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**Tenth District Manufacturing Activity Remained Solid**
***Federal Reserve Bank of Kansas City Releases September Manufacturing Survey***

**KANSAS CITY**, Mo. – The Federal Reserve Bank of Kansas City released the September Manufacturing Survey today. According to Chad Wilkerson, vice president and economist at the Federal Reserve Bank of Kansas City, the survey revealed that Tenth District manufacturing activity growth moderated slightly but remained solid, and expectations for future production increased further.

"The pace of regional factory activity growth eased slightly but remained positive," said Wilkerson. "Many firms continued to report rapid increases in input prices, difficulties hiring workers, and supply chain delays. However, production remains considerably higher than a year ago, with the most positive expectations for production in almost 20 years."

Historical data, results from past surveys and release dates for future surveys can be found at https://kansascityfed.org/surveys/manufacturing-survey/.

The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, encompassing the western third of Missouri; all of Kansas, Colorado, Nebraska, Oklahoma and Wyoming; and the northern half of New Mexico. As part of the nation's central bank, the Bank participates in setting national monetary policy, supervising and regulating numerous commercial banks and bank holding companies, and providing financial services to depository institutions. More information is available online at www.kansascityfed.org.

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# TENTH DISTRICT MANUFACTURING SUMMARY

Tenth District manufacturing activity growth moderated slightly but remained solid, and expectations for future production increased further (Chart 1, Tables 1 & 2). The index of prices paid for raw materials continued to increase at record levels in September compared to a month ago and a year ago. Price indexes for finished goods also remained very high. Additionally, district manufacturing firms expected materials prices and finished goods prices to rise more over the next six months.

## Factory Activity Remained Solid

The month-over-month composite index was 22 in September, moderately lower than 29 in August and 30 in July (Tables 1 & 2). The composite index is an average of the production, new orders, employment, supplier delivery time, and raw materials inventory indexes. Factory growth continued to be driven by a faster increase in durable goods, in particular primary metals, computer and electronic products, and transportation equipment, while nondurable goods manufacturing grew more modestly. Month-over-month indexes remained positive in September, indicating expansion, but the pace of growth moderated slightly. The month-over-month index for materials inventories reached the highest level since late 2017, rebounding after pandemic lows last year, while finished goods materials inventories were marginally positive. Firms reported another increase in supplier delivery time, setting a survey record high. Year-over-year factory indexes expanded steadily as the year-over-year composite index changed from 50 to 48, and production and supplier delivery time increased. The future composite index was 35 in September, and expectations for future production matched the survey record last seen in 2003.

## Special Questions

This month contacts were asked special questions about hiring plans and price increases. Since earlier this summer, 56% of firms reported no change in hiring plans (Chart 2). However, 38% of firms reported they expect to hire more workers in the remainder of 2021 than initially planned earlier this summer, and 6% of firms expect to hire fewer workers. All survey respondents reported facing higher input costs due to elevated material or labor expenses compared to last year. 41% of firms indicated the ability to pass through 0-20% of those cost increases to their customers in the form of higher prices, over a third of firms reported passing through 21-80% of price increases, and nearly a quarter of firms indicated passing through 81-100% of price increases (Chart 3).

## Selected Manufacturing Comments

“Costs and lead times of raw materials is a major problem. Hiring and retaining low skilled workers has never been this bad in company history.”

“Still experiencing high container freight rates for imports of raw materials, and Covid-related delays from Asian suppliers.”

“Lead times from vendors are moving out as much as 3-4 times from the beginning of 2021. This is causing us to miss ship dates and pull units off the production floor because we cannot get parts to finish the units.”

“Supply chain interruptions and raw materials being either out of stock or on allocation is affecting our revenue noticeably.”

“Transportation costs are the main factor in costs going up to the consumer.”

“Hiring quality employees has become more difficult and we are looking at increasing wages for entry level at the very least.”

“Hiring has improved somewhat but still very sluggish. 4 interviews scheduled in the last two days and all 4 were no-shows.”

“Overall, the opportunity to get back to pre-covid revenue exists but we are being held back by lack of labor. Our customer base is focused on turn times and delivery.”

