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Working Paper

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Suggested Citation: Duran-Fernandez, Roberto (2024) : Nearshoring in Mexico: Navigating Expectations and Realities of the Reconfiguration of Global Value Chains, ZBW - Leibniz Information Centre for Economics, Kiel, Hamburg

This Version is available at:

<https://hdl.handle.net/10419/301885>

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Nearshoring in Mexico: Navigating Expectations and Realities of the Reconfiguration of Global Value Chains

Roberto Duran-Fernandez¹

August 2024

Abstract

This paper critically examines the phenomenon of nearshoring in Mexico within the broader context of global value chain (GVC) reconfiguration. As geopolitical tensions, rising labor costs in Asia, and the push for supply chain resilience have intensified, nearshoring has emerged as a prominent strategy, particularly in Mexico. However, despite the optimistic narratives surrounding nearshoring, this paper argues that its impact on Mexico is more complex and nuanced than often portrayed. By analyzing economic, geopolitical, and environmental factors, the paper evaluates Mexico's positioning to benefit from nearshoring trends. It highlights the opportunities, such as increased foreign direct investment (FDI) and potential GDP growth, while also addressing the significant challenges, including infrastructure deficits and the need for strategic industrial policies. The analysis reveals that the benefits of nearshoring are likely to be concentrated in specific sectors and regions, necessitating a balanced perspective that recognizes both the potential and limitations of this trend. Ultimately, the paper provides a grounded assessment of nearshoring's implications for Mexico, offering insights into the broader narrative of GVC reconfiguration and its localized effects.

Keywords: Nearshoring; Global Value Chains; Economic Development; Industrial Policy; Mexico

JEL Codes: F63; O14; O25; R58; Q56

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1. Nearshoring in Mexico: Navigating Expectations and Realities

In the rapidly changing landscape of global trade, concepts such as "nearshoring" have gained prominence, reflecting broader trends in the reconfiguration of global value chains (GVCs). These shifts are often discussed in global terms, with nearshoring being viewed as one of many responses to the challenges and opportunities presented by evolving economic dynamics. However, while the phenomenon is indeed global, its most immediate and visible impacts are often localized.

This article takes a closer look at nearshoring, particularly through the lens of Mexico's unique experience. Over the past months, nearshoring has become a central topic in Mexico's public and economic discourse, fueled by rising labor costs in Asia, geopolitical tensions, and the increasing emphasis on supply chain resilience. The term "*nearshoring*" has transitioned from a theoretical concept to a concrete strategy, heavily influencing Mexico's economic strategies and business planning.

However, the discourse around nearshoring has often been marked by speculative narratives, with a tendency to view it as a panacea for Mexico's long-standing developmental challenges. This article aims to ground the discussion in data and analysis, providing a realistic assessment of what nearshoring truly means for Mexico. While the broader global reconfiguration of GVCs is acknowledged, the focus here is on the specific case of Mexico, examining how the country is positioned to capitalize on, and be challenged by, this trend.

As we delve into the various aspects of nearshoring, it becomes clear that while the trend holds significant promise, it is neither a quick fix nor a one-size-fits-all solution for Mexico's development. The benefits of nearshoring are likely to be concentrated in certain sectors and regions, leaving others largely untouched. Therefore, it is crucial to approach nearshoring with a balanced perspective, understanding its potential within the broader context of Mexico's economic landscape.

The primary scope of this analysis is to assess the economic, geopolitical, and environmental factors driving nearshoring, and to evaluate how Mexico is positioned to benefit from these global trends. Specifically, the article examines the opportunities nearshoring presents for Mexico, such as increased foreign direct investment (FDI) and potential GDP growth, as well as the challenges the country faces in realizing these opportunities, including infrastructure deficits and the need for strategic industrial policies.

However, this article intentionally limits its scope to certain aspects of the nearshoring discussion. It is intended as a starting point for further exploration and discussion, rather than a comprehensive treatment of all aspects related to the reconfiguration of GVCs. By focusing on Mexico's experience, we aim to provide insights into the broader narrative of GVC reconfiguration while highlighting the specific challenges and opportunities faced by the country in this new economic environment.

2. Shifting Trends: How GVCs Are Evolving

Since the mid-2010s, GVCs have undergone significant changes, suggesting a reconfiguration in the dynamics of global trade networks. This evolution follows China's ascension to the World Trade Organization (WTO) and its subsequent emergence as a global manufacturing powerhouse. China's low labor costs and vast manufacturing capacity attracted Western manufacturing, drastically altering the global production landscape.

In 1995, China accounted for a mere 3% of global manufacturing exports; by 2020, this share had surged to 20% (Baldwin, 2021). However, as labor costs in China rise and geopolitical tensions intensify, there is growing interest in alternative models of production and trade. These shifts, though global in nature, have specific and pronounced implications for certain regions, including Mexico, which has become a focal point for discussions on nearshoring.

At the heart of China's transformation was the strategy of offshoring, where companies, predominantly from the West, relocated production from Europe and the U.S. to Asia. Offshoring became one of the cornerstones of modern globalization, though not without controversy. Some scholars attribute the net loss of nearly two million jobs in the U.S. since 2011 to this model (Autor, Dorn & Hanson, 2016). Others argue that the employment impact was less about loss and more about a shift from the industrial sector to the service sector (Belsie, 2011). The extent of China's trade integration's impact on the U.S. economy continues to be debated in academic circles. Nevertheless, this has not stopped public discourse in North America from blaming globalization for deepening inequality and exclusion (Kennedy & Mazzoco, 2022).

