FONDATION POUR LES ÉTUDES ET RECHERCHES SUR LE DÉVELOPPEMENT INTERNATIONAL

LA FERDI EST UNE FONDATION RECONNUE D'UTILITÉ PUBLIQUE.
CETTE PUBLICATION A BÉNÉFICIÉ D'UNE AIDE DE L'ÉTAT FRANCAIS AU TITRE
DU PLAN D'INVESTISSEMENT FRANCE 2030 PORTANT LA RÉFÉRENCE ANR-16-IDEX-0001.

Uncertainty Matters for Trade: Uncovering the Heterogeneous Effects

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A World of Rising Uncertainty

The ongoing global trend is marked by increasing geopolitical fragmentation, leading to policy differences, longer supply chains, and heightened uncertainty. Recent events such as the war between Russia and Ukraine, conflicts in the Middle East, and trade disputes between the United States and China demonstrate this global uncertainty. The World Uncertainty Index has steadily increased since the 1990s and peaked in 2020 due to factors like US-China trade tensions, Brexit, and the coronavirus pandemic.

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Why Does Uncertainty Matter for Trade?

The pervasive nature of economic uncertainty has long been acknowledged as a significant barrier to economic expansion. Heightened levels of uncertainty can lead to reduced investment, decreased consumer expenditure, and an overall slowdown in economic activity as businesses and individuals adopt a more cautious stance. Consequently, this phenomenon can impede growth and hinder economic recovery during periods of crisis.

Uncertainty significantly influences global trade. When future policies are ambiguous, businesses may hesitate to invest in new production facilities or export markets, reducing trade activities. Furthermore, frequent changes in government, elections, or other political events can create uncertainty about the future course of trade policy and frequent trade terms, dissuading businesses from participating in trade. At the national level, uncertainty affects trade through its impact on policy mis-forecasting and constraints. Monetary and fiscal policies hinge on future forecasts and become less effective under high uncertainty. Debt sustainability assessments and economic policies, such as inflation targeting, suffer from forecast alterations. Periods of high uncertainty are often linked to heightened trade restrictions. The World Trade Organization (WTO) reports a significant rise in trade restrictions during the pandemic, especially at the onset of the conflict in Ukraine. The number of export restrictions now surpasses import restrictions, adversely affecting international trade within our interconnected world.

The unequivocal impact of uncertainty on global trade has become increasingly evident. For example, recent Houthi attacks have compelled major shipping companies to announce their plans to bypass the Red Sea and, consequently, the Suez Canal. This has necessitated ships traveling from the Far East to Europe to take an alternate route around the entire African continent, passing through South Africa's Cape of Good Hope. This detour is expected to significantly prolong the journey by more than a week and add approximately 3,500 nautical miles (6,482 kilometers)[1]. The Suez Canal, typically accommodating around 12 percent of global shipping traffic by connecting the Red Sea and the Mediterranean, offers the shortest route linking Europe to Asia. These disruptive events have escalated shipping costs and intensified pressures on already-stretched supply chains.

Data clearly shows that trade suffers when geopolitical tensions heighten. Let's look at three recent events with similar outcomes. First, during President Trump's election in November 2016, the World Uncertainty Index (WUI)2 noted a significant 3.2 percent surge in global uncertainty. This was quickly followed by a 2 percent decline in global trade the following quarter, signaling the immediate adverse effects of heightened uncertainty on global trade. Second, the onset of the COVID-19 pandemic in the first quarter of 2020 led to a substantial rise in the WUI and a marked decline in trade growth during the same quarter. Finally, during the first quarter of 2022, the WUI experienced another notable uptick due to heightened geopolitical tensions arising from Russia's invasion of Ukraine. As expected, this increase in uncertainty was followed by a substantial drop in trade growth during the same period, indicating the potentially negative impact of heightened uncertainty on global trade. Notably, the correlation between increased global uncertainty as measured by the WUI and the subsequent decline in trade growth in all three instances supports the view that elevated uncertainty levels tend to influence global trade negatively (see **Figure 1**). This is evidenced by the heightened caution exercised by businesses and governments, resulting in reduced cross-border trade activities.

