

Supply Chain Impact Intelligence

January 2025

This monthly brief has three primary sections providing updates on the fundamental factors impacting the cost of goods and services. Each section will cover the current market and trends within energy, freight, raw materials and wages. The first section provides a high-level overview, followed by a heat map containing detailed inflation trends. The third section dives deep into the market fundamentals currently impacting prices and costs of manufacturing.

Energy

Despite the multitude of geopolitical events that could send oil prices soaring at any moment, the continued low demand from Europe, China and the U.S. has prevented oil, gasoline and diesel from escalating. This battle of low demand vs. price escalators that include the ongoing conflicts among high oil producing countries, sanctions on Russian oil, Saudi Arabia's continued oil production cuts well into 2025 and demand growing from developing countries will keep prices hovering in the \$70 to \$80 per barrel range for most of 2025.

Freight

The International Longshoremen's Association (ILA) and the US Maritime Alliance (USMX) agreed to a six-year extension, preventing a port strike on the East and Gulf coasts. A joint statement was released by the two groups: "This agreement protects current ILA jobs and establishes a framework for implementing technologies that will create more jobs while modernizing East and Gulf coast ports – making them safer and more efficient, and creating the capacity they need to keep our supply chains strong."

Spot rates remain elevated as shipping demand has escalated with companies ordering additional goods and raw materials, fearing the threats of very high tariffs by the incoming administration.

Raw materials

Demand for raw materials remains weak, with flat to lower prices shadowing the depressed demand. Manufacturing production has slowed during the last six months, indicating a slowing economy, leading to the recent drops in raw material prices. However, concern about upcoming tariffs has led to a price spike this winter as manufacturers stockpile raw materials before the potential tariffs.

Wages for labor in manufacturing and service providers

Wage growth in manufacturing continues with above normal wage increases. The measurement continues to maintain a 12-month increase around 5%, which remains high when compared with the more normal pre-pandemic wage increases that typically fell between 2 and 3%. Wage increases for service providers continue rising at just above 4% per year.

Monthly spotlight

In 2018, when tariffs that largely targeted China on several raw materials were implemented, freight costs immediately surged as manufacturers increased imports to build inventory before the tariffs became active. The increased demand for various raw materials also created price increases throughout the raw material market. Anticipate the same impact on freight and raw materials if the proposed tariffs by the Trump administration are implemented. China has become more aggressive with its retaliation tactics in response to tariffs and sanctions. Other countries have taken note and have indicated they will implement retaliatory tariffs or sanctions if the Trump administration imposes tariffs on them. Depending on the strategies taken, this growing trend could impact the ability of manufacturers to obtain raw materials and intermediate goods.

Inflation and raw materials heat map

The heat map provides a synopsis of inflation trends month-over-month. It also provides a long-term inflation picture looking at 12-month percent changes, three-year percent change and what has happened since January 2020, right before the pandemic created wild price swings. The colors within the heat map are meant to assist you with capturing the current trend of costs that impact manufacturing, service and distribution.

