
(Professor Patrick Egan, Political Economy)

The following thesis studies the US supply chains in Mexico and China to determine whether there is evidence supporting trends in regionalization and nearshoring. Given the US-China political tensions that have escalated since the Trump presidency and the Covid-induced supply chain bottlenecks, a number of US firms have introduced the idea of relocating from China for resiliency, logistic, and national security purposes. In addition to analyzing commodity import data from the US Census to uncover industry-specific regionalization trends (or lack thereof), this thesis evaluates the political and economic factors driving regionalization and their implications for the development of the great power rivalry between the US and China.

The first five chapters provide the definitions of key terms like regionalization and nearshoring; overviews of the modern historical, political, and economic relationships between the US, Mexico, and China; and an introduction to Vietnam and Southeast Asia to contextualize Mexico within the broader trend of relocation from China. The last five chapters include hypotheses, the results of my data analysis, data visualization, and interpretations of the results within their political economic context. The results indicate a negative relationship between US imports from Mexico and China in specific industries when China is taken as the dependent variable. The data support the claim that the industries most prone to regionalization are those dependent on labor-cost arbitrage, such as apparel and furniture, and to a lesser extent, some industries relevant to national security like medical devices and aircraft. Such trends indicate that economic factors take precedence over political factors in firms’ decisions to regionalize or relocate from China.
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I. Introduction

For years, businesses have been forecasting that US manufacturing and value chains will undertake a shift out of China into other developing countries like Mexico and Vietnam, reversing the decades-long trend of the manufacturing flight to China.\(^1\) Although reshoring had already begun, talk of moving out of China intensified after President Trump’s first round of tariffs that started the US-China trade war in 2018 and increased when major supply chains were disrupted by COVID-19.\(^2\) Because of its high export similarity with China, Mexico has been tapped as a popular alternative.\(^3\) While data shows that it is common for US manufacturing to move to lower-income developing countries like in neighboring Southeast Asia, moving to Mexico differs in that it would constitute part of the trend known as nearshoring, which is when firms move closer to home for reasons such as security, convenience, and efficiency. Nearshoring is a big component of global movements toward regionalization and de-globalization, which are contested topics in both academic and geopolitical spheres.

However, the question remains whether US firms are actually relocating their supply chains closer to home, and for those that are, why? Are existing shifts to Mexico beyond the normal ebb and flow of manufacturing? Is word on the street substantiated by quantifiable evidence, or is it too early to tell since moving manufacturing capital takes years? If the move from Mexico is indeed picking up manufacturing on its way out of China, what are the true reasons behind firms’ relocations? If nearshoring of US manufacturing and supply chains is not

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\(^1\) Lucy Colback, “How to Navigate the US-China Trade War,” Financial Times, February 28, 2020, [https://www.ft.com/content/6124beb8-5724-11ea-abe5-8e03987b7b20](https://www.ft.com/content/6124beb8-5724-11ea-abe5-8e03987b7b20).


occurring, where does this assertion come from and what value chain behavior should we expect to see instead?

These questions also factor into the broader issue of great power competition between the US and China and deglobalization trends. Despite mutual economic dependence, relations between the two have soured in recent years. Economic activity is simultaneously the mechanism forcing bilateral cooperation between the US and China and a focus point of their geopolitical rivalry. While a full decoupling is unlikely and unfeasible, regionalization and relocation from China may still have significant implications on global affairs. Evidence of regionalization would not only indicate a major shift in the US business landscape, but it would also indicate a shift toward a multipolar world order and increase the possibility of conflict.

This thesis sets the stage for more in-depth research into these questions. By evaluating annual US commodity import data since 2002 on a country and industry basis, I seek to determine not only whether there is evidence of nearshoring to Mexico, but also what factors are driving such a shift. In addition to analyzing US import volumes from China and Mexico, I include data from Vietnam, which is frequently mentioned alongside Mexico as a manufacturing alternative to China. The results of my analysis of US commodity imports support the claim that regionalization away from China and to Mexico is occurring on an industry-specific basis, particularly industries relevant to national security and those dependent on labor-cost arbitrage, which is when companies choose their location based on labor costs.

Chapter II will address the definitions of nearshoring and regionalization and discuss potential drivers of regionalization, nearshoring, and relocation from China. It also introduces and discusses claims that nearshoring and relocation are not occurring. Chapter III provides the historical context necessary to understand the later analysis. This section includes overviews of the US’ modern manufacturing and economic relationships with China and Mexico and a synopsis of US-China tensions from 2012 until present day. Chapter IV evaluates Mexico as an alternative to China for American sourcing and discusses the current state of their competition.
Chapter V discusses Vietnam and Southeast Asia as other alternatives to manufacturing relocation from China, providing global context for possible regionalization trends.

Chapter VI summarizes my hypotheses and expectations vis-a-vis regionalization and nearshoring of US supply chains based on the historical, political, and economic context. Chapter VII explains the methods and data used to evaluate the presence of regionalization in US supply chains, and Chapter VIII provides the result and visualizations. Chapter IX analyzes and discusses the results of my data analysis. This section includes a summary of the results introduced in the previous chapter; a discussion of limitations, potential sources of error, and topics for further research; and interpretations of the results based on their political economic context. Chapter X concludes.

II. Definitions and Discussions of Nearshoring and Regionalization

A. Definitions

Supply chain shifts from China to Mexico are frequently discussed within the context of broader trends of nearshoring and regionalization. **Offshoring** is when companies manufacture in a foreign country, whereas **reshoring** is when companies relocate back to their home country.⁴ In contrast, **nearshoring** is when companies move manufacturing or sourcing to a country closer to home, or potentially the company’s consumer base. For instance, a US company might engage in nearshoring when it relocates its operations from China to Mexico.⁵ Nearshoring supports a broader trend of **regionalization**, which is when economic activity and value chains are

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concentrated within regions, typically guided by continental geography. As it implies a contraction in GVCs, regionalization is often associated with deglobalization.

B. Drivers

A variety of economic, political, and security reasons motivate businesses to nearshore. Economically, nearshoring can reduce logistical complexity and cut transportation costs. Currently, a shortage in shipping containers has caused global supply chain bottlenecks—particularly in East and Southeast Asia—and a dramatic increase in the price of international shipping, illustrating the practical and economic arguments for nearshoring. Demand for Chinese and other Asian manufactures has increased, but Covid breakouts and ongoing quarantine measures prevent firms from meeting demand and slow shipments as they move through ports. Ports are also not equipped for the influx of goods and lack the storage capacity to unload ships in a timely manner.

Sourcing closer to home eliminates, or at least decreases, the cost of transportation and revenue lost to shortages. Ed Dorian, the president of US export management firm Dorian and Drake International, effectively encapsulated the impact of Covid-19 bottlenecks on the advantages of sourcing from China: “During the pandemic, lead times out of China have grown very long, and transport costs have exploded. That’s wiping out a lot of the cost advantage of sourcing from China.”

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10 Ed Dorian, Zoom interview, January 28, 2022.
Firms may also nearshore to take advantage of cheaper labor. For instance, China’s cost of labor has risen in recent years, driven by its shift toward capital-intensive, higher value manufacturing. In response, some manufacturing has shifted to neighboring countries in Southeast Asia as well as Mexico, the scope and intensity of which I attempt to determine in this thesis.\textsuperscript{11} Growth in the service economy has reduced the global influence of labor-cost arbitrage.\textsuperscript{12} Instead, an increase in global services has encouraged many companies to shorten supply chains and stay close to their consumer base.\textsuperscript{13}

For firms that choose to nearshore, higher cultural familiarity, more similar time zones, and narrower language barriers also have the potential to reduce costs. These factors make for easier business transactions and broaden the pool of qualified hires.\textsuperscript{14} Finally, regional blocs tend to benefit from a greater number of free trade agreements, such as the USMCA or ASEAN Free Trade Area, which remove tariffs and other state barriers to trade.

Politically, the global rise of populism and geopolitical tensions have fueled nearshoring and reshoring trends. Increased inequality in Western democracies has facilitated the rise populist leaders like Donald Trump and the success of movements like Brexit. Due to economic and status concerns, white working-class voters have been particularly vulnerable to populism in the West, although populism has enjoyed success in Asia and Latin America, too. Populist platforms frequently advocate for trade protectionism and economic nationalism; they claim that bringing manufacturing home will reinvigorate waning domestic industry and bring back jobs.\textsuperscript{15} In reality,

\textsuperscript{12} Tonby et al., “Globalization in Asia: Flows and Networks Shaping the Asian Century.”
\textsuperscript{13} “Multinational Companies Are Adjusting to Shorter Supply Chains.”
automation tends to be the culprit of working-class jobs, and protectionism has negative economic consequences that raise consumer prices, hinder growth, and decrease national welfare in aggregate. However, scapegoating a foreign entity is far more satisfying than blaming technological advancement and intangible market forces for industrial workers’ economic misfortune.

Geopolitical tensions, such as the emerging great power rivalry between the US and China, also play into populist rhetoric, providing a foreign entity to blame for domestic woes. However, geopolitical tensions also feature heavily in mainstream political discourse, and although they have a substantial protectionist effect on trade policy, their scope goes beyond pure economics to encapsulate ethno-cultural tensions, human rights, national security, and uncertainty about the global order. Firms that manufacture abroad are also concerned about political exposure. As evidenced by the arrest of Meng Wangzhou (a Huawei officer), China’s retaliatory imprisonment of two Canadian citizens, and the US’ Huawei restrictions, political disputes can easily bleed into private sector affairs. I later elaborate on the unique and significant nature of the US-China rivalry and its impact on bilateral and global trade.

