E-ISSN: 2997-9420
American Journal of Political Science and Leadership Studies
https://semantjournals.org/index.php/AJPSLS

| Research Article

Check for updates

How Current Macroeconomic Situations and Tariffs Can Affect the Trucking Industry

Jasurbek Tursunov, MBA
Business Intelligence Analyst at Muzom Transportation Inc, Finance, Strategy, Innovations

Abstract: This article explores the impact of current macroeconomic conditions and ongoing tariff conflicts on the U.S. long-haul trucking industry, with projections through 2030. Using recent data from the American Trucking Associations (ATA), Cass Freight Index, and industry sources, the analysis highlights how inflation, high interest rates, fuel price volatility, and trade policy uncertainties have reshaped freight demand, cost structures, and strategic planning for carriers. The post-pandemic period saw record operational costs and a divergence between freight activity and GDP growth due to shifting consumption patterns and inventory cycles. Trade tensions—particularly renewed tariffs on China, Mexico, and Canada—have created volatility in freight flows, driving a "whipsaw effect" where short-term shipment surges are followed by prolonged slumps. The article evaluates three potential trade scenarios—prolonged conflict, policy détente, and regional supply chain diversification—and their implications for long-haul trucking. It concludes that adaptability, cost efficiency, and policy engagement will be key to sustaining the industry's resilience and competitiveness amid a complex economic and geopolitical landscape.

Keywords: U.S. trucking industry, long-haul freight, tariffs, macroeconomic trends, inflation, trade policy, fuel prices, supply chain shifts.

Introduction

The U.S. long-haul trucking industry operates at the intersection of macroeconomic forces and trade policy shifts. As the backbone of domestic freight transport, trucking is highly sensitive to broad economic indicators **inflation**, **interest rates**, **fuel prices**, and **GDP growth** which directly affect operating costs and freight demand. At the same time, **tariff wars** and evolving trade policies reshape supply chains, influencing freight volumes, international trade routes, and cross-border logistics. This article blends academic rigor with policy analysis to examine how current macroeconomic conditions and ongoing/potential tariff battles are impacting long-haul trucking, and projects these effects through 2030. Key economic trends (e.g. rising costs, volatile fuel prices, and shifting demand) are analyzed alongside trade policy developments to assess their

combined impact on trucking operations and strategies. In doing so, the article provides data-driven insights including tables of economic indicators and industry metrics to support a forward-looking discussion. The goal is to inform industry stakeholders and policymakers about the challenges and adaptations required for the U.S. trucking sector to remain resilient through the end of the decade [1].

Macroeconomic Landscape: Key Indicators Shaping Trucking

Long-haul trucking's fortunes are tightly coupled with macroeconomic conditions. Table 1 provides a snapshot of selected economic indicators and trucking industry metrics in recent years, illustrating the challenging environment carriers have faced. Even as the overall U.S. economy grew modestly from 2022 to 2024, the trucking sector grappled with surging costs and a freight downturn, underscoring the divergent impacts of macro trends on freight transport [2].

As Table 1 indicates, the macroeconomic backdrop for trucking has been mixed. Real GDP growth in 2022–2024 remained positive (around 2–3% annually), signaling a growing economy and typically implying rising freight demand. However, a combination of post-pandemic shifts (e.g. consumer spending rotating back to services) and inventory gluts led to what analysts dubbed a "freight recession" in 2023–2024, with freight volumes (as measured by the Cass Freight Index) declining even as overall GDP rose. Meanwhile, inflation reached a four-decade high in 2022 (~8% CPI) before moderating to ~4% in 2023, driving up costs for fuel, labor, equipment, and other inputs. The following sections delve into each key macro factor – inflation, interest rates, fuel prices, and GDP growth – and their specific effects on long-haul trucking operations and costs [3].

