

## NAM MANUFACTURERS' OUTLOOK SURVEY FOURTH QUARTER 2021

DEC. 20, 2021

<p><b>Percentage of Respondents Positive About Their Own Company's Outlook</b></p> <p style="text-align: center;"><b>86.8%</b> <i>(Sept.: 87.5%)</i></p> <p>Small Manufacturers: <b>76.7%</b> <i>(Sept.: 83.1% – Highest Since 2019:2)</i></p> <p>Medium-Sized Manufacturers: <b>85.2%</b> <i>(Sept.: 88.6%)</i></p> <p>Large Manufacturers: <b>93.9%</b> <i>(Sept.: 88.1%)</i></p>	<p><b>Overall Facts About the Survey</b></p> <p>Number of Responses: 389 In the Field: Nov. 19 – Dec. 3, 2021</p> <p>Small Manufacturers: 85 responses (21.9%) Medium-Sized Manufacturers: 189 responses (48.6%) Large Manufacturers: 115 responses (29.6%)</p> <hr/> <p><b>NAM Manufacturing Outlook Index<sup>1</sup></b></p> <p style="text-align: center;"><b>57.9</b> <i>(Sept.: 58.4)</i></p>
<p><b>Expected Growth Rate for <u>SALES</u> Over the Next 12 Months</b></p> <p style="text-align: center;"><b>↑ 5.2%</b> <i>(Sept.: ↑ 5.6%)</i></p>	<p><b>Expected Growth Rate for <u>PRODUCTION</u> Over the Next 12 Months</b></p> <p style="text-align: center;"><b>↑ 4.8%</b> <i>(Sept.: ↑ 5.4%)</i></p>
<p><b>Expected Growth Rate for <u>FULL-TIME EMPLOYMENT</u> Over the Next 12 Months</b></p> <p style="text-align: center;"><b>↑ 3.4%</b> <i>(Sept.: ↑ 3.8% – Record High)</i></p>	<p><b>Expected Growth Rate for <u>EMPLOYEE WAGES</u> Over the Next 12 Months</b></p> <p style="text-align: center;"><b>↑ 3.8% – Record High</b> <b>(Dating to First Survey, 1997:4)</b> <i>(Sept.: ↑ 3.5%)</i></p>
<p><b>Expected Growth Rate for <u>CAPITAL INVESTMENTS</u> Over the Next 12 Months</b></p> <p style="text-align: center;"><b>↑ 3.3%</b> <i>(Sept.: ↑ 3.6% – Highest Since 2018:2)</i></p>	<p><b>Expected Growth Rate for <u>EXPORTS</u> Over the Next 12 Months</b></p> <p style="text-align: center;"><b>↑ 1.0%</b> <i>(Sept.: ↑ 1.1%)</i></p>
<p><b>Expected Growth Rate for <u>PRICES OF COMPANY'S PRODUCTS</u> Over the Next 12 Months</b></p> <p style="text-align: center;"><b>↑ 5.9% – Record High</b> <b>(Dating to First Survey, 1997:4)</b> <i>(Sept.: ↑ 5.4%)</i></p>	<p><b>Expected Growth Rate for <u>RAW MATERIAL PRICES AND OTHER INPUT COSTS</u> Over the Next 12 Months</b></p> <p style="text-align: center;"><b>↑ 6.5%</b> <i>(Sept.: ↑ 6.5%)</i></p>
<p><b>Expected Growth Rate for <u>INVENTORIES</u> Over the Next 12 Months</b></p> <p style="text-align: center;"><b>↑ 2.6%</b> <i>(Sept.: ↑ 2.7%)</i></p>	<p><b>Expected Growth Rate for <u>HEALTH INSURANCE COSTS</u> Over the Next 12 Months</b></p> <p style="text-align: center;"><b>↑ 8.1% – Highest Since 2017:4</b> <i>(Sept.: ↑ 7.7%)</i></p>

<sup>1</sup> The NAM Manufacturing Outlook Index data series is revised each quarter to reflect the mean and standard deviation of the historical data, dating back to the fourth quarter of 1997. Currently, the historical mean for those with positive responses in their outlook is 74.9%, with a standard deviation of 15.0%. An index reading of 40 would be consistent with one standard deviation below the mean (60.0% positive), and an index reading of 60 would be one standard deviation above the mean (89.9% positive). As such, the index helps to normalize the outlook data to put them into a historical context.

## Summary

As 2021 comes to a close, manufacturers continued to report strong demand for their products, and production has rebounded to exceed pre-pandemic levels. The labor market remains tight, with job growth in the sector in 2021 rising at the best pace since 1994. Companies cite difficulties in finding sufficient workers to meet their capacity needs, and according to the latest Bureau of Labor Statistics data, manufacturers had more than 1 million open jobs in October. At the same time, firms have had to grapple this year with significant supply chain disruptions and soaring costs, and new COVID-19 variants continue to hamper output in some markets and create uncertainty in the outlook.

With that as context, the NAM conducted the Manufacturers' Outlook Survey for the fourth quarter of 2021 from Nov. 19 to Dec. 3, and 86.8% of respondents felt either somewhat or very positive about their company outlook, down only slightly from 87.5% in the third quarter (Figures 1 and 2). It was the second straight release with some easing in the outlook, down from 90.1% in the second quarter, which was the best in three years. The NAM Manufacturing Outlook Index measured 57.9 in the fourth quarter, down from 58.4 in the third quarter but still a solid reading (Figure 3). The data are consistent with solid growth in manufacturing activity, but with some continued easing since the second quarter's figures, likely on supply chain and workforce concerns.

Small manufacturers (those with fewer than 50 employees) remained less upbeat in their outlook, with 76.7% positive, than their medium (50 to 499 employees) and large (500 or more employees) manufacturing counterparts, which were 85.2% and 93.9% positive, respectively (Figure 3). Their expected growth rates for sales, production, employment and capital spending were also lower than their larger peers.

For the past six reports, manufacturers were asked about production, employment and capital spending in the current quarter relative to the previous one (Figure 4 and the following table). This information can be expressed as purchasing managers' indices. While each of these PMIs would be consistent with healthy expansions in activity, growth has decelerated over the past two quarters. For instance, the percentage reporting higher production fell from 47.6% in the third quarter to 41.0% in the fourth quarter, with similar trends for employment (43.3% to 34.2%) and capital spending (37.7% to 30.7%). More than half of respondents said that hiring and capital expenditures had no change for the fourth quarter.

	Fourth Quarter 2021 Relative to Third Quarter 2021			
	Higher	No Change	Lower	PMI
<b>Production</b>	41.0%	38.9%	20.1%	<b>60.4</b>
<b>Employment</b>	34.2%	53.1%	12.7%	<b>60.8</b>
<b>Capital Spending</b>	30.7%	57.9%	11.4%	<b>59.6</b>

While the expected employment growth over the next 12 months pulled back from a record high in September's survey (3.8%), manufacturers predict hiring to remain very healthy (3.4%). Respondents also anticipate employee wages rising over the next year at 3.8% on average, the fastest pace in the survey's history, which dates to the fourth quarter of 1997 (Figure 5).

Meanwhile, manufacturers expect raw material costs to rise 6.5%, which is down from 7.5% in the second quarter but nonetheless high. In addition, respondents anticipate health insurance costs to rise 8.1% on average over the next year, the most in four years. So, it follows that manufacturing companies

forecast 5.9% growth in prices for their products over the next 12 months, a record inflation rate for the survey (Figure 6).