“We are having our third record volume year in a row. We are not profitable due to the increases in labor and raw materials. We continue to attempt to raise our prices. Customers are reluctant to accept the increase. We are to the point where we are telling long term customers to take it or leave it, sadly.”

“Our export business (over 50% of our volume) is greatly impacted by freight slowdowns and rising prices.”

“We are absorbing input increases where we can, however our overall profit margin on finished products is suffering.”

## Table 1. Summary of Tenth District Manufacturing Conditions, September 2021

| Plant Level Indicators | September vs. August (percent)* Increase | No Change | Decrease | Diff Index^ | SA Index*^ | September vs. Year Ago (percent)* Increase | No Change | Decrease | Diff Index^ | Expected in Six Months (percent)* Increase | No Change | Decrease | Diff Index^ | SA Index*^ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Composite Index | | | | 22 | 22 | | | | 48 | | | | 34 | 35 |
| Production | 33 | 49 | 18 | 16 | 10 | 78 | 12 | 10 | 67 | 64 | 27 | 9 | 55 | 58 |
| Volume of shipments | 35 | 44 | 21 | 13 | 6 | 70 | 14 | 15 | 55 | 64 | 24 | 11 | 53 | 55 |
| Volume of new orders | 30 | 45 | 26 | 4 | 7 | 70 | 16 | 13 | 57 | 51 | 31 | 19 | 32 | 33 |
| Backlog of orders | 42 | 42 | 16 | 26 | 30 | 70 | 18 | 11 | 59 | 41 | 38 | 21 | 19 | 22 |
| Number of employees | 32 | 56 | 12 | 19 | 21 | 49 | 27 | 24 | 24 | 52 | 37 | 11 | 41 | 43 |
| Average employee workweek | 19 | 71 | 9 | 10 | 9 | 51 | 41 | 8 | 43 | 32 | 59 | 9 | 22 | 24 |
| Prices received for finished product | 44 | 53 | 3 | 41 | 40 | 86 | 11 | 3 | 83 | 62 | 32 | 6 | 56 | 58 |
| Prices paid for raw materials | 80 | 17 | 3 | 77 | 80 | 100 | 0 | 0 | 100 | 84 | 11 | 5 | 79 | 79 |
| Capital expenditures | | | | | | 44 | 46 | 10 | 34 | 46 | 44 | 10 | 36 | 37 |
| New orders for exports | 12 | 81 | 8 | 4 | 3 | 26 | 65 | 10 | 16 | 18 | 71 | 11 | 8 | 8 |
| Supplier delivery time | 57 | 29 | 14 | 43 | 43 | 74 | 7 | 18 | 56 | 48 | 31 | 21 | 27 | 27 |
| Inventories: Materials | 41 | 46 | 13 | 28 | 29 | 55 | 27 | 19 | 36 | 35 | 45 | 20 | 14 | 13 |
| Inventories: Finished goods | 19 | 63 | 19 | 0 | 3 | 38 | 39 | 24 | 14 | 33 | 48 | 19 | 15 | 14 |

*Percentage may not add to 100 due to rounding.
^Diffusion Index. The diffusion index is calculated as the percentage of total respondents reporting increases minus the percentage reporting declines.
*^Seasonally Adjusted Diffusion Index. The month vs. month and expected-in-six-months diffusion indexes are seasonally adjusted using Census X-13.

Note: The September survey was open for a five-day period from September 15-20, 2021 and included 99 responses from plants in Colorado, Kansas, Nebraska, Oklahoma, Wyoming, northern New Mexico, and western Missouri.

## Chart 1. Manufacturing Composite Indexes

**Chart 2. Special Question: Since earlier this summer, have your firm's hiring plans changed for the remainder of 2021?**