Inflation and Operating Costs

Following the pandemic-induced disruptions of 2020–2021, inflation surged across the U.S., severely impacting the trucking industry by driving up operational costs. In 2022, trucking costs soared, with average per-mile expenses rising 23.1% to $2.251 the first time costs exceeded the $2 mark largely due to fuel prices jumping 53.7%, driver wages climbing 15.5%, and lease payments increasing 18.6% (truckingdive.com). Although consumer inflation cooled to around 4% in 2023, the trucking sector continued to face rising expenses. ATRI reported that per-mile costs rose again to a record $2.270, driven by persistent inflation in equipment, insurance (up ~12%), and driver pay (up 7.6%) despite a decline in fuel costs. Excluding fuel, trucking costs were up 6.6% year-over-year in 2023. These trends underscore lasting cost-push pressures in the industry, compelling larger fleets to invest in route optimization and telematics for cost control, while smaller carriers faced profitability challenges. Ultimately, trucking's cost structure has permanently shifted higher, requiring efficiency gains and strategic planning to sustain margins in a high-cost environment [4].

Interest Rates and Capital Expenditure

The rapid rise in U.S. interest rates since 2022 culminating in a 5-percentage-point hike by mid-2023 has significantly impacted the trucking sector by raising capital costs and dampening freight demand. With the federal funds rate reaching 5.25% in 2024–2025, fleet operators faced surging truck and trailer financing costs, up 8–19% in 2023, discouraging equipment upgrades and extending trade-in cycles. Even large carriers shifted from expansion to extracting more productivity from existing assets. High rates also cooled consumer spending on interest-sensitive goods, fueling a freight recession marked by low rates and overcapacity. Over 88,000 small trucking firms shut down in 2023, often due to unsustainable interest payments amid falling revenues. Looking ahead, if inflation moderates, potential rate cuts by 2025–2026 may ease capital burdens and support demand. But if rates remain high, strategies like leasing, used vehicle purchases, and operational efficiency will be essential. Additionally, constrained infrastructure investment under tight credit conditions could indirectly limit trucking performance [5]. Overall,

interest rates affect both the cost of fleet operations and broader freight demand, making them a critical variable for long-haul trucking through 2030.

Fuel Prices and Energy Costs

Fuel remains the largest variable cost for long-haul trucking, comprising 20–25% of operating expenses, and recent years have underscored its volatility. Diesel prices spiked to a record $5.816 per gallon in June 2022 following Russia's invasion of Ukraine, dramatically increasing operating costs, particularly for small carriers without fuel hedging. Although prices eased to $4.02 in 2023 and are projected to average $3.66 in 2025, they remain above pre-pandemic levels. Carriers have responded with efficiency strategies such as telematics, AI routing, and auxiliary power units, while also exploring alternative fuels like biodiesel, battery-electric, and hydrogen options, which may grow by 2030. Larger fleets hedge fuel prices, while smaller ones depend on fuel cards and discounts. Geopolitical tensions and regulatory changes such as carbon pricing or stricter emissions rules could drive future price surges or compliance costs, reinforcing the need for fuel resilience. Thus, managing fuel as both an operational input and a financial risk is now central to long-haul trucking strategy [6].

GDP Growth, Freight Demand, and Supply Chains

Trucking volumes are closely linked to U.S. economic growth, but recent years have shown that GDP alone doesn't fully predict freight activity due to shifting consumption and inventory cycles. While GDP rebounded sharply in 2021 (~5.9%), driving a 13% surge in truck shipments, freight demand slumped in 2023 despite continued economic growth, as consumers shifted spending from goods to services, inventories remained elevated, and sectors like housing slowed due to high interest rates. This "freight recession" led to a 5.5% drop in shipment volumes. Long-term, however, freight demand is expected to grow in line with GDP and population expansion, with ATA projecting trucking tonnage rising from 11.7 billion tons in 2019 to 14.2 billion by 2030, though revised forecasts suggest slower mid-decade growth around 1.6% in 2025 due to ongoing trade and inflationary pressures [7]. As international trade comprises 20–25% of U.S. freight, the strength of global GDP and trade agreements will also play a pivotal role, especially in port and border trucking. Additionally, domestic policies like the Bipartisan Infrastructure Law and CHIPS Act are expected to fuel trucking activity tied to construction and manufacturing through the mid-2020s, partially offsetting external slowdowns [8].

