



# *Policy Note*

---

2024 / 2

## INFLATION

EDWARD LANE

It's the economy, stupid. Well, with all due respect to James Carville and others who see the economy as the most important issue for the election, some clarification is in order. The problem is not the "economy" per se since the US economy—based on GDP growth (currently up over 30 percent since the last election) and other macroeconomic measures—is in fine shape and growing faster than other advanced economies in Canada, Europe, Japan, and Australia.

But a rising tide does not lift all boats, as the economy writ large does not tell you what is happening to individual families and local communities. When people say they are unhappy with the economy, they mean that they are unhappy with their personal situation, that prices for the things they buy every week—food, gas, clothing, shelter—

EDWARD LANE, ASA, CFP®, is a financial advisor and former actuary and professor of finance and economics.

The Levy Economics Institute is publishing this research with the conviction that it is a constructive and positive contribution to the discussion on relevant policy issues. Neither the Institute's Board of Governors nor its advisers necessarily endorse any proposal made by the author.

Copyright © 2024 Levy Economics Institute of Bard College ISSN 2166-028X

have risen faster than they have experienced in several decades. And while real wages have also gone up, for many families the sense that their living standards are slipping is palpable.

So, how did we find ourselves in a world of high prices relative to the period before COVID-19? While a comprehensive analysis is beyond the scope of this policy note, we can try to identify the main contributors. Of course, the immediate proximate cause was the COVID-19 pandemic that struck in late 2019, resulting in factory and business closures, supply chain disruption, COVID-related spending legislation, and price markups by manufacturers and sellers. Then, in February 2022, adding to the pressure on oil and food prices and supply chains, Russia invaded Ukraine.

But it was not all COVID and Russia. As of the end of 2022, for example, the avian bird flu led to the loss of some 90 million chickens and reduced US egg inventories by almost 30 percent (Zamani, Bittmann, and Ortega 2024). According to NOAA data, from 2019 to 2023, the cost of climate-related disasters totaled over \$600 billion.<sup>1</sup> This includes drought conditions in 2023 in Southern and Midwestern states that impacted beef and flour supplies and drought conditions in 2020 that contributed to historically low beef inventory.<sup>2</sup>

Anticipating the potential severity of the economic impact to come, the US Congress quickly passed the bipartisan \$2.2 trillion CARES Act signed by President Trump in March 2020. By that time, unemployment, which had been nearly 9 percent in 2009 and had fallen to 3.6 percent by the end of 2019, was on its way to a peak of nearly 15 percent in April 2020.

While the CARES Act helped reduce unemployment, it was still about twice its pre-COVID level by the end of 2020. Responding to persistent unemployment and with large bipartisan support, Congress passed and President Trump signed the Consolidated Appropriations Act (CAA) in December 2020. At \$2.3 trillion, including an additional \$900 billion for COVID relief, the CAA was one of the largest spending measures ever enacted, surpassing the CARES Act.

Figure 1



In recognition of specific needs not addressed by earlier legislation, President Biden signed the \$1.9 trillion American Rescue Plan (ARP) in March 2021. The ARP targeted funds to those earning less than \$75,000, increased the Child Tax Credit, extended unemployment benefits that were about to run out, and provided money for small businesses and over 100,000 small and medium restaurants. While not a single Republican voted for the ARP, it provided funds to over 30,000 state and local governments,<sup>3</sup> keeping tens of millions of families out of poverty, contributing to a 46 percent