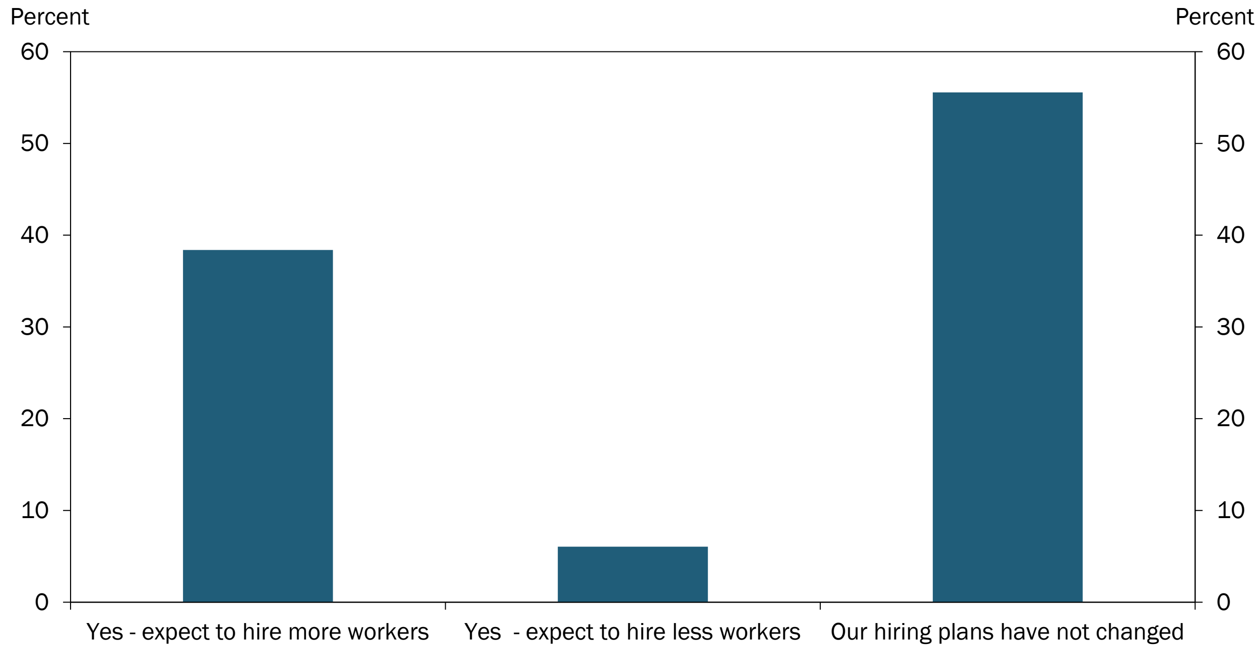


**Chart 3. Special Question: If your firm is facing higher input costs (due to elevated material or labor expenses compared to last year), what share of those cost increases are you passing down to customers in the form of higher prices?**