Tariff Wars and Trade Policy Impacts on Trucking

While macroeconomic trends set the broad demand and cost environment for trucking, **trade policies and tariff conflicts** can create acute disruptions or windfalls for freight flows. Over the past decade, the U.S. has engaged in several rounds of tariff actions – most notably the **U.S.–China trade war** starting in 2018, and more recently, tariff threats involving North American and other trading partners. These **tariff wars** alter the cost of imported/exported goods, which in turn affects supply chain decisions such as sourcing, inventory strategies, and modal choices. The long-haul trucking industry often feels the impact in terms of **volatile freight demand, shifting trade routes, and complex cross-border logistics requirements**. This section explores how ongoing and potential tariff battles are influencing U.S. trucking, and what the projections might be through 2030 [9].

Tariffs and Volatile Freight Demand

Tariffs act effectively as a tax on trade, raising the cost of imported goods (and inviting retaliatory tariffs on exports). For trucking, one immediate effect of tariffs is volatility in freight volumes. A common pattern observed is front-loading of imports before tariffs kick in, followed by a lull after implementation. For example, when new U.S. tariffs on Chinese goods were threatened, many shippers rushed to bring in shipments ahead of the effective date. In late 2024 and early 2025,

U.S. importers frontloaded goods ahead of anticipated duties, causing a temporary spike in freight volumes – particularly on trans-Pacific lanes feeding West Coast ports. Trucking companies saw surges of containers to haul from ports during those months. However, such pre-tariff surges are a mirage: they borrow volume from the future, often leading to a sharp drop-off afterward. Indeed, industry experts warned that tariff-driven inflation would "dampen consumer demand," leading to a post-tariff slump in freight. This played out as expected – after the rush, import volumes fell and freight demand softened [10].

Recent data illustrates how tariff volatility is impacting the U.S. trucking sector. The Cass Freight Index reported a 5.3% year-over-year decline in freight shipments for April 2025, attributing this to the ongoing trade war, which has disrupted freight demand by creating short-term surges followed by steep drops. Cass analysts anticipate a temporary spike in pre-tariff shipments, followed by a prolonged adjustment period with reduced demand, a view echoed by the American Trucking Associations (ATA), which downgraded its 2025 truck tonnage growth projection to just 1.6%, far below the typical 3–4% trend. The implementation of 2025 tariffs such as 145% on Chinese imports and retaliatory 125% Chinese tariffs has further reduced cross-border truck freight with Canada and Mexico by around 5%, while container imports from China dropped sharply, negatively impacting drayage and intermodal carriers (Brooks, 2025).

While certain domestic industries (e.g., steel) might benefit from protective tariffs by boosting internal production and trucking demand, the overall freight outlook remains strained due to supply chain integration and rising equipment costs. ATA's Chief Economist Bob Costello estimated that reinstated tariffs could increase the cost of a new Class 8 truck by $25,000–$35,000, squeezing smaller carriers particularly hard. Some spot freight markets briefly benefited from pre-tariff shipping surges, but ongoing uncertainty has dampened long-term outlooks. As the industry approaches 2030, persistent trade tensions could continue to cap freight growth below potential, making it essential for trucking companies to build operational flexibility and scenario-based planning strategies to adapt to either continued conflict or a possible easing of trade restrictions [11].

Trade Routes, Nearshoring, and Cross-Border Logistics

Beyond affecting aggregate volumes, tariff policies can reconfigure trade routes and supply chain geography, which has direct implications for long-haul trucking routes and cross-border logistics. One notable trend accelerated by recent tariff conflicts is nearshoring – shifting production from distant overseas locations (like China) to closer trade partners (like Mexico) or back to the U.S. This trend is partly a response to high tariffs on Chinese goods and partly a strategy to build more resilient supply chains less subject to geopolitical risk.

