

Reshoring: An Overview, Recent Trends, and Predictions for the Future

Jennifer Dikler Visiting Researcher, KIEP Visiting Scholars Program (jenniferdikler@gmail.com)

I. Introduction

With the rise of globalization beginning in the 20th century, came the inevitable rise of offshoring — companies moving at least some parts of their operations abroad in order to cut costs and increase profits. In recent years, however, international developments, such as the rise of wages in what were typically considered low-cost countries, coupled with uncertainties created through global political tensions, have incentivized companies to move their operations back to their respective home countries or to make new investments in United States-based facilities. This phenomenon, known as reshoring, has only increased in 2020 and 2021, amidst US - China tensions and the COVID-19 pandemic.

Reshoring is growing in popularity particularly among companies based in the United States. In May 2021, for example, a US solar

energy systems manufacturer called GAF Energy announced that the company would relocate its operations from Asia to Silicon Valley, expecting to add 400 jobs in research, engineering, and manufacturing roles (Szal, 2021). Around the same time, cycle and treadmill machine maker Peloton announced that it would invest \$400 million to build its first US-based factory, citing heightened demand and the pandemic highlighting uncertainties that come with its global supply chain (Thomas, 2021). The company, which has announced that the US factory will be based in Troy Township, Ohio, stated that it expects to create over 2,000 jobs in the area. Also, in May 2021, Ford Motor announced a joint venture with South Korean battery maker SK Innovation to manufacture battery cells for electric vehicles in the United States (Wayland, 2021). The venture will be based in the US, marking a significant decision for Ford

Motor, which operates worldwide and has notably been in the press in recent years for its decisions to offshore operations.

Though an increasingly important and growing phenomenon, reshoring has not been studied nearly as much as offshoring. Experts predict that reshoring will only continue to increase as global supply chain uncertainties get revealed through political tensions and fallout from the pandemic. As companies gain a deeper understanding of the vulnerabilities in offshoring their production, they will become more incentivized to invest in their home country-based facilities. As such, it is more important than ever to understand reshoring, the reasons behind why companies decide to reshore, the recent trends among companies moving operations back home, and predictions about how reshoring is likely to evolve in years to come. This paper offers an overview of the aforementioned points, specifically focusing on companies based in the US, which are some of the more likely companies to make the decision to offshore and subsequently reshore.

II. Reasons for Reshoring

Both reshoring and offshoring are particularly common among developed countries, such as the United States and those comprising the European Union. By moving to low

cost countries, these companies have historically been able to cut production costs on factors such as labor, raw materials, and processed components. In deciding whether to offshore their operations and where & how best to offshore them, companies typically consider trade-off transport costs, scale economies, and other cost-based variables (MacCormack et al., 1994), as well as strategy, risk management, flexibility, and supply chain reliability (Tate, 2014). In recent years, a lot of these factors have shifted away from favoring offshoring, leading companies to bring their operations back or otherwise invest in operations in their home countries. This concept is known as reshoring.

Unlike offshoring, reshoring globally is much less studied, and data on the phenomenon is scarce. While there are various definitions of the term “reshoring,” working off of a modified definition combining those utilized by Backer et al. and by the Reshoring Initiative, this paper defines it as the reverse decision with respect to a previous offshored process resulting in the transfer of activities to the home country of a company.¹ Crucially, reshoring does not have to include the repatriation of *all* previously offshored activities. In fact, under the Reshoring Initiative’s definition, reshoring also includes a domestic manufacturer taking market share from a foreign manufacturer, as well as the domestic

¹ The original Backer et al. definition differs from this paper’s in that it includes nearshoring, or the decision by a company to transfer activities to a neighboring country, as opposed to a company’s home

country, as part of reshoring. This brief touches on nearshoring but treats it as a distinct phenomenon from reshoring.

production of entirely new products that replace the function of different products that had previously been imported.

