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The Geopolitics of Supply Chains

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Contents

Introduction

The nature of globalization is evolving. For over two decades, China was the leading solution for offshore production. That is no longer true, in part because rising geopolitical tensions are spurring a fundamental rewiring of supply chains. But is there a next China? We believe the answer is no. Instead of simply pursuing a "China plus one" strategy, companies are navigating a "China plus many" world. Firms seeking to increase the resilience of their supply chains and insulate themselves from geopolitical risk have little choice but to engage with this complexity. In this report, we assess the rise and relative decline of China as an offshoring destination and evaluate five countries (India, Vietnam, Mexico, Poland, and Thailand) emerging as manufacturing alternatives in this new geopolitical environment.

Traditional supply chain analyses often have not centered around geopolitics. Today, though, while questions such as inputs, labor force, energy supplies, raw material availability, and economic and political stability are all critical, geopolitics is central to patterns of trade and is no longer a secondary or tertiary variable to consider. Our analysis, therefore, brings in geopolitics as a key input to corporate decision-making on supply chains. We believe that if companies neglect to integrate assessments of geopolitics—such as the impact of increasing tensions and restrictions between the United States and China—they may put their future operations at risk, while those that do will be able to seize opportunities for growth in a changing world.

Our Key Findings

1 **Geopolitics is increasingly transforming supply chains and foreign investment.** Companies will need a nuanced understanding of the diverging geopolitical trajectories of different countries and regions to remain competitive and manage uncertainty. Tariffs and trade agreements, bilateral and multilateral political relationships, subsidies, and export restrictions are all key indicators of how geopolitics will shape supply chains.

2 **China remains the dominant global manufacturing power.** China's trade surplus continues to grow. Approximately 17% of all global intermediate goods imports come from China; India, Vietnam, and Thailand each import more than 25% of their intermediate goods from China. Even as trade with China becomes more complicated, China will remain a core manufacturer, and companies will need to be more attuned to Chinese policies and restrictions implemented by the United States and Europe.

3 **There is no "next China." Instead of "China plus one," globalization is entering a "China plus many" phase.** Companies seeking to diversify and de-risk supply chains outside of China will find an ambiguous, complex operating environment with no obvious single candidate to replace China. Foreign companies are unlikely to move their entire manufacturing facilities to another nation. Instead, they will have to engage with different geographies to find solutions to their own manufacturing needs.

4 **Labor supply, productivity, and demographics are key for the success of advanced manufacturing exports.** An aging population, such as China's, reduces the available labor supply. Even in the case of nations with young, large workforces like India and Vietnam, firms often highlight dissatisfaction with the skill level of employees. Evaluating how governments plan to increase productivity can help identify high-potential sectors and countries. Both quality and quantity of labor are critical—for example, while Poland has a skilled labor force, it has a worsening labor supply problem, whereas India has the opposite issue with abundant labor and lower productivity levels.

5 **Companies should tailor their strategies to specific regulatory and policy environments.** Consistency of regulatory enforcement, dispute resolution processes, and the ease of capital movement differ across geographies. Countries with constitutional protections for investments or with similarly codified laws, like Thailand and Poland, can give companies confidence.

6 **Companies need effective infrastructure for trade, but financing gaps are creating bottlenecks.** Financing gaps create opportunities for private sector infrastructure investment, but these investments are also becoming increasingly geopolitical. While some nations have the fiscal space for significant investment, like India and Mexico, many do not. The consequence is a growing role for private companies able to finance export-enabling infrastructure—and a larger role for China in financing projects in places such as Thailand and Vietnam, even as those countries are wary of closer ties.

7 **Companies must build climate adaptation into their investments.** Water scarcity in Mexico and Poland, flooding in Thailand, heat in India, China, and Vietnam, and other climate stresses are already affecting production processes. While some countries are investing effectively to adapt, like Thailand and Poland, others, like India and Mexico, are lagging, creating business uncertainty. Companies ahead of these trends can work with governments to deploy capital effectively and adapt to climate disruptions. Integrating climate change into investment decisions is necessary for the success of manufacturing projects.

SUMMARY OF COUNTRY DYNAMICS

This report evaluates China and five potential alternatives—India, Vietnam, Mexico, Poland, and Thailand—using a framework to assess their strengths, risks, and implications for corporates. The framework is used to analyze and score each economy along key dimensions for corporates considering these geographies as manufacturing destinations. A summary of this country analysis is in Table 1, below. Each country score is relative to the six countries in this analysis, and though scoring can be reductive, it does provide high-level insights into the respective advantages and challenges of each nation. More details can be found in the country profiles, and in the extended country deep dives in the Annex.

Table 1: Summary of Country Dynamics by Geopolitical Supply Chain Framework

●○○○ Significant challenges for firms ●●●● Globally competitive and advanced

Country	Geopolitics & Industrial Policy	Inputs	Infrastructure	Financial Conditions	Local Supply Ecosystem
China	●○○○ Worsening geopolitics with rising trade tensions; industrial policy prioritizes domestic firms over foreign businesses	●●○○ China has an effective labor force with high productivity, but rising wages are increasing costs. Global de-risking from China in areas like critical minerals decreases the security of China's inputs	●●●○ Robust and resilient infrastructure facilitates export. Ongoing investments continue improving capacity, raising it to competitive levels with advanced economies	●●○○ Historically open to FDI, but geopolitical and domestic policy risks are making it harder for investment to flow	●●●● Diverse, complex export basket with major producers across industries like autos, textiles, semiconductors, machinery, etc.
India	●●●○ Strengthening ties with the West provide India with a promising geopolitical outlook, though complicated somewhat by India's "multi-aligned" diplomacy and continuing ties to Russia	●●●○ India's demographic dividend and low wages are major selling points for global corporations, but concerns about labor force skills and productivity persist	●●○○ India's infrastructure network is still in need of significant improvement, but infrastructure development is a core strategic priority for Modi and FDI into Indian states and SEZs is geared toward infrastructure.[1] Blackouts due to heatwaves in summer are becoming more commonplace, disrupting production	●●○○ Strong incentivization of FDI is juxtaposed against a complex regulatory landscape that is challenging for global corporations to navigate	●●○○ India is still developing its supply ecosystem and remains reliant on China for intermediate goods. Overall, India's manufacturing sector is relatively weak
Vietnam	●●○○ US-China tensions will continue to boost the country's attractiveness. Domestic policies are improving, but corruption and lagging reforms in some areas threaten government stability and effectiveness	●●○○ Competitive wages, but firms face skilled labor shortages. Energy availability issues and climate disruption create ongoing risks	●●○○ Beyond certain SEZs, infrastructure remains challenging, with limited investments in renewables and poor-performing transport logistics despite rising investment values	●●○○ Openness to FDI will remain, but quality of financial regulators and investment institutions can be patchy, alongside major corruption scandals	●●○○ As FDI increases, the supply chain ecosystem will continue to improve, but beyond cellphone production, the manufacturing value chain is underdeveloped and tied to imports of intermediate goods from China
Mexico	●●●○ Strong beneficiary of West-China geopolitical tensions. Some domestic policies are trending negatively with initiatives by the ruling Morena party causing potential institutional erosion and uncertainty	●●○○ Relatively affordable labor force wages, but despite improvements, labor force has skills deficits in key geographic regions	●●●○ Overall, effective logistics infrastructure for trade but lack of recent investments in energy infrastructure represents a bottleneck and setback to the country's attractiveness. Water scarcity will increasingly be a challenge	●●●○ Robust economic and financial institutions and regulations with a history of financial stability. But risks of institutional erosion from the new Sheinbaum government may create headwinds	●●●○ Diverse supply chain ecosystem with exports of complex products but specialized in specific sectors (e.g., autos, machinery). Developing new sectors alongside skilled labor force will be a challenge
Poland	●●●○ Strong geopolitical position as an EU member state but still recovering from institutional and rule-of-law damage caused by years of far-right leadership. Russian aggression in the neighborhood is a risk, and domestic politics remain fragile with a weak governing coalition	●○○○ High input costs and wages compared to other nations, compounded by labor shortages, which adds complexity to using Poland as a base to serve markets outside of the EU	●●●● High-quality infrastructure and deep logistics networks that extend across Europe. But water shortages are creating pressures for growing manufacturing activity	●●●● Integration with Europe and EU partners provides stable financial conditions and ease of investment processes	●●●○ Sophisticated local supply chain ecosystem conducive to export of complex products, though regional focus means Poland is more competitive for exports to European rather than US markets
Thailand	●●○○ History of coups and political instability create ongoing uncertainty, but Thailand does have a well-developed industrial strategy	●●●○ Labor is relatively low cost and highly productive but with concerns about an aging population and energy independence challenges	●●○○ Challenging infrastructure outside of major urban areas, though investment is increasing. Climate change and flooding pose a risk to certain industries and infrastructure	●●○○ FDI processes may be too slow to meet demand, and corruption issues complicate investment timelines and procedures	●●●○ Diverse basket with exports in multiple sectors that are internationally competitive like autos, machinery, and electronics

1 SEZs are Special Economic Zones.

The Great Rewiring

A great global supply chain rewiring is underway. The past few years have forced a reexamination of the assumptions and drivers behind how companies structure and operate their supply chains. Growing tensions between the US and China, a related rise in industrial policies across the globe, ongoing Chinese economic weakness, the disruptions brought by the war in Ukraine and conflict in the Middle East including shipping in the Red Sea, and a post-pandemic focus on resilience are all driving this reevaluation. C-suites are clearly more focused on these questions, with mentions of reshoring, onshoring, and nearshoring peaking in recent years (Figure 1).

Central to this story is the evolution of China as a manufacturing destination. The Chinese model of growth is under pressure both internally and externally. A faltering economy with greater centralization of decision-making under President Xi, along with forced technology transfers and domestic subsidies, is causing investors to think twice about China. Beyond its borders, trade tensions between the US and China are causing uncertainty. Flows of foreign direct investment turned negative at the end of 2023 in China for the first time in decades (Figure 2).[3]

Yet, in aggregate, China is largely undiminished as an industrial and manufacturing powerhouse. Subsidies appear to be fueling a shift away from products that helped create the Chinese miracle of the 1990s and 2000s, like textiles and toys, into higher value-added products like computers and electric vehicles, driven by domestic Chinese firms.[5] Geopolitical tension and economic struggles must therefore be weighed against the reality that China is still the largest global exporter of goods and may succeed in its pivot to more high-tech products.[6]

Meanwhile, both advanced and emerging economies are competing against China with their own industrial strategies. The US is leading a renaissance of industrial policy with the Inflation Reduction Act and CHIPS and Science Act as it seeks to restore some of the manufacturing jobs lost to China in the 2000s. Emerging markets are also seeking to mobilize capital toward their industrial objectives with an increasing focus on manufacturing for exports—though because of China's dominance, creating a manufacturing base is a major

Figure 1: Companies Are Increasingly Concerned about Reshoring[2]

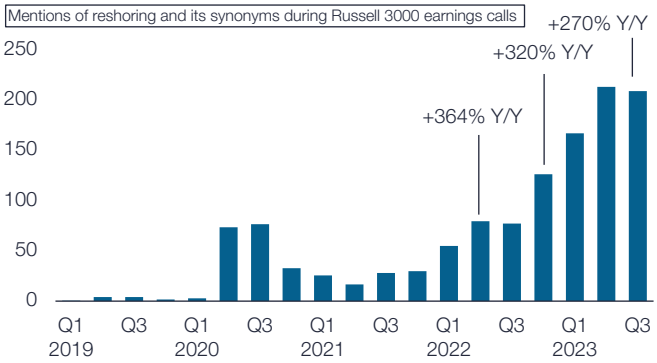
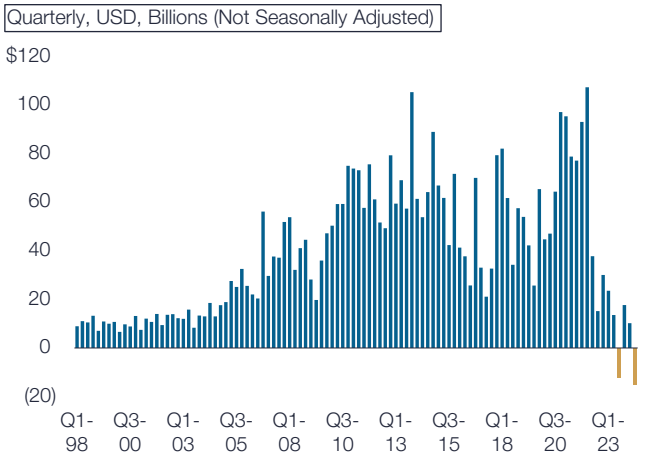


Figure 2: Flow of Foreign Direct Investment into China[4]



2 Bloomberg, "'Made in USA' Revival Sparks Building Boom," October 2023.

3 Federal Reserve Bank, Geopolitical Risk and Decoupling, CEIC China FDI.

4 Chinese State Administration of Foreign Exchange, 2024.

5 Center for International Development, Harvard University, 2023.

6 UN Comtrade Data, 2024.

"Geopolitical tension and economic struggles must therefore be weighed against the reality that China is still the largest global exporter of goods and may succeed in its pivot to more advanced products."

challenge.[7] Competition among the US, China, and other nations seeking their own export base means more foreign investment is flowing between geopolitically aligned countries than between nations that are geographically close (Figure 3).

Framework and Country Selection

This report analyzes supply chain diversification through a geopolitical lens. In doing so, it aims to help business leaders evaluate alternative supply chain options as they plan their future operations. It begins by considering China as the base case—because for all the headlines, controversies, and weaknesses, China will remain a vital source of global manufacturing. We go on to evaluate five countries that are emerging as plausible investment alternatives: India, Vietnam, Mexico, Poland, and Thailand.

The countries we have selected have three things in common:

1. They are pursuing geopolitical cooperation with Western countries. Some have deep trade links and longstanding histories, like Mexico with the US. Others are pursuing "multi-aligned" strategies with both the United States and China, seeking to benefit from both and alienate neither, like Thailand and Vietnam.
2. These countries rank highly for FDI inflows among potential manufacturing destinations, a leading indicator of market attractiveness given that some Western investors already have well-established operations.
3. These nations all aim to grow their manufacturing sectors for export. In addition, several of these countries have already started benefiting from US-China tensions.

Our framework assesses countries across five categories: geopolitics and policy, inputs, infrastructure, financial conditions, and local supply ecosystem (Table 2). It aims to shed light on strengths and weaknesses for each and therefore how companies should create entry strategies and develop investment priorities.

Figure 3: Geopolitics Edges Out Geography in Foreign Direct Investment[8]

Our analysis is forward-looking. We look at FDI to understand whether countries are succeeding in attracting capital, and we also consider the impact of regional trade agreements that bind countries beyond the current government.

Table 2: Supply Chain Framework[9]

Supply Chain Framework	
Geopolitics and Industrial Policy	• Geopolitical trajectory • Regulatory quality • Industrial policy and investment trajectory • Notable trade relationships
Inputs	• Labor force and demographics • Intermediate goods dependency • Energy costs and reliability • Raw materials availability • Land regulations
Infrastructure	• Infrastructure quality • Logistics networks • Water, sanitation, and environment
Financial Conditions	• Macroeconomic conditions • Access to capital • FDI processes • Ease of capital inflow and outflow
Local Supply Ecosystem	• Network effects • Economic complexity of exports
Case Studies	
China	India
Vietnam	Mexico
Poland	Thailand

7 Dani Rodrik, "Premature Deindustrialization," 2015.

8 IMF, "Geopolitics and International Trade," 2024.

9 Each country is evaluated against the five categories of the framework. Some variables within each category are more relevant for select nations than others, meaning country analyses may emphasize different parts of the framework.

In addition, we consider how products and supply chains interact. A diverse economy, with multiple products exported around the world, is likely to have a rich supply chain ecosystem, which can enhance "learning by doing" and create other production efficiencies.[10] Economies that are diversified, and produce and export goods that are difficult to make and relatively rare on the global market, tend to grow faster and over a longer time horizon than those that specialize in a limited set of exports.

This report provides a comparative analysis between countries, a summary of each country's supply chain landscape, and brief snapshots on FDI and key headwinds and tailwinds. The report's annex has more detailed analysis of each country along our supply chain framework.

Country Comparisons

Two central questions in global trade are: How dominant will China remain? And which countries can gain manufacturing share from China? Overall, it is clear why China will remain a superior manufacturing power: its effective infrastructure and productive labor give it a lasting competitive edge. But, beyond its geopolitical headwinds, highlighted by falling trade with the US, rising labor costs in China could create opportunities for other countries seeking corporate investment.

Each potential alternative has its own strengths and drawbacks. For example, Thailand has a productive workforce and relatively low-cost labor—but it has a higher median age than those of other nations, suggesting future labor force pressures. Poland is the only nation in this analysis with better infrastructure than China's, but Poland suffers from water shortages that create manufacturing pressures and has an aging population with immigration reform unlikely. India, with its sizable population, has demographic tailwinds, but its workforce will need further investments to raise productivity. Mexico has water shortages and energy production challenges, but its proximity to the US makes it a compelling investment destination. Vietnam has strong trade links and affordable labor, but its labor force has low productivity, and it has growing political challenges.

Comparing economic complexity provides insight into which nations have a strong base of exports versus those weaker than they might appear on paper. Economic complexity describes the manufacturing capacity and know-how of the labor force within an economy, based on a country's basket of exports. A country with high complexity and high manufacturing exports implies it has the capacity to grow further, but a low complexity base means that nation will likely need larger investments to catch up.[11]

China has the most complex basket of exports of these six nations, with high value-add and difficult-to-produce goods (Figure 4). It also has the highest total value of manufacturing exports and the largest share of manufacturing as a percent of GDP. India has a much smaller share of manufacturing as a percent of GDP and has the second-lowest total exports in manufacturing, above only Thailand. Vietnam, despite gaining share in manufacturing, has a much less complex economy than any country analyzed in this report, indicating that its supply chain ecosystem is not as diverse as it might appear—and underscores Vietnam's reliance on China for intermediate goods. Mexico, Thailand, and Poland are all reasonably complex economies by comparison, with Mexico having the highest value of manufacturing exports other than China.[12]

FDI data indicates how investors view these geographies. Since 2008, FDI in all nations has been dwarfed by Chinese inflows as companies expanded operations in China (Figure 5). But the sharp drop-off in FDI into China that began in the first quarter of 2022 has continued. This creates a potential opportunity for

10 Irwin Douglas et al., "Learning by Doing Spillovers in the Semiconductor Industry," 1994; Rodrik D, "Industrial Policy for the 21st Century," 2015.

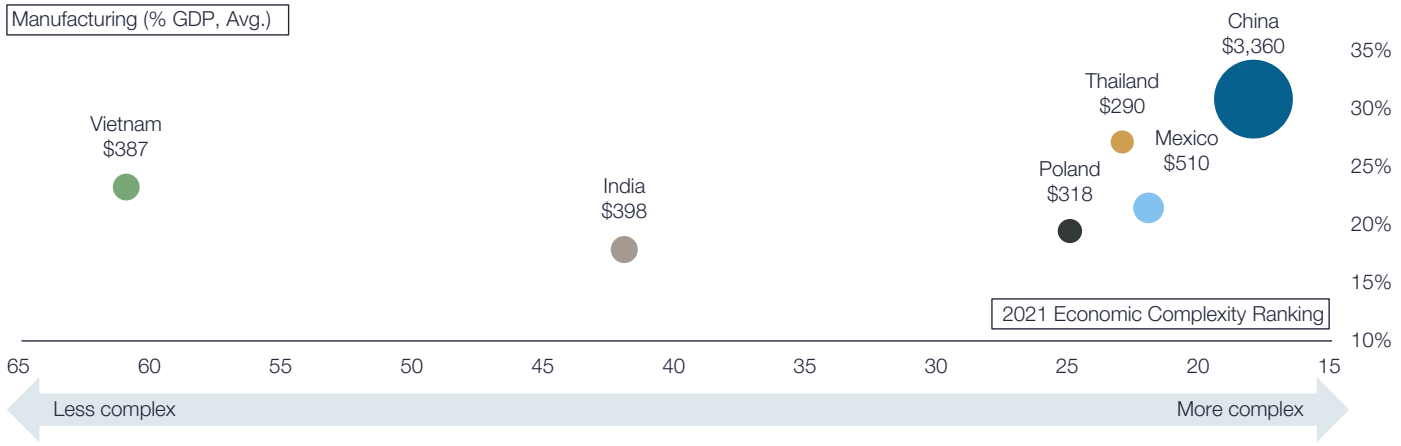
11 Hausman et al, "The Atlas of Economic Complexity: Mapping Paths to Prosperity," 2013.

12 CID Atlas, IMF, OECD.

Note: Economic complexity is a measure of how difficult to produce exports are. A simple economy that produces basic agricultural goods scores low on the economic complexity ranking because these goods are both relatively easier to produce and relatively ubiquitous easy to produce and relatively ubiquitous. By implication, then, this economy's workforce has relatively low know-how, and it would be difficult for such a nation to pivot to high value-added goods. In contrast, a complex economy produces many goods that are difficult to make and rare, suggesting an effective workforce and technical know-how. A diverse economy, with a rich basket of exports, scores highly on the ranking. China, with its multiple categories of manufacturing goods, is the most complex economy here and 14th globally.

"Economies that are diversified, and produce and export goods that are difficult to make and relatively rare on the global market, tend to grow faster and over a longer time horizon than those that specialize in a limited set of exports."

Figure 4: Economic Complexity (Ranking, X Axis), Manufacturing as % of GDP (%, Y Axis), and Total Manufacturing Exports ($bn, Size of Bubble)[13]



competitor nations—if Chinese FDI is weaker in the medium term, global capital is likely to flow elsewhere. Other economies have significant room to grow FDI, and while these economies are all instituting policies to attract foreign investment, catching up to Chinese inflows will be challenging.