The impact of nearshoring is clearly visible in North American trucking flows. Mexico has emerged as an even more critical manufacturing hub for the U.S. According to U.S. trade data, **2024 was a record year for Mexican truck freight**. The total value of cross-border freight hauled by trucks between the U.S. and Mexico rose by about **6% in 2024**, reaching new highs. By contrast, U.S. Canada trucking trade was up only ~2%, and trans-Pacific import volumes were flat or down, indicating a relative shift towards Mexico. Figure 2 illustrates the surge in imports from Mexico in recent years, with 2024 (black line) significantly above prior years in terms of trade volume, especially in the latter half of the year.

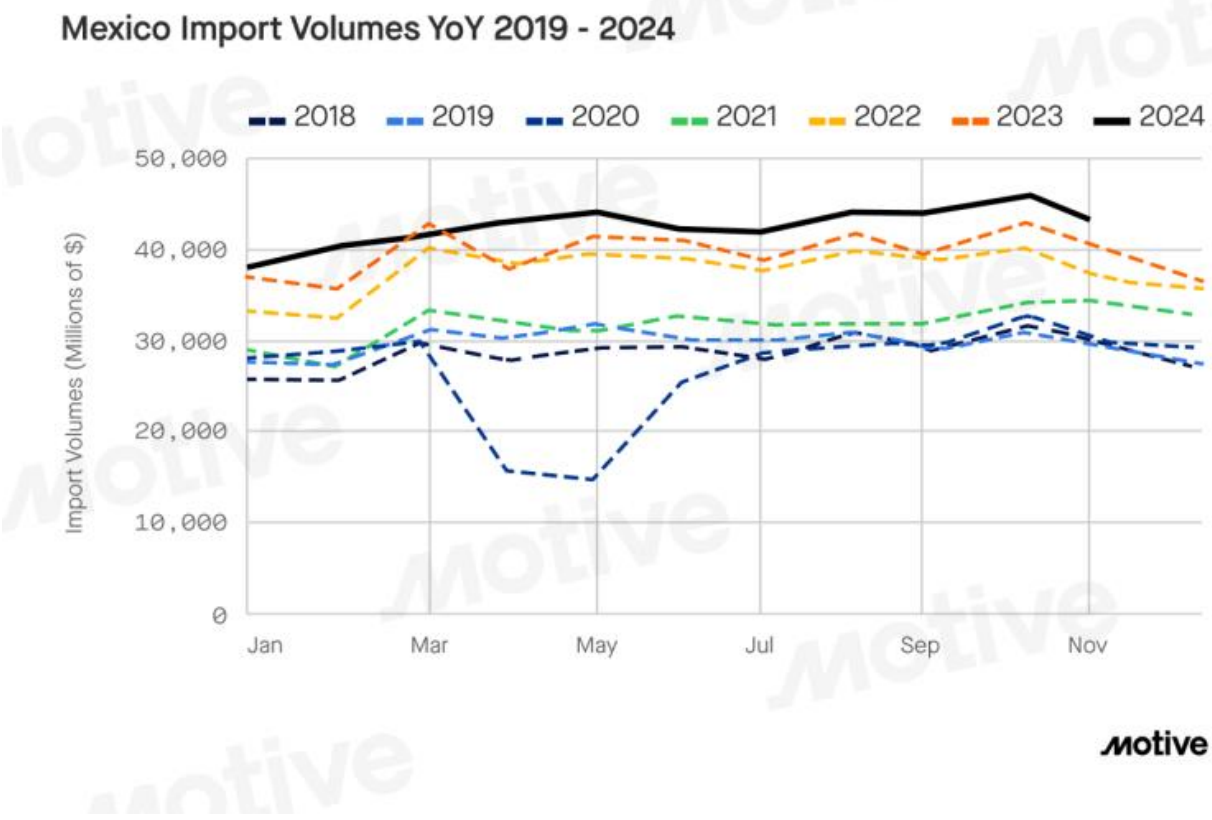

Figure 2. U.S. Import Volumes from Mexico by Month, 2018–2024. (Source: Motive Analytics, via Land Line Magazine)

