The Effects of Tariffs on Global Supply Chain and Operations

Short Description – I chose to explore the effects of tariffs on global supply chain and operations, I wanted to do this as we are living in a time where tariffs are extremely present. Every day we wake up and they are shifted, altered, removed, etc…. Markets are shifting rapidly, and consumer prices are rising significantly. This topic will cover how companies have adjusted to these changes. Whether this is with a work around, moving manufacturing, or another method.

Disclaimer – All my research questions are answered directly under each source.

Research Questions –

1. What are the short and long-term effects of tariffs on the global supply chain?
2. How do tariffs increase supply chain complexity and what are the downstream implications?
3. What proactive strategies are businesses using to ensure supply chain resilience?
4. Do tariffs successfully support domestic manufacturing or do they have unintended consequences?

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| L1 S1 - Blogs Posts | #1 - Kinaxis. “Tariffs and the Supply Chain: Navigating the Ripple Effects of Economic Policy.”  Kinaxis Blog, 28 Mar. 2024, https://www.kinaxis.com/en/blog/tariffs-and-supply-chain-navigating-ripple-effects-economic-policy.  #2 - ThomasNet. “3 Ways Businesses Are Mitigating the Impacts of Tariffs.”  Thomas Insights, 7 Aug. 2019, https://www.thomasnet.com/insights/3-ways-businesses-are-mitigating-the-impacts-of-tariffs/. |
|  | These blog posts both highlight the impact that tariffs can have on our economy. This post from March explores that while the US adds tariffs on steel and aluminum and most imports from Mexico and Canada. The posts highlight how tariffs are in theory designed to create more jobs and strengthen the economy. They actually can have the opposite effect. In this case, it is likely we will see a substantial price increase in the cost of goods. The second blog post highlights how with tariffs we begin to see logistical inefficiencies. These are created because manufacturers have spent years getting their supply chains to be efficient and organized but tariffs can alter that structure. Let’s look at a manufacturer such as Patagonia. They recognized that making products in the US was not the most efficient due to the expertise, equipment, volume and many other issues with the manufacturing in the US. Instead, they’ve spent years investing money on making clothing ethically in many countries, including the US. With this investment came renewable energy investments, education, and many other items in countries such as Vietnam. The second blog goes into that while the tariffs can force investment in manufacturing and logistics in the United States that when they are imposed this rapidly, they will likely trigger a recession. The article then goes to elaborate that this recession will likely trigger the Federal Reserve to cut interest rates.  The second blog goes into ways companies are navigating these tariffs, one way is stock piling inventory and parts. Essentially, we had warned these tariffs were going to go into effect, so this gave opportunities. One of the opportunities was to create surplus inventory and stash it in the US, whether this was with finished goods or parts it allows companies to avoid the tariffs for a short time frame. Another option is “tariff engineering,” this is when you make your raw materials and then ship them in to produce the item, this can avoid the tariffs or at least lower them. For instance, a product that contains chips from Taiwan could potentially be made in Brazil if it is adjusted enough in Taiwan. |
| Research Questions | 1. What are the short and long-term effects of tariffs on global supply chain?   These blogs dive into this by talking about tariff engineering and the potential for the fed to cut interest rates to promote spending.   1. How do tariffs increase supply chain complexity and what are the downstream implications?   According to these blogs complexity is increased due to the need for more suppliers and the requirement of navigating all of the different regulations that are rapidly changing.   1. What proactive strategies are businesses using to ensure supply chain resilience?   Businesses can build a larger safety stock to potentially allow them to wait out tariffs or take some of the pain away.   1. Do tariffs successfully support domestic manufacturing or do they have unintended consequences?   These blogs fail to answer this question. |