Rising raw material costs once again topped the list of primary business challenges in the fourth quarter (Figure 7), cited by 87.1% of respondents. In addition to rising costs, other top challenges in the fourth quarter include supply chain challenges (84.5%), the inability to attract and retain a quality workforce (82.7%), transportation and logistics costs (73.1%), rising health care and insurance costs (50.7%) and an unfavorable business climate (43.4%). The top four received higher percentages in the fourth quarter than in the third quarter, and for many manufacturers, they are interrelated, as noted below.

There were several special questions in this survey on supply chain challenges and their impacts. Nearly 41% of respondents said that production for their company was disrupted for two weeks or more over the past quarter, with nearly half saying they had disruptions of at least one week. For those firms that had disruptions, respondents cited delays in receiving key inputs to the production process (63.2%), lack of sufficient workforce to meet demand (52.7%) and transportation or logistics challenges (42.6%) as the primary reasons.

More importantly, those completing the survey were asked when they expect supply chain disruptions to abate, and 53.6% anticipate these disruptions to improve in 2022, with 38.8% suggesting that it would be in the second half of next year (Figure 8). Nearly 28% believe that supply chain problems will not get better until 2023 or later, with 16.8% uncertain. Overall, 73.6% of respondents said supply chain bottlenecks had impacted their company's outlook for production, hiring and capital spending negatively, with 15.6% responding they had not and 10.8% uncertain.

With supply chain disruptions in mind, manufacturers were asked about what they had done to help address these challenges (Figure 9). Nearly three-quarters had found alternative or duplicative suppliers for some inputs, with 70.1% noting they had increased inventories of raw materials and other inputs. In addition, 39.4% had explored more domestic U.S. sourcing or production, 35.8% had reevaluated their entire supply chain, and 29.1% had utilized alternative modes of transportation or logistics, among others.

In terms of strategies that could be effective for positively impacting supply chain disruptions (Figure 10), the top response was addressing the workforce shortage (76.6%). Other leading responses included relieving bottlenecks at the ports (62.3%), addressing the shortage of supply for certain commodities (61.9%) and increasing inventories of raw materials and other inputs to better hedge against disruptions (52.8%).

On the topic of workforce, 85.2% had unfilled positions within their companies for which they were struggling to find qualified applicants. Companies were addressing the skills shortage by creating or expanding internal training programs (62.7%), utilizing temporary staffing services (50.4%), collaborating with educational institutions on skills certification programs (41.2%) and encouraging possible retirees to stay longer in their roles (39.9%), among others (Figure 11).

Without having enough workers, nearly 45% of respondents were unable to take on new business and had lost revenue opportunities (Figure 12). In addition, roughly 71% cited negative impacts on the timeliness of product deliveries and with production processes, and nearly 70% had increased compensation significantly at their company to remain competitive with local market conditions.

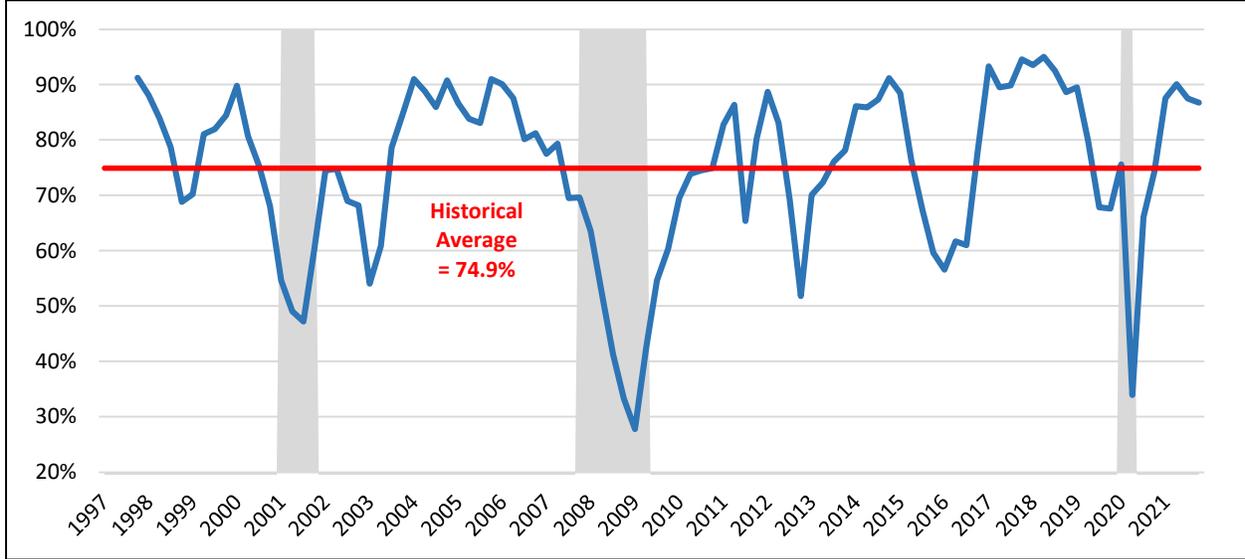
Finally, with Congress considering legislation that would increase taxes on income from manufacturing activities, 87.8% of respondents said their company would find it more difficult to expand their workforce, invest in new equipment or expand facilities if the tax burden on income from manufacturing activities increased.

Some other trends regarding predicted growth rates over the next 12 months:

- **Sales:** Respondents expect sales to rise 5.2% over the next 12 months, down from 5.6% in the third quarter but still a very solid reading. Nearly 80% of manufacturers predict sales will increase over the next four quarters, with 60.6% feeling that orders will rise 5.0% or more. Firm size mattered in the data. Medium and large manufacturers anticipate sales rising 5.6%, whereas small firms forecast increases of 3.7%.
- **Production:** Respondents expect production to increase 4.8% over the next 12 months. While this declined from 5.4% in the third quarter survey, output growth continued to be healthy. More than three-quarters forecast output to rise over the coming months, with 7.5% seeing declining production. Medium and large manufacturers felt the most optimistic, anticipating 5.2% growth in production over the next 12 months. In contrast, small businesses expect output to rise 3.4%.
- **Full-Time Employment:** Respondents expect full-time employment to rise 3.4% over the next 12 months, pulling back from 3.8% in the third quarter, which was the highest rate in the survey's history. Nearly 69% anticipate more full-time hiring over the next year, with 34.7% predicting employment growth of 5% or more. Just 5.4% expect employment reductions. Medium manufacturers felt the most upbeat in their hiring plans, predicting 3.8% growth over the next 12 months. In contrast, small and large firms expect employment to rise 2.4% and 3.5%, respectively.
- **Employee Wages:** Respondents anticipate employee wages (excluding nonwage compensation, such as benefits) to rise 3.8% over the next 12 months, the fastest rate in the survey's history (Figure 5). Thirty-two percent see wages rising by more than 5% or more, with 81.3% predicting an increase of at least 3%. The expected wage increases were largest for medium manufacturers, up 4.0% over the next year, with small and large firms predicting 3.4% and 3.7%, respectively.
- **Capital Investments:** Respondents expect capital spending to rise 3.3% over the next 12 months, easing from 3.6% in the previous survey, which was the best pace since the second quarter of 2018. In this survey, 55.4% expect additional capital spending in the next year, with 34.5% predicting no change and 10.2% forecasting reduced capital expenditures. By firm size, small, medium and large manufacturers see capital spending increasing 2.5%, 3.4% and 3.8%, respectively.
- **Exports:** Respondents expect exports to increase 1.0% over the next 12 months, inching down from 1.1% in the previous survey. Thirty-two percent anticipate higher exports in the next year, with 63.2% seeing no changes. By firm size, small, medium and large manufacturers see exports increasing 0.6%, 1.0% and 1.4% on average, respectively.

