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# Influence of Geopolitics on Commodities: Effects of the 2022 Russia-Ukraine Conflict on the Global Sunflower Products Market

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## Introduction

In February of 2022, Russia invaded Ukraine. Ukraine, nicknamed the "breadbasket of Europe," is a major producer and exporter of agricultural commodities. Many of these foodstuffs, such as corn, wheat, barley, sunflower seeds, oil, and meal, are exported to developing and food-insecure countries. After the war started, there was concern that the agricultural production in Ukraine would decrease, lowering supply and increasing prices for crucial commodities and therefore worsening food insecurity.

The objective is to explore the impact of Russia's invasion of Ukraine on the global sunflower oil market, examining changes in supply, price, and trade routes, and how other countries responded to the disruption.

## Ukraine's Role in the Sunflower Oil Market

The invasion of Ukraine was speculated to cause a drastic change in the supply of sunflower products because, from 2008 to 2022, Ukraine was the top producer of sunflower oil, meal, and seeds (Foreign Agricultural Service, 2022). Ukraine is the top exporter of sunflower oil, accounting for 50% of the global sunflower exports.

Additionally, agriculture is a huge industry in Ukraine as it makes up 10% of Ukraine's GDP, although this is declining due to the war, and more than 40% of its export income and 14% of its employment comes from the agricultural industry (Berman, et al., 2024). This information shows how economically significant agriculture is in Ukraine.

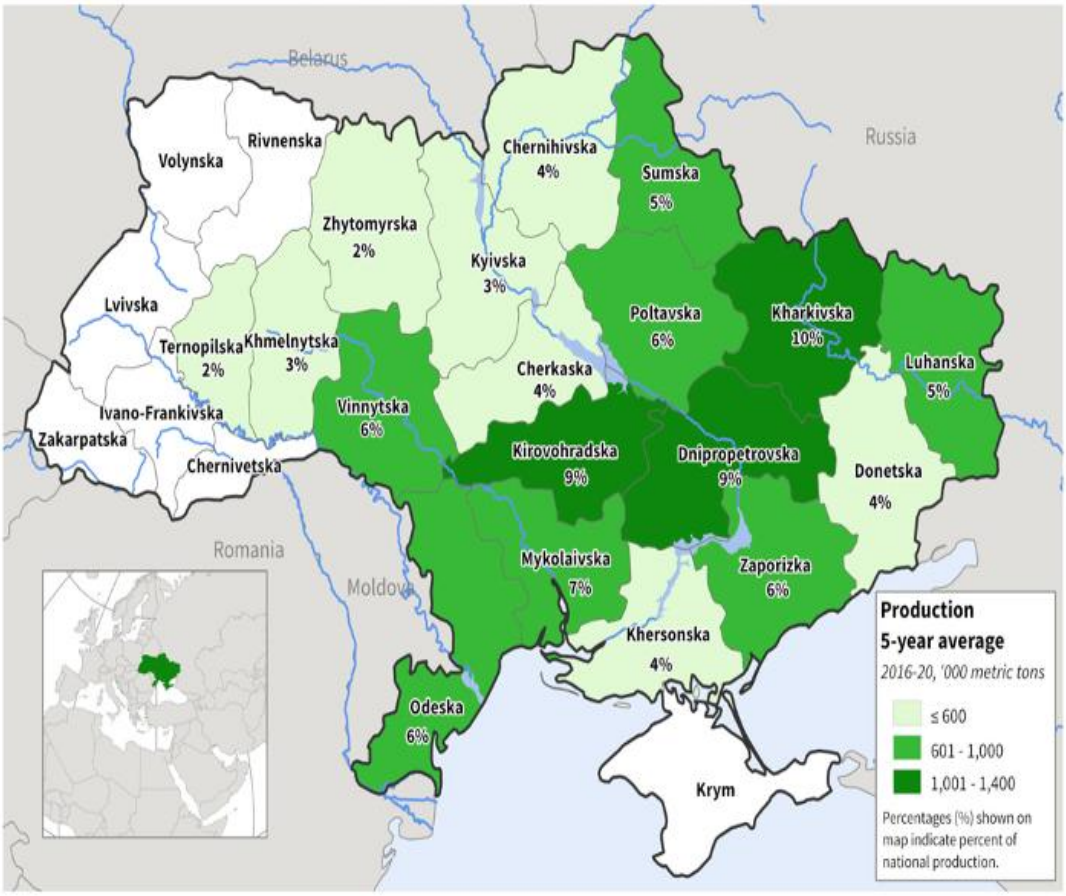


Figure 1: *Map of Sunflower Production in Ukraine*
Note: *Taken from USDA FAS. Data Source: State Statistics Service of Ukraine (Rosstat for Crimea Oblast). This is using a 5-year average.*

Figure 1, using data from the State Statistics Service of Ukraine, shows where sunflower production occurs in the country. The eastern half of the country, where the greatest production is, is also where the most fighting has been.