Security concerns, both political and practical, also contribute to the discussion surrounding nearshoring and supply chain relocation. Multinational firms already faced rising costs and risks because of President Trump’s trade war with China, and Covid-19 highlighted the US’ extensive reliance on China for key items like pharmaceuticals and medical PP&E. In fact, many argue shorter supply chains were underway prior to 2018 as services featured more

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prominently in the global economy and companies began to understand the risks of long, opaque supply chains vulnerable to political, economic, and environmental crises.19

While Covid-19 is among the most dramatic and recent supply chain shocks, natural disasters like a 2011 tsunami in Japan and major flooding in Thailand shut down clusters of semiconductor component and hard drive factories, halting production globally. Climate change will only increase the likelihood of natural disasters, and digitization leaves GVCs vulnerable to cyberattacks.20 Recently, a single ship blocking the Suez Canal highlighted how individual accidents can interrupt the interdependent web of GVCs.21 Understandably, firms have looked to increase resiliency as they begin to question overreliance on a single supplier or localized cluster of factories for key inputs.

Since firms are primarily economic units, it is likely that the decision to nearshore would be based on the perceived impact to companies’ bottom lines. There are costs associated with supply chain bottlenecks, transportation, overreliance on localized production; however, the potential benefits of resilience will be weighed against the certain cost of opening entirely new facilities and developing brand new supply chain relationships. While political tensions may also be of interest, companies would only primarily be concerned insofar as they are passed on as economic costs or mandated through government policy.

Given the diverse reasons for regionalization or shifting out of China, I expect to find evidence for nearshoring or relocation in industries that depend on labor-intensive manufacturing given China’s rising cost of labor and the comparatively cheaper labor and transport costs associated with sourcing from Mexico. Value chains engaging in labor arbitrage are also likely to move to Southeast Asia for labor cost reasons. Industries that depend on labor-intensive

19 “Multinational Companies Are Adjusting to Shorter Supply Chains.”
manufacturing, which typically implies low-skilled labor, include textiles, apparel, furniture, and toys. I also expect that the data will indicate regionalization in regulated critical industries like pharmaceuticals and medical equipment and industries directly relevant to defense like arms and aircraft. Regionalization in critical security industries would evidence nearshoring for political reasons related to US-China tensions.

C. Current Trends and Evidence for Nearshoring and Regionalization

Data from McKinsey Global Institute (MGI) shows that regionalization has been occurring since the financial crisis, especially in the automotive and clothing sectors. Labor-intensive industries are the easiest to relocate, whereas tech products are difficult to move due to economies of scale and domestic innovation.22 Intra-regional trade volumes have increased since 2012, driven in great part by firms’ desire to produce close to their consumer bases and large consumer markets like the US and China.23 Accordingly, the global trade growth rate slowed from 5.5 percent in 2017 to 2.1 percent in 2019.24

Although the shift toward regionalization was already in motion pre-pandemic, the recent supply chain disruptions caused by the Covid-19 and shipping bottlenecks have caused firms to prioritize resilience in their supply chains. Prior to the pandemic, supply chains tended to value efficiency and cost savings. Firms favored just-in-time (JIT) inventory management—this approach seeks to minimize the inventory on hand to save on storage and keep products up-to-date.25 However, due to supply chain disruptions caused by Covid and shipping bottlenecks, companies have turned to what some have coined as “just-in-case” inventory management.26

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26 Page, “Port Logjams Reach Savannah as Container Ships Idle off Georgia Coast.”
Instead of cost minimization, the name of the game has become supply chain resiliency, or the ability to absorb and respond to shocks like coronavirus and localized disruption with international ripple effects.

Redundancy is also seen more favorably, which marks a significant shift from supply chain professionals’ previous emphasis on streamlining processes and efficiency.27 “Doubling up value chains” limits political exposure and vulnerability to localized disruptions that wipe out nationally-concentrated production clusters of crucial inputs like semiconductors and hard drives.28 However, doubling up may not always be feasible since companies may struggle to set up duplicate supply chains with costs, labor quality, and manufacturing technology comparable to their original location.29

Another often-cited industry trend, at least in the United States, is relocation out of China. As I discuss in greater depth below, firms sought to mitigate their political and economic risk when Trump launched his trade war in 2018.30 Only a few years later, Covid-19 highlighted the US’ reliance on their largest geopolitical rival for pharmaceuticals and other key inputs, drumming up national security concerns.31

China’s increasing authoritarianism has also discouraged American businesses from operating in China. Foreigners, especially Americans, face greater suspicion and feel “less welcome.”32 The crackdown in Hong Kong resulted in the US ending the city’s preferential trade status, and US regulations prohibiting forced labor have complicated supply chains for companies

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32 Ibid.
with sourcing in the Xinjiang province.\textsuperscript{33} Meng Wanzhou’s arrest and China’s retaliatory arrest of the “two Michaels” also shows that private sector dealings can be swept up in political conflicts.\textsuperscript{34}

A 2020 survey of 260 “global supply chain leaders” surveyed by Gartner indicated that they have or plan to “move sourcing or manufacturing activities out of China” within three years.\textsuperscript{35} A 2020 study by McKinsey showed that 50 percent of executives in the fashion industry, a labor-intensive sector, expected sourcing from China to decrease in some capacity, and 46 percent expected nearshoring to increase. Only 13 percent predicted an increase in sourcing from China.\textsuperscript{36}

Once firms move out of China, some of most frequently-mentioned alternatives are Vietnam, Mexico, and other Southeast and East Asian countries.\textsuperscript{37} Indonesia, Cambodia, Bangladesh, and India are favored for low-skill and low-tech products, and South Korea, Taiwan, Malaysia, and Singapore are alternatives for high-tech goods.\textsuperscript{38} For the US, Mexico is a promising option given the competitive labor costs, proximity, and technological level. Reasons for nearshoring to Mexico are discussed in more depth in a later section.

D. \textit{Opposing Theories}

While it may be hard to dispute regionalization occurring within specific industries, a significant faction of industry experts doubt the narrative that firms are leaving China in droves or that there is a net shift away from Chinese sourcing. For instance, China’s shift to high-value

\begin{footnotesize}

\textsuperscript{34} Palmer, “Another Win for China’s Hostage Diplomacy.”


\textsuperscript{37} “Supply Chains for Different Industries Are Fragmenting in Different Ways.”

\textsuperscript{38} Maidment, “How Western Multinationals Are Responding to the Escalating US-China Trade War.”
\end{footnotesize}
industries does not necessarily mark a departure from GVCs; the country is simply moving to a different spot on the supply chain. Furthermore, relocating or doubling-up supply chains can be time-consuming and costly.\textsuperscript{39} As previously discussed, labor-intensive industries are the most susceptible to nearshoring because of the availability of cheap labor substitutes. However, industries that require greater capital investments, specific technology, skilled labor, and innovation “are discovering that leaving China is not so easy” and that there are few countries that match China’s offerings. \textsuperscript{40} Although some countries are concerned about the resilience and security implications of sourcing from China, many others do not share the same view.\textsuperscript{41} At the very least, relocation and nearshoring may be sector-specific rather than broadly applicable to US companies across the board.

Firms’ supply chain data is opaque, complex, and difficult to obtain; and anecdotal evidence of “a handful of firms leaving China” is not indicative of a trend.\textsuperscript{42} While executive surveys revealing unrealized future plans to leave China prompt interest, they may not be representative and provide no empirical evidence of nearshoring or a business exodus from China. For instance, a contradictory 2019 survey by the US-China Business Council reported that 97 percent of respondents’ “operations in China are profitable” and another 87 percent indicated that “they had not relocated and had no plans to relocate.”\textsuperscript{43} Given China’s growing middle class and large consumer base, US firms may also want to maintain access to China’s flourishing domestic market.\textsuperscript{44} The survey results further support the interpretation that economic factors will be the primary reason companies decide (or decide not) to nearshore.

\textsuperscript{40} “Supply Chains for Different Industries Are Fragmenting in Different Ways.”; Nicholas Lardy, “Are Foreign Companies Really Leaving China in Droves?”; Maidment, “How Western Multinationals Are Responding to the Escalating US-China Trade War.”
\textsuperscript{41} “Supply Chains for Different Industries Are Fragmenting in Different Ways.”
\textsuperscript{42} Nicholas Lardy, “Are Foreign Companies Really Leaving China in Droves?”
\textsuperscript{43} Ibid.
\textsuperscript{44} John Lee, “Decoupling the US Economy from China after COVID-19,” Hudson Institute, May 2020, 12.
The conflicting views invite further research into the validity and extent of US firms’ supply chain exodus from China and regionalization. Following a modern historical overview of US manufacturing relations with Mexico and China, I will analyze how these economic and political drivers discussed in this section apply to the specific case of nearshoring from China to Mexico.

