



Supply Chain Management Series

Part One: Building a Resilient Supply Chain in the Face of Geopolitical Uncertainty (March 2024)

As we learn from the business world, we want to share that information with our community of educators and business professionals. Several recent focus panels on the topic of supply chain management (SCM) have highlighted a growing trend within supply chains: the need for adaptability and resilience in response to geopolitical insecurity around the world.

This Action Brief explores the global events impacting supply chains and the strategies businesses are adopting to strengthen their supply chains, from procurement to final-mile delivery.

The Growing Need for Geopolitical Awareness

In a recent focus panel, a panelist likened a supply chain network to a spider's web—even the slightest disturbance or agitation can be felt everywhere else within the web.

Supply chains have certainly felt plenty of these disturbances in the past few years. Since the [chaos](#) brought about by the COVID-19 pandemic, global supply chains remain in a delicate state. Amidst signs of improvement—such as the [shipping container boom](#) of 2023 and [above-average wage growth](#) in the manufacturing sector—are persistent supply chain headaches stemming from global conflicts, shifting foreign and domestic policies, and environmental calamities.

In response, supply chain professionals everywhere, including in our focus panels, have emphasized a greater need for geopolitical awareness. In that same spirit, let's discuss a few key global issues impacting supply chains worldwide.

Russia-Ukraine

Perhaps the most significant conflict on the international stage is the Russia-Ukraine War. The war, which has lasted over two years and claimed [hundreds of thousands](#) of lives, has also greatly affected global supply chains. Certain commodities that are heavily produced in the two countries, such as grains and fertilizers, experienced shortages and price shocks shortly after the Russian invasion. While grain production and prices have [stabilized](#) (the same cannot be said for [fertilizers](#)), Ukraine's grain exports are [declining](#) due to Russia's [blockade](#) of ports in the Black Sea. This places undue stress on global food supply chains and contributes to [food crises around the world](#).

However, the economic anguish caused by Russian aggression is not just reserved for food supply chains. Businesses and supply chain professionals within every industry are being forced to reevaluate their own supply chains to account for global economic uncertainty. Participants in a recent SCM focus panel specifically cited the Russia-Ukraine War as a lesson in the total-cost model, which assesses the value of a product based on a variety of factors, including the logistics and transportation necessary to manufacture and deliver a product.

Israel-Hamas

The Red Sea is a crucial thoroughway of global trade, as its Suez Canal functions as the shortest sea route from Asia to Europe. Over a [trillion dollars](#)' worth of goods are transported through the Suez Canal every year—that's roughly 12–15% of all global trade.

In recent months, shipping vessels traversing the Red Sea have fallen under attack from [Houthi militants](#) based out of Yemen. The Houthi attacks on cargo ships began shortly after Israel invaded the Gaza Strip in response to aggression from Hamas, a Palestinian terrorist organization.

While the U.S. and its allies have [dispatched naval fleets](#) to secure supply lines through the Red Sea, the rocket- and drone-based attacks have already yielded [significant consequences](#) (increased prices, factory shutdowns, damaged ships and freight) to supply chains. Furthermore, an increased U.S. presence in the Red Sea threatens to stretch the nation's seafaring forces thin, as its Navy is [no longer well-equipped](#) to secure global supply chains.

China-Taiwan

The relationship between Taiwan, which has [sought independence](#) for decades, and China, which [insists Taiwan is under its governance](#), has always been dangerously delicate. In recent months, however, tensions have escalated after Taiwan elected yet another [pro-independence president](#) in January 2024. The Chinese military [increased its activity](#) in Taiwanese territory, frequently performing aerial and naval exercises which may be, [according to some experts](#), a prelude to invasion.

A China-Taiwan war would have a massive impact on global supply chains as both countries are major players in the world economy. A shortage of crucial exports like [Taiwan's semiconductors](#) and [China's electronics](#) would devastate supply chain sourcing, and a lack of access to the South China Sea would cause a logistical nightmare for supply chain managers.

The mere prospect of such a conflict has businesses rethinking their reliance on China. The "[China Plus One](#)" strategy is rising in popularity among supply chain professionals. Businesses have also opted to [vertically integrate](#) (acquire firms at different supply chain levels) within their supply chain rather than form partnerships in China. For example, [Apple](#) has moved the production of some of its capital goods (goods that were once manufactured in China) in-house.