U.S. trucking patterns are being reshaped by nearshoring trends, particularly the rerouting of supply chains from Asia to Mexico, exemplified by a 42% surge in computer imports from Mexico and a 28.5% rise in truck tonnage through Laredo, Texas in 2024. However, trade policy uncertainty including proposed 25% tariffs on imports from Mexico and Canada and revived steel/aluminum tariffs in early 2025 poses significant risks by increasing costs, complicating customs, and disrupting cross-border logistics. Carriers are adapting by forming binational partnerships and shifting routes toward Gulf and East Coast ports and Midwest corridors. Looking toward 2030, sustained tariff disputes could undermine freight growth projections, with the ATA's forecast of 14 billion tons by 2035 potentially unmet under trade friction scenarios. Conversely, stable trade relations could spur a 3% annual growth in tonnage. A middle-ground scenario envisions regionalized supply chains, demanding agile and specialized trucking strategies. Ultimately, the future of long-haul U.S. trucking will hinge on effective policy coordination and strategic flexibility in navigating an evolving global trade environment.

Outlook Through 2030: Projections and Adaptation Strategies

Bringing together the macroeconomic and trade policy threads, what can we expect for the U.S. long-haul trucking industry through 2030? While forecasting is inherently uncertain – especially in the wake of recent upheavals – several projections and trends appear likely:

- **Moderate Freight Demand Growth:** Despite current headwinds, total freight volumes in the U.S. should resume growth in the latter half of the 2020s, in line with population and economic expansion. The ATA's Freight Forecast (pre-trade war) envisaged trucking tonnage reaching ~14.2 billion tons by 2030. Given the setbacks of 2020–2024, reaching that figure may be delayed by a couple of years, but a reasonable projection is **12–13 billion tons by 2030** for trucking, with annual growth averaging perhaps **1.5–2%**. This assumes slow growth

early (2025–26) then faster later as conditions improve. Much of this growth will come from sectors like e-commerce, retail replenishment, construction materials (if infrastructure spending peaks), and agricultural commodities, whereas some heavy industrial freight could lag if certain manufacturing remains offshore.

- **Elevated Operating Costs (New Baseline):** The cost pressures of inflation may abate in terms of annual increases, but the *level* of costs (wages, equipment, etc.) is not likely to revert to pre-2020 norms. Drivers will expect higher pay to attract them, and new trucks with advanced technology (or alternative fuel powertrains) will be more expensive than yesterday's models. For instance, by 2030, many fleets might be purchasing zero-emission trucks (battery-electric or hydrogen) to meet California's mandates or corporate ESG goals – these trucks currently cost significantly more than diesel rigs. Interest rates may normalize somewhat (perhaps settling in a 3–4% range by late 2020s), which will ease financing costs compared to 2023 highs, but credit is unlikely to be as cheap as the 2010s. Therefore, carriers must operate under a paradigm of **higher fixed costs** and thus seek higher utilization and efficiency. Technologies like **autonomous trucking** (if commercially deployed late in the decade) could reduce labor costs per mile in long-haul routes, but initial investments will be steep. **Predictive maintenance AI** can lower breakdown costs. Overall, industry analysts suggest trucking will need to improve productivity by around 1–2% per year (through tech and process optimization) just to counteract the cost creep and stay competitive.
- **Supply Chain Reconfiguration Benefits Some Trucking Segments:** The push for resilience means more **warehousing and inventory** in the U.S., which can increase local drayage and shorter-haul truck trips distributing goods from regional warehouses to stores or consumers. Long-haul trucking might see slightly shorter average lengths of haul if companies decentralize distribution (more regional hubs). However, long-haul will still be needed for coast-to-coast or cross-border moves. Cross-border trucking with Mexico in particular is poised for growth. The **Mexican government's initiative to attract $277 billion in new investment by 2030** to become a manufacturing hub suggests more factories and more freight moving north. If political relations remain stable, one can project cross-border truck volumes to grow perhaps **5–6% annually** through 2030, outpacing domestic U.S. freight growth. By 2030, Mexico could account for an even larger share of U.S. imports (it was the U.S.' largest single-country trading partner in 2022–24, and that lead may widen). This means carriers specializing in cross-border logistics (handling customs, bilingual operations, etc.) will thrive. Infrastructure at the border (like new bridges or expanded customs facilities) will be critical to support this growth; ongoing projects, if funded, will help mitigate bottlenecks.
- **Continued Policy Uncertainty:** Trade policy may swing with U.S. political cycles – for example, one administration may favor multilateral trade agreements, while another opts for unilateral tariffs. Trucking companies should **hedge against policy risk** by diversifying their customer base and commodity mix. For instance, a carrier heavily reliant on hauling imported electronics might branch into domestic retail or agricultural freight to avoid being too vulnerable to one set of tariffs. Industry associations (ATA, etc.) will likely continue lobbying for more consistent trade policies, highlighting the economic damage that sudden tariffs can cause to freight businesses. By 2030, it's possible a new equilibrium will be found in U.S.–China trade (either a managed decoupling or a new framework), but until then, **volatility is the watchword**.
- **Regulatory and Environmental Trends:** Though not the focus of this article, it's worth noting that other policy factors (emissions regulations, labor regulations like driver hours-of-service or classification laws) will also shape trucking's trajectory. California's zero-emission truck mandate (requiring a percentage of sales to be ZEVs) could spread to other states, and by 2030 a noticeable minority of long-haul trucks might be electric/hydrogen, especially for