1. Cf. Martin, 2023.
2. See: https://worlduncertaintyindex.com/.

The impact of uncertainty on trade is well-documented, yet many intricacies remain elusive. A recent working paper[3] from the International Monetary Fund highlights these concerns, drawing on a comprehensive dataset spanning 143 nations over four decades. The analysis confirms that heightened levels of uncertainty, such as those observed between Russia and Ukraine when the war started in 2022, have led to a drop of 4 percent in bilateral trade. Nonetheless, the depth and intricacies of this relationship are not well documented in the literature. The impact of uncertainty on trade can vary significantly depending on the specific products, sectors, and regions involved.

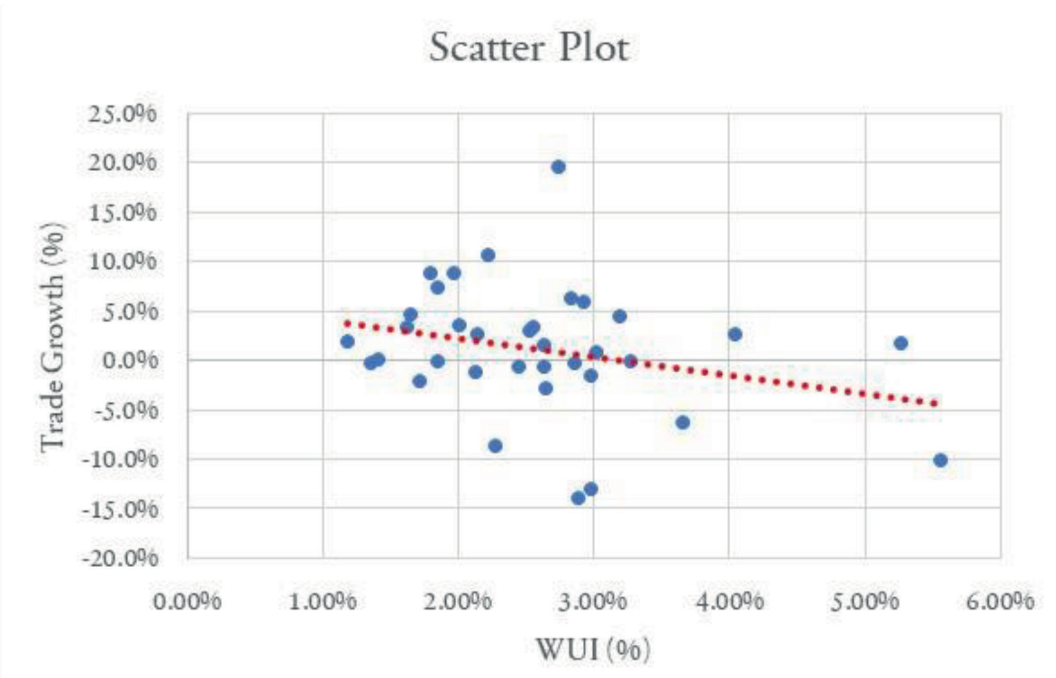
3. Cf. Nana, Ouedraogo & Tapsoba, 2024.

Uncovering the Heterogeneous Effects of Uncertainty

Fact 1 | *Manufacturing and mineral fuel trade is particularly susceptible to uncertainty*

The manufacturing industry relies heavily on complex global value chains across multiple countries, involving intricate production processes. Disruptions in the value chain can lead to delays, increased costs, and decreased efficiency. Additionally, manufactured goods have shorter shelf life and are more vulnerable to changes in consumer preferences, market conditions, and economic fluctuations than primary products. Uncertainties such as trade disputes and geopolitical tensions can disrupt supply chains and reduce demand within the manufacturing sector. Moreover, trade in mineral fuel products, including oil, gas, and coal, is notably vulnerable to uncertainty due to their strategic significance and geopolitical implications. These products play a crucial role in global economic activities

Figure 1. Uncertainty and trade growth.



