Manufacturing Firms Leaving China and Moving into Southeast Asia

Eudora Chi and Tim Cavnar

1Cranbrook Schools
2Advisor, University of Wisconsin-Madison

ABSTRACT

Over the past twenty years, a growing number of manufacturing firms have left China. This paper explains the three principal reasons behind this exodus: disadvantages of Chinese manufacturing, US-China trade-war tariffs, and manufacturers’ emphasis on diversification. This study analyzes the current trend with an economic model to examine the relationship between manufacturing firms and the Southeast Asian host countries. As foreign direct investment (FDI) tends to shift from higher to lower-cost regions, manufacturing firms are now leaving China and moving into Southeast Asia. This paper also suggests the option of reshoring and manufacturers’ concerns about moving. This paper is useful for investors in the manufacturing industry.

Introduction

As China is currently the central manufacturing region in the world, it is common to see numerous products manufactured in China. However, Southeast Asia is now superseding China’s position as manufacturing companies are relocating to this region. Since 2000, transnational corporations (TNC), which involve significant manufacturing work, have been shifting from China to Southeast Asian countries (Yang 2016). Numerous well-known electronics manufacturing firms established in China are either closing or relocating to Southeast Asia countries (Zhao, Wong, Wong, and Jiang 2020). This trend has existed for twenty years, yet scholars began noticing the transfer only after the surge that followed the 2008 global financial crisis (Yang 2016). The reason behind this surge is that while the financial crisis significantly affected countries in Europe and the U.S., China experienced only a nominal downturn. Consequently, labor costs rose as the Renminbi inflated. Foreign manufacturing companies hit hard by the crisis became increasingly sensitive to the high manufacturing costs in China. Therefore, manufacturers have been showing interest in shifting into Southeast Asian countries that allow for cheaper labor costs. The purpose of this study is to explain the shift with the application of an economic model.

Past papers have examined different possible reasons behind the trend and suggested different probabilities for a massive shift (e.g., Yang 2016, Sheffi 2020). This paper presents three principal reasons behind the shift: the disadvantages of Chinese manufacturing labor, the tariffs associated with the U.S.-China trade war, and the diversification mindset that manufacturers have developed. This study utilizes an economic model to explain the economics behind the shift, as the tendency of foreign direct investment (FDI) corresponds with the ongoing trend. This paper also suggests the option of reshoring and manufacturers’ concerns about leaving China.

The issue discussed is significant as it indicates the future trend of global manufacturing firms and explains the changes of economic roles for different countries. While the world currently relies heavily on Chinese manufacturing, the world will soon witness a massive shift in the manufacturing supply chain, allowing Southeast Asian countries to become the next primary manufacturing region. This paper provides a thorough analysis of the trend that is beneficial to investors in the manufacturing industry. The rest of the paper is organized as follows. Section 2 elaborates on the three main factors causing the shift. Section 3 explains the economics behind the shift and Southeast Asian
countries’ responses. Section 4 explains the manufacturers’ concerns. Section 5 notes the option of reshoring, and the final section concludes.

**Reasons Behind the Shift**

Disadvantages of Chinese Manufacturing Labor

Foreign manufacturers are noticing the significant disadvantages of Chinese manufacturing compared to Southeast Asian countries. Discouraged by the workforce disadvantages, foreign manufacturing firms are shifting to Southeast Asia. This paper utilizes three main perspectives to discuss the manufacturers' concerns about Chinese labor: the high cost, the aging workforce, and a declining rate of expansion.

**Table 1:** Comparison of the Average Monthly Manufacturing Wage in Different Countries (in US Dollars). Source: Trading Economics (2021).

<table>
<thead>
<tr>
<th>Country</th>
<th>Average Monthly Wage</th>
<th>Rank</th>
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<tbody>
<tr>
<td>China</td>
<td>$1067.78</td>
<td>3</td>
</tr>
<tr>
<td>Vietnam</td>
<td>$269.39</td>
<td>5</td>
</tr>
<tr>
<td>Thailand</td>
<td>$419.21</td>
<td>4</td>
</tr>
<tr>
<td>Indonesia</td>
<td>$202.18</td>
<td>6</td>
</tr>
<tr>
<td>Taiwan</td>
<td>$1869.68</td>
<td>2</td>
</tr>
<tr>
<td>United States</td>
<td>$4,130.53</td>
<td>1</td>
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</table>

As labor costs rise in China, manufacturing firms are shifting to Southeast Asian countries to reduce manufacturing costs. The average salary in China is increasing continuously and is much higher than that in Southeast Asia. Trading Economics (2021) provides empirical data for labor costs. Table 1 shows that the average monthly wage for Chinese workers exceeds $1000 per month, which is 2.5 times that of Thailand workers ($419.21), nearly quadruple that of Vietnamese workers ($269.39), and more than five times that of Indonesian workers ($202.18).