III. Historical Overview: the US, Mexico, and China

A. Manufacturing Relationship between the US and Mexico

The manufacturing relationship between the US and Mexico in the modern era has largely been defined by the North American Free Trade Agreement (NAFTA), which took effect in 1994. In summary, NAFTA did away the majority of tariffs between the US, Mexico, and Canada, with a specific focus on the textile, automobile, and agricultural industries. The trade deal also included provisions that addressed economic liberalization (in Mexico), intellectual property protections, and environmental and labor standards, among others.\(^n\)

NAFTA’s biggest effect on the Mexican economy has been Mexico’s intense focus on the US as its primary export market. Since NAFTA entered into force, exports to the US have increased substantially in nearly all industries. For instance, agricultural exports to the US have increased threefold, and 90 percent of Mexican manufacturing is destined for the US.\(^m\) Reduced tariffs combined with lower production costs (relative to the US) have also encouraged US supply chains to relocate to Mexico to take advantage of cheaper inputs.\(^n\)


In terms of domestic impacts, NAFTA is generally said to have benefitted Mexicans by “increas[ing] productivity and lower[ing] consumer prices.”48 Other positive effects include higher levels of foreign direct investment (FDI) and more high-tech manufacturing, both of which tend to concentrate in northern Mexico, close to the US border. These plants and factories along the border are called maquiladoras, which references the 1960s Maquiladora Program that gave foreign export plants in Mexico special tariff exemptions. However, NAFTA failed to raise Mexican wages, alleviate poverty, or stimulate the Mexican economy. NAFTA is also credited with increasing Mexican unemployment and putting small-scale farmers out of business thanks to the US’s subsidized agricultural exports, thus increasing illegal migration to the US until 2008.49

Although the USMCA replaced NAFTA in June 2020, its effects on Mexican manufacturing and Mexico’s economic relationship with the US remain largely unchanged.50 The USMCA is essentially a continuation of NAFTA, but with key provisions that increase intellectual property protections, heighten labor standards and protect workers’ rights (especially in Mexico), and increase environmental protections. Another key USMCA provision increased the de minimis trading level between the US, Mexico, and Canada, which means that the USMCA increased the value below which goods shipments are not taxed. This provision incentivises greater trade volumes between the three North American trading partners and is intended to benefit small- and medium-sized businesses.51

In 2019, Mexico reclaimed its position as the US’s largest trading partner from China, in great part thanks to the US-China trade war that began in 2018.52 The US imported a total of

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48 Chatzky, McBride, and Sergie, “NAFTA and the USMCA.”
49 Ibid.
$346.5 billion in goods from Mexico in 2019 alone.\(^5\) This inflection point marked the end of a decade-and-a-half-long era that began when China overtook Mexico in 2006.\(^4\) Mexico is also ranked the 12th largest exporter worldwide, and its largest manufacturing industries are its automotive, aviation and aerospace, medical device, textile, and consumer product industries.\(^5\) Leading manufactured exports to the US include “transport equipment, computer and electronic products, electrical equipment and appliances, [and] machinery,” all of which are key inputs in US supply chains.\(^6\)

As it stands, the USMCA, the entrenchment of US-Mexico economic interests, and Mexico’s developing manufacturing capabilities create an increasingly persuasive economic argument for US firms to move operations to Mexico. The countries’ proximity and free trade agreement enable a comparatively frictionless move and reduce relocations costs, which can be prohibitive to firms that might otherwise consider nearshoring. Warmer political relations likely make Mexico even more attractive to US companies. However, the specific industries that exhibit regionalization behavior will be the best indicators of whether economic or political factors take precedence in firms’ decision to nearshore.

B. Manufacturing Relationship between the US and China

China is often known as the world’s factory, and since the normalization of US-China trade relations through the US-China Trade Relations Act of 2000, this moniker has held true for the US, too.\(^5\) Despite being demoted to the US’ second largest trade partner, China is still the country from which the US imports the greatest value of goods and services.\(^6\) Prior to

\(^4\)“Timeline: U.S. Relations With China.”
\(^6\)Nagashybayeva and van Blarcom, “Research Guides.”
normalizing trade in 2000, US-China trade had been on the rise since the two reestablished diplomatic relations in 1979. While China tends to manufacture large quantities of consumer goods, communications equipment, electronic parts, and semiconductors rank among the US’s top imports from China. Over the course of the two countries’ modern economic relationship, China has gone from producing primarily “low-value, labor-intensive” goods to producing greater quantities of high-value, “capital-intensive” goods.

In 2017, the US imported $506 billion worth of merchandise from China, which put America's current account deficit with China at $375 billion. Recently, the US’s trade deficit with China has been a matter of controversy for policymakers and is often interpreted as disadvantageous to the US. In part because of the purported deficit disadvantage, President Trump began the US-China trade war in 2018, which has shaped the nature of US-China economic relations ever since. Although Trump has criticized China for “unfair” trade practices (allegations include dumping steel, currency manipulation, and intellectual property theft) since the beginning of his presidency in 2016, the trade war truly began after Trump slapped China with aluminum and steel tariffs in 2018. Trump escalated the trade war with a 25 percent tariff on $34 billion worth of industrial and transport goods, and China retaliated by placing tariffs on US products like beef, dairy, and soybeans. Although the trade war did result in negative economic impacts in China, it also squeezed US producers and consumers as inputs and consumer goods became more expensive.

60 Morrison, “China-U.S. Trade Issues.”
61 Nagashybayeva and van Blarcom, “Research Guides.”
President Trump has also accused China of stealing American manufacturing jobs.\textsuperscript{66} The claim is only somewhat true—many US multinationals outsourced labor to China during the early 2000s to lower costs.\textsuperscript{67} However, in recent years, cheap labor has been moving to neighboring Southeast Asian countries that tend to be on lower levels of the economic development spectrum than China. This change is attributable to China’s rising labor costs from increased economic development and its shift toward higher-value industries and stages of production.\textsuperscript{68}

Fortunately for businesses and consumers, the US and China brokered a trade deal in early 2020 that is intended to gradually reduce tariffs and re-expand trade between the two countries. Even so, despite tariff reductions, the deal will keep 25 percent tariffs on $250 billion worth of intermediary Chinese goods used in US manufacturing and a 7.5 percent tariff on $120 billion of imported consumer goods. China will also keep tariffs on about $100 billion worth of US imports. The deal also binds China to buy billions more in US manufacturing, services, agricultural goods, and energy over the next two years.\textsuperscript{69} So far, US exports to China have increased 13 percent from 2019 to 2020, although China still fell over “40 percent short of the target” agreed upon in the Phase One trade deal.\textsuperscript{70}

In spite of the trade war, China remains one of the most important countries to US manufacturing supply chains. China’s share of US manufacturing imports was about 25 percent in 2014, marking a solid lead of about 15 percentage points over Mexico.\textsuperscript{71} While Mexico has narrowed the gap in the past seven years, Chinese “containerized imports” to the US increased by


\textsuperscript{71} Blyde, Busso, and Romero, “Labor Market Adjustment to Import Competition: Long-Run Evidence from Establishment Data.”
2 percent in late 2020, and as previously mentioned, Chinese imports increased overall 13 percent in 2020 compared to 2019 in spite of coronavirus-related supply chain disruptions and a downward import trend during 2018 and 2019.\textsuperscript{72}

The Phase One trade deal, signed during the last few months of the Trump presidency, relieved some tariff pressures and further increased trade with China. However, China “failed to meet its Phase One trade commitments” before the deal expired in late 2021.\textsuperscript{73} China only purchased 60 percent of its commitments, leaving a USD $13 billion difference between its actual and promised US import volume.\textsuperscript{74} In addition, US manufacturing exports remain 14 percent lower than before the trade war due to retaliatory tariffs. Furthermore, despite efforts to move past the trade war, many businesses fear that future political conflicts between the two nations, perhaps caused by adverse Chinese actions in Taiwan or the South China Sea, could trigger another slew of sanctions.\textsuperscript{75}

While the Biden administration has expressed hope for greater cooperation and a bilateral reduction of tariffs, there is still talk of decreasing manufacturing dependence on China as a result of supply chain crises during the Covid-19 pandemic, rising US-China political tensions, and the rising cost of labor within China, among other reasons. However, as Trump’s trade war showed, policy to reduce reliance on China faces an uphill battle against the economic factors that drew US supply chains in China in the first place. Analyses of specific industries later in this thesis evaluate whether political or economic drivers have a greater impact on US companies’ decision to regionalize.


\textsuperscript{74}Lawder and Shalal, “U.S. Trade Official Says China Failed to Meet ‘Phase 1’ Commitments.”

C. Overview of US-China Tensions

Even after the normalization of relations in 2000, the US and China have maintained an arm’s length relationship due to clashes between their democratic and communist ideals. Tensions flared up again in 2012, fueled by the US’ discontent over its hefty deficit with China. Although President Barack Obama and CCP President Xi Jinping attempted to ease relations, the two countries halted their cybersecurity cooperation in the wake of America’s indictment of Chinese nationals for hacking and stealing trade secrets from US companies.

Cybersecurity has continued to negatively impact US-China relations. Although China rejects all accusations, its cyberwarfare efforts seem to have a significant state-directed component and mirror the goals of the CCP’s five-year plans.[76] Over the past decade, Chinese hacking has become a greater national security concern as efforts have become more sophisticated and coordinated. Hackers have conducted major cyber attacks on government offices like the Office of Personnel Management and large American companies like Google, The New York Times, and, most recently, Microsoft.[77] In addition, Chinese cyberwarfare is closely intertwined with the US’ grievances over stolen American intellectual property (IP). Conflict over IP theft has bolstered US-China trade tensions and factored heavily into trade agreement negotiations. Donald Trump linked trade and IP politically through his campaign rhetoric, combining the issues further in his administration’s Phase One trade deal signed in 2020.[78]

The Biden administration has taken a less aggressive stance on trade, but it has nonetheless called Beijing out for cybersecurity breaches, most notably the Microsoft hack in August 2021 that exposed the email data of corporations, government agencies, and government

contractors. The US condemned China in coalition with other NATO allies but refrained from any concrete action. Even so, such a move is significant given Europe’s deep economic dependence on China and previous reluctance to criticize it outright.\(^7^9\)

US-China relations took another nose dive in 2015 in response to China’s expansion and illegal island building in the South China Sea.\(^8^0\) Beijing claims over 80 percent of the South China sea, which conflicts with the UNCLOS-delineated exclusive economic zones (EEZs) of Vietnam, the Philippines, Malaysia, Indonesia, and Brunei. In support of its ally the Philippines and freedom of navigation, the US has conducted joint military drills and sailed warships to assert its right to sail freely in international waters that lie between countries’ legal EEZs.\(^8^1\) The South China Sea is highly contentious because of its rich natural resources and the fact that a high percentage of global trade passes through its waters.\(^8^2\) It provides access to the Strait of Malacca, which connects the Pacific to the Indian Ocean. Ninety percent of Japan, Korea, and China’s imported petroleum, 40 percent of China’s overall trade, and 42 percent of Japan's maritime trade passes through the South China Sea.\(^8^3\) With an approximate $3.5 trillion in goods traversing the South China Sea yearly, the regional territorial conflicts have great potential to disrupt international trade and spark a “global economic crisis.”\(^8^4\)

In 2016, Trump’s campaign engaged in decidedly anti-China rhetoric as part of his broader populist narrative. As with Brexit, populism often manifests via isolationist foreign policy, an emphasis on national industry, and a lack of appreciation for aggregate welfare benefits.

