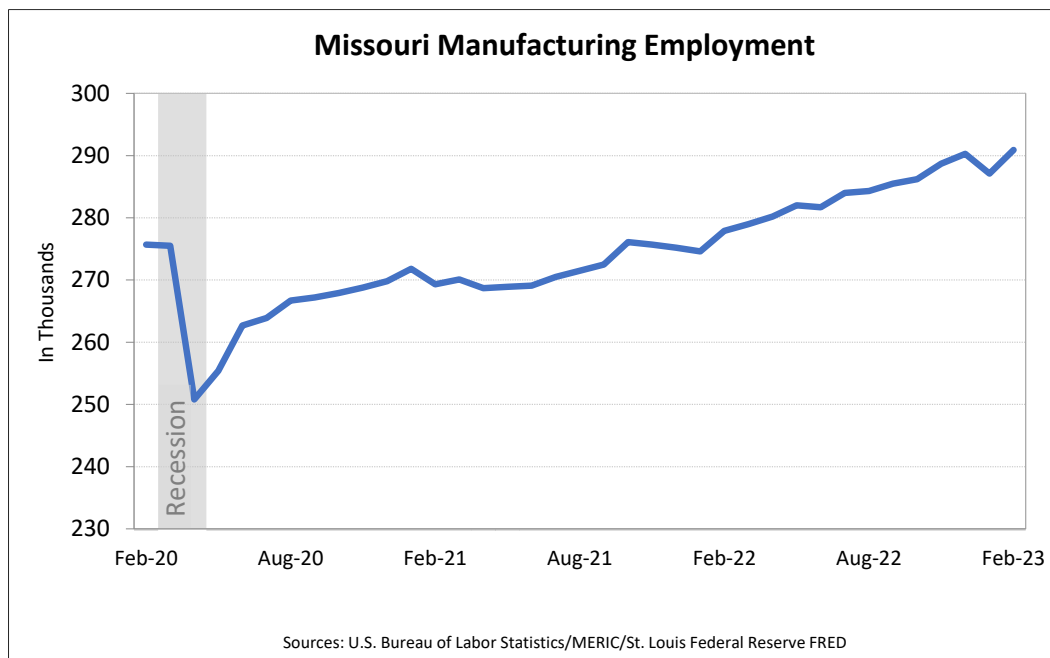


The Missouri Manufacturing Indicators is a bi-monthly brief that uses several surveys to highlight recent manufacturing economic activity. Highlights for the March 2023 brief include:

- The Missouri manufacturing sector employed 290,600 people in February 2023, or 13,000 more workers than a year earlier. This represents a yearly increase of 4.7% in employment, well above the 2.0% growth rate for all Missouri payroll employers.
- The February 2023 Missouri purchasing management index indicated that manufacturers expect output to grow moderately over the next few months. U.S. producers expect output to be weaker.
- The Mid-America price index, for Missouri and most surrounding states, show that wholesale price inflation is still a concern for companies in this region.
- Missouri manufacturing hourly earnings advanced by 4.0% in February, based on a three-month moving average compared a year earlier.
- A study of inventive occupations in Missouri shows the need for connecting rural manufacturers with higher education institutions and training providers to support long-term economic growth.

Missouri Manufacturing Jobs Increased Substantially from a Year Ago

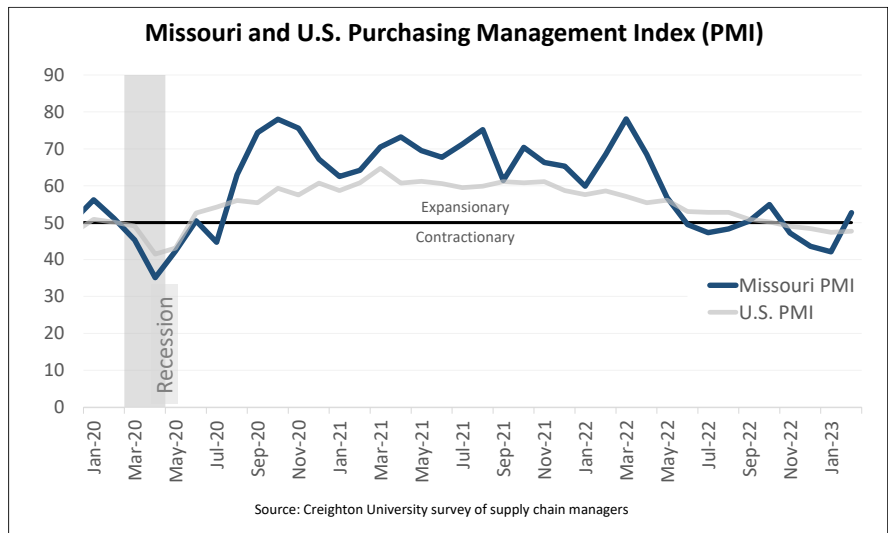
Missouri manufacturers employed 290,900 workers in February 2023, according to preliminary estimates from the U.S. Bureau of Labor Statistics (BLS). Manufacturing employment rose by 4.7% in February, from a year earlier, on a seasonally adjusted basis. This increase amounts to 13,000 more jobs over the year.