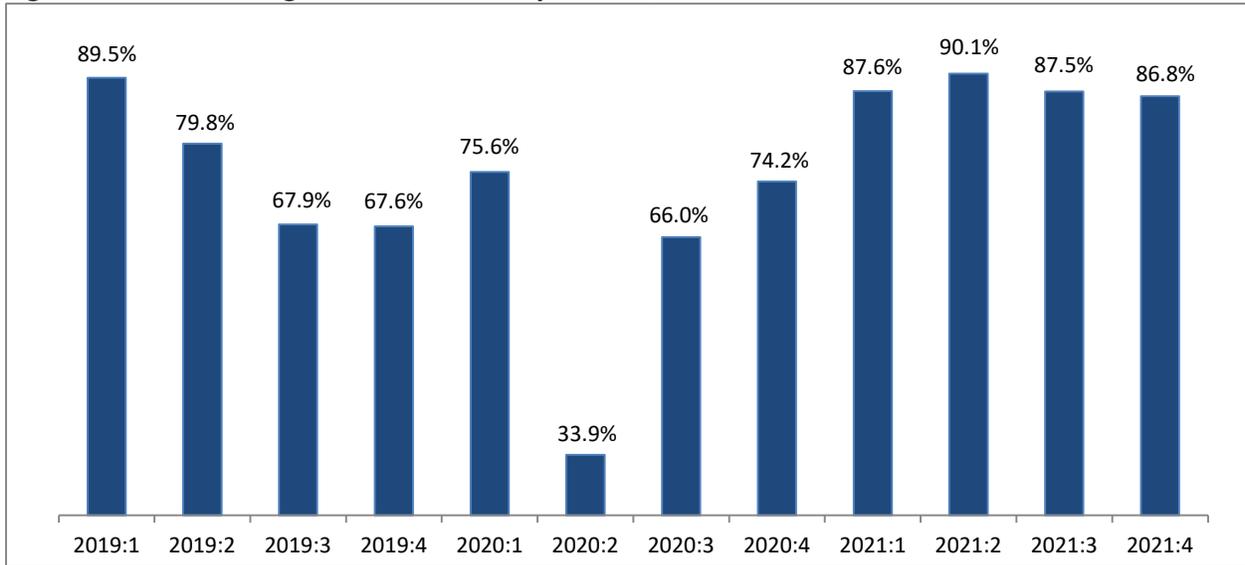
- **Inventories:** Respondents anticipate 2.6% growth in inventories over the next 12 months, edging down from 2.7% in the third quarter and a record 2.8% in the second quarter. More than 52% of manufacturers expect increased inventories over the next year, with 14.5% predicting decreases and 33.2% seeing no changes.
- **Health Insurance Costs:** Manufacturers predict health insurance costs will rise 8.1% over the next 12 months, up from 7.7% in the previous survey and the fastest pace in four years. In the latest figures, 76.3% expect costs to increase 5% or more, including 34.5% seeing costs rising 10% or more.

**Figure 1: Manufacturing Business Outlook by Quarter, 1997–2021**  
*(Recessions Are Highlighted with Gray Shading)*



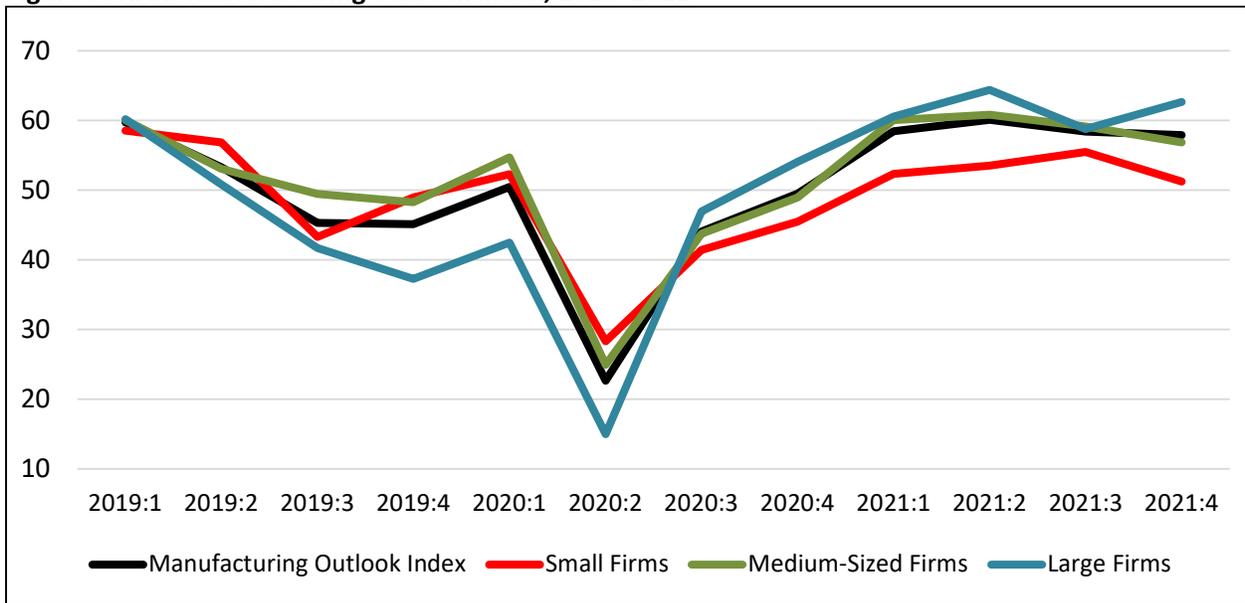
Note: Percentage of respondents who characterized the current business outlook as somewhat or very positive. Recessions are designated by the National Bureau of Economic Research.