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\(^8^0\) “Timeline: U.S. Relations With China.”


\(^8^4\) China Power Team, “How Much Trade Transits the South China Sea?”
of foreign trade. Accordingly, Trump blamed China for stealing American manufacturing jobs and manipulating its currency to make its exports more desirable.\textsuperscript{85} Using China as a scapegoat was an effective populist strategy—it is far easier to blame a foreign entity for blue collar workers’ misfortunes and the decline of American manufacturing than automation and the abstract market forces of global capitalism. By painting lower middle- and working-class white America as “victims of the elite and foreign countries,” Trump rallied a support base whose loyalty he ensured by pushing through illiberal trade policy like the trade war against China and his withdrawal from the Trans-Pacific Partnership (TPP).\textsuperscript{86}

The Trump administration’s tariffs decreased trade with China substantially, allowing Mexico to overtake as America’s largest trading partner, and withdrawal from the TPP halted the growth of US trade and influence along the Pacific Rim. The Obama administration had intended the TPP to be “the world’s largest trade deal” and a keystone to effectively countering China’s growing influence in the Asia-Pacific.\textsuperscript{87} Although withdrawing from the TPP may seem inconsistent with Trump’s anti-China policies, it is consistent with his deglobalization and reshoring narratives. Biden has expressed openness to rejoining a later iteration of the TPP with better labor and environmental provisions.\textsuperscript{88}

Such isolationist policy suggests that American populism may have accelerated trends toward regionalization and even reshoring. However, the trade war drew considerable criticism from the business community for creating unnecessary and ineffectual pressure on US supply chains in China, illustrating how populist rhetoric is often at odds with national economic interests. Although theories alleging regionalization frequently imply that economic and political factors work in tandem, the opposition to the trade war shows how difficult it can be for

\textsuperscript{88} McBride, Chatzky, and Siripurapu, “What’s Next for the Trans-Pacific Partnership (TPP)?”
politicians to mandate relocation from China before the economic considerations support such a move.

Following the 2018 trade war, US-China relations reached another nadir when Canada arrested Meng Wanzhou, the CFO of Huawei, in coordination with the US for fraud and violating trade sanctions with Iran. Her arrest was a culmination of cybersecurity and espionage accusations against the telecommunications company Huawei. As a Chinese company, there exist founded concerns that the CCP could use Huawei’s data access and technology infrastructure to threaten national security. In 2019, Trump banned federal agencies from using Huawei technology for national security reasons and encouraged America’s allies to do the same. However, the Trump administration may have also acted to mitigate Chinese technological competition, both in intelligence collection and strategic commercial spheres like 5G.

The Huawei incidents demonstrated that the private sector is far from immune from geopolitical conflict. Although the private sector is typically a strong proponent of cooperation between the US and China, it has become wary of embroilment in political proxy matches. Although still heavily reliant on China-based supply chains, American companies are much more cognizant of the political risks of operating in and sourcing from China.

The global outbreak of the Covid-19 pandemic in late 2019 and early 2020 further exacerbated US-China tensions. Early on, Donald Trump blamed China for the pandemic, calling it the “China virus” and engaging in anti-China rhetoric that many have accused of fueling anti-Asian racism and xenophobia in America. As hate crimes against Asian Americans fed Chinese anti-American propaganda abroad, they undermined domestic support for policies that sought to

89 “Timeline: U.S. Relations With China.”
counter China’s influence or criticize its bad behavior. Even so, Trump’s anti-China rhetoric appealed to a large contingency, many of whom were already swayed by his populist narrative.

The Covid-19 pandemic also brought supply chain issues front and center. Early into the pandemic, coronavirus outbreaks in China created factory stoppages that bottlenecked supply chains. The blockages revealed the extent of the US’ reliance on China for everyday goods and medical supplies necessary to combat the virus at home. America is particularly reliant on China for pharmaceutical products, including some with military uses such as the drugs that protect soldiers from anthrax. China hawks argue that, if for no other reason, America should reshore its supply chains for national security. The worry is that China may cut off the US’ supply to crucial products. The concern has merit—China has held exports hostage in the past. For example, China “denied the export of rare earths to Japan” over a political skirmish in 2012. The actual extent of US supply chains’ shift remains to be explored.

China’s withholding of exports and the US’ trade war play into an increasingly relevant phenomenon known as “weaponized interdependence.” Weaponized interdependence describes how certain countries may leverage the structure of the global economic networks to exert power over other countries dependent on their trade and capital flows. Trump attempted to weaponize US-China trade relations; however, the US’ mutual dependence on China has dampened the efficacy of his attempted economic coercion. To the United States, the greater threat to national security is the perception of China’s greater ability to weaponize global dependence on crucial inputs. China’s retaliation in the trade war and efforts to decrease their own foreign reliance have only exacerbated such fears.

As such, the US may also see a convergence of political and economic drivers of regionalization as supply chain interruptions support the need for better value chain resiliency.

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National security mandates the ability to manufacture the critical products like pharmaceuticals, healthcare equipment, and semiconductors. The private sector also has a renewed interest in reliable and uninterrupted sourcing so as to prevent losses from shortages and skyrocketing transport costs.

Human rights issues have also strained the US-China relationship. In 2019, the US passed the Hong Kong Human Rights and Democracy Act, officiating its support for the city’s pro-democracy protests. As expected, China reacted angrily and called on the US to stop interfering in “China’s internal affairs.”94 In 2020, the US ended up revoking Hong Kong’s special trade status after Beijing passed its National Security Law to crack down on pro-democracy activists, effectively reducing Chinese access to US markets.95

Accusations of forced Uyghur labor have also affected US trade with China. In January 2021, former Secretary of State Pompeo labeled China’s treatment of Uyghurs, a Muslim minority in Xinjiang province, a genocide. The CCP has interned over a million people, and escapees report gruesome accounts of torture, forced sterilizations, and forced labor.96 In July 2021, the US passed a law banning the importation of products from Xinjiang, warning companies of legal repercussions should they fail to comply.97 The mandate is hefty: Xinjiang is a hub for high-quality cotton and 85 percent of China’s cotton, which in turn produces 20 percent of cotton globally. Furthermore, supply chains’ opacity makes it difficult for many companies to know whether they are using cotton from Xinjiang. Some brands have shifted their supply chains

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and product designs to avoid relying on forced labor. However, other corporations Fila and Hugo Boss do not appear to have made any changes, nor do their North American operations seem likely to face any legal consequences.

Although critical of Trump’s approach to US-China trade, President Biden has echoed many of his China narratives and continues on the trade trajectory set by the Trump administration, albeit with a more cooperative tone. While his criticism of China has been less aggressive than his predecessor’s, Biden claims that China’s trade practices have taken American jobs and criticized it for human rights abuses. In addition, he increased restrictions on Huawei and accused China of the recent Microsoft hack, reaffirming concerns about China as a national security threat. Biden has also maintained the tariffs agreed upon in the Phase One trade deal. US Trade Representative Katherine Tai has expressed that the administration is open to increasing tariffs if China continues to fall short of its purchase commitments under the agreement.

During President Biden’s summit in early November 2021 with Chinese president Xi, Biden reaffirmed his desire to reduce tensions and return to lower tariff levels through mutual cooperation. His sentiments contrast starkly with the Trump administration’s hard-line approach. However, the two leaders did not achieve any substantive progress or issue a joint statement, indicating that current levels of protectionism and suspicion will remain.

While trade is not always the nominal issue driving US-China tensions, it is certainly a hot-button topic and underlies other territorial and human rights conflicts. Without resorting to

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102 Ibid.
military action, economic sanctions and trade restrictions are the US’ only tool for shaping behavior. However, Trump’s trade war has not produced the desired results, and it remains to be seen how the Biden administration will balance its desire for economic gains with China’s increased aggression.

IV. Competition between Mexico and China

Even before the Covid-19 pandemic, manufacturing had been shifting out of China toward other countries in the global south.\textsuperscript{103} Vietnam and Mexico are often referenced as choice alternatives. While the issue has become more relevant recently, China and Mexico have competed for years in certain industries. The countries have a high export similarity, although China is vying for a greater degree of high-value manufacturing.\textsuperscript{104} The primary markets in which China and Mexico are said to compete as exporters to the US are textiles, apparel, electronics, and steel, among others.\textsuperscript{105}

A decade ago, Mexico and Central America were losing ground to China and other Asian manufacturers. China and other Asian exporters built a market advantage by diversifying export destinations while Mexico and other Latin American countries suffered from dependence on the US market, in part due to free trade agreements NAFTA and CAFTA. Mexico and Central America also had weak domestic markets in apparel and textile industries, as opposed to China and the rest of Asia.\textsuperscript{106}

One reason for China’s lead over Mexico in exports to the US is its efficient allocation of production and resources through “product-specific cluster” cities and factories with vertical integration of supply chains, all strategically developed along the coast.\textsuperscript{107} These phenomena

\textsuperscript{103} Szakonyi, “Trans-Pacific Trade: US Importers Still Dependent on China Sourcing in a Pinch.”
\textsuperscript{104} Wise, Carol and Margaret Myers, “After the China Boom.”
\textsuperscript{106} Frederick and Gereffi, “Upgrading and Restructuring in the Global Apparel Value Chain.”
\textsuperscript{107} Ibid.
created economies of scale by “reduc[ing] lead times, minimis[ing] transaction costs, ...and foster[ing] flexible supply chain management.”"\textsuperscript{108} Chinese exporters also enjoy substantial government support that has helped develop domestic industries and protect from international competition. Lastly, China has opted for “regionally integrated development with East Asian neighbors.”\textsuperscript{109}