Figure 2: *Map of Russian and Ukrainian Controlled Areas of Ukraine as of April 2025*
Note: *From the Institute of the Study of War*

To better understand how conflict zones overlap with production zones, Figure 2 maps current areas of control in Ukraine. As seen between the two maps, there is a significant area where sunflowers are usually grown, where there has been fighting.

**Sunflower Market**

In marketing year 2022/23, Ukraine was projected to become the world's third-largest sunflower producer, falling after Russia and the European Union, as production was expected to be down sharply, reflecting challenges from the war (Foreign Agricultural Service, 2022).

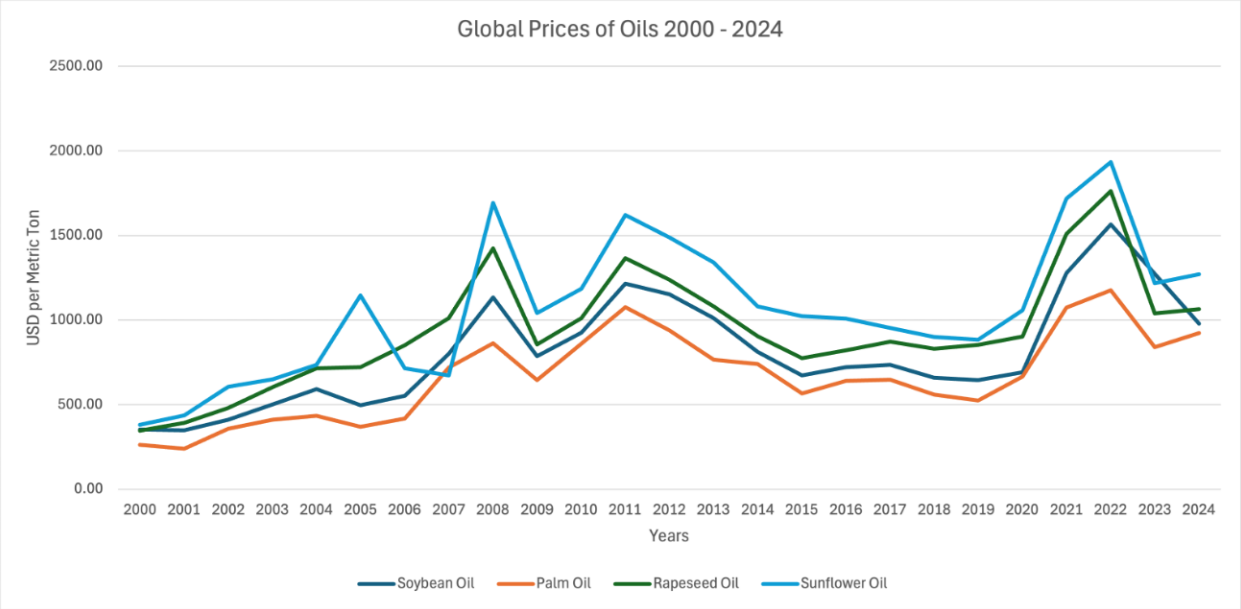


Figure 3: *Global Prices of Oils from 2000 - 2024*
Note: *Data from FAOSTAT*

Since the prices for substitutes usually move together, it makes sense that the global prices for these four main oils peak at the same time (CBI, 2022). As shown in Figure 3, in 2022, sunflower oil peaked at a little under 2,000 USD per metric ton. In 2024, the price of sunflower oil has lowered, and there has been about a $700 decrease in the cost per metric ton (Food and Agriculture Organization of the United Nations, n.d.).

Before the 2022 invasion, according to the Brookings Institution, Ukraine exported an average of around 6 million tons of agricultural commodities to nations in the Middle East, Asia, and Africa each month (Strubenhoff et al., 2022). These commodities include sunflower oil, but also wheat, corn, barley, and fertilizer. Figure 4 shows the top export destinations for Ukrainian sunflower products.