While in aggregate FDI inflows for other economies are weak, there are some encouraging green shoots at the sectoral level. For instance, Mexico has seen announced FDI in electronic components increase by 640% and automotives by 200%, while India has grown announced FDI in semiconductors by 180%, and in Vietnam announced FDI into the metals sector has risen by 282% and renewable energy by 113%.[14] These countries are starting at a much lower base than China's—but growing sectoral investments signal that corporates are exploring these economies.

The impact of geopolitics on US trade is clear. US imports across strategic categories from China have decreased on a value basis, while they have increased rapidly from all other countries and regions. Some of this is driven by Chinese companies circumventing tariffs through third-party nations—Vietnam, Thailand, and India stand out in our analysis. But it is also evidence that supply chains are, in fact, shifting, even as China continues to grow total exports. At a sector level, there has been rapid growth in US imports of Indian semiconductors and consumer electronics, Polish auto components, and Thai and Vietnamese mechanical machinery (Figure 6).

Figure 5: FDI Inflows from 2012 – 2023[15]

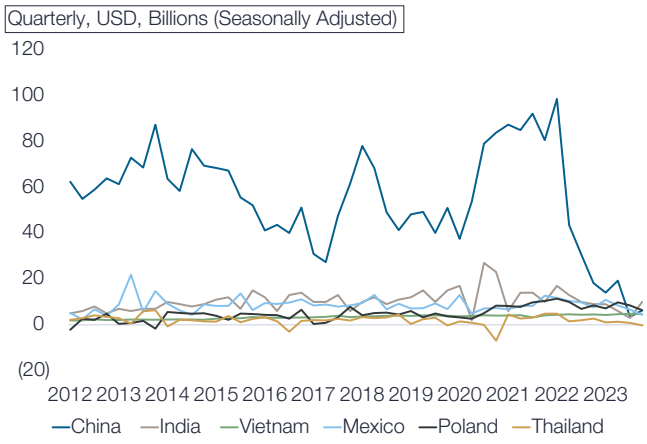


Figure 6: Changes in US Imports from 2019 to 2023[16]

Change in US Imports (USD Bn, % change from 2019 to 2023)	Consumer Electronics	Semiconductors and Materials	Auto Components	Mechanical Machinery	Total U.S. Imports
Total Imports in 2019	$274	$54	$410	$204	$2,492
China	(11.4)	(1.7)	3.0	(9.5)	(21.9)
	(8%)	(36%)	13%	(22%)	(5%)
India	5.2	1.8	0.2	3.8	25.9
	747%	1152%	5%	126%	45%
Vietnam	14.8	3.4	1.7	10.1	48.0
	98%	95%	86%	224%	72%
Mexico	3.7	0.8	38.7	10.3	119.5
	8%	28%	28%	42%	34%
Poland	0.3	0.0	1.2	0.7	4.8
	37%	12%	115%	59%	57%
Thailand	3.0	4.9	1.1	5.6	22.9
	41%	292%	21%	132%	69%
ASEAN	19.6	7.1	4.1	21.0	104.4
	58%	25%	39%	130%	51%
European Union	3.5	2.0	22.1	16.2	125.3
	21%	79%	37%	33%	28%
Rest of world	16.4	8.8	23.3	23.0	239.2
	45%	56%	13%	33%	25%
Total Change	37.0	18.7	91.4	64.9	592.4
	14%	35%	22%	32%	24%
Total Imports in 2023	$311	$72	$501	$269	$3,084

XX (50%) to (5%) XX (5%) to 5% XX 5% to 50% XX >50%

13 Center for International Development, Harvard University, 2024.

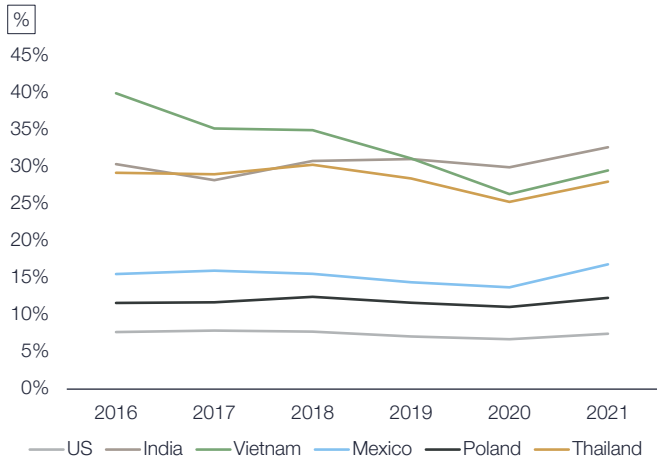
14 fDI Markets Data – see the individual country profiles in the Annex for more information on sectoral data. fDI markets data evaluate announced foreign direct investment that corporates have publicly declared.

15 Chinese State Administration of Foreign Exchange, Reserve Bank of India, Banco de Mexico, National Bank of Poland, Bank of Thailand, General Statistics Office of Vietnam, 2024.

16 US Census Bureau, 2024.

China's manufacturing dominance is apparent in both overall trade data and in intermediate goods. Some promising export nations are highly dependent on China for intermediate goods, which are materials or components used to manufacture final goods. India, Thailand, and Vietnam import well over 25% of their intermediate goods from China (Figure 7). These nations are increasingly likely to get caught in US tariffs, as illustrated by Vietnam and Thailand in May 2024 when manufacturers of solar components were impacted by the end of exemptions to tariffs that targeted Chinese companies circumventing duties and anti-dumping rules.[17] Companies looking at these countries will need to evaluate supply chains below the surface to ensure goods manufactured there meet US import requirements, so they do not risk exposure to US-China tensions.

Figure 7: Share of Intermediate Goods Imported from China[18]



Labor costs and labor productivity are key inputs into manufacturing, and are closely related to whether a country is benefiting from its demographic dividend, as China did in the 1990s and India, Vietnam, and Mexico are now. Economies that are aging will face labor force challenges, like Poland and Thailand, alongside China today. While China has high labor productivity, its wages have increased rapidly, creating cost pressures for firms (Figures 8A and 8B). Thailand and Mexico are appealing for their low-cost labor paired with competitive productivity. India and Vietnam have low labor costs but are substantially behind in terms of productivity. Poland has the most productive workers, but also the most expensive, given that it is an advanced economy.[19]

Figure 8A: Manufacturing Labor Costs per Hour[20]

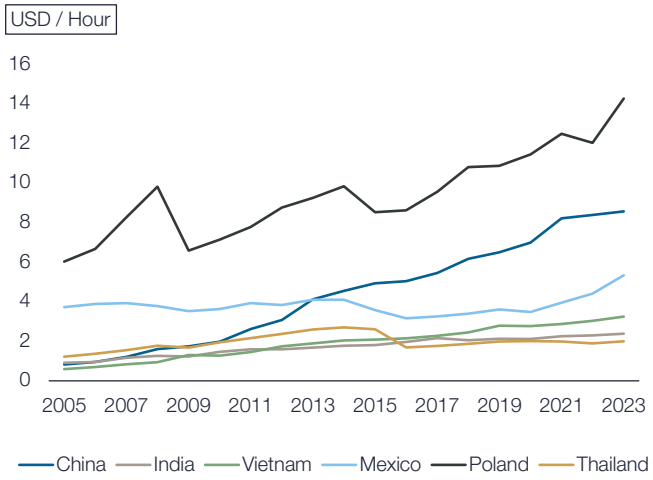
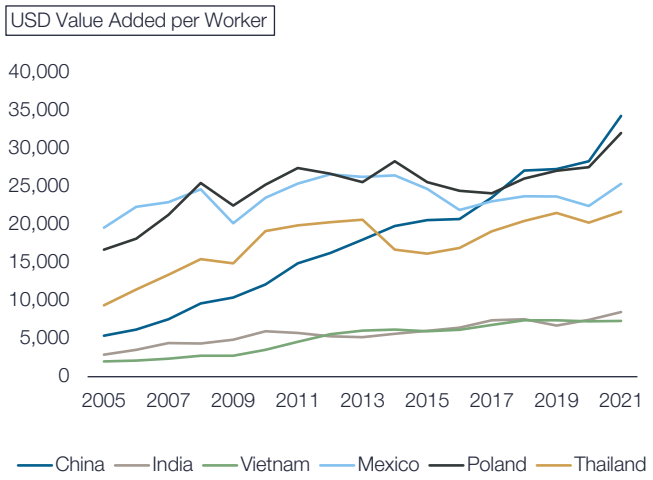


Figure 8B: Productivity of Labor in Manufacturing



Taxes are another critical variable for firms looking at other destinations. Overall, China, India, and Mexico are above the global average of corporate taxes, while Poland, Thailand, and Vietnam are below average—though effective taxes can look quite different than the statutory rates do. Poland has the lowest on-paper taxes for corporations, while India and Mexico both have 30% statutory top corporate rates (Figure 9).

17 The White House, "Fact Sheet: Biden-Harris Administration Takes Action to Strengthen American Solar Manufacturing and Protect Manufacturers and Workers from China's Unfair Trade Practices," May 2024.

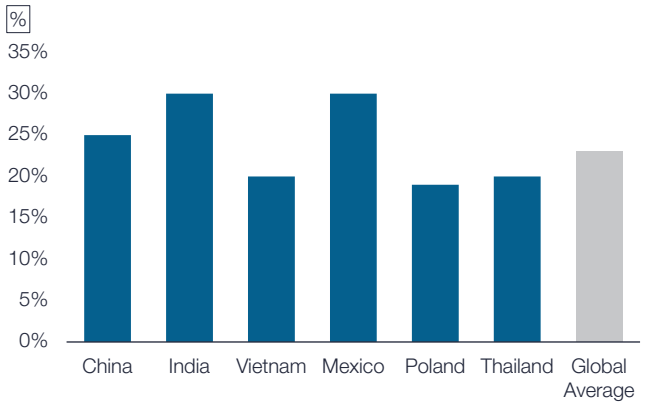
18 Economist Intelligence Unit, 2024.

19 There are inherent difficulties in comparing both wages and productivity across countries as large and diverse as these. Beyond the process issues of conducting reliable surveys across multiple sectors and geographic locations, standardizing wages entails accounting for different consumption baskets and national GDP. Labor productivity is notoriously complex to measure and difficult to isolate from other factors like capital and broader economic changes. As a consequence of these measurement difficulties, wage and productivity data are used in this report directionally rather than for point estimates specifically.

20 Economist Intelligence Unit, 2024.

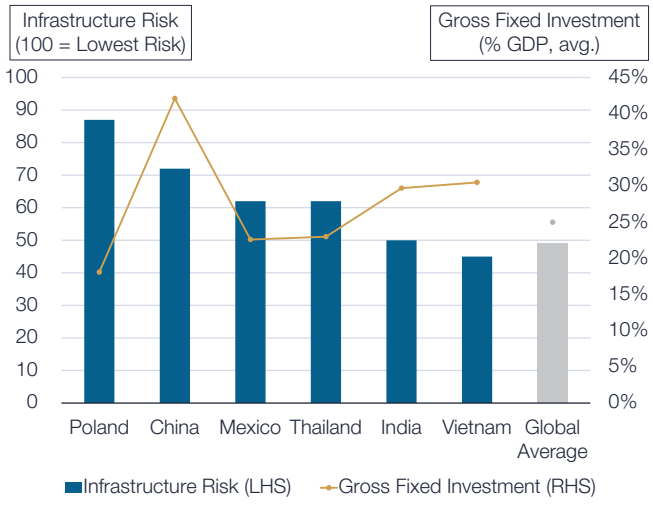
Both India and Mexico are attempting to improve collection efficiency for corporations specifically. But actual tax collection rates, especially in emerging markets, can be far more variable given state capacity and collection efficiency.

Figure 9: Statutory Top Corporate Tax Rates, 2023[21]



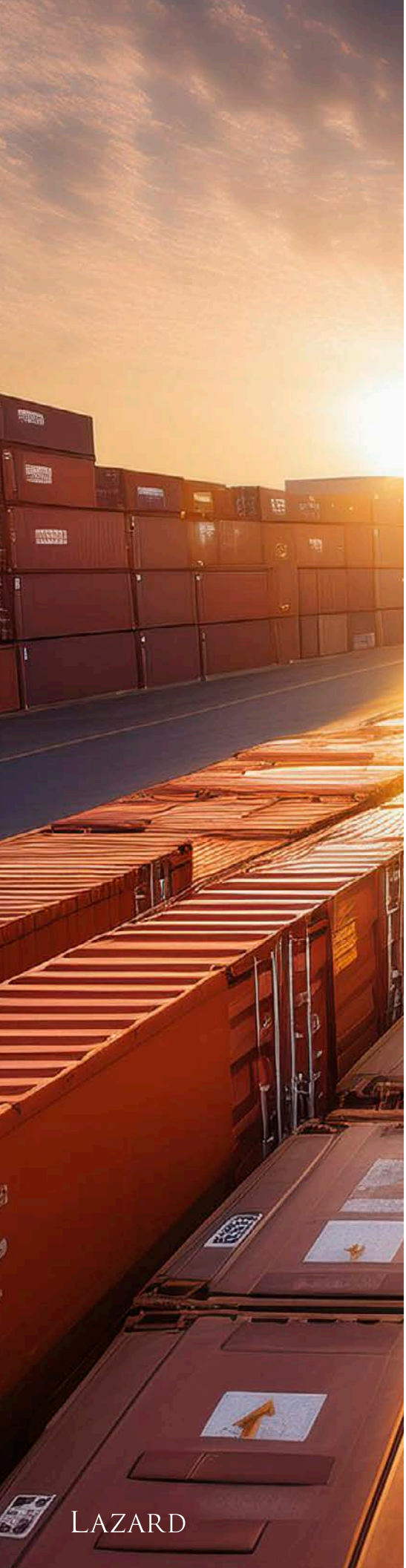
Finally, competitive infrastructure is critical for corporates exporting globally. Firms are especially concerned with how the quality of infrastructure translates into the risk of income losses through delays, power blackouts, and inadequate trade networks. Poland, as an advanced economy, is the clear leader with China close behind in terms of the lowest risk of income loss due to infrastructure challenges for multinational corporations (MNCs) (Figure 10). China continues to invest in infrastructure, further developing its edge. Other nations like India and Vietnam are investing in infrastructure, but both have struggled to extract value from their investments, and both are close to the global average of infrastructure risk. Mexico and Thailand have their own infrastructure gaps outside of major urban areas and industrial clusters, but they have lower risk of income loss than Vietnam and India.[22]

Figure 10: Infrastructure Risk & Gross Fixed Investment[22]



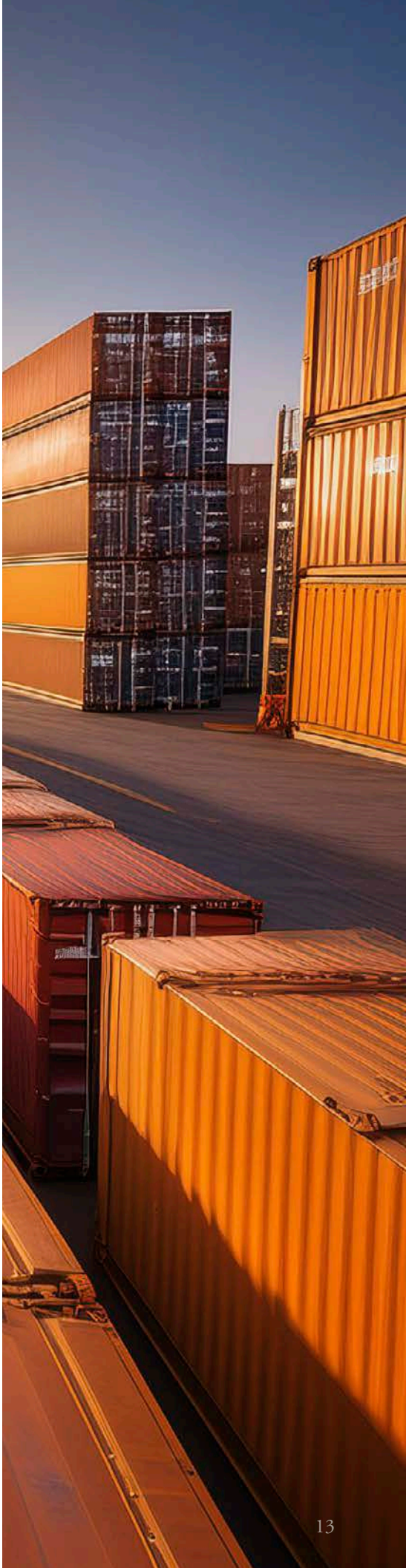
21 Tax Foundation, Cristina Enache, "Corporate Tax Rates Around the World, 2023," December 2023.

22 The EIU's "Infrastructure Risk" evaluates how likely infrastructure issues will lead to loss of income for a business, including deficiencies in rail, road, ports, cyber, and energy. Above, a high score indicates a low-risk country, meaning few anticipated losses due to infrastructure problems.



Country Summaries

Geopolitics is driving notable shifts in international investment flows at the sector level, with growing FDI into alternative geographies, albeit from a much lower base than China's. Evaluating publicly announced foreign investments by corporates can indicate where multinationals are exploring new avenues of production. By looking at aggregate announced FDI in the five years prior to 2018—when the US-China trade wars started—and the subsequent five years, a picture of how FDI is changing at the sector level emerges. The below summaries analyze sectoral announced FDI and provide an overview of the strengths, weaknesses, and the resulting corporate implications for each country.[23] Detailed country analyses follow in the Annex.



23 FDI data in the below section uses fDI Markets, a database that categorizes publicly announced FDI by sector.

China

For all of China's geopolitical and domestic challenges, it remains a powerful manufacturing destination. Yet foreign firms in China now have to contend with rising trade tensions, and an uneven domestic playing field—but these firms also benefit from an effective, skilled labor force and competitive infrastructure and trade links. The path of US-China tensions means foreign firms investing in China will find operations increasingly difficult.

Recent FDI Trends

China's announced FDI is down across almost all categories from 2019 to 2023, compared to 2014 to 2018, with an average drop of 18% (Figure 11). US and European trade tensions with China, along with US and EU industrial policies, have led to pronounced drop-offs in announced FDI in China in electronics and semiconductors. The three largest investors into China over 2014 to 2018 were the US, Taiwan, and Germany, but their investments plummeted respectively by 72%, 82%, and 32%, from a total of $80bn down to $25.9bn during 2019 – 2023. In other words, China's continued dominance in manufacturing exports is less because of new foreign investment and more due to its domestic industries.

Summary of Country Outlook

Strengths

Productive workforce: An efficient labor force with high technical know-how is enabling production of complex goods, like electric vehicles, across multiple sectors and products.

MNC experience operating in China: Multinationals with decades of experience working in China have long-standing business relations and well-established export pathways, meaning they may be reluctant to depart.

Effective infrastructure network for trade: A robust logistics system reduces costs and streamlines exports with further investments creating greater efficiencies.

Complex export basket alongside diverse export destinations: China's export basket is complex and large, and China is shifting up the value chain to more high-tech products. In addition, China is exporting to a growing list of countries and regions.

Risks

Uneven playing field for foreign firms: Chinese government support for Chinese firms and their exports has led to forced technology transfers, rising subsidies for domestic firms, and bans on foreign firms in sectors like advanced technology.

Rising trade tensions: As China doubles down on exports, the West, led by the US, is reigniting its own industrial policies with further trade barriers and retaliation likely.

Weak domestic consumption: A weak economy, with insufficient policy support, is exerting further pressure on the Chinese export model and exacerbating trade tensions.

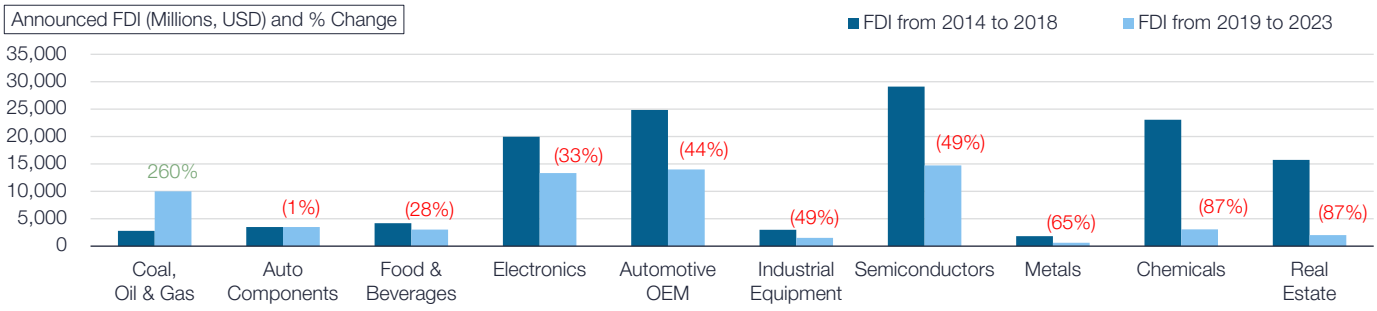
Corporate Implications

Exploring a "China plus many" strategy: MNCs will have to engage with different geographies to find solutions to their China de-risking priorities.

Ensuring compliance with trade policies and production requirements: Firms operating in China will need to track trade policy changes in the European Union, United States, and China given how rapidly policy regimes are shifting. They will also need greater insight into their supplier and customer networks within China to ensure compliance with new restrictions and controls.

Building contingencies in Chinese supply chains: Firms that rely on China for inputs will need to develop alternatives in case US-China tensions escalate and trade restrictions become more severe.

Figure 11: Change in China's Announced Aggregate FDI from 2014 – 2018 to 2019 – 2023[24]



24 fDI Markets Database, Financial Times. Note: Sector data does not necessarily sum to aggregate flows data published by each economy, because of differences in sectors covered, when investments are made, in what form, and over what time horizon.