In contrast, Mexican businesses do not enjoy the same level of government support nor the centralized planning that led to efficient resources allocation and production. Mexico was also “not part of a global network,” nor “strategically tied into the region.”\textsuperscript{110} Instead, Mexico tends to compete with regional neighbors rather than working in a complementary fashion. Furthermore, Chinese and Southeast Asian labor tended to cost less.\textsuperscript{111} However, conditions have shifted over the past decade. Mexico’s unit labor costs are now lower than China’s, in part due to China’s rising wages and shift toward higher-value goods production.\textsuperscript{112}

Mexico also specializes in many of the industries that have supposedly experienced the highest levels of regionalization. A McKinsey Global Institute study asserts that sixteen of seventeen major industries have regionalized since the 2008 financial crisis. The same study observed the greatest contractions in clothing, automotive, and electronics—all active industries in Mexico.\textsuperscript{113} Mexico is particularly attractive to the automotive industry given its numerous free trade agreements, low labor costs, and manufacturing infrastructure. While Mexico’s manufacturing hubs are not yet on par with China’s “product specific clusters,” northern cities like Tijuana have become centers of the Mexican automotive industry.\textsuperscript{114}

\textsuperscript{108} Ibid.
\textsuperscript{109} Ibid.
\textsuperscript{110} Ibid.
\textsuperscript{111} Ibid.
\textsuperscript{113} “Supply Chains for Different Industries Are Fragmenting in Different Ways.”
\textsuperscript{114} Solis, “Trump’s Trade War Contributes to Commercial Boom for Tijuana, as Companies Seek to Leave China and Its Rising Tariffs.”
manufacturing has broadly settled across Mexico’s northern states, including Baja California, Sonora, and Chihuahua, and some central states, such as Puebla, Estado de México, and Jalisco.115

As mentioned in the section covering the drivers of regionalization, Mexico is also an attractive alternative because of the lower cultural and linguistic barriers, decreased transport costs, similar time zones, and the USMCA free trade agreement. Mexico’s governance objectives and USMCA provisions also provide for better IP protections than China. Lastly, manufacturing in Mexico has the potential to shorten supply chains, which may help address resiliency concerns and blockages. Shorter supply chains can also reduce management costs overall.116

Evidently, there are pros and cons to nearshoring and continuing to manufacture in China, and the balance between the two may differ according to the company and the industry. As an international trade professional, the Ed Dorian’s experience helps illustrate the tradeoffs firms must face when sourcing from China:

“Chinese manufacturing has become quite normal and familiar to us. Our people tell me that Chinese suppliers tend to be very responsive, perhaps even more so than US companies we represent. On the flip side, unlike US manufacturers, Chinese companies are loath to provide contracts with exclusive territory or protection, and they often insist on being fully paid before anything even ships. While there are often advantages to sourcing from China—the pricing is often attractive, the quality of the products is often quite good—the terms of business often aren’t great, and we’re often operating without any contractual protection.”117

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117 Ed Dorian, Zoom interview, January 28, 2022.
Despite sometimes challenging business environments, China still offers attractive economic prospects and boasts a number of growing manufacturing industries. Similar to Mexico, China’s medical devices and automotive industries have seen significant growth. As part of China’s “Made in China 2025” plan, the country has also invested heavily in its high-tech sectors and is attempting to shift toward manufacturing industries with greater value-added. China’s growing middle class also provides an attractive domestic market for foreign companies looking to establish operations in China.

Advantages to manufacturing or continuing to manufacture in China include its well-developed factory ecosystem. As the world’s foremost manufacturer, China offers a variety of facilities to meet all desired technological levels. Manufacturing out of China avoids the considerable costs of greenfield investment, which may be necessary to set up operations in promising yet less developed countries. China’s robust manufacturing environment also allows for speedy and flexible scaling and design changes.

One the one hand, Mexico is developing as a global manufacturer in its own right, and political and economic narratives indicate regionalization trends in various industries. However, China also remains an attractive manufacturing location for the reasons mentioned above. Both are the US’ top trading partners. The various reasons to nearshore and remain in China appeal to the different industries’ and firms’ needs, which speaks to a case-by-case approach to relocation. As such, the question remains: will US trade data at the commodity level reveal any evidence of regionalization in US trade patterns?

V. Other Supply Chain Alternatives: Vietnam and Southeast Asia


Vietnam has also reaped the benefits of certain firms’ relocation from China. Southeast Asia is the fastest growing region in terms of economic growth, manufacturing, and both international and intraregional trade.\(^{121}\) Regional trade has boomed in recent years, and despite setbacks, its pandemic trade growth outpaced the global average. According to the Financial Times, the combined GDP of Asian economies surpassed the rest of the world’s combined GDP in 2020.\(^ {122}\)

A number of notable multinational corporations have already shifted operations from China to countries like Vietnam, Thailand, South Korea, and the Philippines (Figure V-2). Chief among reasons for moving are Southeast Asia’s competitive labor costs, which sit below both Chinese and Mexican rates. The region’s labor-intensive manufacturing industries have driven its above-average manufacturing export growth rate, which sits at 5 percent, as compared to the global average of 3 percent.\(^ {123}\) Furthermore, Southeast Asia’s growing middle class is transforming it into a promising consumer market, although its economic development is not yet on par with China’s.

Among the Southeast Asian nations, Vietnam stands out for a variety of reasons. Like its regional neighbors, Vietnam boasts lower labor costs than both China and Mexico. However, its centrality within the Asian continent and location along the South China Sea make it particularly accessible as an export base. Vietnam has also developed more robust internal transportation


infrastructure, and its numerous free trade agreements make exporting manufactures even easier.\textsuperscript{124}

Figure V-1: Manufacturing Labor Costs per Hour for China, Vietnam, Mexico from 2016-2020 (in USD)

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure_V_1.png}
\caption{Manufacturing Labor Costs per Hour.}
\end{figure}

Source: Statista\textsuperscript{125}

In addition, Vietnam offers a number of manufacturing incentive programs to attract foreign FDI. For instance, companies can import manufacturing machinery, equipment, and components duty-free if Vietnam cannot manufacture them in-country. Vietnam also has higher technological capabilities and a better-educated workforce compared to other nations with low labor costs, such as Cambodia or Bangladesh, which makes it particularly attractive to technology

\begin{itemize}
\item \textsuperscript{125}“Manufacturing Labor Costs per Hour.”
\end{itemize}
and electronics manufacturers. The Vietnamese government has taken further steps to create a competitive workforce by providing vocational training programs.¹²⁶

Vietnam has benefited greatly from the US-China trade war. As of 2019, the US was Vietnam’s latest export destination by a $20 billion margin. Thanks to its high-skill manufacturing offerings, big-name companies like Nintendo, Intel, and Google have moved, or are considering moving, some operations to Vietnam. Although Covid has hindered some companies’ shifts out of China, the intended moves demonstrate that companies are seeking to diversify their sourcing and increase supply chain resilience for political reasons.¹²⁷

In comparison to Mexico, Vietnam also offers a more stable political environment and dramatically lower crime rates. Mexico and Vietnam have the potential to compete over technology manufacturing as the two countries diversify away from labor-intensive industries. Both have welcomed tech companies setting up operations outside of China.¹²⁸ However, it remains to be seen to what extent the two actually compete over manufacturing exports to the US or whether their manufacturing will interact in a more complementary manner.

As a similarly-positioned emerging market, Vietnam may help contextualize Mexico’s relationship with China as a prominent exporter to the US. Both are frequently cited in the US as manufacturing alternatives to China, but relocations to Mexico speak to a broader trend of regionalization. In contrast, relocations to Vietnam may support economically or politically

founded reasons for leaving China, but such moves would not indicate any retreat from globalization or the shortening of US value chains.
Figure V-2: Selected Cases of Relocations and Reshoring from China