Depending on the industry and the home country of a company, a company's decision to reshore operations is based on a variety of factors and has been explained through a multitude of theories. According to Backer et al., some of the major reasons that lead to reshoring include the changing cost structure in emerging countries, growing digitalization of manufacturing in developed economies, miscalculation and underestimation of the full costs of offshoring, the co-location of R&D, innovation, and production, potential threats to intellectual property when offshoring, the balancing of costs savings and risk dispersion, proximity to markets and increased flexibility of production, and finally, specifically in the United States, a weakening dollar and the shale gas/oil revolution.

Though there has definitely been a rise in reshoring in recent years, especially in developed countries such as the United States, the significance of the effects of reshoring on national economies is still highly debated. Anecdotal evidence in the form of news headlines points to the growing importance of the phenomenon, but studies point out that reshoring creates a limited number of jobs and that these jobs are increasingly meant for high-skilled workers (Backer et al., 2016). Further, experts continue to point to the fact that though reshoring seems to be growing in terms of absolute numbers in recent years,

offshoring doesn't seem to be slowing down. As highlighted in a 2015 report published by the Peterson Institute for International Economics, "discussions of reshoring generally focus only on movement in one direction...proponents of reshoring do not take into account the many firms that have expanded offshoring over the same period, a substantial number of which are the same firms with highly publicized reshoring efforts" (Oldenski, 2015). Even under President Trump, who pledged the return of manufacturing jobs back to the US as part of his campaign and during his presidency, the Labor Department signed 2,095 "petition[s] for help under a federal designed to aid those harmed by trade...covering 202,151 workers who lost jobs that moved abroad" (Aeppel, 2021). The number of such applications filed and the number of workers they cover serve as some of the more commonly used measures of offshoring. During the Trump administration, they amounted to only slightly less than the number of petitions covered (2,170) and workers covered (209,735) during the last four years of the Obama administration, pointing to the notion that offshoring doesn't seem to be significantly decreasing in recent years.

As such, though it is important to examine available data on reshoring and identify reshoring trends among various counties and industries, it is also important to keep in mind how limited this data really is, and how (relatively) few studies measuring aggregate economic effects of reshoring have been con-

ducted. It is also worth noting that more recently, protectionist trade policies in nations such as the United States, and tech wars between large countries such as the US and China, coupled with the COVID-19 pandemic, have contributed to unreliability surrounding companies' dispersed global value chains and have further contributed to a rise in companies' interest in reshoring, as well as to a rise in reshoring itself. The recent nature of these developments and the data associated with them further complicate performing research that factors such developments into measuring the importance of the effects of reshoring.