**Table 2:** Comparison of the Labor Workforce in Southeast Asian (SEA) Countries and China (in millions). Source: World Bank (2021)

<table>
<thead>
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<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
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<tr>
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<td>23.9</td>
<td>24.3</td>
<td>24.7</td>
<td>24.6</td>
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</tr>
<tr>
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<td>8.1</td>
<td>8.3</td>
<td>8.4</td>
<td>8.9</td>
<td>9.2</td>
<td>9.2</td>
</tr>
<tr>
<td>Timor-Leste</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.6</td>
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<tr>
<td>Indonesia</td>
<td>111.3</td>
<td>115.6</td>
<td>120.7</td>
<td>123.1</td>
<td>126.0</td>
<td>132.6</td>
<td>134.6</td>
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<tr>
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<td>3.1</td>
<td>3.3</td>
<td>3.4</td>
<td>3.6</td>
<td>3.7</td>
<td>3.8</td>
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<tr>
<td>Malaysia</td>
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<td>12.3</td>
<td>13.3</td>
<td>14.3</td>
<td>14.9</td>
<td>15.5</td>
<td>15.9</td>
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<td>40.5</td>
<td>42.5</td>
<td>44.0</td>
<td>43.9</td>
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<tr>
<td>Singapore</td>
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<td>3.0</td>
<td>3.2</td>
<td>3.4</td>
<td>3.5</td>
<td>3.5</td>
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<tr>
<td>Thailand</td>
<td>38.8</td>
<td>38.9</td>
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<td>39.0</td>
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<td>51.3</td>
<td>53.0</td>
<td>55.0</td>
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<td>57.0</td>
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</tr>
<tr>
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<td>295.4</td>
<td>307.3</td>
<td>314.5</td>
<td>320.6</td>
<td>329.8</td>
<td>329.5</td>
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<tr>
<td>China</td>
<td>773.6</td>
<td>775.4</td>
<td>781.1</td>
<td>785.2</td>
<td>787.0</td>
<td>786.0</td>
<td>771.0</td>
</tr>
</tbody>
</table>
The Conference Board (2018) writes that the growth rate of Chinese manufacturing workers’ absolute compensation ranks the highest over the past decade. This indicates that labor costs in China have continuously increased relative to other regions. Surprisingly, this surge in labor costs is not a recent trend. From 2011 to 2016, labor costs in China increased by 64% and surged again by 30% between 2016 and 2020 (Sheffi 2020). As labor costs have been surging in China over the past decade, Chinese labor no longer holds its cost advantage. Foreign manufacturers are thus shifting to Southeast Asia for lower-cost production.

In addition to the high cost, the Chinese labor workforce is also aging and has a declining rate of expansion. While the Chinese workforce ages rapidly, the Southeast Asian workforce is significantly under the global median age of 29.7 years (The Economist 2015). This difference places Chinese labor at a major disadvantage, as the young labor workforce in Southeast Asia is much more appealing to manufacturers. While the Chinese labor workforce’s rate of expansion is declining, its counterparts in Southeast Asia are rapidly expanding. The World Bank database (2021) provides empirical data to demonstrate this trend. Since the 2008 global financial crisis, the Chinese total labor workforce has declined by 2.6 million, increasing by less than one percent per year and resulted in a 0.34% decrease in the total workforce. On the other hand, the combined workforce of Southeast Asian countries has increased by 44.6 million since 2008, which is a 15.7% increase in the total workforce (see Table 2). Moreover, although China’s labor workforce exceeds 770 million, Yang (2016) explains that the 300 million combined workforce of Southeast Asian countries is large enough to attract foreign manufacturing companies to shift their firms into Southeast Asia.

The notable difference in workforce expansion between China and Southeast Asian countries provides foreign manufacturers the reason to prefer the Southeast Asian labor workforce for both the short and long-term. As China no longer possesses a cost advantage and its labor workforce is at a disadvantage of aging and not expanding, foreign manufacturers are shifting their firms from China to Southeast Asia.