dedicated routes. This requires charging or refueling infrastructure development – a challenge and an investment opportunity. Additionally, any federal carbon pricing or stringent emission standards on diesel could effectively act like a "fuel tariff" internally, raising diesel costs and pushing quicker adoption of new tech. These changes, while beyond macroeconomics per se, interact with fuel price trends discussed earlier and will influence cost structures.

Strategies for Resilience and Competitiveness

Given the macroeconomic headwinds and tariff crosswinds outlined, what strategies can the long-haul trucking industry employ to remain resilient and competitive through 2030? A blend of operational, technological, and policy-responsive strategies will be needed:

- **Operational Efficiency:** Carriers must continue to drive down empty miles, improve load planning, and optimize routing. Embracing **advanced analytics and AI** is key here. As noted in industry case studies, AI-powered systems can forecast regional demand surges and reposition assets (trailers, trucks) in advance. This helps capture revenue in volatile markets. For example, **ITS Logistics** expanded a program using AI to decide where to stage its 3,000-trailer pool, reducing situations where equipment sits idle in one region while demand is high in another. Such agility will be a differentiator in a world where a tariff can suddenly shift demand geographically. Fuel efficiency measures (telematics, driver training) remain crucial – every 1% improvement directly buffers against fuel price spikes.
- **Cost Management and Flexibility:** Given high fixed costs, carriers might explore more flexible models – e.g., using more **owner-operators or third-party capacity** in boom times to avoid over-investing in assets that could sit idle in downturns. However, this is challenging amid California's AB5 law and the national debate on independent contractor status. Alternatively, larger fleets may use **lease-purchase programs** for drivers to balance risk. Building strong cash reserves or access to credit lines can help weather interest-rate or freight demand swings, preventing forced exits during downturns.
- **Diversification:** Trucking companies can diversify in several dimensions: customer base (serving multiple industries), lanes (mix of domestic and cross-border), and even services (some trucking firms are adding warehousing, intermodal capabilities, or dedicated contract carriage to secure stable revenue streams). Those that carried mainly import cargo might pivot to also handle export commodities or vice versa. Diversification is a hedge against any one sector-specific downturn (e.g., auto haul carriers suffered when auto sales dipped, so having other freight like general retail can compensate).
- **Collaboration and Advocacy:** The industry should continue collaborating with policymakers to inform them of trucking's challenges. For instance, during tariff negotiations, input from trucking and logistics firms could help trade officials understand bottlenecks and craft solutions (perhaps tariff exemptions for critical components to avoid crippling truck manufacturing, etc.). The example of **tariffs adding $30k to truck prices** is a powerful data point the industry can use to lobby against such broad measures that have unintended economic consequences. Additionally, trucking associations can push for infrastructure improvements at ports and borders to alleviate trade-related strain – e.g., more truck parking and staging areas at border crossings, or digital pre-clearance systems to speed up customs, which would reduce delays if tariffs necessitate more documentation.
- **Leveraging Technology and Automation:** By 2030, technologies like **autonomous trucks** may become viable on certain highway routes (platooning or unmanned runs between hubs). If labor shortages persist or worsen (the driver shortage could reach 160,000 by 2031 by some estimates), autonomous tech could be both a relief and a disruptive force. Trucking firms should monitor and pilot these technologies to see how they can complement operations. In the near term, automation in back-office tasks (load matching algorithms, digital broker