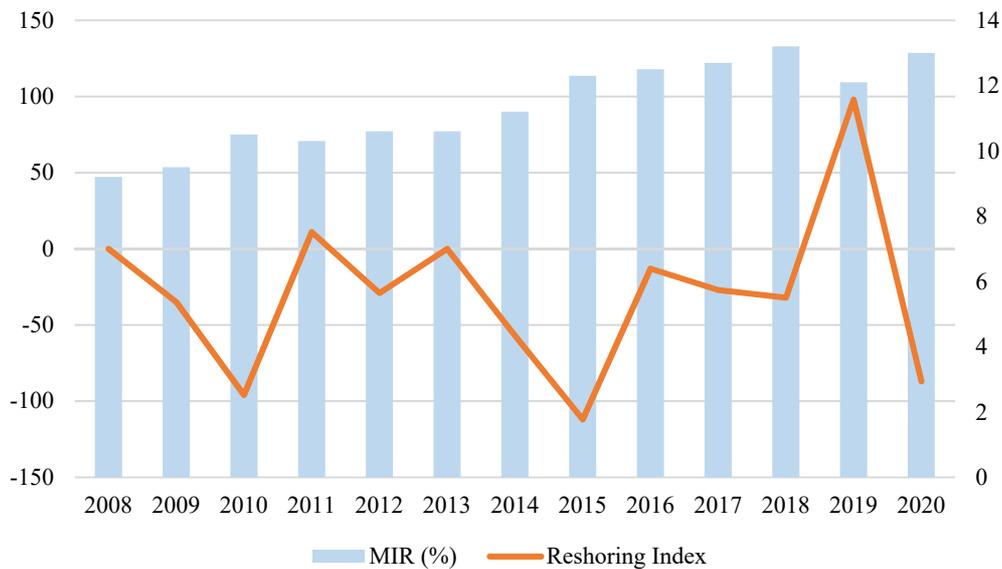
III. Recent Trends

As mentioned previously, data on reshoring, even in countries where it is relatively more available, is still quite limited. As such, companies and organizations have created their own definitions, metrics, and data collection methodologies in order to gauge reshoring trends over the last several years. These range from broad metrics extracted from general economic data, and trends observed through surveys of company executives. The below summary utilizes a variety of such data to provide an overview of recent reshoring trends among US companies.

According to the 2020 US Reshoring Index published by Kearney, COVID-19 played a significant role in disrupting recent reshoring trends. The report utilizes the US manufacturing import ratio (MIR) as one of its primary

metrics in assessing the country's reshoring trends, specifically examining US imports from 14 Asian low-cost countries (LCCs) as a percent of US domestic gross manufacturing output. The change in basis points among this metric annually composes the Reshoring Index, and sheds light on whether the US is increasingly or decreasingly relying on imports from these countries. As demonstrated by Figure 1, the US domestic manufacturing import ratio experienced a steady climb between 2011 and 2018, indicating an increasing reliance on LCCs. However, in 2019, the MIR sharply dropped, leading to a positive Reshoring Index, before increasing again in 2020. As the Kearney Index explains, the 2020 increase is more nuanced than it seems, and reflects a decrease in domestic manufacturing due to COVID-19, which then increased reliance on LCC imports. The data is particularly interesting with respect to China. Though recent political and trade tensions point to a rise in decoupling among the two countries, US reliance on Chinese imports actually increased in 2020. Kearney explains this discrepancy by pointing to the timing of the pandemic: "In March 2020, just as COVID-19 hit hard in the US and neighboring countries, China was moving out of its lockdown period to restart manufacturing. Many US companies, seeking sources of supply to replace halted domestic production, turned to Asian imports, particularly from China" (Van den Bossche, 2021). The report also notes that as US manufacturing recovered, US reliance on Chinese imports declined

Figure 1. US Reshoring Index



Source: Kearney 2020 US Reshoring Index

Apart from analyzing more broad economic data, the Kearney 2020 US Reshoring Index also sheds light on reshoring perspectives through surveys of 120 US manufacturing executives from a range of company sizes and more than a dozen industry categories. The survey found that 41% of executives said their companies reshored at least some parts of their operations to the US over the previous three years, and that 22% said their companies plan to do so over the next three years. Other findings included (1) 49% of respondents agreeing that the benefits of production in the US outweigh higher labor costs, (2) 52% reporting that COVID-19 caused their companies to increase domestic manufacturing, (3) 48% agreeing that current domestic and international trade policies sufficiently encourage reshoring, (4) 47% stating that their company will seek to reduce dependence on a single

country or manufacturing location through diversification of supply chains, and (5) 41% specifically stating they will seek to reduce dependence on China for manufacturing. Though these findings point to continued interest and intent towards reshoring, Kearney notes that companies expressed an even greater interest towards nearshoring to Mexico or Canada, especially in larger companies and those with existing offshore facilities. As such, the report predicts that companies will explore nearshoring in parallel with reshoring in coming years.

Another prominent source of reshoring data and its analysis is the US Reshoring Initiative, an organization dedicated to the promotion of reshoring by US companies. The US Reshoring Initiative compiles its data by tracking, compiling, and analyzing articles about com-

panies' reshoring decisions, as well as through privately submitted reshoring case studies and other privately documented cases. In its 2020 report, the organization found that jobs created through reshoring in 2020 totaled over 109,000, bringing the cumulative total of jobs created between 2010 and 2020 to over one million. Further, the report noted a record number of companies reporting reshoring and foreign direct investment (FDI)² decisions in 2020, amounting to 1,484 such companies.