**Figure 2: Manufacturing Business Outlook by Quarter, 2019–2021**

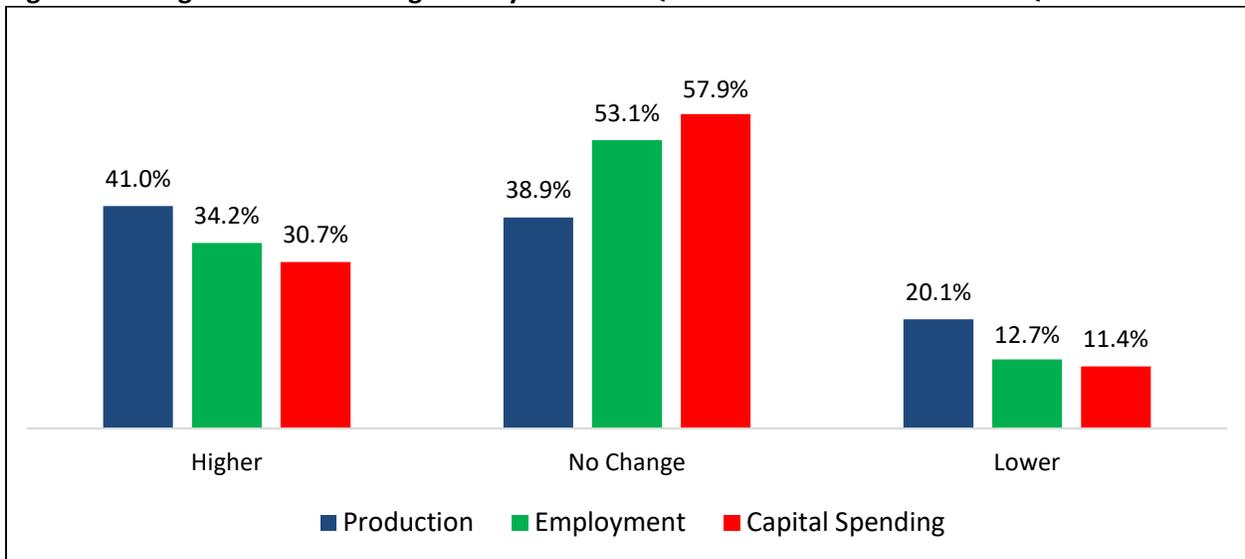


Note: Percentage of respondents who characterized the current business outlook as somewhat or very positive.

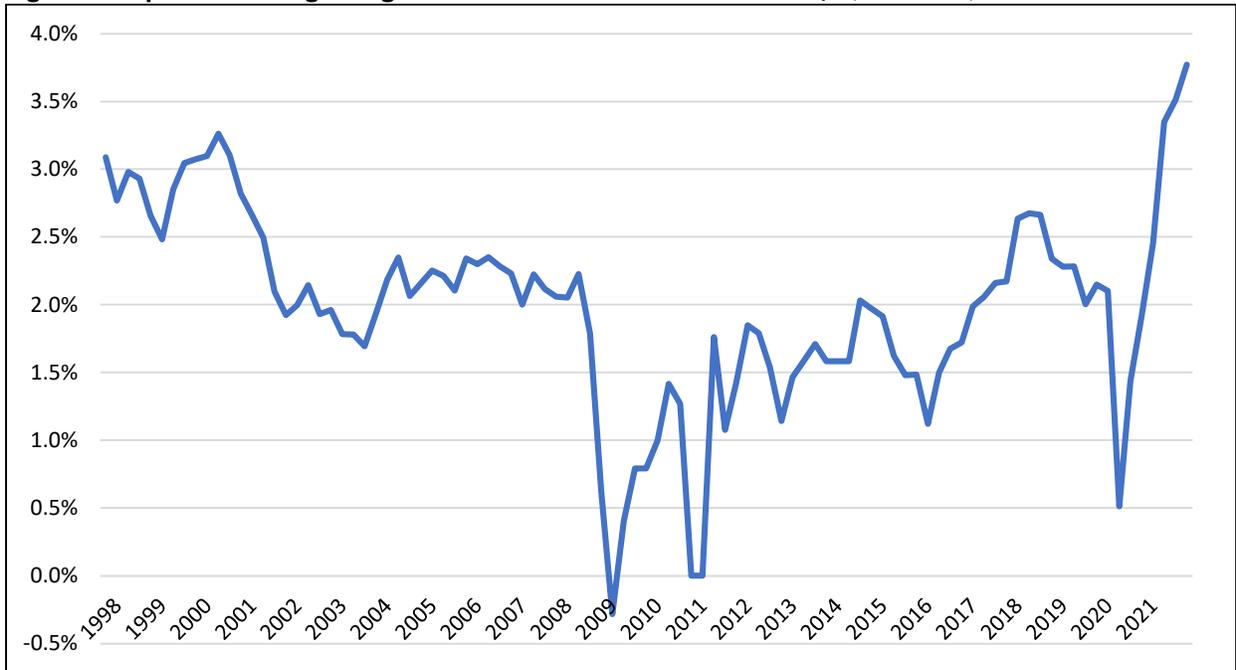
**Figure 3: NAM Manufacturing Outlook Index, 2019–2021**