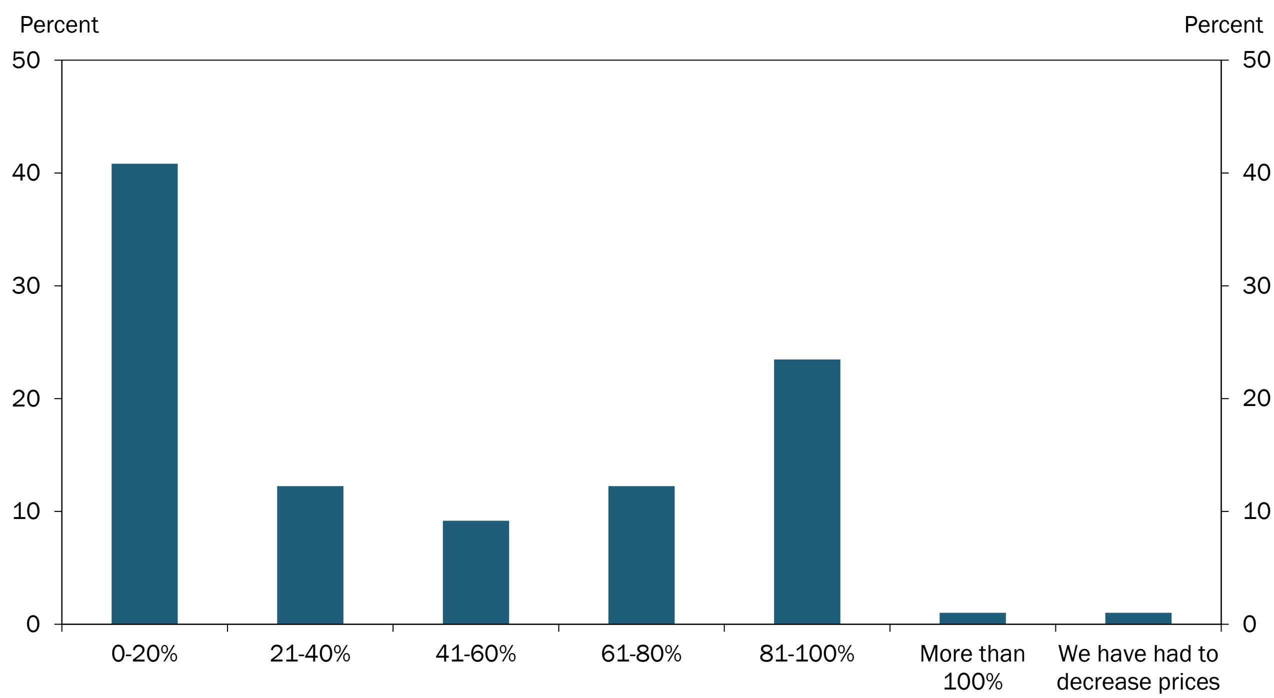

**Table 2**
**Historical Manufacturing Survey Indexes**

| | Sep'20 | Oct'20 | Nov'20 | Dec'20 | Jan'21 | Feb'21 | Mar'21 | Apr'21 | May'21 | Jun'21 | Jul'21 | Aug'21 | Sep'21 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Versus a Month Ago | | | | | | | | | | | | | |
| (seasonally adjusted) | | | | | | | | | | | | | |
| Composite Index | 11 | 13 | 11 | 14 | 17 | 24 | 26 | 31 | 26 | 27 | 30 | 29 | 22 |
| Production | 18 | 23 | 20 | 12 | 22 | 26 | 23 | 40 | 32 | 30 | 41 | 22 | 10 |
| Volume of shipments | 9 | 22 | 3 | 17 | 28 | 14 | 27 | 32 | 29 | 20 | 37 | 25 | 6 |
| Volume of new orders | 23 | 26 | 19 | 24 | 25 | 16 | 37 | 29 | 35 | 22 | 26 | 34 | 7 |
| Backlog of orders | 13 | 2 | 4 | 14 | 14 | 27 | 32 | 35 | 25 | 29 | 53 | 30 | 30 |
| Number of employees | 7 | 9 | 1 | 7 | 13 | 21 | 17 | 29 | 20 | 26 | 27 | 28 | 21 |
| Average employee workweek | -1 | 7 | 8 | 11 | 12 | 13 | 21 | 27 | 20 | 21 | 31 | 15 | 9 |
| Prices received for finished product | 12 | 4 | 7 | 9 | 19 | 27 | 31 | 41 | 51 | 48 | 52 | 61 | 40 |
| Prices paid for raw materials | 24 | 34 | 32 | 53 | 65 | 68 | 66 | 73 | 86 | 79 | 78 | 80 | 80 |
| Capital expenditures | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| New orders for exports | -4 | 1 | -10 | 6 | 10 | 9 | 1 | 9 | 5 | 6 | 16 | 7 | 3 |
| Supplier delivery time | 13 | 7 | 15 | 17 | 22 | 40 | 41 | 35 | 23 | 38 | 39 | 41 | 43 |
| Inventories: Materials | -6 | 1 | -1 | 9 | 4 | 16 | 11 | 24 | 22 | 21 | 15 | 18 | 29 |
| Inventories: Finished goods | -3 | -6 | -5 | -14 | -3 | -5 | -10 | 8 | 6 | 3 | 2 | 1 | 3 |
| Versus a Year Ago | | | | | | | | | | | | | |
| (not seasonally adjusted) | | | | | | | | | | | | | |
| Composite Index | -21 | -12 | -12 | -14 | 0 | 8 | 16 | 35 | 43 | 43 | 50 | 50 | 48 |
| Production | -31 | -23 | -23 | -31 | -5 | 4 | 4 | 46 | 61 | 55 | 64 | 64 | 67 |
| Volume of shipments | -29 | -24 | -24 | -30 | -8 | 7 | -1 | 42 | 59 | 49 | 64 | 55 | 55 |
| Volume of new orders | -30 | -9 | -18 | -14 | -3 | 16 | 21 | 47 | 61 | 47 | 66 | 57 | 57 |
| Backlog of orders | -23 | -15 | -18 | -5 | -2 | 8 | 15 | 36 | 44 | 52 | 62 | 63 | 59 |