In citing the factors that contribute to companies' reshoring and foreign direct investment decisions, the US Reshoring Initiative cites the prevalence of positive domestic factors over negative offshoring factors. In terms of positive influencing factors, between 2010 and 2020, companies overwhelmingly listed proximity to customers/market, government incentives, skilled workforce availability/training, eco-system synergies, and image/brand. Negative offshoring factors, on the other hand, included quality/rework/warranty, freight cost, supply chain interruption risk/natural disaster risk/political instability, total cost, and tariffs. Notably, in 2020 alone, COVID-19 was the single most cited influencing factor, and supply chain disruption as a factor experienced a 1000% increase in reporting.

The US Reshoring Initiative provides a thorough analysis of reshoring trends by industry,

though it also provides this data as a combined result of reshoring and FDI. In 2020, the organization found that the industries with the largest increases in jobs as a result of reshoring were the following: Transportation Equipment (29,185 jobs, 19% of jobs added), Medical Equipment & Supplies (21,421 jobs, 14% of jobs added), Chemicals (20,120 jobs, 13% of jobs added), Electrical Equipment, Appliances & Components (19,677 jobs, 19% of jobs added), and Computer & Electronic Products (13,989 jobs, 9% of jobs added). Transportation Equipment, as noted by the Reshoring Initiative, likely leads the pack because it is an industry in which the size and weight of the products that are typically manufactured suggest that offshoring did not offer significant total cost savings to begin with. As companies have realized this, they have started to shift their operations back to the United States. Further, as explained by the report, as a result of COVID-19-driven need for PPE, vaccines, and treatments, the category of Medical Equipment and Chemicals experienced the largest relative increase as percent of total jobs added by reshoring and FDI.

Though the US Reshoring Initiative reports the countries from which US companies reshore operations from, they note that this data is incomplete because only roughly a third of reshoring cases report this information. Cumulatively, from 2010 to 2020, the organization reports that China was the

foreign direct investment.

² The US Reshoring Initiative provides some data points that combine the effects of reshoring and new

source of 46% of reshoring in cases where the original country of operations was reported. The US Reshoring Initiative predicts the actual rate of reshoring from China is in reality significantly higher, but companies do not indicate the country for fear of retaliation. More broadly, in cases where companies report the region from which they are reshoring, 61% of jobs in these cases come from Asia. The Reshoring Initiative also notes that this rate is likely to be higher in reality, but because the number of companies reshoring from China is underreported, so is the total number of companies reshoring from Asia. As a result of the limitations of data related to reshoring by country, it is difficult to measure the true effects of the US-China trade tensions and the countries' trade war in recent years.

Another study by Zhai et al. (2016) analyzed 139 cases of reshoring of American manufacturing from China between 2009 and 2015. The study revealed that although factors related to cost were the most important as a group factor, the most important single factor for reshoring in the cases analyzed was the decision by companies to put a greater focus on quality. The authors further found that 18% of all companies that chose to reshore and were analyzed in the study were part of the electronic industry, 14% fell under fabricated metal products, and 12% fell under measuring, analyzing & controlling instruments. It's worth noting that this analysis was performed before the commencement of the Trump presidency and the escalation in trade tensions and the tech war between the United States and

China, all of which have increased the incidence of reshoring from China.

IV. Predictions for the Future of Reshoring

Numerous surveys and reports predict the increase of reshoring in subsequent years. The Reshoring Initiative, for example, predicts that 200,000 jobs will be added to the US economy as a result of reshoring and FDI in 2021, approximately two-thirds of which will come directly from reshoring. The 2020 Kearney Reshoring Index report predicts that as the effects of the pandemic begin to subside and the world moves towards pre-pandemic economic levels, the US phenomenon of decreasing its reliance on LCC imports will continue, and the Reshoring Index will once more take on a positive value, i.e., imported manufactured goods from LCCs will form a smaller percentage of total domestic output.