**Figure 4: Change in Manufacturing Activity in Fourth Quarter 2021 Relative to Third Quarter 2021**

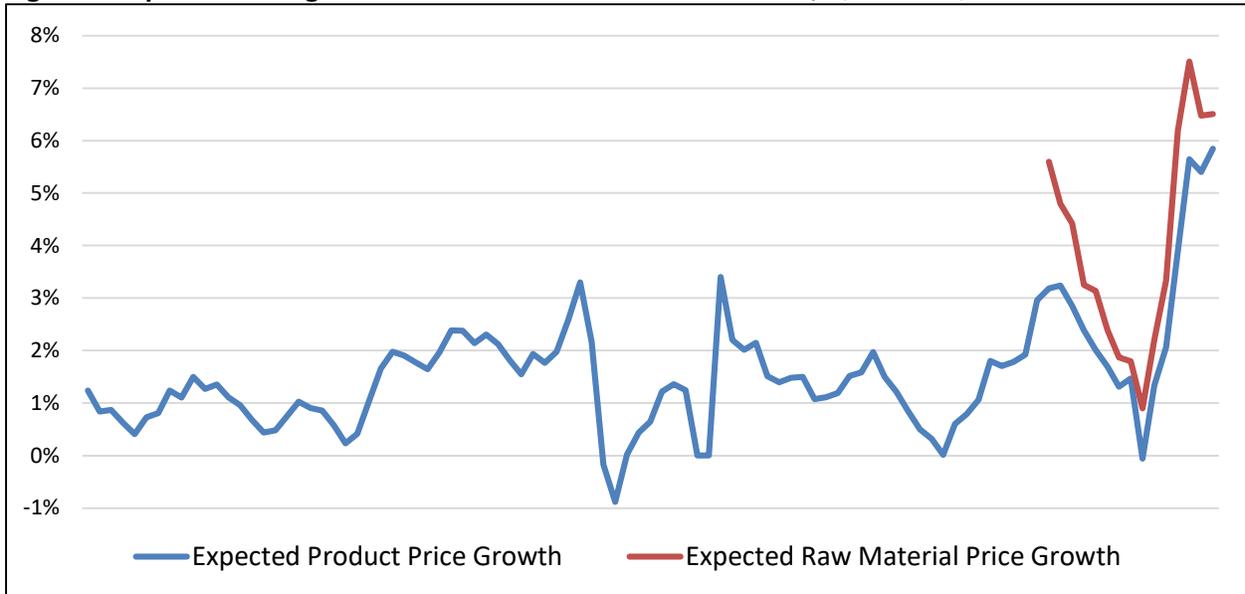


**Figure 5: Expected Average Wage Growth Over the Next 12 Months, Q1:1998–Q4:2021**



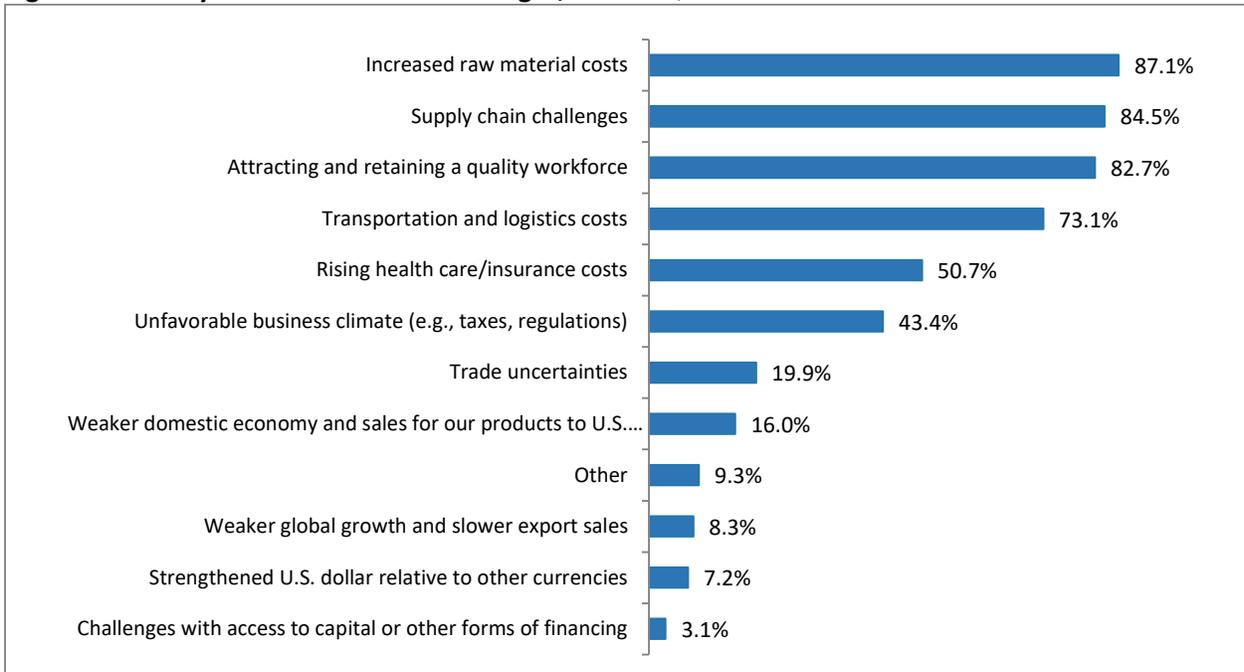
Note: Respondents were able to check more than one response; therefore, responses exceed 100%.

**Figure 6: Expected Average Price Growth Over the Next 12 Months, Q1:1998–Q4:2021**



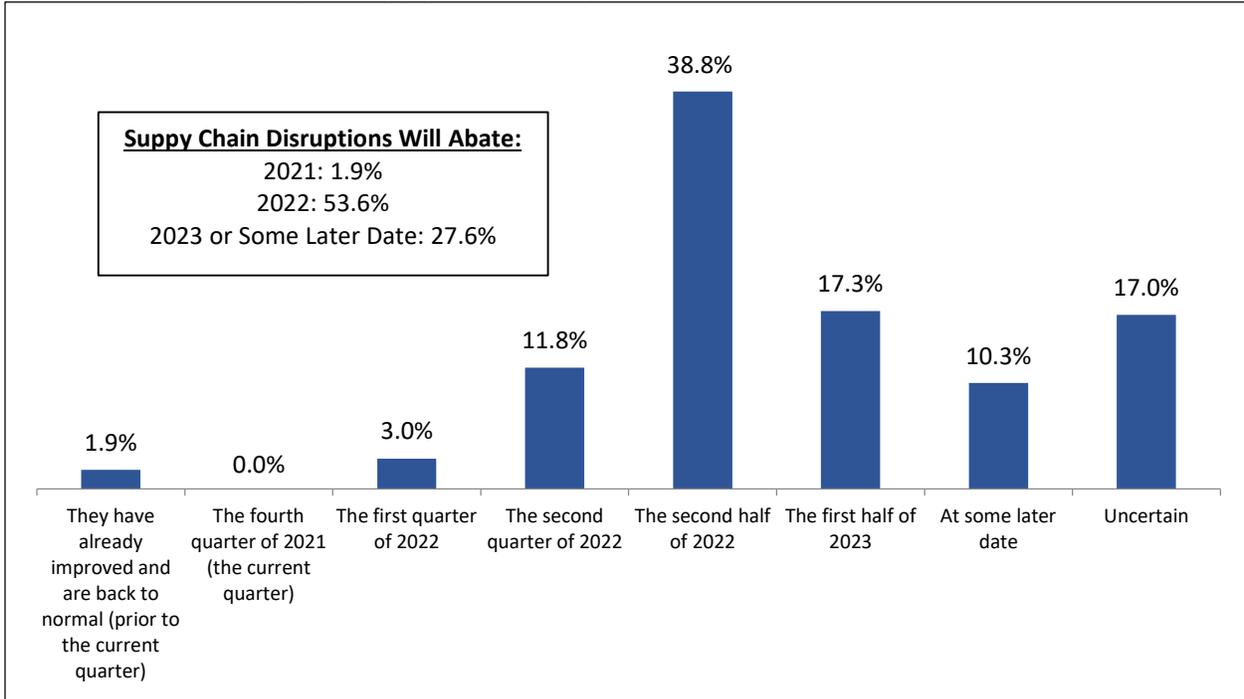
Note: Expected growth rates are annual averages. Expected raw material price growth data begin in Q2:2018.

**Figure 7: Primary Current Business Challenges, Fourth Quarter 2021**

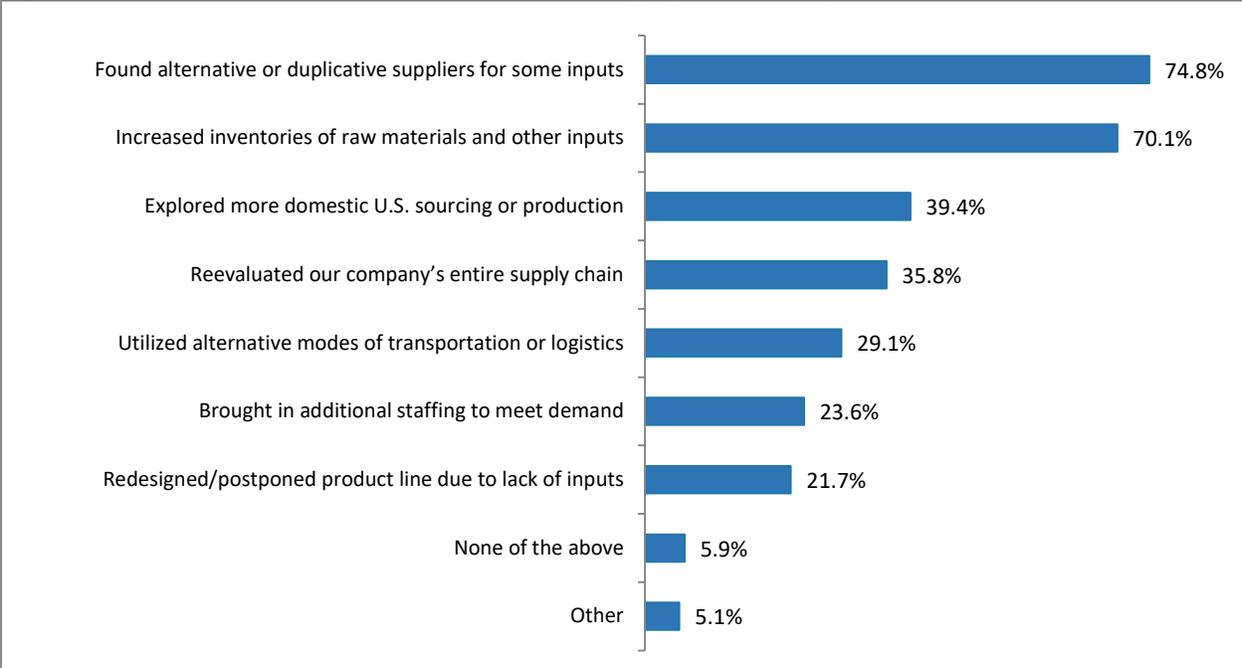


Note: Respondents were able to check more than one response; therefore, responses exceed 100%.