	Prices low/declining												Prices high/increasing												Historic inflation rates		
	2023 1 month % change												2024 1 month % change												12-month	3 year	Jan. 2020
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	% change	% change	% change
Materials																											
Resins	-0.9%	0.7%	0.6%	1.2%	-3.0%	-1.5%	-4.1%	-0.2%	0.1%	-1.5%	-0.3%	-0.3%	-1.1%	1.8%	-1.5%	2.6%	-0.3%	0.2%	1.1%	-1.3%	-2.2%	1.9%	-1.0%	-1.3%	-1.2%	-11.7%	16.2%
Metals	1.1%	1.2%	0.0%	-1.0%	-0.2%	-1.2%	-0.8%	-0.4%	-0.5%	-0.6%	-0.7%	-0.1%	0.7%	0.4%	0.5%	1.1%	1.8%	0.5%	-1.3%	-1.3%	-0.4%	0.9%	1.1%	-0.5%	3.6%	1.4%	39.9%
Chemicals	0.4%	0.5%	0.1%	0.2%	-0.5%	-1.0%	-1.1%	-0.4%	-0.1%	0.3%	-0.5%	-0.3%	-0.5%	0.5%	-0.1%	0.7%	0.1%	0.1%	0.6%	0.1%	-0.4%	-0.3%	-0.3%	0.1%	3.4%	20.6%	
Paper	0.9%	1.0%	-1.4%	0.9%	0.1%	-0.6%	-1.3%	-0.7%	0.7%	-1.6%	0.1%	0.0%	0.7%	-0.1%	-0.8%	0.3%	0.7%	0.1%	1.4%	-0.7%	-0.1%	1.0%	-0.2%	-0.1%	2.0%	14.3%	24.9%
Sanitary paper	0.9%	0.4%	0.1%	0.0%	0.4%	0.3%	0.0%	-0.6%	0.1%	-0.9%	-0.4%	-1.3%	-0.2%	0.2%	-0.8%	0.2%	0.2%	0.0%	0.2%	0.0%	1.0%	0.2%	0.1%	1.2%	2.2%	15.4%	20.9%
Packaging	-1.4%	0.4%	0.5%	0.9%	-1.2%	0.8%	-0.5%	-0.4%	0.5%	0.6%	0.1%	0.1%	-0.1%	0.8%	0.6%	0.4%	-0.2%	0.1%	-0.3%	0.7%	0.1%	0.1%	-0.8%	-0.2%	1.3%	1.5%	28.0%
Fibers	-1.3%	-4.1%	-1.0%	-0.8%	-1.2%	-1.3%	0.8%	0.2%	0.2%	0.9%	-0.1%	-2.4%	1.3%	0.0%	1.5%	0.3%	0.5%	0.9%	1.1%	0.5%	-0.6%	-0.6%	0.0%	0.0%	5.0%	16.5%	37.7%
Cotton	0.5%	-1.9%	-3.0%	-2.6%	1.9%	-3.6%	4.7%	2.2%	-1.2%	-2.5%	-4.4%	0.4%	5.4%	7.6%	-9.1%	-8.9%	-2.1%	-1.4%	-3.5%	1.6%	2.5%	1.2%	-2.5%	-2.0%	-11.9%	-33.4%	1.0%
Energy																											
Oil	2.2%	-1.7%	-4.6%	8.4%	-9.9%	-1.9%	8.3%	7.0%	9.9%	-4.2%	-9.3%	-7.5%	3.1%	4.2%	5.2%	5.0%	-6.2%	-0.3%	2.5%	-6.3%	-8.4%	2.5%	-2.8%	0.2%	-2.5%	-2.2%	21.9%
Diesel	-2.9%	-3.6%	-4.6%	-2.6%	-4.4%	-3.1%	2.1%	####	4.3%	-1.1%	-5.8%	-6.5%	-3.0%	4.9%	-0.5%	-0.5%	-4.5%	-2.6%	2.4%	-2.9%	-3.8%	0.7%	-1.8%	-0.8%	-12.0%	-4.0%	14.7%
Natural gas	-40.9%	-27.2%	-2.9%	-6.5%	-0.5%	1.4%	17.0%	1.2%	2.3%	12.9%	-9.1%	-7.0%	26.2%	-45.9%	-13.4%	7.4%	32.5%	19.8%	-18.5%	-3.9%	14.6%	-3.5%	-3.6%	42.0%	19.4%	-19.9%	49.0%
Electricity - industrial	0.0%	-2.9%	-1.8%	-3.0%	2.7%	7.7%	1.1%	0.6%	0.3%	-5.9%	-1.6%	0.2%	0.6%	2.9%	-1.8%	-0.9%	-1.4%	8.4%	0.7%	0.0%	0.1%	-5.3%	-3.1%	1.0%	0.5%	18.1%	27.5%
Logistics																											
Ocean shipping	-5.7%	3.2%	-9.7%	-0.6%	8.3%	-5.2%	6.1%	3.6%	-4.5%	-5.5%	-3.1%	3.1%	2.9%	-2.4%	-2.9%	0.6%	3.5%	4.9%	1.1%	-1.6%	1.6%	2.7%	3.0%	0.6%	14.6%	28.0%	45.9%
Trucking	3.0%	-1.8%	-1.3%	-2.2%	1.5%	-0.4%	0.0%	4.4%	0.9%	0.6%	-1.4%	-2.0%	2.6%	0.8%	0.5%	0.6%	-0.9%	-1.2%	2.4%	-1.5%	-0.3%	0.1%	0.0%	0.0%	3.1%	11.6%	25.7%
Labor (index of average hourly wage for production and nonsupervisory employees)																											
Manufacturing	0.7%	-0.6%	0.6%	0.8%	-0.2%	0.9%	0.6%	-0.2%	1.1%	-0.1%	0.9%	1.3%	0.0%	0.1%	0.5%	0.5%	-0.1%	0.7%	0.7%	-0.2%	0.9%	-0.1%	0.8%	0.6%	4.6%	16.8%	27.1%
Services	1.4%	-0.3%	0.4%	1.4%	-0.8%	-0.3%	1.1%	-0.5%	0.9%	0.9%	-0.3%	0.3%	1.2%	0.0%	0.0%	0.5%	0.0%	0.2%	-0.1%	0.3%	1.3%	-0.1%	0.1%	0.9%	4.3%	14.6%	28.4%
Construction labor	-0.5%	1.1%	0.8%	-1.1%	0.4%	0.1%	1.8%	1.7%	0.0%	0.2%	0.2%	0.2%	0.7%	0.0%	1.0%	-0.5%	0.3%	-0.6%	0.5%	0.4%	1.3%	-0.9%	0.1%		2.3%	16.8%	27.2%

