

Small Business GDP 1998–2014

by

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ABSTRACT

The paper measures the contributions of small businesses to the American economy from 1998 to 2014. Small business GDP (SGDP) is a unique series that tracks private non-farm GDP for small businesses. SGDP contributed \$5.9 trillion to the \$13.6 trillion private economy in 2014. The small business share of GDP fell from 48.0% in 1998 to 43.5% in 2014 due to 2.5% real annual growth for large businesses versus only 1.4% for small businesses. Productivity in terms of real GDP per employee was \$103,000 for small businesses versus \$122,000 for large businesses in 2014. In contrast, productivity per payroll dollar was \$2.44 for small businesses versus \$2.20 for large businesses. In addition to providing updated national estimates and analysis, the paper combines the SGDP series with other government data sources to provide 16 industrial profiles highlighting the role of small business in each industry.

ACKNOWLEDGMENTS

This report is a joint effort. Kathryn Kobe analyzed and compiled the SGDP data. Her work continues a series begun by Joel Popkin, in which she participated as researcher, co-author, then as principal author. Richard Schwinn, research economist with the Office of Advocacy, used Kobe's SGDP tables to generate the report. Rebecca Krafft, senior editor with the Office of Advocacy, edited the entire report and provided extensive feedback and suggestions.

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1 INTRODUCTION

This report measures the economic output of US small businesses.¹

The small business GDP (SGDP) series is comprised of revised 1998–2007 estimates, new 2008–2012 estimates, and preliminary estimates for 2013 and 2014. [Section 2](#) provides an overview of the main findings. [Section 3](#) delves into the industry-level experiences of small businesses by combining the SGDP series with additional government data sources. [Section 4](#) details the methodology for measuring SGDP. [Section 5](#) discusses related literature and challenges facing small businesses. [Section 6](#) concludes. [Appendix A](#) provides additional statistics and figures displaying the level, growth, and shares of GDP, businesses, and employees for small businesses, large businesses, and the economy as a whole for each industry over the 1998–2014 period. Finally, [Appendix B](#) provides NAICS (2017) industry definitions.

The study data were collected and analyzed under Small Business Administration (SBA) contract number SBAHQ-15-M-0146.

2 FINDINGS

2.1 SMALL BUSINESS GDP (SGDP)

Small businesses created \$5.9 trillion, or 43.5%, of the \$13.6 trillion private non-farm US economy in 2014. This followed 16 years of uneven nominal growth averaging 3.3% per year. SGDP stagnated briefly in 2001, declined \$213 billion during the great recession, and did not recover to pre-recession levels until 2011. The small business share of the economy fell from 48.0% in 1998 to 43.5% in 2014 due to faster nominal growth for large businesses of 4.8% versus 3.3% for small businesses.

Figure 1 displays SGDP over time, the shaded bars highlight recessions. SGDP stagnated briefly in 2001 and declined steeply between 2007 and 2009. SGDP did not recover to 2007 levels until 2011. SGDP was \$3.4 trillion in 1998 and grew 71.9%, or 3.4% annually, to \$5.9 trillion in 2014. The full series, including industry-level breakdowns, is provided in the [Appendix A](#).

2.2 SMALL BUSINESS SHARE OF GDP

Figure 2 shows that the share of GDP attributable to small businesses declined from 48.0% in 1998 to 43.5% in 2014. The share fell sharply

¹ For research purposes, the Office of Advocacy defines a small business as an independent business having fewer than 500 employees. For the industry-level definitions of small business used in government programs and contracting, see <https://www.sba.gov/document/support-table-size-standards>. The terms GDP, SGDP, and large business GDP refer to private non-farm nominal GDP and thus exclude owner-occupied housing, government, and agriculture unless otherwise noted. Including these sectors, total value-added GDP was \$17.4 trillion in 2014.

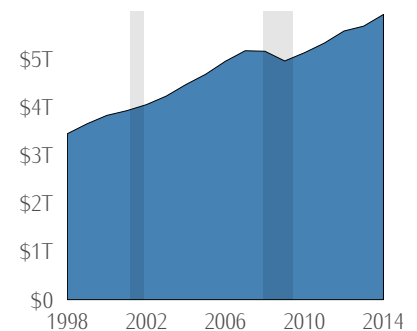


Figure 1: Small Business Nominal GDP, 1998–2014

in 2000 and 2005 and declined steadily in most other years. However, the overall level of SGDP rose throughout the period. Therefore the declining small business share is attributable to the markedly faster growth of large business GDP.

Figure 3 compares SGDP growth rates to large business GDP growth rates for 1998–2014. Points on the dotted 45° line indicate equal small and large business rates, points above the line indicate years when large business GDP grew faster than SGDP, and points below the line indicate that SGDP grew more quickly than large business GDP. SGDP growth exceeded large business GDP growth only once across the period. This is reflected in Figure 3 by the solitary increase in small business share of GDP observed in 2002.²

A solitary point in the third quadrant indicates that both SGDP and large business GDP declined in 2009. In 2008, SGDP declined as well, albeit only slightly. Furthermore, when growth peaked in 2005, SGDP grew 4.8% while large business GDP grew 9.2%, almost double the SGDP rate. Several factors, discussed at length in [Section 5.3](#), help to explain the relatively faster growth of large businesses over the period.

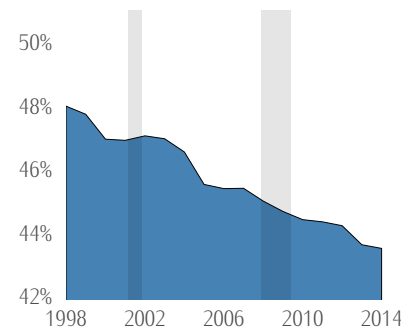


Figure 2: Small Business Share of GDP, 1998-2014

² See detailed tables in Appendix A.



Figure 3: Annual Growth Rates for Small and Large Business GDP, 1998-2014

2.3 SMALL BUSINESS PRODUCTIVITY

Economies grow when they employ more inputs or when the inputs they employ are used more productively. The latter source of growth is called productivity. The ratio of economic output, measured by real GDP, to an input, such as employment, therefore provides a rudimentary approximation for productivity.

Estimates of real SGDP and productivity may be biased for various reasons. For example, the prices for outputs from small and large businesses within the same industry may diverge over time. In addition, price levels for many North American Industrial Classification System (NAICS) defined industries are incomplete and price levels for grouped industries, such as Manufacturing and Mining, are not available. Inaccurate price estimates will overstate growth in subsectors with higher than average inflation rates. Thus, it is unlikely that the difference between the price deflator for the overall economy and one that reflects only small businesses is negligible. Nevertheless, a measure of real SGDP and growth can be approximated by applying the GDP deflator to the nominal SGDP series.

According to the US Bureau of Economic Analysis's (BEA) GDP deflator, \$1.00 in 1998 translates to \$1.38 in 2014. Given this estimate of inflation, real SGDP grew roughly 25% over the period. Real GDP for large businesses, however, grew about 49%. Annualized, these growth estimates translate to growth rates of 1.4% for small businesses and 2.5% for large businesses.³

Figure 4 shows real GDP growth, employee productivity, and the productivity of payroll dollars. Real calculations are provided in 2014 dollars. Figure 4 (b) shows that following the 2001 recession, small and large business real GDP per employee diverged, widening from \$6,100 per worker in 1998 to \$19,200 per worker in 2014. Large businesses recovered more ground during and immediately after both the 2001 and 2008 recessions. This suggests that the recessions stimulated worker productivity for large businesses. Lazear, Shaw, and Stanton (2016) argue that this phenomenon is due to existing workers' increased effort as opposed to changes in workforce composition.

Real GDP per payroll dollar describes the return of payroll spending. Its inverse also provides an intuition. Consider a business that spends \$1 on payroll to create \$2 in output. The inverse of the output per payroll dollar implies that the business spends half of the final value of its output on payroll. Continuing the example, real GDP per payroll dollar of \$4 implies that one-quarter the final value of its output is spent on payroll. Between 1998 and 2014, the figure averaged be-

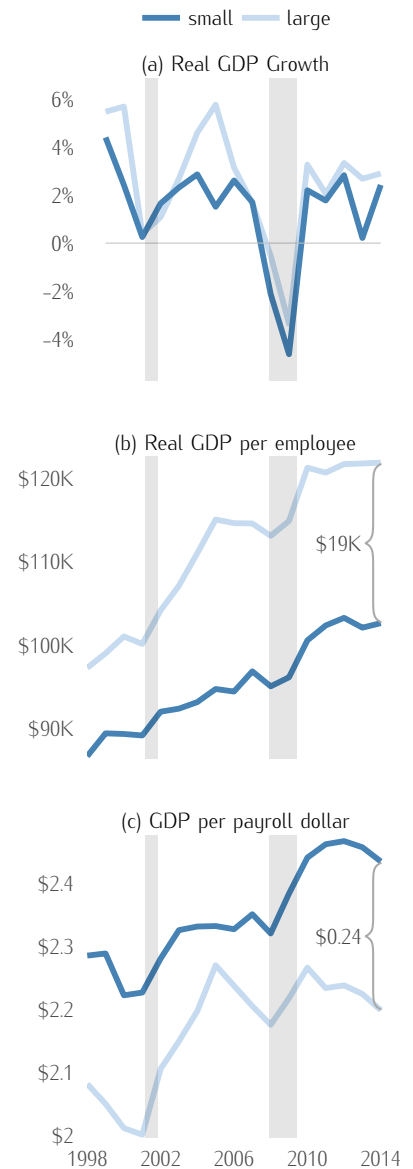


Figure 4: Real GDP, Real GDP per Employee, and Real GDP per Payroll Dollar, 1998–2014

³ Real SGDP growth estimation:

$$\begin{aligned} \text{real SGDP growth} &= \left(\frac{\text{SGDP}_{\text{nominal}}^{2014}}{\text{SGDP}_{\text{nominal}}^{1998}} \right) - 1 \\ &= \left(\frac{5.937}{3.457} \right) \left(\frac{1}{1.38} \right) - 1 \\ &\approx 25\%. \end{aligned}$$

Annualized real SGDP growth:

$$\begin{aligned} \text{annual rate} &= \left((1 + \text{growth})^{\frac{1}{\text{years}}} - 1 \right) \\ &= \left(1.25^{\frac{1}{16}} - 1 \right) \\ &\approx 1.4\%. \end{aligned}$$

tween \$2 and \$2.50 across all industries. Therefore the typical business spent 40 to 50 percent of the final value of its output on payroll.⁴

Figure 4 (c) shows that real GDP per payroll dollar was consistently greater for small businesses than for large businesses. While large businesses narrowed the productivity gap from 23¢ in 2001 to 6¢ in 2005, the difference grew following the 2008 recession, and has remained hovering at close to 25¢.

The discussion of macro-level trends in SGDP is continued in [Section 5](#). [Sections 2.4](#) and [3](#) examine the industries underlying SGDP with the aim of identifying the industries most responsible for driving change.

⁴ SGDP per employee and SGDP per payroll dollar calculations include SGDP attributable to nonemployers and thus exceed purely employer-only SGDP estimates. For context, nonemployer businesses generate about 3% of all business receipts. The Census Bureau's Nonemployer Statistics (NES) data provide detailed statistics on non-employer businesses. Also note that real and nominal GDP per payroll dollar are equivalent because the price weights, which are applied to both the numerator and denominator, cancel.

2.4 SMALL BUSINESS SHARES OF GDP BY INDUSTRY

Industry	Small % of GDP		Industry	Small % of GDP	
	1998	2014		1998	2014
Real Estate and Rental and Leasing	82	82	Wholesale and Retail Trade	53	42
Other Services	84	82	Educational Services	45	39
Construction	87	81	Administrative and Support Services	45	37
Arts, Entertainment, and Recreation	80	69	Transportation and Warehousing	40	35
Professional and Scientific Services	68	54	Finance and Insurance	30	29
Accommodation and Food Services	58	53	Manufacturing and Mining	29	27
Management of Businesses	30	47	Utilities	10	14
Health Care and Social Assistance	52	47	Information	20	12

Table 1 displays the evolution of the small business shares of GDP by industry since 1998. The small business share of GDP fell in all but two industries. The relatively small Utilities industry saw an increase that was attributable to a fall in the number of large utility companies. Interestingly, small businesses in the Management of Businesses industry experienced an increase in their share of GDP. These small businesses also experienced a decline in the number of small businesses indicating higher productivity per small business.⁵ Most of the increase in small business shares occurred during the financial crisis. Anecdotal evidence suggests that falling employment of previously large firms transferred a significant share of Management of Businesses' GDP into the ranks of small business. Small businesses in the Professional and Scientific Services industry saw the largest decline in GDP share. The small business share of GDP in Professional and Scientific Services fell from 68% in 1998 to 54% by 2014.

Table 1: Evolution of the Small Business Share of GDP, 1998–2014

⁵ See [Appendix A](#).

Figure 5 provides a hierarchical map of SGDP and large business GDP for 2014. Relative areas in the figure correspond to industry GDP

shares. The industries are ranked, numbered, and arranged from largest, top-left, to the smallest, bottom-right. Small and large GDP shares are identified by color.

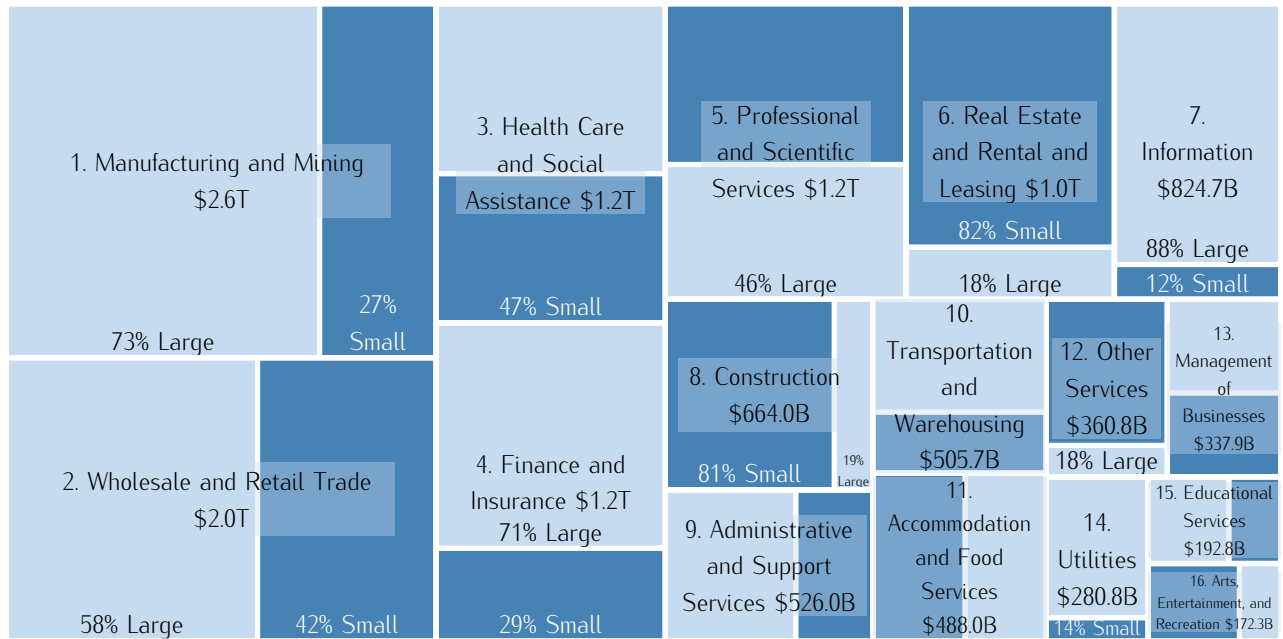


Figure 5: Industry Hierarchy Sorted by Industry Size, 2014

The four largest industries were dominated by large firms in 2014. Small businesses tended to have greater shares of service industries, rather than goods and manufacturing. The overall industry rankings by GDP have remained stable since 1998. Only four industries increased their rank in terms of their level of GDP:⁶ Educational Services increased from the smallest to the second smallest industry; Management of Businesses increased from 14th to 13th largest; Administrative and Support Services increased from 12th to 9th largest; and Health Care and Social Assistance increased from being 5th to 3rd largest industry.

⁶ The Educational Services industry refers only to private sector educational institutions and not public schools.

Figure 6 displays aggregate openings and closings across all US industries. Quarterly openings and closings series provide insight into each industry’s overall business dynamism. The openings and closings differential, or net openings, implies growth, when positive, or contraction, when negative. Net openings occur whenever the openings line exceeds the closings line. In Figure 6, openings exceed closings from 1998 until 2008 and from 2011 to 2014. For many industries, net openings is highly correlated with growth in the number of businesses, employment, GDP, and productivity.

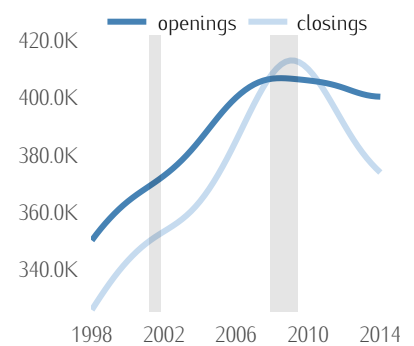


Figure 6: US Quarterly Openings and Closings, 1998–2014

3 SMALL BUSINESS INDUSTRIAL PROFILES

This section combines the SGDP series with additional government data sources to shed light on the industry-level experiences of small businesses.

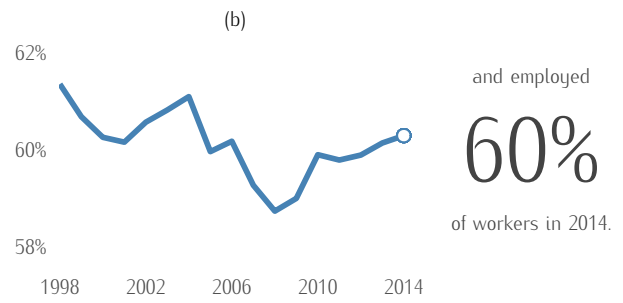
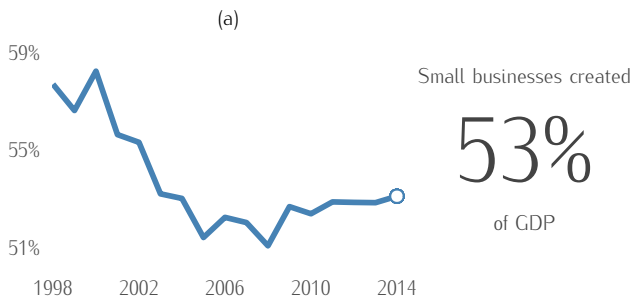
Each small business industrial profile highlights the small business share of GDP and employment with annotated line graphs. Next, analyses based on 2014 rankings describe each industry relative to the other 15 industries. The margins then add firm-size breakdowns, as well as multiple productivity plots. Quarterly openings and closings plots illustrate trends in business dynamism.⁷ Finally, industry NAICS definitions, adapted from NAICS (2017), conclude each profile.⁸

A WORD OF CAUTION on interpreting isolated shocks within industry series. Changes to NAICS definitions occasionally create one-period disturbances to variables such as employment or the number of businesses. *Definition-rooted shocks* will appear as extreme, one-period changes in growth rates and should not be interpreted as actual changes in the economic landscape. See Transportation and Warehousing in 2002 and 2003 for a vivid example of the issue. When considering any significant one-period shocks, it is best to examine the underlying data provided in [Appendix A](#). Also note that the US Census Bureau's Statistics of US Businesses (SUSB), which provides data regarding the numbers of businesses and employees by industry and firm-size, redacted small business employment statistics for the 2006 Arts, Entertainment, and Recreation and 2003 Utilities industries. Interpolated estimates fill the gaps.

⁷ The Bureau of Labor Statistics' Business Employment Dynamics (BED) program provides openings and closings data. [Appendix A](#) describes the procedure used to aggregate and harmonize BED's 3-digit NAICS series into series that describe standard 2-digit NAICS classifications. Overall, the upward slopes of both series suggest a trend toward greater business dynamism. Each series is Hodrick-Prescott smoothed ($\gamma = 1600$).

⁸ Complete definitions are provided in [Appendix B](#).

3.1 ACCOMMODATION & FOOD SERVICES SMALL BUSINESS PROFILE

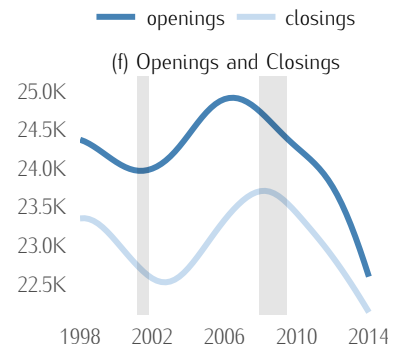
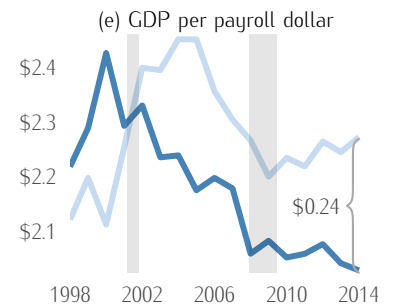
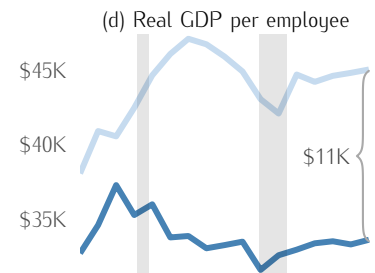
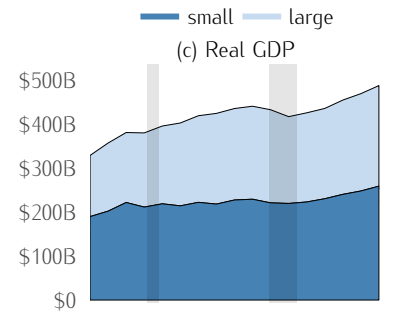


THE ACCOMMODATION AND FOOD SERVICES industry produced 3.6% of private non-farm GDP in 2014. The industry was the 11th largest overall and 9th among small businesses. Its small businesses created \$259.1 billion, or 53.1%, of the \$488 billion industry total in 2014, as compared to 57.7% in 1998. See panels (a) and (c) for greater detail.

The industry's 12.8 million employees comprised 10.6% of total private non-farm employment in 2014. It was the 3rd largest employer among small businesses and 3rd largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 61.4% in 1998 to 60.3% in 2014.

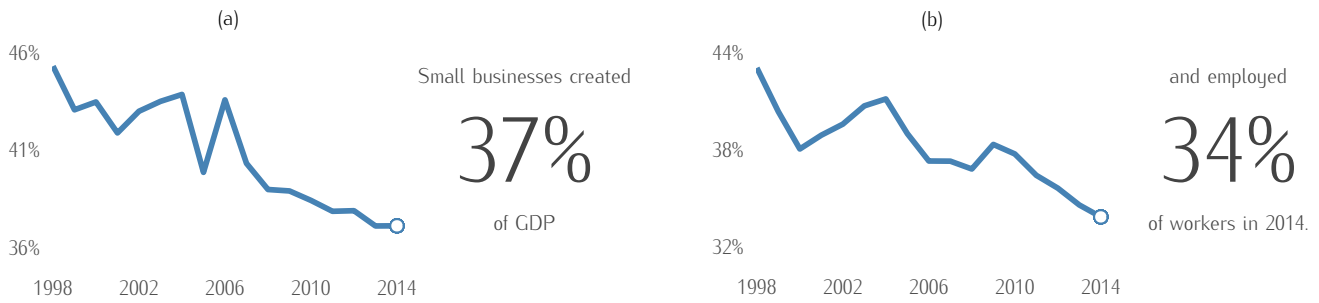
The industry's productivity ranked 16th in terms of GDP per employee and 10th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Accommodation and Food Services produced \$33,598 per worker, 16th among small businesses, and they generated \$2.03 of SGDP for every dollar in payroll, 11th among small businesses. Accommodation and Food Services productivity was higher for large businesses than for small businesses both in terms of real GDP per employee and per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 14.0% from 1998 to 2006 and grew 6.7% during the 2007 to 2014 period. Overall, the number of small businesses grew 21.6% to 506,725. The industry averages 15.2 employees per small business as compared to 10 per small business across all industries.



THE ACCOMMODATION AND FOOD SERVICES sector comprises establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption. The sector includes both accommodation and food services establishments because the two activities are often combined at the same establishment. Excluded from this sector are civic and social organizations; amusement and recreation parks; theaters; and other recreation or entertainment facilities providing food and beverage services

3.2 ADMINISTRATIVE & SUPPORT SERVICES SMALL BUSINESS PROFILE

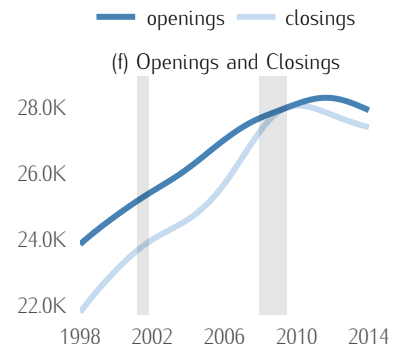
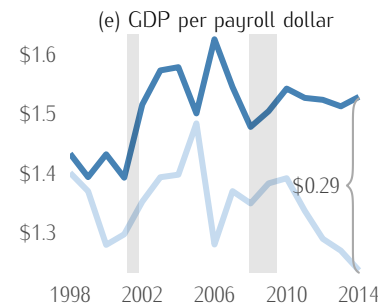
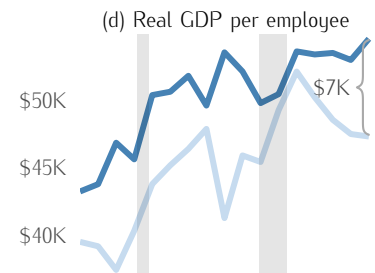
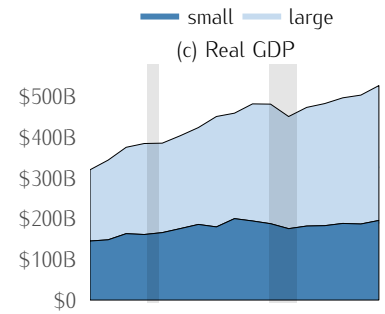


THE ADMINISTRATIVE AND SUPPORT SERVICES industry produced 3.9% of private non-farm GDP in 2014. The industry was the 9th largest overall and 10th among small businesses. Its small businesses created \$195.2 billion, or 37.1%, of the \$526 billion industry total in 2014, as compared to 45.3% in 1998. See panels (a) and (c) for greater detail.

The industry’s 10.6 million employees comprised 8.7% of total private non-farm employment in 2014. It was the 8th largest employer among small businesses and 5th largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 43.1% in 1998 to 33.9% in 2014.

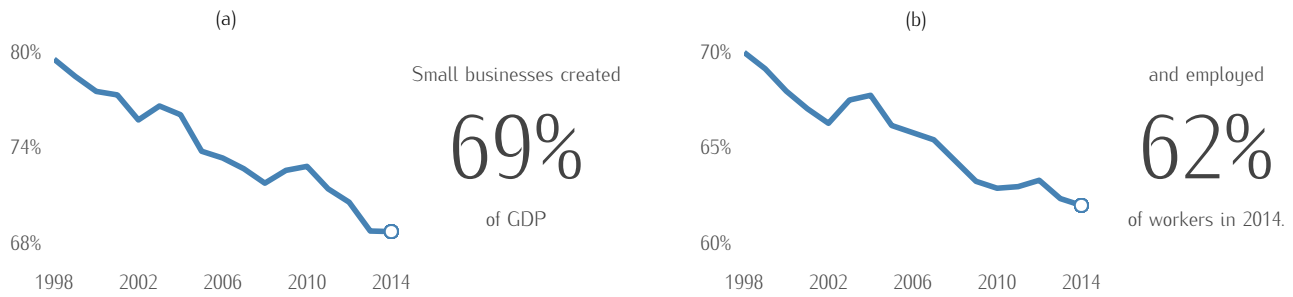
The industry’s productivity ranked 15th in terms of GDP per employee and 15th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Administrative and Support Services produced \$54,496 per worker, 14th among small businesses, and they generated \$1.53 of SGDP for every dollar in payroll, 14th among small businesses. Administrative and Support Services productivity was higher for small businesses than for large businesses both in terms of real GDP per employee and real GDP per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 8.3% from 1998 to 2006 and grew 0.8% during the 2007 to 2014 period. Overall, the number of small businesses grew 9.2% to 327,706. The industry averages 10.9 employees per small business as compared to 10 per small business across all industries.



THE ADMINISTRATIVE AND SUPPORT AND WASTE MANAGEMENT AND REMEDIATION SERVICES sector comprises establishments performing routine support activities for the day-to-day operations of other organizations. These essential activities are often undertaken in-house by establishments in many sectors of the economy. The establishments in this sector specialize in one or more of these support activities and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: office administration, hiring and placing of personnel, document preparation and similar clerical services, solicitation, collection, security and surveillance services, cleaning, and waste disposal services.

3.3 ARTS, ENTERTAINMENT, & RECREATION SMALL BUSINESS PROFILE

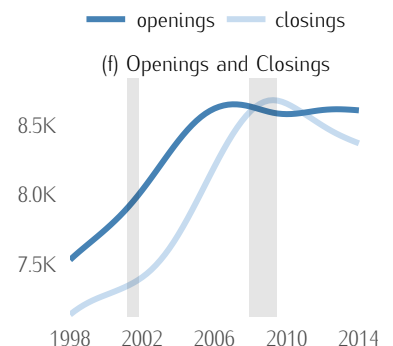
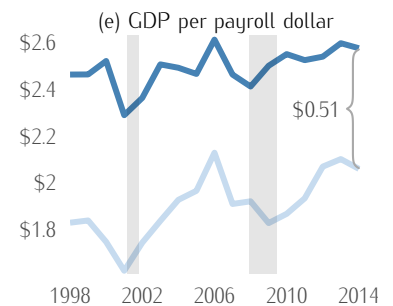
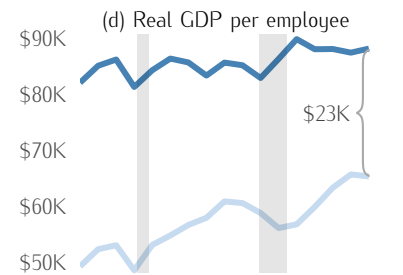
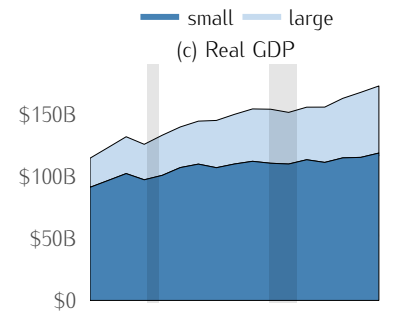


THE ARTS, ENTERTAINMENT, AND RECREATION industry produced 1.3% of private non-farm GDP in 2014. The industry was the smallest overall and 13th among small businesses. Its small businesses created \$118.4 billion, or 68.7%, of the \$172.3 billion industry total in 2014, as compared to 79.5% in 1998. See panels (a) and (c) for greater detail.

The industry’s 2.2 million employees comprised 1.8% of total private non-farm employment in 2014. It was the 13th largest employer among small businesses and 14th largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 70.0% in 1998 to 61.9% in 2014.

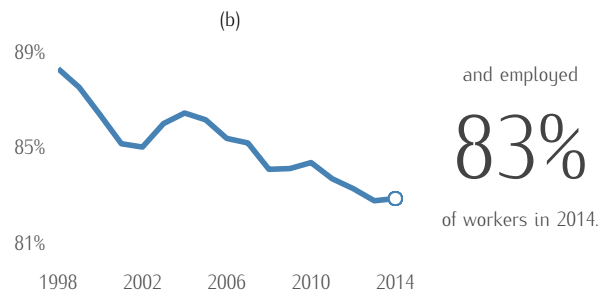
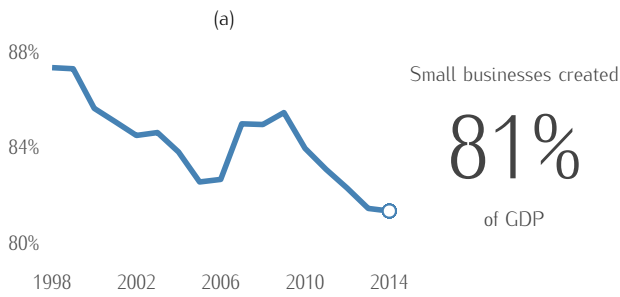
The industry’s productivity ranked 11th in terms of GDP per employee and 7th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Arts, Entertainment, and Recreation produced \$88,097 per worker, 11th among small businesses, and they generated \$2.57 of SGDP for every dollar in payroll, 6th among small businesses. Arts, Entertainment, and Recreation productivity was higher for small businesses than for large businesses both in terms of real GDP per employee and real GDP per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 21.1% from 1998 to 2006 and grew 2.2% during the 2007 to 2014 period. Overall, the number of small businesses grew 23.8% to 118,566. The industry averages 11.3 employees per small business as compared to 10 per small business across all industries.



THE ARTS, ENTERTAINMENT, AND RECREATION sector includes a wide range of establishments that operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of their patrons. Some establishments that provide cultural, entertainment, or recreational facilities and services are classified in other sectors. This sector comprises (1) establishments that are involved in producing, promoting, or participating in live performances, events, or exhibits intended for public viewing; (2) establishments that preserve and exhibit objects and sites of historical, cultural, or educational interest; and (3) establishments that operate facilities or provide services that enable patrons to participate in recreational activities or pursue amusement, hobby, and leisure-time interests.

3.4 CONSTRUCTION SMALL BUSINESS PROFILE

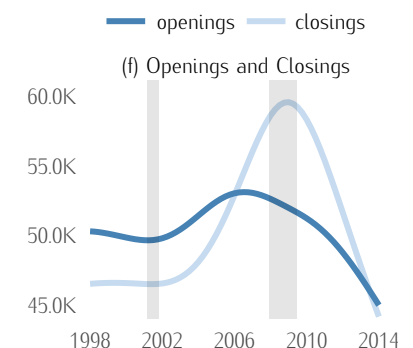
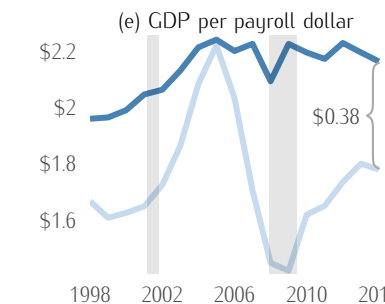
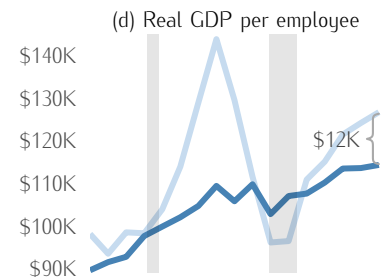
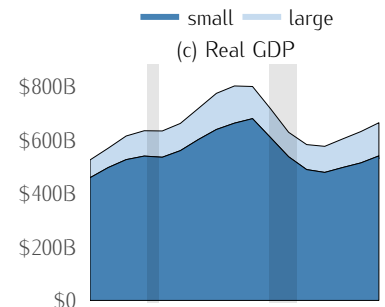


THE CONSTRUCTION industry produced 4.9% of private non-farm GDP in 2014. The industry was the 8th largest overall and 6th among small businesses. Its small businesses created \$540 billion, or 81.3%, of the \$664 billion industry total in 2014, as compared to 87.3% in 1998. See panels (a) and (c) for greater detail.

The industry’s 5.7 million employees comprised 4.7% of total private non-farm employment in 2014. It was the 6th largest employer among small businesses and 8th largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 88.3% in 1998 to 82.8% in 2014.

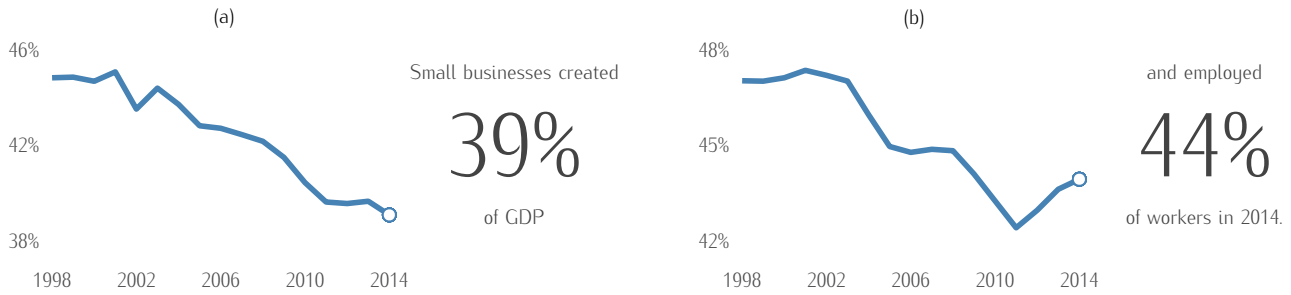
The industry’s productivity ranked 7th in terms of GDP per employee and 11th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Construction produced \$114,263 per worker, 7th among small businesses, and they generated \$2.16 of SGDP for every dollar in payroll, 10th among small businesses. Construction productivity was higher for large businesses than for small businesses in terms of real GDP per employee but lower in terms of real GDP per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 16.5% from 1998 to 2006 and fell 18.2% during the 2007 to 2014 period. Overall, the number of small businesses fell 4.6% to 653,598. The industry averages 7.2 employees per small business as compared to 10 per small business across all industries.