Another critical issue related to offshoring to China concerns intellectual property rights (IPR). Western companies have often been compelled to enter forced technology transfer agreements when offshoring to China (Jyh, 2020). In return, China offered access to its vast domestic market. This arrangement has led to significant challenges in protecting technological property rights. The U.S. Congress estimates that China's IPR theft amounts to between \$225 billion and \$600 billion annually (Gantz, 2020; Financial Times, 2022).

By the mid-2000s, emerging changes in the global economic landscape began to signal a possible reconfiguration of GVCs. Braun, García, and Molero (2023) identify four major trends that have influenced this reconfiguration over the past decade. While these trends are reshaping the global economic landscape, their impact is particularly evident in Mexico. As such, Mexico serves as a microcosm through which we can understand the broader implications of these global shifts.

The first trend is related to rising labor costs in China. Initially, the economic rationale for relocating production from the West to China hinged on substantial wage disparities. However, since the mid-2010s, Chinese wages have increased, narrowing this gap. Additionally, technological advancements such as automation, and additive manufacturing have further reduced labor cost differentials (Li et al., 2012).

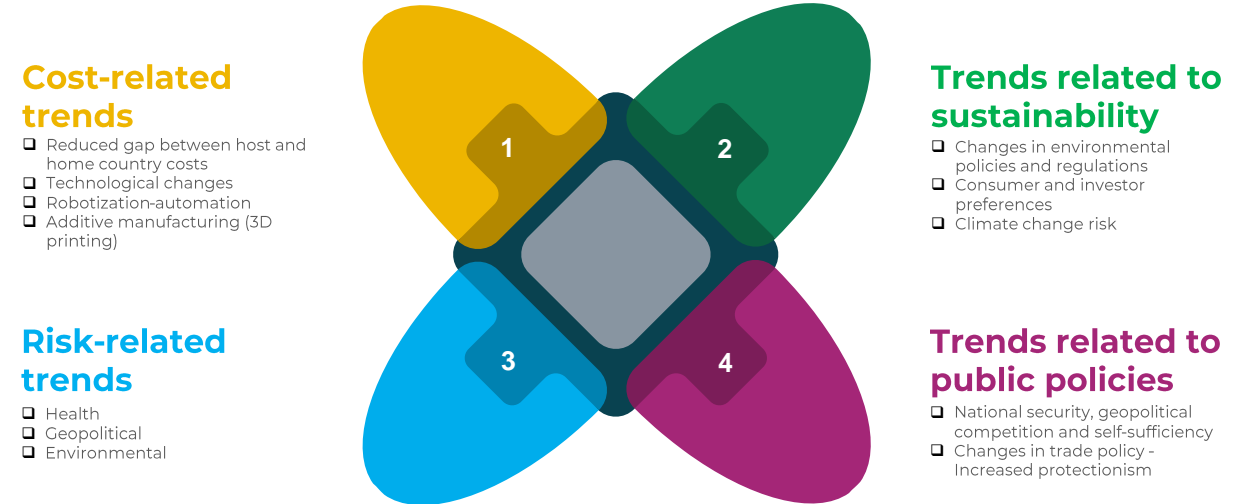
The second trend is driven by sustainability concerns. The offshore production model relies heavily on long-distance, transoceanic supply chains, which carry a significant carbon footprint. From an environmental perspective, these value chains are becoming increasingly untenable, particularly for countries committed to ambitious sustainability goals and carbon footprint reduction. The pressure to shorten these supply chains is mounting (IADB, 2020; Maloney et al., 2023).

Geopolitical risks represent the third major trend. While globalization’s benefits have been extensively discussed, its inherent risks have also become more apparent. These include global health crises like the COVID-19 pandemic, geopolitical conflicts, and international rivalries, such as those in Eastern Europe or the Middle East. The climate crisis also poses challenges, as evidenced by the 2023 drought affecting Panama Canal transit (Chan, 2013; Gantz, 2023).

The fourth and increasingly prominent trend is the resurgence of protectionism, particularly in developed countries. These policies, often framed as national security measures, aim to protect strategic sectors from potential conflicts or future threats. This resurgence of protectionism, rooted in economic nationalism, seeks to shield domestic jobs from external competition. It is reflected in the trade and industrial policies championed by several Western nations (Puślecki, 2023).

The following sections will delve into these four trends, providing a detailed analysis of the reconfiguration of GVCs and the potential retreat from the offshoring model that has dominated globalization in the early 21st century.

Figure 1. Forces shaping the reconfiguration of GVCs.



2.1. Rising Labor Costs and the Diminishing Appeal of Offshoring

Since the mid-2010s, rising labor costs in China have cast doubt on the long-term sustainability of the offshore model to preserve low-cost value chains. Between 2001 and 2019, wages in China nearly quadrupled, driven by sustained economic growth. This surge has considerably eroded China's comparative advantage as a low-cost production hub.

The shrinking cost differential between developing and developed countries has prompted discussions about the relocation of production. The rise in labor costs across China and other emerging economies, coupled with higher logistical expenses and declining energy prices in the U.S., has diminished the attractiveness of manufacturing in developing nations. For instance, between 2008 and 2018, average wages doubled in Thailand, nearly tripled in China, and quadrupled in Vietnam. In contrast, wage increases in key GVC hubs like the U.S. and Germany were far more modest, rising by just 25%. According to the Economist Intelligence Unit, labor costs in China nearly tripled relative to those in the U.S. between 2008 and 2020, while they doubled in Vietnam and decreased by 35% in Mexico (Braun, García, and Molero, 2023).

These shifts in factor prices among major GVC players should logically prompt companies to either relocate production or increase capital intensity. However, it remains uncertain whether these cost dynamics alone are enough to trigger a full-scale reconfiguration of GVCs. Technological advancements are also reshaping GVCs and reducing China's appeal. Innovations in robotics, automation, and additive manufacturing—symbols of Industry 4.0—are diminishing the attractiveness of labor-intensive regions, potentially reducing investment in traditional offshore models (Braun, García, and Molero, 2023).