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| L1 S2 – News Article | Associated Press. “China Accuses Trump Administration of Economic Bullying with Tariffs.” AP News, 7 Apr. 2025, <https://apnews.com/article/trump-tariffs-china-trade-4e130e740f3955feccec226d6c0084d9>.  Another source to add context - Office of the United States Trade Representative. “Reciprocal Tariff Calculations.”  USTR.gov, https://ustr.gov/issue-areas/reciprocal-tariff-calculations. Accessed 7 Apr. 2025. |
|  | This news article dives into some of the effects that tariffs can have on shipping products. Tariffs cause major supply chain disruption because while many companies can move their production to another country to avoid them, in this case that is not as feasible as the tariffs are across the board on most countries. This means that these companies are left with only two choices, either you move the production to the US, or you pay the tariff. In this case, moving production to the US is not always worth it as there isn’t enough capacity to produce the produce and it could change again. The issue of there being a bottleneck with production facilities in the US is an interesting issue. Part of the issue with these current tariffs is they aren’t being calculated based on other tariffs but rather trade deficits. In this news article we see countries such as Indonesia are having to strengthen their imports from the US on products such as wheat, cotton, oil, etc.… |
| Research Questions | 1. What are the short and long-term effects of tariffs on global supply chain?   According to these news articles the long-term impacts are substantial as businesses lose faith in producing products in certain areas, including the US.   1. How do tariffs increase supply chain complexity and what are the downstream implications?   These articles discuss this to an extent, in the current tariff war, it isn’t a tariff war, it’s a trade deficit war. The implications of this are positive and negative, for a place like the US it will likely complicate everything as we will begin shipping more than before, other countries will begin receiving either more of their stuff from the US or none.   1. What proactive strategies are businesses using to ensure supply chain resilience?   This Article Does not mention this.   1. Do tariffs successfully support domestic manufacturing or do they have unintended consequences?   Yes they have unintended consequences, they do support domestic manufacturing to an extent but in this case, we are unlikely to see the support. |

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| L1 S3 - Magazine Article | Institute for Supply Management. “Tariffs on the Horizon: Expect Supply Chain Implications.” Inside Supply Management Magazine, Nov. 2024, https://www.ismworld.org/supply-management-news-and-reports/news-publications/inside-supply-management-magazine/blog/2024/2024-11/tariffs-on-the-horizon-expect-supply-chain-implications/. |
|  | This magazine article highlights what exactly a tariff is by saying that it is a tax paid by the US importer, not a foreign country or exporter. This tax ultimately comes out of the consumers’ pockets with higher prices. The magazine goes into it being difficult to manage risk on manufacturers that are far away, and potential adversaries. The reason it could be hard to manage risk on manufacturers far away is that you don’t truly know what the tariff situation will be like when you order product. When I order a product that is made in China, it could take me 180 days before I import it into the US. This means that currently importers are currently struggling to import goods in the US whose orders were made in potentially October, before the election. The article goes into how tariffs could cost the consumer as much as $78 billion dollars. The article goes into how Chinese imports to Mexico and Vietnam are accelerating. This is likely to avoid tariffs, essentially manufacturers are shipping goods in from China, then rebranding them saying they are from Mexico or Vietnam to avoid the tariffs. Essentially, they are changing the statement of origin to avoid being affected by these tariffs as much. The issue as we think about this is we have now added complexities to our supply chain. We are now shipping products further, with more hands involved in order to make these exchanges happen. The article goes into how instead of tariffs the better approach would be to make the US the unquestioned destination of choice for future manufacturing and supply chain investment. The article also discusses how if the goal is to weaken the Chinese Economy, then it will be achieved but if it is to strengthen the US in the manufacturing sector, well that won’t happen. |
| Research Questions | 1. What are the short and long-term effects of tariffs on global supply chain?   Short term implications are a massive complication of our supply chain that is extremely difficult to reverse.   1. How do tariffs increase supply chain complexity and what are the downstream implications?   In this case there is a high likely of increased complexity, we see in the article that the author talks about companies changing the country of origin. This will add a lot more complexity as instead of a product going to China -> US, it will now go China -> Mexico -> US. This additional step will cause significant complications.   1. What proactive strategies are businesses using to ensure supply chain resilience?   Businesses are using suppliers that change the country of origin. Whether legal or not they are finding ways to import from other countries for the same or a lower price.   1. Do tariffs successfully support domestic manufacturing or do they have unintended consequences?   According to this article, it does not support domestic manufacturing, in many cases it can harm them. |