THE CONSTRUCTION sector comprises establishments primarily engaged in the construction of buildings or engineering projects (e.g., highways and utility systems). Establishments primarily engaged in the preparation of sites for new construction and establishments primarily engaged in subdividing land for sale as building sites also are included in this sector. Construction work done may include new work, additions, alterations, or maintenance and repairs. Activities of these establishments generally are managed at a fixed place of business, but they usually perform construction activities at multiple project sites. Production responsibilities for establishments in this sector are usually specified in (1) contracts with the owners of construction projects (prime contracts) or (2) contracts with other construction establishments (subcontracts).

3.5 EDUCATIONAL SERVICES SMALL BUSINESS PROFILE

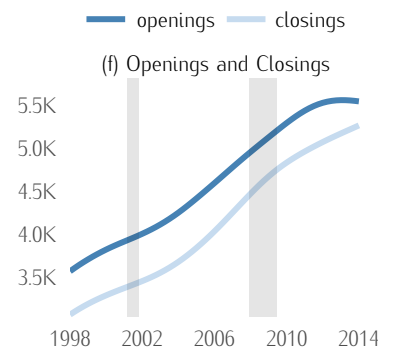
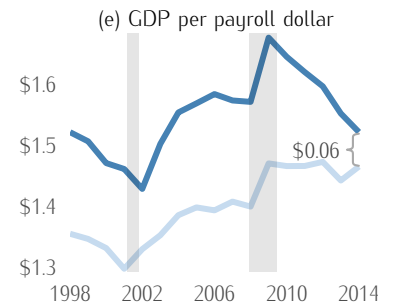
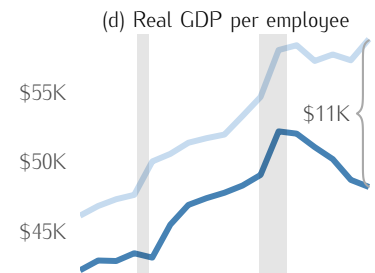
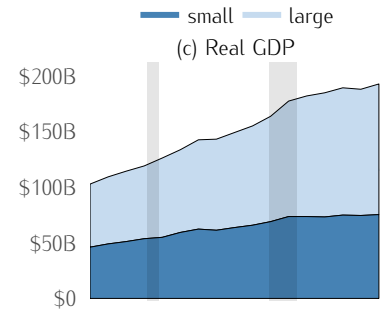


THE EDUCATIONAL SERVICES industry produced 1.4% of private non-farm GDP in 2014. The industry was the 15th largest overall and 15th among small businesses. Its small businesses created \$75.3 billion, or 39.1%, of the \$192.8 billion industry total in 2014, as compared to 44.8% in 1998. See panels (a) and (c) for greater detail.

The industry’s 3.6 million employees comprised 2.9% of total private non-farm employment in 2014. It was the 11th largest employer among small businesses and 11th largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 47.0% in 1998 to 43.9% in 2014.

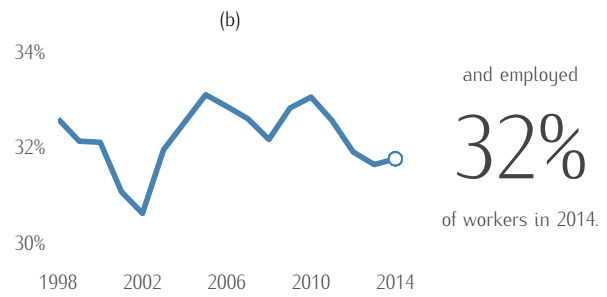
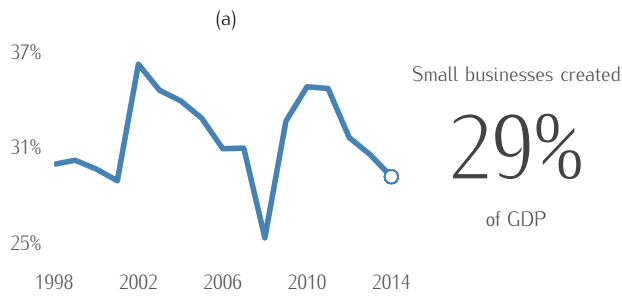
The industry’s productivity ranked 14th in terms of GDP per employee and 13th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Educational Services produced \$48,149 per worker, 15th among small businesses, and they generated \$1.52 of SGDP for every dollar in payroll, 16th among small businesses. Educational Services productivity was higher for large businesses than for small businesses in terms of real GDP per employee but lower in terms of real GDP per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 32.0% from 1998 to 2006 and grew 14.0% during the 2007 to 2014 period. Overall, the number of small businesses grew 50.4% to 86,549. The industry averages 18.1 employees per small business as compared to 10 per small business across all industries.



THE EDUCATIONAL SERVICES sector comprises establishments that provide instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments, such as schools, colleges, universities, and training centers. Educational services are usually delivered by teachers or instructors that explain, tell, demonstrate, supervise, and direct learning. Instruction is imparted in diverse settings, such as educational institutions, the workplace, or the home, and through diverse means, such as correspondence, television, the Internet, or other electronic and distance-learning methods. The training provided by these establishments may include the use of simulators and simulation methods. It can be adapted to the particular needs of the students, for example sign language can replace verbal language for teaching students with hearing impairments.

3.6 FINANCE & INSURANCE SMALL BUSINESS PROFILE



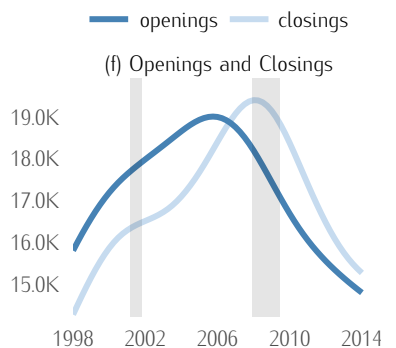
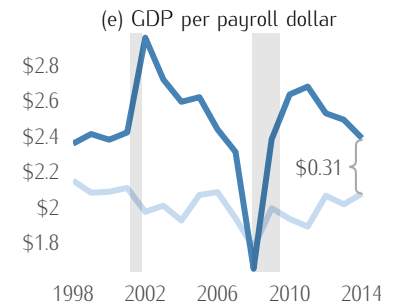
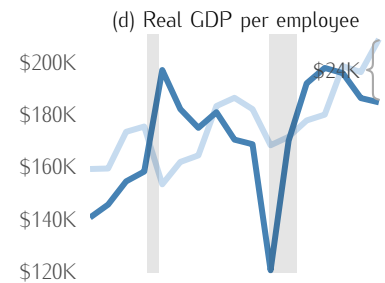
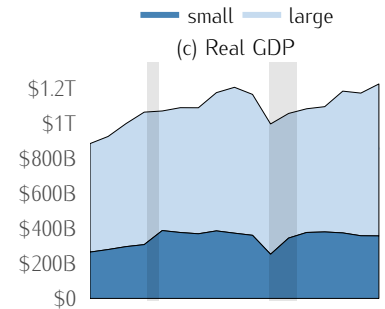
THE FINANCE AND INSURANCE industry produced 9.0% of private non-farm GDP in 2014. The industry was the 4th largest overall and 7th among small businesses. Its small businesses created \$356.4 billion, or 29.1%, of the \$1.2

trillion industry total in 2014, as compared to 29.9% in 1998. See panels (a) and (c) for greater detail.

The industry's 6.1 million employees comprised 5.0% of total private non-farm employment in 2014. It was the 9th largest employer among small businesses and 7th largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 32.6% in 1998 to 31.8% in 2014.

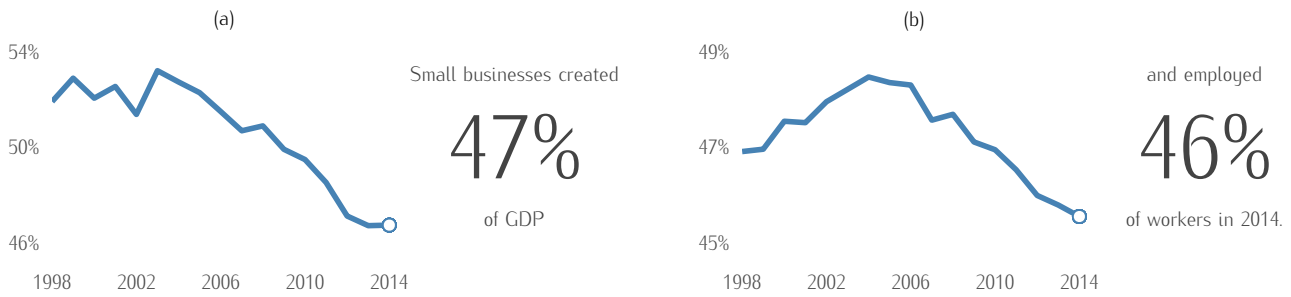
The industry's productivity ranked 5th in terms of GDP per employee and 9th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Finance and Insurance produced \$184,637 per worker, 4th among small businesses, and they generated \$2.39 of SGDP for every dollar in payroll, 7th among small businesses. Finance and Insurance productivity was higher for large businesses than for small businesses in terms of real GDP per employee but lower in terms of real GDP per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 19.1% from 1998 to 2006 and fell 10.7% during the 2007 to 2014 period. Overall, the number of small businesses grew 6.3% to 234,350. The industry averages 8.2 employees per small business as compared to 10 per small business across all industries.



THE FINANCE AND INSURANCE sector comprises establishments primarily engaged in financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or in facilitating financial transactions. Three principal types of activities are identified: 1. Raising funds by taking deposits and/or issuing securities and, in the process, incurring liabilities. 2. Pooling of risk by underwriting insurance and annuities. 3. Providing specialized services facilitating or supporting financial intermediation, insurance, and employee benefit programs.

3.7 HEALTH CARE & SOCIAL ASSISTANCE SMALL BUSINESS PROFILE



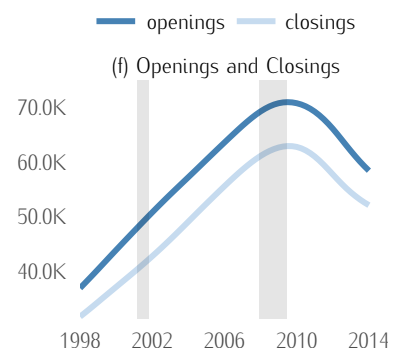
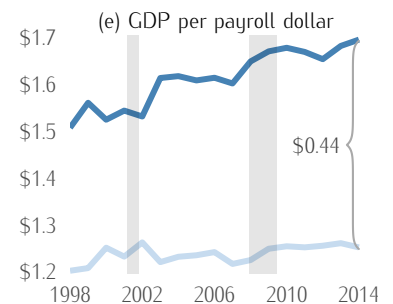
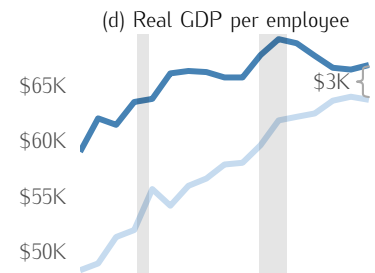
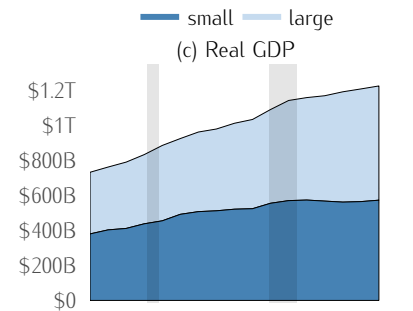
THE HEALTH CARE AND SOCIAL ASSISTANCE industry produced 9.0% of private non-farm GDP in 2014. The industry was the 3rd largest overall and 5th among small businesses.

Its small businesses created \$573.4 billion, or 46.7%, of the \$1.2 trillion industry total in 2014, as compared to 51.9% in 1998. See panels (a) and (c) for greater detail.

The industry’s 18.9 million employees comprised 15.6% of total private non-farm employment in 2014. It was the 2nd largest employer among small businesses and 2nd largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 46.9% in 1998 to 45.5% in 2014.

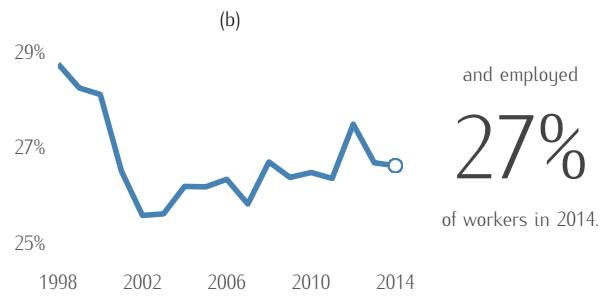
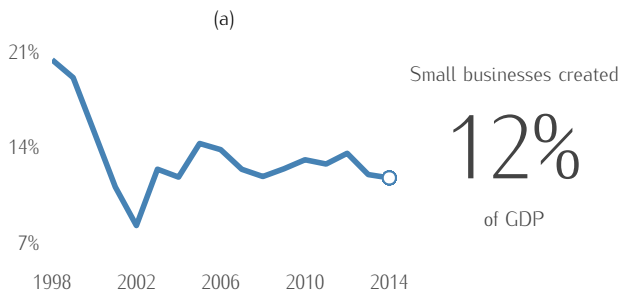
The industry’s productivity ranked 13th in terms of GDP per employee and 14th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Health Care and Social Assistance produced \$66,790 per worker, 12th among small businesses, and they generated \$1.70 of SGDP for every dollar in payroll, 13th among small businesses. Health Care and Social Assistance productivity was higher for small businesses than for large businesses both in terms of real GDP per employee and real GDP per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 16.6% from 1998 to 2006 and grew 5.9% during the 2007 to 2014 period. Overall, the number of small businesses grew 23.4% to 646,954. The industry averages 13.3 employees per small business as compared to 10 per small business across all industries.



THE HEALTH CARE AND SOCIAL ASSISTANCE sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.

3.8 INFORMATION SMALL BUSINESS PROFILE

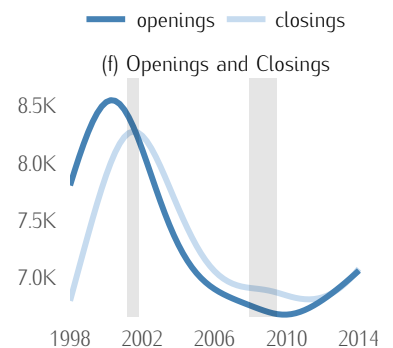
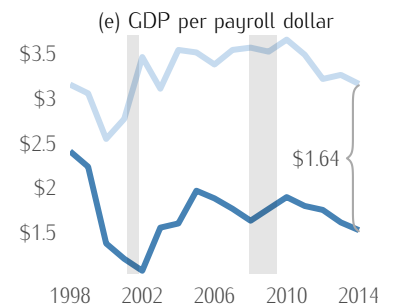
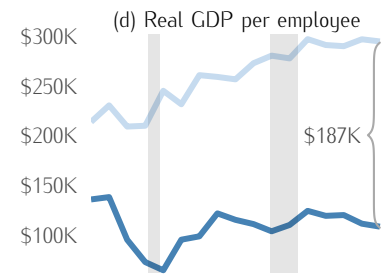
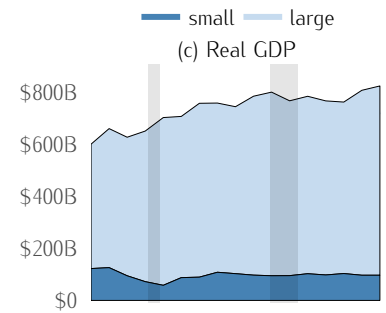


THE INFORMATION industry produced 6.1% of private non-farm GDP in 2014. The industry was the 7th largest overall and 14th among small businesses. Its small businesses created \$96.9 billion, or 11.7%, of the \$824.7 billion industry total in 2014, as compared to 20.4% in 1998. See panels (a) and (c) for greater detail.

The industry’s 3.4 million employees comprised 2.8% of total private non-farm employment in 2014. It was the 14th largest employer among small businesses and 12th largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 28.7% in 1998 to 26.6% in 2014.

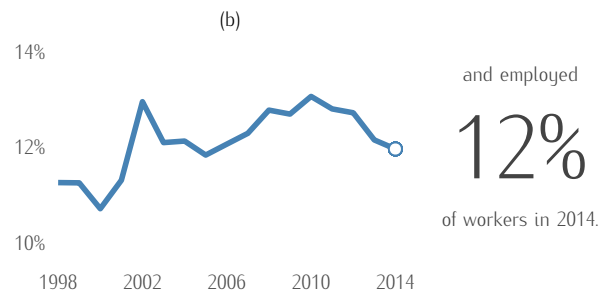
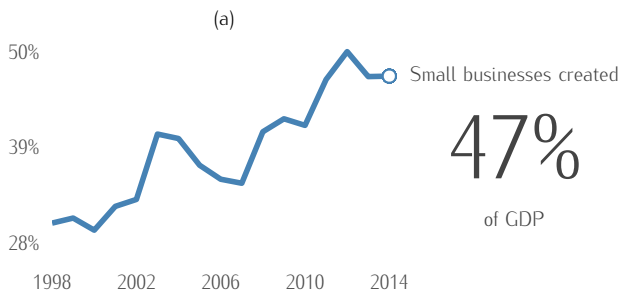
The industry’s productivity ranked 3rd in terms of GDP per employee and 4th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Information produced \$108,225 per worker, 9th among small businesses, and they generated \$1.52 of SGDP for every dollar in payroll, 15th among small businesses. Information productivity was higher for large businesses than for small businesses both in terms of real GDP per employee and per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 0.4% from 1998 to 2006 and fell 3.4% during the 2007 to 2014 period. Overall, the number of small businesses fell 3.1% to 72,028. The industry averages 12.4 employees per small business as compared to 10 per small business across all industries.



THE INFORMATION sector comprises establishments engaged in the following processes: (a) producing and distributing information and cultural products, (b) providing the means to transmit or distribute these products as well as data or communications, and (c) processing data. The main components of this sector are the publishing industries, including software publishing, and both traditional publishing and publishing exclusively on the Internet; the motion picture and sound recording industries; the broadcasting industries, including traditional broadcasting and those broadcasting exclusively over the Internet; the telecommunications industries; Web search portals, data processing industries, and the information services industries.

3.9 MANAGEMENT OF BUSINESSES SMALL BUSINESS PROFILE

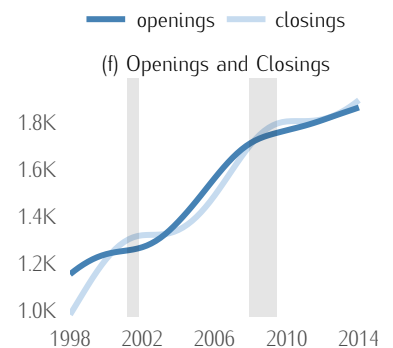
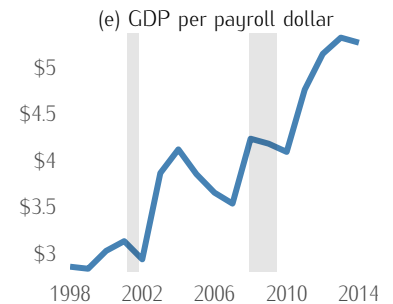
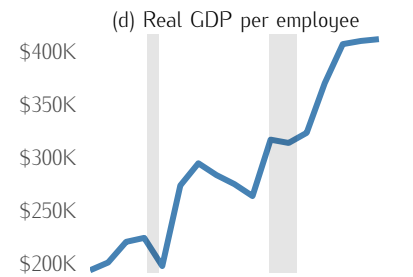
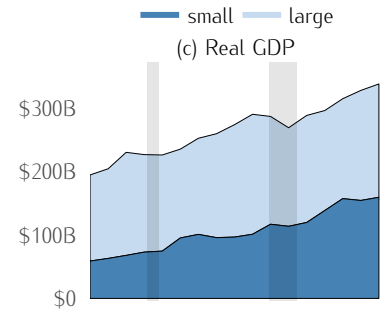


THE MANAGEMENT OF BUSINESSES industry produced 2.5% of private non-farm GDP in 2014. The industry was the 13th largest overall and 12th among small businesses. Its small businesses created \$159.3 billion, or approximately 47.2%, of the \$337.9 billion industry total in 2014, as compared to 30.3% in 1998. See panels (a) and (c) for greater detail.

The industry's 3.2 million employees comprised 2.7% of total private non-farm employment in 2014. It was the 15th largest employer among small businesses and 13th largest overall. Panel (b) shows the small business share of employment. Small business employment grew from 11.3% in 1998 to 12.0% in 2014.

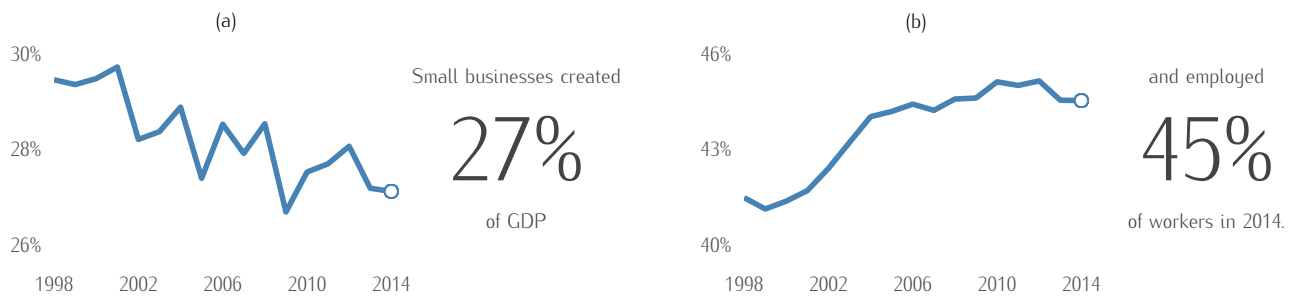
Panels (d) and (e) provide productivity series for small businesses from 1998 to 2014. Small business workers in Management of Businesses produced \$411,733 per worker, 2nd among small businesses, and they generated \$5.27 of SGDP for every dollar in payroll, 2nd among small businesses. Productivity information for large businesses is not reported due to limited data availability.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 4.7% from 1998 to 2006 and fell 7.8% during the 2007 to 2014 period. Overall, the number of small businesses fell 3.4% to 19,179. The industry averages 20.2 employees per small business as compared to 10 per small business across all industries.



THE MANAGEMENT OF BUSINESSES sector comprises (1) establishments that hold the securities of (or other equity interests in) companies and enterprises for the purpose of owning a controlling interest or influencing management decisions or (2) establishments (except government establishments) that administer, oversee, and manage establishments of the company or enterprise and that normally undertake the strategic or organizational planning and decision making role of the company or enterprise. Establishments that administer, oversee, and manage may hold the securities of the company or enterprise.

3.10 MANUFACTURING & MINING SMALL BUSINESS PROFILE

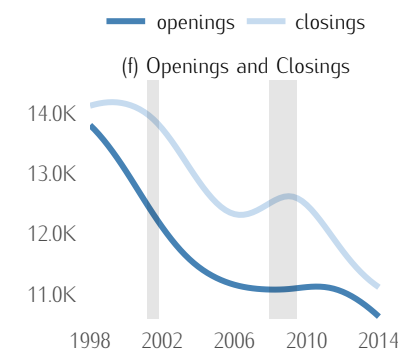
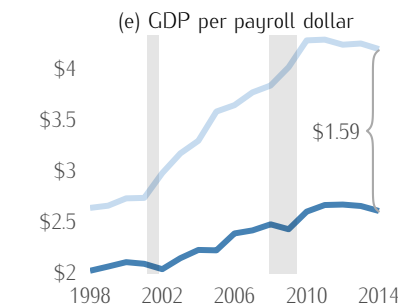
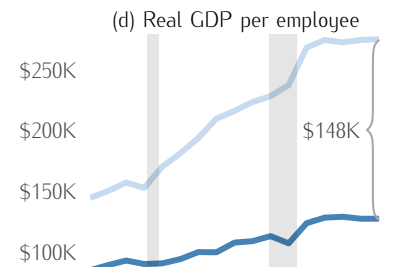
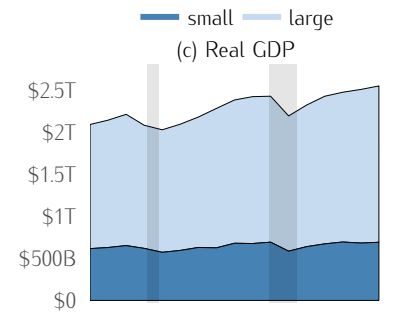


THE MANUFACTURING AND MINING industry produced 18.7% of private non-farm GDP in 2014. The industry was the largest overall and 3rd among small businesses. Its small businesses created \$691.9 billion, or 27.1% of the \$2.6 trillion industry total in 2014, as compared to 29.4% in 1998. See panels (a) and (c) for greater detail.

The industry’s 12.2 million employees comprised 10.1% of total private non-farm employment in 2014. It was the 4th largest employer among small businesses and 4th largest overall. Panel (b) shows the small business share of employment. Small business employment grew from 41.5% in 1998 to 44.5% in 2014.

The industry’s productivity ranked 4th in terms of GDP per employee and 3rd in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Manufacturing and Mining produced \$127,538 per worker, 6th among small businesses, and they generated \$2.60 of SGDP for every dollar in payroll, 5th among small businesses. Manufacturing and Mining productivity was higher for large businesses than for small businesses both in terms of real GDP per employee and per payroll dollar.

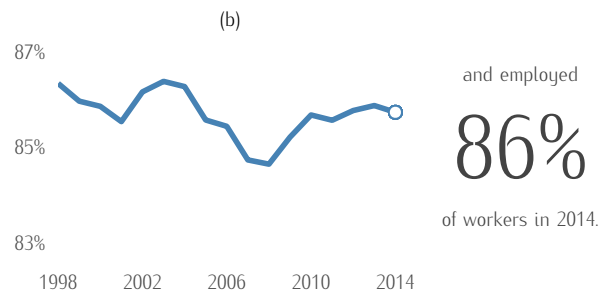
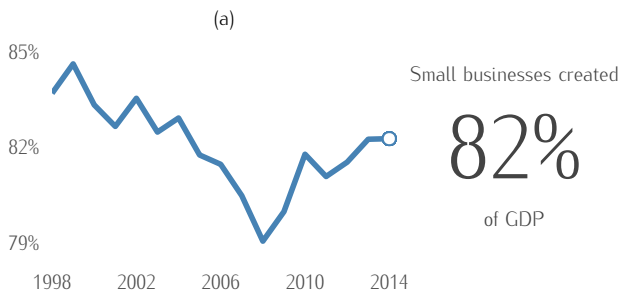
Panel (f) shows net quarterly openings. The number of businesses in the industry fell 9.1% from 1998 to 2006 and fell 10.7% during the 2007 to 2014 period. Overall, the number of small businesses fell 18.8% to 270,528. The industry averages 20.1 employees per small business as compared to 10 per small business across all industries.



THE MANUFACTURING sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. Establishments in the Manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment.

THE MINING sector comprises establishments that extract naturally occurring mineral solids, such as coal and ores; liquid minerals, such as crude petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and flotation), and other preparation customarily performed at the mine site, or as a part of mining activity.

3.11 OTHER SERVICES SMALL BUSINESS PROFILE

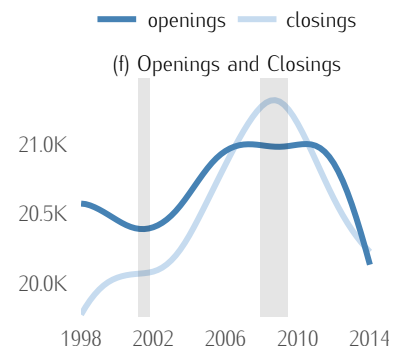
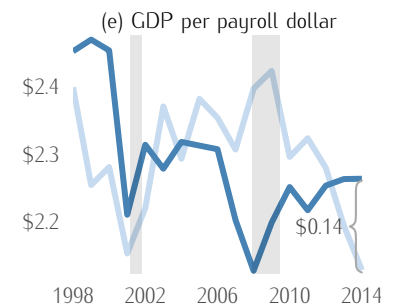
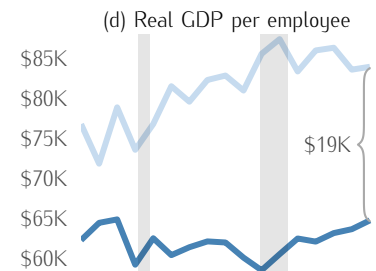
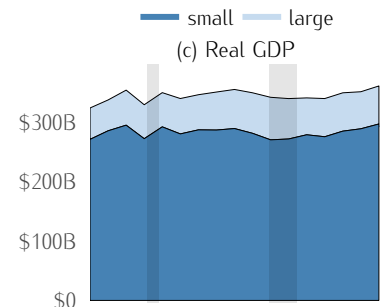


THE OTHER SERVICES industry produced 2.6% of private non-farm GDP in 2014. The industry was the 12th largest overall and 8th among small businesses. Its small businesses created \$296.8 billion, or 82.3%, of the \$360.8 billion industry total in 2014, as compared to 83.7% in 1998. See panels (a) and (c) for greater detail.

The industry’s 5.3 million employees comprised 4.4% of total private non-farm employment in 2014. It was the 7th largest employer among small businesses and 9th largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 86.3% in 1998 to 85.7% in 2014.

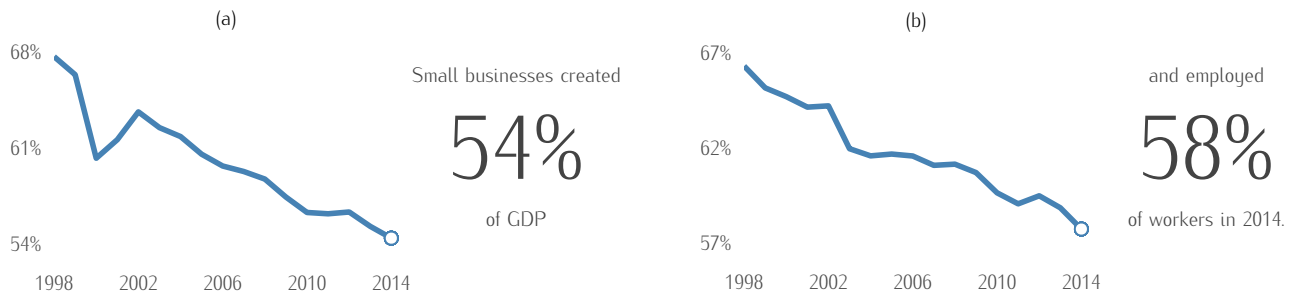
The industry’s productivity ranked 12th in terms of GDP per employee and 8th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Other Services produced \$64,746 per worker, 13th among small businesses, and they generated \$2.26 of SGDP for every dollar in payroll, 9th among small businesses. Other Services productivity was higher for large businesses than for small businesses in terms of real GDP per employee but lower in terms of real GDP per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 2.7% from 1998 to 2006 and fell 0.2% during the 2007 to 2014 period. Overall, the number of small businesses grew 2.5% to 674,514. The industry averages 6.8 employees per small business as compared to 10 per small business across all industries.



Establishments in the OTHER SERVICES sector perform essential activities that are often undertaken, in-house, by establishments in many sectors of the economy. By consolidating the performance of these activities of the enterprise at one establishment, economies of scale are achieved.

3.12 PROFESSIONAL & SCIENTIFIC SERVICES SMALL BUSINESS PROFILE

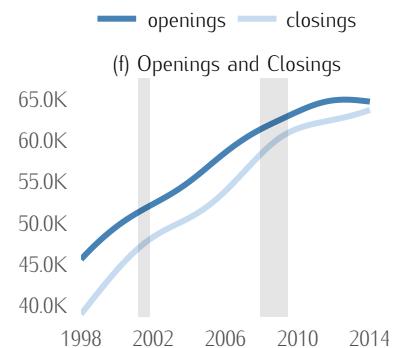
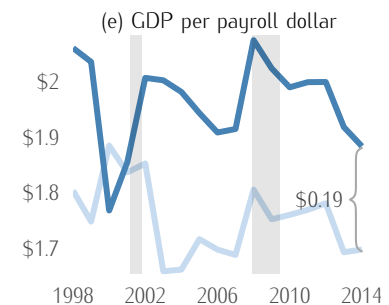
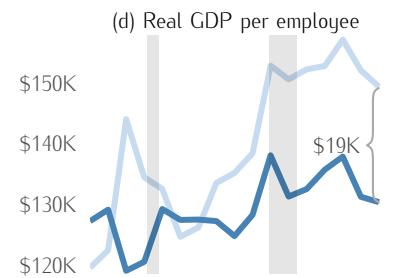
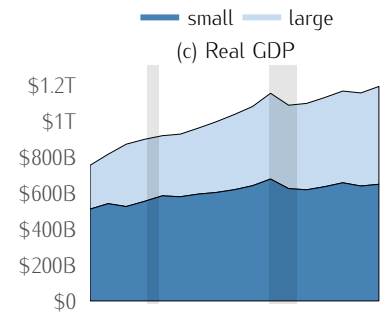


THE PROFESSIONAL AND SCIENTIFIC SERVICES industry produced 8.8% of private non-farm GDP in 2014. The industry was the 5th largest overall and 4th among small businesses. Its small businesses created \$648.7 billion, or 54.4%, of the \$1.2 trillion industry total in 2014, as compared to 67.7% in 1998. See panels (a) and (c) for greater detail.

The industry’s 8.6 million employees comprised 7.1% of total private non-farm employment in 2014. It was the 5th largest employer among small businesses and 6th largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 66.3% in 1998 to 57.7% in 2014.

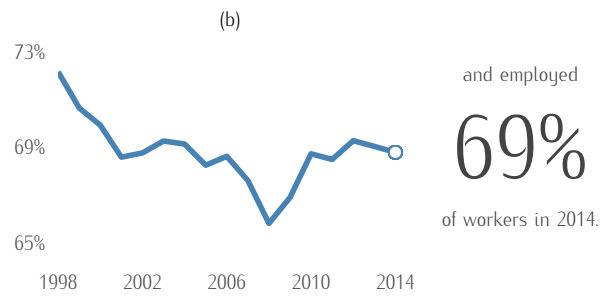
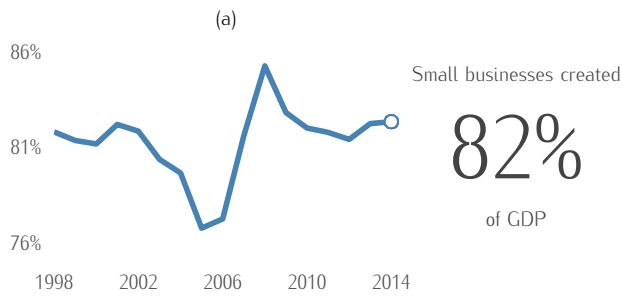
The industry’s productivity ranked 6th in terms of GDP per employee and 12th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Professional and Scientific Services produced \$130,384 per worker, 5th among small businesses, and they generated \$1.88 of SGDP for every dollar in payroll, 12th among small businesses. Professional and Scientific Services productivity was higher for large businesses than for small businesses in terms of real GDP per employee but lower in terms of real GDP per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 22.6% from 1998 to 2006 and grew 0.4% during the 2007 to 2014 period. Overall, the number of small businesses grew 23.1% to 786,915. The industry averages 6.3 employees per small business as compared to 10 per small business across all industries.



THE PROFESSIONAL, SCIENTIFIC, AND TECHNICAL SERVICES sector comprises establishments that specialize in performing professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. The establishments in this sector specialize according to expertise and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services.

3.13 REAL ESTATE & RENTAL & LEASING SMALL BUSINESS PROFILE



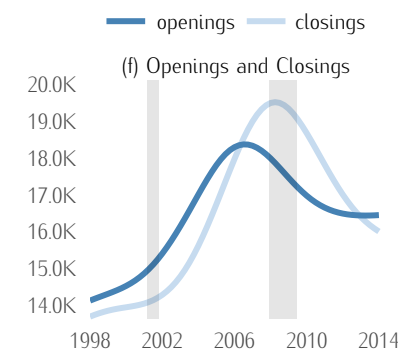
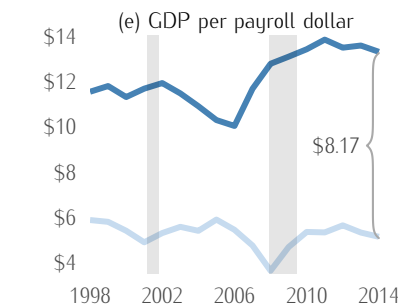
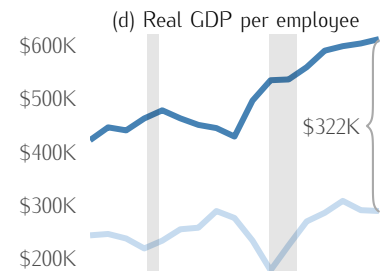
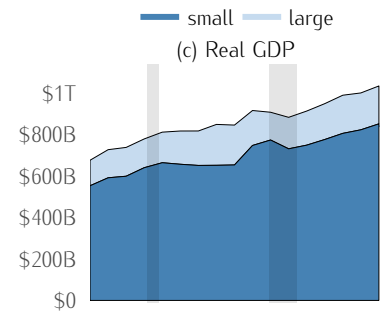
THE REAL ESTATE AND RENTAL AND LEASING industry produced 7.6% of private non-farm GDP in 2014. The industry was the 6th largest overall and 1st among small businesses.