Source: WUI from Ahir, Bloom, and Furceri (2022) and quarterly trade data from the IMF.

and energy security. Any uncertainty surrounding mineral fuel products' availability, pricing, or geopolitical stability can have far-reaching consequences. Estimates indicate that the level of joint uncertainty between Russia and Ukraine observed during the onset of the Russia-Ukraine war in 2022 led to a 4.5 percent decline in manufacturing trade and a 3.6 percent decrease in mineral and fuel trade. The exchange of primary goods experienced a more moderate decline of 2.3 percent (see **Figure 2** below).

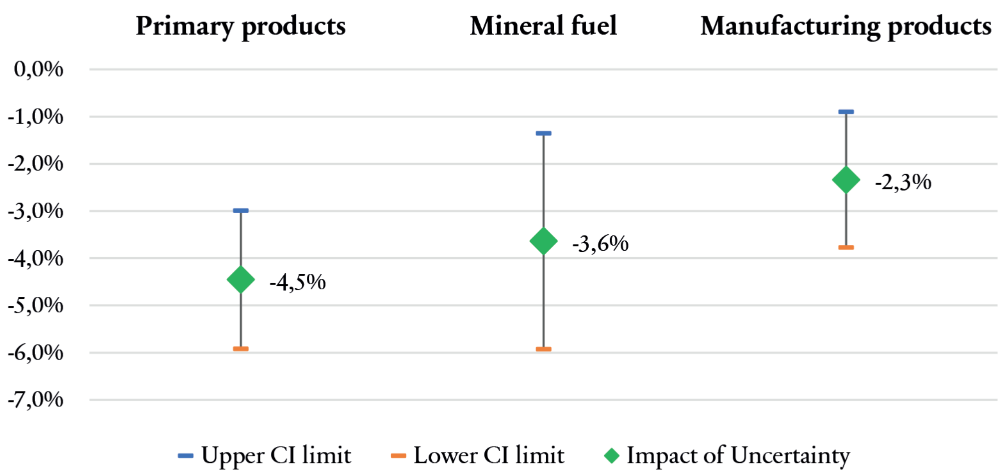
Fact 2 | *Trade between developing countries is more significantly affected by uncertainty than trade between advanced economies.*

Trade between developing economies is more vulnerable to uncertainty than trade between advanced economies. Developing economies heavily rely on international trade and capital flows, making them vulnerable to global economic fluctuations. Any uncertainty in the global economic environment can significantly impact trade volumes, investment inflows, and overall economic stability in developing economies. Moreover, developing economies are often characterized by reduced institutional quality, limited diversification and buffers to absorb new shocks, and heavy reliance on specific sectors or commodities, which worsens the impact of uncertainty and makes it harder to adapt and manage risks. Furthermore, developing economies may need more resources and policy tools to address uncertainty, making them more vulnerable than advanced economies. The evidence suggests that uncertainty significantly impacts trade in developing economies, causing substantial decreases in bilateral trade with the rest of the world (see **Figure 3** on next page). Intra-African and European trade have been substantially affected by this uncertainty.

Fact 3 | *Deeper trade integration helps mitigate the adverse impacts of uncertainty. However, progressing along the global value chain can also increase risks.*

The World is experiencing unequal distribution of globalization and trade integration benefits. These issues have increased doubts about working together globally, making inward-focused policies more appealing. Recent events have

