

An Overview of the Federal Reserve Bank of Richmond's Business Surveys

About the Business Surveys

The Fifth District Regional Surveys of Business Activity (business surveys) are monthly surveys administered to business leaders throughout the Fifth Federal Reserve District¹. The manufacturing survey began in June 1986 and took its current monthly form in November 1993. The service sector survey began in November 1993.

The overall goal of the business surveys is to better understand changes in business conditions across the Fifth District. The surveys assess how businesses are faring through four mechanisms. First, we ask respondents a series of questions about changes in the last month to several economic variables (e.g., revenues, new orders, employment, prices, etc.). Second, we ask them how they anticipate the same economic variables to change in the next six months. Third, we ask them an open-ended question about the most pressing concerns facing their businesses. Fourth, we ask them a series of "special" questions that contribute to our understanding of firms' attitudes toward economic realities their businesses may be facing, such as COVID-19, labor shortages, tariff implementation, or hurricanes.

We categorize businesses by their North American Industry Classification System (NAICS) industry code, and questions might differ based on the industry of the respondent. For example, we ask manufacturing survey participants about shipments, while we ask retail firms additional questions about shopper traffic and sales of big-ticket items. We define manufacturing firms as having a NAICS code in the 300s. However, we treat all other firms with a NAICS code not in the 300s as service sector businesses.

Sampling Methodology

We aim to construct a survey panel that represents the district by geography, industry, and firm size. Recruiting methods include: (1) Contacting businesses on purchased lists of firms from suppliers such as Dun & Bradstreet; (2) Reaching out to potential participants through our existing business outreach program, including local chambers of commerce or industry associations.

Data Collection

The monthly survey has a fielding period of about three weeks. Data collection begins two business days after the previous months' results are published and ends three business days before the results are published. Results are usually published the fourth Tuesday of the month at 10 a.m.

Panel members receive an email with a web link to the survey questionnaire by noon EDT on the first day of the fielding period. During that time, panel firms receive three reminder emails to encourage participation.

Survey Questions & Analysis

The service sector survey includes questions on general business conditions, volume of business, employment, prices, and spending. Retail firms receive additional questions on sales, shopper traffic, and inventories. To view the entire service sector survey, follow this link: [Service Sector Core Questionnaire](#).

The manufacturing survey includes questions on general business conditions, volume of business, employment, spending, inventories, and prices. To view the entire manufacturing survey, follow this link: [Manufacturing Core Questionnaire](#).

Panel Composition

There are currently 616 businesses in the panel, including 198 manufacturing firms and 418 service sector firms. The following panel information is accurate as of August 5, 2021. The tables below break down our panel by state (establishment location, not necessarily firm headquarters), firm size, and industry. Overall, the panel overrepresents manufacturing compared to the U.S. and Fifth District industry distribution. This is intentional, given our survey focus on manufacturing.

Table 1: Survey Panel Composition by State (Percent of Firms)

State	Share of Panel	Share of Manufacturing Panel	Share of Service Sector Panel
District of Columbia	2%	1%	2%
Maryland	23%	12%	29%
North Carolina	22%	30%	18%
South Carolina	12%	20%	8%
Virginia	35%	31%	37%
West Virginia	6%	7%	6%
N	616	198	418

Table 2: Survey Panel Composition Across Firm Size (Percent of Firms)

Firm Size	Share of Panel	Share of Fifth District Firms*	Share of U.S. Firms*
< 5 employees	13%	63%	64%
5 to 49 employees	35%	33%	32%
50 to 499 employees	38%	4%	4%
500 to 999 employees	5%	<1%	<1%
1,000+ employees	9%	<1%	<1%

*Source: Bureau of Labor Statistics Quarterly Census of Employment and Wages, Q4:2020

Table 3: Total Survey Panel Composition (Percent of Firms)