Its small businesses created \$850.3 billion, or 82.3%, of the \$1 trillion industry total in 2014, as compared to 81.8% in 1998. See panels (a) and (c) for greater detail.

The industry's 2 million employees comprised 1.7% of total private non-farm employment in 2014. It was the 12th largest employer among small businesses and 15th largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 72.2% in 1998 to 68.8% in 2014.

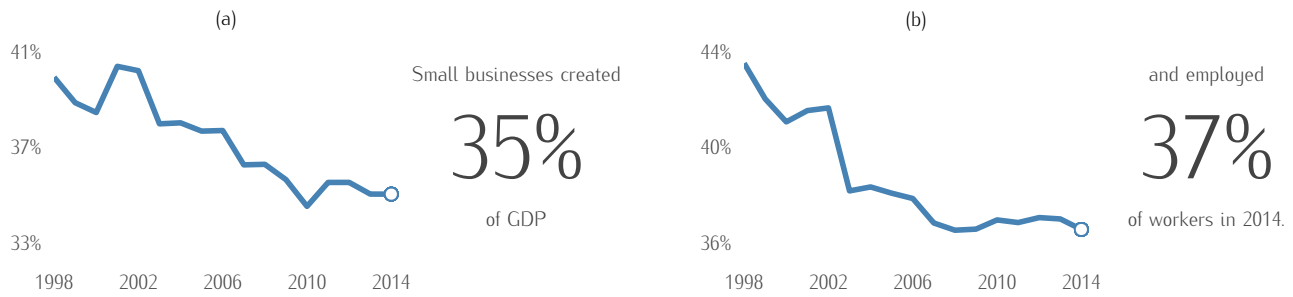
The industry's productivity ranked 1st in terms of GDP per employee and 1st in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Real Estate and Rental and Leasing produced \$611,575 per worker, 1st among small businesses, and they generated \$13.29 of SGDP for every dollar in payroll, 1st among small businesses. Real Estate and Rental and Leasing productivity was higher for small businesses than for large businesses both in terms of real GDP per employee and real GDP per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 24.3% from 1998 to 2006 and fell 6.1% during the 2007 to 2014 period. Overall, the number of small businesses grew 16.7% to 281,567. The industry averages 4.9 employees per small business as compared to 10 per small business across all industries.



THE REAL ESTATE AND RENTAL AND LEASING sector comprises establishments primarily engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets, and establishments providing related services. The major portion of this sector comprises establishments that rent, lease, or otherwise allow the use of their own assets by others. The assets may be tangible, as is the case of real estate and equipment, or intangible, as is the case with patents and trademarks. This sector also includes establishments primarily engaged in managing real estate for others, selling, renting and/or buying real estate for others, and appraising real estate. These activities are closely related to this sector's main activity, and it was felt that from a production basis they would best be included here.

3.14 TRANSPORTATION & WAREHOUSING SMALL BUSINESS PROFILE

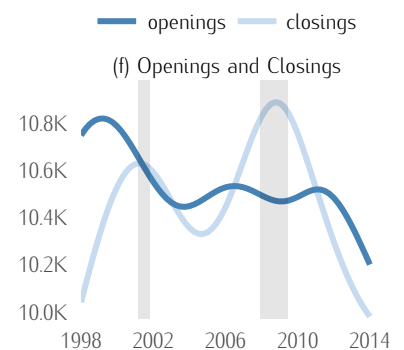
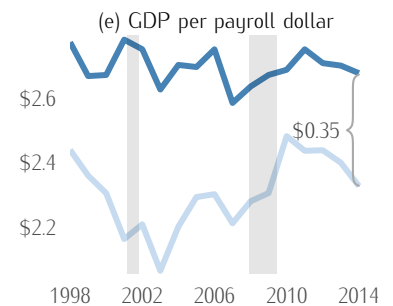
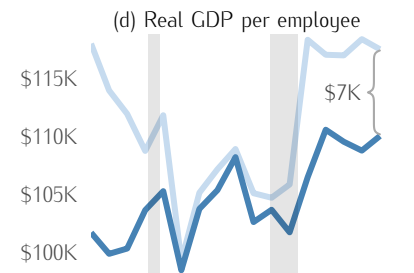
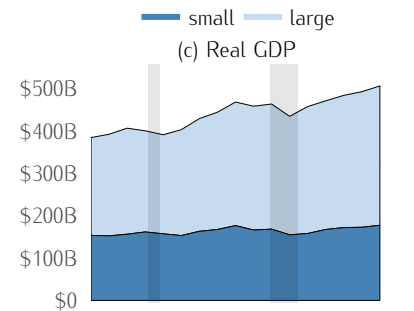


THE TRANSPORTATION AND WAREHOUSING industry produced 3.7% of private non-farm GDP in 2014. The industry was the 10th largest overall and 11th among small businesses. Its small businesses created \$177.2 billion, or 35.0%, of the \$505.7 billion industry total in 2014, as compared to 39.9% in 1998. See panels (a) and (c) for greater detail.

The industry’s 4.4 million employees comprised 3.6% of total private non-farm employment in 2014. It was the 10th largest employer among small businesses and 10th largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 43.5% in 1998 to 36.5% in 2014.

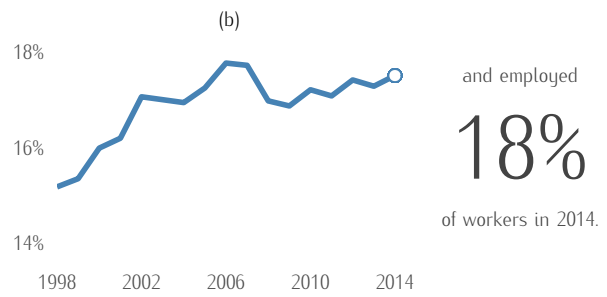
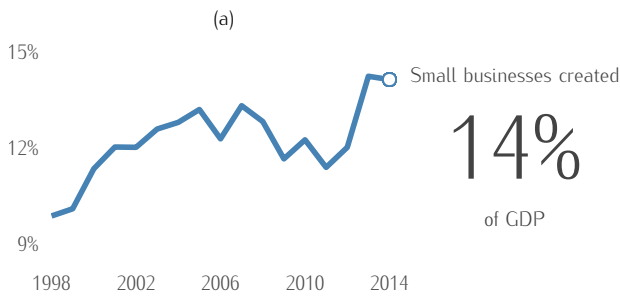
The industry’s productivity ranked 8th in terms of GDP per employee and 6th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Transportation and Warehousing produced \$110,019 per worker, 8th among small businesses, and they generated \$2.68 of SGDP for every dollar in payroll, 4th among small businesses. Transportation and Warehousing productivity was higher for large businesses than for small businesses in terms of real GDP per employee but lower in terms of real GDP per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry grew 12.0% from 1998 to 2006 and fell 0.5% during the 2007 to 2014 period. Overall, the number of small businesses grew 11.5% to 171,251. The industry averages 9.4 employees per small business as compared to 10 per small business across all industries.



THE TRANSPORTATION AND WAREHOUSING sector includes industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation. Establishments in these industries use transportation equipment or transportation related facilities as a productive asset. The type of equipment depends on the mode of transportation. The modes of transportation are air, rail, water, road, and pipeline.

3.15 UTILITIES SMALL BUSINESS PROFILE

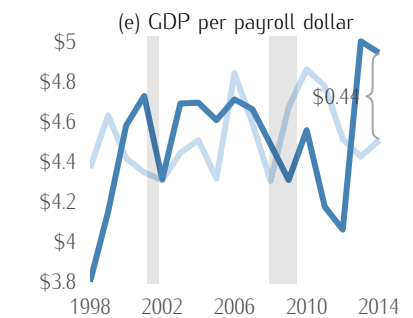
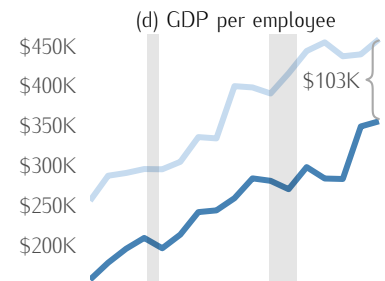
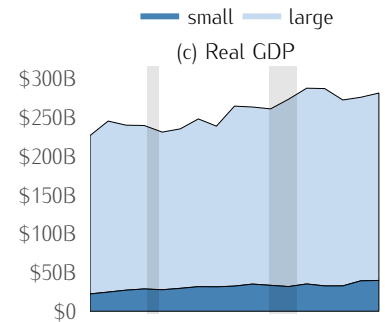


THE UTILITIES industry produced 2.1% of private non-farm GDP in 2014. The industry was the 14th largest overall and 16th among small businesses. Its small businesses created \$39.6 billion, or 14.1%, of the \$280.8 billion industry total in 2014, as compared to 9.9% in 1998. See panels (a) and (c) for greater detail.

The industry’s 637,840 employees comprised 0.5% of total private non-farm employment in 2014. It was the smallest employer among small businesses and smallest overall. Panel (b) shows the small business share of employment. Small business employment grew from 15.2% in 1998 to 17.5% in 2014.

The industry’s productivity ranked 2nd in terms of GDP per employee and 2nd in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Utilities produced \$355,134 per worker, 3rd among small businesses, and they generated \$4.94 of SGDP for every dollar in payroll, 3rd among small businesses. Utilities productivity was higher for large businesses than for small businesses in terms of real GDP per employee but lower in terms of real GDP per payroll dollar.

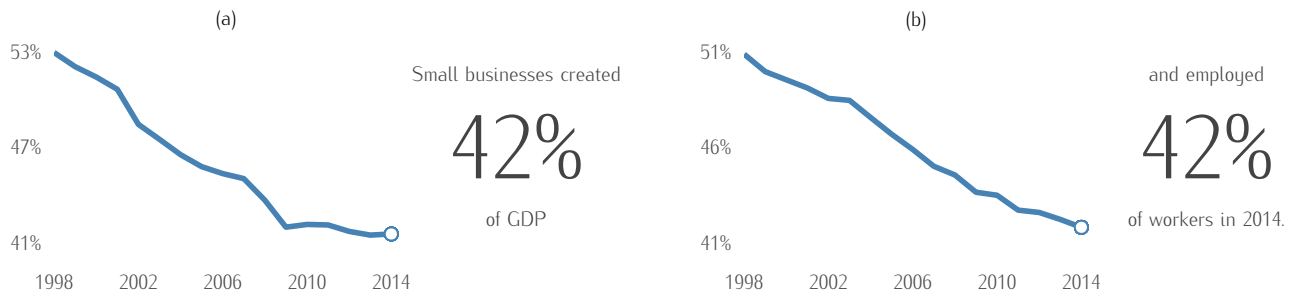
The number of businesses in the industry fell 7.0% from 1998 to 2006 and fell 3.3% during the 2007 to 2014 period. Overall, the number of small businesses fell 10.1% to 5,726. The industry averages 19.5 employees per small business as compared to 10 per small business across all industries.⁹



⁹ Figure (f) is omitted due to Utilities industry data limitations.

THE UTILITIES SECTOR comprises establishments engaged in the provision of the following utility services: electric power, natural gas, steam supply, water supply, and sewage removal. Within this sector, the specific activities associated with the utility services provided vary by utility: electric power includes generation, transmission, and distribution; natural gas includes distribution; steam supply includes provision and/or distribution; water supply includes treatment and distribution; and sewage removal includes collection, treatment, and disposal of waste through sewer systems and sewage treatment facilities.

3.16 WHOLESALE & RETAIL TRADE SMALL BUSINESS PROFILE

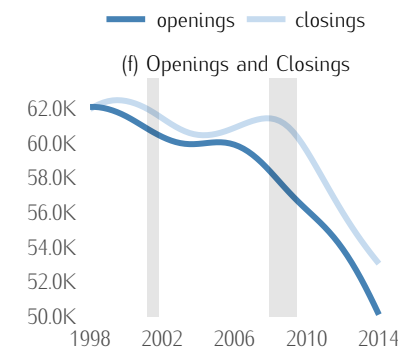
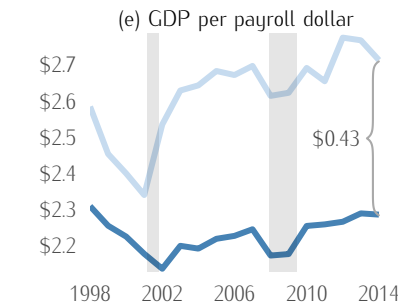
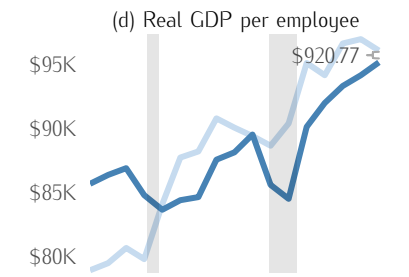
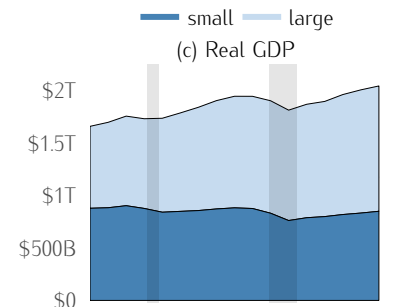


THE WHOLESALE AND RETAIL TRADE industry produced 15.0% of private non-farm GDP in 2014. The industry was the 2nd largest overall and 2nd among small businesses. Its small businesses created \$848.7 billion, or 41.6%, of the \$2 trillion industry total in 2014, as compared to 52.9% in 1998. See panels (a) and (c) for greater detail.

The industry’s 21.3 million employees comprised 17.6% of total private non-farm employment in 2014. It was the largest employer among small businesses and largest overall. Panel (b) shows the small business share of employment. Small business employment fell from 50.9% in 1998 to 41.8% in 2014.

The industry’s productivity ranked 10th in terms of GDP per employee and 5th in GDP per payroll dollar. Panels (d) and (e) provide productivity series for both small and large businesses from 1998 to 2014. Small business workers in Wholesale and Retail Trade produced \$95,167 per worker, 10th among small businesses, and they generated \$2.29 of SGDP for every dollar in payroll, 8th among small businesses. Wholesale and Retail Trade productivity was higher for large businesses than for small businesses both in terms of real GDP per employee and per payroll dollar.

Panel (f) shows net quarterly openings. The number of businesses in the industry fell 5.0% from 1998 to 2006 and fell 8.3% during the 2007 to 2014 period. Overall, the number of small businesses fell 12.9% to 955,411. The industry averages 9.3 employees per small business as compared to 10 per small business across all industries.



THE WHOLESALE TRADE sector comprises establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. Wholesalers are organized to sell or arrange the purchase or sale of (a) goods for resale, (b) capital or durable nonconsumer goods, and (c) raw and intermediate materials and supplies used in production.

THE RETAIL TRADE sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. This sector comprises two main types of retailers: store and nonstore retailers.

1. Store retailers operate fixed point-of-sale locations, located and designed to attract a high volume of walk-in customers.
2. Nonstore retailers, like store retailers, are organized to serve the general public, but their retailing methods differ.

4 METHODOLOGY

4.1 DEVELOPMENT OF THE SGDP METHODOLOGY

Joel Popkin and Company's SBA Advocacy sponsored research, *Measuring Gross Product Originating (GPO) in Small Businesses*, was the first to estimate small businesses' contribution to total US output (Popkin 1980).¹⁰ The paper established a methodology that traced small business GPO at the Standard Industrial Classification (SIC) industry level from 1955 to 1976. Popkin created the estimates by combining statistics from the US Census's *Enterprise Statistics* report, the Internal Revenue Service's (IRS) *Statistics of Income*, and the BEA's *Survey of Current Business*. The small business share of aggregated gross national product (GNP) for the earliest reported period was roughly 51.4% for 1958.¹¹

Subsequent Popkin reports refined the methodology and updated the years of coverage to include newer data (Popkin 1981a, 1981b, 1982, 1997, 2001, 2002b).

In *The Small Business Share of GDP, 1998–2004*, Kobe (2007) pioneered a series of innovative improvements to the methodology as more data sources became available. The report evolved from reporting GNP-based GPO to reporting GDP, and it incorporated additional industrial detail made possible by the availability of NAICS data. Another notable refinement involved the experimental treatment of unincorporated large businesses which were previously treated as small businesses. Large unincorporated businesses are typically limited liability company (LLC) partnerships. In response to a 1988 IRS ruling recognizing LLCs, the number of LLCs grew rapidly between 1988 and 2000.¹² Kobe's *Small Business GDP: Update 2002–2010* streamlined the treatment of unincorporated large businesses and the calculation of non-compensation components of SGDP (Kobe 2012).

The SGDP 1998–2014 series includes additional methodological improvements. In contrast to past editions that allotted all non-compensation output for unincorporated partnerships to small businesses for the 1998–2002 period, the new series distributes these components by size-class. The SGDP series technically extends to the 1950s. Only the period after 1997 is examined in the current report due to the 1997 change from SIC industry classifications to NAICS classifications. The following section provides a brief overview of the methodology for measuring SGDP.

¹⁰ The US Small Business Administration's (SBA) Office of Advocacy is tasked with conducting, sponsoring, and promoting economic research on the contributions of small businesses.

¹¹ BEA's *Survey of Current Business* reported gross product originating (GPO). GPO refers to each SIC sector's contribution to gross national product (GNP).

¹² This legislative change is responsible for as much as 0.7% of the overall fall in the small business share of GDP.

4.2 CALCULATING SGDP

Data provided by the Bureau of Economic Analysis (BEA) form the foundation for calculating SGDP. The initial calculations utilize BEA's GDP by industry data. The data show nominal GDP broken into major industries and by major value-added components of income. BEA does not provide data by firm size. Consequently, estimating SGDP requires the division of the components of GDP into the small and large business shares for each industry.¹³

Once the components are estimated for each industry, the small business portions of compensation and each of the non-compensation components are summed for each industry. When that small business total is divided by the industry GDP total, it produces the small business share for that industry. Also, each of the components is summed across all industries to produce small and large business shares of compensation for the total non-farm private economy, and small and large business shares of the non-compensation components. Summing the compensation and non-compensation components for each size group produces the small and large business shares of total GDP.

Compensation has two components: (1) wages and salaries and (2) supplements, which includes employee benefits paid by the employer. Non-compensation is broken down into four components: taxes on production and imports less subsidies, consumption of fixed capital, business transfer payments, and other net operating surplus (which includes net interest payments and profit-type income). The final three of these non-compensation components are also referred to as gross operating surplus.¹⁴

With the release of the 2007 Input-Output (IO) tables, BEA fully integrated the Input-Output tables with the National Income and Product Accounts (NIPA). Prior to that, some components of the industry value-added estimates could not be matched back to the NIPA components. This integration means that the NIPA annual components can more easily be used to estimate the corporate and non-corporate breakdowns.

Industry totals require an adjustment. Owner-Occupied Housing (OOH) is treated as a business in the industry accounts (and the NIPAs), and is included in the real estate industry. Therefore, the real estate components contain several imputations that are meant to approximate the imputed rental value of the house to the homeowner and the depreciation, etc. that would be deducted if the homeowner is actually renting their property to a third party rather than living in it. These imputations are subtracted from each of the value-added components before the real estate industry is split between large and small

¹³ The BEA builds its GDP estimates upon detailed economic census data which are available only once every five years. An array of monthly, quarterly, and annual economic indicators are then combined to extrapolate GDP between economic census years. More recent GDP estimates are less precise and are subject to significant revision. Around 25% of the data needed to make initial monthly GDP estimates are unavailable at publication so past trends are used instead (Landefeld, Seskin, and Fraumeni 2008). BEA produces both real and nominal estimates of GDP. GDP components are always given in nominal dollars however; only the overall industry GDP number is deflated. Consequently, nominal shares are produced first and summed for the business size GDP measure. Real measures of output are estimated by deflating the nominal GDP value by the industry deflator. Unfortunately, there are no data from which different price indexes for the large business and SGDP series can be calculated. Thus, deflating these measures may generate misleading results.

¹⁴ In an appendix to the IO tables, the BEA also shows gross operating surplus broken down into two components, one for corporate and one for non-corporate businesses. The latter breakdown is more useful for the separation of the GDP by business size because the methodology uses different techniques for the corporate and non-corporate portions of the calculations.

business.

4.2.1 COMPENSATION COMPONENTS THROUGH 2013

Wages and Salaries BEA provides industry compensation in two parts, wages and salaries data and what it calls supplements, which are mostly employers' costs associated with the benefits provided to employees.¹⁵ Separating the wages and salaries by firm size is straightforward. Payroll shares for large and small businesses are calculated for each of the sixteen industries for each year from 1998 through 2014 directly from the Census's SUSB and NES data.

Payroll shares separate each industry's wages and salaries between the two business size classes. The SUSB data are adjusted to remove the payroll associated with hospitals owned by local, state, and federal governments.¹⁶

Wage Supplements The benefits shares are calculated using a different method. If benefits are allocated to each firm-size group according to the payroll shares then the small business share of benefits is overestimated. Several studies show that small businesses provide fewer pension and health insurance benefits than do large businesses (Popkin 2002a).

BEA separates its benefits data into two categories: those that are considered government social insurance (such as Social Security and Medicare taxes) and those that are voluntary, such as health insurance and pensions. BEA publishes some industry detail for benefits paid for social insurance programs. Separately, the total amount paid by private business for health insurance, life insurance, pensions and workers compensation insurance is also provided, but with no industry detail.

BEA provides industry detail for the social insurance portion of benefits. Consequently, the social insurance portions are allocated to large and small business. This is done using the industry payroll shares since most of the social insurance taxes are calculated as a specific percentage of payroll.

Once the social insurance portion is subtracted from the total supplements, the remainder represents the value of other benefits by industry. Those include health insurance, life insurance, pension and retirement payments made by companies, and workers' compensation costs. The Bureau of Labor Statistics' data from Employer Costs for Employee Compensation show the average cost per hour paid for each of these types of benefits across all employers in an industry sector. For each

¹⁵ Annual BEA data through 2014 are used.

¹⁶ BEA includes government hospitals in the government sector along with government-run schools. SUSB does not include government-run schools in its definition of education services; therefore it is not necessary to make a similar adjustment to the educational services share of the SUSB.

year, the pension, health and life insurance, and workers' compensation shares of total costs are calculated. Those shares are used to allocate the "other supplements" to their respective benefit types. After the allocations are completed, each type of benefit is separated between its large and small business components.

Workers' compensation is allocated to firm size categories according to payroll shares since, like social insurance, it tends to be calculated from payroll amounts. The other two categories are more complicated to separate by firm size, since health insurance and pension/retirement savings contributions are voluntary and vary by employer. Two different data sources are consulted to estimate those shares.

The Medical Expenditure Panel Survey (MEPS) data for the periods from 1998 to 2014 are used to estimate the provided small and large business shares of the health insurance benefits. The MEPS data were used to calculate an average premium cost per employee by industry and firm size group. This is done by calculating the total cost for employees covered by insurance for each firm size and industry group, then dividing the total by the total number of employees (covered and not covered).¹⁷

The previous step produces a cost per employee for each industry for several firm size groups; each of these is then multiplied by the employees in each of the matching firm size groups in SUSB to produce a health insurance cost bench-marked to the SUSB employment totals. Once the health insurance cost is calculated for each of the firm size groups they are summed across the appropriate subset of groups to obtain the small and large business shares.¹⁸

The final benefit type is pensions. Unfortunately, data on pension expenses by company size are inferior to the data for medical insurance expenditures. There is one method for approximating these figures however. The IRS provides information on the deductions companies take for payments into pension and retirement savings plans in its *Statistics of Income*. Those data are collected following the procedures discussed below for the non-compensation components, and are used to allocate the pension payment totals by industry to large and small business. Once all three categories of the "other" benefits are separately allocated to large and small businesses, they are combined with the social insurance benefits and produced an estimate of total supplements for each firm size and industry group.

After the wages, salaries and benefits are separated between large and small business for each industry, they are added together to determine a compensation total for small and large business for each indus-

¹⁷ The MEPS data were not produced for 2007. Consequently, the 2007 shares were calculated by averaging the 2006 and 2008 cost per employee for each industry/size cell combined with the 2007 employee distribution from the SUSB data.

¹⁸ Life insurance is allocated using the same shares as health insurance. That is somewhat arbitrary, but the two types of insurance are often offered at the same time. Life insurance is a very small part of the total benefits package and its allocation is unlikely to cause any major change in the compensation shares.

try. The compensation totals for small business for all industries is then totaled to determine a small business share of overall compensation for the private non-farm economy.

4.2.2 NON-COMPENSATION COMPONENTS THROUGH 2013

The calculation of the small business shares of the non-compensation components is a multi-step process that uses data from SUSB combined with IRS statistics. There are five non-compensation components for each industry. The BEA data are divided into large and small business components: indirect business taxes, business transfer payments, net interest, corporate depreciation and profits, and non-corporate depreciation and profit-type income. Three of those components are provided with the corporate and non-corporate information combined. Corporate depreciation and profit-type income components are provided separately from the non-corporate depreciation and profit-type income components.

The Internal Revenue Service's Statistics of Income (SOI) data provide tax return detail for the three major taxpaying forms of legal organization: corporations, partnerships and sole proprietorship. It shows detailed tax-related information for these businesses, such as the amount of business receipts, interest paid, depreciation and net income (or loss) for each year by industry. For corporations, it shows all of these components by major industry category broken down by major receipts size classes. This latter set of tables is used to estimate the small and large business shares of corporate payments.

The *indirect business taxes* and *business transfer payments* components of GDP are divided according to the small business and large business shares of SOI business receipts. The *net interest payments* component of GDP is allocated according to the small business and large business shares of SOI interest paid.

The final component, combined depreciation and profits for corporations, is divided between large and small business using the sum of the depreciation and net income, less deficits, lines from the SOI corporate tax tables. The non-corporate depreciation and profits component is assumed to belong entirely to small businesses through 2001. From 2002 onward, the non-corporate depreciation and profits component is split between large and small business by allocating all the depreciation and net income of the sole proprietorships to small businesses. The depreciation and net income of partnerships are allocated based on the large and small business receipt shares according to SUSB legal form of organization data.

The IRS data provide detailed information on the different components of a business's income but the data are not known by the employment size of that business. Consequently, the first step in the methodology is to use the Census's SUSB data to produce a share of receipts for each industry sector associated with the companies having 500 or more employees for two benchmark years from the Census's data. For this update, the data from the 2002, 2007 and 2012 SUSB are used.¹⁹ For these three benchmark years, the Census estimates receipts by business size group for the employer businesses included in the SUSB data.

To take the fullest advantage of the IRS statistics, one needs the SUSB data further dis-aggregated by legal form of organization. The Census produces tables that show employment, payroll, and receipts data by legal form of organization for each major industry separated by the employment size of the firms.²⁰ This information is used to calculate the large business share of receipts for (taxpaying) corporate businesses in 1997, 2002, 2007 and 2012 and is interpolated for the remaining years.

Once the large business share of corporate receipts is calculated for each year, the IRS Statistics of Income data could be used to make share estimates for the detailed non-compensation components of GDP. To calculate the corporate business size shares from the SOI tables, the large business share of corporate receipts is used to determine the average receipts size of a large business. This provides the breakpoint in the distribution of the other components by business size that approximates what should be allocated to large corporate businesses and what should be allocated to small corporate businesses.

SUSB tables showing the legal form of organization provide more information about partnerships and sole proprietorship than was previously available.²¹ For the most part, sole proprietorship are overwhelmingly small businesses. Consequently, the SOI data for sole proprietorship continues to be allocated to small businesses. Partnerships are increasingly used by larger and larger businesses. The 2002, 2007, and 2012 SUSB tables by legal form of organization provides a basis for calculating how much of the partnership information should be allocated to large businesses. The SOI does not distribute its partnership data by receipts size as it does for its corporate data. Consequently, the business receipts share for the partnerships in each industry is used to split the other components by firm size.²²

The IRS SOI tables are used to proxy the large and small business shares of the BEA data. The calculated SOI shares are applied directly to the corporate business components of the GDP by industry data.

¹⁹ Receipt shares are included in the SUSB only in years when the economic census is conducted: 2002, 2007, and 2012.

²⁰ SUSB provides legal form of organization data for 1998 according to SIC code but not by NAICS code. The 1998 data for SUSB's 10 SIC coded industries were matched and weighted to harmonize with the 16 NAICS industries' LFO data reported in 2002. To illustrate this approach, consider 1998 data for SIC code 60, Finance, Insurance, and Real Estate. It was matched to NAICS codes 52, Finance and Insurance, and 53, Real Estate. The 1998 SIC 60 data were then distributed according to industry-level receipt shares of 2002: 57% to Finance and Insurance and 43% to Real Estate.

²¹ Prior to 2002, the amount allocated to small business corporations has been added to the total amount reported for partnerships and sole proprietorships in order to produce an estimate of the total small business payments for each of the SOI proxies that are used to divide the non-compensation components of GDP.

²² This approach differs from the methodology used in making earlier estimates of GDP by business size (Popkin 1982, 2002a). When SIC-based estimates were calculated, the SOI shares could be bench-marked using a special SBA study that allocated the IRS SOI data by firm employment size with the firm size determined by payroll tax form 941. That study was never replicated and is now antiquated; therefore this technique is no longer in use.

A larger share of small business income than that of large business income is allocated to the non-compensation shares because the wage income of partners and proprietors is allocated to profit-type income for non-corporate businesses, while the wages of corporate owners are considered part of compensation. In addition, the distribution between corporate and non-corporate depreciation and profits, as measured in the GDP numbers, weights the non-corporate side more heavily than it is weighted in the IRS statistics. This may be because the BEA makes estimates for under-reported income which is somewhat more likely to occur in the non-corporate sector.

4.2.3 ESTIMATES FOR 2014

Estimated 2014 small business shares were produced using 2014 GDP by industry data and estimated payroll and employment statistics.²³

To estimate payroll shares, the BLS' Quarterly Census of Employment and Wages is used to estimate the likely direction and magnitude of the change in the small business share from 2013 to 2014. Those data are used to estimate the small business payroll share for 2014. MEPS data are available through 2014 and 2013 SUSB employment totals are used to estimate the 2014 health insurance cost for health insurance by firm size. The pension share is based on 2013 share information.

The information on corporate and non-corporate profits show some interesting differences by industry. For example corporate profits in the finance and insurance industry grew strongly in 2014, while the non-farm proprietors' income in that industry declined substantially. There is little data available to judge the overall magnitude and direction of such changes by business size until the 2014 IRS statistics are published. Consequently, the 2014 estimates are much more speculative than those for the earlier years.

²³ The 2014 SUSB and IRS data were unavailable when the SGDP calculations were finalized.

5 DISCUSSION

5.1 RELATED RESEARCH AND ANALYSES

Rispoli and Leung (2014) estimate the share of Canadian GDP attributable to small (less than 100 employees) and medium size (100–499 employees) enterprises and compare those to similar shares in the US economy. The analysis uses a methodology similar to that of Kobe

(2012). The authors find that Canadian small and medium size enterprises (SME) have a larger share of the Canadian economy than their counterparts do in the US economy (53.4% of business sector GDP in Canada in 2008 compared with 46.1% in the US.) Both countries experienced declining SME shares of GDP between 2002 and 2008. The authors have somewhat more information from tax records (as tabulated for the Canadian estimates of GDP) than are directly available for use in the US estimates, especially for the non-corporate non-compensation components. It is unclear if this provides additional levels of industry disaggregation than the records used for the US tabulations.

Abowd and Vilhuber (2011) compare estimates of gross job flows from three sources: the Bureau of Labor Statistics' Job Openings and Labor Turnover Survey (JOLTS) and Business Employment Dynamics (BED) data and the Census's Quarterly Workforce Indicators (QWI). In the past, BED and JOLTS were used for estimating changes in relative payroll shares for periods after the last observation from the Statistics of US Businesses' database. Past research on the small business share of GDP noted that these two datasets do not always provide consistent information on employment trends by industry and firm size. Therefore, studies that look at the available datasets can provide insights that are useful in that portion of the GDP analysis. The study finds some differences between the survey-based JOLTS data and the Unemployment-Insurance based BED data. One possible reason for this difference is that the JOLTS survey is not picking up establishment births and deaths whereas the other data tend to incorporate those changes.

Kochhar, Parker, and Rohal (2015) analyzed information on the self-employed from the 2014 Current Population Survey and found that 14.6 million workers identified themselves as self-employed, about one-tenth of the workforce. Of those, about 3.4 million (a quarter of the self-employed) are also employers, providing jobs for about 29.4 million other workers. Among these employers, the median number of paid workers is 3, and the average is 8.6. Most of the self-employed run unincorporated businesses, but those who employ the most people are incorporated (employing 22.5 of the 29.4 million employees who worked for self-employed employers.) The largest number of self-employed workers is in the professional and technical fields, followed by construction, trade, and health and educational services. The author also discusses the differences in reported self-employment between the Current Population Survey (CPS) and the Survey of Business Owners. The latter survey is only conducted during the 5-year business censuses but identifies more business owners than the CPS.

Anderson (2009) uses business valuation methods to estimate the

value of privately held businesses in the United States. GDP is a measure of output, not of value, so Anderson's techniques do not directly assist in making GDP estimates. He is however using similar data sources for his work, primarily the IRS Statistics of Income data. For example, Anderson separates the C corporations from the S corporations in his analysis, primarily because the S corporations are, by definition, small, privately held companies. Such a dichotomy may provide some insight into the ways the Statistics of Income data are used to measure SGDP in this paper. Anderson's estimates for 2002 indicate that privately held businesses were worth more than publicly held businesses (\$12.4 trillion compared with \$7.2 trillion) and that privately held businesses generated more earnings than publicly held companies (\$753 billion compared with \$181 billion). In evaluating these figures, it is important to remember that privately held businesses greatly outnumber publicly held companies.

5.2 CHALLENGES TO SMALL BUSINESSES

From its low in 2009, SGDP steadily grew to pre-recession levels by 2011 and to new highs by 2014. In contrast, neither small business employment nor the number of small businesses recovered to pre-recession levels by 2014. Large businesses, on the other hand, quickly rebounded from the recession and, by 2014, reached new levels for all three series. In this sense, small businesses were more harmed by the 2008 recession.

The recession's impact only explains a small part of the almost 5% decline in the small business share of GDP from 1998 to 2014. The small business share fell more than 3.3% during the 8 years preceding the recession and only 1.2% in the 8 years during and after the recession. This difference points to structural changes, as opposed to cyclical responses, as causing the observed decline in the small business share of GDP. Potential mechanisms explaining these structural and cyclical changes include:

- Long run declines in business dynamism,
- The rise of big-box stores,
- The changing regulatory environment,
- The changing industry composition,
- Differential effects of recessions according to business age,
- The critical role of credit for small businesses, and
- The faster growth of large businesses.

BUSINESS DYNAMISM IS DECLINING. Business dynamism, also known

as churning, refers to the continual process of firm births, deaths, expansions, and contractions.²⁴ Small businesses cease to be counted as small businesses when they grow into large businesses or when they close their doors. Thus, a constant replenishment of small businesses from new startups or shrinking large businesses is required to maintain the small business share of the overall economy. The relatively slight, but steady, decline in business openings since 2007 is therefore likely to diminish the small business share of GDP. Hathaway and Litan (2014) show that observed declines in business dynamism are not driven by geography, while Haltiwanger, Hathaway, and Miranda (2014) demonstrate that the declines extend to the US high-tech sector.

BIG-BOX STORES CHANGED THE SMALL BUSINESS LANDSCAPE. The rise of big-box stores marked a major shift in the Wholesale and Retail Trade industry, as the small business share of GDP fell from 53% in 1998 to 41% in 2014. Haltiwanger, Jarmin, and Krizan (2009) analyze the growth of big-box stores in retail trade. Using a longitudinal dataset of businesses, they analyzed the impact of a big-box store's entry into the geographic area of small retailers. Their main finding is that big-box stores generate a substantially negative impact on employment growth at both single-unit and smaller chain stores (mostly due to store exits). The impact is only observed if the big-box store's activity is in the immediate area and in the same detailed industry. As the distance increases between the new entrant and the established smaller businesses, the negative impact is reduced. Certain businesses, such as smaller chain restaurants however, seem to benefit from the entry of big-box stores.

OVER-REGULATION DISCOURAGES ENTREPREURSHIP AND MAY FAVOR LARGE BUSINESS. Djankov (2009) identifies three motives for regulators to regulate new businesses: to promote the public interest, to benefit the incumbents in a captured industry, and to operate as a tollbooth.²⁵ The study surveys empirical work suggesting that reduced regulation, especially those that target start-ups, cuts corruption, increases entrepreneurship, and raises productivity. Cross-country empirical research by Ardagna and Lusardi (2009) similarly suggests that over-regulation is detrimental to entrepreneurship when considering entry, contract enforcement, and labor market regulation.²⁶ Van Stel, Storey, and Thurik (2007) however, find that while minimum capital requirements lower entrepreneurship rates, cross-country differences in labor market regulations do more to discourage entrepreneurship than administrative barriers to starting new businesses. The result is somewhat counterintuitive: potential entrepreneurs are less influenced by imme-

²⁴ *Births* are counted when business establishments hire at least one employee for the first time. *Openings* measure *births* plus seasonal re-openings. Similarly, *deaths* occur when establishments having at least one employee later have none and remain closed for at least a year. *Closings* measure deaths plus seasonal shutterings.

²⁵ Pigou (1951) suggests that unregulated markets exhibit frequent market failures that may lead to monopoly or other undesirable externalities. Describing regulatory capture theory, Stigler (1971) asserts, "Regulation is acquired by the industry and is designed and operated primarily for its benefit." Shleifer and Vishny (1993) describe the tollbooth theory, "Regulations exist... to give officials the power to deny them and to collect bribes in return for providing the permits."