Figure 2. Impact of uncertainty on trade – by industry



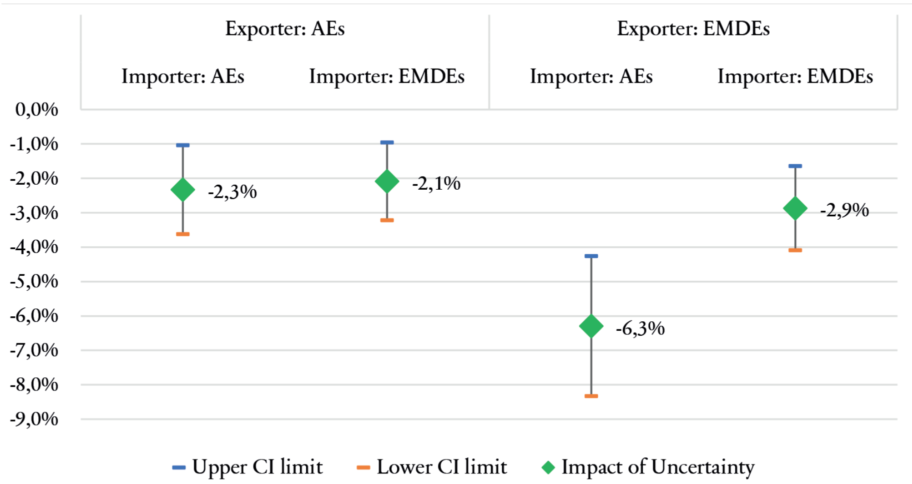
Source: Estimates based on Nana, I., Ouedraogo, R., & Tapsoba, S. (2024). The figure displays the impact of an increase in joint uncertainty equivalent to the level of joint uncertainty between Russia and Ukraine in 2022, with 95% CI.

caused supply chain disruptions and brought economic separation's potential advantages and disadvantages to policy discussions. Given this growing uncertainty, these factors are likely to influence the impact of uncertainty on trade. Although the effect of uncertainty on trade seems clear, deeper levels of trade integration (horizontal integration) can help mitigate its adverse effects. The more closely two countries are connected through trade, the more uncertainty can affect their trade relationship. However, when countries are heavily integrated and have no choice but to trade with each other, uncertainty becomes less critical. For country pairs with low trade intensity such as the US and Burkina-Faso in 2020, an increase in lagged joint uncertainty close to the level of joint uncertainty between Russia and Ukraine observed during the onset of the Russia-Ukraine war in 2022 is associated with an approximately 7.3 percent decrease in bilateral trade. However, for unavoidable trading partners such as the US and Canada in 2020, a similar hike in joint uncertainty would decrease bilateral trade by 0.37 percent (see **Figure 4** on next page).

On the other hand, participating in the global value chain (vertical horizontal integration) can be risky and rewarding. This process involves manufacturing products in various stages, with each stage adding value and at least two stages taking place in different countries. While cooperation among companies in different locations is essential for this arrangement, countries are more susceptible to unexpected events and uncertainty. The more involved a country is in global value chains, the more negative the impact of uncertainty on its international trade. A hike in lagged joint uncertainty similar to the level of joint uncertainty between Russia and Ukraine observed during the onset of the Russia-Ukraine war in 2022 in less integrated countries into GVCs (e.g. Benin and Afghanistan in 2021)[4] decreases bilateral trade by 2.6 percent against a 5.6 percent decrease for a well-integrated country (e.g., Singapore and Hong-Kong in 2021) (see **Figure 5** on next page).[5]

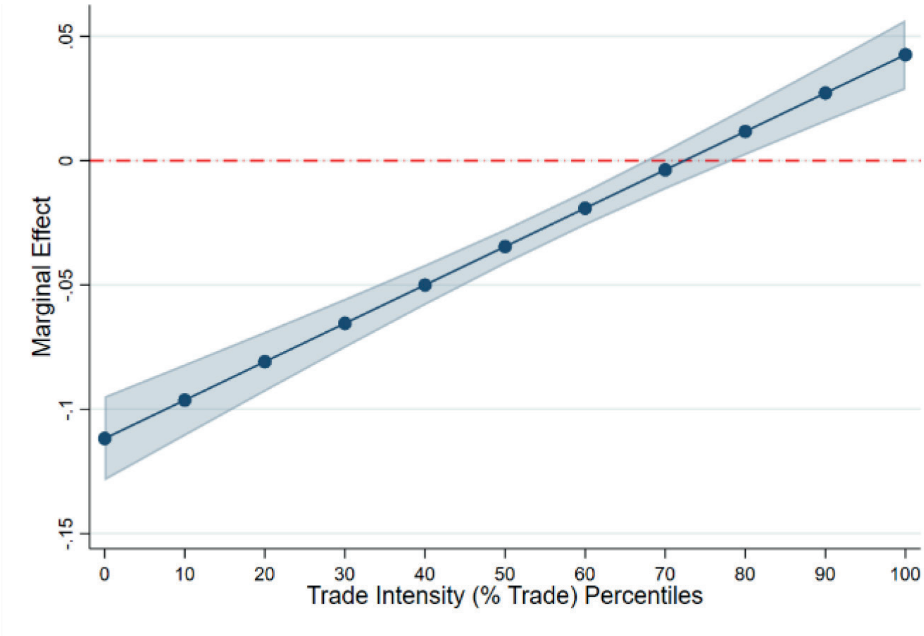
4. Less integrated countries refer to countries with 25 percent joint GVCs participation or less.
5. Well-integrated countries refer to countries with 75 percent of joint GVCs participation or higher.