In line with the findings from Kearney's survey of 120 US manufacturing executives discussed earlier, a 2020 survey conducted by global research and advisory company Gartner of 1,300 supply chain professionals revealed that 87% of those surveyed plan to invest in their companies' resilience within the next two years. Similarly, the 2021 BDO Manufacturing CFO Outlook Survey revealed that 25% of the 100 manufacturing industry CFOs surveyed plan to conduct a supply chain risk assessment, 24% plan to relocate to another country, and 22% explicitly stated

that they plan to reshore operations to the US. Lastly, the May/June 2020 Thomas Industrial Survey revealed that “Two in three (69%) manufacturing companies are looking into bringing production to North America (compared to 54% in February)” (Ma, 2020). As demonstrated by the above, a multitude of surveys conducted in the last year point to a heightened interest in reshoring in coming years.

However, the aforementioned growth in reshoring will not be without its nuances. As noted by the Reshoring Initiative, COVID-19 will have dual effects on reshoring: on one hand, the pandemic has highlighted vulnerabilities in companies’ global supply chains and created motivations for reshoring. On the other, reshoring growth will largely depend on the recovery of the economy following the disruptions caused by the pandemic. In a similar vein, the Reshoring Initiative points to the dual nature of the effects that Biden’s presidency may have on the growth of reshoring in the United States. Among other policies, some of the Biden administration’s proposed plans that support reshoring include the targeted goal of the creation of five million manufacturing jobs, the potential provision of novel tax incentives, and possible implementation of a 10% offshoring tax penalty on overseas production sold in the U.S. On the other hand, Biden’s administration has vowed to keep the dollar strong, raise the minimum federal wage to \$15/hour, and raise the corpo-

rate tax rate from 21% to 28% — all proposed policies that would increase company costs and disincentivize the moving of operations back to the United States. Significantly, the Biden administration has also endorsed the implementation of a 15% minimum global corporate tax rate (Wilkie 2021). If adopted, a global minimum corporate tax rate would act as a safeguard measure and would discourage United States companies to keep operations in countries that have historically acted as tax havens for these firms. Also, as noted by the Reshoring Initiative, “the biggest challenge [to increasing reshoring] will be bolstering our skilled workforce, which is not adequate to support a much higher rate of reshoring” (Reshoring Initiative 2021).

Finally, when thinking about the future of reshoring and the above predictions, it is important to keep them in perspective. Specifically, as discussed previously, a rise in reshoring (1) does not at all point to a corresponding decrease in offshoring and (2) creates economic effects that are difficult to measure and potentially limited, especially in the context of the aggregate global economy. Regardless, it is undeniable that the pandemic, as well as US-China political tensions, have exposed uncertainties in companies’ global supply chains, encouraging more executives to consider reshoring their operations. As such, it will become more and more critical to monitor the phenomenon and measure its effects in the coming years.

V. Conclusion

Though growing in recent years, the future of reshoring isn't as straightforward as it seems. Despite its rise, the number of companies bringing operations back home remains relatively low, and studies have not yet been able to show that reshoring contributes to the creation of a significant number of jobs domestically. On one hand, some research cites increased unreliability of global supply chains as a factor that will continue to motivate the increasing of reshoring (The Reshoring Initiative 2021). On the other hand, research has shown that in 2020, increased unreliability from COVID-19 had actually shut down domestic manufacturing and increased the

United States' reliance on imports, plunging reshoring for the year, as measured by the Reshoring Index (Van den Bossche, 2021). Obtaining a better understanding of the direction reshoring will take in the future necessitates further research of the topic. It is critical to explore the concept of reshoring in order to understand how companies are thinking about the decision to bring operations home, how countries are thinking about the incentivization of this practice, and how people within developed and developing nations are and will continue to be affected by the phenomenon. **KIEP**