²⁶ The Ardagna and Lusardi (2009) paper is notable for its statistical power, employing over 190,000 observations across 40 developed and developing countries.

diate barriers than by factors which do not come into play until their businesses are established. More recent research frames regulation as a dynamic force that both empowers and constrains business performance, generating contradictory performance effects (Kitching, Hart, and Wilson 2015).

Van Stel, Storey, and Thurik (2007) highlight a common theme among cross-country analyses on regulations and entrepreneurship, noting, “[The] US is the exemplar low regulation country.” The relatively favorable small business regulatory environment is, in part, traceable to legislative and executive efforts beginning with the 1953 Small Business Act (15 USC 631–657 1953). The Regulatory Flexibility Act (5 USC 601–612 1980), a subsequent statute, aims to address the disproportionately burdensome legal, accounting, and consulting costs faced by small businesses when regulations are applied uniformly and without regard for the sizes of businesses. The RFA mandates that agencies fit their rules to the scale of businesses in order to promote competition, innovation, and productivity growth while preventing regulatory actions inconsistent with legislative intent or that make inefficient use of regulatory agency resources.

Despite being supportive of small businesses relative to other countries, the growing volume of US regulations may explain some part of the declining small business share of GDP. Apart from a small dip in the 1980s and another in the 1990s, the Code of Federal Regulations (CFR), the central repository for US regulations, has grown rapidly since the mid-1970s. Its ever-growing volume may diminish the ability of new and small businesses to navigate the rules relative to their larger or more established counterparts.²⁷

SERVICE INDUSTRY DYNAMICS EXPLAIN THE DECLINING SMALL BUSINESS SHARE OF EMPLOYMENT. Headd (2015) identifies the maturing age distribution of businesses in service industries as a factor contributing to the declining small business share of employment. That service industries, which typically have higher than average small business shares of employment, would be responsible for the decline is counterintuitive. Headd uses underlying small business employment shares and workers’ age data to identify the aging of the workforce and of firms. He further suggests that these trends might explain the fall in dynamism beginning in 2000.

Figure 7 plots small business employment levels and shares for four industries over time.²⁸ Each cluster of points shows the small business shares and levels of employment for a given industry over time with markings for the years 1998 and 2014. Linear trend lines describe

²⁷ Executive Order 13771 is poised to stem CFR growth by requiring that agencies identify at least two existing regulations to be repealed whenever they publicly propose for notice and comment or otherwise promulgate a new regulation (EO 13771 2017). In addition, all changes must be cost neutral or negative.

²⁸ For a figure including all 16 industries, see Appendix A.

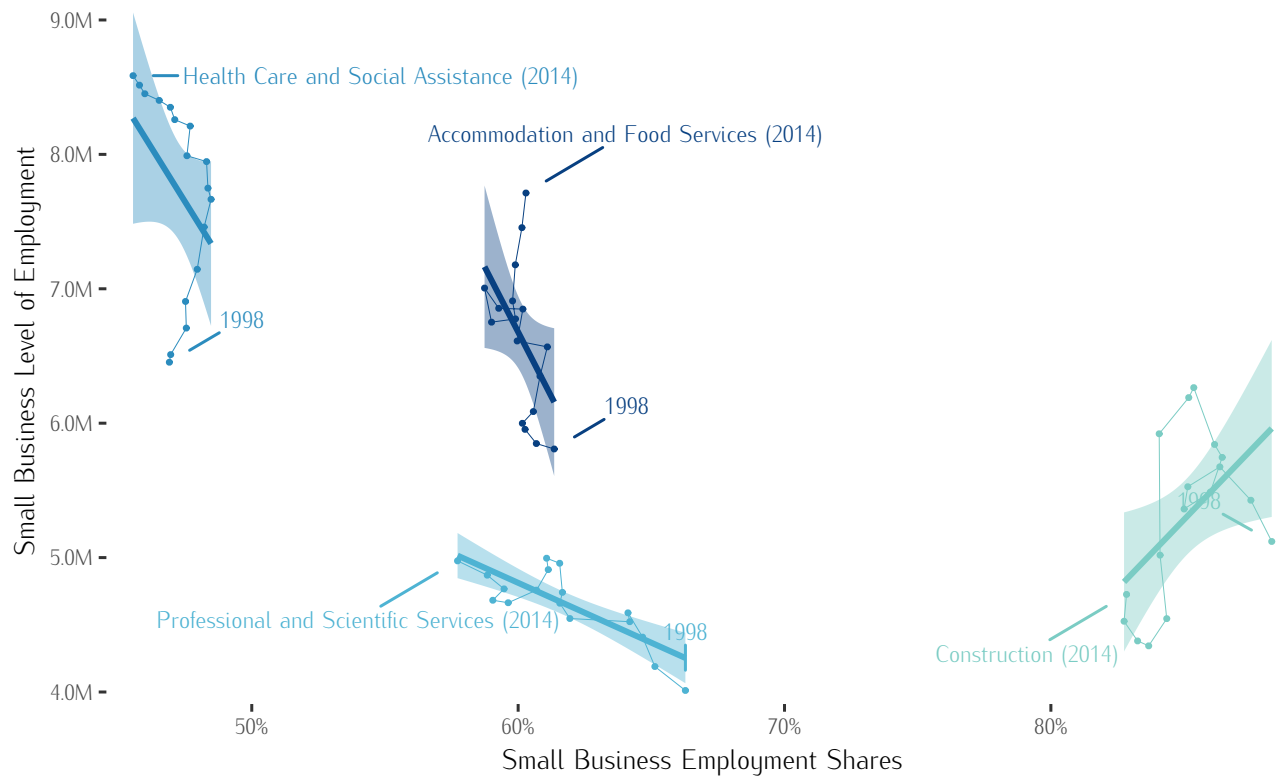


Figure 7: Small Business Employment Levels and Shares, 1998-2014

the overall relationships. Consider the cluster of points tracking the Professional and Scientific Services industry. While small business employment increased from approximately 4 million in 1998 to 5 million by 2014, the small business share of employment fell from 66% to 58%. Overall, small business employment *increased* in 14 of 16 industries yet the small business share of employment *fell* in 13 of 16. From this perspective, the underlying statistical evidence suggests that the declining small business shares of employment in these services industries is due primarily to faster growth in large business employment and not to shrinking small business employment.²⁹

Decker et al. (2014) refine the earlier research, and reiterate the important role young businesses (and almost always small businesses) play in job creation. The authors also note that annual startup rates declined from about 12 percent in the 1980s, to 10.6 percent briefly before the recession, to about 8 percent in the immediate aftermath of the recession. In short, the authors find that the share of young businesses in the economy, and the share of activity for which they account, is declining. The authors find that this decline in startup activity is present in all broad industrial sectors and in all US states, implying some common factors that are not specific to sectors or geographic regions.

²⁹ See Appendix A for all industries displayed together.

THE CONSTRUCTION INDUSTRY'S SHARE OF GDP FELL AS FORMER EMPLOYEES EXPERIENCED FALLING WAGES IN OTHER INDUSTRIES. Hyatt and McEntarfer (2012) used a multi-state pilot study of a planned Census dataset on national job-to-job flow statistics derived from the Longitudinal Employer-Household Dynamics (LEHD) infrastructure files. The data links information about employers with information about their employees. The preliminary study uses limited information focused on those who lost or left jobs in residential construction (a small business dominated industry) and found new jobs. During the most recent recession, even those who found a new job in residential construction relatively quickly suffered a decline in median wages of about 0.6 percent. Those who moved from residential construction to other industries suffered a larger wage decline, 3.4 percent on average. This study indicates that payrolls and possibly payroll shares were impacted not only by reductions in employees but in reductions in pay to new employees added to the payroll.

THE RECESSION HARMED YOUNG BUSINESSES. Fort et al. (2013) use a longitudinal database to analyze the impact of the recession on young versus mature businesses. They conclude that young businesses experienced larger increases in job destruction and larger declines in net employment growth and job creation during the 2007–2009 recession. Mature businesses also experienced substantial declines in net employment growth over the period and, since large businesses account for most employment, they account for a larger share of job losses. Nevertheless, the relative declines in this period are greater because young businesses are more cyclically sensitive. Among other mechanisms, Fort et al. (2013) identify a connection between the weakness of young businesses and housing price declines. Mach and Wolken (2012) suggest the tight connection between the decline in housing prices and the decline in net growth for young and small businesses may be due to declining home equity. They find that the impact of collapsing housing prices on young and small businesses is concentrated in the Construction, Retail Trade, Finance, Insurance, Real Estate, and Other Service sectors.

CREDIT AVAILABILITY IS CRUCIAL. Mach and Wolken (2012) find that credit availability impacted small business survival over the 2004–2008 period. The authors applied failure prediction models to a sample of small businesses confirmed to be in operation as of December 2003. They found that credit constrained businesses were significantly more likely to exit than non-constrained businesses. Moreover, credit constraint and credit access variables appear to be among the most impor-

tant factors predicting which businesses went out of business during the 2004–2008 period even when an extensive set of firm, owner, and market characteristics were included as explanatory factors. By definition, credit-constrained businesses are unable to easily access normal bank loans and therefore use more expensive forms of credit such as credit cards or trade credit. Since many small businesses depend on the value of their personal property (such as their personal residence) as collateral for business loans, the loss in value of that personal property during the recession caused more businesses to become credit constrained.

5.3 LARGE BUSINESS GROWTH

As shown in [Section 2.2](#), Figure 3, the decline in the small business share of GDP is due, in part, to faster growth among large businesses.

As small business manufacturing declined in the past, underlying shifts toward small business service industries picked up the slack. Thus, one hypothesis for the declining small business share of GDP is that demand is shifting toward industries dominated by large businesses. The data do not support this view. The industry mix remained relatively unchanged from 1998–2014 and the small business share of GDP fell both among industries whose GDP was generated mostly by small businesses and among those composed primarily of large business GDP. For example, the small business share of Manufacturing and Mining fell from 32% to 27% while the small business share of Construction fell from 89% to 81%. In the largest demand shift among all industries, the Health Care and Social Assistance industry grew from the 5th largest in 1998 to the 3rd largest industry in 2014 while its small business share fell from 52% to 47%.

Factors unique to large businesses may help explain their strong growth. Economies of scale due to increased globalization, for instance, may explain part of this growth. Larger firms can spread the legal, logistical, and translation costs of importing and exporting. This allows larger firms to access markets otherwise unaffordable to small businesses. Reduced competition from small businesses due to declining start up rates and lack of vibrancy among small businesses may play a role. Faced with fewer rivals, some large businesses might be enabled to invest in expansions where they otherwise would not.

6 CONCLUSION

Small businesses are the lifeblood of the US economy. Yet despite being key drivers of innovation, job creation, and competition, they make up a smaller share of US output than ever before. The small business share of GDP fell from 48.0% in 1998 to 43.5% in 2014. The decline was not due to declining output. In fact, real SGDP grew at 1.4% annually. Instead, the decline is attributable to faster real growth of 2.5% among large businesses.

The number of small businesses declined following the financial crisis and did not fully recover by 2014. In contrast, the number of large businesses grew continuously between 1998 and 2014. Average small business employment remained at about 10 employees per business, while average employment for large businesses increased from 3,253 employees per business in 1998 to 3,324 in 2014.

Despite increasing average employment for large firms, the employee productivity gap grew substantially following both the 2001 and 2008 recessions. By 2014, large business GDP per employee was \$122,000 per employee versus only \$103,000 per employee for small businesses. This may reflect the better ability of large businesses to invest in physical capital by harnessing low interest rates following recessions or the increased propensity of small businesses to employ part-time workers. In contrast, small businesses produced more GDP for every dollar spent on payroll in 12 of 16 industries. GDP per payroll dollar was \$2.44 for small businesses and only \$2.20 for large businesses in 2014.

The experiences of small businesses varied across industries. Real SGDP increased for all industries while the small business share decreased for 14 of 16 industries. In 2014, Real Estate & Rental & Leasing remained the leading industry in terms of SGDP, productivity per employee, and productivity per payroll dollar, however it ranked 12th out of 16 in employment. Wholesale & Retail Trade, the largest small business employer, was the 2nd largest in terms of SGDP. Construction small businesses, which experienced sharp declines during the financial crisis, created only 81% of Construction GDP in 2014, down from 87% in 1998.

The findings indicate that small businesses did not fare as well as large businesses between 1998 and 2014. While small businesses continue to drive innovation and create nearly two-thirds of all new jobs, recent trends bring their future role into question. Future research should therefore consider the potential for further declines in the small business share of the economy as well as the consequences of further declines in terms of innovation, job creation, and competitiveness.

Small Business GDP, 1998–2014 was peer-reviewed consistent with Advocacy's data quality guidelines. For more information, please contact the [Office of Advocacy](#).

7 APPENDIX A: INDUSTRY LEVEL DATA

7.1 NOMINAL GDP³⁰

³⁰ Statistics cover only private non-farm entities.

7.1.1 NOMINAL TOTAL GDP

Billions of Nominal US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	7,185.9	7,658.2	8,156.3	8,369.7	8,612.9	9,006.0	9,604.5	10,289.5	10,914.4	11,393.7	11,471.6	11,103.2	11,553.2	12,019.8	12,623.1	13,031.3	13,622.4
Manufacturing and Mining	1,516.5	1,578.0	1,665.8	1,603.6	1,586.2	1,671.2	1,786.7	1,930.8	2,077.6	2,168.3	2,215.6	2,017.1	2,162.3	2,305.9	2,394.6	2,465.7	2,551.5
Wholesale and Retail Trade	1,201.3	1,247.6	1,320.6	1,331.4	1,355.5	1,423.0	1,506.1	1,608.1	1,693.7	1,738.4	1,733.9	1,665.0	1,737.3	1,798.9	1,895.1	1,969.8	2,042.2
Health Care and Social Assistance	531.2	561.4	595.4	642.0	692.7	738.0	788.8	828.9	883.0	925.9	996.0	1,051.0	1,079.2	1,111.6	1,153.8	1,188.5	1,226.9
Finance and Insurance	639.8	679.5	750.4	817.5	835.2	866.8	890.3	991.8	1,048.8	1,040.5	907.2	969.3	1,005.8	1,038.0	1,142.7	1,150.2	1,222.9
Professional and Scientific Services	546.8	600.2	656.0	691.6	718.2	739.5	787.4	842.8	903.7	967.3	1,053.3	1,000.4	1,022.0	1,074.1	1,128.8	1,136.6	1,193.0
Real Estate and Rental and Leasing	489.2	534.1	554.4	598.5	633.2	650.2	668.3	716.4	735.7	818.0	826.4	810.2	848.1	899.5	955.4	981.6	1,032.8
Information	435.5	486.1	472.2	501.2	549.5	564.0	620.8	641.6	649.0	702.4	730.5	705.3	730.2	728.4	737.5	793.8	824.7
Construction	380.5	418.4	462.3	488.0	494.9	527.1	587.5	654.1	698.2	715.0	653.0	577.3	541.6	546.6	583.6	619.9	664.0
Administrative and Support Services	231.6	252.5	281.9	295.5	300.7	321.3	346.5	380.5	399.4	430.4	438.2	413.6	439.5	457.5	479.6	493.8	526.0
Transportation and Warehousing	278.2	288.3	305.6	307.8	305.3	320.9	351.1	375.1	407.6	409.6	422.4	398.8	425.1	446.9	467.4	483.5	505.7
Accommodation and Food Services	238.5	262.9	286.8	292.7	309.4	321.1	343.5	359.0	379.7	394.5	394.9	383.5	396.2	413.9	439.9	461.4	488.0
Other Services	234.6	248.1	266.2	253.4	273.1	270.7	283.4	296.3	309.2	312.4	311.6	312.0	316.9	322.4	337.7	344.9	360.8
Management of Businesses	141.0	150.3	173.2	174.4	176.6	187.5	206.7	219.3	238.5	259.5	261.5	247.1	268.2	281.0	304.3	322.0	337.9
Utilities	163.9	180.1	180.2	184.0	180.1	187.1	202.7	201.4	230.0	235.1	237.5	250.8	267.0	272.0	262.9	270.5	280.8
Educational Services	74.5	80.4	86.1	91.7	98.6	106.5	116.7	121.0	129.9	138.7	149.3	163.0	169.3	175.5	183.0	184.7	192.8
Arts, Entertainment, and Recreation	82.8	90.4	99.0	96.6	103.8	111.1	118.0	122.3	130.3	137.6	140.1	138.8	144.4	147.5	157.0	164.3	172.3

Table 2: Nominal GDP, 1998-2014

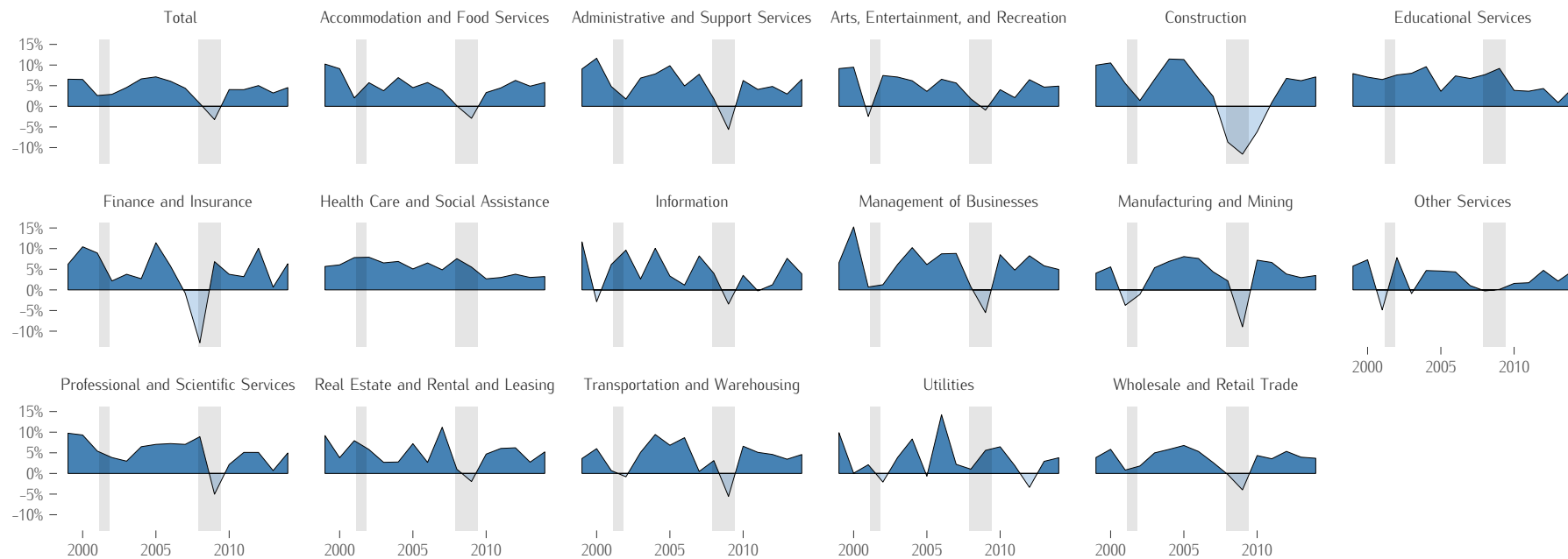


Figure 8: Nominal GDP Growth Rates, 1999-2014

7.1.2 NOMINAL SGDP

Billions of Nominal US Dollars

Table 3: SGDP, 1998-2014

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	3,448.4	3,655.5	3,829.4	3,926.5	4,052.8	4,229.6	4,470.6	4,684.4	4,954.5	5,173.2	5,162.3	4,960.3	5,131.5	5,330.6	5,582.8	5,685.1	5,927.4
Real Estate and Rental and Leasing	400.1	434.4	450.0	491.8	518.1	522.5	532.3	550.0	568.3	667.4	704.4	670.8	695.4	735.5	777.7	807.1	850.3
Wholesale and Retail Trade	635.8	649.2	678.6	674.0	656.4	675.7	700.7	736.1	767.9	782.7	757.2	699.0	732.3	757.7	790.6	817.2	848.7
Manufacturing and Mining	446.6	463.1	491.0	476.5	447.3	474.0	515.9	528.8	592.5	605.2	632.1	538.3	595.1	638.6	671.9	670.2	691.9
Professional and Scientific Services	369.9	398.1	395.1	425.9	456.8	461.9	486.7	510.0	539.1	573.1	618.3	574.0	574.9	603.2	635.4	627.9	648.7
Health Care and Social Assistance	275.7	296.8	309.8	337.2	355.8	392.6	415.9	433.3	454.6	469.3	506.8	524.5	534.0	539.3	543.7	555.3	573.4
Construction	332.2	365.1	395.8	415.1	418.1	446.0	492.3	539.9	577.1	607.5	554.7	493.2	454.7	454.1	480.3	504.8	540.0
Finance and Insurance	191.4	205.0	222.3	236.2	302.3	299.6	301.8	325.5	324.1	321.9	229.7	316.2	349.8	359.9	361.1	351.0	356.4
Other Services	196.3	209.9	221.8	209.4	228.2	223.2	235.0	242.2	251.9	251.4	246.4	249.5	259.2	261.4	275.3	283.7	296.8
Accommodation and Food Services	137.6	148.8	167.0	162.8	171.1	170.8	182.1	184.6	198.3	205.2	201.7	202.0	207.6	218.8	232.5	243.8	259.1
Administrative and Support Services	104.9	108.7	122.5	123.7	129.2	139.7	151.9	151.6	174.0	173.5	170.8	160.9	168.8	173.2	181.7	183.2	195.2
Transportation and Warehousing	111.1	112.0	117.5	124.3	122.7	121.8	133.5	141.3	153.6	148.5	153.2	142.1	146.8	158.7	166.0	169.4	177.2
Management of Businesses	42.7	46.4	51.0	56.1	58.3	75.9	82.6	81.0	84.2	90.4	106.6	104.4	111.3	131.4	152.0	151.7	159.3
Arts, Entertainment, and Recreation	65.9	70.9	76.7	74.6	78.5	85.1	89.7	90.2	95.5	100.0	100.5	100.7	105.1	105.3	110.8	112.9	118.4
Information	88.8	92.7	71.3	55.6	45.4	69.8	73.3	91.5	89.6	86.9	86.6	87.6	95.5	93.0	99.9	95.2	96.9
Educational Services	33.4	36.0	38.4	41.3	42.9	47.3	51.0	51.8	55.5	58.8	62.9	67.6	68.4	69.5	72.4	73.2	75.3
Utilities	16.2	18.1	20.4	22.1	21.6	23.5	25.9	26.5	28.2	31.3	30.4	29.2	32.7	30.9	31.5	38.5	39.6

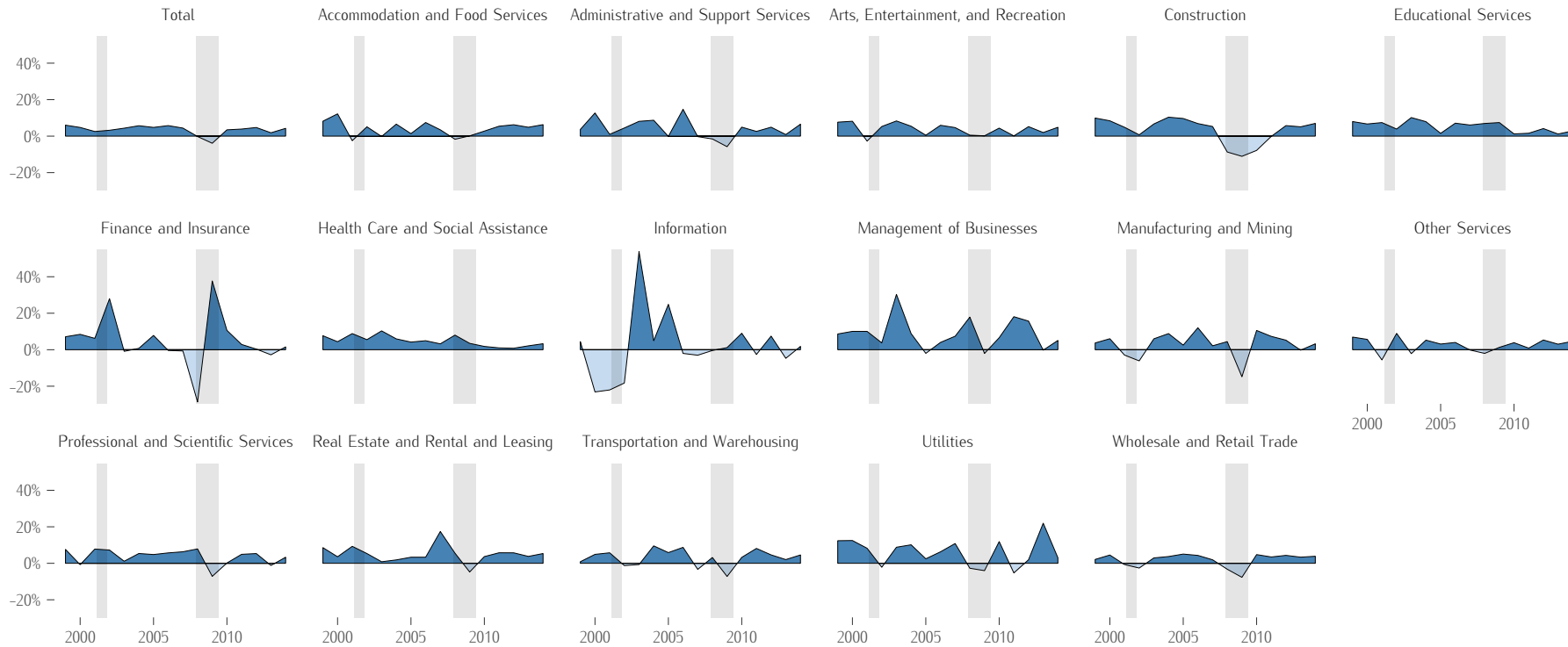


Figure 9: SGDP Growth Rates, 1999-2014

7.1.3 NOMINAL LARGE BUSINESS GDP

Billions of Nominal US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	3,737.4	4,002.6	4,326.9	4,443.2	4,560.1	4,776.4	5,133.9	5,605.2	5,959.9	6,220.5	6,309.3	6,143.0	6,421.7	6,689.2	7,040.4	7,346.2	7,695.0
Manufacturing and Mining	1,069.9	1,114.9	1,174.9	1,127.1	1,138.8	1,197.2	1,270.8	1,402.0	1,485.1	1,563.2	1,583.5	1,478.8	1,567.2	1,667.4	1,722.7	1,795.5	1,859.6
Wholesale and Retail Trade	565.5	598.4	642.0	657.5	699.1	747.2	805.4	872.0	925.8	955.7	976.7	966.0	1,004.9	1,041.2	1,104.5	1,152.6	1,193.6
Finance and Insurance	448.4	474.4	528.1	581.3	532.9	567.2	588.5	666.4	724.7	718.7	677.6	653.0	656.0	678.1	781.6	799.2	866.5
Information	346.7	393.4	400.9	445.7	504.0	494.1	547.5	550.0	559.4	615.5	643.9	617.8	634.7	635.5	637.6	698.6	727.8
Health Care and Social Assistance	255.5	264.5	285.5	304.7	336.9	345.5	373.0	395.6	428.4	456.7	489.2	526.5	545.2	572.2	610.1	633.3	653.4
Professional and Scientific Services	176.9	202.1	260.9	265.7	261.3	277.6	300.7	332.8	364.6	394.2	435.0	426.3	447.1	470.9	493.4	508.7	544.2
Administrative and Support Services	126.7	143.8	159.4	171.8	171.5	181.6	194.6	228.9	225.4	256.9	267.5	252.7	270.7	284.3	297.9	310.6	330.8
Transportation and Warehousing	167.2	176.3	188.1	183.5	182.6	199.0	217.7	233.8	254.0	261.1	269.1	256.7	278.4	288.1	301.4	314.1	328.5
Utilities	147.7	161.9	159.8	161.9	158.5	163.6	176.8	174.8	201.8	203.8	207.1	221.6	234.3	241.1	231.3	232.1	241.2
Accommodation and Food Services	100.9	114.1	119.8	129.9	138.3	150.3	161.4	174.4	181.4	189.3	193.2	181.5	188.7	195.1	207.4	217.6	228.9
Real Estate and Rental and Leasing	89.1	99.6	104.4	106.6	115.0	127.7	136.0	166.4	167.4	150.6	122.0	139.3	152.7	164.0	177.7	174.5	182.5
Management of Businesses	98.3	103.9	122.2	118.3	118.3	111.6	124.0	138.4	154.3	169.1	154.9	142.7	156.9	149.6	152.2	170.4	178.6
Construction	48.2	53.3	66.5	72.9	76.8	81.1	95.2	114.2	121.1	107.4	98.3	84.0	86.9	92.6	103.4	115.1	124.0
Educational Services	41.1	44.3	47.6	50.4	55.7	59.2	65.7	69.2	74.4	79.8	86.3	95.4	100.8	105.9	110.6	111.5	117.4
Other Services	38.3	38.2	44.4	44.0	45.0	47.5	48.4	54.1	57.3	61.0	65.3	62.5	57.8	61.0	62.4	61.2	64.0
Arts, Entertainment, and Recreation	17.0	19.5	22.3	21.9	25.2	26.0	28.3	32.1	34.8	37.7	39.6	38.1	39.3	42.2	46.2	51.4	53.9

Table 4: Large Business GDP, 1998-2014



Figure 10: Large Business GDP Growth Rates, 1999-2014

7.1.4 SMALL BUSINESS SHARES OF GDP

Percent

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	48.0	47.7	46.9	46.9	47.1	47.0	46.5	45.5	45.4	45.4	45.0	44.7	44.4	44.3	44.2	43.6	43.5
Real Estate and Rental and Leasing	81.8	81.3	81.2	82.2	81.8	80.4	79.7	76.8	77.2	81.6	85.2	82.8	82.0	81.8	81.4	82.2	82.3
Other Services	83.7	84.6	83.3	82.6	83.5	82.5	82.9	81.8	81.5	80.5	79.1	80.0	81.8	81.1	81.5	82.2	82.3
Construction	87.3	87.3	85.6	85.1	84.5	84.6	83.8	82.5	82.6	85.0	84.9	85.4	83.9	83.1	82.3	81.4	81.3
Arts, Entertainment, and Recreation	79.5	78.4	77.5	77.3	75.7	76.6	76.0	73.7	73.3	72.6	71.7	72.5	72.8	71.4	70.5	68.7	68.7
Professional and Scientific Services	67.7	66.3	60.2	61.6	63.6	62.5	61.8	60.5	59.7	59.3	58.7	57.4	56.3	56.2	56.3	55.2	54.4
Accommodation and Food Services	57.7	56.6	58.2	55.6	55.3	53.2	53.0	51.4	52.2	52.0	51.1	52.7	52.4	52.9	52.8	52.8	53.1
Management of Businesses	30.3	30.8	29.5	32.2	33.0	40.5	40.0	36.9	35.3	34.8	40.8	42.3	41.5	46.8	50.0	47.1	47.2
Health Care and Social Assistance	51.9	52.9	52.0	52.5	51.4	53.2	52.7	52.3	51.5	50.7	50.9	49.9	49.5	48.5	47.1	46.7	46.7
Wholesale and Retail Trade	52.9	52.0	51.4	50.6	48.4	47.5	46.5	45.8	45.3	45.0	43.7	42.0	42.2	42.1	41.7	41.5	41.6
Educational Services	44.8	44.8	44.7	45.1	43.5	44.4	43.7	42.8	42.7	42.4	42.2	41.5	40.4	39.6	39.6	39.7	39.1
Administrative and Support Services	45.3	43.1	43.5	41.9	43.0	43.5	43.8	39.8	43.6	40.3	39.0	38.9	38.4	37.9	37.9	37.1	37.1
Transportation and Warehousing	39.9	38.9	38.4	40.4	40.2	38.0	38.0	37.7	37.7	36.3	36.3	35.6	34.5	35.5	35.5	35.0	35.0
Finance and Insurance	29.9	30.2	29.6	28.9	36.2	34.6	33.9	32.8	30.9	30.9	25.3	32.6	34.8	34.7	31.6	30.5	29.1
Manufacturing and Mining	29.4	29.3	29.5	29.7	28.2	28.4	28.9	27.4	28.5	27.9	28.5	26.7	27.5	27.7	28.1	27.2	27.1
Utilities	9.9	10.1	11.3	12.0	12.0	12.6	12.8	13.2	12.3	13.3	12.8	11.6	12.2	11.4	12.0	14.2	14.1
Information	20.4	19.1	15.1	11.1	8.3	12.4	11.8	14.3	13.8	12.4	11.8	12.4	13.1	12.8	13.5	12.0	11.7

Table 5: Small Business Shares of GDP, 1998-2014

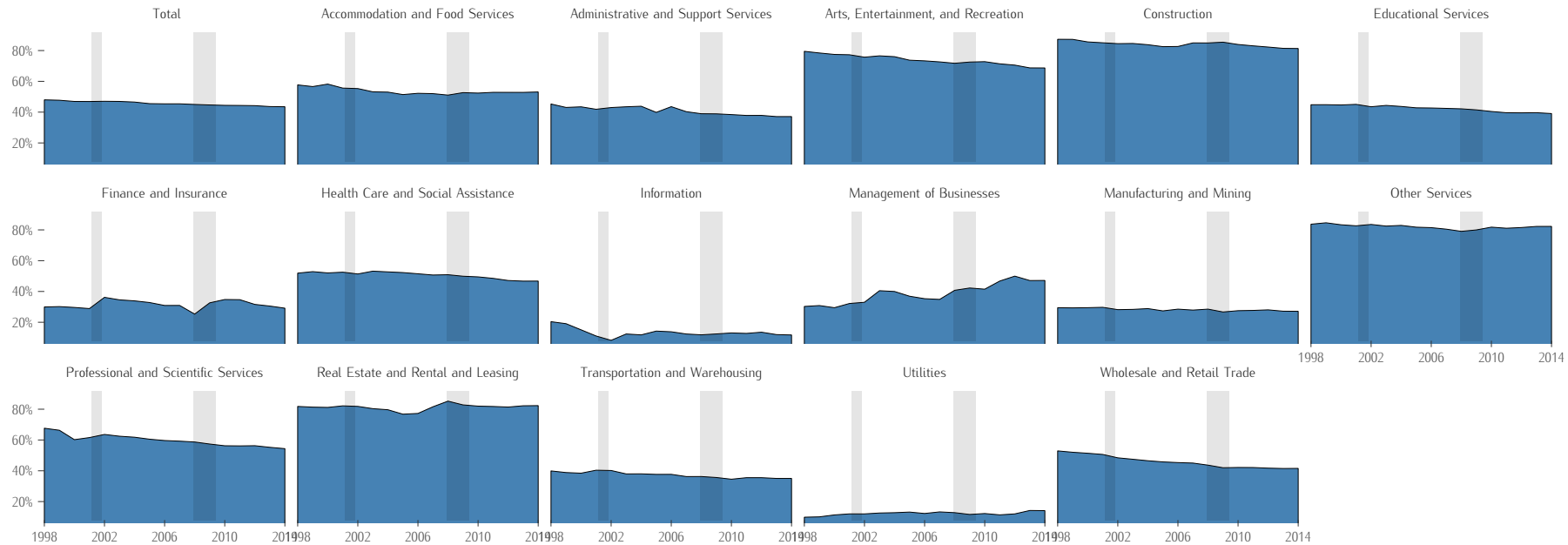


Figure 11: Small Business Shares of Nominal GDP, 1998-2014

7.2 REAL GDP

7.2.1 REAL TOTAL GDP

Billions of 2014 US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	9,916.7	10,409.3	10,839.7	10,875.4	11,022.3	11,300.0	11,728.4	12,173.2	12,527.6	12,738.8	12,579.1	12,083.4	12,421.4	12,661.7	13,056.7	13,264.7	13,622.4
Manufacturing and Mining	2,092.8	2,144.8	2,213.9	2,083.7	2,029.9	2,096.9	2,181.8	2,284.3	2,384.7	2,424.3	2,429.5	2,195.1	2,324.8	2,429.1	2,476.8	2,509.9	2,551.5
Wholesale and Retail Trade	1,657.8	1,695.9	1,755.1	1,730.0	1,734.7	1,785.4	1,839.2	1,902.5	1,944.1	1,943.7	1,901.3	1,812.0	1,867.8	1,895.0	1,960.2	2,005.1	2,042.2
Health Care and Social Assistance	733.1	763.0	791.3	834.2	886.5	926.0	963.3	980.6	1,013.5	1,035.2	1,092.2	1,143.8	1,160.3	1,170.9	1,193.4	1,209.8	1,226.9
Finance and Insurance	883.0	923.6	997.3	1,062.2	1,068.8	1,087.6	1,087.2	1,173.4	1,203.9	1,163.4	994.8	1,054.8	1,081.4	1,093.5	1,181.9	1,170.8	1,222.9
Professional and Scientific Services	754.7	815.8	871.9	898.6	919.1	927.9	961.5	997.1	1,037.3	1,081.5	1,155.0	1,088.7	1,098.8	1,131.4	1,167.5	1,157.0	1,193.0
Real Estate and Rental and Leasing	675.1	725.9	736.9	777.7	810.3	815.9	816.1	847.6	844.4	914.6	906.2	881.7	911.9	947.5	988.2	999.2	1,032.8
Information	601.0	660.8	627.6	651.3	703.2	707.6	758.1	759.0	744.9	785.3	801.0	767.6	785.1	767.3	762.8	808.0	824.7
Construction	525.0	568.7	614.4	634.1	633.3	661.4	717.5	773.9	801.4	799.4	716.0	628.3	582.3	575.8	603.7	631.0	664.0
Administrative and Support Services	319.6	343.2	374.7	383.9	384.8	403.1	423.1	450.2	458.4	481.2	480.5	450.2	472.5	481.9	496.0	502.7	526.0
Transportation and Warehousing	384.0	391.8	406.2	399.9	390.6	402.6	428.8	443.8	467.8	458.0	463.1	434.1	457.1	470.7	483.5	492.2	505.7
Accommodation and Food Services	329.1	357.3	381.2	380.3	396.0	402.9	419.4	424.7	435.8	441.0	433.1	417.3	426.0	436.0	455.0	469.6	488.0
Other Services	323.8	337.3	353.8	329.2	349.6	339.7	346.0	350.6	354.9	349.3	341.7	339.6	340.7	339.6	349.3	351.1	360.8
Management of Businesses	194.6	204.3	230.2	226.6	226.0	235.2	252.4	259.5	273.7	290.2	286.8	269.0	288.4	296.1	314.7	327.8	337.9
Utilities	226.2	244.7	239.4	239.1	230.5	234.7	247.5	238.2	264.0	262.8	260.4	272.9	287.1	286.6	271.9	275.4	280.8
Educational Services	102.8	109.3	114.4	119.1	126.2	133.7	142.6	143.2	149.1	155.0	163.7	177.4	182.0	184.8	189.3	188.0	192.8
Arts, Entertainment, and Recreation	114.3	122.9	131.5	125.5	132.8	139.4	144.1	144.6	149.5	153.9	153.7	151.1	155.3	155.4	162.4	167.2	172.3