2.2. Sustainability Imperatives Reshaping Global Trade Networks

In recent years, environmental concerns have moved to the forefront of the economic development agenda. The pressing realities of climate change and its detrimental effects on global ecosystems and human well-being have compelled nations and societies to reassess their commitment to ambitious global objectives, such as the Paris Agreement, which seeks to dramatically reduce carbon emissions. Within this framework, intercontinental value chains, a hallmark of the offshore production model, pose a significant challenge due to the substantial carbon content embedded in their products.

A striking example of this issue is the supply chain for tennis balls used in the Wimbledon tournament, the world's oldest tennis event. According to research by Warwick Business School, the production of these balls involves a global chain that stretches across 11 countries and 4 continents. The materials that comprise a single ball—such as clay from U.S., silica from Greece, zinc from Thailand, rubber from Malaysia, and wool from New Zealand—collectively travel more than 50,000 miles before arriving at their destination in London. This extensive journey

exemplifies the significant carbon footprint generated by even seemingly simple products (Warwick Business School, 2017).

As environmental regulations become increasingly stringent, the feasibility of sustaining these transoceanic production chains may be called into question. The internalization of environmental costs, such as the implementation of carbon taxes, could render this model unsustainable. Consequently, the future of value chains is likely to see a shift towards shorter, more localized structures that can substantially reduce emissions and the carbon footprint. A World Bank report underscores this point, suggesting that the reconfiguration of GVCs presents an opportunity to leverage the green potential of regions like Latin America (Maloney, 2023).

2.3. *Global Crises and the Push Towards Regionalized Value Chains*

Former British Prime Minister Gordon Brown has popularized the concept of "*permacrisis*," a term used to describe a prolonged period of instability, driven by a series of interconnected security challenges such as wars, pandemics, economic crises, and natural or climate disasters (Brown et al., 2024). This concept aptly characterizes the current global economic and political climate. The geopolitical crisis, exemplified by intensifying rivalries between China and the U.S. and unprecedented international conflicts like the war between Russia and Ukraine, is further compounded by an environmental crisis that threatens to disrupt the lives of millions through droughts, extreme temperatures, and other climate-related events. Together, these threats pose a significant danger to the global economy (Duran-Fernandez, 2024a).

The COVID-19 pandemic is a clear example of this "*permacrisis*" in action. The health crisis revealed that, despite the advances in trade liberalization and economic integration, national borders remain critical barriers. In the face of the pandemic, countries quickly closed their borders to safeguard access to strategic supplies, such as vaccines and medical equipment, demonstrating the fragility of our global economic systems. This enduring state of crisis underscores the urgent need to rethink these vulnerabilities and seek alternatives to mitigate them (Zeihan, 2020).

Ideally, addressing global challenges would require enhanced international cooperation and dialogue, alongside deeper economic integration that extends beyond mere economic considerations to encompass social, environmental, and political dimensions. However, in the absence of a robust institutional framework to facilitate such cooperation, nations have turned to other strategies to protect their economic systems from global fragilities. In this context, concepts like reshoring and nearshoring have gained traction, advocating for the shortening of GVCs in favor of more regionalized chains that prioritize resilience in production systems over mere efficiency and cost reduction (Duran-Fernandez, 2023b; UNCTAD, 2020).

In recent years, multiple global crises have challenged the integrity of value chains. The U.S.-China trade war in 2018 disrupted supply chains across Asia, while the COVID-19 pandemic in 2020 and 2021 led to widespread border closures. More recently, the partial closure of the Panama

Canal due to drought in Central America, driven by the climate crisis, has further highlighted these vulnerabilities (Gantz, 2023).

The fragmentation of the global economy into regional blocs is far from ideal, as it carries significant economic costs. The International Monetary Fund (IMF) estimates that severe fragmentation could result in a loss of up to 7% of global GDP (Geoergieva, Gopinath & Pazarbasioglu, 2022; Georgieva, 2023). Nonetheless, the reality is that both nations and corporations are increasingly gravitating towards a more regionalized and compact supply chain model. This approach, which emphasizes geographic diversification, is seen to mitigate risks in the face of ongoing and future global crises. This trend is undeniably one of the key drivers behind the reconfiguration of GVCs that we are witnessing today (O'Neil, 2022).

2.4. Economic Nationalism and Its Impact on Globalization

Globalization has increasingly come under scrutiny in various countries, often cited as a primary driver of growing social inequality and exclusion. In nations like the U.S., England, and Germany, public support for globalization has sharply declined. In the U.S., for example, support for globalization fell from 78% in 2002 to just 42% in 2021 (PEW, 2009). This decline reflects a narrative that associates globalization with job losses and labor market deterioration, although the strength of this relationship remains contested and is a topic of ongoing debate (O'Rourke, 2001; Helpman, 2018).

However, it's crucial to examine inequality through a broader lens. From a sociological perspective, scholars like Mills (2009) argue that inequality is a multifaceted issue, shaped by economic, political, and cultural factors. Abdelal (2020) contends that globalization has become entangled in political discourse with social changes such as multiculturalism, immigration, and social liberalism. In this process, many individuals feel "*forgotten*," perceiving a loss of respect and dignity, which exacerbates their sense of exclusion.

This growing sense of exclusion has fueled populist movements on both the left and right, which reject globalization and advocate for more protectionist policies. Geopolitical tensions, such as the rise of China and its expanding international influence, further exacerbate this trend, as some view these developments as threats to Western interests. These dynamics have contributed to a global environment that is increasingly less cooperative and more inward-looking (Jie & Wallace, 2021).