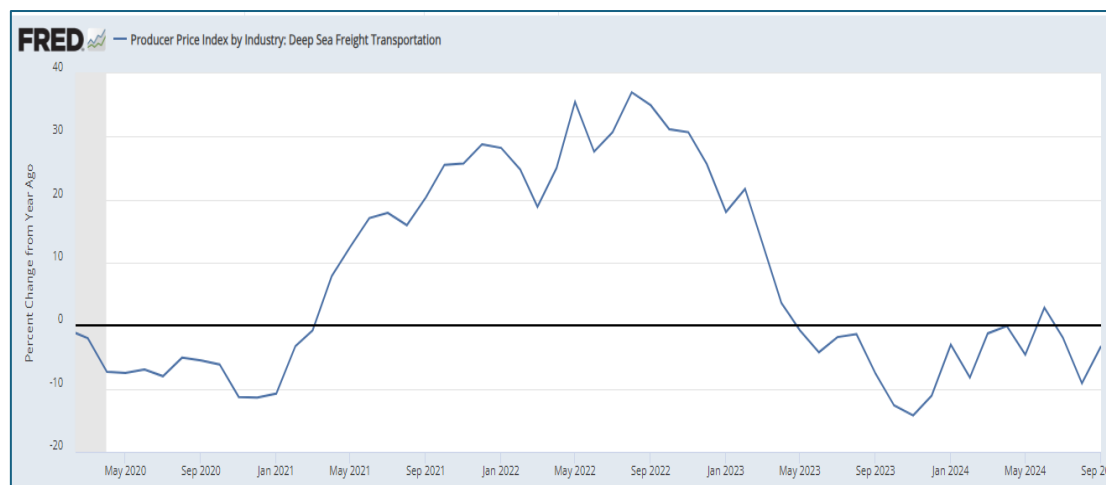
decline in child poverty to the lowest level on record, and keeping foreclosures historically low, among many other targeted achievements.<sup>4</sup>

Parsing the individual causes of inflation and their proportionate impact cannot be done with accuracy. What some people would like to believe—but I do not—is that inflation was caused by COVID-related federal deficit spending legislation (increases in the money supply). One (but not the only) reason I do not count this as a source of inflation is that government spending that is not spent by consumers (i.e., saved or used to pay off debt) cannot cause inflation. For that reason, I focus only on what is spent. Figure 1 illustrates my point.

Figure 1 shows personal savings accounts (the blue line), the CPI-based inflation rate (the red line), and the change in consumer debt (the green line). The peaks in personal savings accounts in April 2020, January 2021, and March 2021 align perfectly with the passages of the CARES Act, the Consolidated Appropriations Act, and the American Rescue Plan discussed above. What this chart demonstrates is that consumers used legislated spending to pay off debt. Inflation actually decreased during this period until about April 2021. With the improving economy, consumer loans exploded in 2021, catching up for lost expenditures in 2020 but also reflecting advancing housing, food, and energy prices.

Rather than focus on increases in the money supply, my approach here is to identify the causes of inflation by focusing on three sources: supply disruptions, inflation-adjusted consumer spending (to parse out that which might be considered attributable to government spending), and consumer spending attributable to price markups (the ratio of a firm’s prices to their marginal cost of production). Psychology also plays a role: expectations of higher prices become self-fulfilling as consumers ramp up current purchases to avoid higher prices in the future and businesses ramp up prices (Kuttner 2022).