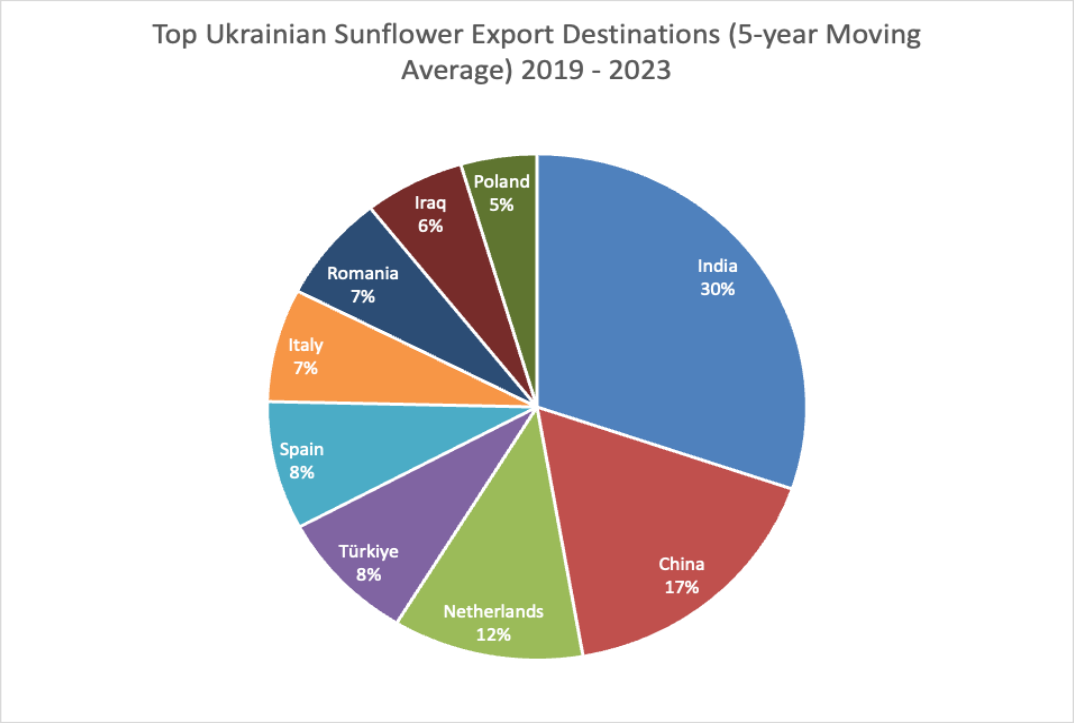


Figure 4: *Ukrainian Sunflower Export Destinations 2019 - 2023*

*Note*: This chart uses a five-year moving average to show trends in Ukrainian sunflower oil exports without so many fluctuations (Data from UN Comtrade Database).

**Global Market Response and Substitution Effects**

Of all vegetable oils produced and consumed globally, sunflower oil accounts for about nine percent of the whole (USDA, 2022). However, sunflower oil is not the only popular edible oil. Other oils, such as palm, soybean, rapeseed, and canola oil, are all considered to be substitutes for sunflower oil (Smith, 2023). Due to global market uncertainty, some consumers have switched from sunflower oil to other products, increasing the demand for substitutes and decreasing the demand for sunflower oil. However, since demand is increasing for these products, "Supplies of these alternatives are expected to be tight in the 2021/22 marketing year, contributing to elevated vegetable oil prices" (USDA, 2022).