| Number of employees | -30 | -21 | -24 | -26 | -16 | -15 | 0 | 24 | 36 | 30 | 35 | 35 | 24 |
| Average employee workweek | -23 | -9 | -14 | -11 | -4 | -1 | 14 | 36 | 43 | 49 | 54 | 44 | 43 |
| Prices received for finished product | 12 | 18 | 21 | 24 | 32 | 40 | 48 | 64 | 73 | 77 | 80 | 79 | 83 |
| Prices paid for raw materials | 21 | 24 | 46 | 63 | 71 | 82 | 88 | 92 | 97 | 98 | 100 | 96 | 100 |
| Capital expenditures | -4 | 3 | 14 | -3 | -2 | 19 | 5 | 17 | 20 | 31 | 35 | 26 | 34 |
| New orders for exports | -16 | -9 | -13 | -13 | 0 | -1 | -5 | 9 | 21 | 21 | 19 | 17 | 16 |
| Supplier delivery time | 9 | 13 | 20 | 20 | 32 | 42 | 39 | 28 | 36 | 51 | 42 | 48 | 56 |
| Inventories: Materials | -24 | -20 | -14 | -20 | -8 | -6 | 14 | 29 | 20 | 34 | 44 | 44 | 36 |
| Inventories: Finished goods | -20 | -16 | -13 | -29 | -28 | -30 | -18 | 7 | 6 | 13 | 16 | 14 | 14 |
| Expected in Six Months | | | | | | | | | | | | | |
| (seasonally adjusted) | | | | | | | | | | | | | |
| Composite Index | 18 | 21 | 20 | 17 | 24 | 34 | 35 | 34 | 33 | 37 | 33 | 36 | 35 |
| Production | 25 | 31 | 31 | 20 | 46 | 44 | 45 | 45 | 50 | 44 | 48 | 46 | 58 |
| Volume of shipments | 27 | 26 | 29 | 19 | 43 | 44 | 42 | 49 | 59 | 50 | 45 | 42 | 55 |
| Volume of new orders | 23 | 24 | 24 | 21 | 31 | 50 | 37 | 40 | 42 | 45 | 40 | 31 | 33 |
| Backlog of orders | 13 | 9 | 6 | 13 | 12 | 19 | 27 | 25 | 27 | 23 | 26 | 15 | 22 |
| Number of employees | 19 | 22 | 17 | 22 | 25 | 28 | 41 | 49 | 46 | 45 | 48 | 47 | 43 |
| Average employee workweek | 11 | 12 | 6 | 15 | 5 | 12 | 27 | 30 | 30 | 32 | 20 | 15 | 24 |
| Prices received for finished product | 34 | 26 | 30 | 25 | 38 | 40 | 48 | 43 | 60 | 56 | 64 | 55 | 58 |
| Prices paid for raw materials | 33 | 55 | 50 | 45 | 61 | 68 | 72 | 79 | 76 | 68 | 71 | 75 | 79 |
| Capital expenditures | 3 | 13 | 11 | 4 | 12 | 25 | 23 | 30 | 22 | 36 | 31 | 32 | 37 |
| New orders for exports | 6 | 5 | 4 | 8 | 10 | 13 | 5 | 10 | 17 | 16 | 19 | 7 | 8 |
| Supplier delivery time | 13 | 16 | 30 | 14 | 19 | 35 | 27 | 13 | 10 | 23 | 16 | 30 | 27 |
| Inventories: Materials | 11 | 12 | -2 | 5 | 1 | 11 | 25 | 21 | 19 | 27 | 13 | 27 | 13 |
| Inventories: Finished goods | 7 | 7 | 0 | 5 | -2 | 1 | 9 | 12 | 1 | 13 | -1 | -4 | 14 |