**Figure 2**

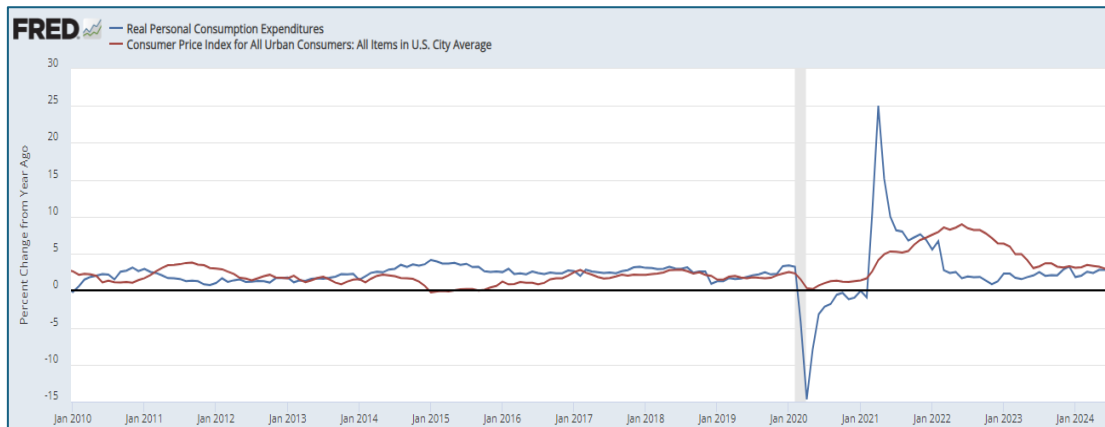


At the top of my list of causes is the disruption in global supply, especially from China, that resulted from the COVID-19 outbreak. The evidence of supply disruption is extensive, including for example a nearly 60 percent reduction in imports from China<sup>5</sup> following the outbreak of COVID-19, and the steep increase in deep-sea transportation costs as

seen in Figure 2. A Federal Reserve Bank of San Francisco study found that supply chain shocks contributed as much as 60 percent to above-trend inflation from April 2021 to March 2023.

Figure 3 examines inflation-adjusted consumer spending, that is, spending increases above inflation.

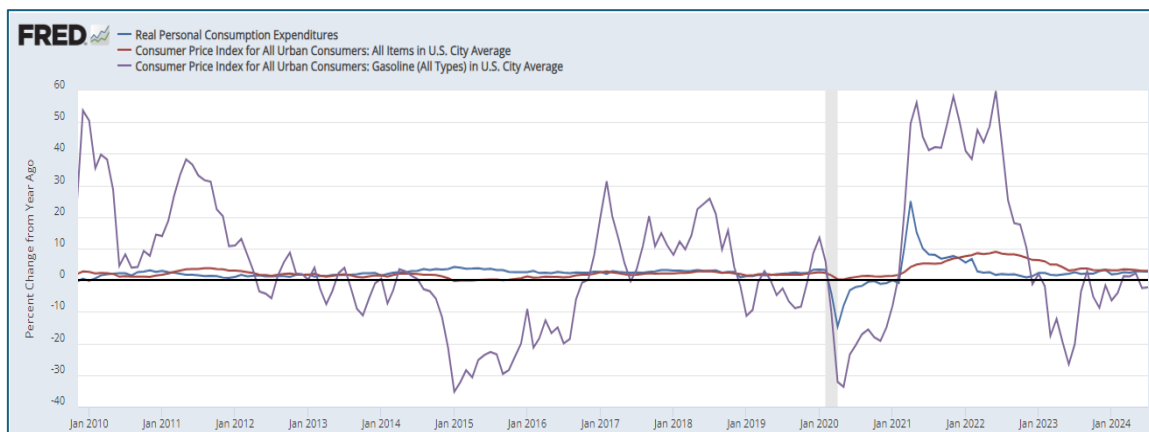
**Figure 3**



Before the pandemic outbreak, inflation-adjusted spending closely followed the inflation rate, ranging between, say, 2 percent and 4 percent above inflation. COVID struck the US at the beginning of 2020, resulting in a sharp reduction in economic activity, including the shutdown of factories around the world, especially in China, a major supplier of goods to the US. Inflation-adjusted (real) consumer spending fell by over 18 percent from the pre-pandemic level by April 2020 but was then restored with the assistance of the CARES Act, the CAA, and the ARP. Taken together, real spending in the period from January 2020 to the spike in April 2021 was essentially a wash as previously lost consumption was restored.

Figure 4 is the same as Figure 3 except that it also depicts gasoline inflation (the purple line). Gasoline inflation (and oil generally)—initially resulting from the Colonial Pipeline cyberattack shutdown in May 2021, and followed by Russia’s invasion of Ukraine in February 2022—kept consumer spending above the broad-based inflation measure until the end of 2022.