Table 6: Real GDP, 1998-2014

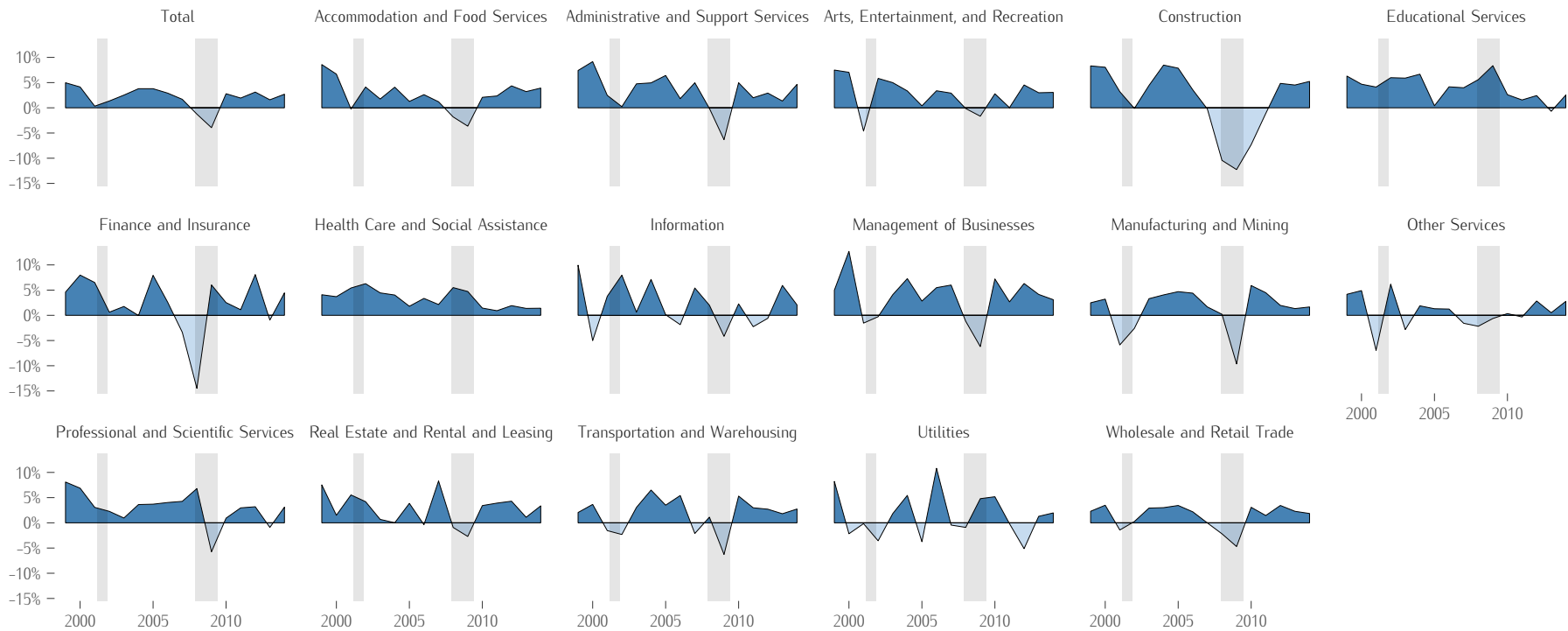


Figure 12: Real GDP Growth Rates, 1999-2014

7.2.2 REAL SGDP

Billions of 2014 US Dollars

Table 7: Real SGDP, 1998-2014

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	4,759.0	4,968.8	5,089.2	5,102.1	5,186.6	5,306.9	5,459.2	5,541.9	5,686.8	5,783.9	5,660.7	5,398.2	5,517.2	5,615.3	5,774.5	5,786.9	5,927.4
Real Estate and Rental and Leasing	552.2	590.5	598.1	639.1	663.1	655.6	650.0	650.7	652.3	746.1	772.4	730.1	747.7	774.8	804.4	821.6	850.3
Wholesale and Retail Trade	877.4	882.5	901.9	875.7	840.0	847.9	855.7	870.9	881.4	875.1	830.3	760.7	787.4	798.2	817.8	831.8	848.7
Manufacturing and Mining	616.3	629.4	652.5	619.2	572.5	594.8	630.0	625.7	680.1	676.6	693.1	585.8	639.8	672.7	695.0	682.2	691.9
Professional and Scientific Services	510.5	541.1	525.1	553.4	584.6	579.5	594.3	603.4	618.8	640.8	678.0	624.7	618.2	635.4	657.2	639.2	648.7
Health Care and Social Assistance	380.5	403.5	411.8	438.2	455.4	492.6	507.8	512.6	521.8	524.7	555.8	570.8	574.1	568.1	562.3	565.2	573.4
Construction	458.5	496.3	526.1	539.4	535.0	559.6	601.2	638.8	662.4	679.3	608.2	536.8	488.8	478.3	496.8	513.8	540.0
Finance and Insurance	264.2	278.7	295.5	306.9	386.8	375.9	368.6	385.0	372.0	359.9	251.8	344.2	376.1	379.1	373.5	357.3	356.4
Other Services	271.0	285.4	294.8	272.1	292.0	280.1	286.9	286.6	289.1	281.1	270.1	271.6	278.6	275.3	284.8	288.7	296.8
Accommodation and Food Services	189.9	202.3	222.0	211.6	219.0	214.3	222.3	218.4	227.7	229.4	221.2	219.8	223.2	230.5	240.5	248.1	259.1
Administrative and Support Services	144.7	147.8	162.8	160.7	165.4	175.3	185.5	179.4	199.7	194.0	187.3	175.1	181.5	182.4	187.9	186.5	195.2
Transportation and Warehousing	153.3	152.2	156.1	161.5	157.0	152.9	163.0	167.2	176.3	166.0	168.0	154.7	157.8	167.2	171.7	172.4	177.2
Management of Businesses	58.9	63.0	67.8	73.0	74.6	95.3	100.9	95.8	96.7	101.1	116.9	113.6	119.6	138.4	157.3	154.4	159.3
Arts, Entertainment, and Recreation	90.9	96.4	101.9	96.9	100.5	106.8	109.5	106.7	109.6	111.8	110.2	109.6	113.0	110.9	114.6	115.0	118.4
Information	122.5	126.1	94.7	72.2	58.1	87.6	89.5	108.3	102.9	97.2	94.9	95.3	102.6	97.9	103.3	96.9	96.9
Educational Services	46.1	49.0	51.1	53.7	54.9	59.3	62.3	61.3	63.7	65.8	69.0	73.6	73.6	73.2	74.9	74.6	75.3
Utilities	22.3	24.7	27.1	28.7	27.7	29.5	31.6	31.4	32.4	35.0	33.4	31.8	35.1	32.6	32.6	39.2	39.6

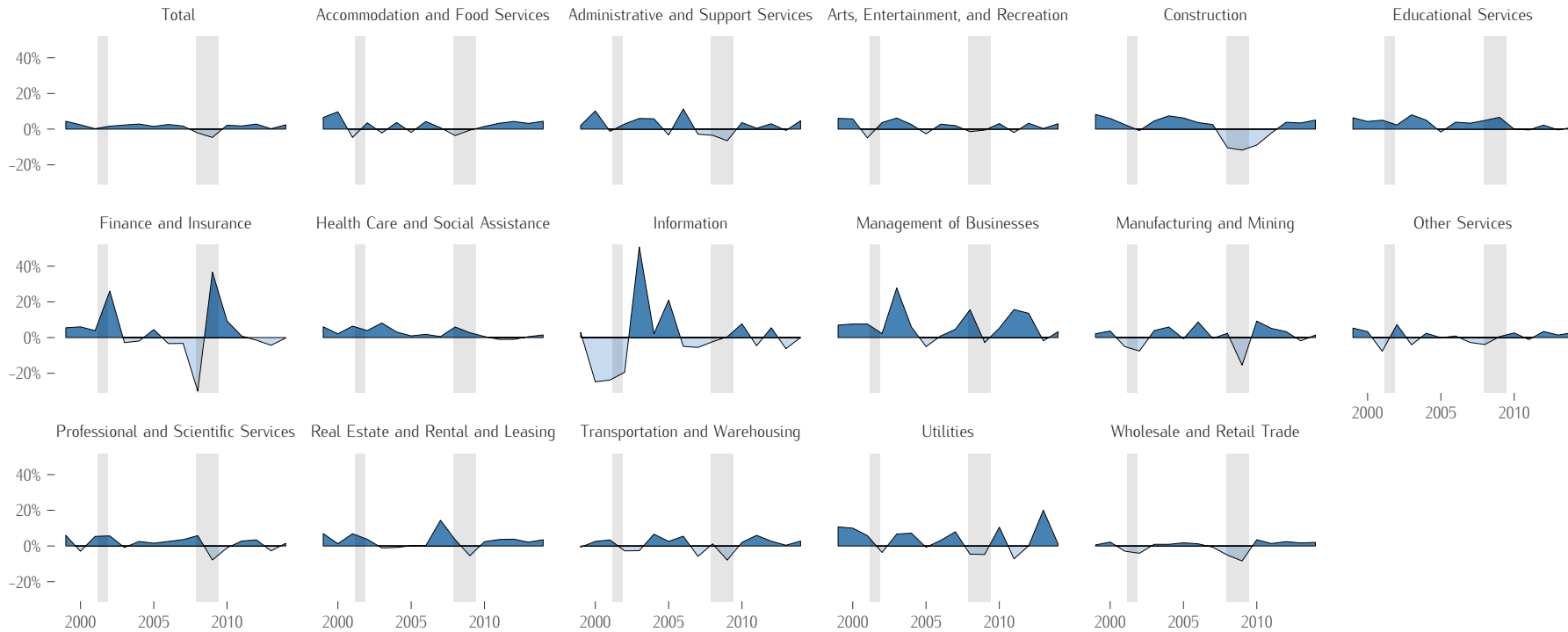


Figure 13: Real SGDP Growth Rates, 1999-2014

7.2.3 REAL LARGE BUSINESS GDP

Billions of 2014 US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	5,157.8	5,440.5	5,750.5	5,773.4	5,835.8	5,993.1	6,269.3	6,631.3	6,840.8	6,954.9	6,918.4	6,685.3	6,904.3	7,046.4	7,282.2	7,477.8	7,695.0
Manufacturing and Mining	1,476.5	1,515.4	1,561.4	1,464.6	1,457.4	1,502.1	1,551.8	1,658.6	1,704.6	1,747.7	1,736.4	1,609.3	1,685.0	1,756.4	1,781.8	1,827.6	1,859.6
Wholesale and Retail Trade	780.4	813.4	853.2	854.3	894.7	937.6	983.5	1,031.6	1,062.7	1,068.5	1,071.0	1,051.3	1,080.5	1,096.8	1,142.5	1,173.3	1,193.6
Finance and Insurance	618.8	644.9	701.9	755.4	682.0	711.7	718.6	788.4	831.9	803.5	743.0	710.7	705.3	714.4	808.4	813.5	866.5
Information	478.5	534.7	532.9	579.1	645.0	620.0	668.6	650.7	642.1	688.1	706.1	672.3	682.4	669.4	659.5	711.2	727.8
Health Care and Social Assistance	352.6	359.6	379.5	396.0	431.2	433.5	455.4	468.0	491.7	510.6	536.4	573.0	586.2	602.8	631.1	644.6	653.4
Professional and Scientific Services	244.1	274.7	346.8	345.2	334.4	348.3	367.2	393.7	418.5	440.7	477.0	464.0	480.7	496.0	510.3	517.8	544.2
Administrative and Support Services	174.9	195.5	211.9	223.2	219.4	227.8	237.6	270.8	258.7	287.2	293.3	275.1	291.0	299.5	308.1	316.2	330.8
Transportation and Warehousing	230.7	239.6	250.0	238.5	233.6	249.7	265.8	276.6	291.5	291.9	295.1	279.4	299.3	303.5	311.7	319.7	328.5
Utilities	203.9	220.1	212.3	210.3	202.9	205.2	215.9	206.8	231.6	227.9	227.1	241.2	251.9	254.0	239.3	236.2	241.2
Accommodation and Food Services	139.2	155.0	159.3	168.8	177.0	188.6	197.1	206.4	208.2	211.6	211.9	197.5	202.8	205.5	214.5	221.5	228.9
Real Estate and Rental and Leasing	122.9	135.4	138.8	138.6	147.2	160.2	166.1	196.9	192.1	168.4	133.7	151.6	164.2	172.8	183.8	177.6	182.5
Management of Businesses	135.7	141.3	162.4	153.7	151.5	140.0	151.5	163.7	177.1	189.1	169.9	155.3	168.7	157.6	157.5	173.4	178.6
Construction	66.6	72.4	88.4	94.8	98.2	101.8	116.3	135.1	139.1	120.1	107.8	91.5	93.5	97.5	106.9	117.1	124.0
Educational Services	56.7	60.3	63.3	65.4	71.3	74.3	80.3	81.9	85.4	89.2	94.7	103.8	108.4	111.6	114.4	113.5	117.4
Other Services	52.8	51.9	59.0	57.1	57.6	59.5	59.1	64.0	65.8	68.2	71.6	68.0	62.1	64.3	64.5	62.3	64.0
Arts, Entertainment, and Recreation	23.4	26.5	29.6	28.5	32.3	32.7	34.5	38.0	39.9	42.1	43.4	41.5	42.3	44.5	47.8	52.3	53.9

Table 8: Real Large Business GDP, 1998-2014

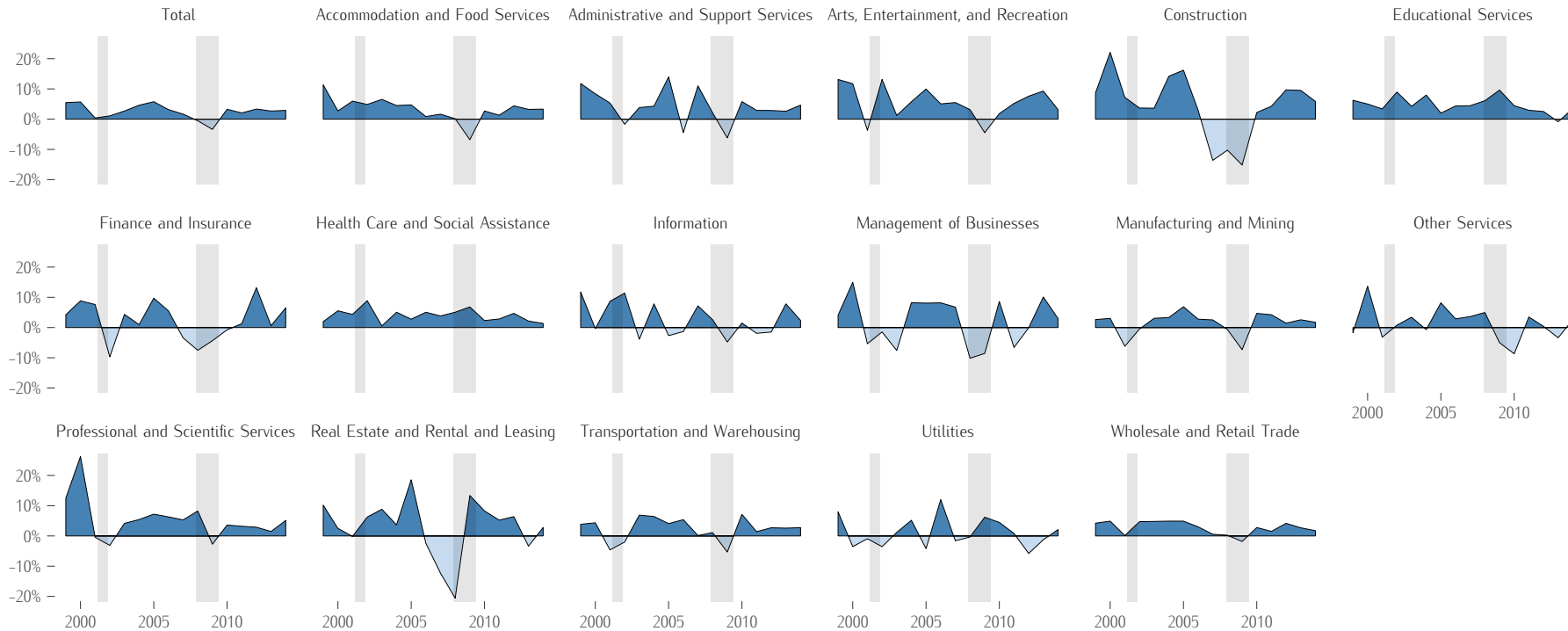


Figure 14: Real Large Business GDP Growth Rates, 1999-2014

7.3 PRODUCTIVITY

7.3.1 REAL GDP PER EMPLOYEE

Thousands of 2014 US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	91.9	94.2	95.2	94.7	98.2	99.8	102.1	104.8	104.6	105.8	104.2	105.7	111.1	111.8	112.8	112.3	112.7
Real Estate and Rental and Leasing	372.4	387.4	379.4	386.2	401.7	399.0	391.2	395.3	380.9	411.2	412.6	432.9	468.5	494.1	509.2	506.6	510.9
Utilities	331.5	366.9	365.4	365.3	355.6	347.3	389.9	376.3	429.7	422.0	407.3	425.4	449.9	447.9	424.1	431.3	440.2
Information	191.3	204.3	177.0	173.5	198.9	196.6	218.3	223.1	219.3	231.0	233.2	233.5	251.3	245.8	243.2	247.4	245.1
Manufacturing and Mining	120.0	125.3	130.8	126.8	136.6	143.8	152.7	161.3	168.1	172.9	177.0	179.4	203.1	208.8	207.8	209.0	209.4
Finance and Insurance	153.0	154.8	167.2	170.0	166.6	168.3	167.7	182.4	181.1	177.6	152.8	170.9	182.4	185.8	197.7	193.1	201.2
Professional and Scientific Services	124.7	126.8	127.9	125.6	130.4	126.4	127.0	129.7	128.8	132.2	143.8	138.9	140.5	142.7	145.6	139.8	138.4
Construction	90.5	91.7	93.5	97.7	100.4	103.6	107.9	114.1	109.2	110.0	101.7	105.3	108.1	110.9	114.7	115.3	116.4
Transportation and Warehousing	110.9	108.0	107.2	106.6	109.1	99.0	104.6	106.5	108.6	104.2	104.3	104.3	113.9	114.6	114.2	114.8	114.8
Management of Businesses	72.0	73.3	80.1	78.7	77.6	81.7	89.3	90.8	93.9	93.0	99.3	94.3	101.8	101.3	103.6	105.8	104.4
Wholesale and Retail Trade	82.4	82.9	83.8	82.3	83.9	86.1	86.5	89.3	89.2	89.5	87.3	87.8	92.9	93.2	95.2	95.8	95.7
Arts, Entertainment, and Recreation	72.2	74.9	75.5	70.5	73.7	76.1	76.3	74.7	75.8	76.6	74.3	75.2	77.5	77.6	78.9	79.2	79.4
Other Services	64.3	65.5	66.8	61.3	64.5	63.3	63.9	65.0	65.0	63.3	62.7	64.5	65.5	65.5	66.4	66.5	67.5
Health Care and Social Assistance	53.3	55.0	56.1	57.4	59.5	59.9	60.9	61.2	61.6	61.6	63.4	65.2	65.2	64.8	64.9	65.0	65.1
Educational Services	44.2	44.9	45.2	45.6	46.7	48.1	49.3	49.7	50.0	51.0	52.1	55.4	55.6	54.6	54.4	53.5	54.1
Administrative and Support Services	41.1	41.0	41.0	42.4	46.4	47.4	48.6	48.5	45.8	48.2	47.0	49.7	52.6	51.3	50.3	49.4	49.7
Accommodation and Food Services	34.8	37.1	38.6	38.1	39.4	38.6	39.0	38.5	38.3	38.1	36.3	36.5	37.7	37.7	38.0	37.9	38.1

Table 9: Real GDP per Employee, 1998-2014

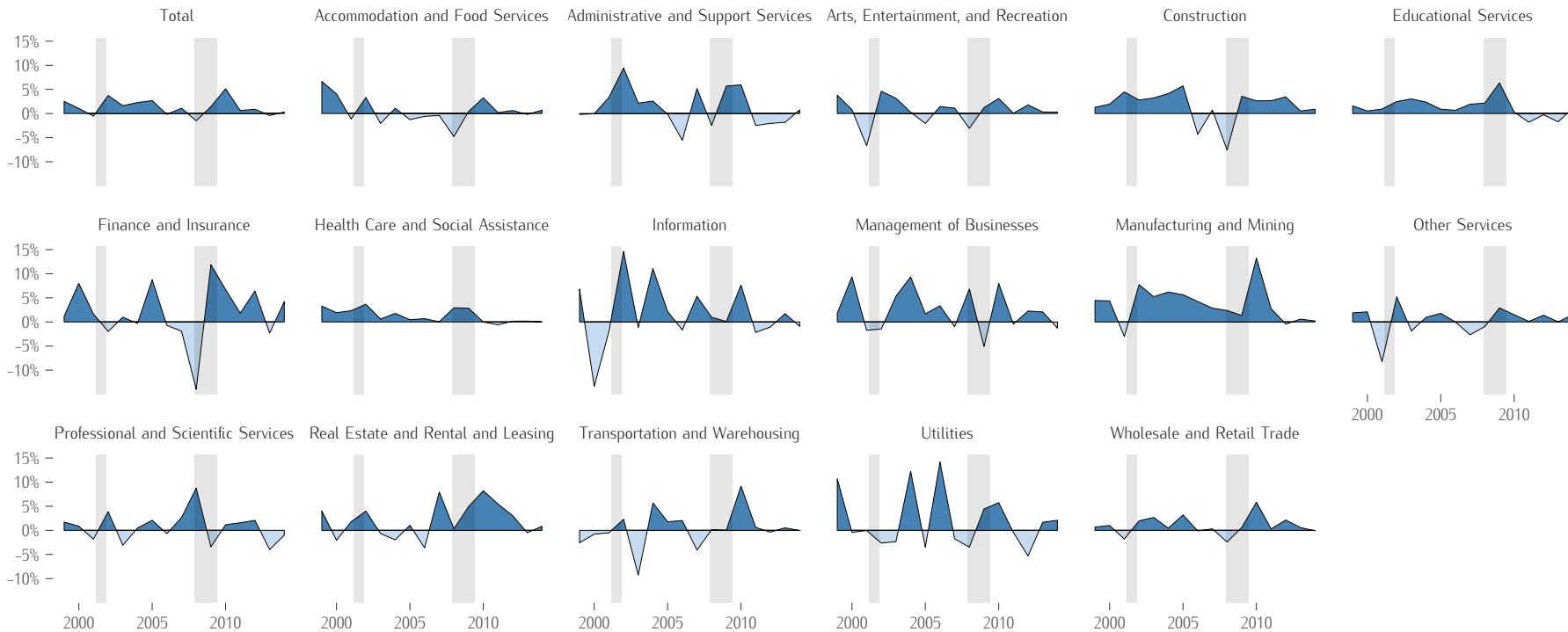


Figure 15: Real GDP per Employee Growth Rates, 1999-2014

7.3.2 REAL SGDP PER EMPLOYEE

Thousands of 2014 US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	86.7	89.4	89.3	89.2	92.0	92.4	93.2	94.7	94.4	96.8	95.1	96.1	100.6	102.3	103.3	102.1	102.6
Real Estate and Rental and Leasing	422.1	446.1	440.4	462.8	478.1	463.0	450.7	444.7	428.8	496.3	534.5	536.0	559.0	590.0	598.4	603.5	611.6
Management of Businesses	193.6	200.9	220.4	224.1	197.5	273.6	294.6	283.4	274.8	263.6	316.9	313.7	323.3	370.2	407.0	410.0	411.7
Utilities	215.3	241.0	259.0	270.9	250.2	266.9	294.3	287.7	296.7	316.8	307.4	293.6	319.9	298.3	292.3	354.9	355.1
Finance and Insurance	140.5	145.4	154.3	158.1	197.0	182.1	174.9	180.9	170.3	168.6	120.3	169.9	191.9	197.8	195.8	186.3	184.6
Professional and Scientific Services	127.3	129.1	119.1	120.6	129.3	127.5	127.5	127.3	124.8	128.3	138.1	131.3	132.5	135.7	137.9	131.3	130.4
Manufacturing and Mining	85.2	89.4	93.2	90.4	90.9	94.4	100.1	100.0	107.9	109.1	113.3	107.3	123.9	128.5	129.2	127.6	127.5
Construction	89.5	91.5	92.7	97.6	99.8	102.0	104.6	109.3	105.7	109.7	102.7	107.0	107.5	110.1	113.4	113.5	114.3
Transportation and Warehousing	101.7	99.9	100.3	103.6	105.3	98.5	103.8	105.4	108.2	102.6	103.7	101.7	106.5	110.6	109.5	108.8	110.0
Information	135.6	138.0	95.1	72.6	64.3	95.1	98.5	121.6	115.1	110.8	103.6	109.9	124.1	119.1	119.9	111.2	108.2
Wholesale and Retail Trade	85.7	86.4	86.9	84.8	83.7	84.4	84.6	87.6	88.1	89.5	85.6	84.5	90.1	92.0	93.3	94.2	95.2
Arts, Entertainment, and Recreation	82.0	85.0	86.2	81.3	84.2	86.3	85.6	83.3	85.6	85.1	82.9	86.3	89.8	88.0	88.0	87.4	88.1
Health Care and Social Assistance	59.0	62.0	61.4	63.5	63.7	66.0	66.2	66.2	65.7	65.7	67.7	69.1	68.8	67.6	66.5	66.4	66.8
Other Services	62.3	64.4	64.9	59.2	62.5	60.4	61.4	62.1	62.0	60.1	58.5	60.5	62.5	62.1	63.2	63.7	64.7
Administrative and Support Services	43.2	43.8	46.8	45.6	50.3	50.6	51.8	49.6	53.5	52.1	49.7	50.4	53.6	53.3	53.5	52.9	54.5
Educational Services	42.2	42.9	42.8	43.4	43.1	45.4	46.9	47.3	47.7	48.2	49.0	52.1	52.0	51.0	50.1	48.7	48.1
Accommodation and Food Services	32.7	34.6	37.3	35.3	36.0	33.8	33.9	33.0	33.2	33.5	31.6	32.6	32.9	33.4	33.5	33.3	33.6

Table 10: Real SGDP per Employee, 1998-2014

^a Linearly interpolated values replace the redacted employment values for 2006 Arts, Entertainment, and Recreation and 2003 Utilities.

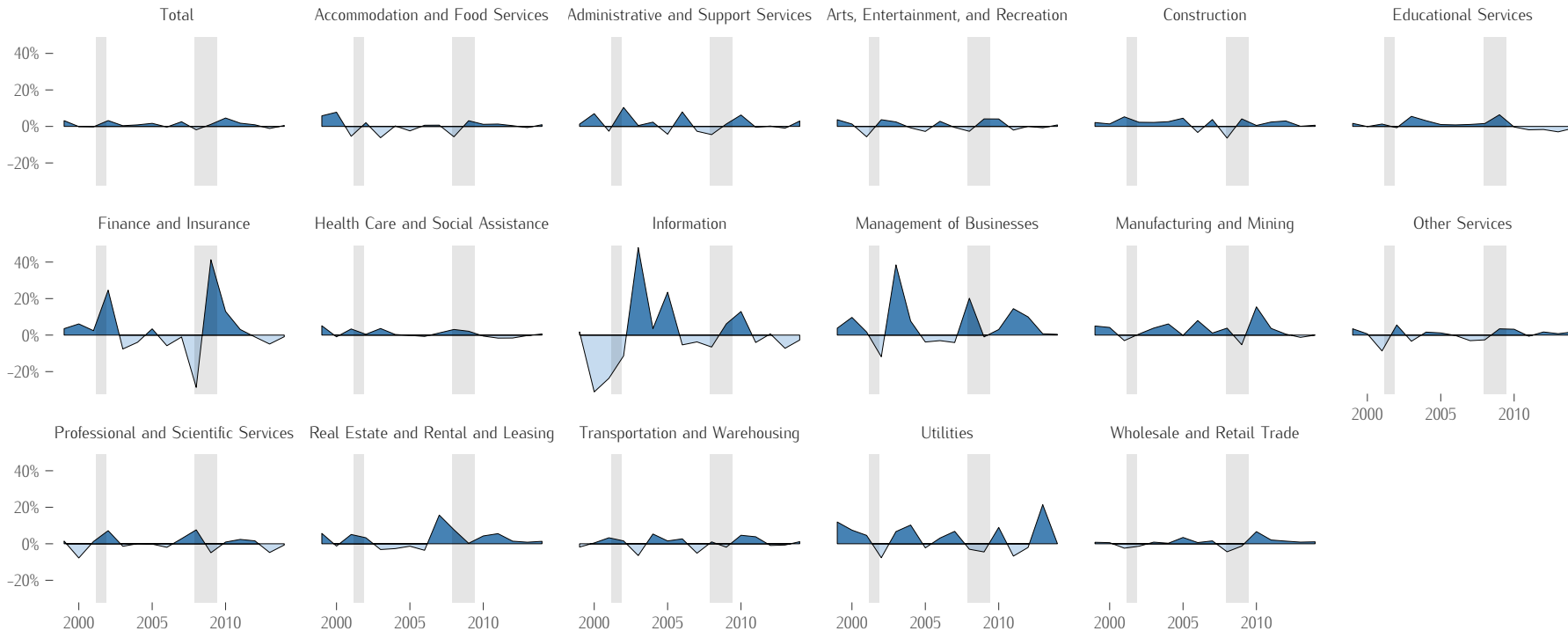


Figure 16: Real SGDP per Employee Growth Rates, 1999-2014

7.3.3 REAL LARGE BUSINESS GDP PER EMPLOYEE

Thousands of 2014 US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	97.3	99.0	101.0	100.1	104.1	107.1	111.0	115.0	114.6	114.6	113.1	114.9	121.2	120.7	121.7	121.7	121.8
Utilities	352.3	389.7	385.7	383.5	377.3	381.7	409.5	394.7	458.4	444.7	427.8	452.2	476.9	478.7	451.9	447.2	458.3
Information	213.7	230.4	209.0	209.8	245.1	231.5	260.8	259.0	256.6	272.8	280.5	277.7	297.1	291.2	290.0	296.9	294.8
Real Estate and Rental and Leasing	243.5	246.1	237.6	219.0	233.6	254.9	257.9	289.1	276.1	233.7	178.0	224.8	269.7	285.8	308.2	290.8	289.2
Manufacturing and Mining	144.6	150.3	157.3	152.8	170.3	181.3	194.0	209.8	216.2	223.5	228.3	237.4	268.3	274.5	272.5	274.4	275.2
Finance and Insurance	159.1	159.3	173.3	175.4	153.2	161.8	164.3	183.2	186.4	182.0	168.2	171.4	177.7	179.9	198.5	196.2	208.9
Professional and Scientific Services	119.6	122.5	144.0	134.5	132.5	124.7	126.2	133.5	135.2	138.4	152.8	150.5	152.2	152.7	157.1	152.0	149.4
Construction	98.1	93.4	98.4	98.2	103.9	113.9	128.9	143.8	129.5	111.5	96.1	96.4	110.8	115.0	121.4	124.1	126.6
Transportation and Warehousing	118.0	113.9	111.9	108.7	111.8	99.3	105.1	107.2	108.9	105.1	104.7	105.9	118.3	117.0	117.0	118.3	117.5
Wholesale and Retail Trade	78.9	79.5	80.7	79.8	84.1	87.7	88.2	90.8	90.1	89.4	88.7	90.4	95.1	94.2	96.6	97.0	96.1
Other Services	76.7	71.8	78.8	73.5	76.7	81.4	79.5	82.2	82.8	80.9	85.5	87.3	83.3	85.9	86.2	83.5	83.9
Arts, Entertainment, and Recreation	49.3	52.3	53.0	48.6	53.1	54.8	56.6	57.9	60.8	60.5	58.8	56.1	56.8	59.9	63.3	65.7	65.3
Health Care and Social Assistance	48.3	48.9	51.3	51.9	55.6	54.1	55.9	56.6	57.8	58.0	59.6	61.8	62.1	62.4	63.6	63.9	63.6
Management of Businesses	56.5	57.1	63.3	60.2	59.7	55.3	61.0	65.0	69.1	69.1	67.5	62.3	68.5	61.9	59.4	63.7	62.7
Educational Services	46.1	46.8	47.3	47.6	50.0	50.5	51.3	51.7	51.9	53.3	54.6	58.0	58.3	57.2	57.7	57.3	58.8
Administrative and Support Services	39.5	39.2	37.4	40.3	43.8	45.2	46.4	47.8	41.3	45.9	45.4	49.2	52.1	50.2	48.5	47.5	47.3
Accommodation and Food Services	38.1	40.9	40.6	42.5	44.7	46.1	47.1	46.8	45.9	44.9	43.1	42.1	44.7	44.2	44.6	44.8	45.1

Table 11: Real Large Business GDP per Employee, 1998-2014

^a Linearly interpolated values replace the redacted employment values for 2006 Arts, Entertainment, and Recreation and 2003 Utilities.