Market fundamentals impacting costs

The table below highlights the factors creating an upward or downward pressure on the cost of manufacturing, providing services and distribution. The information details pressures on energy and raw material prices, costs of trucking and shipping, and wage changes within goods manufacturing and service providers. The **upward** section identifies factors that may lead to future price increases while the **downward** section indicates what may lead to lower costs.

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Market fundamentals putting **upward** and **downward** pressure on prices:

Energy

Oil market fundamentals

↑ Upward pressures

- Geopolitical pressures and conflicts from the Russia/Ukraine war and multiple potential areas in the Middle East will keep upward pressure on oil prices and have the potential of leading to significant increases.
- U.S. energy officials will continue refilling the depleted Strategic Petroleum Reserve when incoming Pres. Donald Trump takes office. This will place mild pressure on prices.
- Growing demand of fossil fuels in developing countries, especially from India and Southeast Asia, will contribute to increased price pressures during the next few years.
- OPEC countries have extended their production cuts until April 2025, which will likely be extended further until market demand returns.

↓ Downward pressures

- China has started boosting its oil drilling and discovered a large oil deposit offshore, and Brazil has grown its offshore drilling production.
- In 2024, the U.S. reached record levels of oil production which has offset the current production cuts by OPEC+. The Energy Information Administration (EIA) anticipates the high U.S. production levels will continue under the Trump administration.
- Less oil and its derivatives will be needed from the U.S., Europe and China as government policies push them toward green energy. Europe and China will continue investing heavily to increase green energy, reducing dependence on fossil fuels. The purchase of EVs has exploded in China, creating a noticeable decline in fuel demand.

Diesel market fundamentals

Upward pressures

- Inventory remains tight despite a low demand environment. A return of demand would escalate prices quickly.
- Europe, which no longer receives diesel from Russia, continues to rely on the U.S. for diesel imports, leading to further price pressures in the U.S.

Downward pressures

- New refining plants have come online outside the U.S., along with capacity upgrades of several current U.S. plants. In 2023, China became the largest refiner of diesel and gasoline.

Natural gas market fundamentals

Upward pressures

- Russia and Ukraine have been targeting each other's energy infrastructure, which could lower global supply availability.
- Ukraine began 2025 by ending all remaining pipeline transit of natural gas from Russia to Europe. Only a temporary price jump will occur due to the bad timing of a cold month. Europe has replaced most of its natural gas needs already by obtaining additional natural gas from the U.S. and several high-producing Asian and Middle Eastern countries.
- The U.S. will continue exporting natural gas to Europe, especially Germany, during the next 20 years as a long-term replacement of Russian natural gas.
- Long term, global natural gas demand is projected to surge 90% by 2040. Asia will account for 70% of the increase as it hopes to switch from more polluting resources to liquified natural gas, yielding continued Asian economic growth.

