878<br>434,083<br>5,769,971            | 372,587<br>1,265,637<br>71,936<br>2,391,311            | 3,769,302<br>3,658,353<br>862,269<br>14,471,022              | 1,215,621<br>614,892<br>107,849<br>3,788,214              | 950,308<br>-352,765<br>47,194<br>1,946,158 | 265,313<br>967,657<br>60,655<br>1,842,056              |  |
| 99   | Unclassified   | 35,229   | 981,954  | 79,887  | 902,067  | 14,619   | 319,333   | 48,023                                     | 271,310  |  |

## Over-the-year employment change and annual shifts in employment in private single and multi-firms, March 1992–March 2003 Table A-2.

| Period                   | Single firms <sup>1</sup>        |                                      |                               |  |                  | Multi-firms <sup>2</sup>         |                                      |                               |  |   |  |
|--------------------------|----------------------------------|--------------------------------------|-------------------------------|--|------------------|----------------------------------|--------------------------------------|-------------------------------|--|---|--|
|                          | Beginning<br>employment<br>level | Change<br>within<br>1-year<br>period | Ending<br>employment<br>level | Net<br>employment<br>shift from<br>singles in<br>the current<br>period | level of<br>next | Beginning<br>employment<br>level | Change<br>within<br>1-year<br>period | Ending<br>employment<br>level | Net<br>employment<br>shift from<br>singles in<br>the current<br>period | Beginning<br>level of<br>next<br>period |  |
| 1-year period            |                                  |                                      |                               |  |                  |                                  |                                      |                               |  |   |  |
| March:                   |                                  |                                      |                               |  |                  |                                  |                                      |                               |  |   |  |
| 1992-93                  | 39,940,056                       | 1,189,307                            | 41,129,363                    | -1,303,759   | 39,825,604       | 47,084,051                       | 316,757                              | 47,400,808                    | 1,303,759  | 48,704,567                              |  |
| 1993-94                  | 39,825,604                       | 1,821,767                            | 41,647,371                    | -1,163,574   | 40,483,797       | 48,704,567                       | 862,554                              | 49,567,121                    | 1,163,574  | 50,730,695                              |  |
| 1994–95                  | 40,483,797                       | 2,018,566                            | 42,502,363                    | -988,673   | 41,513,690       | 50,730,695                       | 1,327,548                            | 52,058,243                    | 988,673  | 53,046,916                              |  |
| 1995–96                  | 41,513,690                       | 1,358,907                            | 42,872,597                    | -882,881   | 41,989,716       | 53,046,916                       | 611,457                              | 53,658,373                    | 882,881  | 54,541,254                              |  |
| 1996–97                  | 41,989,716                       | 1,600,113                            | 43,589,829                    | -990,609   | 42,599,220       | 54,541,254                       | 1,269,297                            | 55,810,551                    | 990,609  | 56,801,160                              |  |
| 1997–98                  | 42,599,220                       | 1,388,657                            | 43,987,877                    | -601,591   | 43,386,286       | 56,801,160                       | 1,412,519                            | 58,213,679                    | 601,591  | 58,815,270                              |  |
| 1998–99                  | 43,386,286                       | 1,436,374                            | 44,822,660                    | -669,756   | 44,152,904       | 58,815,270                       | 999,226                              | 59,814,496                    | 669,756  | 60,484,252                              |  |
| 1999–2000                | 44,152,904                       | 1,685,648                            | 45,838,552                    | -750,739   | 45,087,813       | 60,484,252                       | 1,349,423                            | 61,833,675                    | 750,739  | 62,584,414                              |  |
| 2000–01                  | 45,087,813                       | 602,061                              | 45,689,874                    | -498,313   | 45,191,561       | 62,584,414                       | 286,789                              | 62,871,203                    | 498,313  | 63,369,516                              |  |
| 2001–02                  | 45,191,561                       | -195,287                             | 44,996,274                    | -597,160   | 44,399,114       |                                  | -2,555,751                           | 60,813,765                    | 597,160  | 61,410,925                              |  |
| 2002–03                  | 44,399,114                       | 558,038                              | 44,957,152                    | -595,973   | 44,361,179       | 61,410,925                       | -1,271,257                           | 60,139,668                    | 595,973  | 60,735,641                              |  |
| 11-year period<br>March: |                                  |                                      |                               |  |                  |                                  |                                      |                               |  |   |  |
| 1992–2003                | 39,940,056                       | 13,464,151                           |                               | -9,043,028   | 44,361,179       | 47,084,051                       | 4,608,562                            |                               | 9,043,028  | 60,735,641                              |  |

 $<sup>^{1}\,</sup>$  Longitudinal analysis: gain = 13.5 million; cross-sectional analysis: gain = 4.4 million.  $^{2}\,$  Longitudinal analysis: gain = 4.6 million; cross-sectional analysis: gain = 13.7 million.