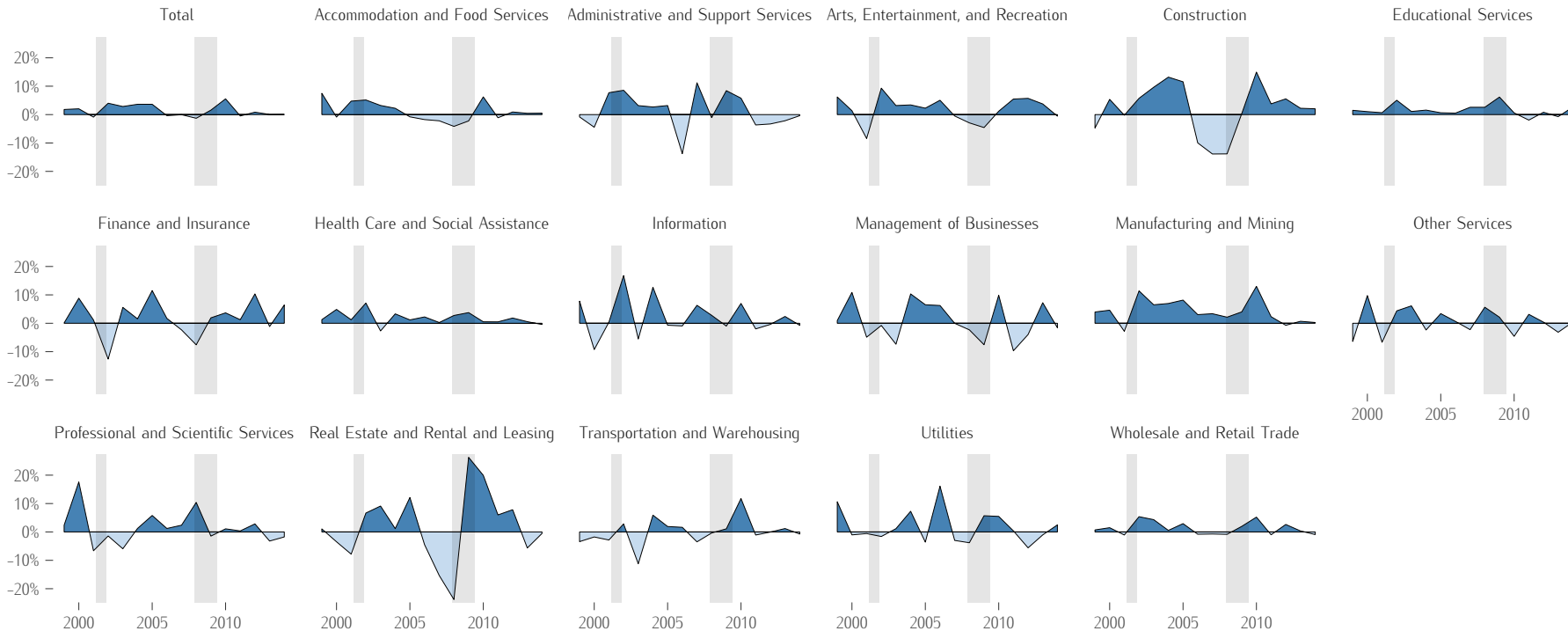


Figure 17: Real Large Business GDP per Employee Growth Rates, 1999-2014

7.3.4 REAL GDP PER PAYROLL DOLLAR

2014 US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	2.17	2.16	2.10	2.10	2.19	2.23	2.26	2.30	2.28	2.27	2.24	2.29	2.34	2.33	2.33	2.32	2.30
Real Estate and Rental and Leasing	9.81	9.87	9.36	9.35	9.71	9.48	9.02	8.76	8.40	9.19	9.30	9.99	10.54	10.71	10.70	10.63	10.37
Utilities	4.30	4.58	4.43	4.39	4.30	4.20	4.53	4.35	4.82	4.60	4.32	4.62	4.82	4.70	4.45	4.50	4.56
Manufacturing and Mining	2.41	2.44	2.50	2.50	2.62	2.78	2.88	3.06	3.16	3.25	3.31	3.41	3.62	3.66	3.63	3.64	3.59
Information	2.97	2.85	2.26	2.42	2.92	2.76	3.10	3.16	3.04	3.15	3.13	3.13	3.26	3.11	2.89	2.90	2.81
Wholesale and Retail Trade	2.43	2.35	2.31	2.25	2.32	2.41	2.41	2.45	2.45	2.47	2.40	2.41	2.49	2.47	2.54	2.55	2.52
Transportation and Warehousing	2.56	2.47	2.43	2.38	2.40	2.25	2.37	2.43	2.45	2.33	2.40	2.42	2.55	2.54	2.53	2.50	2.44
Arts, Entertainment, and Recreation	2.30	2.29	2.29	2.09	2.17	2.31	2.33	2.31	2.29	2.28	2.25	2.27	2.32	2.32	2.38	2.42	2.39
Other Services	2.44	2.43	2.42	2.20	2.30	2.29	2.31	2.32	2.32	2.22	2.18	2.24	2.26	2.24	2.26	2.25	2.24
Finance and Insurance	2.21	2.17	2.16	2.19	2.24	2.21	2.11	2.22	2.18	2.04	1.74	2.10	2.13	2.10	2.19	2.14	2.16
Accommodation and Food Services	2.18	2.25	2.28	2.28	2.36	2.31	2.33	2.30	2.27	2.24	2.16	2.14	2.13	2.13	2.16	2.13	2.14
Construction	1.92	1.91	1.93	1.97	2.00	2.08	2.19	2.24	2.17	2.13	1.96	2.05	2.08	2.06	2.12	2.11	2.08
Professional and Scientific Services	1.97	1.93	1.81	1.85	1.95	1.86	1.85	1.85	1.82	1.81	1.95	1.90	1.88	1.89	1.90	1.81	1.79
Educational Services	1.42	1.41	1.39	1.37	1.37	1.41	1.45	1.47	1.47	1.47	1.47	1.55	1.53	1.52	1.52	1.48	1.49
Health Care and Social Assistance	1.34	1.37	1.38	1.38	1.39	1.40	1.41	1.41	1.41	1.39	1.41	1.43	1.43	1.42	1.42	1.43	1.43
Administrative and Support Services	1.41	1.38	1.34	1.33	1.42	1.47	1.47	1.49	1.41	1.43	1.40	1.43	1.45	1.40	1.37	1.35	1.33
Management of Businesses	0.80	0.78	0.82	0.82	0.86	0.88	0.93	0.90	0.90	0.89	0.96	0.93	0.95	0.94	0.96	0.99	0.96

Table 12: Real GDP per Payroll Dollar, 1998-2014

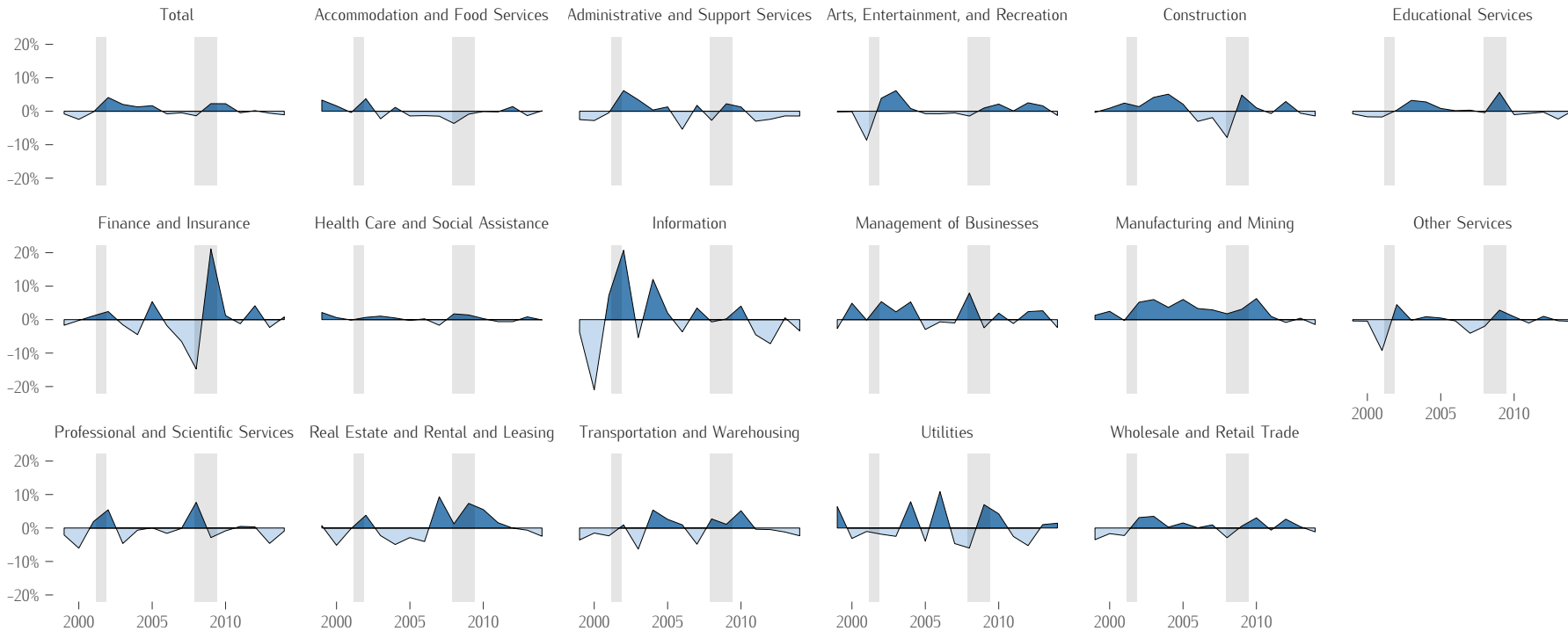


Figure 18: Real GDP per Payroll Dollar Growth Rates, 1999-2014

7.3.5 REAL SGDP PER PAYROLL DOLLAR

2014 US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	2.29	2.29	2.22	2.23	2.28	2.33	2.33	2.33	2.33	2.35	2.32	2.38	2.44	2.46	2.47	2.46	2.44
Real Estate and Rental and Leasing	11.53	11.78	11.30	11.67	11.91	11.46	10.89	10.28	10.02	11.66	12.77	13.08	13.41	13.83	13.48	13.57	13.29
Management of Businesses	2.85	2.83	3.02	3.12	2.93	3.86	4.11	3.85	3.65	3.53	4.23	4.18	4.09	4.76	5.15	5.32	5.27
Utilities	3.80	4.15	4.58	4.73	4.31	4.60	4.69	4.60	4.71	4.66	4.48	4.31	4.55	4.17	4.06	5.00	4.94
Transportation and Warehousing	2.77	2.67	2.67	2.78	2.75	2.63	2.70	2.70	2.75	2.58	2.64	2.67	2.69	2.75	2.71	2.70	2.68
Manufacturing and Mining	2.01	2.05	2.10	2.08	2.03	2.13	2.21	2.21	2.38	2.41	2.47	2.42	2.59	2.66	2.66	2.65	2.60
Arts, Entertainment, and Recreation	2.46	2.46	2.52	2.29	2.36	2.50	2.49	2.46	2.53	2.46	2.41	2.50	2.55	2.52	2.54	2.59	2.57
Finance and Insurance	2.36	2.41	2.38	2.42	2.95	2.72	2.59	2.62	2.44	2.31	1.65	2.38	2.63	2.68	2.53	2.49	2.39
Wholesale and Retail Trade	2.31	2.25	2.22	2.18	2.14	2.20	2.19	2.22	2.23	2.24	2.17	2.18	2.25	2.26	2.27	2.29	2.29
Other Services	2.45	2.47	2.45	2.21	2.31	2.28	2.32	2.31	2.31	2.20	2.13	2.20	2.25	2.22	2.25	2.26	2.26
Construction	1.96	1.96	1.99	2.05	2.06	2.13	2.21	2.24	2.20	2.22	2.09	2.22	2.19	2.17	2.23	2.19	2.16
Accommodation and Food Services	2.22	2.29	2.43	2.29	2.33	2.24	2.24	2.17	2.20	2.18	2.06	2.08	2.05	2.06	2.08	2.04	2.03
Professional and Scientific Services	2.06	2.04	1.77	1.85	2.01	2.00	1.98	1.94	1.91	1.91	2.07	2.02	1.99	2.00	2.00	1.92	1.88
Health Care and Social Assistance	1.51	1.56	1.52	1.54	1.53	1.61	1.62	1.61	1.61	1.60	1.65	1.67	1.68	1.67	1.65	1.68	1.70
Administrative and Support Services	1.43	1.39	1.43	1.39	1.52	1.57	1.58	1.50	1.63	1.54	1.48	1.50	1.54	1.53	1.52	1.51	1.53
Information	2.41	2.23	1.37	1.20	1.07	1.55	1.60	1.97	1.88	1.76	1.63	1.76	1.89	1.79	1.75	1.61	1.52
Educational Services	1.52	1.51	1.47	1.46	1.43	1.50	1.55	1.57	1.58	1.57	1.57	1.68	1.65	1.62	1.60	1.55	1.52

^a Linearly interpolated values replace the redacted payroll values for 2006 Arts, Entertainment, and Recreation and 2003 Utilities.

Table 13: Real Small Business GDP per Payroll Dollar, 1998-2014

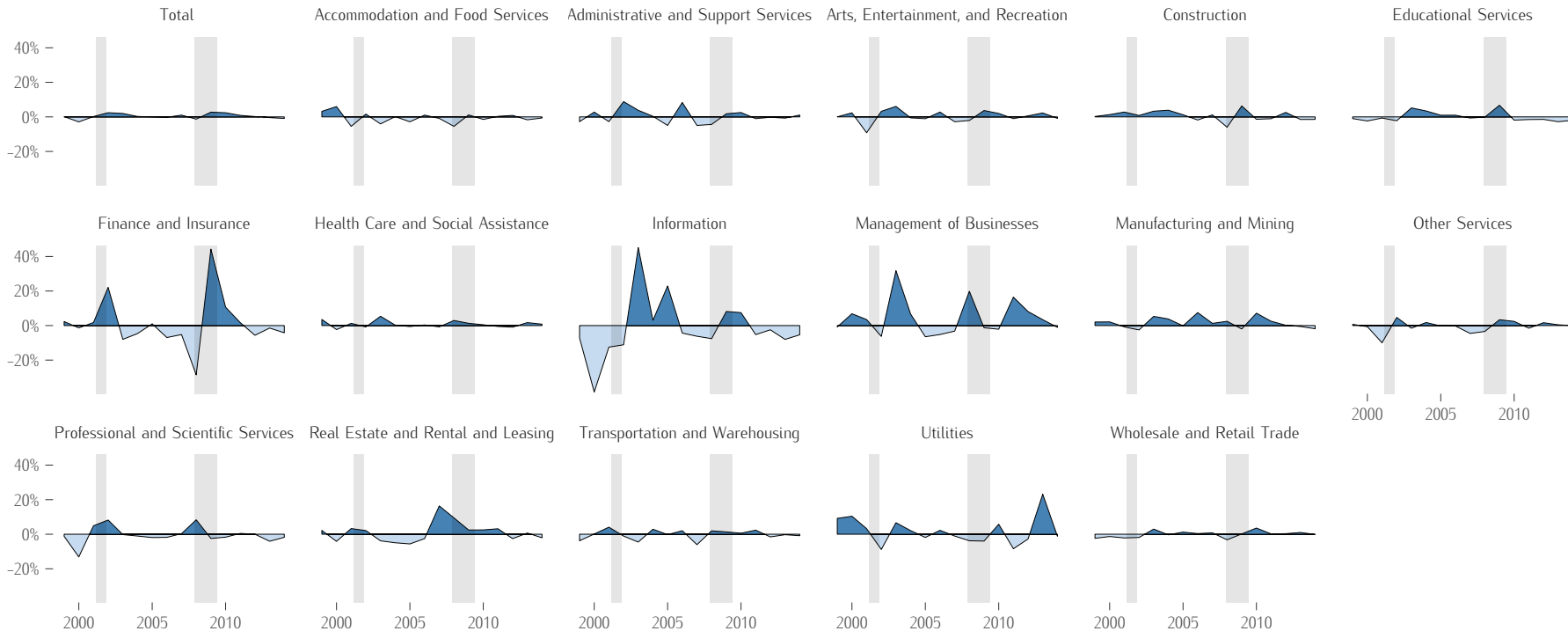


Figure 19: Real SGDP per Payroll Dollar Growth Rates, 1999-2014

7.3.6 REAL LARGE BUSINESS GDP PER PAYROLL DOLLAR

US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total	2.08	2.05	2.01	2.00	2.11	2.15	2.20	2.27	2.24	2.21	2.18	2.22	2.27	2.23	2.24	2.22	2.20
Real Estate and Rental and Leasing	5.86	5.78	5.39	4.88	5.29	5.56	5.39	5.88	5.43	4.74	3.62	4.67	5.34	5.32	5.63	5.31	5.12
Utilities	4.36	4.63	4.41	4.34	4.30	4.35	4.50	4.31	4.84	4.59	4.30	4.67	4.86	4.77	4.51	4.42	4.50
Manufacturing and Mining	2.63	2.65	2.72	2.73	2.97	3.16	3.29	3.57	3.64	3.76	3.83	4.01	4.27	4.28	4.23	4.24	4.19
Information	3.15	3.06	2.54	2.77	3.46	3.11	3.54	3.51	3.38	3.54	3.57	3.52	3.66	3.49	3.22	3.26	3.16
Wholesale and Retail Trade	2.58	2.45	2.40	2.34	2.53	2.63	2.64	2.68	2.67	2.70	2.61	2.62	2.69	2.65	2.77	2.77	2.71
Transportation and Warehousing	2.44	2.36	2.31	2.16	2.21	2.07	2.20	2.29	2.30	2.21	2.28	2.31	2.48	2.44	2.44	2.40	2.33
Accommodation and Food Services	2.12	2.20	2.11	2.25	2.40	2.39	2.45	2.45	2.36	2.30	2.27	2.20	2.23	2.22	2.26	2.24	2.27
Other Services	2.40	2.25	2.28	2.15	2.22	2.37	2.29	2.38	2.35	2.31	2.40	2.42	2.30	2.32	2.28	2.19	2.13
Finance and Insurance	2.15	2.08	2.08	2.11	1.97	2.01	1.92	2.07	2.08	1.94	1.77	1.99	1.93	1.89	2.06	2.01	2.07
Arts, Entertainment, and Recreation	1.83	1.84	1.75	1.62	1.74	1.84	1.93	1.96	2.06	1.91	1.92	1.83	1.87	1.93	2.07	2.10	2.06
Construction	1.67	1.61	1.63	1.65	1.72	1.86	2.08	2.22	2.03	1.70	1.45	1.42	1.62	1.65	1.73	1.80	1.78
Professional and Scientific Services	1.80	1.75	1.88	1.84	1.85	1.66	1.66	1.72	1.70	1.69	1.81	1.75	1.76	1.77	1.78	1.69	1.70
Educational Services	1.35	1.35	1.33	1.30	1.33	1.35	1.39	1.40	1.39	1.41	1.40	1.47	1.47	1.47	1.47	1.44	1.47
Health Care and Social Assistance	1.20	1.21	1.25	1.23	1.26	1.22	1.23	1.24	1.24	1.22	1.22	1.25	1.25	1.25	1.26	1.26	1.25
Administrative and Support Services	1.40	1.37	1.28	1.30	1.35	1.39	1.40	1.48	1.28	1.37	1.35	1.38	1.39	1.34	1.29	1.27	1.24
Management of Businesses	0.61	0.59	0.63	0.61	0.64	0.58	0.61	0.62	0.63	0.63	0.62	0.60	0.62	0.55	0.53	0.57	0.56

Table 14: Real Large Business GDP per Payroll Dollar, 1998-2014

^a Linearly interpolated values replace the redacted payroll values for 2006 Arts, Entertainment, and Recreation and 2003 Utilities.

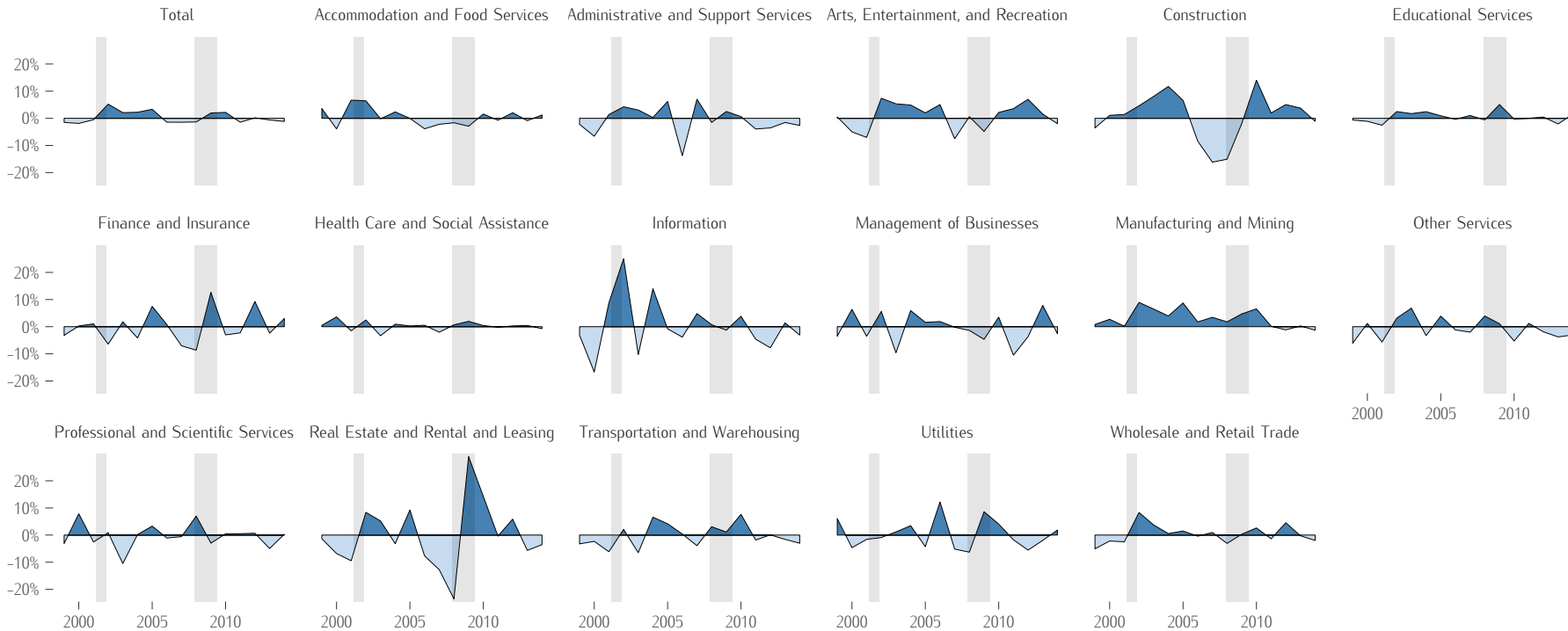


Figure 20: Real Large Business GDP per Payroll Dollar Growth Rates, 1999-2014

7.4 EMPLOYMENT

7.4.1 TOTAL EMPLOYMENT

Thousands of Employees

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (Non-Farm)	107,930.6	110,513.5	113,881.4	114,877.7	112,219.5	113,217.4	114,892.8	116,148.3	119,751.5	120,432.2	120,736.5	114,355.8	111,814.0	113,269.4	115,777.4	118,111.8	120,913.6
Wholesale and Retail Trade	20,126.7	20,448.7	20,952.8	21,032.4	20,680.2	20,731.7	21,258.5	21,307.6	21,798.5	21,724.8	21,780.0	20,630.5	20,095.1	20,324.9	20,584.2	20,932.1	21,339.4
Health Care and Social Assistance	13,758.4	13,865.0	14,108.7	14,534.7	14,900.1	15,472.2	15,814.8	16,025.1	16,451.4	16,797.6	17,217.3	17,531.1	17,787.9	18,059.1	18,378.3	18,598.7	18,852.0
Accommodation and Food Services	9,466.7	9,638.0	9,880.9	9,972.3	10,048.9	10,439.7	10,749.8	11,025.9	11,381.2	11,564.9	11,926.3	11,443.3	11,312.1	11,556.3	11,985.3	12,395.4	12,791.9
Manufacturing and Mining	17,444.0	17,116.6	16,930.1	16,436.0	14,859.4	14,586.6	14,292.3	14,164.6	14,186.0	14,021.1	13,725.4	12,237.6	11,444.4	11,635.6	11,919.7	12,008.6	12,183.2
Administrative and Support Services	7,775.0	8,366.5	9,138.1	9,062.0	8,299.2	8,511.1	8,708.1	9,280.3	10,003.6	9,983.7	10,224.6	9,061.0	8,977.3	9,390.0	9,866.3	10,185.3	10,579.3
Professional and Scientific Services	6,052.4	6,432.4	6,816.2	7,156.6	7,046.2	7,340.2	7,570.0	7,689.4	8,054.1	8,179.9	8,032.8	7,840.0	7,822.4	7,929.9	8,016.2	8,275.4	8,619.6
Finance and Insurance	5,770.3	5,965.2	5,963.4	6,248.4	6,414.6	6,463.7	6,481.3	6,431.8	6,647.1	6,548.9	6,511.6	6,171.2	5,928.7	5,886.6	5,979.7	6,063.8	6,078.7
Construction	5,798.9	6,201.6	6,572.8	6,492.0	6,307.4	6,381.4	6,647.6	6,781.3	7,338.8	7,267.9	7,043.6	5,967.1	5,389.3	5,190.9	5,260.9	5,470.2	5,705.1
Other Services	5,038.7	5,151.5	5,293.4	5,370.5	5,420.1	5,367.2	5,416.2	5,391.0	5,458.6	5,519.8	5,452.6	5,264.4	5,204.4	5,181.8	5,256.2	5,282.7	5,347.1
Transportation and Warehousing	3,462.6	3,627.1	3,790.0	3,750.7	3,581.0	4,067.9	4,098.9	4,168.0	4,306.4	4,395.4	4,438.9	4,159.6	4,012.0	4,106.4	4,233.4	4,287.2	4,406.8
Educational Services	2,323.8	2,431.7	2,532.3	2,612.4	2,701.7	2,776.6	2,893.3	2,879.4	2,979.5	3,039.4	3,141.3	3,200.6	3,273.5	3,386.0	3,477.0	3,513.5	3,562.4
Information	3,142.0	3,234.5	3,545.7	3,754.7	3,536.1	3,599.9	3,472.4	3,402.6	3,396.2	3,399.3	3,434.2	3,288.1	3,124.0	3,121.3	3,136.0	3,266.1	3,364.5
Management of Businesses	2,703.8	2,788.3	2,873.5	2,879.2	2,913.8	2,879.2	2,824.8	2,856.4	2,915.6	3,121.4	2,887.4	2,853.4	2,833.0	2,921.7	3,037.3	3,098.8	3,236.0
Arts, Entertainment, and Recreation	1,583.8	1,640.0	1,741.5	1,780.4	1,801.0	1,833.0	1,889.0	1,936.5	1,973.7	2,008.6	2,069.3	2,010.3	2,003.6	2,003.1	2,057.3	2,112.0	2,170.1
Real Estate and Rental and Leasing	1,812.7	1,873.8	1,942.0	2,013.7	2,017.3	2,044.7	2,086.1	2,144.1	2,216.8	2,224.2	2,196.3	2,036.6	1,946.4	1,917.6	1,940.7	1,972.1	2,021.4
Utilities	682.2	667.1	655.2	654.5	648.3	675.9	634.7	633.1	614.4	622.8	639.4	641.6	638.1	639.8	641.1	638.6	637.8

Table 15: Total Employment, 1998-2014

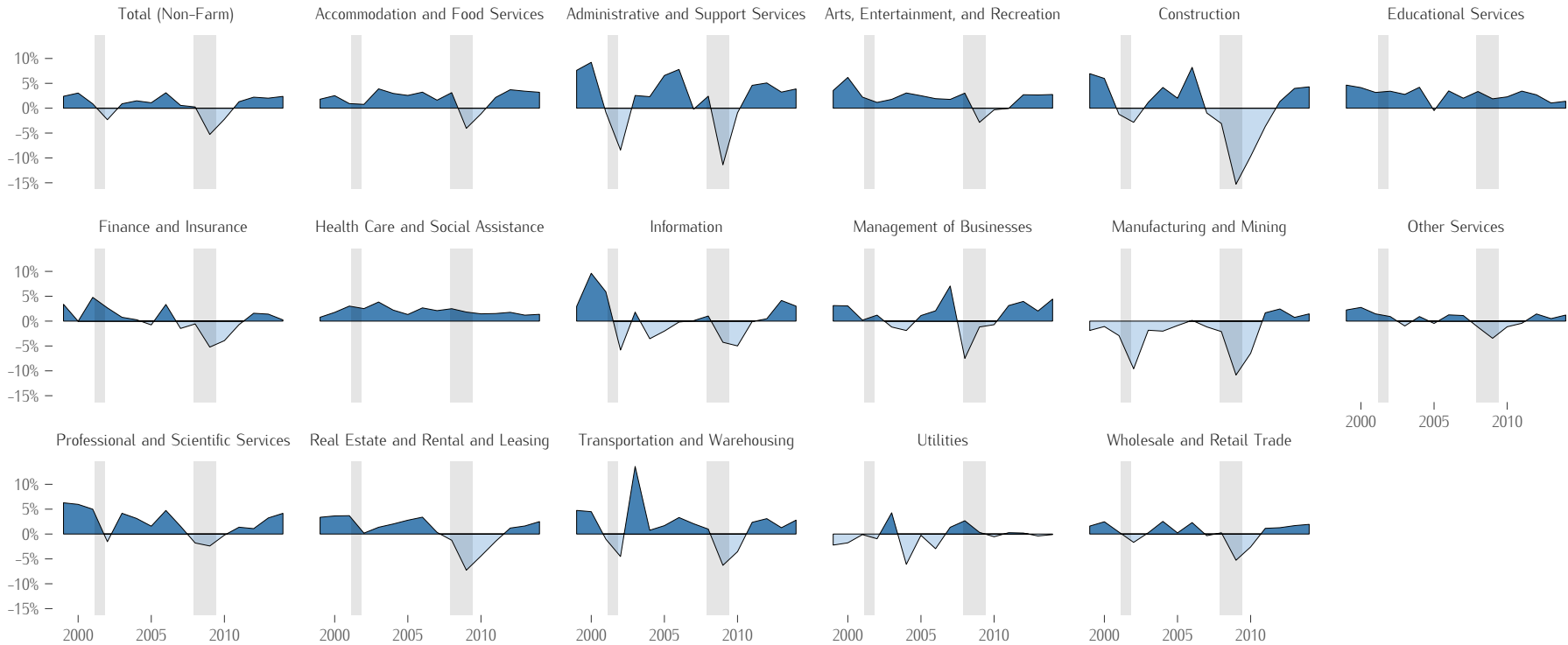


Figure 21: Total Employment Growth Rates, 1999-2014

7.4.2 SMALL BUSINESS EMPLOYMENT

Thousands of Employees

Table 16: Small Business Employment, 1998-2014

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (Non-Farm)	54,900.7	55,566.1	56,962.2	57,219.6	56,366.3	57,447.6	58,597.5	58,502.0	60,223.7	59,722.8	59,553.2	56,152.1	54,865.3	54,866.7	55,925.7	56,690.6	57,760.9
Wholesale and Retail Trade	10,239.7	10,216.4	10,378.1	10,327.4	10,040.8	10,045.0	10,109.0	9,945.2	9,999.9	9,774.5	9,699.8	9,001.2	8,735.7	8,676.9	8,762.5	8,834.0	8,917.6
Health Care and Social Assistance	6,453.6	6,510.4	6,707.6	6,905.8	7,144.9	7,459.3	7,665.7	7,748.8	7,946.4	7,989.9	8,210.6	8,258.5	8,350.4	8,401.8	8,451.1	8,515.1	8,585.7
Accommodation and Food Services	5,808.2	5,848.6	5,954.1	5,999.2	6,086.6	6,349.5	6,567.7	6,611.6	6,848.9	6,854.7	7,005.4	6,751.7	6,776.0	6,909.6	7,178.3	7,454.8	7,712.6
Manufacturing and Mining	7,234.0	7,037.4	7,002.4	6,852.5	6,299.2	6,303.0	6,291.6	6,258.5	6,300.8	6,200.0	6,118.3	5,458.8	5,163.4	5,236.5	5,381.3	5,348.5	5,424.8
Professional and Scientific Services	4,011.4	4,189.6	4,408.2	4,589.0	4,523.0	4,546.7	4,660.5	4,741.3	4,958.0	4,995.4	4,910.5	4,758.1	4,664.2	4,682.5	4,767.3	4,869.3	4,975.7
Construction	5,119.9	5,426.8	5,675.1	5,527.3	5,361.3	5,487.2	5,745.6	5,841.8	6,264.7	6,190.4	5,921.3	5,018.3	4,545.8	4,343.3	4,380.0	4,526.4	4,726.1
Other Services	4,350.3	4,428.4	4,544.7	4,593.6	4,669.9	4,636.1	4,672.5	4,613.0	4,663.6	4,676.9	4,615.2	4,485.7	4,458.9	4,433.7	4,508.1	4,536.3	4,584.1
Administrative and Support Services	3,348.3	3,376.8	3,477.5	3,525.7	3,285.5	3,465.4	3,582.9	3,619.7	3,732.5	3,724.2	3,764.5	3,473.6	3,388.7	3,420.5	3,515.9	3,523.8	3,582.3
Finance and Insurance	1,880.6	1,916.2	1,914.3	1,941.0	1,963.3	2,064.6	2,107.7	2,128.9	2,183.9	2,134.6	2,094.1	2,025.4	1,959.4	1,916.2	1,907.2	1,918.1	1,930.3
Transportation and Warehousing	1,506.9	1,524.2	1,556.1	1,557.7	1,491.3	1,552.3	1,570.9	1,586.5	1,629.6	1,618.1	1,620.6	1,520.5	1,482.1	1,512.4	1,568.0	1,585.5	1,610.3
Educational Services	1,092.8	1,143.2	1,193.2	1,237.1	1,275.1	1,305.4	1,329.7	1,294.4	1,333.9	1,363.7	1,408.0	1,411.1	1,415.5	1,435.6	1,493.4	1,532.2	1,564.8
Real Estate and Rental and Leasing	1,308.1	1,323.7	1,357.9	1,380.9	1,387.0	1,416.1	1,442.1	1,463.1	1,521.0	1,503.5	1,445.1	1,362.1	1,337.6	1,313.2	1,344.3	1,361.4	1,390.3
Arts, Entertainment, and Recreation	1,108.2	1,133.4	1,183.1	1,193.1	1,193.1	1,236.7	1,279.2	1,280.7	1,280.7	1,313.2	1,330.5	1,270.6	1,259.1	1,260.4	1,301.4	1,315.7	1,344.2
Information	903.2	913.5	996.5	995.0	904.0	921.5	908.9	890.3	894.0	877.2	916.5	866.8	826.8	822.2	861.8	871.1	895.3
Management of Businesses	304.3	313.7	307.6	325.5	377.4	348.2	342.6	338.0	351.7	383.6	368.9	362.2	370.1	374.0	386.3	376.5	387.0
Utilities	103.5	102.4	104.7	106.0	110.6	110.6	107.5	109.2	109.2	110.3	108.5	108.2	109.8	109.3	111.6	110.4	111.6

^a Linearly interpolated values replace the redacted employment values for 2006 Arts, Entertainment, and Recreation and 2003 Utilities.

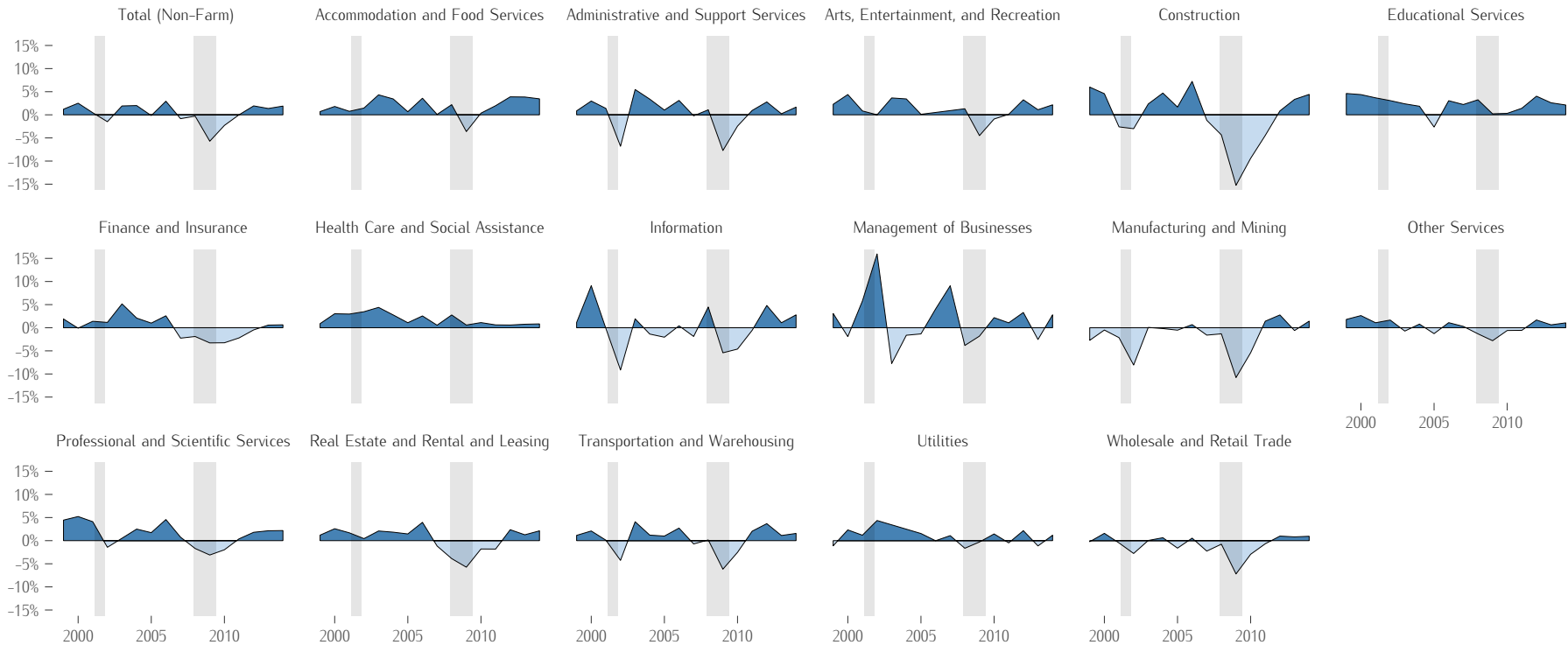


Figure 22: Small Business Employment Growth Rates, 1999-2014

7.4.3 LARGE BUSINESS EMPLOYMENT

Thousands of Employees

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (Non-Farm)	53,029.9	54,947.5	56,919.2	57,658.1	56,034.4	55,950.5	56,477.5	57,646.3	59,693.4	60,709.3	61,183.3	58,203.7	56,948.7	58,402.7	59,851.7	61,421.2	63,152.7
Wholesale and Retail Trade	9,887.0	10,232.2	10,574.7	10,705.0	10,639.3	10,686.7	11,149.5	11,362.4	11,798.6	11,950.3	12,080.1	11,629.3	11,359.4	11,648.0	11,821.7	12,098.1	12,421.8
Health Care and Social Assistance	7,304.8	7,354.6	7,401.1	7,628.9	7,755.2	8,012.9	8,149.2	8,276.4	8,505.0	8,807.8	9,006.7	9,272.6	9,437.5	9,657.3	9,927.2	10,083.6	10,266.3
Administrative and Support Services	4,426.8	4,989.7	5,660.6	5,536.3	5,013.7	5,045.8	5,125.1	5,660.6	6,271.1	6,259.5	6,460.0	5,587.4	5,588.6	5,969.4	6,350.4	6,661.5	6,997.0
Manufacturing and Mining	10,210.0	10,079.2	9,927.8	9,583.5	8,560.1	8,283.6	8,000.6	7,906.1	7,885.3	7,821.1	7,607.2	6,778.8	6,281.0	6,399.0	6,538.4	6,660.1	6,758.4
Accommodation and Food Services	3,658.5	3,789.4	3,926.8	3,973.1	3,962.3	4,090.2	4,182.1	4,414.3	4,532.3	4,710.1	4,920.9	4,691.6	4,536.1	4,646.7	4,806.9	4,940.6	5,079.3
Finance and Insurance	3,889.7	4,049.0	4,049.2	4,307.4	4,451.3	4,399.1	4,373.6	4,303.0	4,463.2	4,414.2	4,417.5	4,145.9	3,969.3	3,970.4	4,072.4	4,145.6	4,148.5
Professional and Scientific Services	2,040.9	2,242.8	2,408.0	2,567.6	2,523.2	2,793.6	2,909.5	2,948.0	3,096.1	3,184.6	3,122.4	3,081.9	3,158.2	3,247.4	3,248.9	3,406.1	3,643.9
Management of Businesses	2,399.5	2,474.6	2,565.9	2,553.8	2,536.4	2,530.9	2,482.2	2,518.4	2,564.0	2,737.8	2,518.5	2,491.3	2,462.9	2,547.7	2,651.0	2,722.3	2,848.9
Transportation and Warehousing	1,955.7	2,102.9	2,233.9	2,192.9	2,089.7	2,515.6	2,527.9	2,581.5	2,676.8	2,777.4	2,818.3	2,639.1	2,529.9	2,593.9	2,665.3	2,701.7	2,796.5
Information	2,238.8	2,321.0	2,549.2	2,759.7	2,632.1	2,678.4	2,563.5	2,512.3	2,502.2	2,522.1	2,517.7	2,421.3	2,297.2	2,299.1	2,274.2	2,395.0	2,469.2
Educational Services	1,231.0	1,288.5	1,339.1	1,375.3	1,426.6	1,471.2	1,563.7	1,584.9	1,645.6	1,675.7	1,733.3	1,789.5	1,858.0	1,950.5	1,983.7	1,981.3	1,997.6
Construction	679.0	774.8	897.7	964.7	946.0	894.2	902.0	939.6	1,074.1	1,077.5	1,122.3	948.9	843.4	847.6	880.9	943.8	979.0
Arts, Entertainment, and Recreation	475.6	506.6	558.4	587.3	607.9	596.3	609.8	655.8	655.8	695.3	738.9	739.7	744.5	742.7	755.9	796.3	826.0
Other Services	688.5	723.1	748.7	776.9	750.2	731.0	743.6	778.0	795.0	842.9	837.4	778.7	745.6	748.1	748.1	746.3	763.0
Real Estate and Rental and Leasing	504.7	550.1	584.2	632.8	630.3	628.7	644.0	681.0	695.8	720.7	751.2	674.5	608.9	604.4	596.4	610.8	631.1
Utilities	578.7	564.7	550.5	548.5	537.7	537.7	527.2	523.9	505.3	512.4	530.9	533.3	528.3	530.5	529.4	528.2	526.2

^a Linearly interpolated values replace the redacted employment values for 2006 Arts, Entertainment, and Recreation and 2003 Utilities.