India

India has many strong attributes as an investment destination, including a large population, impressive overall growth, and improving ties with Western nations. But its FDI inflows have disappointed, implying structural issues around infrastructure as well as legal and regulatory unpredictability. In addition, India's supply chains are reliant on Chinese intermediate goods, suggesting a weaker domestic supply ecosystem. Investors face important tailwinds, like liberalizing investment processes, but there are challenges to overcome in the medium term, like labor productivity, infrastructure, and political uncertainty. Geographically, investment opportunities are mostly in the west and south of the country given these regions' better infrastructure and higher skilled labor.

Recent FDI Trends

Overall FDI into India has been below expectations, with inflows at the end of 2023 as a share of Indian GDP falling to 2014 levels despite increased incentives for FDI. But India is seeing encouraging growth in announced FDI in semiconductors, communications, and software and IT, though announced FDI in electronic components fell over the same period (Figure 12). India's growth in renewable energy investments and decline in coal and gas power confirm its pivot to renewable energy, though this transition will take time. Most concerningly for investors, India did see a major increase in announced semiconductor investments, from $1.6bn (2015 – 2018) to $30.2bn (2019 – 2023), but $25.7bn of this was canceled as foreign firms struggled to find local partners.[25] Despite these cancellations, investments in semiconductors increased 180% over 2019 – 2023, compared with the prior five-year period, suggesting momentum in the sector, albeit from a low base.

Summary of Country Outlook

Strengths

Strong incentivization of FDI: Industrial policies, like $28bn in Production Linked Incentives (PLIs), are designed for companies to catalyze investments and grow export-oriented manufacturing.

Promising demographic trends: India has the lowest median age (28) and second-lowest wages of our analyzed countries, creating labor market opportunities for foreign investors.

Stable macroeconomic environment: India has effective currency management, low external debt, and a reasonable fiscal outlook, meaning investors can have confidence in the medium term.

Improving ties with the West: Prime Minister Modi's ambition to position India as a competitor to China is creating closer geopolitical alignment and welcoming conditions for Western businesses.

Risks

Weak public institutions: Modi has put pressure on the independence of public institutions like courts and regulators, meaning companies face inconsistent application of rules and laws like FDI processes and tax collection. The coalition government in the aftermath of the June 2024 election may enhance the performance of such institutions, though this will take time. On the upside, investments may become less politicized as Modi faces a stronger political opposition.

Divisive nationalist rhetoric: While the Bharatiya Janata Party (BJP) is now in a coalition government, it remains to be seen if Modi moderates his sectarian rhetoric. In the past, such actions have threatened civil unrest, disrupted business functions, and created operational risks. For instance, protests in 2020 in Uttar Pradesh and subsequent state-wide internet shutdowns created uncertainty for businesses.

Reliance on Chinese intermediate goods: Up to 30% of imported component parts in India come from China, suggesting high exposure to Chinese supply chains and weaker domestic manufacturing. For example, Indian headline mobile phone exports have increased 21-fold since 2019, but when imports of Chinese intermediate goods are included, India's trade deficit in mobile phones has increased.

Low productivity workforce: While India has demographic advantages, its workforce is, on average, less productive than its competitors', which creates production bottlenecks and raises costs.

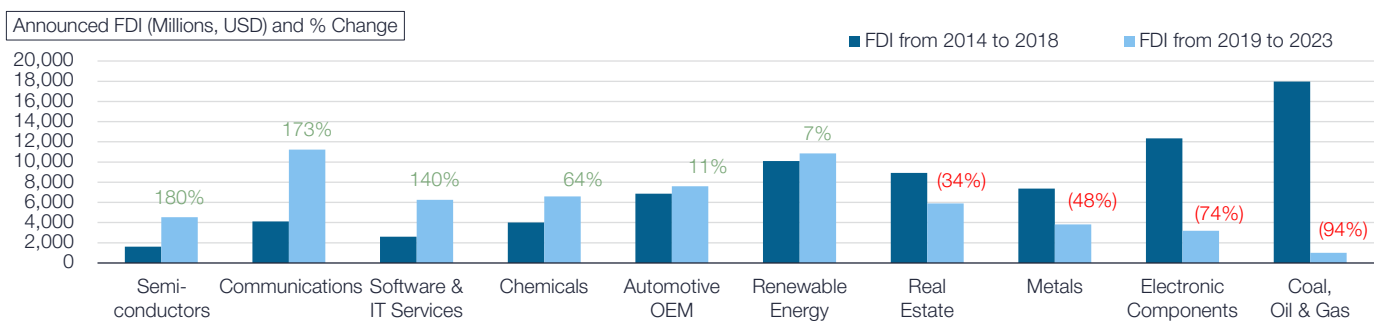
Corporate Implications

Building relations with regulators is critical: The investment process may become less politicized because of the coalition government, and understanding independent institutions is likely key to investing successfully.

Investing in upskilling to enhance labor productivity: While Indian labor is low cost, firms will need to address the skills gap in the overall labor force.

Developing a climate and energy strategy: Energy blackouts and climate events are impacting production, and an adaptation strategy will be important in order to avoid disruptions.

Figure 12: Change in India's Announced Aggregate FDI from 2014 – 2018 to 2019 – 2023[26]



25 The cancellation of three FDI announcements, Foxconn-Vedanta ($19.5 billion), IGSS Ventures ($3.2 billion), and ISMC ($3.0 billion), drove this as they were all unable to secure partners with expertise in developing semiconductor fabrication plants in India, suggesting implementation issues for investments.

26 fDI Markets Database, Financial Times. The three canceled semiconductor projects, totaling $25.7bn of announced FDI, are not displayed in this chart, but overall announced FDI into semiconductors still rose by 180%.

Vietnam

Vietnam's deep trade links, young labor force, and relationships with the US and China showcase a country with significant investment potential. In addition, its geographic location means it benefits from proximity to major shipping lanes. Yet Vietnam has weak infrastructure, and its heavy reliance on Chinese intermediate goods means it is already caught in US-China trade tensions as the US government scrutinizes attempts by Chinese firms to circumvent import restrictions. In addition, its labor force has surprisingly low productivity and though it does produce complex electronics, it is increasingly exporting lower complexity goods, undermining its supply chain ecosystem. Political instability—rarely a problem until recently—is becoming an issue that complicates its potential, with multiple resignations due to corruption issues and a succession crisis after the death of the former General Secretary.

Recent FDI Trends

Vietnam saw increases in announced FDI in renewable energy and metals, and a modest increase in electronic components, but small declines in textiles and consumer products (Figure 13). Vietnam grew its announced electronics foreign investments, despite global capital flowing to the US and other advanced markets in this sector. The textile market, on the other hand, has become more fragmented, with countries like Thailand, Bangladesh, and Turkey attracting financing, reducing flows to Vietnam. Announced FDI into the energy sector is an encouraging sign for the provision of stable power, which is a key vulnerability for manufacturers. At a country level, both China and the US have increased investments; US companies boosted their FDI investments by nearly 900% to $17bn, while Chinese companies raised theirs by over 300% to $11.5bn during the 2019–2023 period.

Summary of Country Outlook

Strengths

Export-oriented economic model: Vietnam has implemented reforms, adjusted its regulatory framework, and aligned economic and political incentives to make it an attractive manufacturing and export platform. Trade agreements with seventeen nations further underscore this export orientation, and firms operating in Vietnam have access to large potential markets.

Positive relations with the US and China: Vietnam has placed itself in a strategically advantageous position amid US-China tensions, though this is becoming difficult to maintain.

Demographics and input costs: Vietnam benefits from a young population along with a large working-age population (70% of the population). In addition, Vietnam remains cost-competitive with low wages, contrasting with countries like China and Poland.

Risks

Overreliance on China: A significant proportion of Vietnam's imports and FDI comes from China, making it susceptible to ongoing geopolitical tensions between Washington and Beijing. Vietnam's growing electronics sector is also vulnerable to increased US scrutiny. Critically, any escalation of tensions in the South China Sea would significantly damage Vietnam's economy, making it a limited hedge against US-China friction.

Lagging infrastructure: Vietnam spends the second-highest percentage of GDP on infrastructure of the countries analyzed here, but its quality remains poor.[28] Road quality is severely lagging, and energy infrastructure is vulnerable to weather events, including in manufacturing hubs.

Political instability: Corruption scandals have affected the highest levels of government, leading to the resignation of Vietnam's President in March 2024. The death of General Secretary Nguyen Phu Trong in July 2024 and rapid elevation of To Lam could lead to conflict among political factions in the Communist Party and create policy and business uncertainty.

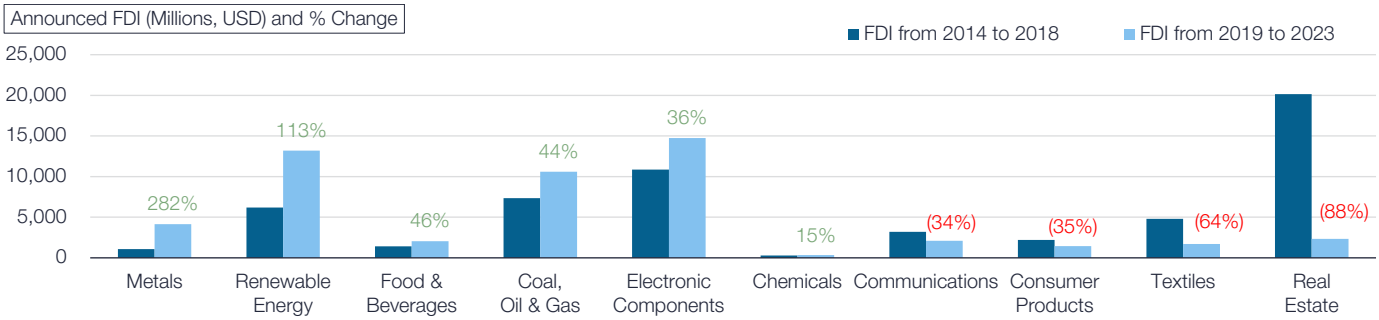
Low labor productivity and low value-add manufacturing: Vietnam's workforce has the lowest productivity in this analysis, and Vietnam's export basket is generally low value-add, a headwind for companies trying to export complex manufacturing goods.

Corporate Implications

Decreasing reliance on Chinese intermediate goods: Companies with Vietnamese supply chains dependent on Chinese intermediate goods will need to develop alternative sourcing, to ensure their exports do not fall afoul of US and EU barriers.

Investing in infrastructure: The development of export-oriented infrastructure will need corporate support, given the government's poor record.

Figure 13: Change in Vietnam's Announced Aggregate FDI from 2014-2018 to 2019-2023[27]



27 fDI Markets Database, Financial Times.

28 Open Vietnam, 2022.

Mexico

Mexico's proximity to, and economic integration with, the United States has made it a critical location for nearshoring. Yet Mexico faces challenges as well. The country's resource nationalism, which began under President López Obrador and is likely to continue under President Claudia Sheinbaum, creates bottlenecks in the energy sector. In addition, manufacturing in Mexico is under increasing pressure to adhere to US content requirements due to rising US-China tensions. Sheinbaum's overwhelming victory in the June 2024 elections also raises questions about the rule of law and the independence of the judiciary.

Recent FDI Trends

Investment data demonstrate how Mexico is becoming a favored nearshoring destination (Figure 14). Mexico's announced FDI saw major increases in automotives and electronics components, though it also saw falling investments in renewable energy. Warehousing has been an important area for domestic investment, but foreign investment has decreased. In the autos sector, announced FDI in auto components has decreased, but this likely is illustrative of global investments moving toward electric vehicles (EVs), which have fewer components than traditional combustion engine vehicles.[29] Rising investments by original equipment manufacturers (OEMs) in autos suggest the growth of a robust Mexican electric vehicle sector, and investments from South Korean and US EV manufacturers support this. But much of the EV sector is being driven by Chinese automobile companies increasing their presence in Mexico: Chinese firms have pledged 35% (~$3bn) of announced FDI in the sector.

Summary of Country Outlook

Strengths

US-Mexico economic integration: Deep economic and institutional ties between the United States and Mexico strongly anchor its attractiveness as a manufacturing destination. Despite political turbulence, there are limited incentives for either nation to fundamentally disrupt these links.

Nearshoring due to US-China tensions: Mexico will be a major winner from US-China trade tensions. US-China decoupling makes Mexico more attractive due to its geographic proximity and integration with the US, as well as its strong existing manufacturing base.

Developed manufacturing sector and export-based economy: Since the implementation of the North America Free Trade Agreement (NAFTA) in the 1990s, Mexico's manufacturing sector has expanded. Automotives and other complex sectors have gained in sophistication with growing exports to the US and elsewhere.

Stable peso and reasonable fiscal deficit: Mexico's macroeconomic outlook is encouraging and relatively stable. Sheinbaum's efforts to raise revenue will likely focus on enhancing tax collection, rather than increasing corporate taxes.

Risks

Growing resource nationalism, particularly in the energy sector: Nationalization of the energy sector has created supply bottlenecks for manufacturing.

Water scarcity in manufacturing hubs: Industrial production has already been impacted by lack of water in the past few years, with disruptions expected to continue.

Corruption and violence spreading to industrial hubs: Mexico's judicial and security weaknesses are unlikely to be resolved quickly. The costs of corruption are up to 5% of GDP per year and, shockingly, the total cost of crime may be up to 15% of GDP each year.[31]

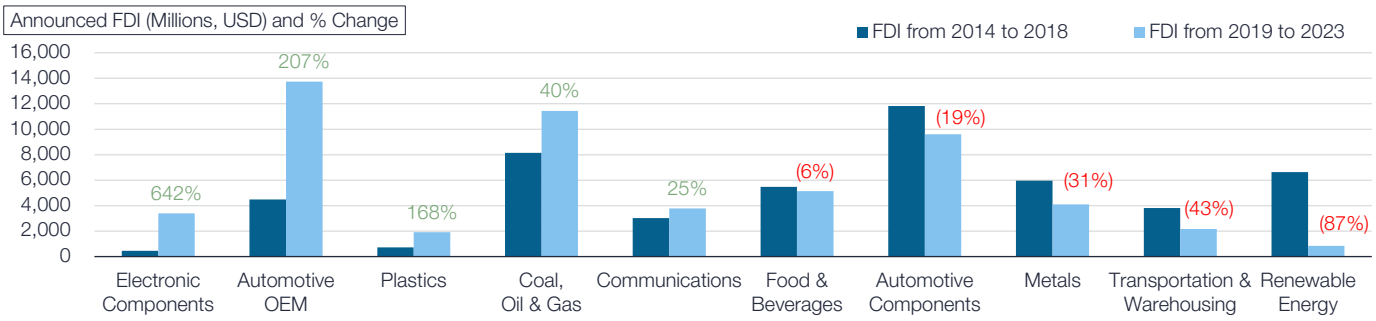
Institutional erosion: Potential reforms by the Sheinbaum government, such as efforts to assert greater political influence over the judiciary, create headwinds for businesses.

Corporate Implications

Investing in upskilling and attracting labor: Multinationals in Mexico will need to invest in upskilling programs outside of central and northern Mexico, where manufacturing has largely been based.

Developing relationships to improve access to resources: Water and energy are important binding constraints that require ongoing cooperation and coordination with the government to smooth access.

Figure 14: Change in Mexico's Announced Aggregate FDI from 2014–2018 to 2019–2023[30]



29 Rest of World, "Mexico's $100-billion auto parts industry is reinventing itself for the EV era," April 2023.

30 fDI Markets Database, Financial Times.

31 Andres Cervantes et al, "Estimating the economic impact of interpersonal violence in Mexico in 2021: projecting three hypothetical scenarios for 2030, 2023," 2021.

Poland

As an advanced economy, Poland has effective infrastructure and a productive, but expensive, labor force. Its high trade integration—with the EU directly and with EU partners like the US—means firms in Poland have access to multiple markets for export. Poland moved quickly to secure energy independence after the Russian invasion of Ukraine with domestic coal, and while it needs to transition to renewables to meet EU climate objectives, its overall energy mix provides it with a major strategic advantage. But Poland's labor force is aging, and weakening political institutions appear unlikely to shift immigration policy. Labor shortages are becoming a growing bottleneck for firms in Poland. Additionally, challenges like water shortages, proximity to the fighting between Russia and Ukraine, and Poland's border with Russian Kaliningrad, create further uncertainty.

Recent FDI Trends

Poland has seen significant increases in announced FDI in automotives, metals, and electronics, while semiconductor investment went from zero capital in 2014–2018, to $4.6bn in 2019–2023 (Figure 15). Poland secured a major investment in 2023 by Intel to create a semiconductor factory in Wroclaw, southwest Poland, which will form a key part of Intel's European supply chain.[32] Key investments in metals and communications were announced by, respectively, Volkswagen/Umicore in 2023 ($1.9bn) and Google in 2022 ($1.8bn). Poland is clearly benefiting from both EU-China tensions and Germany's decline in energy-intensive manufacturing after the invasion of Ukraine and subsequent energy price spikes.[33] Investments by US, German, and South Korean companies, Poland's three largest sources of FDI, have surged by 270% over the past 5-year period, increasing from $4.5bn to $17bn. At a sectoral level, Poland's battery sector has seen rising announced investments, suggesting momentum behind Polish production in this space.

Summary of Country Outlook

Strengths

High trade integration with Europe and EU partners: Access to the single-market and customs union—along with with conformity on EU standards on trade, investment, and defense—situate Poland strongly vis-à-vis reshoring peers. The current more moderate political leadership under Prime Minister Donald Tusk's Civic Platform party has unlocked EU funding, channeling further investments into the country.

High-quality infrastructure: Deep logistics networks and a robust local supply chain ecosystem within Poland provide trade linkages across the EU.

Energy independence: Poland shifted to domestic coal and has insulated energy-intensive industries from disruptions and price spikes. That said, dependence on coal is a long-term challenge and Poland will need to pivot to a greater share of renewables given EU climate objectives.

Risks

Labor shortages: A shrinking workforce is a handicap to Poland's growth prospects and is further compounded by prevalent domestic anti-immigration sentiment.

Challenging political institutions: Poland's far-right party, Law and Justice (PiS), still wields considerable influence in domestic politics, and threatens long-term stability unless institutional capacity and independence can be strengthened.

Chronic water shortages: Water scarcity and the implementation of water restrictions during summer months pose critical challenges to industrial operations, particularly for water-intensive businesses like autos and batteries.

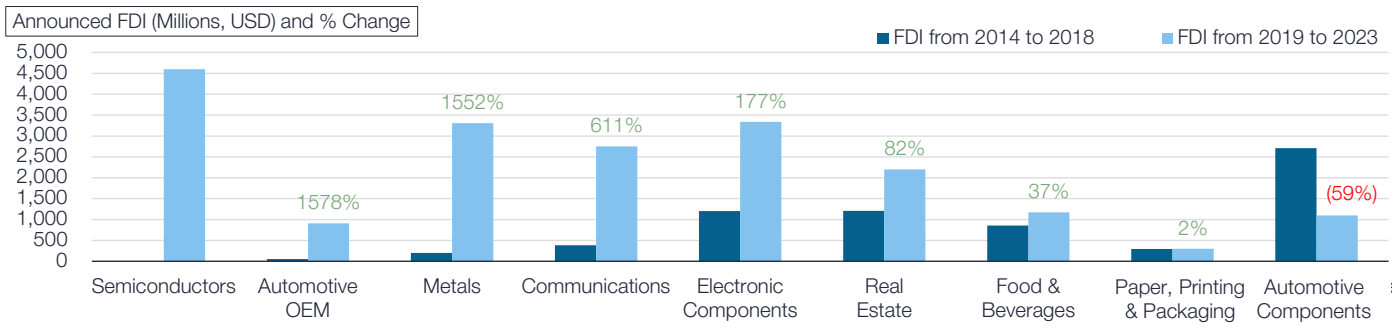
Poland's proximity to Russia's war in Ukraine: Ongoing territorial and border concerns require increasing defense spending, which imposes a rising fiscal burden on Poland.

Corporate Implications

Creating labor and water access strategies: Water and labor shortages are key constraints that require effective engagement with local and national government.

Developing expertise in a complex tax system: The legacy tax system is complex and unlikely to be reformed in the short run, meaning firms will have to invest in local support to navigate the existing rules until reforms occur.

Figure 15: Change in Poland's Announced Aggregate FDI from 2014–2018 to 2019–2023[34]



32 Intel, "Intel Plans Investment in Poland," June 2023.

33 Federal Statistical Office (Statistisches Bundesamt), Lukas Vogel et al., "Calculation and Development of the New Production Index for Energy-Intensive Industrial Branches," 2023.

34 fDI Markets, Financial Times.

Note: No percentage is displayed for semiconductors since the value was zero in 2014–2018.

Thailand

Thailand's productive labor force, FDI flows from major economies, and its diverse basket of exports have made it a growing manufacturing destination. Thailand's workforce combines affordable wages with high productivity, a major advantage for firms. But a history of political instability creates uncertainty around investment processes and policy continuity. Firms in Thailand have also experienced production disruptions due to climate events and will need to invest to adapt to this reality. While Thailand is bringing in capital, Chinese investments could undermine Thailand's attractiveness to foreign firms. Preferential subsidies for Chinese EV makers in Thailand have attracted Chinese firms like Neta and BYD–but have undercut other producers in Thailand since these firms use intermediate goods imported from China. Honda has already moved to consolidate its operations into one plant, as it reacts to Thailand's preferential subsidy policies for Chinese firms.[35]

Recent FDI Trends

Thailand's significant increases in announced FDI in renewable energy and communications suggest Bangkok's modernizing drive is yielding results, particularly in automotives where it already has an export track record (Figure 16). Falling FDI in the business machines and equipment sector was due to a major $500mn investment in 2015 by Seagate, a US data storage firm, with no comparable investments in the second five-year period.[36] Communications and renewables investments were driven by announcements from Saudi Arabia's ACWA Power ($7bn) and Amazon ($5bn), both in 2023. Japanese auto firms Toyota, Honda, Mitsubishi, and Isuzu Motors have announced plans to invest a total of $4.3bn over the next four years to expand electric vehicle production.[37]

Summary of Country Outlook

Strengths

Strong FDI links with the United States, Japan, and China: Thailand's multi-alignment strategy is driving inflows for export-oriented businesses. Multinationals from different nations have experience operating and investing in Thailand.