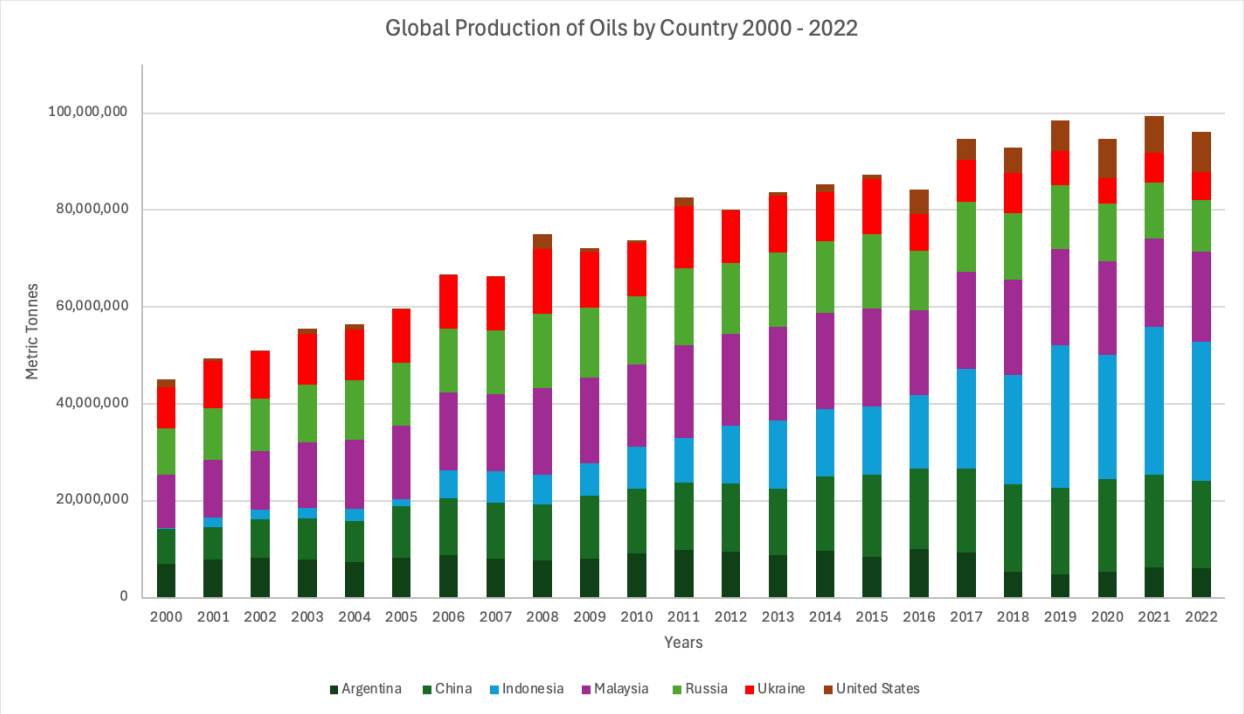


Figure 5: *Global Production of Oils by Country, 2000 - 2022*

Note: *Data from FAOSTAT*

Figure 5 above shows the production of various oils by country over the past two decades. Global oil production has increased as health awareness has changed, and the demand for edible oils has increased. Countries like Malaysia and Indonesia dominate due to palm oil, while Ukraine and Russia are key producers of sunflower oil. Palm oil, while cheap, is not considered to be very healthy, and there are concerns over how it is produced. On the other hand, sunflower oil is one of the healthiest edible oils, but it is also quite expensive.

Major producing countries like Argentina, Russia, and parts of the EU increased sunflower production in response to higher prices, a greater market share, and lowering supply from Ukraine. Russia, in particular, has benefited from having a larger market share; in the 2024/25 marketing year, they accounted for 33% of global production, with Ukraine producing 26% of the global total (FAO, n.d.). This is a readjustment from prior to the 2022 invasion, when Ukraine was the top producer. However, due to the length of time it takes to grow sunflowers and produce sunflower oil, these production adjustments in other countries have not fully replaced Ukraine's role in the sunflower oil market.