platforms) can reduce overhead costs and improve asset utilization – for example, C.H. Robinson and others using AI for dynamic pricing and matching saw productivity gains. **Paperwork automation** (like the **Transflo Workflow AI** adopted by small carriers, reducing admin costs ~20–30% is another win in an environment of tight margins.

- **Adapting to Nearshoring and Regional Opportunities:** U.S. carriers should consider establishing partnerships or subsidiaries in Mexico and Canada to capture the growing intra-North American freight. Some large U.S. trucking firms have already acquired Mexican carriers or set up drop yards near the border. Training staff in cross-border regulations and perhaps hiring bilingual dispatchers and drivers will become more valuable as cross-border traffic rises. **Nearshoring isn't just Mexico** either – some production may come to the U.S. heartland (e.g., new battery factories in the Midwest due to EV investment), which means new lanes for trucking. Being early to service these emerging logistics corridors (for example, between Texas and new manufacturing sites in the Southeast) could yield a competitive edge.

Conclusion

The U.S. trucking industry is closely linked to the broader economy and exhibits cyclical behavior, but recent deviations between GDP growth and freight trends reveal that sector-specific issues like inventory fluctuations and trade tensions can disrupt this relationship. While freight demand is expected to moderately recover as inflation eases and supply chains adapt, carriers will face elevated costs and thinner margins unless significant efficiency improvements are achieved. Persisting trade uncertainties highlight the need for strategic agility in trucking firms—those with flexible operations and diversified freight will be better equipped to adapt. The analysis emphasizes that macroeconomic policies and trade decisions directly affect trucking operations, from vehicle financing to fuel costs and route planning. Looking to 2030, the industry must balance caution with optimism, leveraging innovation and resilience to navigate ongoing disruptions while continuing to power the U.S. economy by connecting goods with markets across the country.

References

1. American Transportation Research Institute (ATRI) & RTS Financial. (2024). *2024 Operational Costs of Trucking* – ATRI Report Summary rtsinc.com. RTS Financial.
2. Brooks, H. (2025, April 14). *Trucking's Tariff Trap: How Trade Wars Could Prolong the Freight Recession* Invest News.
3. Campbell, C. (2023, July 12). *Average operational cost of trucking surpassed $2 per mile in 2022: ATRI* truckingdive.com
4. Fisher, T. (2025, April 22). *Cross-border freight in 2024 propped up by Mexican freight*
5. Reuters. (2023, May 3). *Fed raises rates, opens door to pause in tightening cycle*reuters.com. *Reuters* (H. Schneider & A. Saphir).
6. Rigzone. (2025, Jan 29). *EIA Increases 2025 U.S. Diesel Price Forecast* rigzone.com rigzone.com. Rigzone News.
7. Tilley, M. (2025, April 14). *Trade wars 'likely to extend' U.S. freight recession*. *Talk Business & Politics*.
8. The Trucker News Staff. (2019, August 21). *ATA Freight Forecast projects 25.6% increase in tonnage by 2030*. *The Trucker.com*.
9. United States Bureau of Labor Statistics (BLS). (2023). *Consumer Price Index: 2023 in review*. [Press Release].

10. United States Energy Information Administration (EIA). (2025). *Short-Term Energy Outlook, January 2025* (Diesel price projections) rigzone.com.

11. United States Bureau of Economic Analysis (BEA). (2025). *Gross Domestic Product data, 2022-2024*. Retrieved from https://www.bea.gov (for GDP growth rates)