Competitive wages and high productivity workforce: Firms investing in Thailand have an effective local workforce to employ across sectors.

Diverse basket of exports: Thailand is a trade-oriented economy with complex supply chains alongside multiple trade agreements for exports, including 14 regional trade agreements and 18 free trade agreements.

Well-established constitutional rights: Thailand's constitution guarantees due process for both property rights and protection against expropriation, which means businesses can have confidence in how assets will be treated under the law.

Risks

Ongoing political tensions: A history of coups and military rule undermines business confidence and creates uncertainty in institutional decision-making and government continuity. The dismissal of Prime Minister Srettha Thavisin and his cabinet, in August 2024, and the separate dissolution of the Move Forward Party earlier in August, mean Thailand finds itself in growing political controversy and uncertainty. The return to power of the Shinawatra family compounds these risks.

Aging population: Companies may find rising labor shortages in the coming years, despite competitive wages and high productivity at present.

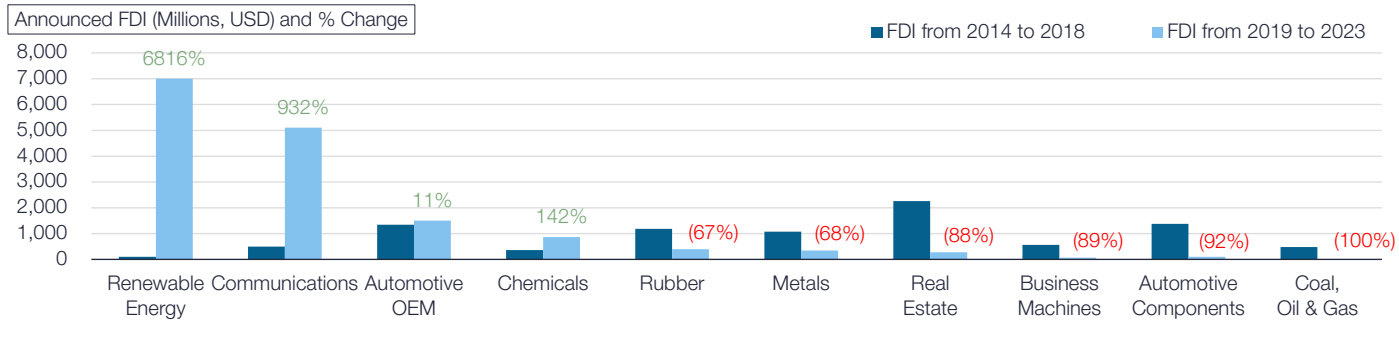
Flooding and other climate events: Climate-related disruptions are already impacting production trade, as it did in major flooding in 2011, and are raising insurance costs in key regions.

Corporate Implications

Developing climate-resilient processes: Given disruptions from flooding and other climate issues, firms investing in Thailand will need climate strategies to reduce risks.

Ensuring compliance with US and EU customs on Chinese goods: Companies will need to ensure exports to the United States are compliant with increasing customs scrutiny, given Thailand's reliance on Chinese intermediate goods.

Figure 16: Change in Thailand's Announced Aggregate FDI from 2014–2018 to 2019–2023[38]



35 Nikkei Asia, "Thai Subsidies for Chinese EV makers wreak havoc on auto sector," July 2024.

36 Reuters, "Seagate to invest $470mn in Thailand over next 5 years," February 2015.

37 Just Auto, "Japanese automakers step up BEV investments in Thailand," January 2024.

38 fDI Markets, Financial Times.

Conclusion

Our profiled economies all have major advantages as manufacturing destinations, and investments in export-oriented sectors in these markets are growing. But each economy also has unique challenges that corporates will need strategies to overcome, like investing in upskilling or creating climate adaptation plans. Building relationships with key policymakers and regulators will further increase the likelihood of success within these nations. Against the backdrop of a still dominant China, corporates exploring new geographies will have to account for the geopolitical trajectories, industrial policies, and investment outlooks of each nation. There is no "one-size-fits-all" solution. Corporates must pay closer attention than ever to geopolitics when making strategic decisions on how, and where, to reorient their supply chains.

Detailed country profiles evaluate each economy with our five-part framework in the Annex, to help better understand the strengths and risks of each nation as a supply chain destination.

Annex

China – The Base Case

Is China Still the Workshop of the World?

China's economic growth from 1978 through to the mid-2000s contains important lessons for competitor nations and firms today. It also reveals that, because of China's ascendancy, what worked once may be far harder to now replicate elsewhere. Notably, while geopolitical tensions and internal political challenges have reduced China's attractiveness as an investment destination, China has continued to grow its trade surplus with the rest of the world (Figure 17). Beijing's vast subsidies and industrial policy commitments have enabled it to develop competitive, advanced exports such as semiconductors, automobiles and electric vehicles, and clean energy technologies like solar panels, wind turbines, and energy storage batteries.

How China Succeeded

Common narratives around Chinese growth after 1978 focus on three pillars that were vital to its industrial drive and to its export orientation:

An openness to foreign direct investment transformed the Chinese economy. Prior to 1978, foreign investment made up less than 1% of total fixed investment but rose to over 20% in 1994.[40]

Massive infrastructure investments prepared the country's economic system to export around the world. China tripled infrastructure investment as a share of GDP from 8% in 2001 to 24% in 2016.[41]

A demographic dividend with a young, large population, and rapid urbanization that created gains from networked industrial centers alongside the move from an agricultural to manufacturing economy.

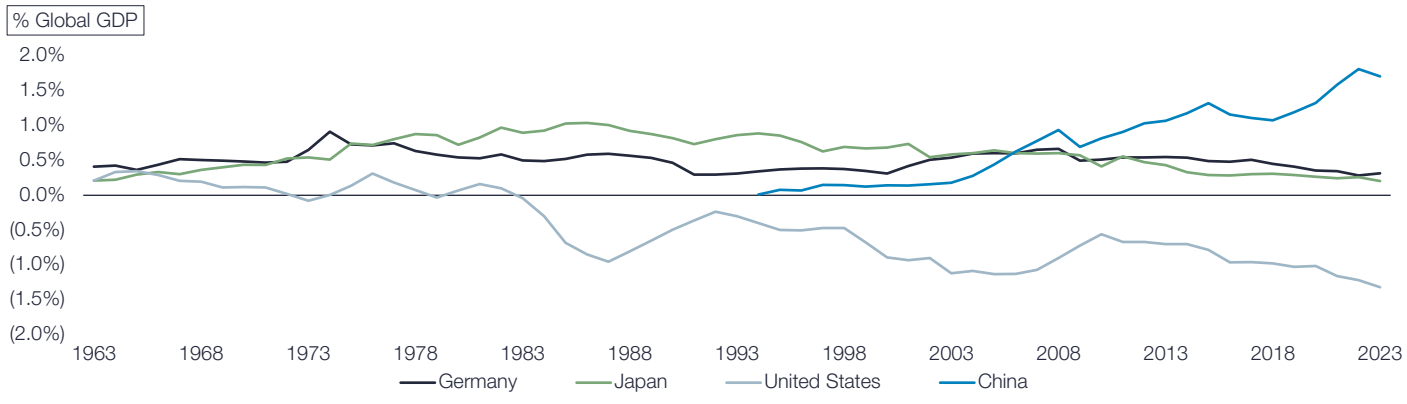
Two additional factors which contributed to China's rise were worker productivity and policy experimentation. Labor productivity grew rapidly, making up over 40% of Chinese growth in the 1990s, as human capital developed to enable a diverse basket of exports, from textiles to light manufacturing.[42] This base of productivity is now enabling China to pivot to higher value-add exports. The second factor was China's policy experimentation and responsiveness to economic signals. The tired image of a centrally planned economy is misleading; in fact, Chinese provinces and local government officials were given significant latitude to experiment with economic models and outputs.[43]

Why Companies Are Diversifying Away from China

China's dominance as an investment destination is being undermined today because of rising geopolitical tensions, a centralized political landscape around President Xi, and an increasingly hostile operating environment for Western firms.

Concerns about China's military assertiveness and economic influence have shifted the political consensus in Washington toward much sharper competition with Beijing. While President Trump initiated a trade war with Beijing, President Biden maintained the Trump administration's tariffs, and trade tensions in some form will continue regardless of who sits in the White House on January 20, 2025. As the US and EU seek to bolster their own domestic industries, this puts them at odds with China's export model—which Beijing remains committed to.[44] For investors, this creates an obstacle course of rising costs, complicated and expensive customs processes, and scrutiny on intermediate goods and exports from third-party countries. Indeed, Mexico, Vietnam, and Thailand were all affected after the Biden administration terminated exemptions on tariffs, as it sought to clamp down on Chinese firms circumventing US restrictions.[45]

Figure 17: Manufactured Goods Surpluses of Germany, Japan, the United States, and China[39]



39 UN Comtrade Data, Council on Foreign Relations, March 2024.

40 IMF, "Why is China Growing So Fast?" June 1997.

41 Journal of Development Economics, "Infrastructure Investment and Growth in China: A Quantitative Assessment," 2022.

42 IMF, "Why Is China Growing So Fast?" June 1997.

43 Wu Jinglian et al, "Whither China: Restarting the Reform Agenda," 2016.

44 The Wall Street Journal, "Takeaways from China's Third Plenum Meeting," June 2024.

45 White House, "Fact Sheet: Solar Manufacturing," May 2024.

A consequence of the Chinese government doubling down on exports is an economic model that expands production by Chinese companies, often at the cost of foreign businesses. Beijing's objectives, via its "Made in China 2025" industrial strategy, are to move up the manufacturing value chain and to develop self sufficiency through its dual circulation economic model. China's strategy utilizes technology transfers, has weak IP protection, and deploys subsidies for domestic firms to create an unequal playing field for foreign firms. The move to focus on advanced technology exports compounds this strategy as Beijing provides greater support to domestic Chinese firms. Raids on foreign companies, pressuring foreign corporations to alter speech policies, and detentions of foreign executives are all a marked departure from the relative openness of the 1990s.

These pressures are contributing to the sense that there are opportunities for countries to draw manufacturing away from China. Tariffs, like those imposed by the Biden administration on electric vehicles, batteries, and other components, signal a determination to reduce reliance on China. Yet China's trade surplus continues to rise, hitting new heights in 2023 in volume terms.[46]

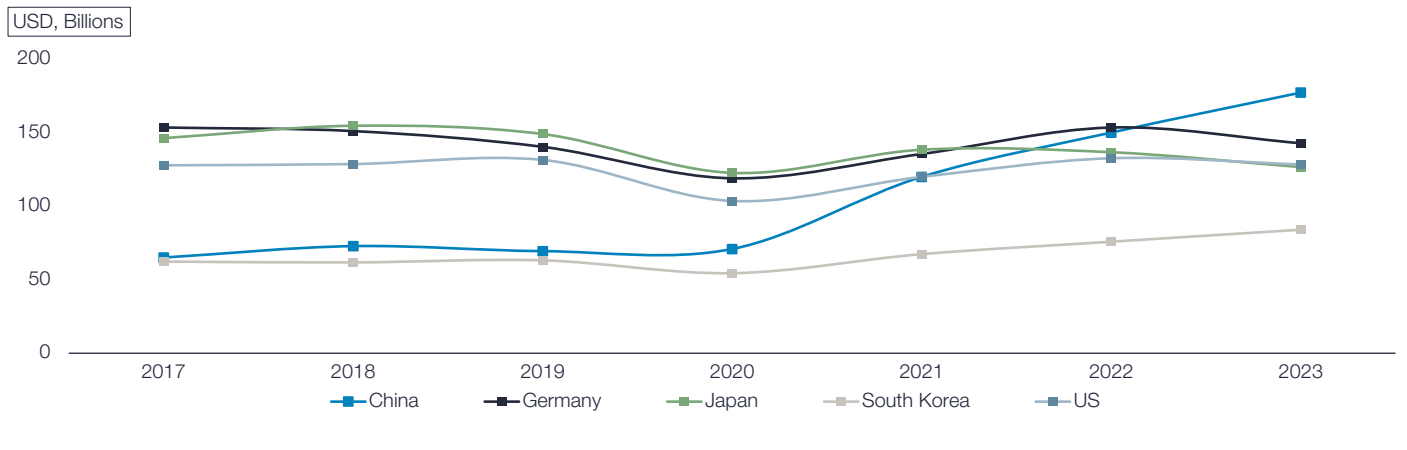
China's Ongoing Investment Strengths

For all the anti-China rhetoric and competition among national industrial policies, dislodging China as a major manufacturing hub is highly unlikely in the medium term. China has an effective workforce alongside infrastructure investments that make it an exporting powerhouse. Companies with a well-established track record of working in China are reluctant to shed that in the face of uncertain alternatives. China has rapidly grown exports in new fields like automobiles (Figure 18). But it also retains significant strength in its more traditional export base like textiles; even as its global share falls, China is still the largest textile exporter in the world.[47] Beyond what China is exporting, it has also shifted where it exports to as tariffs have compelled it to seek new markets. While Chinese exports to the US have fallen, they are rising elsewhere—China now exports more to Belt and Road Initiative countries than to the EU, Japan, and US combined.[48] In response, more emerging markets are imposing tariffs on imports from China. But it also illustrates China's deep trade links and the difficulties in dislodging it.

Chinese Potential, Beijing's Policy Conundrums

Can other countries gain market share in global manufacturing? If China's ongoing trade dominance is durable, it will be difficult for other countries to compete with its established export base. China seems determined to continue with its export-led model, showing few signs of re-prioritizing amid persistently weak Chinese domestic demand. Where manufacturers locate is in part a function of these Chinese domestic policies. But how firms orient their supply chains is also a function of whether other nations can successfully compete with China for its shifting export basket, which will require clear strategic investments, effective FDI policies, and reliable infrastructure that eases the trade of goods. Firms will need to evaluate these geographies for their capacity for trade right now and their potential for manufacturing in the future.

Figure 18: Car and Truck Exports for Select Countries, 2017–2023[49]



46 UNCTAD 2023.

47 Observatory of Economic Complexity 2022.

48 Financial Times, "China's plan to reshape world trade on its own terms," February 2024.

49 World Economic Forum, "Mapping the rise of China's autos and other global trade trends," February 2024.

India Supply Chain Analysis

Introduction

Perhaps no nation is mentioned as the heir apparent to China's manufacturing dominance more than India. A young, dynamic population with strong economic growth and a government that speaks the language of foreign investors makes India an interesting proposition for global businesses. Yet India is a lower-middle income country and features a host of challenging operating conditions. While India has made progress on key indicators, emergence as a major manufacturing and export hub will require the government to implement significant additional reforms.

Geopolitics

Prime Minister Narendra Modi and his Bharatiya Janata Party (BJP) have overseen rapid economic growth, and India is attracting significant attention as a potential destination for manufacturing and FDI. Since 2016 Indian exports to the US have increased by 45% with consumer electronics and semiconductors rising by 750% and 1150% respectively.[50] The US is India's largest bilateral trading partner, and improving US ties could pave the way for greater investment.

India is increasingly willing to block Chinese goods and technology—with mixed success, given that India imports over 30% of its intermediate goods from China.[51] India and China have deep trade links but also long-standing border tensions, which increased in 2020 when Chinese and Indian troops clashed violently in the Himalayas, after which India banned select Chinese technology companies and goods. Tariffs on Chinese technology, in the absence of robust domestic alternatives, could raise prices for companies in India that have little choice but to pay import duties. More broadly, India has been historically reluctant to sign trade agreements that might preclude it from protecting domestic industries. The consequence for foreign investors is that India often has weaker access to international markets.

Industrial Policy

India's industrial policy is a complex bundle of foreign investment incentives, infrastructure developments, tariffs, protectionism, and convoluted bureaucratic processes. Manufacturing as a share of Indian GDP has declined from a peak of around 17% in 2016 to less than 13% in 2023 and is potentially still falling—far from the targeted 12%–14% per annum growth rates (Figure 19).[52]

Alongside declining manufacturing is an investment gap that is stifling growth. Headlines around soaring stock markets and rhetoric around economic growth obscure the reality that FDI has not recovered to pre-pandemic levels and continues to slide (Figure 20).

Weak manufacturing and falling FDI are symptoms of India's lack of industrialization. India's vision of itself as a manufacturing hub for exports clashes against the reality that close to 40% of its exports are in services, like IT and tourism, and a further 15% is in agriculture and precious metals.[53]

Figure 19: Indian Manufacturing as a Share of GDP[54]

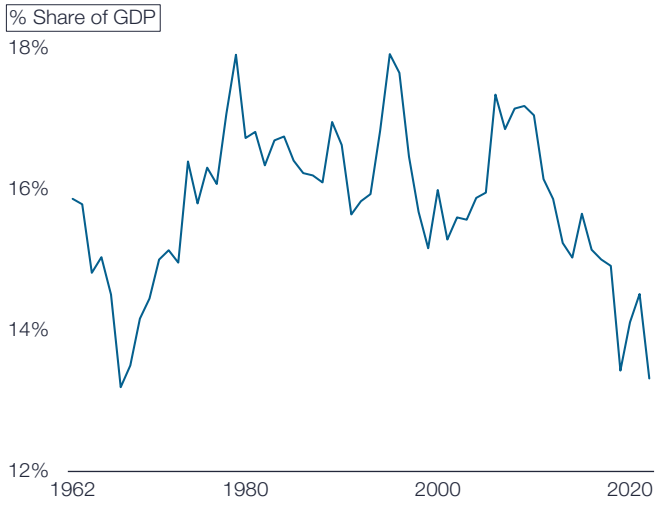
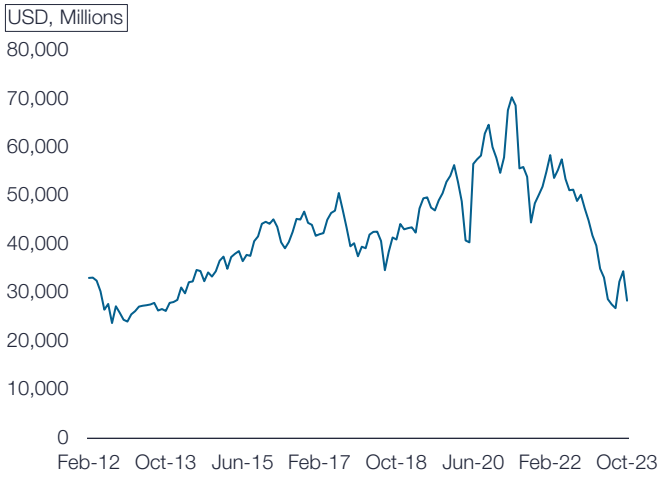


Figure 20: Total Net FDI 12-Month Inflows into India



50 US Census Bureau.

51 The Economic Times, "China's Share in India's Industrial Goods Imports Jump to 30% from 21% in Last 15 Years: GTRI," April 2024.

52 Invest in India, 2024.

53 Center for International Development, Harvard University, 2024.

54 World Bank.

To address this, India is targeting 25 sectors for foreign investment, growth, skill creation, and exports.[55] Many sectors are geared toward enabling the environment for manufacturing, like railways and ports, while others, like mobile phones, are explicitly for export. The government recognizes that India's domestic market, while sizable, cannot sustain high economic growth, given that India's average per capita GDP is less than a quarter of China's.[56]

Over the past five years, the Modi government has liberalized foreign investment restrictions, modernized bankruptcy laws, developed labor market regulations to create greater worker mobility, and implemented a tax overhaul that simplified taxes into the Goods and Services Tax (GST). India has extended incentives to multinationals and is now sunsetting policies that have had mixed impact. FDI screening is an example of streamlining—two categories for FDI, an automatic route and a government route, were developed. Depending on the sector and amount, a foreign investor can inform the Reserve Bank of India (RBI) of their investment, speeding up the process.[57]

India's national economic incentives include tax exemptions of up to 100% for five years and 50% for the following five years for relocation into one of India's Special Economic Zones.[58] The government has earmarked over $28bn in Production Linked Incentives (PLIs), funds across thirteen sectors to attract private capital into manufacturing, like automobiles, chemicals, electronic systems, and pharmaceuticals. Yet PLIs have had limited success; $5bn has been claimed and disbursed since the program was started in 2020, leaving over 80% of funds unclaimed.[59] Companies have complained of confusing processes, but the lack of uptake also suggests manufacturing needs to become more mature to attract foreign investment.[60]

At the same time, India's protectionist regulations insulate specific sectors from competition. The average tariff on imported goods has risen from around 8% in 2014 to more than 18% today.[61] Companies importing goods for production are hit by these tariffs too and will need to evaluate whether building domestic supply chains is more expensive than import tariffs.

A final component of India's industrial policy is improving its slow-moving and complex bureaucracy. Land and planning permission, employment laws, court functionality, and the slow pace of policy, can all result in investment delays—especially when compared to countries with more streamlined processes like Vietnam and Thailand.[62] But an upside of the BJP's underperformance in the 2024 elections, and subsequent coalition government with regional political parties, mean institutions like the RBI and the Securities and Exchange Bureau of India will likely become more critical, and therefore the investment process could become less politicized.

The coalition government likely also means that there will be greater focus on households, potentially leading to tax cuts and greater transfers to farmers. FDI will remain a key focus but with some rebalancing toward more equitable growth and lower income groups. Overall, this may be positive for the Indian economy, addressing deepening wealth inequality and bolstering private consumption to spur growth, which itself may be lagging behind what official numbers suggest.[63]

Inputs

Labor Force and Demographics

India has a young, aspirant population with a median age of 28, suggesting India has some way to run on its demographic dividend. A plurality of India's population still works in agriculture, implying significant economic opportunities as workers shift to higher productivity sectors. India has the second-lowest manufacturing wages of the countries in this analysis, which is a boon as it tries to attract foreign investment. Companies that operate in India will need to invest in upskilling of labor and will have to contend with initially lower productivity than in countries like Thailand and Mexico.