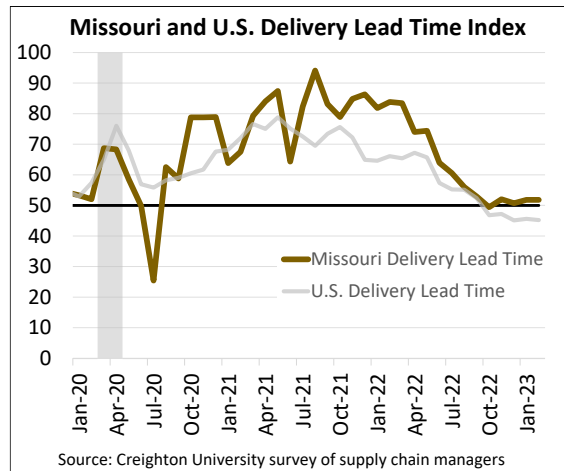
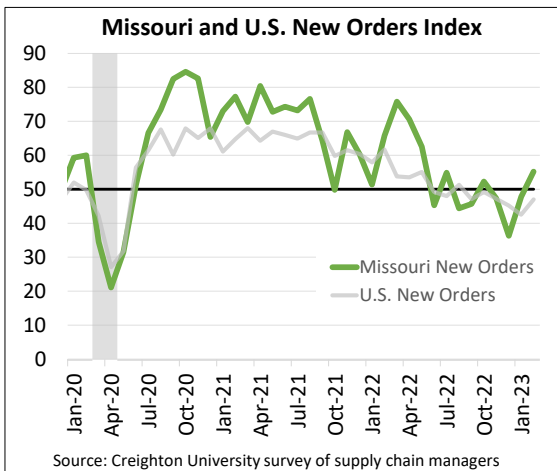
Missouri Purchasing Management Index (PMI) moves back into Expansionary Territory

Creighton University produces a monthly [purchasing management index](#) that averages several indices to track trends such as new orders, production, and inventories. The index ranges between 0 and 100 with values over 50 indicating an expansionary outlook for manufacturing over the next three to six months and values below 50 pointing toward a contractionary period. The index is a leading indicator of manufacturing activity and mirrors the national Institute of Supply Management (ISM) survey methodology.

- The February 2023 PMI index shows Missouri moving into modest expansionary territory (52.7) after several declining months. The U.S. level was 47.7 for February, marking the fourth month the national index has been in contractionary territory.



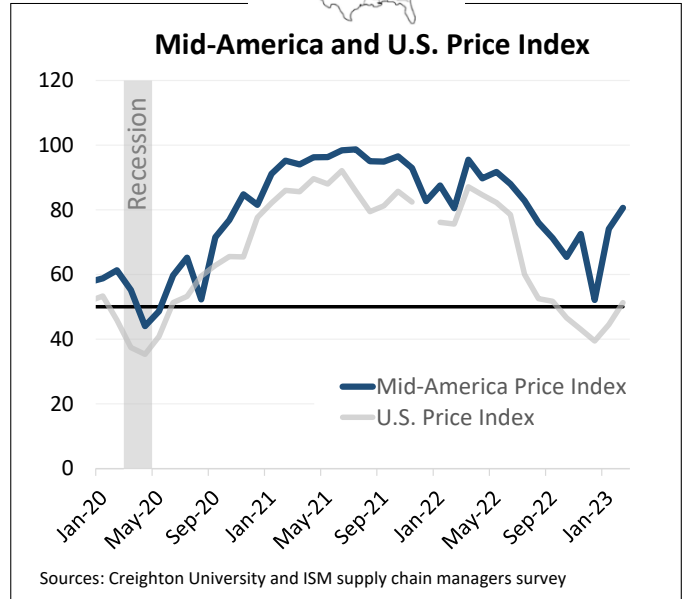
- The Missouri new orders index (same 0 to 100 scale) was 55.5 in February, higher than the U.S. index in the same month. This is a positive sign given the weaker index readings of late 2022.
- Delivery lead times had been elevated since late 2020 for Missouri and U.S. manufacturers, but supplier delivery times have improved in recent months and were at normal levels in February.



Mid-America Wholesale Prices Increase in Early 2023

Wholesale prices in the Mid-America states (see map) had been dropping during the second half of 2022 as inflation pressures moderated, according to the Creighton University survey. However, the Mid-America price index increased significantly during the first two months of 2023. State-level price indices are not available.

Mid-America region prices have followed U.S. trends but are typically higher than the national average. Slowing output and the easing of supply-chain disruptions had driven the wholesale price index down since mid-2022, but the recent index increases show inflation challenges still exist.