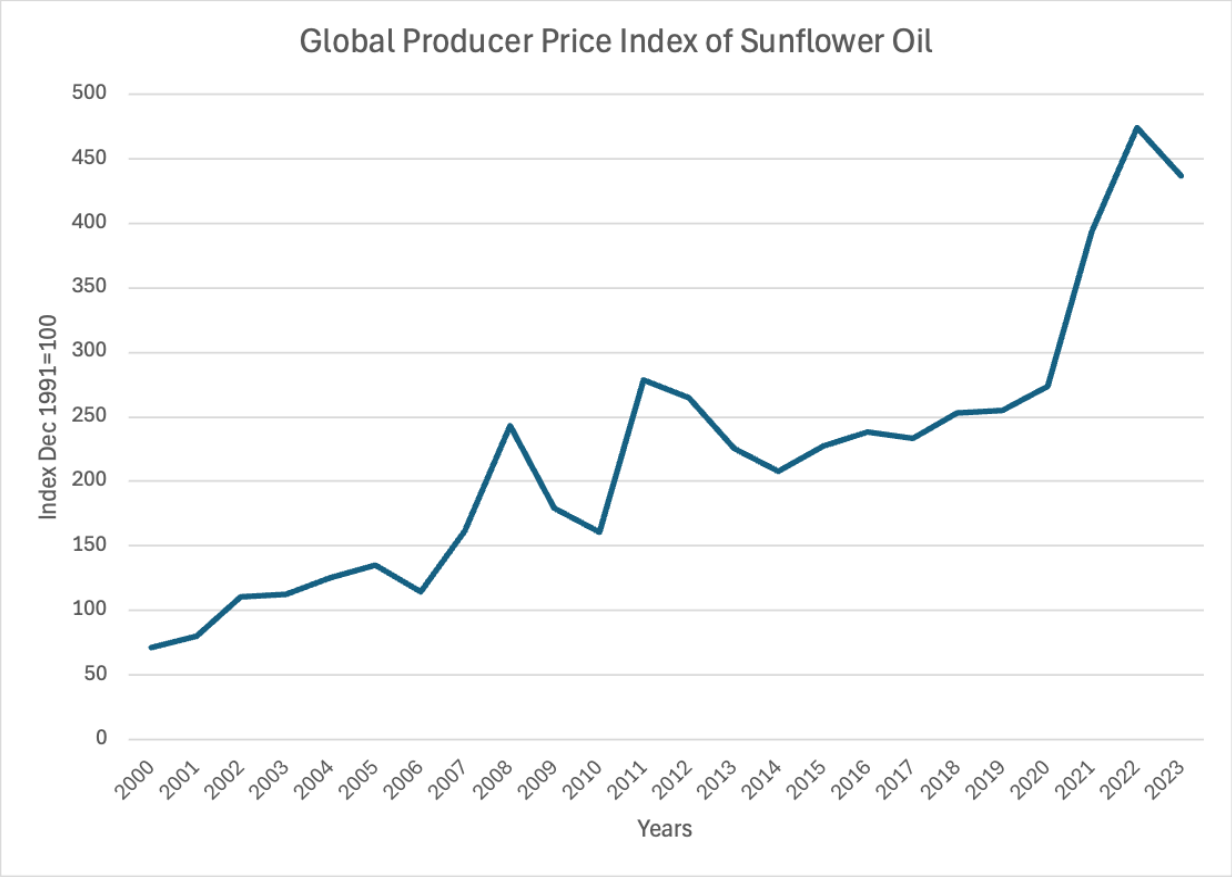


Figure 6: *Global Producer Price Index of Sunflower Oil*

Note: *Data from FAOSTAT*

Examining the impact of the war from the producer side, the Producer Price Index (PPI) is a helpful metric because the PPI measures the average change over time in the prices that producers receive for their goods. It tracks how much producers are paid at the wholesale level, before goods reach consumers. A rising PPI is usually indicative that producers are getting higher prices for their goods, which can lead to higher consumer prices later. In Figure 6, the PPI clearly peaks in 2022, as it costs more to produce sunflowers after Russia invaded Ukraine (Food and Agriculture Organization of the United Nations, n.d.).

Although prices clearly increased during the spring of 2022, they have since settled down. Additionally, even when the war began, prices were already high due to supply chain issues following the pandemic.

**Impacts of Sunflower Market Disruptions**

When prices for commodities rise, the cost of food also increases because commodities make up what is consumed. Especially in low-income areas and countries, the rising cost of food has a significant effect on hunger and diet quality (Arndt et al., 2023). The war between Russia and Ukraine has "both created new food insecurity and highlighted existing systemic weaknesses in international food security" (Behnassi et al., 2022). Additionally, high food prices and increased food insecurity "will bring with it wider health and social consequences, such as medical conditions associated with malnutrition as well as social unrest and crime (Emediegwu, 2024).

The invasion of Ukraine has significantly impacted the supply, demand, and prices of sunflower products. Due to fighting, it has been difficult for Ukrainian producers to continue growing, processing, and supplying sunflower products. Although many price increases have been linked to the war in Ukraine, it is challenging to specify how this conflict has impacted different countries due to the fact that each individual country has specific needs, production opportunities, and trade agreements (Arndt et al., 2023). However, even two years after the invasion, food shortages still persisted (Emediegwu, 2024).