In the U.S., issues such as relations with China and immigration have become rare areas of bipartisan consensus, both favoring protectionist approaches. This political climate is conducive to a shift towards more localized and regionalized production models, challenging the dominance of GVCs that have characterized international trade in recent decades.

3. Production Relocation Strategies: Nearshoring and Beyond

In 2020, at the height of the COVID-19 pandemic, the United Nations Conference on Trade and Development (UNCTAD) released a significant report that explored emerging trends in the reconfiguration of GVCs (UNCTAD, 2020). Amid a world fraught with global risks and supply chain disruptions, such as those exposed by the pandemic, the report anticipated a shift away from the traditional offshore globalization model towards more regionalized supply models.

The report outlined four potential models for the relocation of value chains:

- i. **Nearshoring.:** This model envisions a world divided into trade blocs, where transoceanic value chains are replaced by shorter, regional ones with production centers closer to final consumption markets. Nearshoring involves relocating production from distant locations to economies nearer to end markets, where cost advantages can still be harnessed. For example, a factory might be moved from China to Latin America, where labor costs are lower, and the fragility of GVCs can be mitigated by leveraging on supply chains that are closer to final markets. This model prioritizes the resilience and security of international trade over immediate production cost savings, recognizing that the risks of maintaining long supply chains may be too great in the face of catastrophic disruptions.
- ii. **Reshoring.** For some products, the risks associated with producing in a third country may be unacceptable. Reshoring, or bringing production back to the industrialized home country, aims to avoid outsourcing entirely, even if it results in higher labor and input costs. This model is economically viable for capital-intensive products or those that can transition to more automated, less labor-intensive production. Reshoring is particularly attractive for strategic capital-intensive inputs, such as microprocessors.
- iii. **Allyshoring:** A third approach focuses on diversifying the productive base to manage the risks associated with the current offshore model. Considering the geopolitical and intellectual property challenges posed by China, this model does not suggest abandoning offshoring entirely, but rather diversifying production by prioritizing countries that pose fewer risks. Known as allyshoring, this strategy involves producing in allied countries that share political values with the West and do not present strategic or geopolitical threats to Western nations.
- iv. **Regionalization:** The fourth model advocates for the development of shorter value chains that prioritize regional sourcing of critical inputs. This approach envisions smaller, more capital-intensive production units equipped with replicable technologies, located near consumption centers in both emerging and developed markets. A prime example is vaccine production during the COVID-19 crisis; regional production hubs could have ensured supply without reliance on distant laboratories. This model is also proposed as a strategy for enhancing food security.

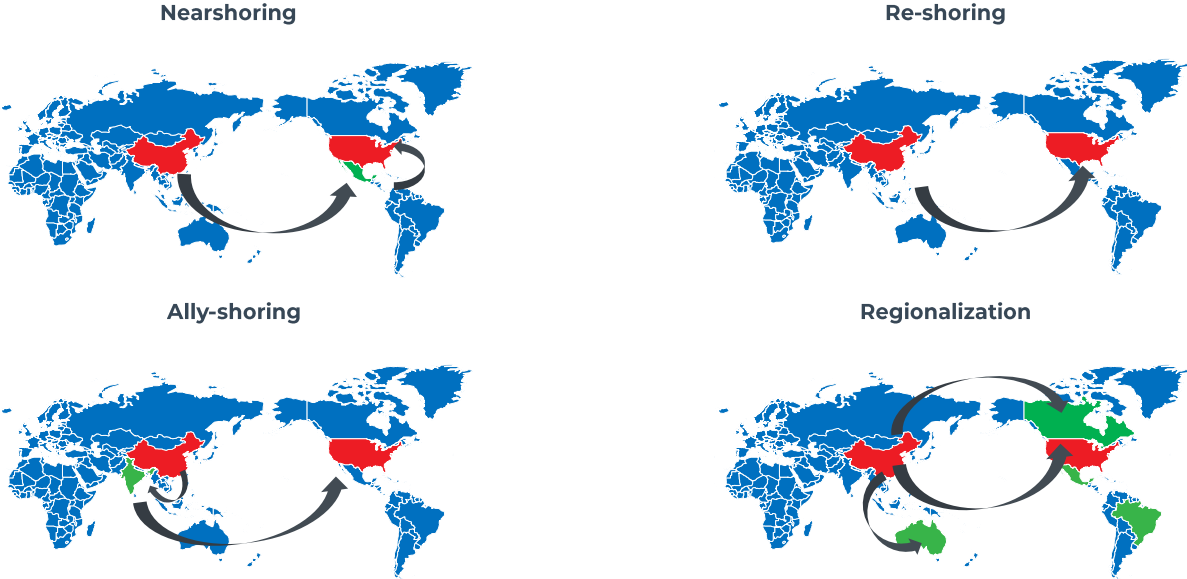
Each of these models would lead to a different GVC configuration. Nearshoring would shift from globalization to regionalization, while reshoring would create a less globalized world with reduced trade integration. Allyshoring could reconfigure value chains without necessarily fragmenting international trade into regional blocs, and the regionalization model might lead to a more fragmented world divided into semi-autarkic trade blocs.

These models, however, are not mutually exclusive. Their adoption will likely depend on technological advancements and the geopolitical context. For instance, in agro-industrial and extractive sectors, nearshoring could reconfigure markets into regionally fragmented but resilient structures, better equipped to handle geopolitical, environmental, or public health risks. The U.S., for example, could reduce its reliance on food and raw material imports from Asia by favoring trade partners within the Americas.

Nearshoring could be particularly beneficial for industries like automotive and light manufacturing, which could continue to capitalize on lower production costs in emerging countries close to consumption centers. Conversely, capital-intensive manufacturing might opt for reshoring to minimize exposure to geopolitical risks and vulnerabilities in intellectual property protection. The U.S. semiconductor production initiative under the CHIPS Act is a clear example of this model.