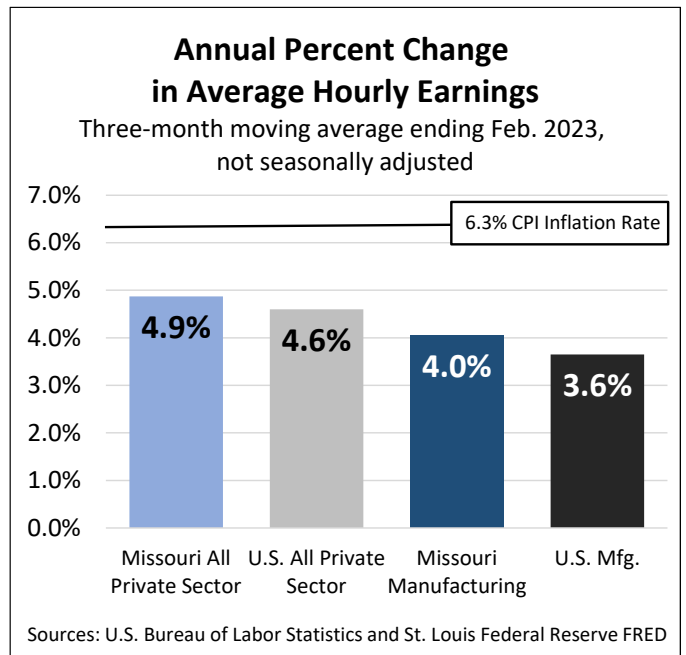


Missouri Private Sector and Manufacturing Earnings Rise at Faster Rate than U.S. Levels

The three-month average hourly earnings – gross payrolls divided by total hours worked – of Missouri manufacturing employees was \$30.46 in February 2023, up 4.0% from a year earlier. Earnings data come from non-seasonally adjusted, preliminary figures produced by the U.S. Bureau of Labor Statistics. The U.S. growth rate of manufacturing earnings was 3.6% over the same period – see chart. Average hourly earnings for U.S. producers were \$31.63 in the three-month average ending in February.

Missouri’s manufacturing earnings growth rate of 4.0% was lower than the year-over-year increase in Missouri’s total private sector hourly earnings (4.9%). Private sector earnings in the U.S. increased by 4.6% year-over-year.

With an inflation rate of 6.3% over the same period, earnings gained in the private sector and at manufacturing firms were lower than overall consumer price increases.

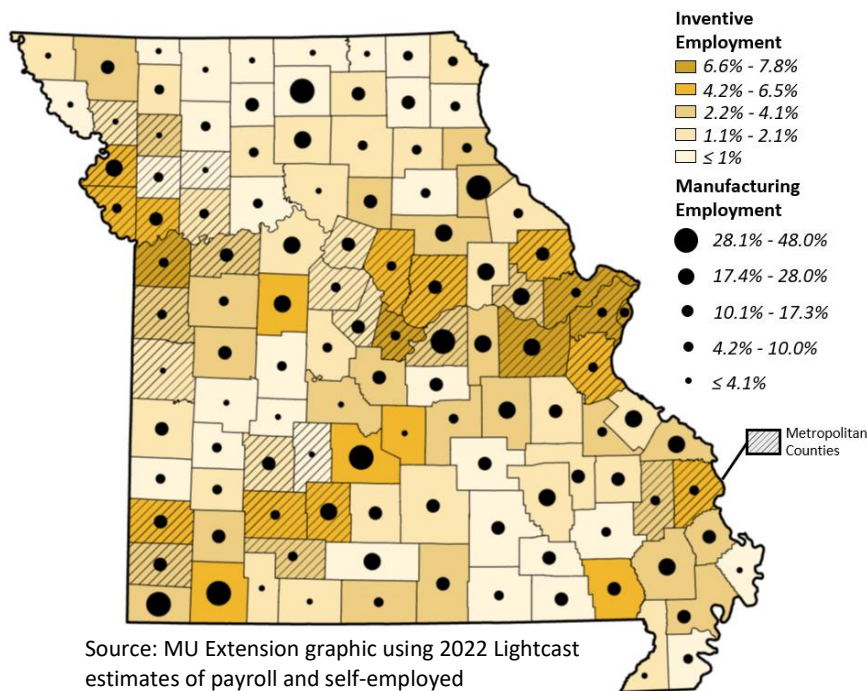


Connecting Rural Manufacturers to Innovation Resources is Important for Regional Growth

A recent [MU Extension analysis](#) of inventive Missouri occupations highlighted the importance of these jobs to manufacturers in the state. Inventive occupations, such as Software Developers, are defined as jobs with a greater than 75% likelihood to patent. Roughly 6.6 out of every 100 jobs in Missouri can be classified as “inventive” — with nearly one out of every four inventive jobs in manufacturing.

Nonmetro, or rural, Missouri counties have lower levels of inventive occupations, 4.2 out of every 100 jobs compared to 7.1 for metro counties. At the same time, nonmetro counties are more dependent on manufacturing employment as 14.2% of jobs are in production, compared to 9.6% in metro counties. Underemployment of inventive occupations in rural Missouri has the potential to limit the long-term growth and competitiveness of employers in these regions. This challenge highlights the need to connect producers with innovations and manufacturing expertise found in the state’s higher education institutions, as well as partnering with training providers to increase the technical skills of area workers.

Share of Inventive and Manufacturing Employment by Missouri County



Source: MU Extension graphic using 2022 Lightcast estimates of payroll and self-employed manufacturing and “inventive” industry employment

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