<table>
<thead>
<tr>
<th>Firm name</th>
<th>Production item</th>
<th>Home country</th>
<th>Moving to</th>
<th>Reasons for relocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Relocations (onshoring / nearshoring)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hasbro Inc.</td>
<td>Toys</td>
<td>US</td>
<td>Vietnam</td>
<td>US-China trade conflicts</td>
</tr>
<tr>
<td>Ricoh</td>
<td>office equipment</td>
<td>Japan</td>
<td>Thailand</td>
<td>US-China trade conflicts</td>
</tr>
<tr>
<td>Sharp</td>
<td>LCD display</td>
<td>Japan</td>
<td>Vietnam</td>
<td>US-China trade conflicts</td>
</tr>
<tr>
<td>Olympus</td>
<td>Optics and cameras</td>
<td>Japan</td>
<td>Vietnam</td>
<td>Decrease of Chinese market attractiveness</td>
</tr>
<tr>
<td>Kyocera</td>
<td>Copiers and printers</td>
<td>Japan</td>
<td>Vietnam</td>
<td>US-China trade conflicts</td>
</tr>
<tr>
<td>Sony</td>
<td>Smartphones</td>
<td>Japan</td>
<td>Thailand</td>
<td>Rise in Chinese wages</td>
</tr>
<tr>
<td>Panasonic</td>
<td>Car audio</td>
<td>Japan</td>
<td>Thailand</td>
<td>US-China trade conflicts</td>
</tr>
<tr>
<td>Hyundai Kia</td>
<td>Automobiles</td>
<td>South Korea</td>
<td>Indonesia</td>
<td>US-China trade conflicts</td>
</tr>
<tr>
<td>Lotte Chemical</td>
<td>Chemical</td>
<td>South Korea</td>
<td>Malaysia</td>
<td>US-China trade conflicts</td>
</tr>
<tr>
<td>Head International</td>
<td>Sports equipment</td>
<td>Austria</td>
<td>Philippines</td>
<td>US-China trade conflicts, Increase of production costs in China</td>
</tr>
<tr>
<td>Delta Electronics</td>
<td>Electronics H/W</td>
<td>Taiwan</td>
<td>India</td>
<td>US-China trade conflicts</td>
</tr>
<tr>
<td>B. Reshoring</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adidas AG</td>
<td>Athletic wear</td>
<td>Germany</td>
<td>Germany</td>
<td>Production quality and flexibility, Proximity to customers</td>
</tr>
<tr>
<td>Electrostar GmbH</td>
<td>Electronics</td>
<td>Germany</td>
<td>Germany</td>
<td>Production quality and flexibility, Quick response to customers’ needs</td>
</tr>
<tr>
<td>Autec AG</td>
<td>Adventure toys</td>
<td>Germany</td>
<td>Germany</td>
<td>Production quality and flexibility, Quick response to clients’ needs, IP issues</td>
</tr>
<tr>
<td>Piquadro S.p.A</td>
<td>Luxury leather bags</td>
<td>Italy</td>
<td>Italy</td>
<td>Production quality, Rise in Chinese wages</td>
</tr>
<tr>
<td>Mitsubishi Electric Co.</td>
<td>Electronics</td>
<td>Japan</td>
<td>Japan</td>
<td>US-China trade conflicts</td>
</tr>
<tr>
<td>C. Departing Chinese firms</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Xinlong Car Materials</td>
<td>Bicycle components</td>
<td>China</td>
<td>Vietnam</td>
<td>US-China trade conflicts, Rise in Chinese wages</td>
</tr>
<tr>
<td>Shandong Linglong Tire Co.</td>
<td>Tire</td>
<td>China</td>
<td>Serbia</td>
<td>US-China trade conflicts, Rise in Chinese wages</td>
</tr>
<tr>
<td>Mingtai</td>
<td>Aluminum</td>
<td>China</td>
<td>South Korea</td>
<td>US-China trade conflicts</td>
</tr>
<tr>
<td>Tshingshan Iron &amp; Steel</td>
<td>Iron and steel</td>
<td>China</td>
<td>South Korea</td>
<td>US-China trade conflicts</td>
</tr>
</tbody>
</table>

Source: Keun Lee for the Project Syndicate[^129]

VI. **Hypotheses and Expectations**

Based on the prevalence of the regionalization narrative in the US, US-China political tensions, security concerns, economic considerations, and recent desires for increased supply chain resiliency, it seemed likely that the commodity import data would exhibit evidence of regionalization of US supply chains between China and Mexico. Since trade between the US and China has grown overall, it was unlikely that any commodities would see much of a decrease in the actual volume of US imports from China. However, the political and economic context evidence—notably President Trump’s trade war—indicated that certain commodities might exhibit a decrease in the *rate* of increase of imports from China and a corresponding increase in the rate of change of imports from Mexico.

In particular, commodities related to national security industries, e.g. Arms and Explosives, Nuclear, Vehicles, Aircraft, Ships and Boats, Electronics, and Medical Devices, seemed more likely to show evidence of regionalization. Beyond the commodities most immediately relevant to national security, labor-intensive manufactured commodities—such as Textiles, Apparel, and Toys—also seem likely to regionalize given China’s rising cost of labor.

My final results showed evidence of a negative correlation between US imports from Mexico and China in the apparel, aircraft, medical devices, and furniture commodity groups when China was the dependent variable and Mexico the independent. These results do support the claim that regionalization away from China in favor of Mexico is occurring in certain industries that rely on labor-cost arbitrage and/or are relevant to national health and security.

VII. **Methods**

This analysis draws on US Census Bureau import data organized by the Harmonized System (HS). Since there exists little aggregated data on global supply chain volumes due to their complexity and lack of transparency, I use intermediary goods import data—in this case,
national-level commodity imports—as a proxy as recommended by Gaulier, Sztulman, and Unal (2020). Although data on the exact number of firms relocating might be more helpful, such information is hard to come by and not often tracked or shared by national governments. I first selected country-specific data from China, Mexico, and Vietnam so that I could compare the changes in import levels on a country-to-country basis. I excluded all food-based, art, and “not elsewhere specified or indicated” (nesoi) commodity groups to hone in on manufactured goods or commodities that serve as manufacturing inputs.

The time frame I selected starts in 2002 and ends in December 2021. When accessing Census import data, 2002 is the earliest year in which trade data is available by month. Within my date range, I divided my data into three segments. The first segment is from 2002 until 2008. While I initially intended to begin my analysis from 2006, the year that China first overtook Mexico as the US’ largest trading partner, I chose to start earlier to gain a fuller picture of trade trends surrounding inflection years. The first segment ends in 2008 since the global financial crisis marked a shift in world economics and trade relations overall. The second segment is from 2009 until 2016. Donald Trump’s election in 2016 marked the beginning of the US-China trade war and Trump’s tough-on-China rhetoric and trade policy. Despite the Phase One Trade Deal and USMCA, President Biden has not dramatically altered the US’ trade policy toward China, so the third segment spans 2017 through 2021.

To better observe trends, I assigned each HS commodity to a broader commodity group. From there, I picked out commodity groups over which China and Mexico appear to compete the most. In this analysis, I first determine that there is competition when both countries have noticeably positive trend lines, assuming that both have sought to increase their exports to the US in that commodity group. Although my analysis relies on this simplifying assumption, it is a

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flawed assumption in that notable increases in US imports from Mexico and China may not necessarily signal stronger competition or greater efforts to export. Instead, they could be more indicative of US demand, the growth of globalization and world trade overall, or a combination of factors. In my second set of regression analyses (Figures D-3 and D-4), I also incorporate industries that depend on labor-cost arbitrage, such as apparel, and are critical to national security, such as arms and pharmaceuticals to provide a more complete picture.

Once I determined which commodity groups experienced the most competition according to my above definition, I honed in on the specific commodities within commodity groups. I looked at overall import value to determine which ones seem to experience the most competition and calculated the percent change from year to year. In looking at the percent change, I sought to determine whether an increase in imports from Mexico corresponded with a decrease in imports from China, or vice versa. Such a correlation might indicate a substitution relationship between Chinese and Mexican imports that could support or contradict theories of regionalization to Mexico. Finally, I ran a multiple regression analysis to determine what kind of correlation, if any, exists between the percent change of Mexican and Chinese imports to the United States. I ran one using the percent change of Mexican imports as the dependent variable and Chinese imports as the independent variable, and then one with Chinese imports as the dependent and Mexican imports as the independent. I included the percent change in Vietnamese imports to determine if it had any relationship with Mexican and Chinese imports, and I broke the analysis down by commodity group to determine if there were industry-specific trends.
VIII. Visualizations and Results

A. Overall Imports: China vs. Mexico

Figure A-1: Chinese Imports to the US
Figure A-2: Mexican Imports to the US
In this preliminary scatterplot analysis, I determine there is competition when both countries have noticeably positive trend lines, meaning both have sought to increase their exports to the US in that commodity group. An initial comparison of imports by commodity group shows that Mexico and China have the most apparent overlap, or import competition, in Electric Machinery and Equipment, Furniture, Medical and Surgical Instruments, and Nuclear. Some modest but skewed competition exists in Plastics and Rubber (favors China) and Vehicles (heavily favors Mexico).
Figure A-3: Vietnamese Imports to the US
In comparison, Vietnam also exhibits with China and Mexico in Electric Machinery and Equipment, Furniture, and Nuclear. Vietnam also exhibits modest upward trend lines in Plastics and Rubber and Medical and Surgical Instruments. Vietnam does not compete with China in any overall commodity group that Mexico does not also compete in.

B. Competitive Commodities

These scatterplots hone in on the specific commodities within the commodity groups over which China and Mexico exhibit positively increasing trendlines.
Figure B-1: China - Specific Commodities
Figure B-2: Mexico - Specific Commodities
Figure B-3: Vietnam - Specific Commodities
Looking at the specific commodities within groups that exhibited upward trendlines, China and Mexico compete most intensely over nuclear, electric machinery, and non-railway ground vehicles. They compete less dramatically over plastics, rubber, optical and surgical instruments, and furniture. The US has experienced a dramatic increase in Vietnamese electric machinery imports. Vietnam has also significantly increased its nuclear and furniture exports and modestly increased its plastic and rubber exports.

C. Percent Change in Competitive Commodities

I have also graphed the percent change year-to-year for each of the commodities over which China and Mexico compete. In other words, the bar graphs show whether or not import levels have increased or decreased as a percent of last year’s imports. The percent change also functions as a yearly rate of change, indicating whether imports from China, Mexico, and Vietnam are slowing or intensifying. To make the information more digestible, I segmented my data into three date ranges: 2002-2008, 2009-2016, 2017-2021.
Figure C-1(a): Percent Change of Chinese Imports 2002-2008
Figure C-1(b): Percent Change of Chinese Imports 2009-2016
Figure C-1(c): Percent Change of Chinese Imports 2017-2021
Figure C-2(a): Percent Change of Mexican Imports 2002-2008
Figure C-2(b): Percent Change of Mexican Imports 2009-2016
Figure C-2(c): Percent Change Mexican Imports 2017-2021
Figure C-3(a): Percent of Change Vietnamese Imports 2002-2008
Figure C-3(b): Percent of Change Vietnamese Imports 2009-2016
Figure C-3(c): Percent of Change Vietnamese Imports 2017-2021
Starting in 2009 and ending in 2016, plastics, electric machinery and equipment, non-railroad vehicles, aircraft, optical and surgical instruments, and furniture from China and Mexico experienced positive and negative percent changes during the same years, indicating a positive correlation between imports. For the remaining commodities, there was no consistent tradeoff or negative correlation between increases and decreases in percent change of imports.