Figure 3. Impact of uncertainty on trade – by economy type.



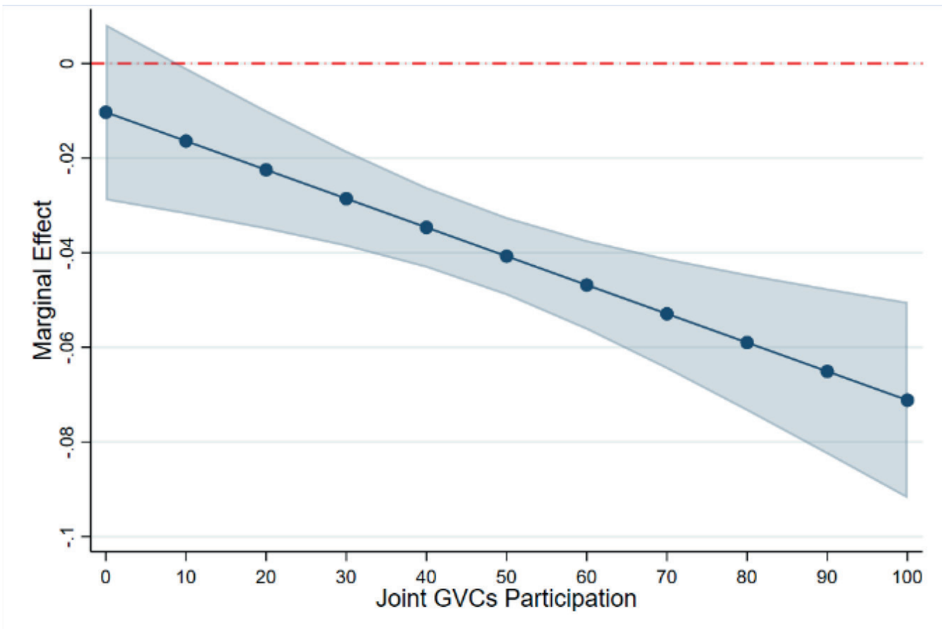
Source: Estimates based on Nana, I., Ouedraogo, R., & Tapsoba, S. (2024). The figure displays the impact of an increase in joint uncertainty equivalent to the level of joint uncertainty between Russia and Ukraine in 2022, with 95% CI.

Figure 4. The Impact of Uncertainty Depends on Trade Intensity - Marginal Impact



Source: The authors' calculations are based on the estimates' results. The figure represents the marginal impact of joint uncertainty with a 95 percent CI.

Figure 5. The Impact of Uncertainty Depends on GVC participation- Marginal impact



Source: The authors' calculations are based on the estimates' results. The figure represents the marginal impact of joint uncertainty with a 95 percent CI.