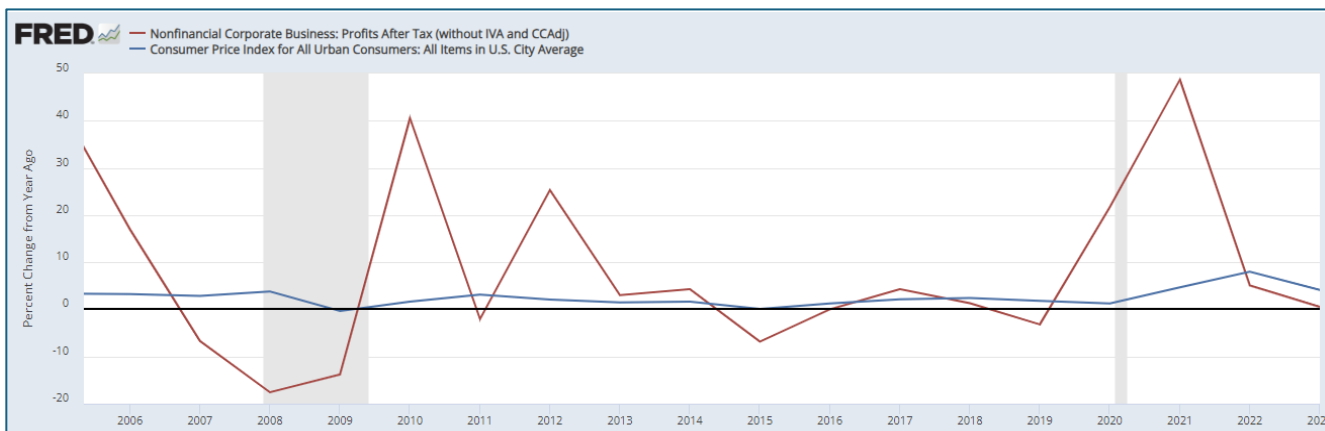
**Figure 4**



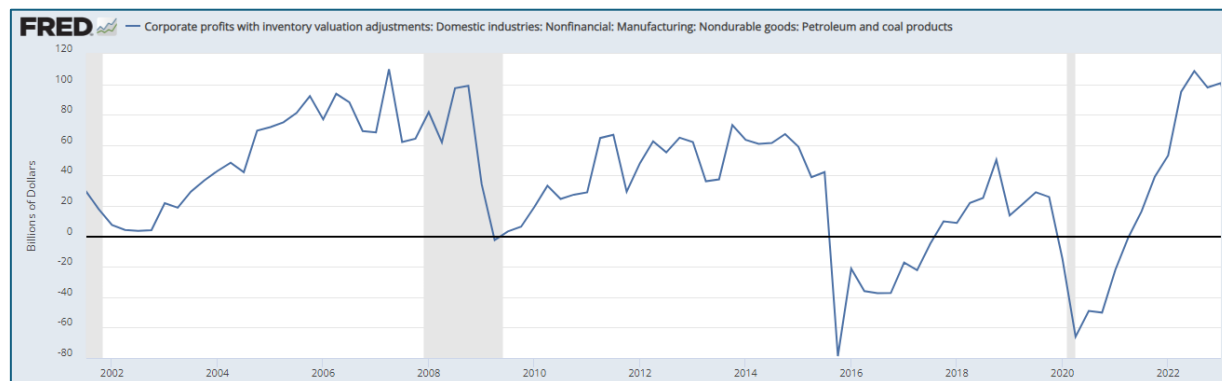
Taking the above charts together, it is clear that pandemic-inspired federal spending legislation had little to do with causing inflation. On the contrary, it resulted in the shortest recession and fastest recovery on record, not to mention it provided a safety net that kept millions of families whole and out of poverty.