Trade War Tariffs

Tensions created by the U.S.-China trade war raise concerns for foreign manufacturers due to the tariffs documented in the US Trade Act 1974, pushing foreign manufacturing firms from China to Southeast Asia. The U.S.-China trade war directly targets Chinese manufacturing with tariffs on Chinese imports. Liu (2018) explains the cause and specifics of the U.S.-China trade war. In 2015, the Chinese government announced the “Made in China 2025” plan, by which China hopes to create a domestic industry to replace foreign suppliers. Liu notes (2018) that on March 8, 2018, the Trump administration declared tariffs on global steel and aluminum, targeting China’s plan. China then retaliated against the U.S., placing 15-25% tariffs on $3 billion worth of American goods. Consequently, the Trump administration announced the enforcement of 25% tariffs on $50 billion worth of Chinese products and 10% tariffs on an additional $200 billion worth of Chinese imports. Since American manufacturers need to absorb the revenue loss resulting from the tariffs, they profit less from manufacturing in China. Consequently, manufacturing firms are more likely to leave China for locations without tariffs on their exports to the U.S.

The U.S.-China trade war has further altered global supply chains, harming Chinese manufacturing while benefiting Southeast Asian countries. A Quality Inspection Management (QIMA) survey (2019) shows that 75% of the American manufacturing companies that left China reported that tariffs affected their decision, whereas 14% of the EU companies explained their decreased sourcing in China as due to the tariffs. Due to the concern that China-related imports may decrease their profits, the trade-war tariffs have forced some foreign manufacturing companies to leave China and relocate to Southeast Asia to avoid the risk.

Southeast Asia is uniquely benefiting from this shift. While some companies are progressively centering their firms in Southeast Asia, more firms have expressed high-level interest in the expansion (Sim 2019). Another QIMA survey (2020) shows that audits requested by U.S. firms have increased by nearly 10% in Asia, while that in China have declined by 3.4% year-over-year. The decline in auditing requests indicates that the number of contracts for Chinese manufacturing firms is also declining. Since the number of audits hints at the companies’ level of interest in a particular area, an increased number of audit requests suggests U.S. manufacturers’ growing interest in Southeast Asia.
Asia. The empirical data both demonstrates the current trend and hints at foreign firms' future behavior. With trade-war tariffs explicitly harming foreign manufacturers with firms located in China, manufacturers are showing a growing interest in shifting to Southeast Asia.

Diversification Mindset

Numerous factors may adversely affect foreign manufacturing firms; the U.S.-China trade war demonstrates the impact of political tension, exposure to which incentivizes foreign manufacturing firms to shift their factories out of China. Factories of leading brands like Nike have diversified their supply chains. In 2006, Vietnam produced 29% of Nike products, while China produced 31% (Lee 2006). Yet, in 2017, Vietnam accounted for nearly 50% of production (Bain 2018). The 21% increase suggests that manufacturing companies of leading-brand products have developed a new path of sourcing in Southeast Asian countries to diversify their production risks. Notably, EU manufacturing companies are moving out of China and diversifying their factories throughout Southeast Asia (Rapoza 2019). Through the U.S.-China trade war, EU firms have realized the vast influence and potential harm that international issues may raise to foreign manufacturers. EU manufacturers thus see this as a signal to move into Southeast Asian countries, which at the moment are less exposed to international tensions compared to China, as the countries are relatively underdeveloped and possess less global influence.

Meanwhile, foreign manufacturers are diversifying their risk of future incidents. Local companies in China are seeking subordinate manufacturing locations to diversify their risks (Sim 2019). The shift diversifies the risk of concentration for factories locating in the same region and reduces disruption that may hinder or delay the manufacturing process. In the meantime, manufacturers can evade the risks of currency fluctuations and tariffs (Yang 2016). Diversification allows manufacturers to generate greater revenue while minimizing the risks and impact of potential tensions, making Southeast Asia an attractive region for foreign manufacturers.

Economics Behind the Trend

Economic Model

An economic model can be applied to explain this current shift. Zhao, Wong, Wong, and Jiang (2020) propose an economic model that describes the tendency of foreign direct investment (FDI). When the model is applied to the current trend, foreign manufacturing firms bring the FDI to their host region, Southeast Asian countries. Developing regions will attempt to attract FDI to achieve regional development, as FDI significantly influences the host countries' employment of services in the manufacturing, financial, and business sectors. FDI also encourages the region's capital development and the spread and transfer of technology (Zhang 2001).

To explain the economics and the movement of FDI, Zhao, Wong, Wong, and Jiang (2020) propose a leapfrog polarization pattern and strategy with several emphases. First, FDI boosts the development of its host country, yet the transient investment may bring only finite growth. Second, a region that relies solely on the initial FDI cannot successfully develop its own economy, whereas regions utilizing their regional capabilities to attract more FDI may rapidly develop their economy. Third, outlying areas may receive only limited benefits since FDI cannot generate a significant wave of economic growth to distant areas. Fourth and most importantly, FDI is ever transient; it will repeatedly move from higher- to lower-cost regions, especially when the host region's costs rise.