Finally, diversification and redundancy could be key for the service sector. Allyshoring offers a middle ground between nearshoring and reshoring, combining lower labor costs with greater geopolitical security. If outsourcing services to Asia become too risky due to geopolitical shocks or other factors, companies could create redundancies by leveraging English-speaking countries in the Caribbean (Duran-Fernandez, 2023a; 2023b; 2024).

Figure 2. Relocation Models



4. Trends in the Reconfiguration of GVC

The production relocation models proposed by UNCTAD in 2020 offered a theoretical framework for how globalization might evolve in response to the emerging challenges facing global trade and the economy. However, the global reconfiguration of value chains is a complex and multifaceted process, influenced by a wide array of economic, geopolitical, and technological factors. While these trends are global in scope, their impacts are often most visible in specific regions or countries that are strategically positioned to benefit from or adapt to these changes. Mexico is one such country, where the broader dynamics of GVC reconfiguration have led to significant shifts in trade patterns, investment flows, and industrial strategies.

This section examines the key trends shaping the reconfiguration of GVCs, with a particular focus on how these trends are manifesting in Mexico. By analyzing Mexico's experience, we gain insights into the broader global shifts, while also understanding the unique challenges and opportunities faced by countries that find themselves at the crossroads of these changes. Although the trends discussed here are global, Mexico serves as a critical case study that highlights the tangible effects of GVC reconfiguration in a specific national context.

The trends explored include shifts in expectations around nearshoring, the decline of China's market share in North America, the impact on Southeast Asia, and the reconfiguration of investment strategies by multinational corporations. Each of these trends illustrates not only the global forces at play, but also how Mexico is navigating and responding to these forces in ways that could redefine its economic landscape.

In broad terms, this reconfiguration of GVCs can be characterized by six key trends or *stylized facts*:

Shifts in Expectations. One of the most notable changes is the shift in expectations among governments and companies, particularly in Latin America. The concept of nearshoring has sparked unprecedented interest in countries like Mexico, where it is often seen as a potential solution to the significant development challenges the country faces. However, these high expectations may be somewhat inflated, leading to both overly optimistic views and critical skepticism that even denies the phenomenon's significance. Despite this gap between expectations and reality, nearshoring has profoundly influenced the outlook of various stakeholders in Latin America, especially in Mexico and parts of Central America.

China's Decline in the North American Market. Recent trade data indicates a decline in China's market share within the U.S., particularly in products that are subject to trade sanctions. However, a complete decoupling of the North American and Chinese economies still appears highly unlikely and difficult to achieve.

Economic Impact of Shifting U.S. Trade Preferences. Another emerging trend is the benefit Southeast Asia, particularly the ASEAN trade bloc, has gained from China's diminishing market

share. In contrast, Latin America has seen relatively modest gains, with Mexico being a notable exception due to its proximity and strong trade ties with the U.S. According to estimates from the Tecnológico de Monterrey, Mexico has captured approximately 15% of the opportunities generated by this shift to date (Duran-Fernandez, 2024a)

Understanding the Complexities of GVCs Reconfiguration. Rather than a straightforward relocation or nearshoring, we are witnessing a broader reconfiguration of production chains. Multinational and domestic companies are responding to the current environment with new investment strategies, such as factory expansions, relocation of production lines, or new greenfield investments. The initial 2020 expectation of closing factories in China and opening them in Latin America has not fully materialized. However, the investment strategies being pursued are significantly reshaping the configuration of global supply chains (Duran-Fernandez & Stein, 2024).

The Role of Industrial Policy in Shaping Global Value Chains. The U.S. has responded to these trends with aggressive legislative measures, such as the CHIPS Act and the Inflation Reduction Act. These laws are primarily aimed at reshoring investments to make U.S. supply chains more resilient. It is important to note that these initiatives are not necessarily designed to stimulate investment and job creation in other countries, including Mexico. However, there may be secondary effects that benefit neighboring countries, particularly in specific sectors like the packaging and testing of microprocessors (The White House, 2022a).

China's Strategic Investments in Mexico. A trend that was not as apparent in 2020 is the emergence of new commercial and industrial strategies from China. Notably, there is a concerted effort to increase China's industrial presence in Mexico, using the country as a platform to bypass U.S. trade sanctions and maintain access to the North American market.

The following sections will provide a more detailed analysis of each of these trends, exploring their implications for the ongoing reconfiguration of GVCs.

4.1. Shifts in Expectations

Since the mid-2010s, there has been growing anticipation of a potential shift in offshore investments from China to locations closer to key markets. The onset of the COVID-19 pandemic in 2020 further fueled this discussion, with several reports emphasizing the need to rethink globalization models heavily reliant on offshoring. These reports suggested a shift towards more regional, compact, and resilient approaches.

UNCTAD's 2020 publication is a notable example, offering insights into this potential transition (UNCTAD, 2020). Similarly, the Economic Commission for Latin America and the Caribbean (ECLAC) highlighted the significant nearshoring opportunities in Mexico (Garrido, 2022). However, it was a 2021 report by the Inter-American Development Bank (IDB) that truly

transformed public perception, estimating the nearshoring potential in Latin America at \$78 billion (IADB, 2021).

Expectations in Mexico soared in the spring of 2022 when Elon Musk announced the construction of a Tesla *Gigafactory* in Nuevo León.² This event underscored a broader trend already taking shape in northern Mexico, where many companies viewed the region as a strategic entry point into the U.S. market (SER, 2023). Since then, nearshoring has gained significant traction in public discourse, as well as in the strategic planning of businesses and public policies. Google searches for "*nearshoring*" have nearly quintupled since 2019, drawing attention from international media, consultancies, financial advisors, and investment banks.