On the other hand, though studies vary, inflation attributable to price markups seems to have affected consumer prices. While this is particularly hard to prove for the food industry because some of the largest food producers (for example, Cargill, Mars, and Perdue Farms) are privately held and do not report profits, there are other ways to gain insight. This next chart shows the annual increase in nonfinancial company profits compared to the annual increase in CPI inflation. According to the Federal Reserve Bank of St. Louis FRED charts (Figure 5), the cumulative increase in nonfinancial corporate after-tax profits between 2019 and 2023 was 91 percent while the cumulative CPI-based inflation increase was about 20 percent. Figure 6 shows record profits for the energy industry going back to 2002.

**Figure 5**



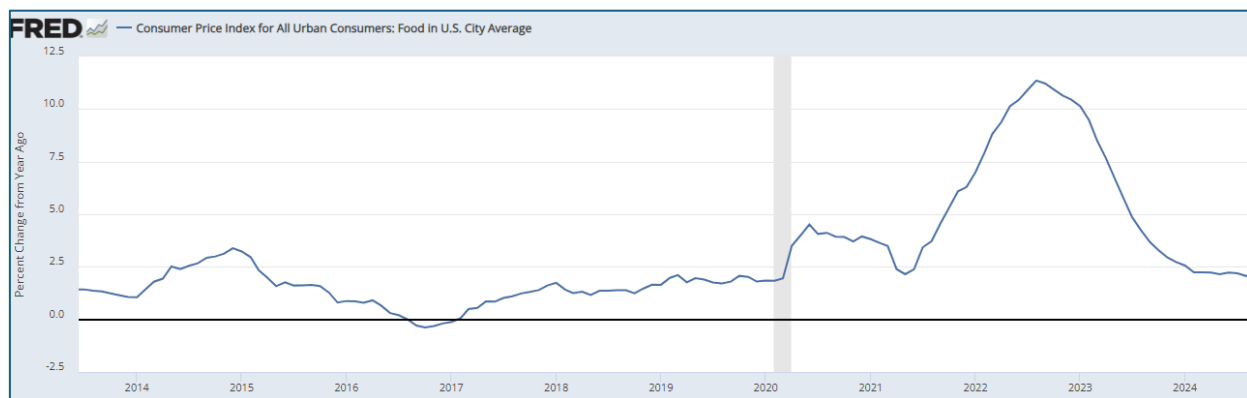
**Figure 6**



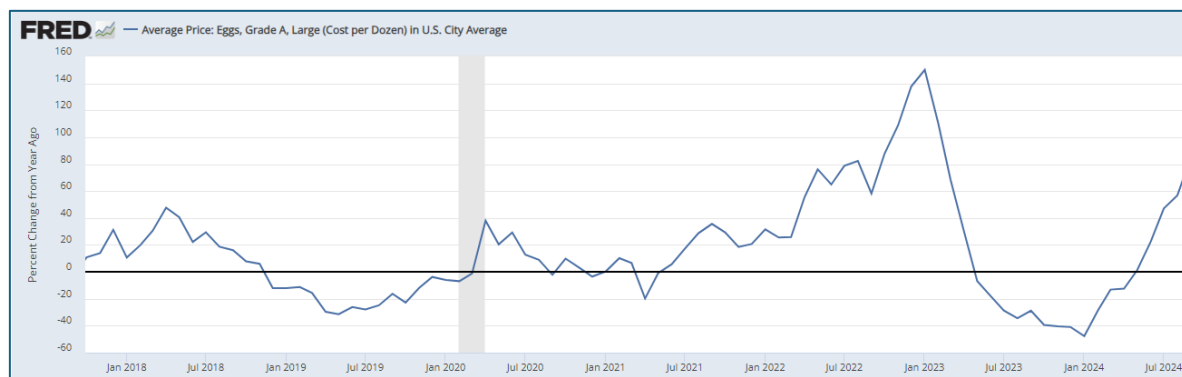
Continuing the focus on inflation-adjusted consumer spending, from the Richmond Federal Reserve we have an analysis of the share of consumer expenditures with 12-month price increases of over 3 percent. In August 2022, that percentage was at its highest level since 1982.<sup>6</sup> In the same study, the Richmond Fed asked firms how important inflation expectations were to how they set prices – the answer was “very important” for over 20 percent of firms, with a strong correlation with inflation. The San Francisco Fed also studied price markups for various industries with similar findings.<sup>7</sup> And according to a study reported by NPR, markups in the food industry also took place following the onset of the pandemic.<sup>8</sup>