Intermediate Goods

India's supply chains are deeply intertwined with Chinese intermediate goods. Despite elevated tariffs, over 30% of intermediate goods used in Indian manufacturing come from China. Though the government's "Make in India" initiative aims to move away from this China dependence, doing so is a medium-term challenge. There are signs of progress, such as in mobile phones where India has gone from manufacturing 1% of phones consumed domestically in 2010 to 99% today, but there is still dependency even in this sector.[64] Goods that are exported to the US with Chinese component pieces will likely be subjected to higher scrutiny from US customs, complicating operations for multinationals based in India and exporting to US buyers.

55 Make in India, "Sectors."

56 World Bank World Development Indicators, 2024.

57 Invest India, "FDI Policy."

58 PwC, "India: Corporate – Tax Credits and Incentives," May 2024.

59 Business Standard, "PLI Scheme's Progress Slows in Key Sectors, Affecting Manufacturing Goals," February 2024.

60 Fortune India, Joe Mathew, "PLIs Attract ₹ 3 lakh cr Committed Investment in 14 Sectors," January 2024.
Reuters, Shivangi Acharya, "India Reviews Production Incentive Scheme Amid Overhaul Push," August 2023.
Reuters, Shivangi Acharya and Sarita Chaganti Sing, "India Plans Over $2 billion in Incentives for New Manufacturing Sectors," September 2023.

61 The Indian Express, "Express View on India's Tariff Regime: Costs of a Barrier," February 2024.

62 Reuters, "Policy Barriers, Bureaucracy Could Slow Pace of Investment in India – Moody's," May 2023.

63 The Indian Express, Josh Felman and Arvind Subramanian, "Verdict 2024 Economy Puzzle: If Growth Has Been Dynamic, Why Have Voters Punished Government?" June 2024.

64 The Economic Times, "Mobile Phone Manufacturing Jumps 21 times to Rs 4.1 lakh cr in 10 years: ICEA," March 2024.

Environment

Pollution, environmental degradation, and water shortages are critical issues that drag down economic growth; some estimates suggest an impact of negative 0.6 percentage points annually to Indian GDP.[65] Climate change is exacerbating Indian droughts and extreme heat waves in the north over the past few years have contributed to water stress. Research suggests that pollution contributes to over 2mn premature deaths a year in India.[66] India is investing in solutions in partnership with the World Bank, but more drastic intervention is needed. Companies considering operating in India will likely have to assist workers to adapt to increasingly challenging environmental constraints, from investing in air conditioning for factories to sourcing water for manufacturing during droughts.

Energy

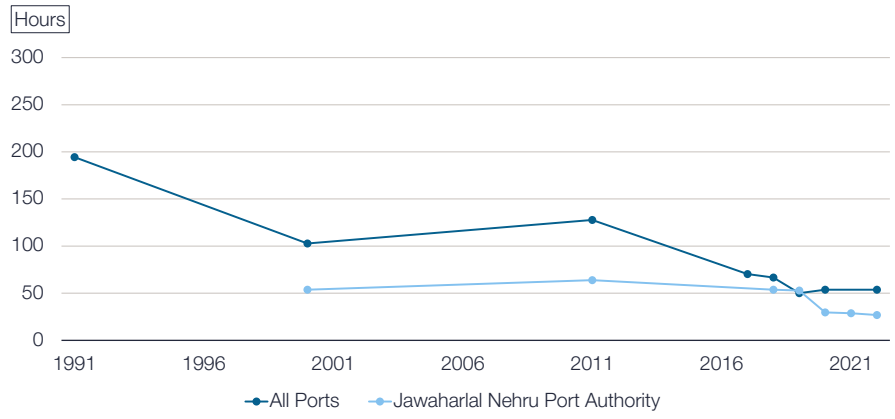
India is the third-largest consumer of energy in the world, behind the US and China, and this demand is growing rapidly as its population expands. A mix of imported fossil fuels and domestic coal makes up close to 70% of India's energy mix, but India is targeting net zero by 2070, including a rapid increase in solar and other renewable energy sources. While India has long relied on Middle Eastern economies for its oil and natural gas needs, it has controversially benefited from Western sanctions on Russia to import discounted Russian oil, prompting criticism from the US and the EU.[67] India does have ambitious green energy plans, but its biggest challenge will be the large-scale deployment of grid-connected renewable energy that can service industrial consumers reliably.

Blackouts are an ongoing issue for households and industries. 16 of 28 Indian states report power outages of between two and ten hours a day, including states like Maharashtra, Gujarat, and Karnataka, all major manufacturing hubs.[68] Summer outages are becoming a feature of the Indian power landscape, compounded by the need to transport coal during outages to augment electricity generation. Slower freight rail networks, however, have been unable to transport sufficient coal to meet this spiking demand during heat waves.

Infrastructure

India's infrastructure is a key barrier to the development of a globalized, export-oriented economy. While major road and railway improvements have occurred, and grid connectivity is theoretically 100%, effective transport and access to energy can be far more difficult. India's road network has increased by up to 40% since 2013, and the government aims to increase the share of railways in transporting freight from 27% in 2023 to 45% by 2030.[69] But India's transportation network is slower and more expensive than China's, and logistics make up 18%–20% of production costs in India, compared to 8%–10% in China.[70] Official data indicate that India is behind schedule and over cost on more than 800 of the close to 1,800 major infrastructure investment projects currently ongoing. India has, however, cut down the average turnaround time at its ports by 75% in the last two decades, making India's ports internationally competitive for trade, and it will hope to emulate this in other infrastructure spaces (Figure 21).[71]

Figure 21: India, Average Cargo Ship Turnaround Time[72]



"Logistics make up 18%–20% of production costs in India, compared to 8%–10% in China."

65 World Bank, "Air Pollution Reduces Economic Activity: Evidence from India," June 2023.

66 BBC, "Lancet Study: Pollution Killed 2.3 Million Indians in 2019," May 2022.

67 Reuters, Nidhi Verma, "Cheap Russian Oil Cuts OPEC's Share of India Imports to Record-Low 50%," January 2024.

68 Time, "India Is Braced for Months of Power Outages amid a Blistering Heatwave," May 2022.

69 The Economic Times, "Increasing Rail Freight Is Essential for Advancing Decarbonization," September 2023.

70 The Wall Street Journal, Megha Mandavia, "India's Infrastructure Push Is Key to Taking on China," December 2023. Macquarie, "Evolving Infrastructure Landscape in India," December 2020.

71 The Economist, Nhava Sheva, "India Has Quietly Transformed Its Ports," May 2024.

72 Ibid.

Financial Conditions

The Indian fiscal situation has improved since the pandemic but remains a challenge overall. India's debt to GDP ratio is 83%, compared to 56% in Mexico and 77% in China.[73] The government has earmarked capital for investments, both in terms of subsidies and tax breaks, but its ability to deploy these incentives is less clear. Furthermore, the return to coalition politics, and the attendant need to increase transfers of central government funds to states represented by coalition partners, will put additional pressure on the national government's budget. Tax revenues are gradually increasing since the introduction of a unified tax system, but India has a small tax base, making corporations a key source of tax revenues. The Indian rupee, however, is generally stable because of the RBI's sizable foreign assets at close to $600bn.[74]

The investment process is a long-standing headache for investors, though recent improvements like direct and automatic routing are encouraging. At the same time, the Modi government's sometimes haphazard ways of rolling out new regulations can undermine business confidence. Demonetization in 2016 is the poster child for this, but the August 2023 restriction on the import of laptops—and then its subsequent U-turn months later—is another example of disruptive government intervention.[75]

Local Supply Chain Ecosystem

India's economy has a substantial way to travel before it develops a robust ecosystem for manufacturing. Complicated value-add products total less than 25% of India's exports, and over 40% of Indians are employed in agriculture, often in subsistence farming.[76] A large portion of Indian exports are in services, while manufacturing lags well behind. The consequence is that India does not have an especially complex export basket, but there are signs that this is gradually changing. From 2016 to 2021, 40% of new Indian exports were in machinery, suggesting that the recent manufacturing drive is gradually increasing complex exports.[77] India's mix of protectionism combined with its largely agrarian economy means that there is major room for growth to create more sophisticated, interdependent supply chain ecosystems.

Sector Outlook—Consumer Electronics and Mobile Phones

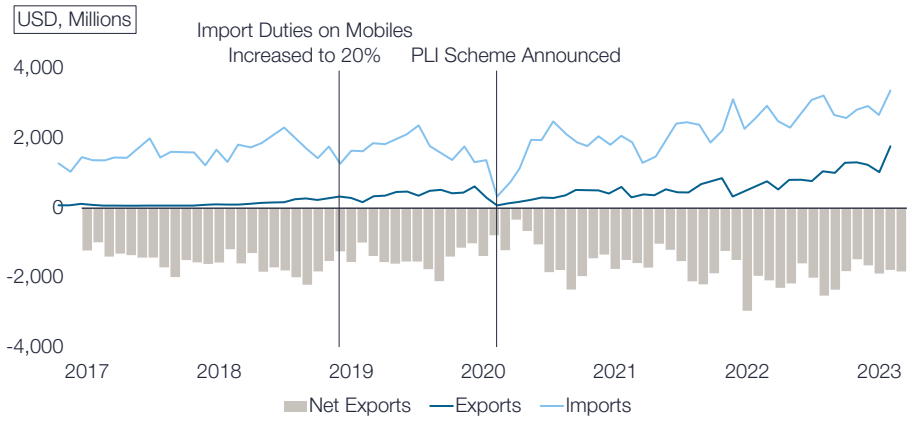
The growth of India's consumer electronics manufacturing—particularly of mobile phones—is a high-profile example of the perceived shift of supply chains away from China. India has become the second-largest global manufacturer of mobile phones behind China with a compound annual growth rate of 23% between 2014 and 2022.[78] Exports of electronics have quadrupled since 2018 to $24bn in 2023.[79] India has also pivoted away from importing phones for its own market, going from close to 98% imported in 2013 to 99% assembled within the country in 2023.[80] Tamil Nadu has been the epicenter of this success with headlines around Apple and Foxconn manufacturing hubs established there.

But headlines about mobile phone exports are complicated by the sector's continued reliance on Chinese intermediate goods. In fact, while Indian exports have increased, imports of Chinese-made components, like semiconductors and displays, have increased too, so the sector remains a net importer (Figure 22). In other words, the Indian electronics sector has not built the independent supply chains that "Make in India" aims to, and India may therefore find itself caught in increased US scrutiny of component parts.[81]

SUMMARY

India has many important strengths as a manufacturing destination. Competitive wages with a large, young population, effective and ongoing infrastructure investments, an increasingly export-oriented industrial policy, and improving geopolitical trajectory point to an economy with major potential. Yet companies will need to navigate India's political uncertainty, bureaucratic challenges, stresses due to climate change and environmental issues, and its still relatively weak manufacturing sector.

Figure 22: Net Exports of Final Mobile Phones, Semiconductors, PCBAs, Display Modules[82]



73 World Bank, World Development Indicators.

74 Reserve Bank of India Weekly Statistics Supplement, July 5, 2024.

75 Reuters, "India Allows Restriction-Free Imports of Laptops, Tablets in Policy Dilution," October 2023.

76 Center for International Development, Harvard University, 2024.

77 Ibid.

78 The Times of India, "2 billion and Counting: The Number of Phones 'Made in India'," August 2023.

79 Center for International Development, Harvard University, 2024.

80 The Economic Times, "99.2% of Mobiles 'Made in India'," November 2023.

81 The Wire, "Has India Really Become a Mobile Phone Manufacturing Giant?" June 2023.

82 The Wire, "Has India Really Become a Mobile Phone Manufacturing Giant?" June 2023.

Vietnam Supply Chain Analysis

Introduction

Vietnam's economic transformation began with Doi Moi, or "Renovation," in 1986, which put Vietnam on the path from an inefficient, centrally planned economy toward a "socialist-oriented market economy."[83] Vietnam has been a major beneficiary of globalization and, more recently, US-China tensions. Vietnam's GDP has grown at an average of 5%–6% per year over the past two decades, and its exports have grown 10%–15% per year in that time.[84] Yet Hanoi has several challenges to overcome as it seeks to attract greater foreign investment. Companies building operations in Vietnam must navigate poor infrastructure, a shortage of skilled labor, and an ongoing political crisis.

Geopolitics

Vietnam has long been known for its diplomatic dexterity borne of necessity—Vietnam exports to the US, imports from China, and seeks Japanese investment to boost its own infrastructure. Vietnam has drawn closer to the United States and sees it as an economic and security partner to balance China's influence. Despite trade links, there is deep skepticism of China in Vietnam that manifests periodically—for instance, the anti-China riot in 2014 in response to China constructing an oil rig in the South China Sea. The disruptions spread well beyond Chinese firms—of the 351 factories damaged in Binh Duong province during the 2014 riots, only 14 were Chinese owned.[85] Vietnam was also caught up in US solar production tariffs after the Biden administration ended exemptions of Vietnamese solar imports as it sought to target Chinese trans-shipments in May 2024. Companies in Vietnam exporting to the US will face rising inspections and scrutiny of imports.

Vietnam has trade agreements with 17 countries and economic blocs, including its membership in ASEAN, along with the Regional Comprehensive Economic Partnership (RCEP), the Indo-Pacific Economic Framework for Prosperity (IPEF), and the Comprehensive and Progressive Agreement for Trans Pacific Partnership (CPTPP).[86] Access to markets and trade routes is a major value proposition for foreign investors, and research suggests Vietnam stands to gain the most from RCEP of all member nations, given how much of its GDP comes from exports.[87]

Vietnam prides itself on its economic and political stability. The Communist Party of Vietnam has ruled since independence, and it has achieved high rates of economic growth. Yet multiple corruption scandals over the last few years have rocked this stability, leading to the resignation of two presidents, and the recent death of General Secretary Nguyen Phu Trong and rapid elevation of To Lam further compounds this uncertainty.[88] Vietnam has, in some ways, succeeded despite its perceived challenges with corruption, but the political instability that is partly driven by corruption is a new phenomenon that companies may find increasingly difficult to navigate.

Industrial Policy

Doi Moi grew exports and raised Vietnamese international competitiveness by lowering unhelpful trade barriers, promoting FDI, and encouraging the development of a robust private sector. Vietnam aims to become a high-income country by 2045 and its latest Five-Year Plan, 2021-2025, has goals including greater domestic production of energy, achieving net zero by 2050, improving the quality and reach of Vietnam's infrastructure, addressing ongoing legal and regulatory challenges, increasing FDI, and continuing a pivot to more complex, value-added manufacturing.

Today, manufacturing contributes over 20% of the country's GDP, while exports of goods and services as a percentage of GDP were a staggering 93% in 2023.[89] Leading this were exports in electronics, textiles, and machinery. But FDI has remained relatively flat as a percentage of GDP since the late 1990s, a symptom of Vietnam's low productivity challenge, which means that overall, Vietnam has grown its manufacturing exports but not increased value-add in manufacturing (Figure 23). In other words, in aggregate Vietnamese firms are producing more, but not becoming more efficient at doing so. At a sector level, there are exceptions to this trend: 40% of Vietnam's total exports are in electronics, and generally these are complex, value-added goods. But 60% of Vietnam's exports are in less complicated sectors like textiles and agriculture, and Vietnam has exported a growing number of these lower value-added goods in the last decade. The result is that Vietnam may be gradually trending toward an economy suited to low-complexity goods instead of advanced manufacturing.

83 US Embassy of the Socialist Republic of Vietnam.

84 World Bank.

85 South China Morning Post, "Just 14 Factories Targeted in Vietnam's Anti-China Protests Belonged to Mainland Chinese," May 2014.

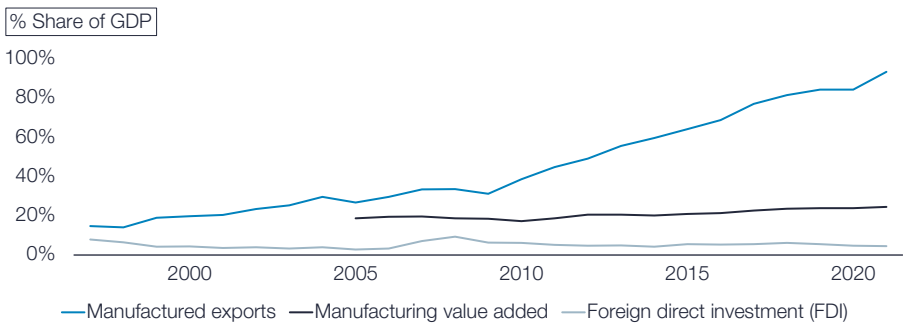
86 Vietnam Briefing, "Vietnam's Economy to Benefit Most from RCEP: World Bank," April 2022.

87 World Bank, "Vietnam's Accession to the Regional Comprehensive Economic Partnership: A Legal and Economic Assessment (English)," 2022.

88 The Washington Post, "What the death of leader Nguyen Phu Trong means for Vietnam," July 2024.

89 World Bank.

Figure 23: Manufactured Exports, Manufacturing Value Added, and Foreign Direct Investment (FDI) in Vietnam as a Share of GDP from 1997–2021[90]



To address this value-add issue and Vietnam's flat FDI as a percentage of GDP, Hanoi has been improving investors' ease of moving capital into Vietnam. The past five years have seen several new laws and resolutions passed to improve the process of foreign investment and ownership. Resolution 55, issued by the Politburo in 2019, aims to catalyze an additional $30bn in FDI by 2030 through improving the investment climate via enhancing domestic institutions, better labor policies, and reducing favoritism toward state-owned enterprises (SOEs).[91] But foreign investors have found additional challenges in government approval for investments, and investors cite regulatory confusion as a barrier to investment.[92] Vietnam lifted foreign ownership limits in early 2024, which expanded the scope of investable assets.[93]

SOEs complicate the activities of foreign investors. The government has attempted to follow the example of countries like South Korea to unify SOEs and streamline their operations, but has been largely unsuccessful. An estimated 2,000 SOEs benefit from preferential treatment across access to capital, land, and priority regulatory approval. Vietnamese SOEs have extensive liabilities, making it difficult for the Vietnamese state to wean off them.[94] Foreign investors will need to learn to coexist with SOEs—as no mass privatization is on the horizon—and develop relations with key state authorities to improve the ease of moving capital.

Inputs

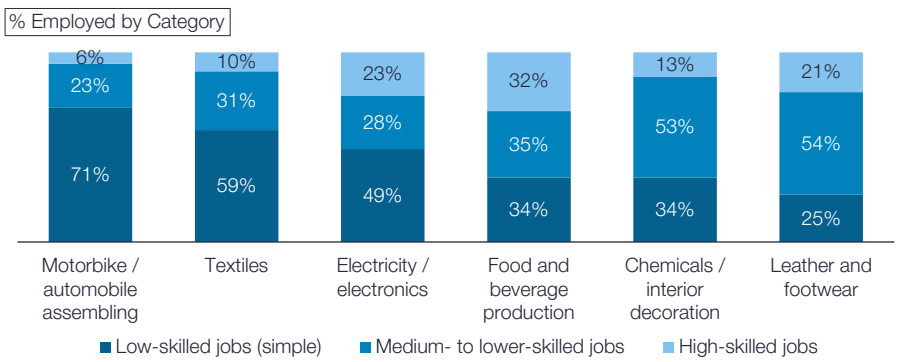
Labor Force and Demographics

Vietnam's population is relatively young with a median age of 31, and 70% of its population, 76 million people, are working age. Employment in manufacturing and industry has significant upside with only 20% employed in manufacturing. But Vietnam's major labor market challenge is relatively low labor productivity. Only 9% of Vietnam's workforce is regarded as high skilled.[95] This is reflected in the fact that job availability is concentrated in low- and medium-skilled jobs—even within more advanced sectors like electronics (Figure 24). The government is investing to upskill its labor force to achieve 30% high-skilled labor by the end of 2025—a tall order. Surveys find that only a third of investors are satisfied with the availability and quality of Vietnam's labor pool.[96] Companies will find cheap labor in Vietnam but will likely need to establish upskilling programs to reach competitive productivity.

Intermediate Goods

A critical supply chain bottleneck for Vietnam, and perhaps its biggest geopolitical vulnerability, is its reliance on China for raw materials and intermediate goods. The downsides of Vietnam's large trade deficit with China—37% of Vietnam's imports come from China—were clear during China's zero COVID period, when Chinese policies created major congestion at borders, slowing Vietnamese production.[98] Sectors like textiles were further exposed when the US passed the Uyghur Forced Labor Prevention Act, which prohibited the export of cotton sourced from Xinjiang in China to the US. In 2023, Vietnam was the top exporter to the US of products covered by this act, ahead of China.[99] US solar tariffs in May 2024 underscored how Vietnam

Figure 24: Structure of Labor in Foreign Direct Investment (FDI) Manufacturing and Processing Businesses in Vietnam, 2021[97]



90 UN Comtrade, UNDP Vietnam, McKinsey & Company.

91 US Department of State.

92 Ibid.

93 Vietnam Acclime, "Significant Updates Lift Foreign Investment Restrictions in Vietnam Under CPTPP from 14 January 2024," March 2024.

94 ADB SOE Reform in Vietnam, January 2020.

95 World Bank, Yang Judy, "Connecting Vietnam's youth to high-skilled jobs: What does it take?" August 2022.

96 Brunswick Review, "Vietnam's Place in the Global Supply Chain," 2023.

97 ILOSTAtT Data, McKinsey & Company, Vietnam Institute of Labour and Social Affairs, ManpowerGroup Vietnam, US Department of State.