During the early part of the current cycle of FDI, China effectively developed a stable economy and attracted significant FDI with its regional advantages: low labor costs and rapid skill development. China also matched the latter part of the model, as remote areas in China did not witness successful economic growth or regional development. Since FDI tends to funnel into coastal areas due to low sea shipment costs, only coastal cities like Shanghai experienced massive development (Zhao, Wong, Wong, and Jiang 2020). This resulted in major regional disparities, with
different regions in China undergoing polarized growth. As manufacturing firms are now shifting away from China as labor costs rise, China is now in the late stage of this cycle.

This model can be applied to examine the continuation of this trend. Since manufacturing costs are significantly higher in China than in Southeast Asia, foreign manufacturers are moving their factories into Southeast Asia. Manufacturing firms are thus initiating a new cycle of FDI, which will soon bring development and economic growth to its host countries in Southeast Asia. As this shift is an ongoing trend, more research is needed to observe Southeast Asian countries’ paths to determine if the regions may develop a stable economy. Still, the model is sufficient to predict similar polarization trends in the future for Southeast Asian countries.

Host Regions’ Responses

As the model explains, Southeast Asian countries will benefit from the economic growth and regional development that results from this shift. Of all the Southeast Asian countries, Indonesia and Vietnam show the greatest interest in welcoming manufacturing firms that leave China.

Indonesia wishes to attract more manufacturing companies, luring firms with needed land and a reduced tax rate (Jibiki 2020). In fact, Foxconn, a Taiwanese manufacturing firm, has invested $1 billion in Jakarta, with Indonesia offering a 200-hectare plot of land for its factory (Yang 2016). Vietnam is also attempting to attract more foreign manufacturing firms as the country gains the most benefit from this shift. Rapoza (2020) provides relevant data: Among the $31 billion worth of U.S. firms that left China, Vietnam absorbed approximately 46%. Consequently, in 2019, Vietnam exported additional manufactured goods worth $14 billion to the homeland of their investor, the U.S. And since Vietnam has agreed to cooperate economically with the EU, Vietnam’s chief target is to attract more European companies that are shifting away from China (Jibiki 2020).

With their specialization in manufacturing, Southeast Asian countries can benefit from this shifting trend. Understanding that manufacturing firms will foster the region's economic growth and technological innovation, Southeast Asian countries are expressing great interest in becoming the next central manufacturing region and are actively attempting to attract foreign manufacturers with their policies.

Manufacturers’ Concerns

Perceiving the benefits of Chinese manufacturing, numerous manufacturing firms are still concerned about following the trend. The three major concerns of manufacturers are the lack of adequate skills in Southeast Asian countries, loss of consumer benefits, and the decrease in profits.

Lack of Adequate Skills

A QIMA survey (2019) provides recent data explaining the manufacturers' concerns. Chinese manufacturing quality has constantly been improving: In the second quarter of 2019, Chinese manufacturers demonstrated a 13% improvement in production. On the other hand, Southeast Asian countries are not showing desirable outcomes to their investors: Since the beginning of 2019, the examination failure rate of Cambodian products was over 40%. While Chinese manufacturing is demonstrating advancement, product quality in Southeast Asian countries is worsening as they have not yet obtained adequate skills to replace China in the supply chain.

Consumer Benefits

Chinese manufacturing possesses an advantage in Corporate Social Responsibility (CSR), which requires companies to demonstrate respect and unselfishness while generating social effects. Fang, Gunterberg, and Larson (2010) notes
that Swedish companies value CSR as an influential factor that incentivizes them to stay in China. Their study explains that highly industrialized countries like Sweden consider social ethics while making business decisions. Since China passed its New Labour Contract Law in 2008, which increased labor wages by 20%, China has shown a growing interest in CSR for its labor. This provides an incentive for foreign manufacturing firms from highly industrialized countries to stay in China.

Decrease in profits

Shifting all the factories out of China decreases profits for three reasons. First, the process of moving factories is very time-consuming and requires an immense amount of money (Sheffi 2020). Second, the costs of importing and exporting in Southeast Asian countries are 24% more than that in China (Yang 2016). Third, Chinese consumers prefer manufacturers in China due to the Chinese nationalistic mindset. Thus, Chinese consumption made up 20% of the global GDP in 2020 (Sheffi 2020). The data indicates that manufacturers need to sacrifice profits if they move out of China, for they will generate less revenue when manufacturing in Southeast Asian countries. Manufacturing firms are thus concerned about the worth of a massive shift that requires vast amount of time and money, considering the inefficacies and uncertainties of Southeast Asian manufacturing. Therefore, the manufacturers must weigh the costs and benefits of the shift when considering whether or not they should join the shifting trend.