**Figure 8: When Firms Expect Supply Chain Disruptions to Abate**

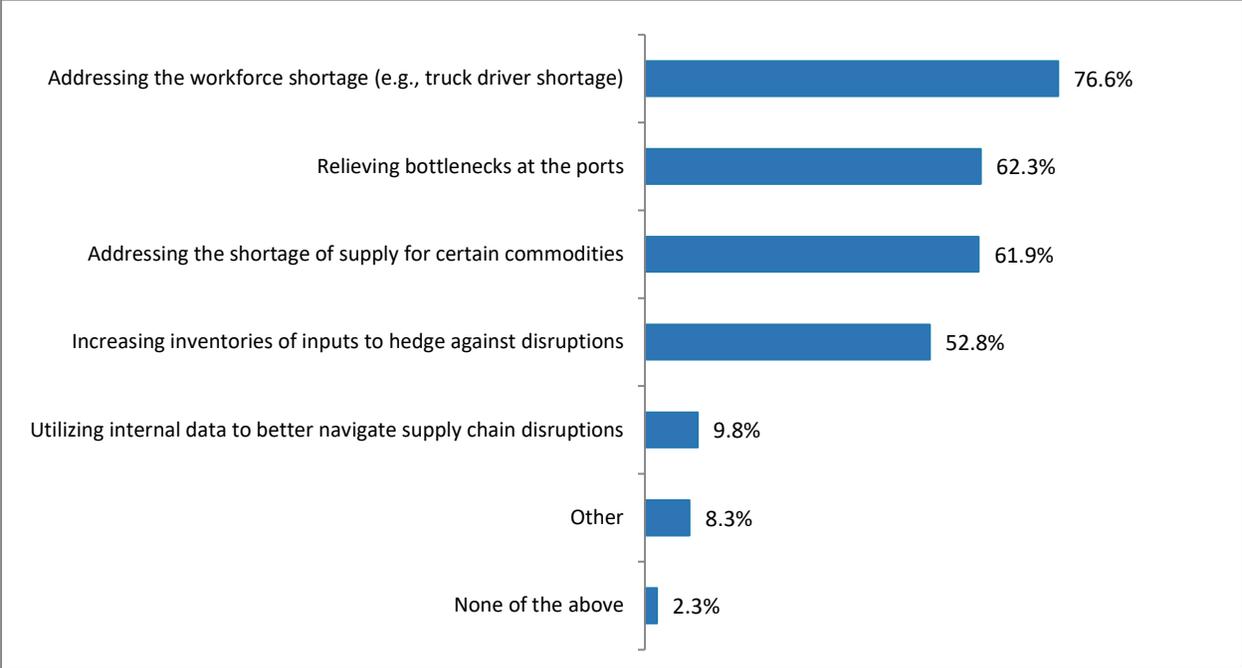


**Figure 9: What Manufacturers Have Done Due to Supply Chain Disruptions, Fourth Quarter 2021**



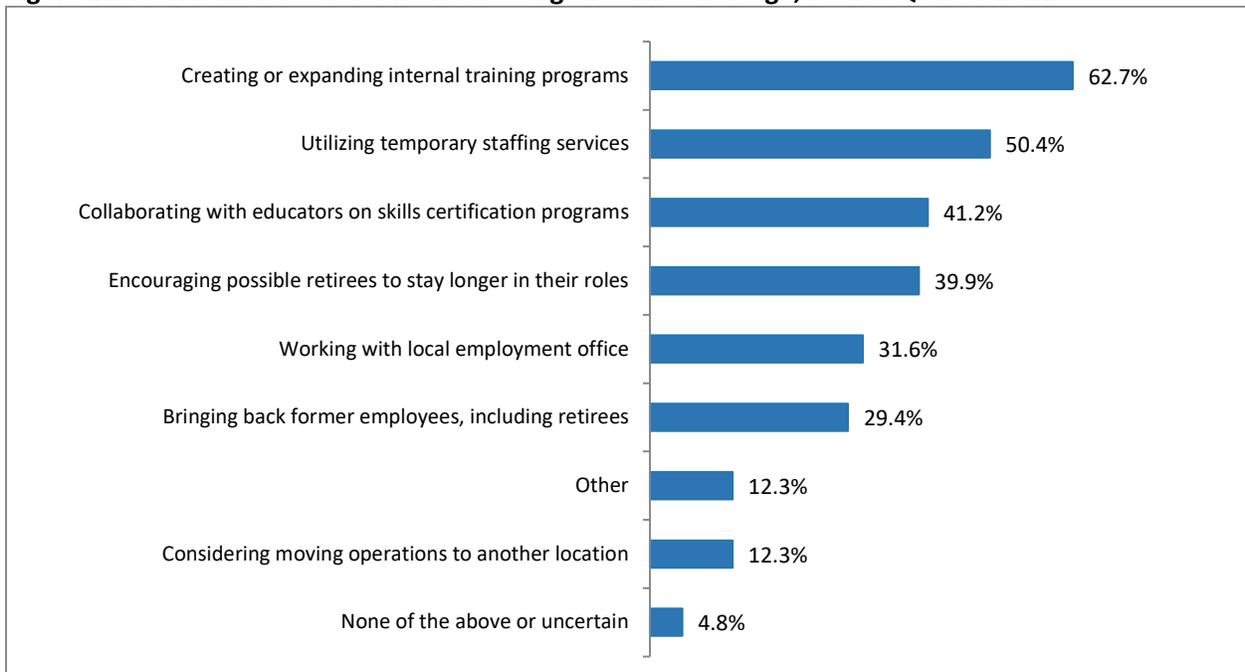
*Note: Respondents were able to check more than one response; therefore, responses exceed 100%.*

**Figure 10: Strategies That Could Have a Positive Impact on Addressing Supply Chain Disruptions, Fourth Quarter 2021**



*Note: Respondents were able to check more than one response; therefore, responses exceed 100%.*