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| L2 S1 – Academic Journal | Rogers, Zachary S., et al. “Protect Me Not: The Effect of Tariffs on U.S. Supply Networks.”  Journal of Purchasing and Supply Management, vol. 30, no. 1, 2024, article 100897,  https://www.sciencedirect.com/science/article/pii/S1478409224000037. |
|  | This research focuses on the effect of the 2018 US-China Trade War. It highlights that while the ultimately goal of these tariffs was to create and protect domestic industries the ultimate effect was a decrease in the value of these domestic industries. The study highlights that while the effects of tariffs are generally assumed to be known, the effects are unknown. The article goes into how there are unintended effects of tariffs and one of those is a lasting increased price on products. This is something we saw from the pandemic, items such as toilet paper increased in price, but they’ve never returned to their previous levels, or even close. The same thing is happening with tariffs, when a tariff applies the imported products go up in price but so do the items made locally in the United States. This essentially makes tariffs have a minimal effect. Due to the regulatory uncertainty the journal highlights that there often was a bit of a premium added to products as a kind of insurance. Many companies decided to increase the number of suppliers they had, leaving their pre-established relationship present but supplementing it with another supplier in another country. This added unnecessary levels of complexity, increasing both the cost and economic impact of their supply chain. Another unintended consequence was an increase in lead time, inventory imbalances and increasing administrative overhead. The last point is very interesting because we have seen pressure to reduce administrative overhead in companies but while supply chains are increasing in complexity. On top of all of these unknowns, companies had to build a larger quantity of safety stock and more complex contingency plans. This means the overall capital required was substantially higher. |
| Research Questions | 1. What are the short and long-term effects of tariffs on the global supply chain?   This article really highlights the longer-term implications of tariffs, it highlights that while there are benefits of them, the long-term effect of a rise in cost of goods is substantial. On top of this, we end up with an increased lead time, and overall higher cost.   1. How do tariffs increase supply chain complexity and what are the downstream implications?   The largest unique mention in this source was that there is an increase in administrative overhead and inventory imbalances. This is interesting and an unexpected drawback in my eyes.   1. What proactive strategies are businesses using to ensure supply chain resilience?   Businesses are having a larger amount of on hand inventory due to tariffs.   1. Do tariffs successfully support domestic manufacturing or do they have unintended consequences?   According to this source, tariffs do not and in many cases have the opposite effect and actually harm domestic production. |