An Alternative: Reshoring

Observing the disadvantages of Chinese manufacturing, some manufacturing firms are considering an alternative: reshoring. However, manufacturing firms from different nations are responding differently to this alternative.

A majority of U.S. manufacturing firms are not considering reshoring their factories. Although the Trump administration has been encouraging U.S. manufacturing companies to reshore, most manufacturers still prefer outsourcing (Swanson and Tankersley 2020). An Icso survey (2020) of U.S. companies shows that only 3.7% of the respondents reported an interest in relocating their firms from China to the U.S., whereas 49.4% of the respondents expressed that shifting to Southeast Asia is their top decision. Labor is the major cost for U.S. manufacturers. Table 1 shows that the average monthly wage of manufacturing labor in the U.S. is $4,130.53, while that in China is $1067.78 (Trading Economics 2021). As the manufacturing labor cost in the U.S. is nearly 3.87 times greater than in China, concern over labor costs far outweighs any disadvantages that U.S. manufacturers may see in Chinese manufacturing.

On the other hand, more EU manufacturing firms are expressing an interest in reshoring. A QIMA survey (2019) points out that 67% of the European companies are leaving China, and reshoring is their next move. In the meantime, sourcing in European countries has increased. A QIMA survey (2019) notes that sourcing in European countries has been growing. In 2019, European manufacturing companies' sourcing of textile and apparel increased in Romania and Portugal. Turkey and African countries have also seen a 40% increase in demand for inspections and audits.

There is also an increased amount of Taiwanese manufacturing companies considering reshoring to Taiwan, for two reasons. First, reshoring elsewhere is a costly activity for Taiwanese manufacturing firms (Deloitte Insights 2020). Second, the Tsai Ing-wen administration has announced its “Action Plan for Welcoming Overseas Taiwanese Businesses to Return to Invest in Taiwan” to incentivize Taiwanese manufacturing firms to reshore to Taiwan with government facilitation. Attracted by the plan and pressured by the trade war, 84 Taiwanese companies have already reshored, bringing nearly $14 billion worth of investment to its local industry (Fulco 2019). The cost of labor is an additional reason Taiwanese firms consider reshoring as a highly feasible option. Table 1 shows that China no longer holds much of a labor cost advantage over Taiwan: the average monthly manufacturing wage of China is $1067.78, while that of Taiwan is $1869.68 (Trading Economics 2021), only 1.75 times greater. In addition, the cost of Chinese
labor is still steadily increasing. With the benefits provided by the Taiwanese government, Taiwanese manufacturing firms are highly encouraged to reshore their firms to Taiwan.

Conclusion

This paper explains the trend of manufacturing firms located in China shifting into Southeast Asia. This phenomenon is significant, as it suggests the probability of a massive shift in manufacturing firms and changes in the global supply chain.

This paper consists of three main findings. First, the three principal reasons behind the shift are the disadvantages of Chinese manufacturing labor (high cost and an aging workforce with a declining expansion rate), the U.S.-China trade-war tariffs that target manufacturing firms located in China, and manufacturers' tendency of diversification to minimize any potential harm of international tensions. Second, the economic model of Zhao, Wong, Wong, and Jiang, which describes the tendency of FDI transferring from higher- to lower-cost regions, explains the economics behind this trend. As their model suggests, the high manufacturing cost in China is encouraging manufacturing firms to shift to a lower-cost region, Southeast Asia. Third, this paper suggests an option of reshoring and manufacturers' three concerns about leaving China: a lack of adequate skills in Southeast Asian manufacturing, a loss of CSR, and a decrease in profits.

This paper benefits investors in the manufacturing industry by analyzing the benefits and costs of the shift, identifying the future trend anticipated by an economic paradigm, and suggesting the option of reshoring. This study provides a framework for manufacturers to use while making their decisions about whether to relocate their manufacturing bases.

Limitations

This paper possesses limitations as it assumes that this trend will be further developed with a sufficient market for manufacturers. As this trend is not yet at its pinnacle, future studies are needed to examine it with more in-depth data, especially about the types of manufacturing firms that leave, their new locations, their departure rates, and the determining factors for their decisions.

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