Downward pressures

- High inventory levels will keep prices from rising significantly during the winter high demand season.
- Qatar broke ground in October 2023 on the world's largest new liquified natural gas (LNG) project, the North Field expansion project, which will supply LNG to Europe and China.
- Significant discoveries of natural gas were made in northern Africa on land and offshore. Several major oil companies are investing heavily to produce and provide natural gas and oil to Europe as a replacement for Russia.

Freight

General freight trucking

Upward pressures

- Demand has grown and will continue with suppliers and manufacturers looking to build inventory as the incoming administration threatens significant new tariffs on imports.
- On Oct. 1, 2024, the per diem rate allowed by the Internal Revenue Service for meals and incidental expenses incurred by transportation workers will increase to \$80 per day. In 2023 and 2024, the per diem was \$69, making this an increase of more than 15%. Costs like this are often passed along the supply chain.
- Trucking capacity has been declining since late 2023 and has continued through 2024, leading to upward pressure on rates. If demand rises in 2025, there could be a significant jump in trucking costs.

Downward pressures

- Diesel fuel prices remaining near or under \$4 per gallon for an extended period of time helps keep freight costs lower.

Deep-sea freight shipping

Upward pressures

- Fears of sweeping tariffs have led to further ocean shipping demand as suppliers and manufacturers attempt to stock inventory of goods and raw materials.
- Due to the Houthis' persistent attacks in the Red Sea, shippers continue to take longer routes around Africa, requiring additional labor, fuel and ships, leading to elevated operating costs.
- Asia to U.S. contract shipping rates, which represents 70% of cargo, take effect each year on May 1. The 2025 negotiations will begin in February.
- Since 2022, many of the labor unions involved with freight have received significant wage increases: West and East Coast ports, railroads, UPS, FedEx and FedEx Express.

Downward pressures

- A six-year agreement has been reached between the ILA and USMX preventing a strike on East and Gulf coasts.
 - Low global demand, outside of the inventory building mentioned above, remains the only factor putting downward pressure on prices.
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Raw materials

Steel

Upward pressures

- U.S. steel mills have throttled production in late 2024 due to low demand and solid supply. The intent is to lower supply, putting upward pressure on prices.
- The Biden Administration implemented tariff increases on certain steel products from China that increased from the 0-7.5% range to 25%, effective Sept. 27, 2024.
- Steel and aluminum products imported from Mexico are subject to a new 25% tariff unless there is documentation proving it was smelted and poured in Mexico, the U.S. or Canada. The main purpose of this tariff is to prevent an influx of cheap metals from China.
- Less steel feedstock and steelmaking raw materials from Russia, Ukraine and Belarus continue to put a strain on European supply levels.

Downward pressures

- The U.S. will have two new steel mills opening in 2025.
- In the short term, high inventory levels of buyers and slow demand, especially from China, will keep prices from increasing, despite producers of metals lowering production levels.
- Production growth from India, China and other Asian countries accelerated in 2024, leading to a growth in inventories.

Stainless steel/nickel

Upward pressures

- Solid demand from India and Southeast Asia will keep mild pressure on prices.
- Low pricing of nickel and a flooded market have led to several countries shutting down mines, reducing investments and slowing nickel production, with the hope of lowering supply and increasing price.

Downward pressures

- Weak demand continues globally, especially from China, Europe and the U.S.
- Nickel's prices are declining with surplus production from China, Chinese-owned production in other countries and Indonesia, which provide nearly half of global nickel, creating strong inventory levels in 2024.
- Growing investment into mining, exploration and discovery may lead to higher supply levels meeting future demand.

Aluminum

Upward pressures

- Steel and aluminum products imported from Mexico are subject to a new 25% tariff unless there is documentation proving it was smelted and poured in Mexico, the U.S. or Canada. The main purpose of this tariff is to prevent an influx of cheap metals from China.
- The Biden Administration implemented tariff increases on certain aluminum products from China that increased from the 0-7.5% range to 25%, effective Sept. 27, 2024. Prices have escalated since this tariff started and further tariffs would likely lead to further price increases.