In 2022, a survey by the Bank of Mexico revealed that nearly 50% of business owners attributed the influx of foreign investment to trade tensions between the U.S. and China, followed by the new rules of origin under the USMCA. Another 33% pointed to disruptions in value chains due to the COVID-19 pandemic, with geopolitical conflicts also cited as significant factors. The manufacturing sector emerged as the primary beneficiary of these investments, with nearly 40% of business owners reporting increased demand or higher FDI due to nearshoring by the end of 2022 (Esquivel, 2022).

However, expectations about the impact of nearshoring in Mexico may be overinflated. Some sectors tout it as a panacea for the country's development challenges, while others remain skeptical about its true scope. This skepticism is particularly pronounced in the central and southern regions of Mexico, which are less directly impacted by the relocation of value chains compared to the north (Duran-Fernandez, 2023d).

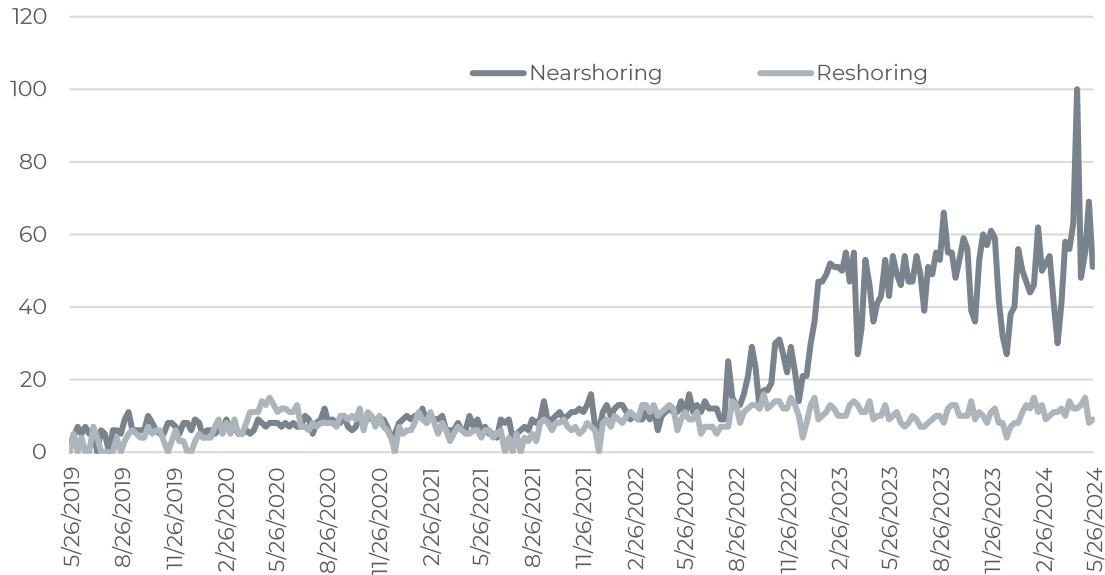
While Mexico leads in nearshoring expectations, the phenomenon has also piqued interest in Central America. Moreover, there was initial speculation in 2020 that Eastern Europe and the Middle East could play significant roles in the relocation of chains from Asia, geopolitical conflicts—such as the Russian invasion of Ukraine and ongoing tensions in the Middle East—have limited their potential compared to Mexico (Piatanesi & Arauzo-Carod, 2019).

It is important to note that the nearshoring narrative is predominantly driven by Mexican interests. In the U.S., the focus is on reshoring, or the repatriation of investments, with an emphasis on enhancing the resilience of value chains in strategic sectors like semiconductors. As a result, the

² In February 2023, Tesla announced a \$4.5 billion investment to build a gigafactory in Nuevo León, with plans to produce up to a million electric vehicles annually. However, the investment has stalled, and by July 2024, Tesla revealed that the plant's construction would be postponed. The official explanation cited uncertainty over U.S.-Mexico trade relations and the potential imposition of tariffs on Mexican-made cars under a possible second Trump administration. Yet, many analysts suggest that the slow adoption of electric vehicles in the North American market, the lack of subsidies and support, and the possibility that aggressive targets for phasing out internal combustion engines might be delayed are the real culprits. Nonetheless, it is worth noting that since Tesla's 2023 announcement, \$36 billion in FDI has poured into the region, with an additional \$20 billion in the first quarter of 2024. The state government argues that several Tesla suppliers are already established in Nuevo León, with more planning to relocate, undeterred by Tesla's delay (Duran-Fernandez, 2024b)

expectations surrounding the reconfiguration of GVCs differ significantly between Mexico and the U.S. (Gantz, 2024).

Figure 3. Nearshoring and Reshoring Searches - Index



Source: Google Trends

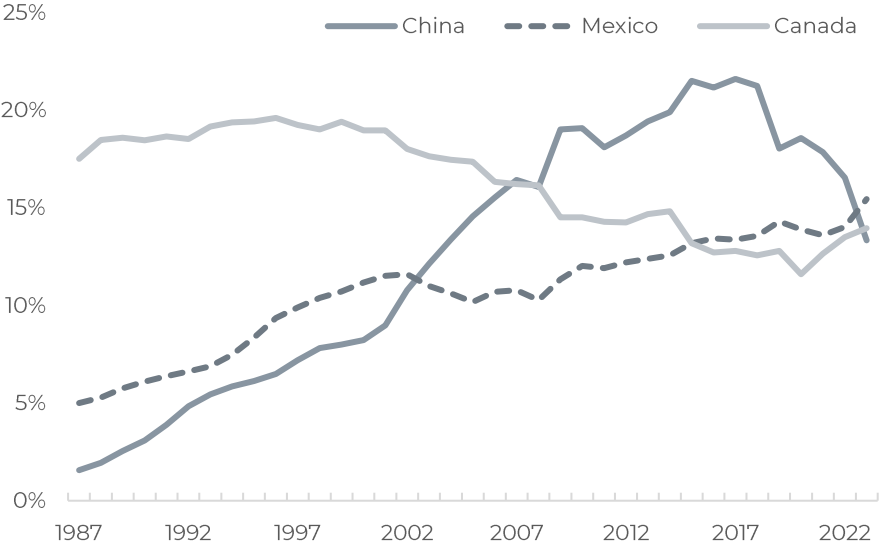
4.2. China's Decline in the North American Market