I referred earlier to supply shocks in the food industry, some caused by climate-related activity, some by avian bird flu, and some by disruptions stemming from Russia’s invasion of Ukraine. Figures 7 and 8 demonstrate that impact. Outbreaks of avian bird flu occurred in 2022 and again in early 2024.

**Figure 7**

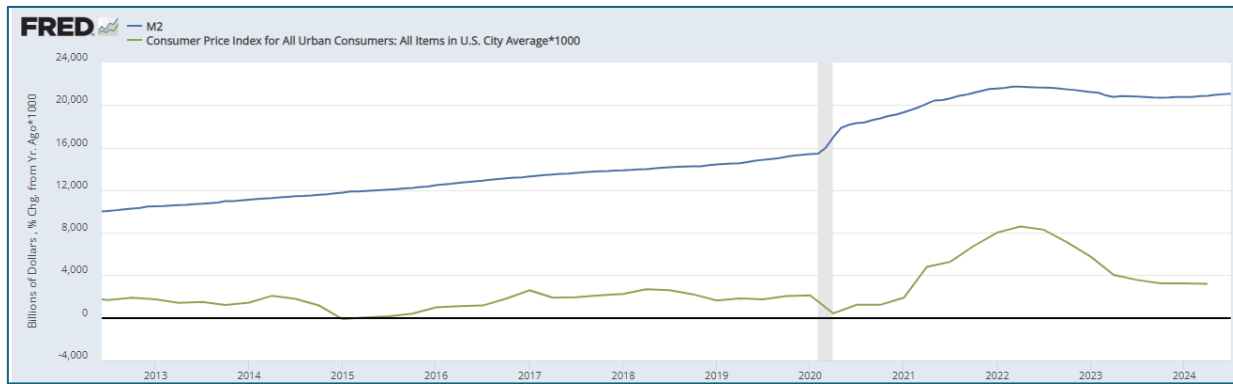


**Figure 8**



As Figure 9 shows, the money supply had been increasing continuously for some time before receiving a bump with COVID-related legislation. It is now similar to its 2022 peak, despite the abatement in inflation since mid-2022, yet inflation has been abating since mid-2022.

Figure 9



So, the above discussion makes clear that factors other than COVID-related spending legislation were responsible for the spike in inflation in recent years. And it can all be boiled down to supply shocks caused by one event or another.

This should not be surprising, since prior year periods of high inflation can be similarly attributed to supply shocks. America's worst inflation occurred following World War I when prices rose over 23 percent from June 1919 to June 1920 and over 80 percent from late 1916 to mid-1920. Inflation peaked again to over 20 percent following World War II and to nearly 10 percent following the Korean War. In all three cases, the wars soaked up the production of consumer goods so that when the wars ended, consumer demand was initially met by a shortage of goods and the inevitable inflation occurred (Roos 2024).

While wars led to high inflation in the first half of the twentieth century, oil shocks dominated the second half. The first shock occurred in 1973 and 1974 with an oil embargo implemented by the Organization of Arab Petroleum Exporting Countries, resulting in a nearly 20 percent increase in energy and over 16 percent increase in the price of food. Overall inflation increased by over 10 percent.

The next major shock occurred in the late 1970s and early 1980s when oil production declined due to the Iranian Revolution and the Iran-Iraq War.