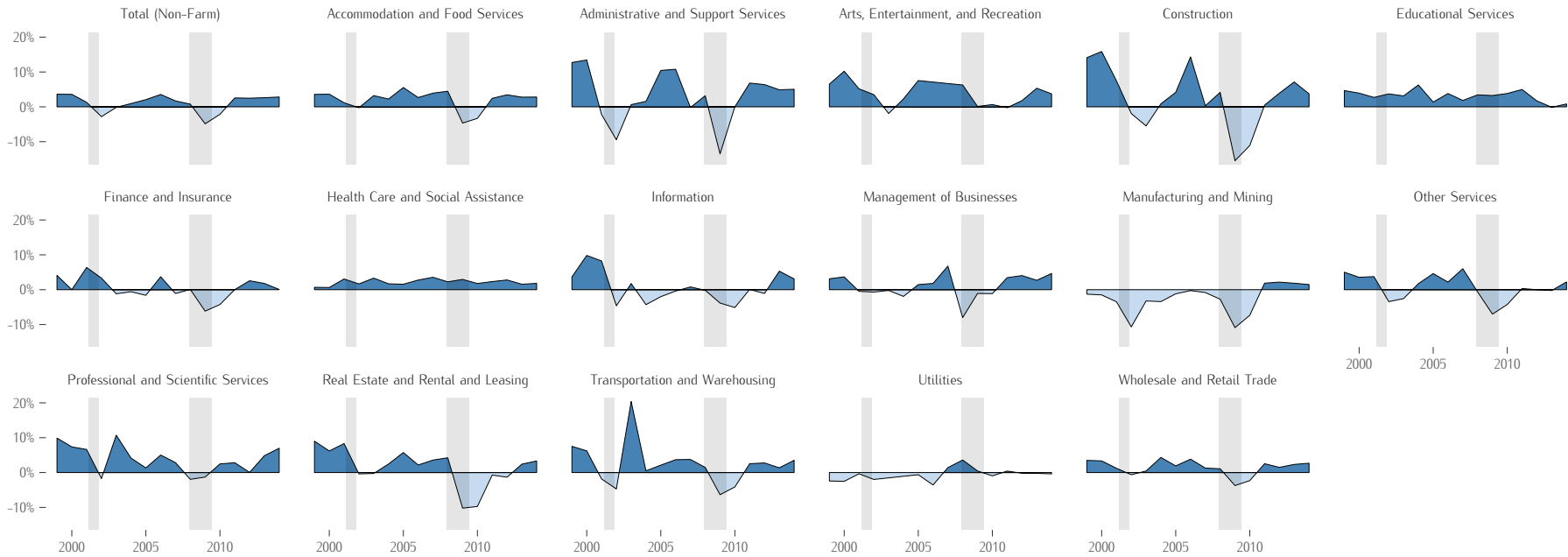


Table 17: Large Business Employment, 1998-2014

Figure 23: Large Business Employment Growth Rates, 1999-2014

7.4.4 SMALL BUSINESS SHARES OF EMPLOYMENT

Percent

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (Non-Farm)	50.9	50.3	50.0	49.8	50.2	50.7	51.0	50.4	50.3	49.6	49.3	49.1	49.1	48.4	48.3	48.0	47.8
Accommodation and Food Services	61.4	60.7	60.3	60.2	60.6	60.8	61.1	60.0	60.2	59.3	58.7	59.0	59.9	59.8	59.9	60.1	60.3
Administrative and Support Services	43.1	40.4	38.1	38.9	39.6	40.7	41.1	39.0	37.3	37.3	36.8	38.3	37.7	36.4	35.6	34.6	33.9
Arts, Entertainment, and Recreation	70.0	69.1	67.9	67.0	66.2	67.5	67.7	66.1	0.0	65.4	64.3	63.2	62.8	62.9	63.3	62.3	61.9
Construction	88.3	87.5	86.3	85.1	85.0	86.0	86.4	86.1	85.4	85.2	84.1	84.1	84.3	83.7	83.3	82.7	82.8
Educational Services	47.0	47.0	47.1	47.4	47.2	47.0	46.0	45.0	44.8	44.9	44.8	44.1	43.2	42.4	42.9	43.6	43.9
Finance and Insurance	32.6	32.1	32.1	31.1	30.6	31.9	32.5	33.1	32.9	32.6	32.2	32.8	33.1	32.6	31.9	31.6	31.8
Health Care and Social Assistance	46.9	47.0	47.5	47.5	48.0	48.2	48.5	48.4	48.3	47.6	47.7	47.1	46.9	46.5	46.0	45.8	45.5
Information	28.7	28.2	28.1	26.5	25.6	25.6	26.2	26.2	26.3	25.8	26.7	26.4	26.5	26.3	27.5	26.7	26.6
Management of Businesses	11.3	11.2	10.7	11.3	13.0	12.1	12.1	11.8	12.1	12.3	12.8	12.7	13.1	12.8	12.7	12.2	12.0
Manufacturing and Mining	41.5	41.1	41.4	41.7	42.4	43.2	44.0	44.2	44.4	44.2	44.6	44.6	45.1	45.0	45.1	44.5	44.5
Other Services	86.3	86.0	85.9	85.5	86.2	86.4	86.3	85.6	85.4	84.7	84.6	85.2	85.7	85.6	85.8	85.9	85.7
Professional and Scientific Services	66.3	65.1	64.7	64.1	64.2	61.9	61.6	61.7	61.6	61.1	61.1	60.7	59.6	59.0	59.5	58.8	57.7
Real Estate and Rental and Leasing	72.2	70.6	69.9	68.6	68.8	69.3	69.1	68.2	68.6	67.6	65.8	66.9	68.7	68.5	69.3	69.0	68.8
Transportation and Warehousing	43.5	42.0	41.1	41.5	41.6	38.2	38.3	38.1	37.8	36.8	36.5	36.6	36.9	36.8	37.0	37.0	36.5
Utilities	15.2	15.3	16.0	16.2	17.1	0.0	16.9	17.2	17.8	17.7	17.0	16.9	17.2	17.1	17.4	17.3	17.5
Wholesale and Retail Trade	50.9	50.0	49.5	49.1	48.6	48.5	47.6	46.7	45.9	45.0	44.5	43.6	43.5	42.7	42.6	42.2	41.8

Table 18: Small Business Shares of Employment, 1998-2014

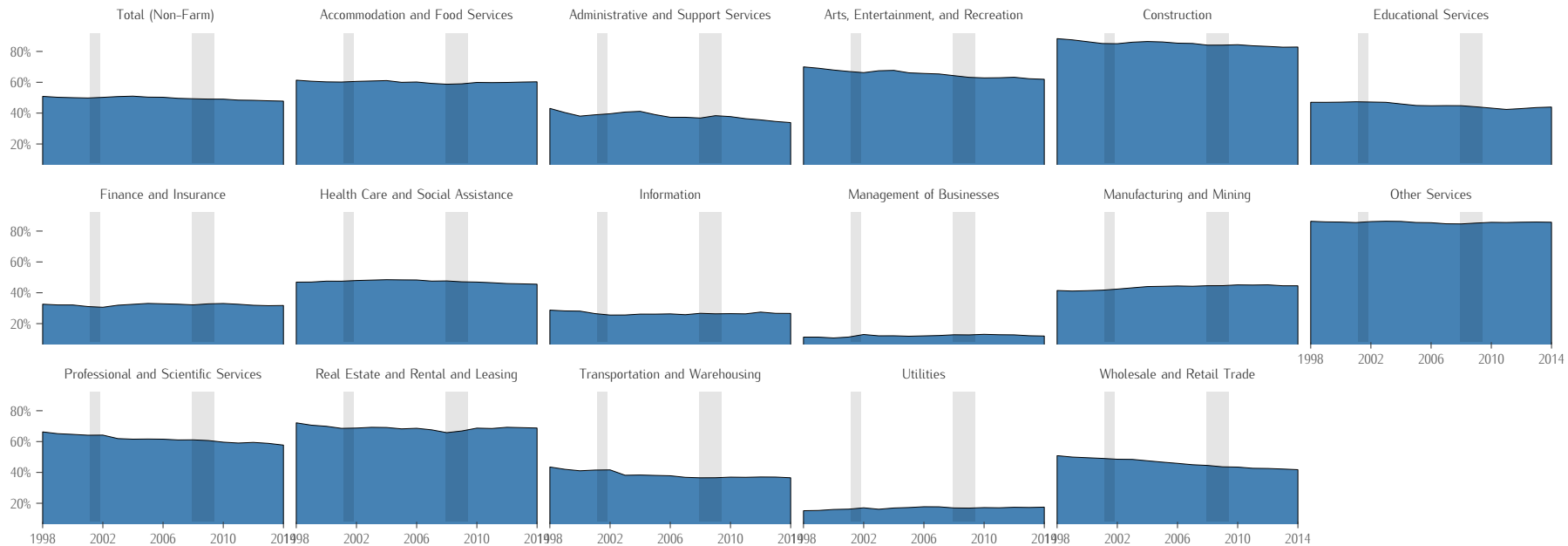


Figure 24: Small Business Shares of Employment, 1998-2014

7.4.5 SMALL BUSINESS EMPLOYMENT LEVELS AND SHARES

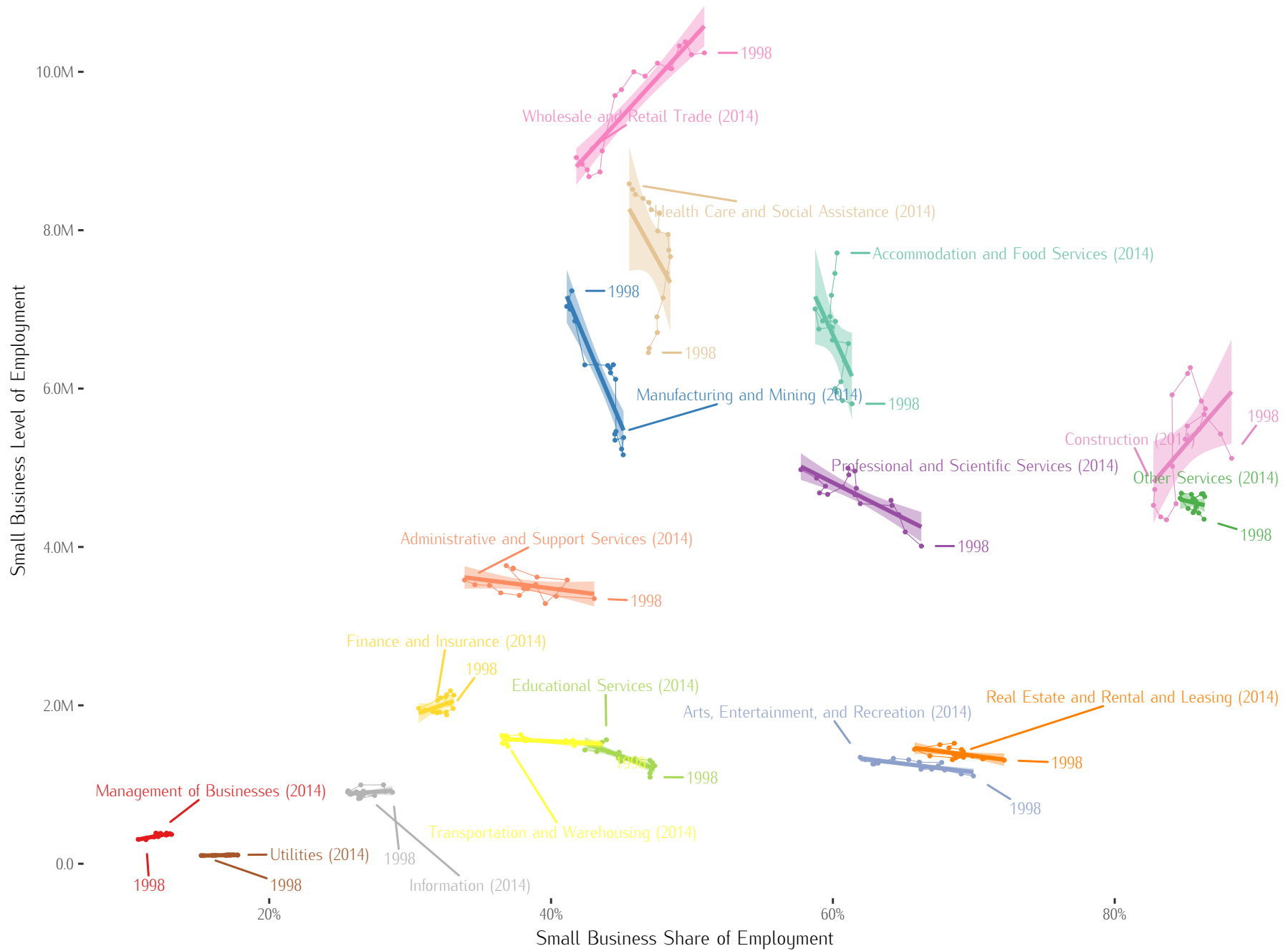


Figure 25:
Small Business
Employment
Levels and
Shares, 1998-
2014

7.5 REAL PAYROLL

7.5.1 REAL TOTAL PAYROLL

Billions of 2014 US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (Non-Farm)	4,560.7	4,825.2	5,149.5	5,177.1	5,039.9	5,063.8	5,188.3	5,297.3	5,494.8	5,614.0	5,619.7	5,278.6	5,306.6	5,434.9	5,594.1	5,716.5	5,934.0
Health Care and Social Assistance	545.8	556.2	573.4	605.1	638.8	660.4	683.6	697.6	719.2	747.2	775.0	800.5	809.4	821.8	842.7	847.2	860.1
Wholesale and Retail Trade	682.1	723.0	761.1	767.5	746.4	742.3	762.7	777.2	793.8	786.2	792.1	750.5	750.9	766.8	772.8	787.5	811.5
Manufacturing and Mining	868.4	878.8	885.2	835.1	773.4	753.7	756.6	747.1	754.9	745.7	734.5	643.7	641.4	663.7	682.5	688.7	710.6
Professional and Scientific Services	383.2	423.0	481.1	486.5	471.9	499.6	521.1	540.0	570.9	595.9	591.1	573.6	583.9	598.4	615.4	639.3	665.2
Finance and Insurance	400.2	425.8	460.9	485.4	476.9	492.9	515.9	528.5	552.1	570.8	572.7	501.3	507.9	519.9	539.7	547.3	567.2
Administrative and Support Services	225.9	248.9	279.5	287.7	271.5	275.1	287.6	302.2	325.1	335.3	344.2	315.4	326.9	343.7	362.4	372.5	395.5
Management of Businesses	242.4	261.5	280.9	276.9	262.1	266.6	271.7	287.8	305.6	327.2	299.6	288.1	303.0	314.8	326.9	331.6	350.2
Construction	274.0	297.8	318.8	321.2	316.5	317.4	327.6	346.1	369.6	375.8	365.2	305.7	280.6	279.4	284.7	299.3	319.4
Information	202.6	231.5	278.3	269.1	240.7	256.0	244.8	240.3	244.8	249.4	256.2	245.0	240.8	246.5	264.1	278.2	293.8
Accommodation and Food Services	151.2	158.9	166.9	167.2	167.8	174.6	179.7	184.6	191.9	197.2	200.9	195.3	199.5	204.6	210.6	220.2	228.5
Transportation and Warehousing	149.9	158.6	166.9	168.3	162.8	179.1	181.0	182.6	190.7	196.2	193.2	179.1	179.3	185.4	191.3	197.1	207.4
Other Services	132.5	138.6	146.0	149.7	152.2	148.1	149.6	150.8	153.3	157.3	157.0	151.6	150.9	151.9	154.7	156.1	161.3
Educational Services	72.2	77.3	82.3	87.2	92.1	94.5	98.0	97.6	101.5	105.2	111.6	114.5	118.7	121.3	124.6	126.7	129.7
Real Estate and Rental and Leasing	68.8	73.5	78.7	83.2	83.5	86.0	90.5	96.8	100.5	99.5	97.4	88.3	86.5	88.5	92.3	94.0	99.6
Arts, Entertainment, and Recreation	49.7	53.6	57.4	59.9	61.1	60.4	61.9	62.6	65.2	67.5	68.4	66.6	67.0	67.0	68.3	69.2	72.2
Utilities	52.6	53.5	54.0	54.5	53.6	55.9	54.7	54.8	54.7	57.2	60.3	59.0	59.6	61.0	61.1	61.3	61.6

Table 19: Real Payrolls, 1998-2014

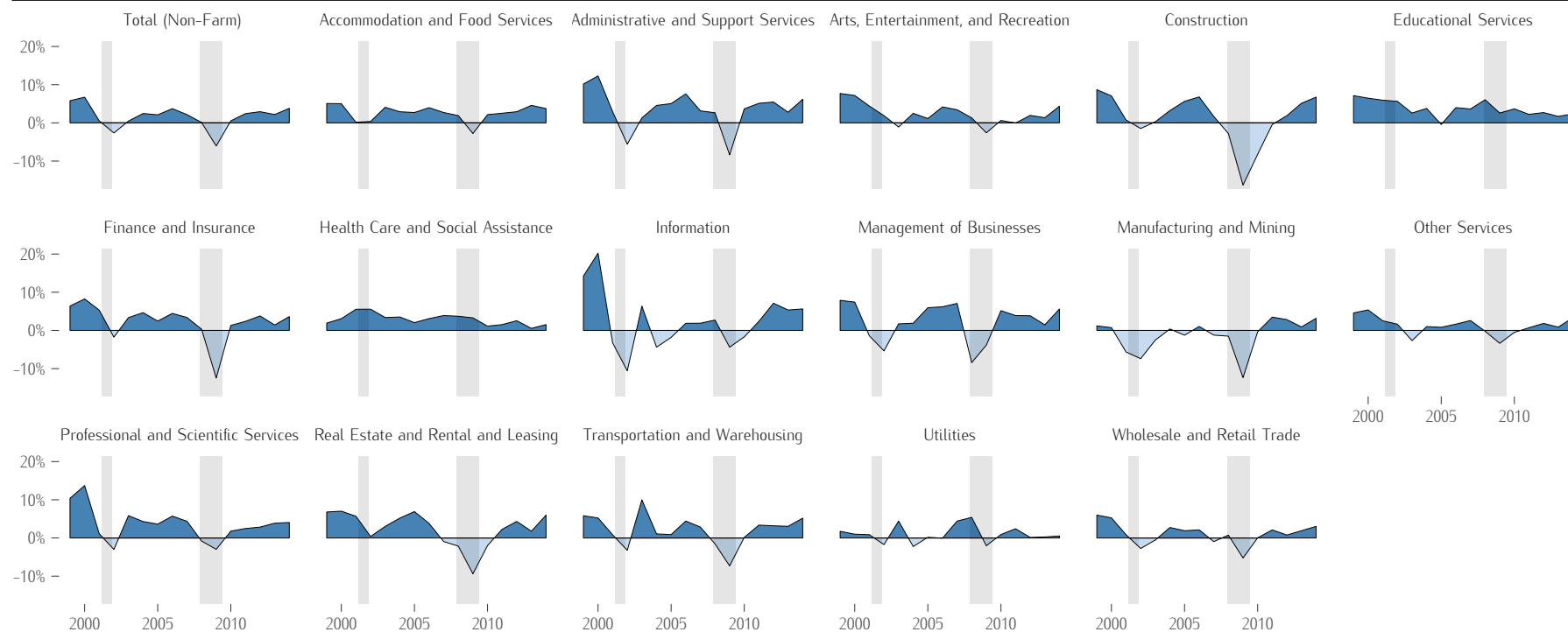


Figure 26: Real Payroll Growth Rates, 1999-2014

7.5.2 REAL SMALL BUSINESS PAYROLL

Billions of 2014 US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (Non-Farm)	2,082.4	2,170.9	2,290.1	2,291.4	2,274.2	2,281.7	2,341.4	2,376.1	2,443.4	2,460.0	2,439.3	2,264.3	2,260.1	2,280.4	2,340.3	2,354.7	2,434.1
Wholesale and Retail Trade	380.1	391.4	405.5	402.3	393.3	385.6	390.5	392.6	395.9	389.9	382.3	349.6	349.3	353.5	361.0	363.5	371.4
Professional and Scientific Services	247.8	265.9	297.1	298.5	291.4	289.5	300.0	310.6	324.3	334.8	326.9	308.7	310.7	317.9	328.8	333.3	344.5
Health Care and Social Assistance	252.4	258.5	270.1	283.8	297.3	305.2	313.9	318.7	323.2	327.5	337.0	341.7	342.1	340.3	340.0	336.0	338.2
Manufacturing and Mining	306.5	306.8	311.4	297.8	282.6	278.7	284.4	283.0	286.1	281.1	281.0	242.3	246.9	253.3	261.2	257.8	266.4
Construction	234.0	252.8	264.5	263.7	259.5	262.7	271.8	285.2	301.2	305.3	290.7	241.3	222.8	220.3	223.0	234.2	249.8
Finance and Insurance	112.1	115.6	124.2	126.8	130.9	138.2	142.2	147.0	152.6	155.8	152.6	144.6	142.8	141.5	147.8	143.4	149.3
Other Services	110.5	115.5	120.1	123.2	126.2	123.0	123.8	124.0	125.3	127.7	127.1	123.6	123.8	124.3	126.4	127.6	131.2
Administrative and Support Services	101.0	106.1	113.8	115.5	109.2	111.5	117.5	119.6	122.9	125.6	126.8	116.4	117.7	119.5	123.4	123.4	127.8
Accommodation and Food Services	85.6	88.4	91.5	92.3	94.0	95.9	99.3	100.4	103.6	105.3	107.4	105.6	108.7	112.0	115.8	121.5	127.7
Transportation and Warehousing	55.3	57.1	58.5	58.1	57.1	58.2	60.3	62.0	64.1	64.3	63.8	57.9	58.7	60.8	63.4	63.9	66.2
Real Estate and Rental and Leasing	47.9	50.1	52.9	54.8	55.7	57.2	59.7	63.3	65.1	64.0	60.5	55.8	55.8	56.0	59.7	60.5	64.0
Information	50.9	56.4	68.9	60.0	54.4	56.5	56.0	55.1	54.7	55.1	58.3	54.1	54.2	54.6	59.0	60.2	63.6
Educational Services	30.3	32.5	34.7	36.7	38.4	39.5	40.1	39.1	40.2	41.8	43.9	43.9	44.7	45.2	46.9	48.0	49.5
Arts, Entertainment, and Recreation	36.9	39.2	40.5	42.4	42.6	42.6	44.0	43.3	43.3	45.4	45.7	43.9	44.4	44.0	45.1	44.3	46.0
Management of Businesses	20.7	22.3	22.5	23.3	25.5	24.7	24.5	24.9	26.5	28.6	27.6	27.2	29.3	29.1	30.6	29.0	30.3
Utilities	5.9	6.0	5.9	6.1	6.4	6.4	6.7	6.8	6.9	7.5	7.4	7.4	7.7	7.8	8.0	7.8	8.0

Table 20: Real Small Business Payrolls, 1998-2014

^a Linearly interpolated values replace the redacted payroll values for 2006 Arts, Entertainment, and Recreation and 2003 Utilities.

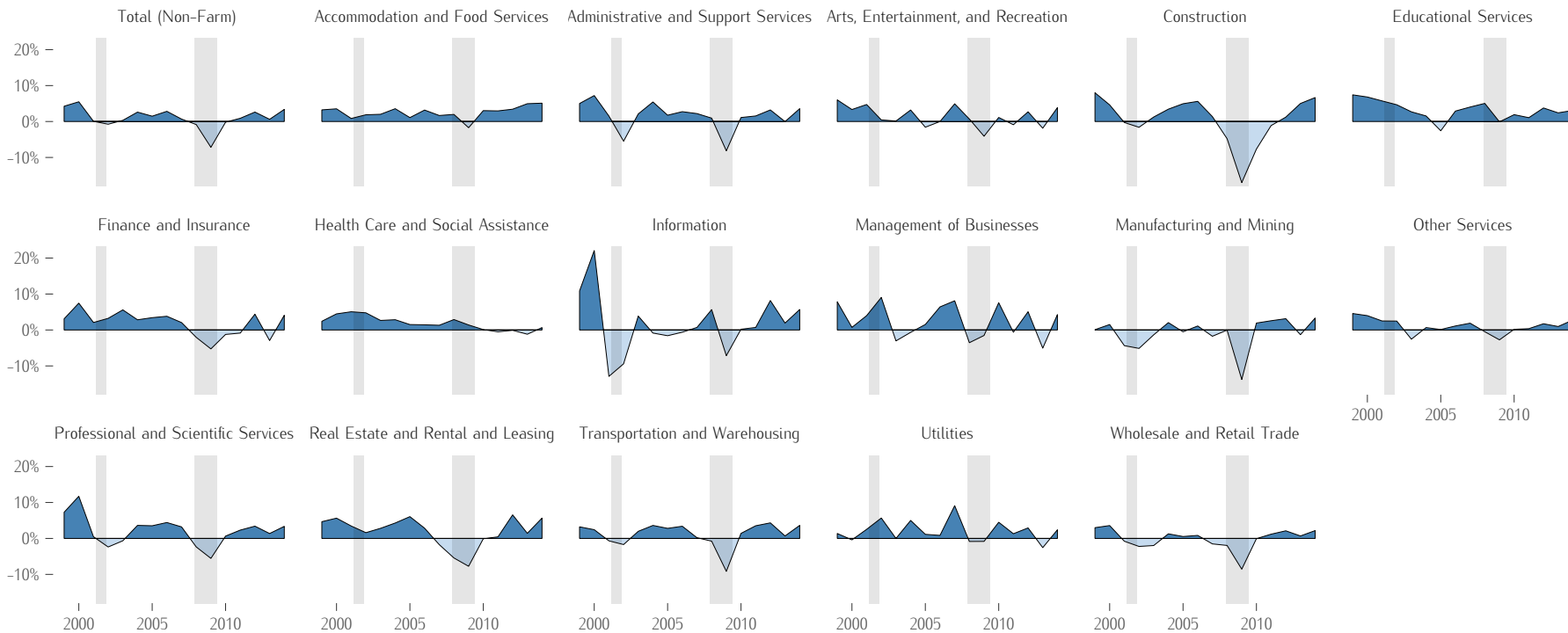


Figure 27: Real Small Business Payroll Growth Rates, 1999-2014

7.5.3 REAL LARGE BUSINESS PAYROLL

Billions of 2014 US Dollars

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (Non-Farm)	2,478.3	2,654.2	2,859.4	2,885.7	2,772.1	2,788.5	2,853.4	2,921.2	3,057.3	3,154.0	3,180.4	3,014.4	3,046.6	3,154.6	3,253.8	3,361.8	3,499.9
Health Care and Social Assistance	293.4	297.7	303.3	321.4	341.5	355.2	369.7	378.9	396.0	419.7	438.0	458.8	467.4	481.5	502.7	511.2	522.0
Manufacturing and Mining	561.9	572.0	573.8	537.3	490.8	475.0	472.2	464.2	468.8	464.6	453.5	401.4	394.4	410.4	421.3	430.9	444.2
Wholesale and Retail Trade	302.1	331.6	355.6	365.2	353.1	356.8	372.2	384.7	397.9	396.3	409.8	401.0	401.6	413.3	411.8	424.0	440.1
Finance and Insurance	288.1	310.2	336.7	358.6	346.0	354.7	373.7	381.5	399.4	415.0	420.1	356.8	365.1	378.4	391.9	403.9	417.9
Professional and Scientific Services	135.4	157.2	184.0	188.0	180.6	210.1	221.1	229.4	246.6	261.2	264.3	264.9	273.2	280.4	286.6	306.0	320.7
Management of Businesses	221.7	239.2	258.4	253.6	236.6	241.9	247.1	262.9	279.1	298.6	272.0	260.9	273.7	285.7	296.3	302.6	320.0
Administrative and Support Services	124.9	142.8	165.7	172.2	162.4	163.6	170.1	182.6	202.2	209.8	217.5	199.0	209.2	224.2	239.0	249.2	267.7
Information	151.7	175.0	209.4	209.1	186.3	199.5	188.8	185.2	190.1	194.3	197.9	190.9	186.6	191.9	205.0	218.0	230.2
Transportation and Warehousing	94.6	101.5	108.4	110.2	105.8	120.9	120.7	120.6	126.6	131.9	129.4	121.1	120.6	124.6	127.8	133.2	141.2
Accommodation and Food Services	65.6	70.6	75.4	74.9	73.8	78.7	80.4	84.2	88.4	91.8	93.5	89.8	90.8	92.6	94.8	98.7	100.7
Educational Services	41.9	44.8	47.6	50.5	53.6	55.0	57.9	58.6	61.3	63.4	67.7	70.6	74.0	76.1	77.7	78.7	80.2
Construction	40.0	45.0	54.4	57.5	57.0	54.6	55.8	60.9	68.4	70.5	74.5	64.4	57.7	59.1	61.7	65.1	69.7
Utilities	46.7	47.5	48.1	48.4	47.1	47.1	47.9	47.9	47.9	49.7	52.8	51.6	51.8	53.2	53.0	53.4	53.6
Real Estate and Rental and Leasing	21.0	23.4	25.7	28.4	27.8	28.8	30.8	33.5	35.4	35.5	36.9	32.5	30.8	32.5	32.7	33.4	35.6
Other Services	22.0	23.0	25.9	26.6	25.9	25.1	25.8	26.9	28.0	29.6	29.9	28.1	27.1	27.7	28.3	28.4	30.1
Arts, Entertainment, and Recreation	12.8	14.4	17.0	17.6	18.5	17.8	17.9	19.3	19.3	22.1	22.6	22.7	22.6	23.0	23.1	24.9	26.2

Table 21: Large Business Real Payrolls, 1998-2014

^a Linearly interpolated values replace the redacted payroll values for 2006 Arts, Entertainment, and Recreation and 2003 Utilities.