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| L2 S2 – Trade Journal | Deloitte. “Managing Supply Chains amid Tariffs: How Manufacturers Can Respond to Trade Volatility.” Deloitte Insights, 1 Apr. 2025, https://www2.deloitte.com/us/en/insights/industry/manufacturing/managing-supply-chains-amid-tariffs.html. |
|  | This article goes into how to manage a supply chain amid rapidly changing tariffs. The first main point is diversifying their supply chain, reducing the usage of single source suppliers and expanding their supply chain across many regions. Notice that the key to this is to use many regions, one supplier may be able to offer production in multiple regions and that can be extremely valuable in these cases. Another major point is to invest heavily in digital technologies. By utilizing technology such as data analytics, and many other tools, we can gain real time visibility into our supply chain operations. This allows us to diagnose and realize issues more rapidly, on top of this, it also leaves us the potential chance to recognize issues ahead of time. The 3rd major point is to foster a close relationship with your suppliers; by having a close relationship it allows us to be more fluid and potentially adjust our supply chain more rapidly as issues arise. This collaboration can allow us to even see issues before they arise, seeing what suppliers our suppliers use can be extremely valuable for detecting potential issues in the future. By improving our communication and working together more closely, we hope to strengthen our supply chain. The last major point is to ensure you have plans for scenarios and managing your risk; by creating plans it will force us to analyze and think through what scenarios are potentially going to happen. This can allow us to see that one supplier maybe should be two or we should adjust our structure. |
| Research Question | 1. What are the short and long-term effects of tariffs on global supply chain?   One of the long-term benefits and drawbacks of tariffs according to the above source is that companies are forced to review their supply chains in depth. This means they could end up making a more resilient supply chain. This benefit is present even after tariffs are removed. Short term this article goes into the same topic as the rest, it is a drawback overall and companies will not do as well.   1. How do tariffs increase supply chain complexity and what are the downstream implications?   Tariffs increase supply chain complexity by making many companies source from multiple suppliers in different regions. This adds great complexity as it is needed to ensure you have the ability to order and receive goods on different timelines.   1. What proactive strategies are businesses using to ensure supply chain resilience?   The proactive strategies that many businesses are using to ensure supply chain resilience are investing heavily into data analytics. By having a good team of data analysts companies can build reports that potentially highlight issues and allow them to resolve them proactively. These reports can also allow them to respond more successfully to issues that arise unplanned.   1. Do tariffs successfully support domestic manufacturing or do they have unintended consequences?   According to this source, they negatively impact domestic manufacturing and the effects are unknown until after the tariffs take effect. |

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| L2 S3 – Ted Talk | Lang, Nikolaus S. “5 Ways Leaders Can Adapt to Shifting Geopolitics.”  TED, Nov. 2024, https://www.ted.com/talks/nikolaus\_s\_lang\_5\_ways\_leaders\_can\_adapt\_to\_shifting\_geopolitics. |
|  | In this ted talk the speaker discusses how we no longer live in a society where our supply chains operate somewhat independently. Instead, our supply chains are very intertwined between countries, all of them are connected in some way or another. Essentially, instead of the US looking at its own supply chain we need to be looking at every else’s as well. The speaker discusses that local sourcing is becoming more valuable as it can provide stability from political pressure. The speaker also discusses how we live in a time where our supply chain is increasingly vulnerable to disruptions caused by tariffs, wars, shifting alliances or even politics. As well, geopolitical tensions have created significant issues over the last couple of years, an example that comes to my mind is Russia-Ukraine. These political tensions have a very real and present impact on supply chains. We also see that having a diverse supply chain is paramount, being in different countries can provide a company with stability in the case of tariffs. Scenario and stress-testing have become paramount as well. One of the largest changes the speaker talks about is how just-in-case is replacing just-in-time inventory. This shift is significant and having an additional buffer inventory can provide stability that is needed in the event of uncertainty. The author ends with speaking how businesses that integrate geopolitical risk into strategy will outlast those who treat it secondary. |
| Research Questions | 1. What are the short and long-term effects of tariffs on global supply chain?   The short-term effects are a volatile supply chain that no one knows what the results are going to be, the long-term effects is a situation where we don’t know where to source our product from.   1. How do tariffs increase supply chain complexity and what are the downstream implications?   Tariffs increase supply chain complexity by making companies source products from multiple sources instead of fewer sources. This is a huge complexity issue as it doesn’t scale very well, if you are going to different countries with different tariffs you could end up in a situation where you must make products in different countries in order to avoid tariffs.   1. What proactive strategies are businesses using to ensure supply chain resilience?   According to this article the strategy that businesses should use to ensure resilience is by producing domestically. It states that by producing domestically it is the only way to ensure stability in the cost. The item that I do feel the article is omitting is that while you can produce products in the US there are many tariffs that are applying to raw materials. This is important to note because you end up having to integrate your entire supply chain into one country.   1. Do tariffs successfully support domestic manufacturing or do they have unintended consequences?   They can support domestic manufacturing, but they have many unintended consequences including a level of complexity in supply chain that is unnecessary. |