Since it takes many months to grow and produce sunflowers and process them into oil, any delay in production or transportation has a severe negative impact on the supply. Due to the destruction of fields, danger of working in unprotected agricultural areas, lack of laborers, and disruption to the entire production line, Ukraine's ability to produce and export sunflower products has decreased. This causes sunflower products to increase in price. Despite the risks, Ukraine's dependence on agriculture as a major economic driver has created strong incentives to maintain production where possible. Even though Ukraine's production decreased since Ukrainian farmers had to abandon millions of acres of farmland, the country still found a way to keep this crucial industry afloat.

According to a report from the Brookings Institution, as of the summer of 2022, Ukraine was only exporting about 15 to 20 percent of its previous typical volume of agricultural commodities to other countries. Since Russian ships and sea mines were blocking Ukrainian ports on the Black Sea, all of the country's exports had to go by rail, truck, or on the Danube River (Strubenhoff et al., 2022).

Ukraine has a strong presence in the oilseed - especially sunflower - market. Ukraine has created a powerful crushing industry (the process that produces oil from sunflower seeds) that produces sunflower oil. In 2020, 52% of the world's globally traded sunflower seeds and oil were produced in Ukraine. In the spring of 2022, the supply chains for edible oils, such as sunflower oil, were heavily disrupted, and these oil prices had increased even higher than the prices for cereals, which had also become very high (Strubenhoff et al., 2022). At this time, Vegetable Oil prices increased by 8.5% (FAO, 2022). In 2022, the food price index was 24.1% higher than it was in 2021 (FAO, 2022). In March of 2022, the Food and Agriculture Organization of the United Nations Food Price Index peaked at 36.2 points above where it was in May of 2025 (FAO, 2025).

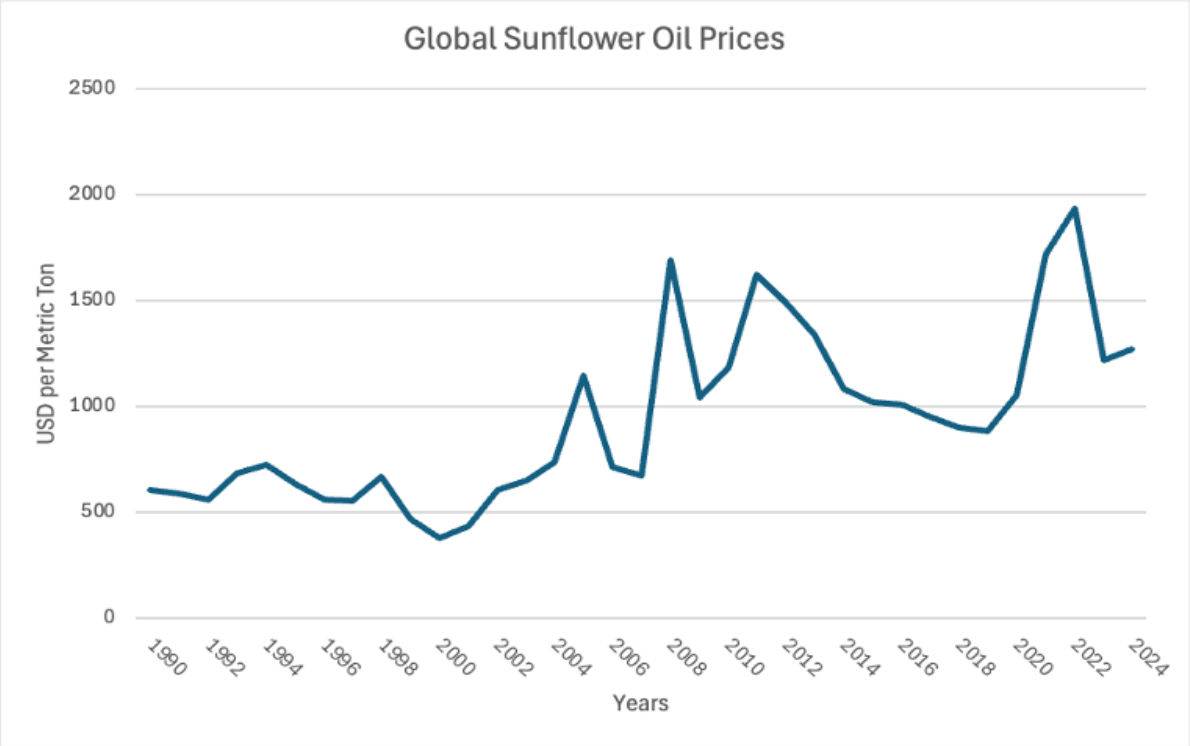


Figure 7: *Global Sunflower Oil Prices*
Note: *Data from Federal Reserve Economic Data*

As shown in Figure 7, there was an increase in sunflower oil prices in 2022, but it did not last. Other cooking oils and countries increased production (substitution), which helped lower the prices. As previously mentioned, the global price for sunflower oil in 2022 was a little under $2000 USD per metric ton, and now the price is at about $1300 USD per metric ton. This figure highlights how extreme the impact of the invasion was on the global sunflower oil market.