From 2017 until 2021, only plastics and aircraft experienced positive and negative percent changes during the same years. Inverse positive and negative percent changes, meaning imports from one country increased while the other decreased, were more common compared to the 2009-2016 segment and were most common in 2019. However, there was no consistent tradeoff in import percent changes. Vietnamese imports experienced lots of positive growth overall.

The different time segments also provide an overview of Chinese manufacturing import activity compared to Mexican and Vietnamese manufacturing import activity. During the periods from 2002 until 2008 and 2009 until 2016, China saw the most activity and overall positive rates of change. Vietnam and Mexico had especially low rates of change from 2002 until 2008. However, in the time segment from 2017 until 2022, Mexico and Vietnam saw a dramatic increase in manufacturing import activity, and China experienced more years with negative rates of change. Such trends support the findings that Mexico and Vietnam are occupying an increasingly large share of US manufactured commodity imports.
D. Multiple Regression Analyses: Percent Change in Imports

Figure D-1: Percent Change in Mexican Imports as Affected by Chinese Imports and Commodity Type

Dependent Variable: Percent Change (Year to Year) in Mexican Imports to the US

<table>
<thead>
<tr>
<th>Percent change in Chinese Imports to US</th>
<th>18.090***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent change in Vietnamese Imports to US</td>
<td>-0.020</td>
</tr>
<tr>
<td>Rubber and rubber products</td>
<td>19.449</td>
</tr>
<tr>
<td>Nuclear reactors, boilers, machinery, etc.</td>
<td>-0.305</td>
</tr>
<tr>
<td>Electric machinery, parts, sound equip, TV parts</td>
<td>7.263</td>
</tr>
<tr>
<td>Railway or tramway, traffic signal equip</td>
<td>-297.809</td>
</tr>
<tr>
<td>Non-railway vehicles</td>
<td>773.621</td>
</tr>
<tr>
<td>Aircraft and spacecraft</td>
<td>101.205</td>
</tr>
<tr>
<td>Ship and boats</td>
<td>91.019</td>
</tr>
<tr>
<td>Optic, photo, and medical/surgical instruments</td>
<td>26.203</td>
</tr>
<tr>
<td>Furniture</td>
<td>75.523</td>
</tr>
<tr>
<td>Constant</td>
<td>-172.943</td>
</tr>
</tbody>
</table>
Figure D-2: Percent Change in Chinese Imports as Affected by Mexican Imports and Commodity Type

Dependent Variable: Percent Change (Year to Year) in Chinese Imports to the US

| Percent change in Mexican Imports to US | 0.009*** |
| Percent change in Vietnamese Imports to US | 0.004 |
| Rubber and rubber products | -1.222 |
| Nuclear reactors, boilers, machinery, etc. | -0.070 |
| Electric machinery, parts, sound equip, TV parts | -0.721 |
| Railway or tramway, traffic signal equip | 15.899 |
| Non-railway vehicles | 2.120 |
| Aircraft and spacecraft | -5.828 |
| Ship and boats | -5.806 |
| Optic, photo, and medical/surgical instruments | -1.593 |
| Furniture | -4.325 |
| Constant | 9.860 |

The two above regressions analyze the relationship between the rate of change of Mexican and Chinese imports, controlling for the commodities that experience the most growth in their import volumes to the United States. In C-4(a), Mexican imports’ yearly rate of change was the dependent variable, and China’s was the independent. In C-4(b), China was the dependent variable, and Mexico was the independent. The regression defaulted to using the import value data in the Plastics and Rubber Commodity group as the baseline to determine whether or not commodities had any significant impact on the relationship between US imports from the two countries.
According to the above regressions, US imports of Chinese and Mexican goods have a very significant, positive correlation. When gauging the effect of imports from China on imports from Mexico, non-railway vehicles have a somewhat significant positive effect. When looking at the effect of imports from Mexico on imports from China, railway-related products had a somewhat significant effect.
Figure D-3: Percent Change in Mexican Imports as Affected by Chinese Imports and Commodity Type

*Note: now including apparel, pharmaceuticals, and arms*

Dependent Variable: Percent Change (Year to Year) in Mexican Imports to the US

<table>
<thead>
<tr>
<th>Category</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent change in Chinese Imports to US</td>
<td>0.118</td>
</tr>
<tr>
<td>Percent change in Vietnamese Imports to US</td>
<td>0.003</td>
</tr>
<tr>
<td>Plastics and plastic articles</td>
<td>0.395</td>
</tr>
<tr>
<td>Rubber and rubber products</td>
<td>0.447</td>
</tr>
<tr>
<td>Knit apparel</td>
<td>-13.930</td>
</tr>
<tr>
<td>Non-knit apparel</td>
<td>4.224</td>
</tr>
<tr>
<td>Nuclear reactors, boilers, machinery, etc.</td>
<td>-1.185</td>
</tr>
<tr>
<td>Electric machinery, parts, sound equip, TV parts</td>
<td>-4.924</td>
</tr>
<tr>
<td>Railway or tramway, traffic signal equip</td>
<td>-2.485</td>
</tr>
<tr>
<td>Non-railway vehicles</td>
<td>-1.791</td>
</tr>
<tr>
<td>Aircraft and spacecraft</td>
<td>7.577</td>
</tr>
<tr>
<td>Ship and boats</td>
<td>18.864</td>
</tr>
<tr>
<td>Optic, photo, and medical/surgical instruments</td>
<td>-2.723</td>
</tr>
<tr>
<td>Arms and ammunition</td>
<td>3.647</td>
</tr>
<tr>
<td>Furniture</td>
<td>-2.912</td>
</tr>
<tr>
<td>Constant</td>
<td>8.026</td>
</tr>
</tbody>
</table>
Figure D-4: Percent Change in Chinese Imports as Affected by Mexican Imports and Commodity Type

*Note: now including apparel, pharmaceuticals, and arms*

<table>
<thead>
<tr>
<th>Dependent Variable: Percent Change (Year to Year) in Chinese Imports to the US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent change in Mexican Imports to US</td>
</tr>
<tr>
<td>Percent change in Vietnamese Imports to US</td>
</tr>
<tr>
<td>Plastics and plastic articles</td>
</tr>
<tr>
<td>Rubber and rubber products</td>
</tr>
<tr>
<td>Knit apparel</td>
</tr>
<tr>
<td>Non-knit apparel</td>
</tr>
<tr>
<td>Nuclear reactors, boilers, machinery, etc.</td>
</tr>
<tr>
<td>Electric machinery, parts, sound equip, TV parts</td>
</tr>
<tr>
<td>Railway or tramway, traffic signal equip</td>
</tr>
<tr>
<td>Non-railway vehicles</td>
</tr>
<tr>
<td>Aircraft and spacecraft</td>
</tr>
<tr>
<td>Ship and boats</td>
</tr>
<tr>
<td>Optic, photo, and medical/surgical instruments</td>
</tr>
<tr>
<td>Arms and ammunition</td>
</tr>
<tr>
<td>Furniture</td>
</tr>
<tr>
<td>Constant</td>
</tr>
</tbody>
</table>

The two above regressions analyze the relationship between the rate of change of Mexican and Chinese imports, controlling for the commodities that experience the most growth in their import volumes to the United States and key sectors (pharmaceuticals, arms and
ammunition, and apparel) that are frequently present in discussions of regionalization and nearshoring. In C-4(c), Mexican imports’ yearly rate of change was the dependent variable, and China’s was the independent. In C-4(d), China was the dependent variable, and Mexico was the independent.

Upon the introduction of the pharma, arms, and apparel industries, the regression results indicated no significant correlation between the rate of change between imports from Mexico or China, regardless of their position as dependent or independent variable. However, when Chinese imports’ rate of change was analyzed as the dependent variable, the analysis found that apparel and furniture were very significant negative confounding variables and that aircraft and medical instruments were somewhat significant negative confounding variables. This implies that increases in Mexican imports in the apparel, furniture, aircraft, and medical instruments have a negative effect on US imports from China in those same groups, or that some factor that causes the US to import more of those commodities from Mexico influences the US to import fewer from China. However, there is no such factor that favors Chinese imports at Mexico’s expense.

IX. Analysis and Discussion of Results

A. Summary of Results

The trends in commodity data collected by the US Census Bureau varied based on the use of Chinese trade or Mexican trade as the dependent variable and the inclusion of key industries such as pharmaceuticals, apparel, and arms and ammunition. When looking solely at commodities whose import the US has visibly increased over the year, the regression analysis shows that the rate of change of US imports from Mexico and China are highly positively correlated overall, although there is some non-significant variation between specific commodities. Although initially surprising, these results may be attributable to the sample composition: the regression only included commodities whose volume was trending upward. After introducing other commodities
central to the discussion of regionalization and nearshoring, the strong mutual correlation between the rate of change between Chinese and Mexican imports disappeared. When Mexico was the dependent variable, there were no significant correlations or confounding variables whatsoever. However, when China was the dependent variable, the rate of change for Chinese imports was very significantly negatively correlated to apparel and furniture and moderately inversely correlated to the commodity groups containing aircraft and medical devices. The lack of mutual correlation supports the interpretation that certain industries are experiencing regionalization rather than simple competition between countries with high export similarity.

The findings indicate that US imports from China slow when the US increases its rate of import from Mexico in the apparel, furniture, aircraft, and medical devices sectors. These results support two of the leading theories behind drivers of regionalization and relocation from China. The high significance of apparel and furniture, both industries sensitive to labor costs, support the assertion that companies are relocating from China because of the rising wages. The moderate significance of the commodity groups containing aircraft and medical devices supports this claim as both are critical to national defense and Covid-19/public health efforts, respectively.