98 Al Jazeera, "Vietnam blames China's 'zero COVID' policies for disrupting trade," 2022.

99 VOA, "Vietnam Overtakes China as Largest Exporter of Goods Made With Uyghur Forced Labor," January 2024.

has emerged as a destination for Chinese firms circumventing tariffs by basing a portion of manufacturing within Vietnam. Chinese imports, which served Vietnam well in the 2000s with low cost inputs, are now becoming a liability.[100] Foreign investors will need to develop processes to meet US customs requirements.

Land

All property in Vietnam belongs to the state, and neither foreigners nor Vietnamese citizens can purchase land. The state does issue rental licenses, and offers favorable terms for investors, especially in industrial zones, where land can be leased for up to 70 years.[101] Yet Vietnamese laws are unclear about how the state can use eminent domain to seize property. Foreign investors have largely been spared from land seizures, which have mostly been directed at Vietnamese households. But as manufacturing grows, investors may be exposed to protests and disruptions around land appropriations.

Infrastructure

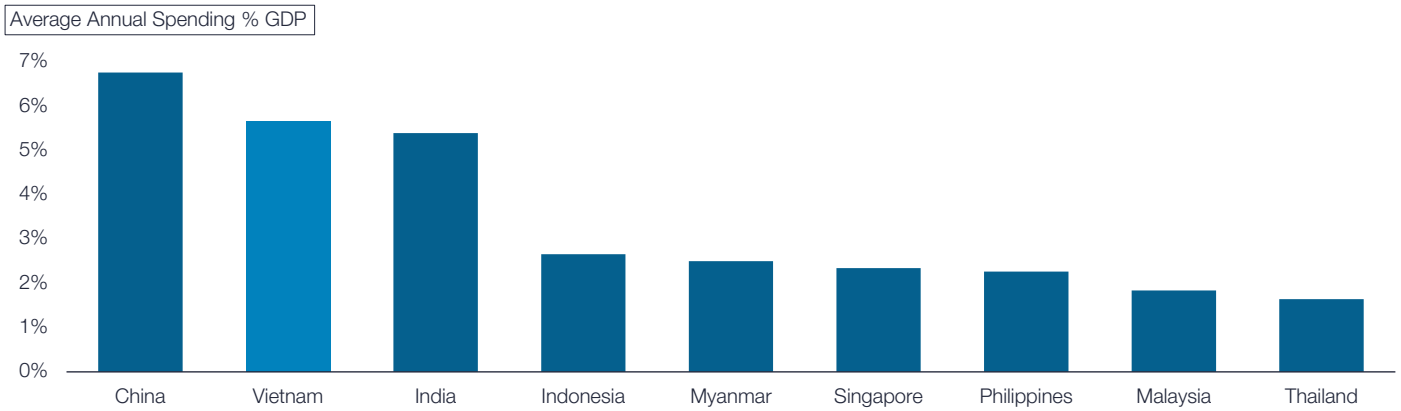
Vietnam has the second-highest infrastructure investment levels as a percentage of GDP in Asia, behind China, and aims to have the infrastructure of an advanced economy by 2045 (Figure 25). Yet despite its high spending, the quality of infrastructure lags significantly behind the region.[102] Vietnam is highly dependent on roads, with 94% of passenger traffic and 75% of cargo and goods transported on road networks. But poor quality and safety issues mean that the average speed on roads is a mere 50 km per hour, throttling trade.[103] Railways are a crumbling vestige of French Indochina and the Vietnam War; passengers carried on Vietnamese railways have halved in the last thirty years, and Vietnam's diesel trains lag well behind in speeds compared to peers. Waterways make up close to 20% of goods transport and are a critical alternative to rail and road. But waterways suffer from underinvestment, and while the government has earmarked $7bn for their improvement, investments have been delayed.[104]

Vietnam has been cautious in permitting China to expand infrastructure via its Belt and Road Initiative, but Vietnam's slowing access to finance from geographies like Japan and South Korea means that Hanoi is warming to Beijing's investments.[106] One flagship project is a high speed rail linking Hanoi to Lao Cai in Yunnan, China, running through Lai Chau province in Vietnam—including areas with high deposits of rare earth minerals.[107,108] While details on this funding from China are unclear, it follows a common story: countries wishing to enhance their infrastructure often have little choice but to turn to China. Given how far behind Vietnam is compared to other nations, anything that improves infrastructure benefits goods exporters—even as it comes with complications from closer ties to China and Chinese goods.

Financial Conditions

Vietnam's fiscal situation is relatively encouraging with a deficit of close to 4% of GDP and public debt at 37% of GDP.[109] While Vietnam does not have major fiscal expansion capacity, drastic tax increases are also not needed.

Figure 25: Infrastructure Spending in Select Asia Pacific Nations[105]



100 Vietnam Briefing, "Vietnam Hit by Raw Material Shortages Disrupting Supply Chains: 7 Industries to Watch," July 2022.
101 US Department of State.
102 Vietnam Briefing, Cecilia Pham, "Why Vietnam's Infrastructure Is Crucial for Economic Growth," September 2022.
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104 Open Development Vietnam, 2022.
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106 South China Morning Post, Hoang Thi Ha, "Vietnam Rethinks Skepticism of China's Belt and Road Initiatives as Laos, Cambodia Reap Benefits," December 2023.
107 CNN, "Vietnam is planning high-speed rail connections with China," April 2024.
108 Reuters, "Inside Vietnam's plans to dent China's rare earths dominance," September 2023.
109 World Bank, World Development Indicators, 2023.

Vietnam's export dependence means it is highly sensitive to Chinese and global downturns. In taking actions to attempt to insulate the currency against this sensitivity, Vietnam was controversially labeled a currency manipulator by the US Treasury in 2020 and has now moved onto the Treasury Department's "monitoring list," given its currency's persistent weakness.[110] Vietnam's central bank is not independent, but the government and the central bank have been in tension because the government has felt credit growth was not rapid enough, suggesting a higher level of operational independence than it might appear.

Corruption is a core political and investment problem in Vietnam, and several recent high-profile incidents highlight this challenge. These include the resignation of President Nguyen Xuan Phuc in 2023, and then the resignation of President Vo Van Thuong, both suspected to be because of corruption, as well as the death sentence of property magnate Truong My Lan, who embezzled $12bn from Saigon Commercial Bank, which was compounded by the disclosure that a central bank official received a bribe from Lan.[111] The potential execution of Lan is an attempt by the government to demonstrate its commitment to cracking down. The government has also created multiple agencies to deal with corruption, but the causes of corruption run deep: low pay for public officials, and weak institutions to hold officials to account means that corruption ranging from paying for access to outright theft is not uncommon.[112]

Local Supply Chain Ecosystem

Vietnam's export basket is a story of contradictions. On the one hand, over 40% of its exports are in electrical goods, an important marker for its future industrial ambitions. Companies like Samsung, Google, and Apple are increasing operations in Vietnam. Yet reliance on Chinese intermediate goods, and the presence of Chinese firms circumventing tariffs, raises questions about Vietnamese manufacturing capacity. Vietnam has the least complex export basket in our analysis, implying corporates may need to invest not just in the upskilling of labor and infrastructure but in the wider development of mature domestic manufacturing chains.[113]

Sector Outlook–Consumer Electronics and Mobile Phones

Vietnam's most promising sector outlook is in mobile phones, which has been gaining attention from multinationals like Samsung and Google. Samsung has been a key manufacturer in Vietnam; as of 2022, it had 28 factories at 11 sites, concentrated mostly in the north because of its port and trade links and because northern Vietnam has a larger pool of skilled labor than the south. Samsung is betting heavily on Vietnam, announcing in May 2024 that it would increase annual spending to $1bn.[114]

But Vietnam's current electronics sector also highlights the country's core weaknesses. 57% of companies have found it difficult to recruit high-skilled labor.[115] Much of Vietnam's value-add in the electronics sector involves final assembly of components from neighboring countries like China, Japan, and South Korea. During the COVID-19 pandemic, 45,000 workers lost jobs in electronics because of supply chain bottlenecks resulting from Chinese lockdowns.[116] Moreover, north Vietnam is one of the regions most impacted by power outages. While Vietnam's mobile phone sector has potential, it also exposes many of the country's risks for investors.[117]

SUMMARY

Vietnam has strong trade links across Asia and globally, an export-oriented growth model, and a young population with competitive wages. But investors have to contend with Vietnam's weak infrastructure, labor skill challenges, and its dependence on Chinese intermediate goods. In addition, its internal political challenges and high-profile corruption issues threaten the stability on which it has built its economic model.

110 Jason Furman, "Branding Vietnam a 'Currency Manipulator' Epitomizes What's Wrong with the Concept," December 2020.

111 The Guardian, "Vietnamese property tycoon sentenced to death in $27bn fraud case," April 2024.

112 US Department of State.

113 US Customs and Border Protection, "Uyghur Forced Labor Prevention Act Statistics," 2024.

114 The Korea Herald, "Samsung doubles down on Vietnam," May 2024.

115 ManPower Group, "Vietnam Employment Outlook Survey," 2022.

116 Vietnam Briefing, "Where Are Samsung's Factories in Vietnam?" February 2023.

117 VN Express, "Big firms labor under skilled worker shortage," August 2022.

Mexico Supply Chain Analysis

Introduction

Mexico has ridden a nearshoring boom—with steady growth, a diverse basket of exports, and expanded manufacturing in industries like automotives and electronics. However, the country faces critical challenges, such as the rise of economic nationalism, shortages of skilled labor, water and energy scarcity, corruption and violence, and political uncertainty around the reform agenda of newly elected President Claudia Sheinbaum. Companies operating in Mexico can take advantage of its geopolitical and economic ties to the US but will have to make investments to overcome Mexico's operational problems.

Geopolitics

The United States and Mexico are bound together, economically, politically, and culturally, regardless of who sits in the White House or Palacio Nacional. Accordingly, a significant shift in the bilateral relationship between the United States and Mexico is unlikely. The US, Mexico, and Canada Agreement (USMCA), and the North American Free Trade Agreement (NAFTA) before it, have been foundational to the creation of a North American economy and the growth of the Mexican auto industry in particular. Enhanced economic relations with the United States are a priority for Sheinbaum and will encourage firms looking at Mexico to export into the US, with recent examples including Tesla, Foxconn, Samsung, and Pegatron.

In 2023, Mexico surpassed China as the leading source of goods imported into the US for the first time in over two decades, while Mexican imports of Chinese goods also grew (Figure 26). As it seeks to grow its share of global manufacturing, Mexico is becoming more open to anti-China trade policies. It recently imposed tariffs ranging from 5%–25% on a total of 392 imports—such as steel, textiles, footwear, transport machinery, and furniture—from countries with which it does not have free-trade agreements, with China the clear target.[118] At the same time, China recently became the second-largest source of FDI into Mexico, behind the US, and China's presence in Mexico is likely to grow (Figure 27).[119]

The Biden administration has become increasingly concerned about China using Mexico as a base for exports and—regardless of who occupies the White House in 2025—Washington will likely deploy tools within the USMCA to scrutinize or restrict Mexican imports made by Chinese companies.

Industrial Policy

Unlike other would-be manufacturing hubs, Mexico does not have a clearly stated set of industrial objectives. When President López Obrador took office in 2018, his plans were vague, focusing on a mix of eradicating corruption, raising growth targets, and improving infrastructure in key regions. Since then, López Obrador and his successor, Sheinbaum, have championed more state intervention focusing on state-run entities such as the utility Comision Federal de Electricidad (CFE) and oil and gas Petroleos Mexicanos (PEMEX). Consistent energy availability is becoming a binding constraint for companies expanding operations, especially in the north. Sheinbaum has pledged an additional $13bn

Figure 26: Mexico's Exports to the US and Imports from China[120]

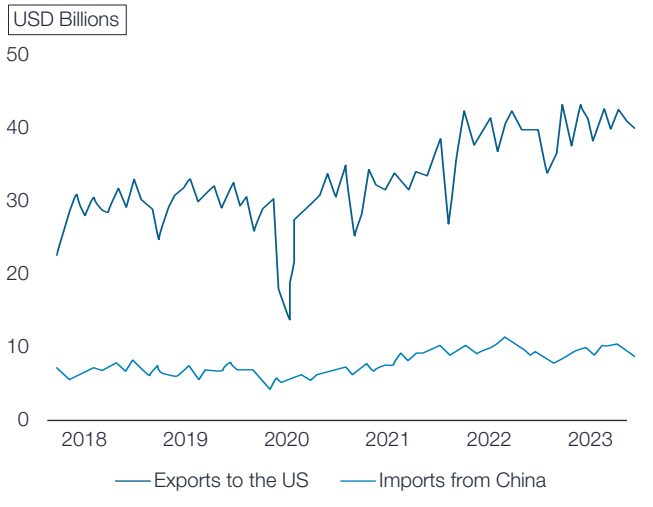
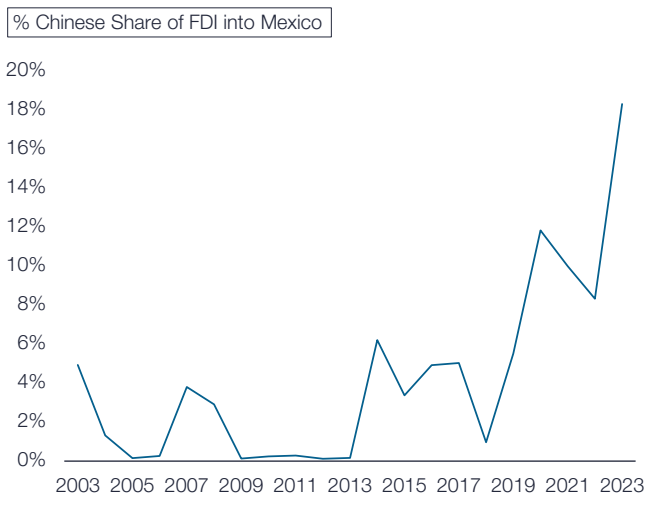


Figure 27: Chinese FDI as a Share of Total into Mexico[121]



118 White & Case, "Mexico Imposes Temporary Import Duties up to 25% on More than 588 non-FTA Tariff Items," August 2023.

119 Secretaría de Economía del Gobierno de México, January 2024.

120 Mexico's Instituto Nacional de Estadística y Geografía (INEGI).

121 The Bank of Mexico.

in funding for renewable energy to address this challenge.[122] While López Obrador was more committed to resource nationalism, Sheinbaum is likely to be more pragmatic and appears open to private sector expansion in the energy sector, which is positive for companies seeking to grow their Mexican operations.

Incentives for production are a bright spot, and companies can take advantage of packages from both the US and Mexico to onshore manufacturing to North America. These include tax benefits for capex and training of local talent in export-oriented sectors like semiconductors, motor vehicles, and electronics, as well as investment and market access incentives under the US Inflation Reduction Act. Beyond incentives, Sheinbaum is targeting the construction of 100 new industrial parks, in addition to the 425 already operating.[123]

Tax increases to fund these incentives in the short run seem unlikely; instead, Sheinbaum wants to improve the efficiency of tax collection. But with pensions set to take up 22% of the budget in FY 2024, at some point broader fiscal reform during Sheinbaum's tenure is likely as Mexico faces a fiscal deficit of over 5%.[124]

Inputs

Labor Force and Demographics

Mexico has high costs of production, largely because of inefficiencies in inputs and procurement. Although the average factory workers in Mexico and China make, respectively, ~$6,900 and ~$13,000 annually, some have estimated the overall cost of production in Mexico to be 30%–40% higher than in China.[125,126] Difficulties operating in Mexico—such as the limited availability of skilled labor, powerful unions, lengthy processes to source raw materials, and a higher likelihood of loss of income for corporates from infrastructure risks—push up costs.[127] Mexico does have favorable demographics with an average worker age of 29, and while labor force skills are improving, there is variability by region and sector.[128] Car manufacturing hubs are located principally in central Mexico, taking advantage of the benefits of a concentration of educational institutions and investments in upskilling. In contrast, northern states, where many firms seek to locate their operations because of proximity to the United States, often have fewer skilled workers. This dynamic, combined with Mexico's requirement that at least 90% of a foreign company's workforce be local, exacerbates labor shortages and drives up costs for firms and investors.[129]

"Although the average factory workers in Mexico and China make, respectively, ~$6,900 and ~$13,000 annually, some have estimated the overall cost of production in Mexico to be 30%–40% higher than in China."

Energy

Both PEMEX's and CFE's finances are strained, and energy is a bottleneck for multinationals in Mexico. PEMEX is the world's most indebted energy company and has faced scandals, which have further strained its balance sheet.[130,131] Consequently, there is limited scope in the short term to expand production and transition to green energy.[132] The Sheinbaum administration aims to raise oil production to 1.8mn barrels per day (mb/d), up from 1.5mb/d, but this output is half of 2005 levels.[133]

Critically, Sheinbaum has signaled that PEMEX will attempt to refinance

122 Reuters, "Mexico presidential frontrunner pledges $13.6 billion for energy investments," April 2024.

123 Bnamericas, "Mexico's Sheinbaum promises 100 industrial parks to boost nearshoring," April 2024.

124 IMF, 2024.

125 Mexico's Instituto Nacional de Estadística y Geografía (INEGI).

126 South China Morning Post, Mia Nulimaimaiti and Ralph Jennings, "China has made Mexico a premier investment destination. Is it a US detour, or something more?" February 2024.

127 Economist Intelligence Unit Infrastructure Risk Index.

128 Consejo Nacional de Población (CONAPO), 2021.

129 Baker McKenzie, "Global Immigration and Mobility Handbook: Mexico," 2024.

130 In 2016, the Brazilian construction conglomerate Odebrecht, pleaded guilty to a major corruption scandal in which the firm paid bribes to countries all over Latin America to gain public contracts. The former CEO of PEMEX, Emilio Lozoya, has been accused of corruption in connection with this scandal.

131 The Economist, "Pemex is the World's Most Indebted Oil Company," October 2023.

132 Reuters, "Mexico's Pemex Bids for More Favorable Financing Rates with Sustainability Plan," March 2024.

133 Bloomberg, Scott Squires, "Mexico's Sheinbaum Wants Debt-Laden Pemex to Go Green," April 2024.

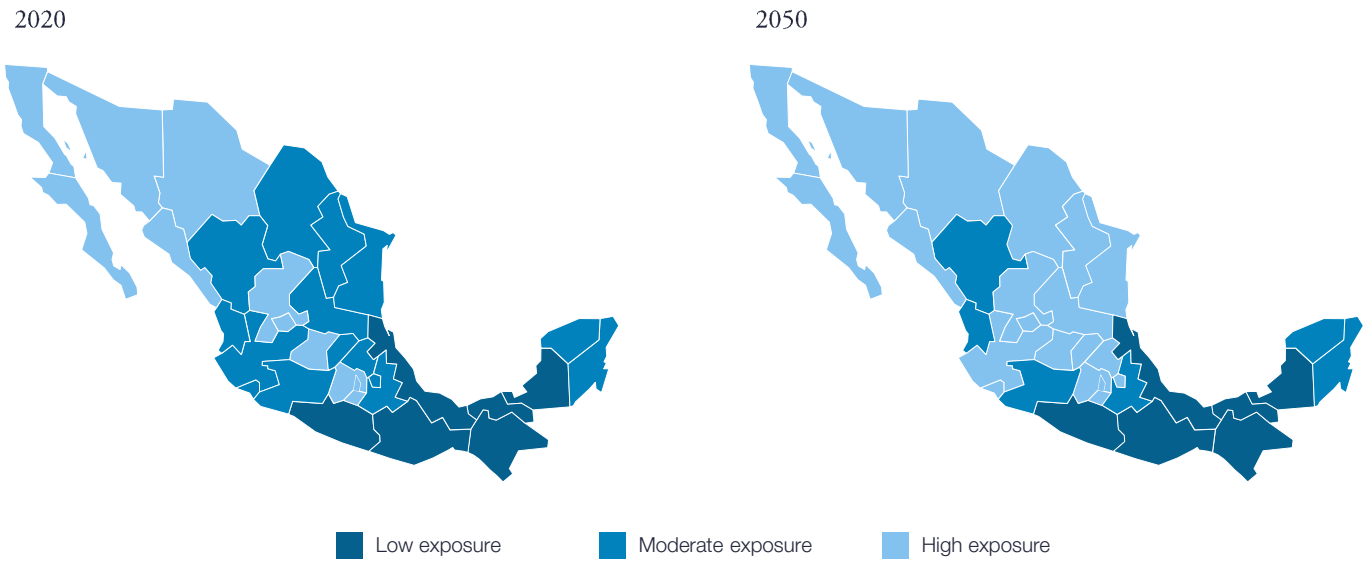
its debt, freeing up cash for further investments.[134] CFE only completed 5% of the transmission projects planned between 2015 and 2022, while various financial and operational challenges for PEMEX resulted in Mexico importing 72% of its domestic gasoline, diesel, natural gas, and jet fuel from the US in 2022.[135,136] Sheinbaum's relative pragmatism could, on the margin increase private sector participation, and though the emphasis will remain on a state-run sector it is encouraging for manufacturing in Mexico.[137] Sheinbaum will likely continue to prefer PEMEX and CFE over private players, while promoting an aggressive shift toward renewable energy. The consequence is that private investments in renewables, particularly those geared toward supporting nearshoring investments, will be more feasible. But limited private investments in oil and gas still create a medium-term challenge in energy for industrial production until Mexico can integrate more renewable energy sources into its energy mix.