References

- Aepfel, T. 2021. *How offshoring rolled along under Trump, who vowed to stop it*. Reuters. <<https://www.reuters.com/business/how-offshoring-rolled-along-under-trump-who-vowed-stop-it-2021-01-19/>>
- Backer, K. D., Menon, C., Desnoyers-James, I. and Moussiegt, L. 2016. *Reshoring: Myth or Reality?* <https://www.oecd-ilibrary.org/science-and-technology/reshoring-myth-or-reality_5jm56frbm38s-en>
- BDO USA. 2021. *2021 Manufacturing CFO Outlook Survey*. <<https://www.bdo.com/insights/industries/manufacturing-distribution/2021-manufacturing-cfo-outlook-survey>>
- Gartner. 2021. *Gartner Survey Finds 87% of Supply Chain Professionals Plan to Invest in Resilience Within the Next 2 Years*. <<https://www.gartner.com/en/newsroom/2021-02-10-gartner-survey-finds-87-of-supply-chain-professionals-plan-to-invest-in-resilience-within-the-next-2-years>>
- Ma, C. 2020. *Manufacturer Interest in Reshoring, Hiring, and Apprenticeships Increasing During COVID-19 Pandemic*. Thomasnet® <<https://www.thomasnet.com/insights/manufacturer-interest-in-reshoring-hiring-and-apprenticeships-increasing-during-covid-19-pandemic-report/>>
- MacCormack, A. D., Newman, L. J. and Rosenfield, D. B. 1994. *The New Dynamics of Global*

Manufacturing Site Location. MIT Sloan Management Review. <<https://sloanreview.mit.edu/article/the-new-dynamics-of-global-manufacturing-site-location/>>

Oldenski, L. 2015. *Reshoring by US Firms: What Do the Data Say?* PIIIE Policy Brief 15-14. <<https://www.piie.com/publications/policy-briefs/reshoring-us-firms-what-do-data-say>>

Reshoring Initiative. 2021. *Reshoring Initiative 2020 Data Report: Reshoring Blog: Reshoring Initiative*. Reshoring Initiative 2020 Data Report. <<https://reshorenow.org/blog/reshoring-initiative-2020-data-report/>>

Szal, A. 2021. *Solar Energy Systems Manufacturer Moves Production from Asia to Silicon Valley*. Thomasnet®. <<https://www.thomasnet.com/insights/solar-energy-systems-manufacturer-moves-production-from-asia-to-silicon-valley/>>

Tate, W. L. 2014. “Offshoring and Reshoring: U.S. Insights and Research Challenges,” *Journal of Purchasing and Supply Management*, vol. 20, no. 1, pp. 66-68.

Thomas, L. (2021, May 24). *Peloton to invest \$400 million to build its first U.S. manufacturing facility in Ohio*. CNBC. <<https://www.cnbc.com/2021/05/24/peloton-to-invest-400-million-on-first-us-production-facility-in-ohio.html>>

Van den Bossche, P., Blaesser, B., Castano, Y. and Serraneau, K. 2021. *Global Pandemic Roils 2020 Reshoring Index, Shifting Focus from Reshoring to Right-shoring*. Kearney. <<https://www.kearney.com/operations-performance-transformation/us-reshoring-index>>

Wayland, M. 2021. *Ford Announces Joint Venture with SK Innovation to Manufacture EV Battery Cells in U.S.* CNBC. <<https://www.cnbc.com/2021/05/20/ford-announces-joint-venture-to-manufacture-ev-battery-cells-in-us.html>>

Wilkie, C. 2021. *Biden and G-7 Leaders Will Endorse a Global Minimum Corporate Tax of at Least 15%*. CNBC. <<https://www.cnbc.com/2021/06/11/biden-and-g-7-leaders-will-endorse-a-global-minimum-corporate-tax.html>>

Zhai, W., Sun, S. and Zhang, G. 2016. “Reshoring of American Manufacturing Companies from China,” *Operations Management Research*, vol. 9, no. 3-4, pp. 62-74. <<https://link.springer.com/article/10.1007/s12063-016-0114-z>>