In terms of the percent changes from year-to-year in absolute terms, China experienced a flurry of positive activity from 2002 until 2016, but the percent changes became more sporadic and less uniformly positive during the period between 2017 and 2021. This trend reflects the tumultuous trade relationship marked by Trump’s trade war, rising tensions, and Covid-related supply chain bottlenecks. The percent change in Mexican imports was comparatively low in the period from 2022 until 2008, but the subsequent periods saw far more dramatic changes as the US-Mexico economic relationship accelerated. Similarly, Vietnamese imports to the US saw few dramatic changes between 2002 and 2016. However, most industries regularly saw positive rates of change from 2017 onward, which mirrors the recent increased popularity of Vietnam as a manufacturing alternative to China.
It is important to note that while these findings support the existence of regionalization on an industry-by-industry basis, they do not conclusively prove or disprove a mass exodus from China overall or any large-scale financial decoupling. Furthermore, they may also be prone to error, which I will discuss further in the following section.

B. Sources of Error, Limitations, and Opportunities for Future Research

Several gaps in my analysis leave room for further exploration into the regionalization and nearshoring of US supply chains. Although intermediary goods may be used as a proxy for supply chain data, certain commodity groups are overly broad categories of goods that factor into a wide variety of industries. If regionalization is happening at the industry level, an effective analysis may need to target specific industries more narrowly to obtain more conclusive results.

My analysis also grouped commodities to make the data more wieldy, which could have further obscured trends at more specific levels. Although I also evaluated the specific commodities within larger groupings of interest, further research would do well to hone in on even more precise subgroups. In terms of increases and decreases in volume (rather than rate of change), it may also have been helpful to look at more commodity groups that did not exhibit visible import increases. For example, the apparel, furniture, aircraft, and arms commodity groups (all significant in the regression analysis) did not exhibit dramatic increases in the volume imported. This trend did not support the assumption I used to select commodity groups to focus on in my initial regression analysis. Volume increases in corresponding commodity imports from both Mexico and China do not actually signify greater levels of competition within the broader commodity sector.

Instead, regionalization appears to be happening on the margins of commodity sectors that have not seen much change in import volume over the last decade or so. This trend is also consistent with the interpretation that industries that are already less reliant in China will be more likely to regionalize. In addition, dramatic trends in increased imports in recent years might signal
an increase in US demand or necessity, which would also hinder efforts to nearshore, relocate supply chains, or cut reliance on China.

The regressions also defaulted to using Plastics and Pharmaceuticals, respectively, as bases of comparison to determine the significance of other commodities as confounding factors. Future research might benefit from using an average derived from all commodity imports as the baseline from which to derive significance. It would also be helpful to expand the range of research to other countries to provide a broader context and further support (or denial) of US regionalization and nearshoring trends.

Lastly, since my analyses did not include data addressing reshoring or the growth of US manufacturing, they are ill equipped to answer any questions about the role of nativism and nationalism in US trade policy. Although Trumpian rhetoric about the rebirth of American manufacturing certainly contributed to US-China political tensions and trade war-induced cost concerns, the scope of this specific project only includes nearshoring to Mexico rather than reshoring to the United States. The specific impact of populist rhetoric and nationalism on reshoring would be interesting topics to build upon in related future research.

C. Interpretation and Discussion of Political Economic Factors

The greater significance (with regard to the regression analyses) of commodities prone to labor-cost arbitrage compared to those directly relevant to national security suggests that economic considerations still take the lead over political drivers. Although both economic and political factors impact firms’ decisions to nearshore, we can expect cost to be the best indicator of whether an industry will trend toward regionalization.

In addition, we may also consider political reasons for nearshoring as secondarily economic. Given the the way great power rivalry tensions have affected firms’ economic future (e.g. US sanctions on Huawei, sourcing rules in defense-related industries), firms might also decide to move or diversify operations for more stable financial prospects and to avoid the high
cost of sudden political changes should US-China relations worsen. Similarly, US firms and supply chains may also worry that China will attempt to restrict access to key inputs, which impacts their economic operations in addition to national security. For instance, global semiconductor supply relies heavily on Taiwan, for whom Chinese invasion is cause for concern.

However, the Census Bureau’s import data also indicates that not all industries vulnerable to US-China political tensions are experiencing regionalization. As previously mentioned in the background sections, semiconductors are a prime example of an import crucial to national security and everyday functions. Nonetheless, my analyses showed no indication of significant nearshoring trends in the electronics and electronic components commodity group as of December 2021. Although it is possible that a more in-depth analysis of subgroups could reveal trends, the lack of regionalization in this commodity group likely reflects the US’ inability to nearshore due to the monopolistic nature of the semiconductor industry and dependence on manufacturing clusters in a limited number of countries. Similarly, certain critical supply chains, especially those that rely on minerals and agricultural products, may not have the option of nearshoring because of the immovable nature of natural resource deposits.

Although the data does support industry-specific nearshoring, the lack of regionalization in crucial sectors like electronic and electronic components and some sectors directly relevant to defense (e.g. arms and ammunition) also support certain arguments against the existence of regionalization. Critics have correctly pointed to the immense costs of greenfield investment in new countries, which will often lead to firms avoiding a move out of China unless absolutely necessary. Despite pockets of regionalization, trade between the US and China (and global trade more broadly) has continued to grow. Even the trade war did not hinder bilateral trade growth for long, and the Phase One trade deal indicates that America’s long-term policy goals aim to expand trade rather than deglobalize. Indeed, not every industry will experience regionalization, nor would such a shift be desirable. The initial benefits of international trade still stand: our complex
network of GVCs reap the benefits of comparative advantage and produce goods affordably and efficiently for global citizens everywhere.

However, national policy and individual firms must also consider means to create resilient and durable supply chains in the face of geopolitical conflict, regardless of immediate economic realities. The Covid-19 pandemic has been a sobering wake-up call. Supply chains need padding to withstand unpredicted global shocks, and many supply chain professionals are indeed discussing alternatives to JIT inventory management and prioritizing resiliency. Not unlike Covid-19, a downturn in US-China relations has the potential to suddenly and severely disrupt the US economy and global trade more broadly. Although it is in the interest of both nations to build a warmer relationship, and many indicators leave room for optimism, it is not inconceivable that tensions take a turn for the worse.

For instance, the rhetoric surrounding Russia’s recent invasion of Ukraine is eerily similar to China’s narrative regarding Taiwan. Such a thought experiment also raises questions about the viability of a comparable response vis-a-vis sanctions and economic decoupling—after all, far more countries are economically entrenched in and dependent on China than on Russia. The annexation of Taiwan is by no means a guarantee, but the mere possibility, especially given current events, is a reminder that normal trade relations could be suspended at any moment. Unless firms would prefer that supply chains be reshaped by sheer necessity than on their own terms, it is in their best interest to consider how to increase their resilience and analyze their vulnerabilities to political and economic factors outside their control. After all, the continued growth of global trade illustrates that GVCs are not a zero-sum game. As the results show, the US is importing more goods from both Mexico and China in a variety of sectors. Diversification and resiliency do not inherently translate to an economic loss for any one country, nor are they inherently contradictory to improved trade relations with China. While the pros and cons of nearshoring or diversifying “away” from China must be evaluated on a case-by-case basis, firms would be wise to incorporate greater elements of geopolitical risk into their future planning. No
one hopes for the worst-case scenario, but the cost of a safety net typically beats the potentially disastrous results of being caught unprepared.

X. Conclusion

US industry chatter of nearshoring and regionalization is more than hot air, but the reality is more nuanced than a mass-exodus from China to Mexico. The results of my analysis support claims that nearshoring and regionalization exist in labor-intensive industries and certain industries relevant to national health and security. However, not all industries are experiencing regionalization, and many critical industries face barriers to relocation due to monopolistic industry conditions and the immovability of natural resources. If industries do choose to regionalize, cost considerations are likely the primary driver. Political considerations (national health and security) also play a role, but they are less compelling than economic ones at the moment. Despite well-founded concerns, setting up operations in a new country can be costly and difficult to justify on speculation alone.

Even so, Covid-19 has shown that it pays to expect the unexpected, which some firms have begun to do by adding slack to their supply chains so as to absorb sudden shocks to the global economy. While it makes intuitive sense for private-sector companies to weigh economic factors most heavily, resiliency and “just-in-case” inventory strategies have become more valued alongside JIT. In the absence of certainty, it may be helpful to plant eggs in several baskets. Firms might also benefit from treating international political conflict more similarly to economic development like rising labor and transport costs since they have frequently translated into bottlenecks and rising costs themselves. As we witness the development of US-China relations in a post-pandemic era, geopolitical events may prove to be the catalyst of cascade effects across GVCs.

In recent months, Russia’s invasion of Ukraine has been yet another major shock to GVCs, especially those related to oil, gas, and wheat. Countries have been forced to pick a side:
they can either condemn Russia’s actions alongside America, or they can defend Putin’s invasion or take an ambiguously pro-Russia stance like China. In addition to disrupting supply chains worldwide and upending energy markets, the Russian invasion may catalyze the transition into a bi-polar world order that pits China against the US even more definitively. The war between Russia and Ukraine has also sparked worries that China might attempt a similar invasion of Taiwan. Should such an attack occur, political drivers of nearshoring may eclipse economic ones and motivate US companies to reduce reliance on China more dramatically.\textsuperscript{131}

Indeed, industry talk of resiliency and diversification is translating into pockets of real action visible through macro-level import data. However, it remains to be seen whether or not trends of regionalization will spill into other industries as a result of worsening geopolitical tensions and to what extent those shifts are permanent relocations versus source diversification. Supply chain is a constant game of forecasting—depending on the context, regionalization and nearshoring may be the appropriate response to the different political and economic influences shaping global trade.


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