Firm Type (by 2-digit NAICs Code)	Share of Panel	Share of Fifth District Firms⁺	Share of U.S. Firms⁺
11: Agriculture, Forestry, Fishing, and Hunting	<1%	1%	1%
21: Mining, Quarrying, and Oil and Gas Extraction	0%	<1%	<1%
22: Utilities	<1%	<1%	<1%
23: Construction	6%	9%	8%
31-33: Manufacturing	32%	3%	4%
42: Wholesale Trade	5%	6%	6%
44-45: Retail Trade	8%	11%	10%
48-49: Transportation and Warehousing	2%	2%	3%
51: Information	2%	2%	2%
52: Finance and Insurance	7%	5%	5%
53: Real Estate and Rental and Leasing	5%	4%	4%
54: Professional, Scientific, and Technical Services	16%	16%	13%
55: Management of Companies and Enterprises	1%	1%	1%
56: Administrative and Support and Waste Management and Remediation Services	3%	6%	6%
61: Educational Services	2%	2%	1%
62: Health Care and Social Assistance	2%	12%	17%
71: Arts, Entertainment, and Recreation	3%	1%	2%
72: Accommodation and Food Services	4%	7%	7%
81: Other Services (except Public Administration)	4%	10%	8%
99: Unclassified	0%	2%	2%

⁺Source: Bureau of Labor Statistics Quarterly Census of Employment and Wages, Q4:2020

Table 4: Manufacturing Survey Panel Composition (Percent of Firms)

Manufacturing Firm Type (by 3-digit NAICS Code)	Share of Panel	Share of Fifth District Firms ⁺	Share of U.S. Firms ⁺
311: Food Manufacturing	8%	8%	10%
312: Beverage and Tobacco Product Manufacturing	3%	4%	4%
313: Textile Mills	6%	2%	1%
314: Textile Product Mills	4%	2%	2%
315: Apparel Manufacturing	3%	1%	2%
316: Leather and Allied Product Manufacturing	1%	<1%	<1%
321: Wood Product Manufacturing	2%	5%	4%
322: Paper Manufacturing	5%	2%	2%
323: Printing and Related Support Activities	4%	8%	8%
324: Petroleum and Coal Product Manufacturing	1%	1%	1%
325: Chemical Manufacturing	7%	7%	6%
326: Plastics and Rubber Products Manufacturing	4%	4%	4%
327: Nonmetallic Mineral Product Manufacturing	4%	5%	5%
331: Primary Metal Manufacturing	3%	1%	2%
332: Fabricated Metal Product Manufacturing	10%	13%	16%
333: Machinery Manufacturing	8%	7%	9%
334: Computer and Electronic Product Manufacturing	7%	6%	6%
335: Electrical, Equipment, Appliance, and Component Manufacturing	4%	3%	2%
336: Transportation Equipment Manufacturing	7%	4%	4%
337: Furniture and Related Product Manufacturing	6%	6%	5%
339: Miscellaneous Manufacturing	6%	9%	9%