Building a Better Supply Chain

With so much instability and uncertainty on today's global stage, businesses are looking for ways to mitigate risk. This starts with building flexibility and security into their supply chain, sometimes called a mesh network or [resilient supply chain](#).

Previous supply chain iterations have emphasized operating at peak efficiency, which means structuring a supply chain around a select number of preferable vendors, manufacturers, and distributors. While effective, the COVID-19 pandemic revealed just how fragile such a system was. Businesses are now pivoting towards network diversification—building alternative resources and forming multiple partnerships at every level of the supply chain. This creates a more robust, wide-ranging supply chain (hence, a "mesh").

As one of our panelists puts it,

“Covid taught that if you have a singular supply chain, one link breaks and you are out of business. Now using a supply chain mesh, which allows for multiple options, [you] may give 30% of work to one vendor and 70% of work to another vendor. [You] can flex those percentages based upon vendor ability to accommodate.”

While the mesh network may not be the finely tuned engine of pre-pandemic supply chains, it ensures security, reliability, and adaptability. This trade-off is—according to our panel participants and [professionals everywhere](#)—very worthwhile in a global economy that is rife with uncertainty.

Links for Further Reading:

- [“How Could Panama Canal Restrictions Affect Supply Chains?”](#)
- [“How Primed for War Is China?”](#)
- [“The Global Supply Chain Consequences of the Russia-Ukraine War”](#)
- [“The Impact of International Events on Supply Chains: Embracing Geopolitical Awareness in Today's Environment”](#)
- [“The Price of Nostalgia: America’s Self-Defeating Economic Retreat”](#)

Discussion Questions:

- What are the ethical implications of a supply chain relying on trade with a country in conflict? Should companies conduct business in countries accused of violating international law, such as Russia and China? Should businesses be ethically obligated to support oppressed or threatened countries, such as Ukraine?
- What are some potential drawbacks of the mesh network/resilient supply chain model?
- As it is currently constructed, the U.S. Navy is better equipped for warfare than for protecting global trade. Should this be the case? Why or why not? Should the United States be responsible for policing the global marketplace?
- How might natural disasters—such as hurricanes and droughts—affect global supply chains? What could businesses do to fortify their supply chains against such events?

Sources:

- [“Boats, Chips and Automobiles: 2023 So Far in 10 Data Points”](#)
- [“Case Studies: Successful Companies That Have Implemented Vertical Integration”](#)
- [“China Is Running Out of Lines to Cross in the Taiwan Strait”](#)
- [“China”](#)
- [“Everything You Need to Know About China Plus One”](#)
- [“Food Security Update | World Bank Response to Rising Food Insecurity”](#)
- [“Global Container Shipping Outlook: Pressure Mounts Amid Flood of New Capacity”](#)
- [“Global Fertilizer Market Challenged by Russia’s Invasion of Ukraine”](#)
- [“Houthi Attacks in the Red Sea Disrupt Global Supply Chains”](#)

- ["In a Vote China Called a Choice Between War and Peace, Taiwan's Pro-Independence Party Holds Onto Presidency"](#)
- ["Issue Brief: Supply Chain Resilience"](#)
- ["Shipping Costs Soar in Wake of Red Sea Attacks"](#)
- ["Supply Chain Fallout: China vs. Taiwan"](#)
- ["Supply Chain Resilience More Important Than Cost Savings: Bain & Co. Survey"](#)
- ["The Age of American Naval Dominance Is Over"](#)
- ["The Importance of the Suez Canal to Global Trade"](#)
- ["Three Strategies to De-Risk Supply Chains Amid Soaring Geopolitical Tensions"](#)
- ["Troop Deaths and Injuries in Ukraine War Near 500,000, U.S. Officials Say"](#)
- ["US Admiral Warns China Could Launch Surprise Attack From Military Drills"](#)
- ["War in Ukraine: Twelve Disruptions Changing the World—Update"](#)
- ["Who Are the Houthis and Why Are They Attacking Red Sea Ships?"](#)
- ["Why China-Taiwan Relations Are So Tense"](#)
- ["Why Is Unification So Unpopular in Taiwan? It's the PRC Political System, Not Just Culture"](#)
- ["Why the Pandemic Has Disrupted Supply Chains"](#)
- ["Will China's Reliance on Taiwanese Chips Prevent a War?"](#)
- [*How Russia's Blockade of Black Sea Ports Is Hitting Ukraine's Economy*](#)
- [Infographic - How the Russian Invasion of Ukraine Has Further Aggravated the Global Food Crisis](#)