Infrastructure

Mexico has an extensive network of highways, ports, rail lines, and border crossing points that are key for exporting to US markets. Two examples of recent infrastructure investments are the Tren Maya line and the Trans-Isthmus Corridor. The Tren Maya line was completed in 2023 and is a 1,500 km intercity railway for tourism and the movement of goods. The Trans-Isthmus Corridor is an ongoing project; it aims to create a network of ports and railways connecting the Pacific Ocean and the Gulf of Mexico. But both projects highlight tensions in operating in Mexico, and the challenges in getting such investments to pay off. Tren Maya was behind schedule, is underutilized, and may end up being used more for tourism than for trade. Both projects have also been criticized for environmental damage and for the treatment of indigenous communities. During construction of Tren Maya, the military was mobilized to oversee development, and it currently operates Tren Maya.[138] Trans-Isthmus is potentially important but could also be underutilized—shipping companies are skeptical the corridor will be useful unless additional manufacturing capacity is added in southern Mexico.[139] Overall, Mexico has effective infrastructure links for trade with the United States, but outside of its industrial hubs, roads and rail are insufficiently developed and the transport of goods is slow. Firms looking to expand outside of central manufacturing zones will find infrastructure a growing challenge.

Water scarcity is another area with significant social and business ramifications. The number of Mexican states exposed to water stress could almost double by 2050, and Mexico City is already grappling with a severe water crisis due to drought and low rainfall.[140] Key industrial regions like Mexico City, Guanajuato, and Chihuahua have seen water-scarcity disruptions (Figure 28).

Figure 28: Water Scarcity in Mexico, 2020 and Projected 2050[141]



134 Ibid.
135 El Economista, Marco A. Mares, "Electric power; investment, economic challenge," January 2024.
136 International Trade Administration, "Mexico - Country Commercial Guide," November 2023.
137 Reuters, Adriana Barrera, "Mexican Regulator Sets Terms to Finalize State Purchase of Iberdrola Plants," February 2024.
138 The Guardian, Louise Morris, "A Megaproject of Death: Fury as Maya Train Nears Completion in Mexico," May 2023.
139 Financial Times, Christine Murray and Oliver Telling, "Mexico Revives Century-Old Railway in $2.8bn Bid to Rival Panama Canal," October 2023.
140 S&P Global, "More Mexican states could face water stress by 2050," April 2023.
141 Ibid.

The López Obrador administration often sided with local groups over water disputes, ordering the cancellation of projects, and forcing firms to shut down or relocate. For example, in 2020, beer producer Constellation Brands was forced to halt the construction of a brewery due to water concerns raised by the nearby community, despite having already invested $900mn.[142] Similarly, in 2023, López Obrador briefly threatened to deny land permits for Tesla's $15bn Gigafactory in Nuevo León due to water concerns. While the parties did reach an agreement, the factory is now on hold until after the 2024 US elections, due to concerns that President Trump may place tariffs on vehicles made in Mexico if he wins the presidency.[143, 144] Sheinbaum is targeting ambitious water supply reforms to help ease this constraint and reduce disruptions. While Sheinbaum's reforms would strengthen state control, a new framework would likely help water access for industries and local communities.[145]

Financial Conditions

Mexico has reaped the benefits of a largely stable macroeconomic environment after the peso crisis of 1994–1995, which prompted structural reforms. Economic growth has been steady, averaging 2.5% per year since the 1990s. The central bank moved quickly when faced with post-pandemic inflation and is independent and effective. While Mexico's fiscal deficit is not severe, it has been rising and will likely hit 5% in 2025. Sheinbaum has signaled plans for limited tax increases, including on the financial sector and on corporate windfall profits. Geographically, FDI has flowed into central and northern parts of the country, taking advantage of Mexico's well-established manufacturing zones (Figure 29).

While Mexico has a relatively liberalized foreign investment environment, FDI is increasingly subject to regulatory changes and policy reversals given the nationalization of some industries, and there are some restrictions on investments in border and coastal areas in the energy and telecom sectors. Mexico lacks a robust investment screening mechanism, but there are plans to create a body in collaboration with the US Treasury Department akin to the Committee on Foreign Investment in the United States (CFIUS). When eventually implemented, it could become a tool for the Mexican government to pressure Mexican firms and MNCs to move away from Chinese investments and intermediate goods. A joint review of the USMCA is due in 2026 and may result in enhanced tools to clamp down on Chinese firms operating in Mexico to circumvent tariffs.

Local Supply Chain Ecosystem

Today, Mexico has a diversified manufacturing sector, with a complex basket of exports. Close to 60% of Mexico's exports are in vehicles and machinery, which are critical to an export-based strategy in value-added goods. Collectively, cars, trucks, and automotive components contribute nearly 20% of manufacturing GDP.[147,148]

Mexico has recently become the second-largest exporter of computers globally, behind China, accounting for 7% of

Figure 29: Most Foreign Direct Investment in Mexico is Concentrated in Border States and Mexico City[146]

142 WSJ, Santiago Perez, "Mexican City's Residents Reject Constellation Brewery in Referendum," March 2020.

143 Reuters, Kylie Madry, "Mexico Gives Tesla Land-Use Permits for Gigafactory, Says State Government," December 2023.

144 Automotive Logistics, "Tesla Pauses Mexico Gigafactory Until After US Election," July 2024.

145 Reuters, Adriana Barrera and Cassandra Garrison, "Mexico Front-Runner Sheinbaum Aims to Reform Water-Heavy Agriculture Sector," May 2024.

146 Secretaría de Economía del Gobierno de México, 2023.

147 International Trade Administration, "Mexico - Country Commercial Guide — Automotive Industry," November 2023.

148 Centre d'Etudes Prospectives et d'Informations Internationales, BACI international trade database, 2022. Observatory of Economic Complexity, "Computers."

the country's exports or ~$39bn in 2022.[149] Several Taiwanese companies, including Foxconn and Inventec, have expanded their operations in Mexico to better cater to North American demand for computers, smart devices, and related components.

Sector Outlook – Automotives

Mexico's automotive sector has emerged as a competitive option for exports. The sector's success stems from trade integration with the United States, inexpensive labor, adequate infrastructure, and an existing supply chain ecosystem. Facilities are in central Mexico and northern Mexico because of effective trade and infrastructure links with the United States (Figure 30). As one of the top-five global exporters of vehicles and auto parts, Mexico already hosts several American, Japanese, and European OEMs with a long-standing presence in the country, reducing time, cost, and complexity for new entrants looking to access the market.[150]

The role of USMCA in the construction of a Mexican auto sector has been vital, and healthy autos and electronics exports mean Mexico has the potential to jump to higher value-added goods. For companies to benefit from Mexico's advantages, though, they need to navigate its constraints, like labor and infrastructure, and work through an increasingly stringent import regime from the United States.

SUMMARY

Mexico's geopolitical ties to the US create strong trade links, and it has benefited from nearshoring investments. While there is political and policy uncertainty, structural forces mean Mexico is likely to be a critical investment destination in the years ahead. Mexico's auto industry is improving, and is becoming a more important player in global value chains. Mexico has labor force challenges, while its water and energy shortages are additional bottlenecks for firms. Firms evaluating Mexico will also need to carefully consider the trajectory of policy reforms under President Sheinbaum and monitor trade dynamics between Washington and Mexico City.

Figure 30: Automotive OEM Assembly Plants in Mexico[151]

149 Ibid.

150 International Trade Administration, "Mexico - Country Commercial Guide — Automotive Industry," November 2023.

151 Tetakawi, "Which Car Brands Are Made in Mexico?" June 2022.

Poland Supply Chain Analysis

Introduction

Poland brings clear strengths for companies seeking to access the EU market. It is the EU's sixth-largest economy, and is a major conduit between Eastern and Western Europe. Poland has an impressive growth trajectory, a diverse basket of exports, and is growing manufacturing in advanced industries like electric vehicles and batteries. Yet Poland's outlook is complicated, both because of Russia's invasion of Ukraine and because of its domestic political volatility. Prime Minister Donald Tusk's return to power is encouraging, but he is now tasked with mending foreign relationships, repairing damaged institutions, and building a competitive manufacturing base after the disruptions of his populist predecessor Jaroslaw Kaczynski. Poland's geopolitical advantage is that it has historically strong links with export destinations, but certain key weaknesses mean it is a more complex destination than it might appear.

Geopolitics

Tusk's election in 2023 has been touted as a turning point for Poland and for its relationship with the EU and NATO. Poland is well positioned as a leader in advanced manufacturing exports, and as Tusk aims to further globalize Poland's economy, he will also oversee a return to strong relations with the EU.

Yet such optimism should be tempered. Tusk, an EU insider, will struggle to transform Poland quickly because of Poland's longer-standing institutional problems, his Civic Platform party's slim majority in parliament, and the need to make major defense investments in the face of Russia's invasion of Ukraine. The far-right Law and Justice Party (PiS) that governed from 2015 to 2023 had a more populist style that clashed with Brussels' priorities. Relations reached a nadir in 2022, when the EU blocked up to $150bn in funding, which was only released in February 2024. This funding is a mix of EU COVID recovery funds and cohesion funds for investment in green energy and industrial development. Eventually, Poland will also benefit from Ukraine reconstruction efforts that are expected to flow via Poland into Ukraine—though a resolution to the conflict is not likely in the short term[152] and though the spillover of the Ukraine war into Poland is highly unlikely, an increasingly assertive Russia presents a long-term security risk to Poland—particularly if the conflict in Ukraine ends on favorable terms for Russia.

Because of Poland's strong ties with Europe and the United States, Poland offers investors easy market access via streamlined investment processes. The US is Poland's largest non-EU FDI partner, and tax treaties make American investments in Poland more straightforward than in other geographies in this analysis.[153]

Poland has also strengthened its relationship with China, even as China's overall relationship to the EU worsens. Poland has awarded key infrastructure construction contracts to China's Stecol, agreed to a deal with Huawei to build 5G networks, and endorsed China's Belt and Road Initiative throughout Eastern Europe.[154] Yet actual Chinese investment in Poland lags far behind those made by the United States and EU, and Western capitals are more likely to influence Warsaw. The EU's tariffs on Chinese products like electric vehicles could benefit Polish industries as alternative locations for manufacturing, including through greater Chinese investment from firms seeking to avoid US and European tariffs on Chinese goods. But in turn, this would require firms to be more cautious about supply chains within Poland, to ensure compliance with US and EU production requirements.

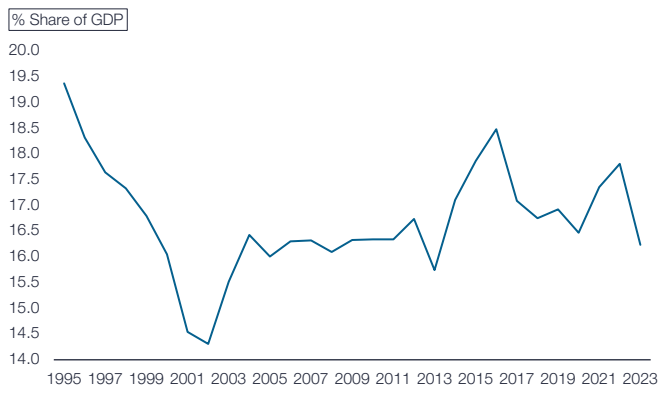
Industrial Policy

Unlocking EU funding was an important step toward realizing Poland's economic agenda, "Industry 4.0." This aims to leverage Poland's diverse economy, with a renewed focus on manufacturing and technologies. Introduced in 2019, these manufacturing-centric policies target eight industries for greater investment and expansion, alongside the pursuit of energy independence and net zero emissions by 2050.[155] Polish value-added manufacturing, however, has been relatively flat since the early 2000s (Figure 31).

Poland has 14 SEZs for these industries and foreign investors are offered tax incentives via the Polish Investment and Trade Agency.[156] Exemptions include a corporate income tax break of up to 50% of investments and SEZs come equipped with infrastructure for manufacturing and trade.[157]

Under PiS, Poland did reform its tax system to be more streamlined. But the "Polish Deal," as this tax overhaul came

Figure 31: Poland Manufacturing, Value Added as a Share of GDP[158]



152 NPR, Rob Schmitz, "EU Refuses to Give Poland Money After Changes Limiting the Judiciary's Independence," November 2022.
European Commission, "Poland's Efforts to Restore Rule of Law Pave the Way for Accessing up to €137 billion in EU Funds," February 2024.

153 US Department of State, 2024.

154 China Daily, "China Ready to Push Ties with Poland to Higher Level: Xi," June 2024.

155 International Trade Administration, "Poland Advanced Manufacturing," 2024. Sectors include Aviation, automotive parts manufacturing, ship building, defense, food processing, chemicals, IT, and furniture manufacturing.

156 Polish Investment & Trade Agency, "Polish Investment Zone."

157 CTP, "7 Reasons to Invest in Poland."

158 World Bank, "Manufacturing, Value Added (% of GDP) – Poland."

to be known, created procedural uncertainty for individuals and corporations. While the current government does want to change this system, doing so will be slow, given their narrow majority in parliament. In the interim, companies will need to navigate a tax system that does not always uphold tax decisions, can seek retroactive payments, and has increased the regulatory obligations of taxpayers, creating inefficiencies for both the government and multinationals.[159]

Poland is also likely benefiting from German economic challenges; German energy-intensive sectors are still yet to recover to activity levels prior to the invasion of Ukraine (Figure 32). By contrast, Poland's pivot to energy self-sufficiency means its energy-intensive sectors have suffered less than Germany's. Companies based in Poland, in other words, have had more stable energy access and pricing.

Beyond investment policies, the government is moving to depoliticize state organs like the judiciary and enhance investor confidence in these institutions. Some of this agenda appears likely to be slowed, or even vetoed, by President Andrzej Duda, the PiS head of state. This obstructionism is a key barrier to any reform agenda in at least the short term. With the next presidential election expected in 2025, substantial parts of the reform agenda may fall by the wayside until then.

Inputs

Labor Force and Demographics

Poland has a highly educated workforce, and while Polish labor productivity has lagged that of other European countries, there are signs it is catching up. However, 72% of Polish employers reported labor shortages as a key problem, and a tight labor market with historically low unemployment and high labor force participation means that the solution to Poland's worker shortages cannot, in the short term, be solved internally.[161] Accepting over one million Ukrainian refugees in the aftermath of the invasion helped, but this one-time shock is insufficient in the longer term. Meanwhile, Tusk has adopted much of the anti-immigration rhetoric of the PiS.[162] The consequence is that labor shortages are likely to impact companies operating in Poland, making expansion more challenging and expensive. These labor shortages compound the fact that Poland already has the labor costs of an advanced economy, which are higher than any other country in this analysis. Labor shortages will likely drive these wages higher, creating further cost pressures for firms.

Energy

The twin crises of the pandemic and the Russian invasion of Ukraine laid bare Poland's strategic vulnerabilities in key supply chains. Poland broke its reliance on Russian energy imports and replaced them with coal, a resource Poland has in abundance. But coal put Poland on the wrong side of the EU's climate objectives, and in 2023, PiS rejected EU carbon goals because of its reliance on coal. Poland is now expanding its renewable energy capacity, and in February 2024, committed to not vetoing EU climate objectives. While close to 40% of Poland's total energy mix and over 60% of Poland's electricity was generated by coal in 2023, the Polish strategy of moving from Russian gas to domestic coal, and onto domestic renewable energy is promising, and its reliance on non-renewables has been structurally declining for decades (Figure 33).[163,164,165] EU funds will help Poland's green energy capacity, and a deal with US-based Westinghouse to build six nuclear reactors by 2050 will further boost its non-coal domestic energy production.

Figure 32: German Production in Energy Intensive Industries and Overall Industry[160]

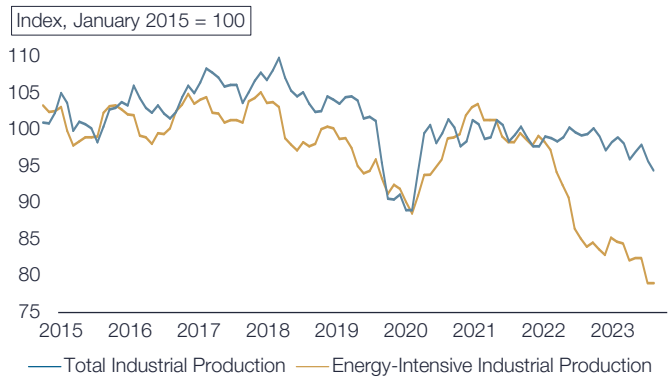
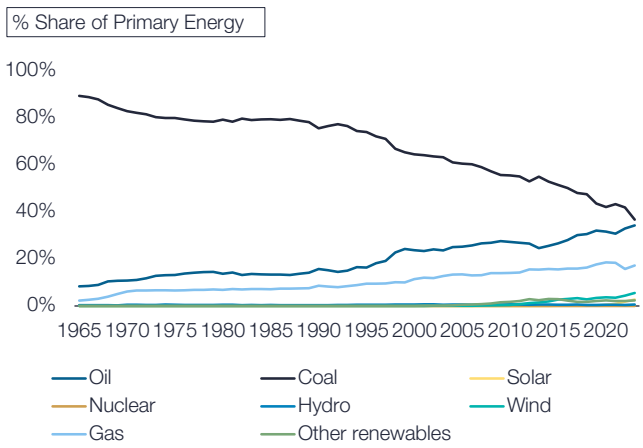


Figure 33: Share of Energy Consumption by Source, Poland[166]



159 US Department of State, "2023 Investment Climate Statements: Poland."
160 German Ministry of Trade, 2024.
161 Polish Ministry of Family, Labour and Social Policy.
162 UnHerd, "Donald Tusk: Mass Migration Is a 'Civilizational Threat,'" February 2024.
163 Energy Institute Statistical Review of World Energy, "Distribution of Electricity Generation in Poland in 2023, by Source," 2024.
164 Reuters, Gavin Macguire, "Poland's Pushback on EU Climate Goals No Surprise, But a Worry," April 2023.
165 Ember Climate, "Changing Course: Poland's Energy in 2023," February 2024.
166 Our World in Data, "Share of Energy Consumption by Source, Poland."

Infrastructure

Poland has high-quality infrastructure, particularly in rail and road networks, and initiatives such as the National Road Construction Program 2014-2023 and the Railway Program 2015-2023, have further improved its quality. Between 2007 and 2022, at least 125 major road transport infrastructure projects were completed in Poland, increasing the length of high-speed roads from 700 km in 2004 to 4,600 km in 2022, with further improvements earmarked from the EU Recovery and Resilience Facility.[167] The creation of logistics networks, including the "Solidarity" Transport Hub and the North-South "via Carpatia" route highlight Poland's ongoing logistics enhancements.[168]

Poland's major infrastructure challenge is the supply of water. Poland struggles with droughts and has one of the worst water scarcity rates in Europe, with a water use intensity roughly double the OECD average.[169] Polish Waters, a state organization, was established in 2018 to manage water resources and develop a strategy to improve water availability in Poland through public campaigns and investments, as well as the construction of 30 new water reservoirs.[170] Industry in Poland consumes 70% of water resources, two-to-three times higher than that of other EU nations, so water scarcity will impact industrial production and increase costs for companies.[171]

Financial Conditions

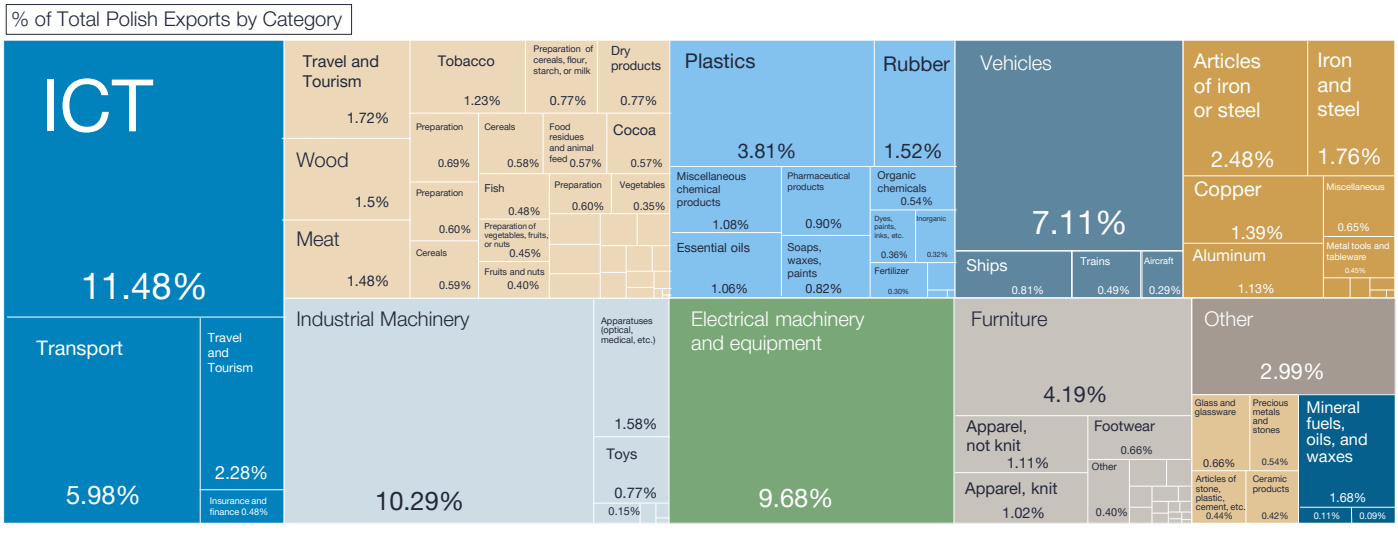
Poland's fiscal deficit is worsening. It is on track to breach EU deficit rules because of inflation spiking due to Russia's invasion of Ukraine, high defense spending for the same reason, and increases in public sector pay and pensions.[172] In January 2024, Poland was placed on the European Commission's excessive deficit watch list under which member states are required to follow plans to reduce their deficit. The Tusk government inherited a fiscal deficit that is likely to increase to close to 6% of GDP in 2024 according to estimates, but the Polish government has argued that it should not be included on the watch list because of its necessary defense spending.[173] Markets do not appear overly concerned, both due to high savings in Poland and because the government has published plans to cut spending in 2025 to address its budget shortfall. Poland's adoption of the euro, however, seems to have taken a back seat. While Tusk is strengthening ties to the EU, ditching the zloty for the euro is not popular in Poland. Generally, the zloty has been relatively stable against the euro, though it has weakened since the invasion of Ukraine.