Lesser but still noticeable inflation shocks attributable to energy supplies occurred in late 1990 and early 1991, due to the Iraqi invasion of Kuwait, and again in 2008 when record-high demand from China, the Middle East, and Latin America more than doubled the price of gasoline (Roos 2024).

This history is instructive as we consider the proposals being made by the presidential candidates this year and their potential impact on inflation. This tells us that throughout recent history exogenous events impacting the supply of goods and energy have been the root causes of high US inflation – not legislative or political activity. It also tells us that, for inflation to have an impact on the nation, it must be a result of an event that affects the entire nation. Other than energy supplies or war (so far), it is hard to imagine what such an event would be, since the likelihood of full implementation of either candidate's proposals is not high – both for political and practical reasons.

Also, on account of the different factors that make up the measurement of inflation, the proposals are unlikely to have a substantial effect on overall inflation, although they are more likely to be impactful in isolated sectors or on

certain products (as was the impact on the price of washing machines and related items when former President Trump imposed tariffs in 2018 [Flaen, Hortaçsu, and Tintelnot 2019]).

With the above in mind, what impact might some of the more prominent proposals have? For both Harris and Trump, plans to lower regulations will contribute to lowering inflationary pressures on certain industrial segments, like construction. In addition, for Harris, plans to address the housing shortage may help to lower costs through increasing supply, but may be offset by increased demand. There is not much Harris can do to address price gouging, especially since the Chevron Decision will make it next to impossible to develop the necessary legislation. Her focus on reducing the cost of drugs will be helpful but will have a limited impact on overall inflation, while increased child tax credits may contribute to inflation, but narrowly (Gleckman 2024).

For Trump, two big proposals have the potential to negatively impact inflation on a broad scale: across-the-board tariffs and mass deportations of undocumented immigrants. It is accepted that tariffs increase the cost of goods for consumers both directly and indirectly through substitutes and retaliation. Trump's across-the-board proposals would, if implemented, have a significant impact on inflation (Clausing and Obstfeld 2024; Lincicome 2024), but I do not believe his broad-based tariff proposals will get very far.

The impact of tariffs on the price of oil deserves special attention. Despite the US being a net exporter of oil, it is also a large importer, with petroleum products being the country's third largest import category. In 2023, the US imported about 8.5 million barrels per day, or about 42 percent (!) of its total oil consumption since US refiners cannot process much of the domestic oil produced, including much of the light sweet crude oil produced by fracking. About half of imports come from Canada. Should Trump's proposed all-country tariffs be implemented without country or product exemptions, the price of oil and gasoline would skyrocket, increasing the cost of nearly every good and service. Somehow, I do not think the large oil companies Trump is trying to cater to will be supportive.

It is not only oil that will be affected. Take, for example, Walmart and Target, the two largest merchandise volume importers (Buchholz 2023). Or, take Boeing, the US's largest exporter with 20,000 diverse and international suppliers and customers in approximately 150 countries.<sup>9</sup> How will across-the-board tariffs affect the customer bases these companies serve?

As for mass deportations,<sup>10</sup> with roughly 10 percent of the output of the agriculture, leisure and hospitality, and construction industries attributable to undocumented workers, this proposal, too, may not get very far.

The outlook for future inflation is not good, regardless of past practices and current proposals. Many factors can and will drive future inflation, including pandemics, wars and geopolitical tension, climate catastrophes and global warming generally, trade wars, an aging population, aging infrastructure, and restrictions on immigration, among others. As former Federal Reserve Chair Alan Greenspan and many others have noted, the only way to mitigate inflation is by providing enough real resources, including skilled labor, to produce the goods and services to meet the demand of future consumers. Unfortunately, neither presidential candidate has focused yet on this long-term need.