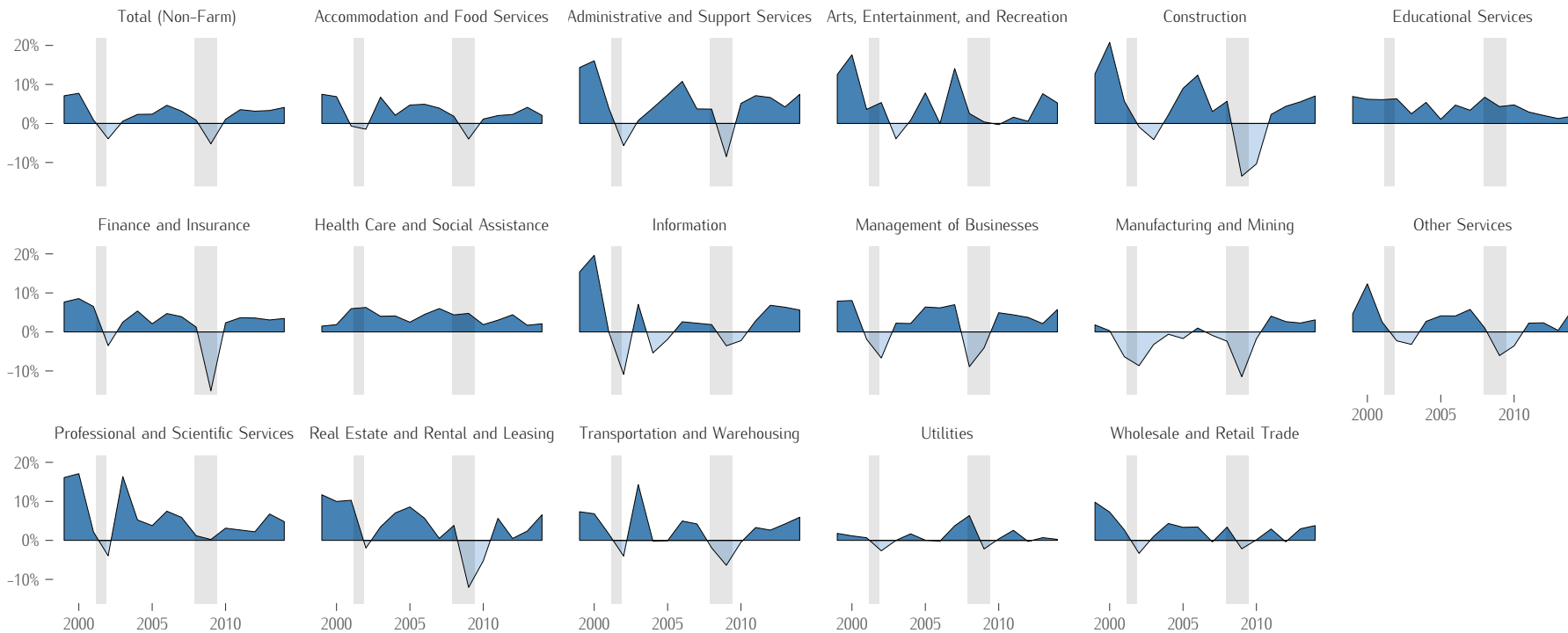


Figure 28: Real Large Business Payroll Growth Rates, 1999-2014

7.6 NUMBER OF BUSINESSES

7.6.1 TOTAL BUSINESSES

Thousands of Firms

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (Non-Farm)	5,552.6	5,581.5	5,627.1	5,632.0	5,671.9	5,742.0	5,860.9	5,960.1	5,999.2	6,026.7	5,908.2	5,746.3	5,713.6	5,663.8	5,704.8	5,753.6	5,804.3
Wholesale and Retail Trade	1,102.3	1,088.9	1,085.6	1,081.2	1,081.4	1,075.3	1,072.6	1,073.7	1,060.2	1,047.6	1,021.9	989.5	978.1	963.4	965.8	964.5	960.7
Professional and Scientific Services	641.6	654.5	670.1	682.3	708.0	714.8	734.9	757.2	772.0	787.2	771.7	761.6	766.2	765.8	772.7	781.3	790.2
Other Services	659.3	656.9	661.7	658.4	675.2	669.7	671.3	676.4	672.1	677.5	667.0	660.4	663.6	660.9	667.2	671.8	675.9
Construction	686.2	691.5	701.9	691.1	701.4	722.8	751.1	777.7	791.6	799.8	761.5	700.8	670.2	645.2	641.0	646.4	654.6
Health Care and Social Assistance	527.7	524.3	532.0	541.0	560.1	575.1	588.2	599.4	605.8	615.1	621.0	625.9	631.4	633.6	640.7	646.8	651.2
Accommodation and Food Services	418.3	411.6	412.8	416.5	427.5	438.2	453.4	463.0	467.1	477.0	476.9	474.7	482.3	486.4	495.3	504.2	508.9
Administrative and Support Services	302.9	299.4	299.3	308.5	289.3	299.4	310.3	320.3	323.3	328.7	332.2	323.7	322.8	321.1	327.2	329.2	331.5
Real Estate and Rental and Leasing	242.5	242.8	244.5	247.6	259.8	270.1	282.8	300.5	306.0	301.1	283.6	269.8	267.1	263.0	270.0	276.5	282.8
Manufacturing and Mining	338.4	330.7	325.1	324.5	316.3	313.8	312.1	308.0	306.6	307.4	302.9	286.9	279.4	276.3	278.5	273.8	274.7
Finance and Insurance	222.0	223.5	227.0	230.6	237.9	244.7	252.0	260.0	263.0	264.2	253.4	242.4	237.9	233.6	234.8	234.8	236.0
Transportation and Warehousing	154.7	155.2	157.3	157.2	159.4	161.9	164.8	169.1	171.9	174.3	169.9	163.2	162.3	164.9	168.1	169.7	173.6
Arts, Entertainment, and Recreation	96.3	96.0	97.1	99.1	103.0	106.5	111.3	114.1	115.0	116.7	115.4	113.7	113.9	113.9	115.0	117.0	119.4
Educational Services	58.5	59.6	60.9	63.7	65.9	69.0	71.2	72.4	73.8	77.1	78.6	78.8	79.7	80.7	84.5	86.5	87.9
Information	75.3	77.1	79.6	77.5	77.6	75.8	75.3	75.3	75.0	75.7	72.7	70.6	70.1	69.4	71.1	71.9	73.2
Management of Businesses	26.4	26.9	26.8	26.8	28.2	27.7	26.6	26.5	26.8	28.1	27.6	27.5	27.5	27.0	26.8	26.7	26.9
Utilities	6.6	6.7	7.0	7.3	7.6	7.1	6.7	6.7	6.6	6.1	5.8	5.7	5.8	5.8	6.0	5.9	5.9

Table 22: Total Businesses, 1998-2014

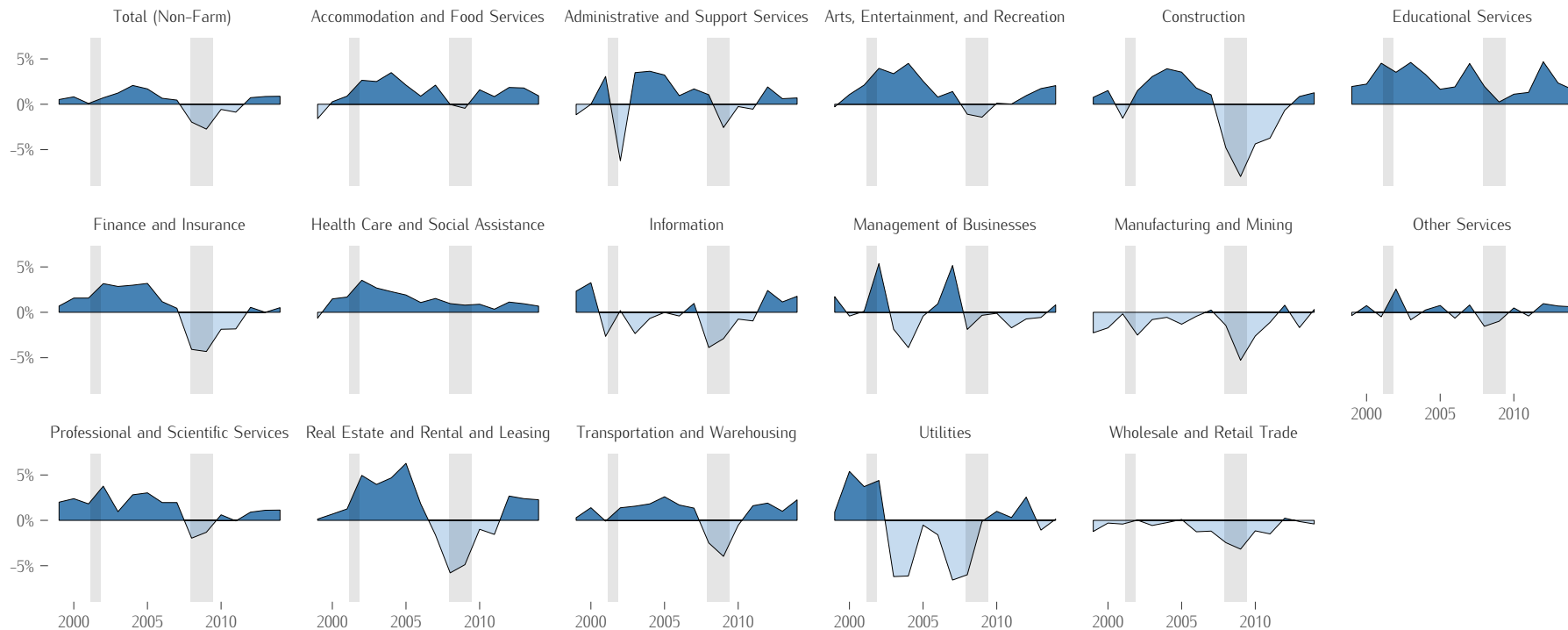


Figure 29: Total sBusinesses Growth Rates, 1999-2014

7.6.2 SMALL BUSINESSES

Thousands of US Businesses

Table 23: Small Businesses, 1998-2014

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (Non-Farm)	5,536.3	5,564.9	5,610.0	5,614.7	5,655.2	5,725.2	5,844.0	5,942.7	5,981.3	6,008.5	5,889.8	5,728.9	5,696.4	5,646.2	5,686.7	5,735.1	5,785.3
Wholesale and Retail Trade	1,096.6	1,083.2	1,079.9	1,075.5	1,076.0	1,069.9	1,067.4	1,068.3	1,054.8	1,042.2	1,016.5	984.4	973.1	958.5	960.7	959.3	955.4
Professional and Scientific Services	639.5	652.2	667.8	679.9	705.5	711.9	732.0	754.3	769.0	784.1	768.7	758.7	763.4	762.8	769.5	778.1	786.9
Other Services	658.1	655.6	660.5	657.2	674.0	668.3	670.0	675.0	670.7	676.1	665.6	659.0	662.3	659.6	665.8	670.5	674.5
Construction	685.4	690.5	700.9	690.1	700.5	721.9	750.1	776.7	790.5	798.7	760.3	699.8	669.3	644.3	640.1	645.5	653.6
Health Care and Social Assistance	524.3	520.9	528.6	537.4	556.5	571.4	584.5	595.6	602.0	611.2	617.0	621.9	627.4	629.5	636.5	642.6	647.0
Accommodation and Food Services	416.7	410.0	411.1	414.8	425.8	436.5	451.7	461.2	465.3	475.1	474.9	472.8	480.3	484.4	493.2	502.1	506.7
Administrative and Support Services	300.0	296.3	296.1	305.3	286.2	296.0	306.9	316.8	319.6	325.0	328.5	320.3	319.5	317.7	323.5	325.5	327.7
Real Estate and Rental and Leasing	241.2	241.6	243.2	246.4	258.6	268.9	281.6	299.3	304.8	299.8	282.4	268.6	266.0	261.9	268.8	275.3	281.6
Manufacturing and Mining	333.2	325.6	320.1	319.6	311.9	309.4	307.7	303.6	302.2	302.9	298.5	282.9	275.7	272.5	274.5	269.7	270.5
Finance and Insurance	220.4	221.9	225.4	229.0	236.1	242.9	250.3	258.3	261.3	262.5	251.7	240.8	236.4	232.0	233.2	233.2	234.3
Transportation and Warehousing	153.6	154.0	156.2	156.1	158.2	159.7	162.7	166.9	169.8	172.1	167.7	161.0	160.2	162.8	165.9	167.5	171.3
Arts, Entertainment, and Recreation	95.8	95.5	96.5	98.5	102.5	105.9	110.7	113.5	114.4	116.0	114.6	113.0	113.1	113.1	114.2	116.2	118.6
Educational Services	57.5	58.7	60.0	62.7	64.9	67.9	70.1	71.3	72.7	75.9	77.4	77.6	78.4	79.4	83.2	85.2	86.5
Information	74.3	76.0	78.5	76.3	76.5	74.6	74.1	74.1	73.9	74.6	71.7	69.6	69.1	68.4	70.0	70.8	72.0
Management of Businesses	19.9	20.3	20.1	20.1	21.5	20.9	19.8	19.5	19.7	20.8	20.2	20.2	20.2	19.6	19.3	19.1	19.2
Utilities	6.4	6.4	6.8	7.1	7.4	6.9	6.5	6.5	6.4	5.9	5.6	5.6	5.6	5.6	5.8	5.7	5.7

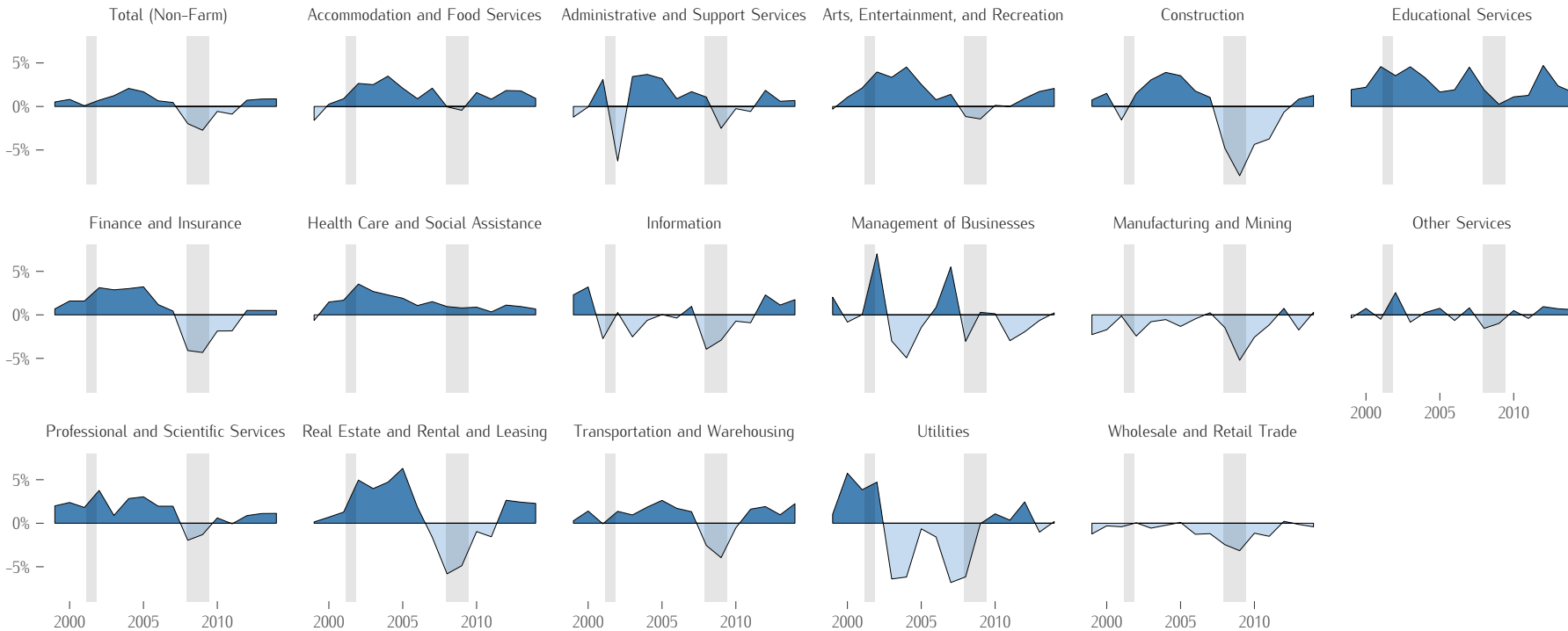


Figure 30: Growth in the Number of Small Businesses, 1999-2014

7.6.3 LARGE BUSINESSES

Thousands of US Businesses

Table 24: Large Businesses, 1998-2014

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (Non-Farm)	16.3	16.6	17.1	17.3	16.8	16.8	17.0	17.4	18.0	18.2	18.4	17.4	17.1	17.6	18.1	18.6	19.0
Management of Businesses	6.6	6.6	6.7	6.7	6.7	6.8	6.8	7.0	7.1	7.3	7.4	7.3	7.2	7.4	7.6	7.5	7.7
Wholesale and Retail Trade	5.7	5.7	5.7	5.7	5.5	5.4	5.3	5.3	5.4	5.5	5.4	5.1	4.9	4.9	5.1	5.2	5.3
Health Care and Social Assistance	3.4	3.4	3.5	3.5	3.6	3.7	3.7	3.8	3.8	3.9	4.0	4.0	4.1	4.1	4.2	4.2	4.2
Manufacturing and Mining	5.2	5.1	5.0	4.9	4.5	4.4	4.4	4.3	4.4	4.4	4.4	4.0	3.8	3.9	4.0	4.1	4.1
Administrative and Support Services	2.9	3.0	3.2	3.2	3.1	3.3	3.3	3.5	3.7	3.7	3.6	3.4	3.3	3.4	3.7	3.7	3.8
Professional and Scientific Services	2.2	2.3	2.3	2.4	2.5	2.9	2.9	2.9	3.0	3.1	3.0	2.9	2.9	2.9	3.2	3.2	3.2
Transportation and Warehousing	1.1	1.1	1.1	1.1	1.2	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.2	2.2	2.3
Accommodation and Food Services	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.8	1.8	1.9	2.0	2.0	2.0	2.0	2.1	2.2	2.2
Finance and Insurance	1.6	1.7	1.6	1.6	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.7	1.7	1.7
Other Services	1.2	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.4	1.3	1.3
Educational Services	0.9	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3
Real Estate and Rental and Leasing	1.3	1.3	1.3	1.2	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.2	1.2	1.2
Information	1.0	1.0	1.1	1.1	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.1	1.1	1.2
Construction	0.9	0.9	1.0	1.0	1.0	0.9	1.0	1.0	1.1	1.1	1.1	1.0	0.9	0.9	0.9	1.0	1.0
Arts, Entertainment, and Recreation	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
Utilities	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

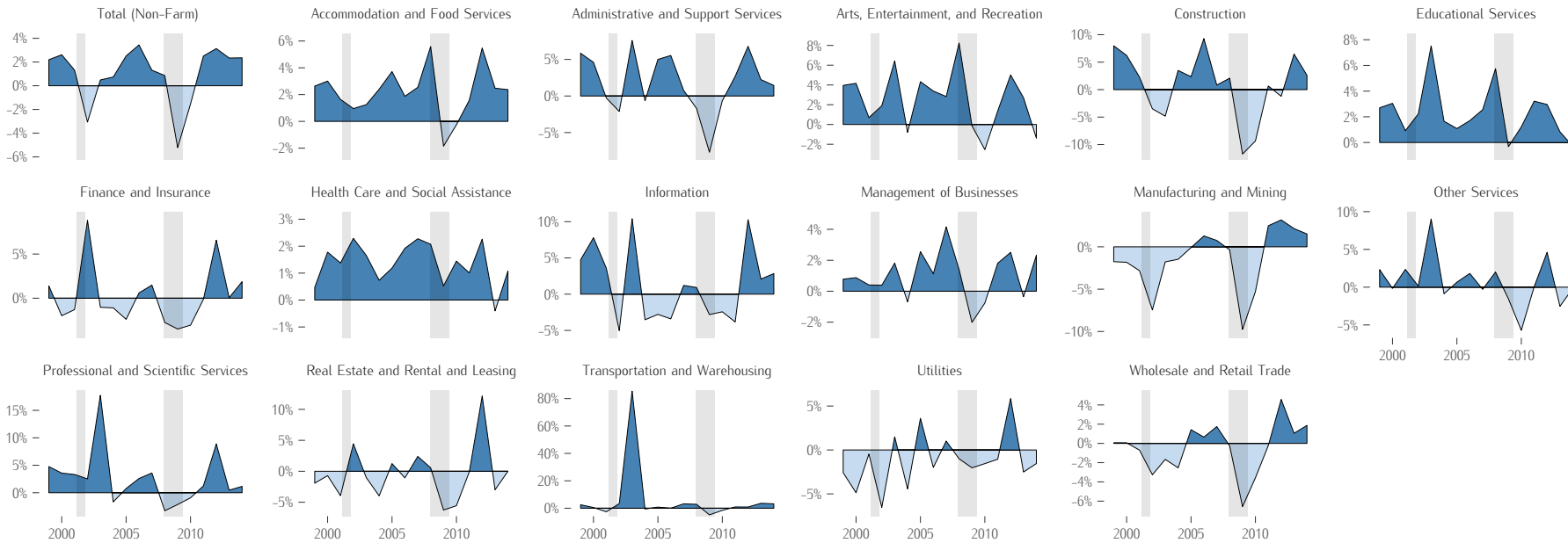


Figure 31: Large Businesses Growth Rates, 1999-2014

7.6.4 SMALL BUSINESS SHARE OF ALL BUSINESSES

Percent

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (Non-Farm)	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7
Accommodation and Food Services	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6
Administrative and Support Services	99.1	99.0	98.9	99.0	98.9	98.9	98.9	98.9	98.9	98.9	98.9	99.0	99.0	98.9	98.9	98.9	98.9
Arts, Entertainment, and Recreation	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.3	99.4	99.4	99.3	99.3	99.3
Construction	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9
Educational Services	98.4	98.4	98.4	98.4	98.5	98.4	98.4	98.5	98.5	98.5	98.4	98.4	98.4	98.4	98.4	98.5	98.5
Finance and Insurance	99.3	99.3	99.3	99.3	99.3	99.3	99.3	99.4	99.4	99.4	99.3	99.3	99.3	99.3	99.3	99.3	99.3
Health Care and Social Assistance	99.4	99.3	99.3	99.3	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.4	99.3	99.4	99.4
Information	98.7	98.7	98.6	98.5	98.6	98.4	98.5	98.5	98.6	98.6	98.5	98.5	98.5	98.6	98.4	98.4	98.4
Management of Businesses	75.2	75.4	75.1	75.0	76.2	75.3	74.5	73.7	73.6	73.9	73.0	73.5	73.7	72.7	71.8	71.8	71.3
Manufacturing and Mining	98.5	98.5	98.5	98.5	98.6	98.6	98.6	98.6	98.6	98.6	98.5	98.6	98.6	98.6	98.6	98.5	98.5
Other Services	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8
Professional and Scientific Services	99.7	99.7	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6
Real Estate and Rental and Leasing	99.5	99.5	99.5	99.5	99.5	99.5	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.5	99.6	99.6
Transportation and Warehousing	99.3	99.3	99.3	99.3	99.3	98.7	98.7	98.7	98.8	98.7	98.7	98.7	98.7	98.7	98.7	98.7	98.7
Utilities	96.5	96.6	96.9	97.1	97.4	97.2	97.1	97.0	97.0	96.7	96.6	96.6	96.7	96.8	96.7	96.7	96.8
Wholesale and Retail Trade	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5

Table 25: Small Business Shares of All Businesses, 1998-2014

7.7 ANNUALIZED OPENINGS AND CLOSINGS

7.7.1 ANNUALIZED NET QUARTERLY OPENINGS

Thousands of Establishments

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Total (selected industries) ^a	276.1	147.3	161.5	54.7	165.3	154.6	196.3	295.2	188.0	129.1	-190.8	-304.1	-30.6	55.7	315.1	79.0	-34.4
Accommodation and Food Services	7.7	4.6	10.2	4.6	17.9	15.3	12.8	16.1	15.7	12.1	-2.7	2.0	9.1	6.5	13.5	9.0	-4.6
Administrative and Support Services	20.9	9.1	14.1	9.6	11.4	7.8	15.1	17.7	16.8	13.6	-8.5	-19.2	3.1	8.4	12.6	5.8	-2.5
Arts, Entertainment, and Recreation	4.3	2.5	4.1	3.6	6.2	6.7	6.6	5.8	2.6	3.4	-1.5	-5.6	0.7	1.0	4.5	3.1	-0.3
Construction	45.3	27.0	18.6	11.9	17.2	22.2	46.6	49.9	21.1	-22.3	-111.8	-126.7	-39.3	-11.9	1.1	12.4	6.4
Educational Services	4.0	3.9	5.3	3.6	4.7	4.1	4.9	5.2	4.6	5.5	3.3	0.9	3.7	5.3	5.0	2.6	1.3
Finance and Insurance	15.5	10.1	3.4	7.5	13.8	14.8	15.3	20.5	11.3	-7.6	-27.5	-24.5	-13.0	-4.6	0.4	1.6	-5.0
Health Care and Social Assistance	72.0	50.9	31.9	67.5	75.5	80.7	35.1	72.6	46.9	81.3	77.3	78.7	12.3	10.2	217.1	15.1	23.2
Information	7.2	11.1	15.8	-9.1	-5.6	-5.0	-2.2	1.9	0.7	1.9	-1.6	-6.7	-1.3	0.1	1.6	1.8	0.3
Management of Businesses	2.2	0.5	0.0	-3.2	-0.5	0.4	1.8	1.1	1.0	1.4	-0.6	-3.5	1.0	0.3	0.9	0.6	-0.8
Manufacturing and Mining	-0.8	-7.0	-7.6	-20.0	-15.3	-14.6	-8.8	-5.5	-3.3	-3.9	-14.9	-31.7	-8.0	-2.4	-0.7	-0.4	-2.5
Other Services	6.0	2.8	2.3	-1.8	6.8	2.9	1.1	6.1	2.2	4.0	-10.8	-12.7	0.6	5.9	9.0	3.1	-5.1
Professional and Scientific Services	68.8	42.1	53.7	12.2	29.0	19.7	44.7	61.0	55.4	48.5	5.9	-32.5	23.4	35.4	37.5	22.3	-7.2
Real Estate and Rental and Leasing	6.9	0.8	3.4	4.6	9.2	13.6	16.8	25.0	4.4	-12.3	-31.5	-21.8	-14.0	-2.9	6.0	9.2	-2.4
Transportation and Warehousing	9.2	4.3	1.2	-5.5	-1.9	-2.3	5.0	4.6	6.2	0.3	-9.6	-15.1	1.1	7.4	4.1	1.9	0.8
Wholesale and Retail Trade	6.8	-15.4	5.2	-30.9	-3.1	-11.5	1.6	13.0	2.4	3.2	-56.1	-85.6	-10.0	-2.9	2.4	-9.2	-36.0

^a Totals reflect the industries analyzed. Some industries, such as Agriculture and others, are excluded.

Table 26: Annualized Net Quarterly Openings, 1998-2014

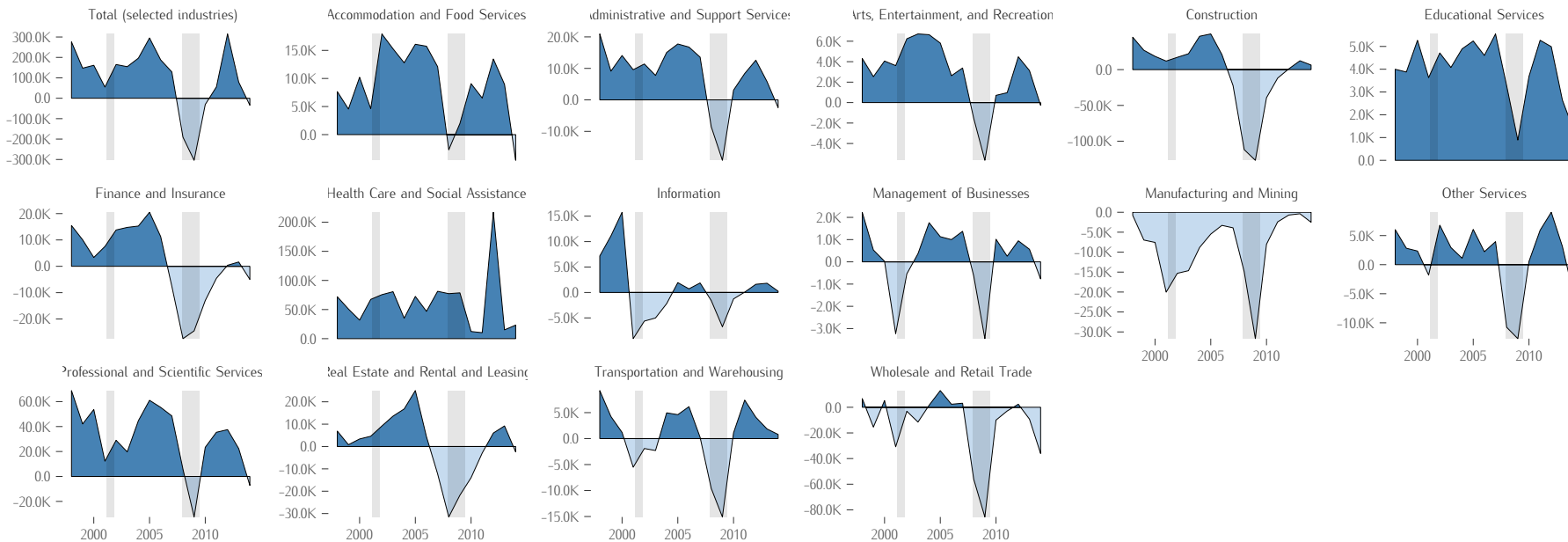


Figure 32: Annualized Net Quarterly Openings, 1998-2014

7.7.2 ANNUALIZED NET QUARTERLY OPENINGS CALCULATIONS

The Bureau of Labor Statistics generates its Business Employment Dynamics (BED) statistics based on its Quarterly Census of Employment and Wages (QCEW) program to provide quarterly series measuring births, deaths, job gains and losses, establishment openings and closings, and related statistics.³¹

The BED series does not provide standard, state-level, and 2-digit NAICS encoded industry data for establishment openings, closings, births, or deaths. Instead, BLS uses its own custom [NAICS Supersector Aggregations](#). Supersectors group various 2-digit NAICS industries, such as Education and Health Services, into composite entities. Birth and death statistics are only available for supersectors. Fortunately, BED provides openings and closings data for standard 3-digit NAICS industries.³² The traditionally defined 2-digit NAICS industries were generated by aggregating the BED 3-digit NAICS series according to the 2-digit NAICS Census definitions.³³

Table 27: Correlations Between Births and Openings and Deaths and Closings

	Births and Openings Correlation	Deaths and Closings Correlation
Construction	0.63	0.94
Education and Health Services	0.92	0.87
Financial Activities	0.73	0.94
Goods-Producing	0.76	0.94
Information	0.85	0.90
Leisure and Hospitality	0.69	0.73
Manufacturing	0.94	0.91
Natural Resources and Mining	0.63	0.51
Other Services	0.36	0.61
Professional and Business Services	0.91	0.97
Retail Trade	0.97	0.96
Service-Providing	0.87	0.94
Total Private	0.74	0.93
Transportation and Warehousing	0.42	0.75
Utilities	1.00	1.00
Wholesale Trade	0.84	0.90

³¹ **Births** are counted when business establishments hire at least one employee for the first time. **Openings** measure **births** plus seasonal re-openings. Similarly, **deaths** occur when establishments having at least one employee later have none and remain closed for at least a year. **Closings** measure deaths plus seasonal shutterings.

³² The correlation between overall establishment births and overall establishment openings is 0.996 and the correlation between overall establishment deaths and overall establishment closings is 0.997.

³³ The net openings data presented in the main text is a Hodrick-Prescott smoothed representation of the quarterly series. For brevity, the table and figure above provide only annually summed raw series.

8 APPENDIX B: NAICS 2017 INDUSTRY DEFINITIONS

Industry	NAICS 2	NAICS 3	Long Definition
Accommodation and Food Services	72	721 722	The Accommodation and Food Services sector comprises establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption. The sector includes both accommodation and food services establishments because the two activities are often combined at the same establishment.
Administrative and Support Services	56	561 562	The Administrative and Support and Waste Management and Remediation Services sector comprises establishments performing routine support activities for the day-to-day operations of other organizations. These essential activities are often undertaken in-house by establishments in many sectors of the economy. The establishments in this sector specialize in one or more of these support activities and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: office administration, hiring and placing of personnel, document preparation and similar clerical services, solicitation, collection, security and surveillance services, cleaning, and waste disposal services.
Arts, Entertainment, and Recreation	71	711 712 713	The Arts, Entertainment, and Recreation sector includes a wide range of establishments that operate facilities or provide services to meet varied cultural, entertainment, and recreational interests of their patrons. Some establishments that provide cultural, entertainment, or recreational facilities and services are classified in other sectors. This sector comprises (1) establishments that are involved in producing, promoting, or participating in live performances, events, or exhibits intended for public viewing; (2) establishments that preserve and exhibit objects and sites of historical, cultural, or educational interest; and (3) establishments that operate facilities or provide services that enable patrons to participate in recreational activities or pursue amusement, hobby, and leisure-time interests.
Construction	23	236 237 238	The construction sector comprises establishments primarily engaged in the construction of buildings or engineering projects (e.g., highways and utility systems). Establishments primarily engaged in the preparation of sites for new construction and establishments primarily engaged in subdividing land for sale as building sites also are included in this sector. Construction work done may include new work, additions, alterations, or maintenance and repairs. Activities of these establishments generally are managed at a fixed place of business, but they usually perform construction activities at multiple project sites. Production responsibilities for establishments in this sector are usually specified in (1) contracts with the owners of construction projects (prime contracts) or (2) contracts with other construction establishments (subcontracts).
Educational Services	61	611	The Educational Services sector comprises establishments that provide instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments, such as schools, colleges, universities, and training centers. These establishments may be privately owned and operated for profit or not for profit, or they may be publicly owned and operated. They may also offer food and/or accommodation services to their students. Educational services are usually delivered by teachers or instructors that explain, tell, demonstrate, supervise, and direct learning. Instruction is imparted in diverse settings, such as educational institutions, the workplace, or the home, and through diverse means, such as correspondence, television, the Internet, or other electronic and distance-learning methods. The training provided by these establishments may include the use of simulators and simulation methods. It can be adapted to the particular needs of the students, for example sign language can replace verbal language for teaching students with hearing impairments. All industries in the sector share this commonality of process, namely, labor inputs of instructors with the requisite subject matter expertise and teaching ability.
Finance and Insurance	52	522 523 524 525	The Finance and Insurance sector comprises establishments primarily engaged in financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or in facilitating financial transactions. Three principal types of activities are identified: 1. Raising funds by taking deposits and/or issuing securities and, in the process, incurring liabilities. Establishments engaged in this activity use raised funds to acquire financial assets by making loans and/or purchasing securities. Putting themselves at risk, they channel funds from lenders to borrowers and transform or repackage the funds with respect to maturity, scale, and risk. This activity is known as financial intermediation. 2. Pooling of risk by underwriting insurance and annuities. Establishments engaged in this activity collect fees, insurance premiums, or annuity considerations; build up reserves; invest those reserves; and make contractual payments. Fees are based on the expected incidence of the insured risk and the expected return on investment. 3. Providing specialized services facilitating or supporting financial intermediation, insurance, and employee benefit programs. In addition, monetary authorities charged with monetary control are included in this sector.

Industry	NAICS 2	NAICS 3	Long Definition
Health Care and Social Assistance	62	621 622 623 624	The Health Care and Social Assistance sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.
Information	51	511 512 515 517 518 519	The Information sector comprises establishments engaged in the following processes: (a) producing and distributing information and cultural products, (b) providing the means to transmit or distribute these products as well as data or communications, and (c) processing data. The main components of this sector are the publishing industries, including software publishing, and both traditional publishing and publishing exclusively on the Internet; the motion picture and sound recording industries; the broadcasting industries, including traditional broadcasting and those broadcasting exclusively over the Internet; the telecommunications industries; Web search portals, data processing industries, and the information services industries. The Information sector groups three types of establishments: (1) those engaged in producing and distributing information and cultural products; (2) those that provide the means to transmit or distribute these products as well as data or communications; and (3) those that process data.
Management of Businesses	55	551	The Management of Companies and Enterprises sector comprises (1) establishments that hold the securities of (or other equity interests in) companies and enterprises for the purpose of owning a controlling interest or influencing management decisions or (2) establishments (except government establishments) that administer, oversee, and manage establishments of the company or enterprise and that normally undertake the strategic or organizational planning and decision making role of the company or enterprise. Establishments that administer, oversee, and manage may hold the securities of the company or enterprise.
Manufacturing and Mining	31–33, 21	211 212 213 311 312 313 314 315 316 321 322 323 324 325 326 327	The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. Establishments in the Manufacturing sector are often described as plants, factories, or mills and characteristically use power-driven machines and materials-handling equipment. However, establishments that transform materials or substances into new products by hand or in the worker's home and those engaged in selling to the general public products made on the same premises from which they are sold, such as bakeries, candy stores, and custom tailors, may also be included in this sector. Manufacturing establishments may process materials or may contract with other establishments to process their materials for them. Both types of establishments are included in manufacturing. The Mining sector comprises establishments that extract naturally occurring mineral solids, such as coal and ores; liquid minerals, such as crude petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and flotation), and other preparation customarily performed at the mine site, or as a part of mining activity.
Other Services	81	811 812 813	Establishments in this sector perform essential activities that are often undertaken, in-house, by establishments in many sectors of the economy. By consolidating the performance of these activities of the enterprise at one establishment, economies of scale are achieved.
Professional and Scientific Services	54	541	The Professional, Scientific, and Technical Services sector comprises establishments that specialize in performing professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. The establishments in this sector specialize according to expertise and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services.

Industry	NAICS 2	NAICS 3	Long Definition
Real Estate and Rental and Leasing	53	531 532 533	<p>The Real Estate and Rental and Leasing sector comprises establishments primarily engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets, and establishments providing related services. The major portion of this sector comprises establishments that rent, lease, or otherwise allow the use of their own assets by others. The assets may be tangible, as is the case of real estate and equipment, or intangible, as is the case with patents and trademarks.</p> <p>This sector also includes establishments primarily engaged in managing real estate for others, selling, renting and/or buying real estate for others, and appraising real estate. These activities are closely related to this sector's main activity, and it was felt that from a production basis they would best be included here. In addition, a substantial proportion of property management is self-performed by lessors. The main components of this sector are the real estate lessors industries (including equity real estate investment trusts (REITs)); equipment lessors industries (including motor vehicles, computers, and consumer goods); and lessors of nonfinancial intangible assets (except copyrighted works).</p>
Transportation and Warehousing	48–49	481 483 484 485 486 487 488 492 493	<p>The Transportation and Warehousing sector includes industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation. Establishments in these industries use transportation equipment or transportation related facilities as a productive asset. The type of equipment depends on the mode of transportation. The modes of transportation are air, rail, water, road, and pipeline.</p>
Utilities	22	221	<p>The Utilities sector comprises establishments engaged in the provision of the following utility services: electric power, natural gas, steam supply, water supply, and sewage removal. Within this sector, the specific activities associated with the utility services provided vary by utility: electric power includes generation, transmission, and distribution; natural gas includes distribution; steam supply includes provision and/or distribution; water supply includes treatment and distribution; and sewage removal includes collection, treatment, and disposal of waste through sewer systems and sewage treatment facilities.</p>
Wholesale and Retail Trade	42, 44–45	423 424 425 441 442 443 444 445 446 447 448 451 452 453 454	<p>The Wholesale Trade sector comprises establishments engaged in wholesaling merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The merchandise described in this sector includes the outputs of agriculture, mining, manufacturing, and certain information industries, such as publishing.</p> <p>The wholesaling process is an intermediate step in the distribution of merchandise. Wholesalers are organized to sell or arrange the purchase or sale of (a) goods for resale (i.e., goods sold to other wholesalers or retailers), (b) capital or durable nonconsumer goods, and (c) raw and intermediate materials and supplies used in production.</p> <p>Wholesalers sell merchandise to other businesses and normally operate from a warehouse or office. These warehouses and offices are characterized by having little or no display of merchandise. In addition, neither the design nor the location of the premises is intended to solicit walk-in traffic. Wholesalers do not normally use advertising directed to the general public. Customers are generally reached initially via telephone, in-person marketing, or by specialized advertising that may include Internet and other electronic means. Follow-up orders are either vendor-initiated or client-initiated, generally based on previous sales, and typically exhibit strong ties between sellers and buyers. In fact, transactions are often conducted between wholesalers and clients that have long-standing business relationships.</p> <p>The Retail Trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise.</p> <p>The retailing process is the final step in the distribution of merchandise; retailers are, therefore, organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers: store and nonstore retailers.</p> <ol style="list-style-type: none"> 1. Store retailers operate fixed point-of-sale locations, located and designed to attract a high volume of walk-in customers. In general, retail stores have extensive displays of merchandise and use mass-media advertising to attract customers. They typically sell merchandise to the general public for personal or household consumption, but some also serve business and institutional clients. In addition to retailing merchandise, some types of store retailers are also engaged in the provision of after-sales services, such as repair and installation. 2. Nonstore retailers, like store retailers, are organized to serve the general public, but their retailing methods differ. The establishments of this subsector reach customers and market merchandise with methods, such as the broadcasting of "infomercials," the broadcasting and publishing of direct-response advertising, the publishing of paper and electronic catalogs, door-to-door solicitation, in-home demonstration, selling from portable stalls (street vendors, except food), and distribution through vending machines.

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