While Poland is not part of the eurozone, foreign and domestic investors enjoy equal access to Polish financial markets, with private Polish investment commonly financed through retained earnings and credits. Generally, foreign and domestic investors alike face no capital controls or restrictions on capital inflows and outflows, though an exit tax was introduced in 2018.[174]

Local Supply Chain Ecosystem

Poland has a sophisticated local supply chain ecosystem, particularly within the automotive, construction materials, furniture, agrifood, and IT sectors (Figure 34). A major upside of this diversified approach is that Poland

Figure 34: Poland Export Basket, 2021[175]



167 MDPI, Bartlomiej Rokicki, "Cost Underruns in Major Road Transport Infrastructure Projects – The Surprising Experience of Poland," November 2022.

168 CTP, "7 Reasons to Invest in Poland."

169 OECD, 2024.

170 Reuters, Thin Lei Win, "Dry Man of Europe, Poland Strives to Save Water," December 2019.

171 International Trade Administration, "Poland – Country Commercial Guide."

172 Financial Times, Paola Tamma and Andy Bounds, "Eleven Countries to Breach EU Deficit Rules," April 2024.

173 ING, "Poland's Deficit Will be High in 2024 but New Government Trims Elections Pledges," December 2023.

174 US Department of State, 2024.

175 Center for International Development, Harvard University, 2024.

is not reliant on one industry, and its economy will benefit from multiple streams of EU funding for climate change and advanced innovation like robotics and automation.

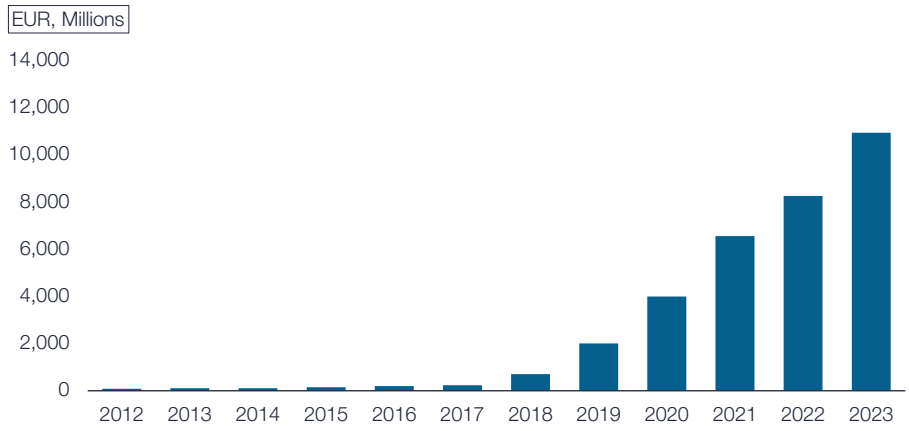
The COVID-19 pandemic accelerated Poland's digital transformation and has hastened the development of a modernized supply chain ecosystem with technology at its core. According to the European Investment Bank (EIB) Investment Survey 2022, 66% of Polish companies have implemented at least one advanced digital technology in their supply chain operations.[176] The government also encourages collaboration between research institutions and industry through programs like the Polish National Smart Specialization Strategy, which promotes R&D and innovation. Consequently, global corporations seeking to operate in Poland will benefit from a digitally savvy workforce that is productive across multiple sectors.

Sector Outlook - Electric Batteries

Poland is the second largest producer behind China of lithium-ion batteries, a critical component in electric vehicles and in renewable energy sectors (Figure 35).[177] Several leading electric battery companies have established manufacturing facilities in Poland, including LG, Northvolt, and Umicore.

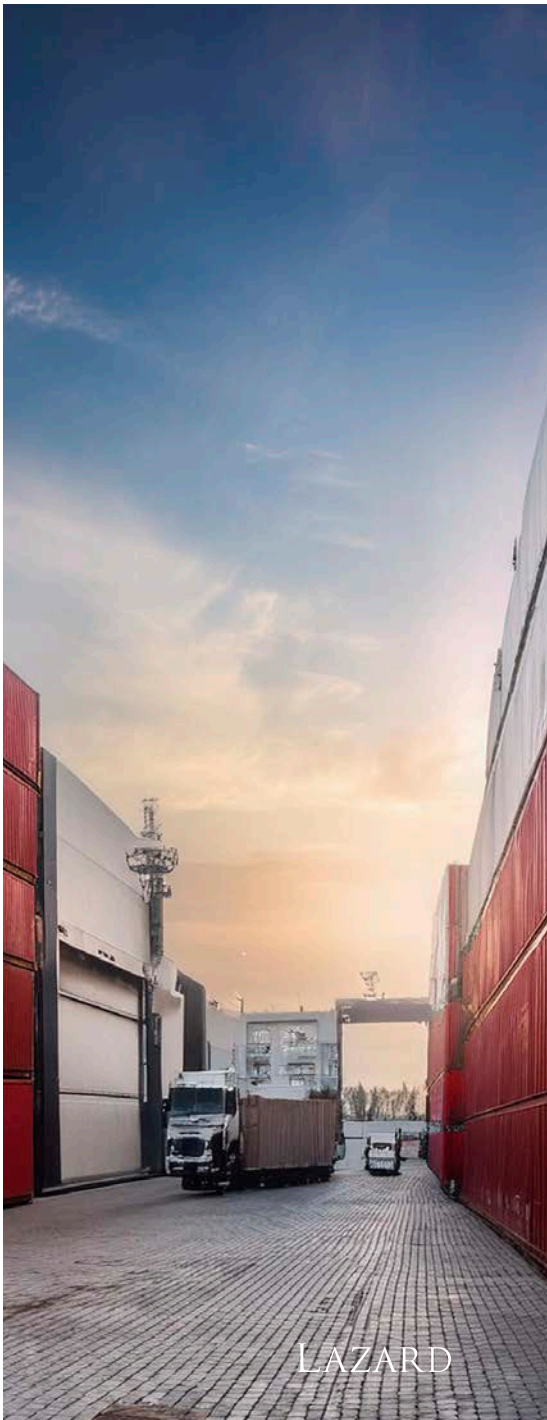
Most critically for Polish, European, and global climate ambitions is the potential for Poland's expertise in producing electric batteries to enable it to become an exporter of renewable energy components beyond batteries. Poland's climate objectives include a target of net zero by 2050, but heavy reliance on coal means it has a long way to go. Batteries themselves are critical for storage and export of electricity and create spillover effects in photovoltaics and wind power. Companies, both in renewable energy and in advanced manufacturing generally, have an increasingly mature sector to tap into and expand.

Figure 35: Value of Lithium-Ion Batteries Exported from Poland, 2012–2023[178]



SUMMARY

Poland's structural advantages include trade links with the European Union and United States, a productive labor force, and the infrastructure of an advanced economy. Yet its aging and expensive labor force and its chronic water shortages undermine its attractiveness, while its weakened political institutions and complicated tax system create further challenges. Poland has a diverse, complex set of exports but companies will need to navigate these key constraints to benefit from its advantages.



176 International Trade Administration, "Poland – Country Commercial Guide."

177 Ministry of Economic Development and Technology, "Poland Recharges Its Batteries," December 2023.

178 Central Statistical Office of Poland, 2024.

Thailand Supply Chain Analysis

Introduction

Thailand is in a critical geopolitical location, with formal treaty ties to the United States and improving relations with China. While Thailand has had turbulent politics since the 1980s, it has managed to grow at impressive rates, and it has deep trade links across Asia. Thailand also benefits from FDI from the US and Japan, reflecting a mature market with navigable processes for moving capital into the country. Yet Thailand's biggest concerns are around political institutions, an aging labor force, and the impacts of climate change events that can interrupt production in key industries.

Geopolitics

Thailand pursues a delicate balance between the United States and China and is integrated regionally to a diverse set of countries both within Asia and beyond. Bangkok simultaneously seeks Chinese investments in infrastructure and pursues economic cooperation with the United States via IPEF. In May 2024, solar cell manufacturers in Thailand were affected by the end of US tariff exemptions—an effort by Washington to prevent Chinese firms from circumventing solar tariffs by routing production through Thailand, alongside Vietnam, Malaysia, and Cambodia. Some companies moving to Thailand will likely face rising scrutiny of Chinese inputs and supply chain connections as concerns increase about Chinese trans-shipments.[179]

Thailand's strong regional and bilateral ties include memberships in ASEAN and RCEP, 14 regional trade agreements, and 18 free trade agreements via ASEAN. Japan, as Thailand's biggest provider of FDI, is a key ally and source of manufacturing offshoring, particularly in the automobile sector.

China is the largest source of Thai imports, the second-largest provider of FDI, and a major provider of infrastructure financing, with negotiations underway for a bilateral trade agreement. But the Thai government is also considering imposing tariffs on some Chinese products to protect nascent industries.[180] Doing so may damage relations, but it underscores the tension that Thailand is both reliant on China and competing with it.

Finally, Thailand's ongoing political challenges deepened in August 2024. First, the country's constitutional court dismissed the nation's most popular party by vote share, Move Forward, and banned its leader, Pita Limjaroenrat from politics for 10 years. Then Prime Minister Srettha Thavisin and his cabinet were dismissed by the court for breaching ethics rules by appointing a cabinet minister who had previously served time in jail. The return to power of the Shinawatra family creates a genuine political crisis at a time when Thailand needs stable policies and government to attract FDI. Investors will need to closely track public sentiment and where political power lands, to understand investment implications.[181]

Industrial Policy

"Thailand 4.0" is a 20-year program that aims to modernize the economy and shift from heavy industry to digitization and innovation. Goals include 4.5% GDP growth per year, 10% investment growth in select industrial sectors, and at least 8% export growth per year. To achieve this, the government aims to attract foreign investment into a developing set of industrial parks like its Eastern Economic Corridor (EEC) via both tax and non-tax incentives such as expedited land acquisition permits and exemption of import duties on raw materials used in export supply chains. Thailand has focused on ten industries for promotion, which include electric vehicles, light and medium manufacturing, healthcare, and digital technologies like AI.

Companies that follow Thai climate priorities and are in the EEC are eligible for tax breaks of up to 13 years, depending on the sector. At the geographic level, investments in 16 provinces are eligible for further incentives, as Thailand seeks to develop industrial parks and SEZs to cluster industries together.[182] Ongoing policy around SEZs, including simplifying the creation of Public-Private Partnerships (PPPs), is designed to smooth investments, like a fast-track scheme that speeds up the registration of joint ventures and PPPs from over two years to nine months. Thai SEZs are an easy way for multinationals to test operating in Thailand, but construction delays threaten to hold up this process.

A major challenge for corporates is the inconsistent enforcement of government regulations.[183] In 2017, Thailand launched a deregulation drive seeking to eliminate redundant laws and improve enforcement procedures. But progress appears to be slow, and under-the-table payments to civil servants tasked with regulatory enforcement are common.[184] Established foreign firms, with long-standing joint ventures and relationships in Thailand are ready to benefit from Thai industrial incentives. But new firms may be put off by the challenge of navigating an increasingly complex system. However, despite unpredictable regulations, companies in Thailand have not faced risks of expropriation or asset seizure given protections for investment in the Thai constitution, giving foreign businesses some confidence despite political turmoil.

179 Center on Global Energy Policy at Columbia SIPA, Tom Moerenhout et al., "Gauging the Impact of New US Tariffs on Imports from China," May 2024.

180 ASEAN Briefing, "Thailand Contemplates Protective tariffs on Chinese Imports Amidst Surging Trade Deficit," April 2024.

181 The Guardian, "Court Bans Largest Thai Political Party Over Pledge to Change Lese-Majesty Law," August 2024.

182 US Department of State, "2023 Investment Climate Statements: Thailand"

183 Ibid.

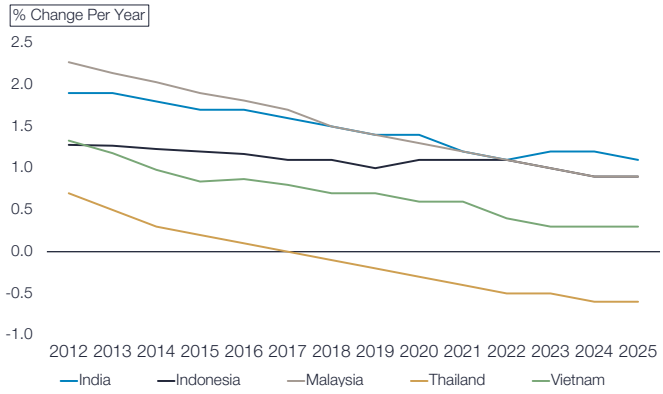
184 Ibid.

Inputs

Labor Force and Demographics

One of Thailand's long-term weaknesses is its aging labor force. Thailand's median age is 41, one of the oldest in Southeast Asia, and population growth has likely peaked (Figure 36). Immigration has picked up in recent years but much of this is driven by refugees from Myanmar and, overall, the pace of immigration is low. A short-term fix for manufacturing is to mobilize the 30% of Thai workers still employed in agriculture. Thailand is at the average of Southeast Asia's urbanization rates, at 54%, and has ample room to grow.[185] Attracting agricultural workers into urban and semi-urban areas with the promise of higher productivity jobs, and therefore higher wages, is a boost to manufacturing that Thailand has yet to fully realize.

Figure 36: Working Age Population Growth[186]



Despite this structural aging issue, Thailand has both competitive international wages and a skilled workforce. This combination is why advanced vehicle manufacturers from Japan, and increasingly China and South Korea, are locating facilities in Thailand.[187]

Intermediate Goods

Thailand is a net importer of intermediate goods, like machinery inputs, and over 25% comes from China.[188] Like in Vietnam, Thai producer price inflation has been kept down, but as China shifts to higher value-added goods, Thailand may find prices for these goods rising, as they did during the pandemic. At the same time, Thailand has emerged as an avenue for Chinese firms to circumvent US tariffs. Companies will need to diversify away from this dependency on China to export to the United States.

Land

Land acquisition is strictly regulated in Thailand. Foreign individuals can now purchase land for the first time after legislation was implemented in 2023.[189] Companies can acquire land in joint ventures with Thai companies, and the process for doing so is well established. Land has been reasonably well governed, despite major restrictions on how and where companies can acquire it.[190]

Energy

Thailand is a major energy importer. Its electrical grid is reliant on natural gas, and Thailand is also the 13th biggest importer of oil in the world, mostly for industrial production. Thailand is heavily reliant on the Middle East for oil, and liquefied natural gas from Qatar, Australia, and Malaysia.[191] The Russian invasion of Ukraine, combined with falling domestic natural gas reserves, convinced Thailand of the need for domestic energy security. Its Thailand 4.0 program features investments in solar and wind, but this pivot will take time and needs both public and private investments.

Infrastructure

Thailand has ambitious infrastructure plans, targeting its industrial zones and the improvement of roads and railways outside of urban areas. Its most significant plans involve a centuries-old idea for a bridge and canal system in the southern Kra Isthmus region that would cost an estimated $28bn. If completed, the canal would bypass the Straits of Malacca, save an estimated four days' travel and reduce shipping costs from China by up to 15%.[192]

Outside of Thailand's North-South Economic Corridor, the most significant trade route in the country, road linkages are weak and dangerous. Thailand has the highest road traffic mortality in Asia, and roads are often unfit for freight shipments.[193] Thailand is embarking on a construction binge: $20bn is earmarked for 150 projects, including expansions of four motorways totaling over 150 km. By 2050, Thailand aims to increase its motorways from 250 km today to 2,500 km.[194] But Thailand's infrastructure challenges are implementation-based, including lengthy delays and problems finding financing, rather than related to strategic planning.

Beyond roads, the Thai government is seeking to invest in railways and ports. A proposed 873 km rail line will connect Bangkok and several major SEZs to the China-Laos Railway, meaning that Bangkok would be directly linked to Kunming in China by rail. This rail link is a microcosm of Thailand's geopolitical challenges. The rail line was proposed in 2014, and only 15% has been completed. Some of the delays are

185 World Bank World Development Indicators, 2024.
186 Economist Intelligence Unit, 2024.
187 Ibid.
188 Ibid.
189 US State Department Investments Report 2023.
190 Ibid.
191 IEA 2023.
192 Seatrade Maritime News, Marcus Hand, "Thailand Revives the Kra Canal But This Time As a Landbridge," November 2023.
193 The New York Times, "Thailand's Roads Are Deadly. Especially if You're Poor," August 2019.
194 Thailand Public Relations Department, "Thai PM Unveils Thailand Vision 2030 to Boost Thailand as Premier Global Industrial Hub," February 2024.

because of red tape, but also because Thai officials are reportedly reluctant to deepen dependency on China.[195] Similarly, Thailand's largest mobile network operator, AIS, is partnering with Huawei to roll out 5G; the US failed to discourage Thailand from doing so in 2019.[196] Outside of urban areas, Thai connectivity can be patchy, and, once again, Thailand is reliant on China to enhance its infrastructure.

Beyond transport, flooding has pushed Thailand to bolster infrastructure resiliency. Devastating floods in 2011 cost an estimated $46.5bn in damages, and materially reduced output. The Thai Ministry of Economy, Trade, and Industry reported production losses of 84% in transport machinery, 77% in office equipment, and 73% in IT and communications technology.[197] Since then, via IPEF and bilateral trade deals, Thailand is investing in logistics and flooding resilience; UN analysis suggests this is paying off, meaning climate-based operational risks for companies in Thailand are improving.[198]

Financial Conditions

Thailand weathered the pandemic and subsequent inflation reasonably well, and it had room to expand its deficit by 50 bps to support its economy, raising it to 3.7% of GDP in 2023.[199] Public debt as a share of GDP has risen from 42% in 2010 to over 60% today, driven both by pandemic stimulus and investments as the government seeks to bring Thailand out of its sub-2% growth, something it looks likely to achieve in 2024. Weak consumption, alongside the fiscal deficit, has driven weakness in the baht, which has dropped the most of all Asian EM currencies against the dollar in 2024. The central bank lowered its growth forecast for 2024 to 2.6%, diverging from the government's own 4% projection, and rate cuts are expected later in 2024.[200] The consequence is likely ongoing baht weakness, potentially adding to domestic inflation. But worryingly the new Prime Minister, Paetongtarn Shinawatra, has suggested she would favor less autonomy for the central bank.

Foreign investment into Thailand is governed by the Foreign Business Act of 1999, which dictates where and how companies can invest. Foreign companies cannot own more than 50% of a Thai entity other than in specific exceptions as recommended by the central bank. For this reason, joint ventures are encouraged by the government and are common practice.[201]

Supply Chain Ecosystem

Thailand has a diverse production ecosystem, from basic agricultural products, to complex, value-added production like vehicles and electronic chips.[202] Thai industrial policy is correct in identifying a wide set of industries to promote; the greatest strength of the Thai economy is variety within its export basket.

The consequence of this multi-sector approach is that the Thai economy has created buffers against global market swings in specific commodities. Today, exports are over 60% of Thai GDP and, most critically for multinationals, manufacturers of different sectors are clustered together in existing SEZs, so firms are able to benefit from a skilled labor force.

Sector Outlook – Electronics and Machine Parts

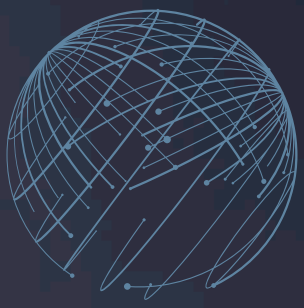
Thailand's largest export is in machinery—it is the fourth-largest exporter of office machine parts and equipment that are used in, among other sectors, the development of semiconductors. Exports have grown almost 600% in the last year, though from a low base, and the machinery sector is the second-largest employer of Thai workers, behind agriculture.[203] Thailand 4.0 aims to accelerate this momentum by incentivizing foreign conglomerates to enter the space. Machinery parts are complex and require high-skilled labor that can create technical know-how. Doing so, in turn, links to a wide array of value-added manufacturing.

Companies like Advanced Energy Industries (AE), a US-based firm, are expanding their Thai operations. AE opened a factory in Chiang Mai, which has multiple universities and therefore different avenues for upskilling the labor force, and AE has publicly stated it believes its facility can generate up to $1bn per year.[204] Revenue estimates like this suggest that Thailand's combination of low-cost, high-skilled workforce can result in growing exports across diversified products. Chiang Mai is also located along key infrastructure corridors, but, outside of these corridors, companies looking to export will find infrastructure challenges.

SUMMARY

Thailand has a complex economy with diverse exports, an attractive labor market with competitive wages, and a productive workforce. Its growing electronics sector suggests it has even greater export potential. But Thailand's history of coups and political instability creates uncertainty, while its vulnerability to climate events, reliance on China for intermediate goods, and an aging population create longer-term risks. Firms operating in Thailand will also have to navigate its sometimes difficult investment processes, while the government enacts reforms.

195 The Diplomat, Sebastian Strangio, "Thailand-China Railway Project Should Be Expedited, Chinese FM Says," January 2024.
196 Asia Times, "Huawei on a 5G Roll in US Ally Thailand," January 2022.
197 Thailand Ministry of Economy, Trade, and Industry, "2012 White Paper, Section 3: Floods in Thailand," 2012.
198 UNDP, "UNDP and Royal Irrigation Department in Thailand Marks World Water Day 2023 with new GCF Funded Project," March 2023.
199 World Bank World Development Indicators.
200 Reuters, Orathai Sriring and Chayut Setboonsarng, "Thai Central Bank Holds Key Rate, Defies Government Calls for Cuts," April 2024.
201 Transparency International, "Our Work in Thailand."
202 Center for International Development, Harvard University.
203 Observatory of Economic Complexity, 2024.
204 Advanced Energy, "Advanced Energy Breaks Ground on Flagship Factory in Thailand," October 2023.



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