**Figure 11: How Manufacturers Are Addressing the Skills Shortage, Fourth Quarter 2021**



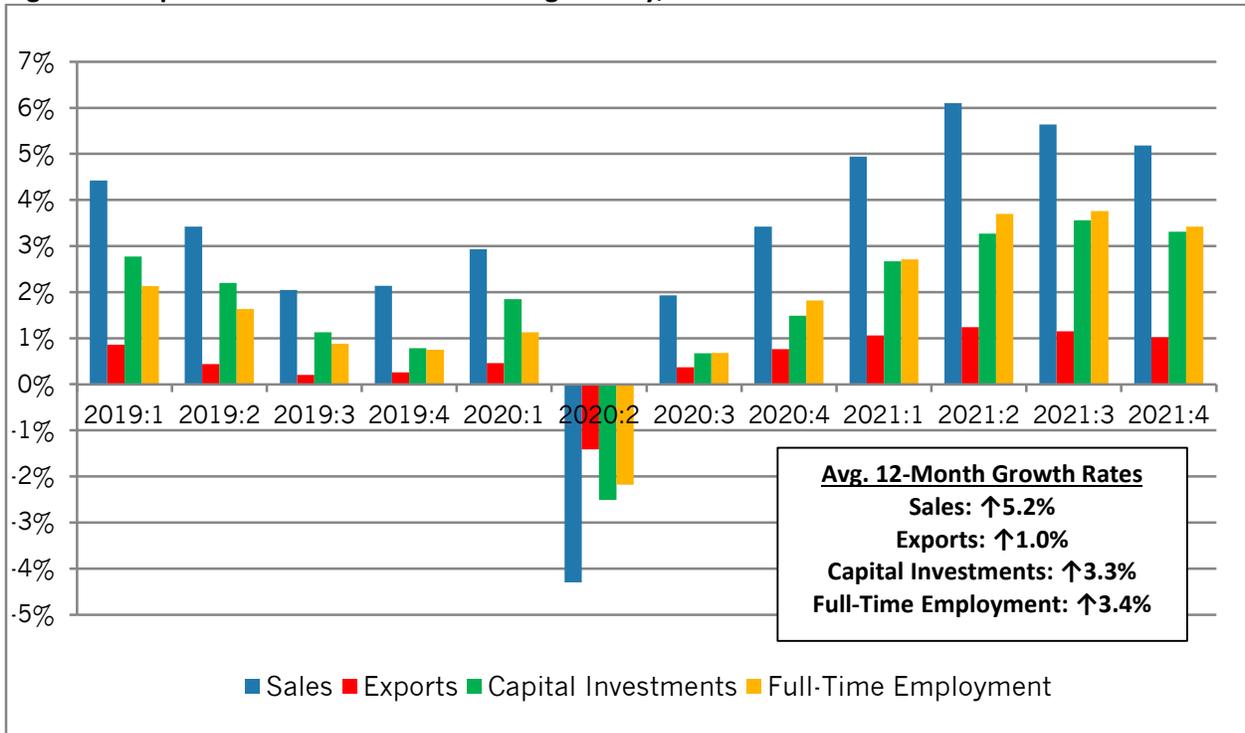
*Note: Respondents were able to check more than one response; therefore, responses exceed 100%.*

**Figure 12: “Because of Workforce Shortages and the Tight Labor Market, Which of the Following Is True for Your Business?”**



*Note: Respondents were able to check more than one response; therefore, responses exceed 100%.*

**Figure 13: Expected Growth of Manufacturing Activity, 2019–2021**



*Note: Expected growth rates are annual averages.*

## Survey Responses

1. How would you characterize the business outlook for your firm right now?
  - a. Very positive – 31.17%
  - b. Somewhat positive – 55.58%
  - c. Somewhat negative – 12.21%
  - d. Very negative – 1.04%

*Percentage that is either somewhat or very positive in their outlook = 86.75%*

2. Over the next year, what do you expect to happen with your company's overall sales?
  - a. Increase more than 10 percent – 25.77%
  - b. Increase 5 to 10 percent – 34.79%
  - c. Increase up to 5 percent – 19.07%
  - d. Stay about the same – 12.37%
  - e. Decrease up to 5 percent – 3.09%
  - f. Decrease 5 to 10 percent – 3.35%
  - g. Decrease more than 10 percent – 1.55%

*Average expected increase in sales consistent with these responses = 5.18%*

3. Over the next year, what do you expect to happen with your company's overall production levels?
  - a. Increase more than 10 percent – 23.58%
  - b. Increase 5 to 10 percent – 30.57%
  - c. Increase up to 5 percent – 22.02%
  - d. Stay about the same – 16.32%
  - e. Decrease up to 5 percent – 4.15%
  - f. Decrease 5 to 10 percent – 2.59%
  - g. Decrease more than 10 percent – 0.78%

*Average expected increase in production consistent with these responses = 4.83%*

4. Over the next year, what do you expect to happen with the level of exports from your company?
  - a. Increase more than 5 percent – 12.70%
  - b. Increase 3 to 5 percent – 9.79%
  - c. Increase up to 3 percent – 9.52%
  - d. Stay about the same – 63.23%
  - e. Decrease up to 3 percent – 2.12%
  - f. Decrease 3 to 5 percent – 1.32%
  - g. Decrease more than 5 percent – 1.32%

*Average expected increase in exports consistent with these responses = 1.02%*

5. Over the next year, what do you expect to happen with prices on your company's overall product line?
  - a. Increase more than 10 percent – 23.64%
  - b. Increase 5 to 10 percent – 41.56%
  - c. Increase up to 5 percent – 23.38%
  - d. Stay about the same – 7.27%
  - e. Decrease up to 5 percent – 2.34%
  - f. Decrease 5 to 10 percent – 1.04%
  - g. Decrease more than 10 percent – 0.78%

*Average expected increase in product prices consistent with these responses = 5.85%*

6. Over the next year, what do you expect to happen with raw material prices and other input costs?
  - a. Increase more than 10 percent – 37.21%
  - b. Increase 5 to 10 percent – 36.43%
  - c. Increase up to 5 percent – 14.73%
  - d. Stay about the same – 5.43%
  - e. Decrease up to 5 percent – 3.36%
  - f. Decrease 5 to 10 percent – 2.07%
  - g. Decrease more than 10 percent – 0.78%

*Average expected increase in raw material prices consistent with these responses = 6.50%*

7. Over the next year, what are your company's capital investment plans?
  - a. Increase more than 10 percent – 25.33%
  - b. Increase 5 to 10 percent – 14.88%
  - c. Increase up to 5 percent – 15.14%
  - d. Stay about the same – 34.46%
  - e. Decrease up to 5 percent – 3.39%
  - f. Decrease 5 to 10 percent – 1.83%
  - g. Decrease more than 10 percent – 4.96%

*Average expected increase in capital investments consistent with these responses = 3.31%*

8. Over the next year, what are your inventory plans?
  - a. Increase more than 10 percent – 13.73%
  - b. Increase 5 to 10 percent – 20.47%
  - c. Increase up to 5 percent – 18.13%
  - d. Stay about the same – 33.16%
  - e. Decrease up to 5 percent – 8.55%
  - f. Decrease 5 to 10 percent – 2.59%
  - g. Decrease more than 10 percent – 3.37%

*Average expected increase in inventories consistent with these responses = 2.62%*

9. Over the next year, what do you expect in terms of full-time employment in your company?
  - a. Increase more than 10 percent – 11.14%
  - b. Increase 5 to 10 percent – 23.58%
  - c. Increase up to 5 percent – 33.94%
  - d. Stay about the same – 25.91%
  - e. Decrease up to 5 percent – 2.59%
  - f. Decrease 5 to 10 percent – 1.55%
  - g. Decrease more than 10 percent – 1.30%

*Average expected increase in full-time employment consistent with these responses = 3.42%*

10. Over the next year, what do you expect to happen to employee wages (excluding nonwage compensation, such as benefits) in your company?
  - a. Increase more than 5 percent – 32.03%
  - b. Increase 3 to 5 percent – 49.22%
  - c. Increase up to 3 percent – 13.80%
  - d. Stay about the same – 4.69%
  - e. Decrease up to 3 percent – 0.26%

- f. Decrease 3 to 5 percent – none
- g. Decrease more than 5 percent – none

*Average expected increase in employee wages consistent with these responses = 3.77%*