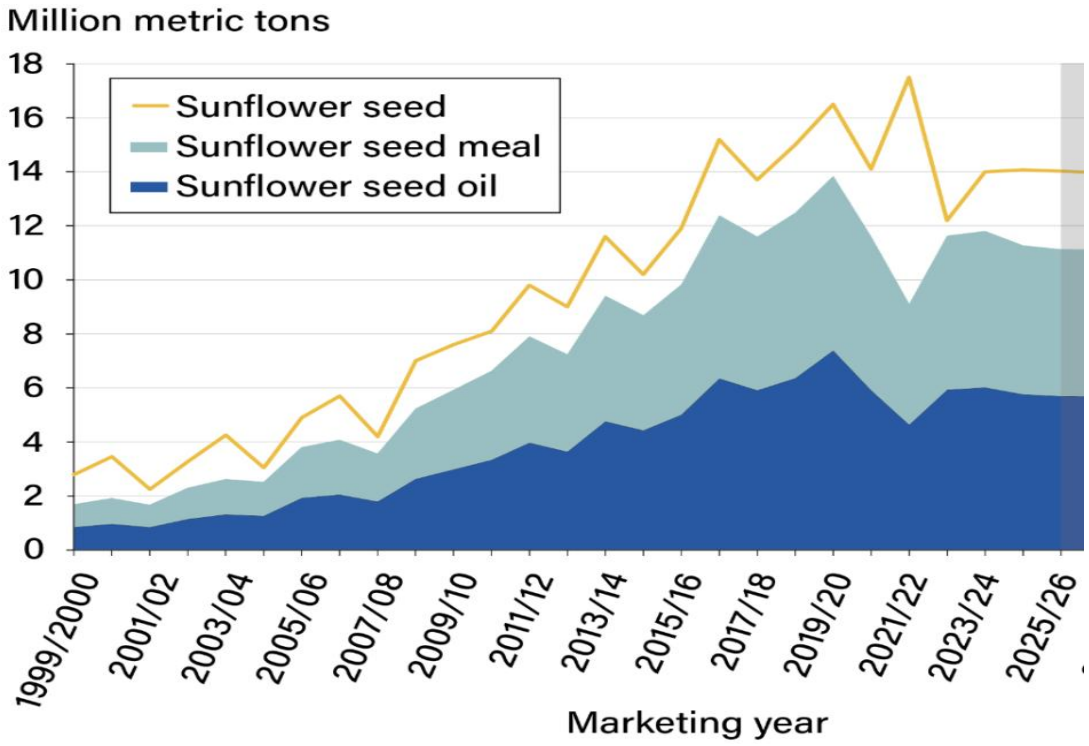


Figure 8: *Ukrainian Sunflower Products Produced*
Note: *Taken from the U.S. Department of Agriculture, 2024*

Figure 8 looks at sunflower products produced in Ukraine (USDA, 2024). Even though the market has adjusted after the initial shock from the invasion in 2022, the projection is that production for Ukrainian agricultural commodities will be lower in the next decade. Production of sunflower products is expected to remain below their pre-war levels. Because of this projected lower supply, other countries will either have to produce more of their own sunflower products or find other substitutes (USDA, 2024).

**Conclusion**

When Russia invaded Ukraine in February of 2022, the global market for sunflower products was immediately disrupted, revealing that geopolitics has a profound impact on agricultural commodities. This disruption led to skyrocketing prices, various supply chain issues, and greater stress on global food security. Although there has been market stabilization, and the situation surrounding sunflower oil prices has steadied out, Russia's invasion of Ukraine has still caused many negative effects, including the strain placed on developing countries that are reliant on Ukrainian exports. This analysis highlights the interrelatedness of geopolitical issues and commodities.

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