Fact 4 | *Building solid diplomatic relationships can help reduce the deterrent impact of uncertainty on international trade.*

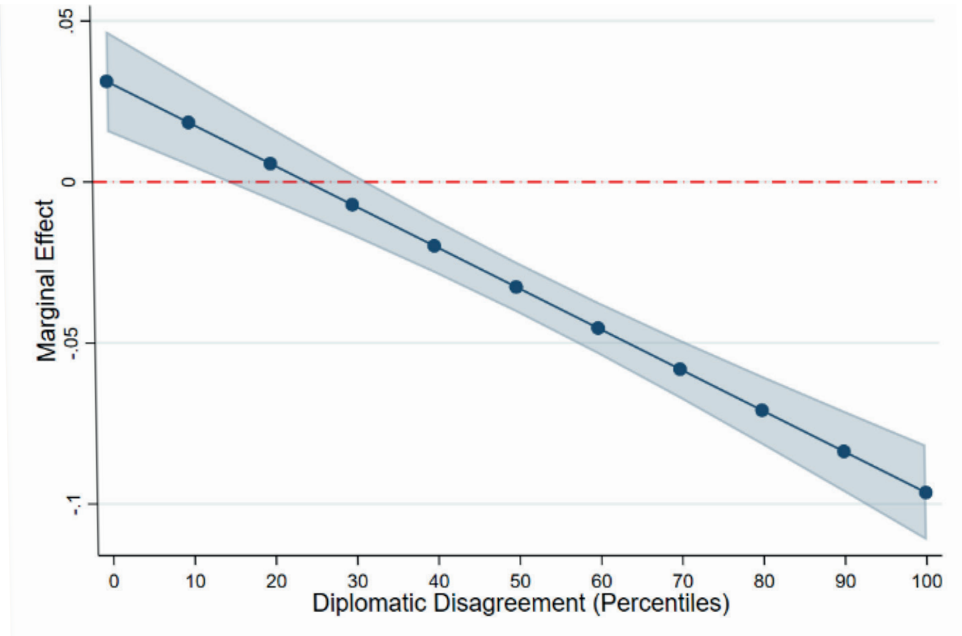
Diplomatic agreements significantly influence trade uncertainty in several ways. Political proximity enables diplomatic discourse to reduce uncertainty's impact on trade. Robust diplomatic relationships often lead to trade pacts, potentially lessening tariffs, simplifying customs, and establishing clear trade regulations. Positive diplomatic ties cultivate trust among nations, reducing risks for international businesses and encouraging more significant investment and trade. Diplomatic channels efficiently resolve trade disputes and facilitate the exchange of market information. While strong diplomatic connections favorably impact trade, economic conditions, infrastructure, and regulatory frameworks also play crucial roles in determining trade magnitude. Estimates show that for friendly countries with less diplomatic frictions such as the US and Israel[6], an increase in lagged joint uncertainty close to the level of joint uncertainty between Russia and Ukraine observed during the onset of the Russia-Ukraine war in 2022 would lead approximately to a negligible 0.067 percent decrease in bilateral trade compared to a 6.4 percent decrease in bilateral trade following a similar hike in joint uncertainty between high diplomatic rivals such as Germany and China (see **Figure 6** below).[7]

Wrapping Up

In recent years, global geopolitical dynamics have been marked by the emergence of regional conflicts and unrest, exemplified by events

6. Friendly countries are countries considered at the 25th percentile of diplomatic disagreement or less.
7. High diplomatic rivals refer to nations at the 75th percentile of diplomatic disagreement or higher.

Figure 6. The Impact of Uncertainty Depends on Diplomatic Disagreement - Marginal Impact.



Source: The authors' calculations are based on the estimates' results. The figure represents the marginal impact of joint uncertainty with a 95 percent CI.

such as the Russia-Ukraine war and escalating tensions in the Middle East. These developments have engendered substantial global uncertainty. Notably, the consequential impact of this uncertainty on international trade has been conspicuous. This report provides an in-depth analysis to aid policymakers in comprehending the intricacies and potential mitigating strategies. Drawing from current evidence, the report contends that the production and trade of mineral fuels are particularly susceptible to unpredictability. Uncertainty disproportionately affects trade between developing nations compared to trade among advanced economies. Improved trade linkages can mitigate the adverse effects of uncertainty. Nonetheless, advancing in the global value chain can also magnify risks. Fostering robust diplomatic relations can minimize the detrimental influence of uncertainty on international trade.

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n° ISSN : 2275-5055

Publication director: Patrick Guillaumont

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