China's market share in the U.S. has indeed declined in recent years, but a complete decoupling between the two economies remains highly unlikely. Since China's entry into the WTO in 2001, the economic relationship between China and the U.S. has deepened significantly, characterized by a substantial trade deficit favoring China. This relationship has been pivotal in shaping global trade, with China establishing itself as a central hub in GVC.

The trade war initiated during the Trump administration was justified as a measure to prevent job losses in the U.S., with the argument that China's trade practices were unfair and detrimental to U.S. industry. Tariffs and other trade barriers were imposed to address this imbalance by repatriating jobs and reducing reliance on Chinese products (Kwan, 2029). Despite the change of government, President Joe Biden has retained many of the trade sanctions imposed by Trump, albeit with a shift in focus. While the Trump administration emphasized economic concerns and job preservation, the Biden administration has framed these measures within the context of geopolitical and national security objectives. Increasing worries over China's growing influence and economic power have led the U.S. to reconfigure its supply chains, particularly in strategic sectors such as semiconductors, telecommunications, and advanced technology (Demarais, 2022).

Nevertheless, a complete decoupling of the U.S. and Chinese economies remains unlikely. The interdependence forged over decades of trade, coupled with the intricate complexity of GVCs, makes total decoupling not only challenging but potentially damaging to both nations. Moreover, U.S. companies continue to rely heavily on China's production capabilities and competitive costs, reinforcing the difficulty of fully severing economic ties between the two economies (Wyne, 2020).

Figure 4. Market Share in USA Market



Source: World Bank

4.3. Economic Impact of Shifting U.S. Trade Preferences

U.S. trade data shed light on evolving trends in international trade and the reshaping of GVCs. Following the U.S.-China trade war, China’s market share in the U.S. declined by 7.3 percentage points (pp) between 2017 and 2023. Conversely, Mexico recorded the largest gain in market share, increasing by 2 pp, followed by Vietnam with a 1.7 pp rise. Southeast Asian nations, including Korea, Thailand, Singapore, and Cambodia, also experienced gains. However, other Latin American countries have lagged, with Costa Rica showing the highest increase after Mexico, albeit with a modest 0.1 pp.

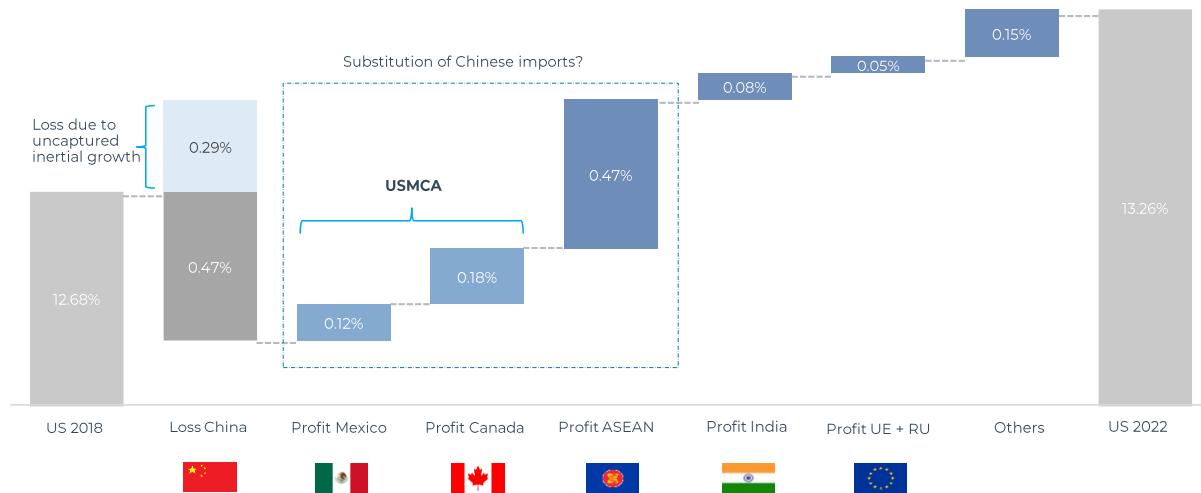
These trends are corroborated by other studies. Duran-Fernandez (2024a), for instance, finds that U.S. imports from China fell by 0.47 pp of U.S. GDP between 2018 and 2019. Accounting for potential growth lost due to trade sanctions imposed during the Trump administration, an additional 0.29 pp decline can be considered, resulting in a total estimated loss of 0.76 pp of U.S. GDP. The study also notes that Mexico and Canada increased their shares by 0.12 and 0.18 pp of U.S. GDP, respectively. However, the primary beneficiaries of this shift have been Southeast

Asian countries, particularly ASEAN members, whose exports to the U.S. rose by 0.47 pp during the same period.

A study by Alfaro & Chor (2023) from Harvard University suggests that there is a notable, albeit incipient, shift in the U.S. supply chain away from China towards other low-cost options like Vietnam and Mexico. This reorientation in sourcing has led to an increase in import prices, though with potentially minor effects on the U.S. economy. Vietnam has been a significant beneficiary, despite its initial market share being smaller than Mexico's in 2018 when the trade sanctions were first imposed.