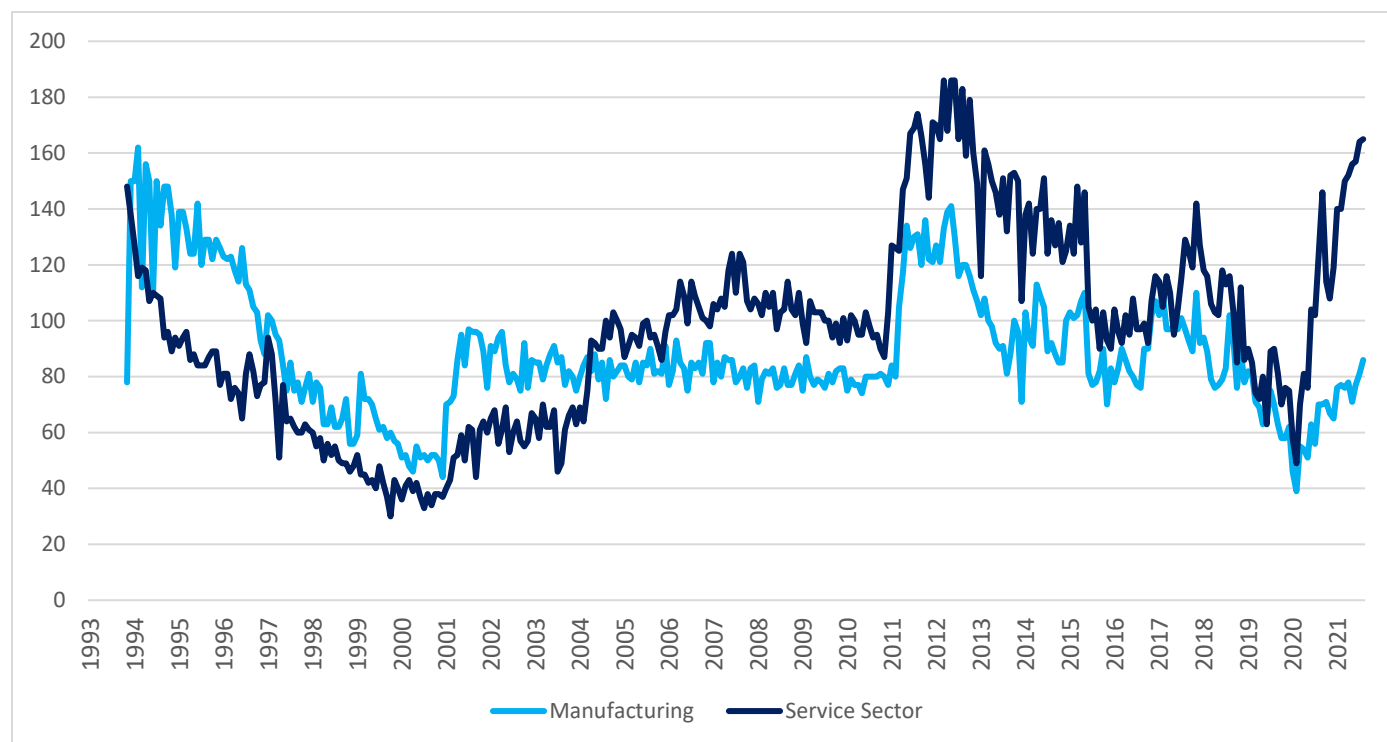
⁺Source: Bureau of Labor Statistics Quarterly Census of Employment and Wages, Q4:2020

Participation & Completion Rates

Since November 1993, the response rate for the manufacturing survey has averaged 25 percent, and the service sector survey has averaged 23 percent. Response rates have fluctuated over months and years. However, more recently, response rates have increased. From January 2021 to August 2021, response rates averaged 39 percent for the manufacturing survey and 37 percent for the service sector survey.

Also, since November 1993, the manufacturing and service survey responses averaged 88 and 96 responses per month, respectively. Here, too, there have been fluctuations. The move from paper- and fax-based surveys to online surveys affected some response rates, as have other process changes. For example, responses in 2011 increased when the surveys added Maryland and North Carolina to the broader Fifth District survey.

Figure 1: Manufacturing and Service Sector Survey Monthly Responses



Survey Reporting

There are several ways we report survey data. First, every month we calculate diffusion indexes from responses to most questions.

Second, we report average percentage changes in prices paid and prices received over the past 12 months. Third, we publish available responses to our “special questions” through an online publication called Regional Matters. To read recent Regional Matters posts, follow [this link](#).

Data Preparation, Cleaning, and Weighting

Diffusion indexes are an important output from the Regional Surveys of Business Activity. The survey protocol asks respondents to report if a particular economic variable increased, decreased, or stayed the same over the month. We calculate the diffusion indexes by subtracting the share of respondents who said that activity decreased from the share who said that activity increased. Diffusion indexes are useful because they allow us to see turning points in business conditions. For more information on diffusion indexes, please visit [this article](#).

Survey data are seasonally adjusted using an Arima-13 process. Seasonal factors are updated each July. Non-seasonally adjusted indexes are also available in the historical data provided on our survey page. We also trim the price change data at the 5 percent level to control for outliers.

The composite manufacturing index is a weighted average of the seasonally adjusted indexes for shipments (0.33), new orders (0.40), and employment (0.27). This follows the weighting scheme in the composite index released by the Institute for Supply Management.

For more information on changes or corrections over time, visit the [Manufacturing errata document](#) and the [Service sector errata document](#).

For additional questions, please reach out to the Richmond Federal Reserve Survey Team at Rich.RegionalSurveyTeam@rich.frb.org.

¹ The Fifth District encompasses the District of Columbia, Maryland, North Carolina, South Carolina, Virginia, and most of West Virginia.