## REFERENCES

- Beaumont-Smith, G. and T. Smith. 2020. "Eliminating Tariffs on Manufactured Goods Is a Pro-Growth Strategy." The Heritage Foundation, Report. <https://www.heritage.org/trade/report/eliminating-tariffs-manufactured-goods-pro-growth-strategy>.
- Buchholz, K. 2023. "The Biggest US Importers and Exporters." *Statista*. <https://www.statista.com/chart/17448/biggest-us-importers-and-exporters/>.
- Clausing, K. and M. Obstfeld. 2024. "Can Trump replace income taxes with tariffs?" Peterson Institute for International Economics, Special Project. <https://www.piie.com/blogs/realtime-economics/2024/can-trump-replace-income-taxes-tariffs>.
- Flaen, A., A. Hortaçsu, and F. Tintelnot. 2019. "The Production, Relocation, and Price Effects of US Trade Policy: The Case of Washing Machines." Becker Friedman Institute for Economics, Working Paper Series.
- Gleckman, H. 2024. "Trump And Harris Efforts To Fight Inflation Are Unlikely To Succeed." Urban Institute & Brookings Institute, Tax Policy Center. <https://taxpolicycenter.org/taxvox/trump-and-harris-efforts-fight-inflation-are-unlikely-succeed>.
- Kuttner, K. 2022. "Thinking Can Make It So: The Important Role of Inflation Expectations." *Econofact*, January 18, 2022. <https://econofact.org/thinking-can-make-it-so-the-important-role-of-inflation-expectations>.
- Lincicome, S. 2024. "Tariff Myths, Debunked." Cato Institute, Commentary. <https://www.cato.org/commentary/tariff-myths-debunked>.
- Roos, D. 2024. "Inflation: 6 Times Americans Felt the Pinch." *History*, April 22, 2024. <https://www.history.com/news/inflation-prices-economy-wars-pandemic>.
- Zamani, O., T. Bittmann, and D. L. Ortega. 2024. "The effect of avian influenza outbreaks on retail price premiums in the United States Poultry Market." *Poultry Science* 103(10).
- 
- <sup>1</sup> [https://www.ncei.noaa.gov/access/billions/#:~:text=All%20Years%20\(1980%2DPresent\),Cost](https://www.ncei.noaa.gov/access/billions/#:~:text=All%20Years%20(1980%2DPresent),Cost)
- <sup>2</sup> <https://www.climate.gov/news-features/blogs/beyond-data/2023-historic-year-us-billion-dollar-weather-and-climate-disasters>
- <sup>3</sup> [https://www.hklaw.com/-/media/files/insights/publications/2021/03/americanrescueplankeyprovisions.pdf?rev=5e0fe194ccc6450d9b7a1f95e7574550&sc\\_lang=en&hash=54473B15CCB2573C1785B2C3878921C3](https://www.hklaw.com/-/media/files/insights/publications/2021/03/americanrescueplankeyprovisions.pdf?rev=5e0fe194ccc6450d9b7a1f95e7574550&sc_lang=en&hash=54473B15CCB2573C1785B2C3878921C3)
- <sup>4</sup> <https://www.eda.gov/funding/programs/american-rescue-plan/impact>
- <sup>5</sup> <https://libertystreeteconomics.newyorkfed.org/2020/05/how-did-chinas-covid-19-shutdown-affect-us-supply-chains/>
- <sup>6</sup> [https://www.richmondfed.org/research/national\\_economy/macro\\_minute/2024/elevated\\_price\\_increases\\_20240514](https://www.richmondfed.org/research/national_economy/macro_minute/2024/elevated_price_increases_20240514)
- <sup>7</sup> <https://www.frbsf.org/research-and-insights/publications/economic-letter/2024/05/are-markups-driving-ups-and-downs-of-inflation/>
- <sup>8</sup> <https://www.npr.org/2024/09/09/nx-s1-5103935/grocery-prices-inflation-corporate-greedflation>
- <sup>9</sup> <https://www.boeing.com/global#overview>
- <sup>10</sup> <https://immigrantfood.com/mass-deportation-would-hit-these-industries-the-hardest/>