11. Over the next year, what do you expect to happen to health insurance costs for your company?
- a. Increase 15.0 percent or more – 11.49%
  - b. Increase 10.0 to 14.9 percent – 22.98%
  - c. Increase 5.0 to 9.9 percent – 41.78%
  - d. Increase less than 5.0 percent – 15.93%
  - e. No change – 6.27%
  - f. Decrease less than 5.0 percent – none
  - g. Decrease 5.0 percent or more – 0.52%
  - h. Uncertain – 1.04%

*Average expected increase in health insurance costs consistent with these responses = 8.10%*

12. What are the biggest challenges you are facing right now? (Check all that apply.)
- a. Weaker domestic economy and sales for our products to U.S. customers – 16.02%
  - b. Weaker global growth and slower export sales – 8.27%
  - c. Trade uncertainties (e.g., actual or proposed tariffs, trade negotiation uncertainty) – 19.90%
  - d. Strengthened U.S. dollar relative to other currencies – 7.24%
  - e. Challenges with access to capital or other forms of financing – 3.10%
  - f. Unfavorable business climate (e.g., taxes, regulations) – 43.41%
  - g. Increased raw material costs – 87.08%
  - h. Rising health care/insurance costs – 50.65%
  - i. Transportation and logistics costs – 73.13%
  - j. Supply chain challenges – 84.50%
  - k. Attracting and retaining a quality workforce – 82.69%
  - l. Other – 9.30%

13. What is your company's primary industrial classification?
- a. Chemicals – 8.01%
  - b. Computer and electronic products – 1.29%
  - c. Electrical equipment and appliances – 6.46%
  - d. Fabricated metal products – 28.42%
  - e. Food manufacturing – 2.84%
  - f. Furniture and related products – 1.81%
  - g. Machinery – 11.37%
  - h. Nonmetallic mineral products – 1.81%
  - i. Paper and paper products – 3.10%
  - j. Petroleum and coal products – 0.52%
  - k. Plastics and rubber products – 8.27%
  - l. Primary metals – 3.10%
  - m. Transportation equipment – 5.17%
  - n. Wood products – 2.33%
  - o. Other – 15.50%

14. How would you characterize **production** in the fourth quarter relative to the third quarter?
- a. Higher – 40.99%
  - b. No change – 38.90%
  - c. Lower – 20.10%

*Production Purchasing Managers' Index = 60.44*

15. How would you characterize **employment** in the fourth quarter relative to the third quarter?
- a. Higher – 34.20%
  - b. No change – 53.11%
  - c. Lower – 12.69%

*Employment Purchasing Managers' Index = 60.76*

16. How would you characterize **capital spending** in the fourth quarter relative to the third quarter?
- a. Higher – 30.65%
  - b. No change – 57.92%
  - c. Lower – 11.43%

*Capital Spending Purchasing Managers' Index = 59.61*

17. What is your firm size (e.g., the parent company, not your establishment)?
- a. Fewer than 50 employees – 21.30%
  - b. 50 to 499 employees – 49.09%
  - c. 500 or more employees – 29.61%
  - d. Uncertain – none

### **SPECIAL QUESTIONS**

18. How long would you say that production was disrupted, in total, over the past quarter?
- a. Hours – 3.70%
  - b. Days – 17.04%
  - c. One week – 8.89%
  - d. Two weeks or more – 40.74%
  - e. None or not applicable – 20.74%
  - f. Uncertain – 8.89%
19. For those who had production stop(s), what were the primary reasons for the disruption? (Select all that apply.)
- a. Delays in receiving key inputs to the production process – 63.18%
  - b. Lack of sufficient workforce to meet demand – 52.71%
  - c. Transportation or logistics challenges – 42.64%
  - d. Other – 8.91%
  - e. None – 15.50%
20. When do you expect that supply chain disruptions will abate?
- a. They have already improved and are back to normal (prior to the current quarter) – 1.85%
  - b. The fourth quarter of 2021 (the current quarter) – none
  - c. The first quarter of 2022 – 2.95%
  - d. The second quarter of 2022 – 11.81%
  - e. The second half of 2022 – 38.75%
  - f. The first half of 2023 – 17.34%
  - g. At some later date – 10.33%

- h. Uncertain – 16.97%
21. Have supply chain bottlenecks negatively impacted your outlook for production, hiring and your overall business?
- a. Yes – 73.61%
  - b. No – 15.61%
  - c. Uncertain – 10.78%
22. If supply chain disruptions have impacted your company, have you done any of the following? (Select all that apply.)
- a. Reevaluated our company’s entire supply chain – 35.83%
  - b. Found alternative or duplicative suppliers for some inputs – 74.80%
  - c. Explored more domestic U.S. sourcing or production – 39.37%
  - d. Utilized alternative modes of transportation or logistics (e.g., air cargo, new sources) – 29.13%
  - e. Increased inventories of raw materials and other inputs – 70.08%
  - f. Brought in additional staffing, including temporary workers, to meet demand – 23.62%
  - g. Redesigned or postponed a specific product line due to lack of input availability – 21.65%
  - h. Other – 5.12%
  - i. None of the above – 5.91%
23. Which of the following strategies would have a positive impact on addressing the supply chain disruptions for your company? (Select all that apply.)
- a. Relieving bottlenecks at the ports – 62.26%
  - b. Addressing the shortage of supply for certain commodities – 61.89%
  - c. Addressing the workforce shortage (e.g., truck driver shortage) – 76.60%
  - d. Utilizing internal data to better navigate supply chain disruptions to remain operational – 9.81%
  - e. Increasing inventories of raw materials and other inputs to hedge against disruptions – 52.83%
  - f. Other – 8.30%
  - g. None of the above – 2.26%
24. Do you have unfilled positions within your company for which you are struggling to find qualified applicants?
- a. Yes – 85.19%
  - b. No – 11.11%
  - c. Uncertain – 3.70%
25. If you answered “yes” to the previous question, how are you addressing the skills shortage? (Check all that apply.)
- a. Creating or expanding internal training programs – 62.72%
  - b. Encouraging possible retirees to stay longer in their roles – 39.91%
  - c. Bringing back former employees, including retirees – 29.39%
  - d. Collaborating with educational institutions on skills certification programs – 41.23%
  - e. Utilizing temporary staffing services – 50.44%
  - f. Working with local employment office – 31.58%
  - g. Considering moving operations to another location – 12.28%
  - h. Other – 12.28%
  - i. Uncertain – 4.82%
26. Because of workforce shortages and the tight labor market, which of the following is true for your business? (Select all that apply.)
- a. We have been unable to take on new business and have lost revenue opportunities – 44.61%
  - b. It has negatively impacted our suppliers by disrupting the delivery of key inputs and our production – 55.76%

- c. It has negatively impacted the timeliness of our production process – 70.63%
  - d. It has negatively impacted the timeliness of the deliveries of our products – 71.00%
  - e. Our existing employees have been forced to work significantly more hours than desired to meet demand – 56.51%
  - f. We have had to adjust our workforce requirements to attract more candidates – 38.66%
  - g. We have had to increase our compensation significantly to remain competitive in the local labor market – 69.89%
  - h. Other – 1.86%
  - i. None of the above – 3.35%
27. If the tax burden on income from manufacturing activities increased, would your company find it more difficult to expand its workforce, invest in new equipment or expand facilities?
- a. Yes – 87.78%
  - b. No – 12.22%