Downward pressures

- New aluminum smelting plants that came online in 2023 have kept supply levels solid.
- The U.S., China and global economies continue tepid demand.

Copper

Upward pressures

- Long term, copper prices will maintain an elevated state as a shortage of raw copper ore will persist with global production not meeting demand growth.
- China, the world's largest producer of refined copper, announced in October 2024 that refined copper production will be reduced due to the ore shortages and will instead increase its focus on recycling copper.

Downward pressures

- The renewed focus on recycling copper in China and globally in 2024 will partially provide an opposite price effect, helping keep a cap on the cost of copper.

Resins

Upward pressures

- Resin producers desperately want to increase pricing during Q1 2025.
- There has been a price spike in December and January, with demand increasing as manufacturers build inventory ahead of potential new tariffs.
- A UN environment program is working on a global treaty to increase plastic recycling and limiting the use of harmful chemicals. These potential changes would raise the cost of plastic/resin-based products significantly.

Downward pressures

- New production capacity has come online in the U.S. and China. The new capacity has provided strong supply levels on most grades of polyethylene and other resins. December supply levels have hovered near record levels.
- Supply levels of resins remain solid despite production rate cuts and should continue as demand domestically and from China remains weak overall.
- Resins are a derivative of oil, and oil prices continue to hover at \$70 per barrel.

Cotton

Upward pressures

- Elevated shipping and trucking costs will keep current prices steady despite the high supply and low demand.

Downward pressures

- Global usage continues at a low level as demand has yet to recover from economic slowdowns and high interest rates. This appears likely to continue in 2025, keeping stocks near record levels.
- China, Brazil and Turkey are seeing large production increases.

Wood pulp, writing and printing paper

Upward pressures

- A potential new tariff on imported lumber and wood pulp will create higher prices as domestic producers would not be capable of meeting the demand.
- Elevated wood pulp prices, which impact paper prices, will remain going forward due to growing demand and lower production levels.

Downward pressures

- Inventories of wood pulp began rising in the fall, leading to a halt in the long trend of rising prices. Prices have dropped four straight months but still remain above historical norms.
- New production facilities came online in the U.S. South in 2023. These facilities are mostly replacing closed production facilities in the U.S. Northwest and Canada.

Packaging

Upward pressures

- Net-zero environmental targets are encouraging movement away from plastic packaging toward paper packaging.
- Higher wood pulp, paperboard and resin prices will keep packaging cost on an upward trend.

Downward pressures

- Several expansion projects began production in 2024.

Labor

Manufacturing wages

Upward pressures

- Deportation of immigrants may lead to a shortage of manufacturing labor, leading to additional wage inflation as suppliers attempt to attract new labor and maintain current experienced labor.
- The trend toward domestic and near sourcing will expand the workforce shortages as additional labor will be needed.
- In 2016, Mexico made the decision to start raising the minimum wage more than other wages in a bid to even-up earnings. Since then, the minimum wage has increased 240%. Medical device manufacturing in Mexico pays more than minimum wage, but these increases have put pressure on raising these wages.

Downward pressures

- Decline in domestic demand of goods has led to a decline in production rates, meaning less manufacturing labor is needed.

Service wages

Upward pressures

- Deportation of immigrants may lead to a shortage of available service labor, leading to additional wage inflation as suppliers attempt to attract new labor.

Downward pressures

- A slow economy has led to lower demand for services, and thus, declining wage increases.
- Hiring in the services sector has slowed or stagnated.

Sources

- [U.S. Bureau of Labor Statistics, Producer Price Index](#)
- [Manufacturers' Outlook Survey - NAM, WSTS](#)
- [EIA, IEA, OilPrice.com,](#)
- [FreightWaves, American Trucking Associations, Hellenic Shipping News, Supply Chain Dive, Freightos](#)
- [MetalMiner: Buy Metal With Confidence, Forecasts for Metal Prices, Plastics Industry News Resintel, Cotton Grower: Dedicated Coverage and Reporting of the Cotton Industry, Cotton Inc., Fisher: Global Pulp & Paper Business Intelligence](#)
- [Institute for Supply Management](#)

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