These data indicate that although the absolute impact of supply chain relocation within Latin America, particularly in Mexico, has been relatively modest compared to Asian countries, the relative impact on Mexico is substantial. Duran-Fernandez (2024a) estimates that the additional U.S. market share could boost Mexico's GDP by 0.25 pp. For a country that has averaged 1.9% growth over the past 30 years, this increase is considerable, especially if the benefits are concentrated in specific regions. On the other hand, Chiquiar & Tobal (2024) from Georgetown University present a more optimistic outlook, estimating that Mexico's GDP could grow by an additional 2% because of this nearshoring phenomenon—a gain comparable to the economic impact experienced after the signing of the North American Free Trade Agreement (NAFTA).

Figure 5. Market Share in USA Market



Source: Duran-Fernandez (2024a),

4.4. Understanding the Complexities of GVCs Reconfiguration

In 2020, initial assessments of GVC relocation often framed the process as a straightforward shift, with production moving from China to more favorable locations in response to economic,

geopolitical, and risk-related pressures (Jayashankar & Torres, 2023). Yet, the reconfiguration of GVCs has revealed itself to be far more intricate than anticipated.

While countries like China and those in Southeast Asia have expanded their market share in the U.S., a concurrent trend has emerged: an increase in investment flows toward nations that have gained prominence in this reshaping. Theoretically, countries best positioned to capitalize on this relocation should attract higher levels of FDI, particularly in new greenfield projects. The assumption is that firms closing operations in China would naturally relocate to Mexico or other countries in the Western Hemisphere, leading to an increase in FDI.

However, despite Mexico's growing market share in the U.S., this has not been mirrored by a proportional influx of new foreign enterprises. Since 2022, while FDI in Mexico has surged, much of this can be attributed to the reinvestment of profits by existing firms rather than the entry of new market players. This apparent paradox challenges the conventional relocation model, prompting a need for a more nuanced taxonomy to understand the phenomenon (Hernández & Benítez, 2023).

Duran-Fernandez & Stein (2024) introduce a taxonomy that categorizes investments along two axes: the origin of capital (foreign or domestic) and the nature of investment (new greenfield ventures or brownfield expansions). Within this framework, not all investments are directly linked to GVC relocation. Some are driven by inertia, unrelated to global trends such as rising labor costs in China, geopolitical tensions, or the resurgence of protectionism in developed economies. Among the investments directly related to GVC relocation, there is a narrower subset: those involving firms that have indeed closed operations in China to relocate elsewhere or have chosen to invest in new facilities outside Asia in response to current conditions.

This distinction underscores the complexity of the investment landscape. In conclusion, FDI data alone does not fully encapsulate the relocation trend. First, there are inertial investments that are unrelated to relocation. Second, some relocation-driven investments may originate domestically, such as local producers expanding due to trade sanctions between the U.S. and China. Duran-Fernandez and Stein (2024) identify anecdotal examples for each quadrant of this taxonomy in the Mexican context. However, conducting a comprehensive review of FDI within these categories remains challenging, necessitating detailed surveys and deeper analysis of both foreign and domestic investments to capture the full picture.

It is also crucial to recognize that a substantial portion of recent FDI in Mexico stems from profit reinvestment. A misguided debate suggests that this reinvestment is unfavorable to the economy, overlooking the fact that it represents real capital staying in the country through factory expansions and new production lines. Mexico boasts a strong industrial base, with numerous multinational companies choosing to reinvest dividends locally rather than repatriating them, thus relocating production that would otherwise occur in Asia. Furthermore, these dividends are taxed within Mexico, offering fiscal advantages.

Nevertheless, some critics argue that profit reinvestment by established firms overshadows the influx of new players, implying that nearshoring might merely result in more of the same—similar

production, in the same locations, by the same actors. While Mexico has increased its U.S. market share, particularly in sectors like automobiles and appliances, there has been little transformation in the added value of exported products (Duran-Fernandez, 2024b).

A notable trend in Mexico is the rise of a dynamic ecosystem of domestic firms, often supported by local capital, that are seizing the opportunities presented by value chain relocation. These companies are offering solutions for U.S. partners to relocate production to Mexican facilities, thereby reducing risk by outsourcing to local entities. Additionally, there are emerging startups that provide enhancements in logistics management, risk mitigation, and financing, which could eventually elevate the country's position within the value chain (Duran-Fernandez & Stein, 2024; Duran-Fernandez, 2024b).

This taxonomy offers a valuable lens through which to analyze the dynamics of nearshoring and value chain relocation, providing a structured approach to understanding investments based on their origin and intent.

4.5. The Role of Industrial Policy in Shaping GVC

U.S. industrial policy has increasingly focused on the strategic relocation of value chains, particularly within the semiconductor sector. This effort, often referred to as nearshoring, is aimed at bringing the production of critical industries closer to the U.S. market, thereby reducing reliance on foreign nations, particularly those perceived as geopolitical rivals or adversaries (Aiginger & Rodrik, 2020).

Semiconductors are indispensable to both national security and the global economy, serving as the brains of all electronic devices, from smartphones to military systems. Historically, the production of these vital components has been heavily concentrated in East Asia, particularly in Taiwan and South Korea—a geographic concentration that poses significant risks. Geopolitical tensions, natural disasters, or pandemics could easily disrupt these supply chains, with far-reaching consequences for the global economy. Relocating semiconductor manufacturing to the U.S. or allied nations is therefore seen as essential for ensuring a stable and secure supply of these critical components. Moreover, this strategy is intended to bolster domestic manufacturing capabilities, enhance technological competitiveness, and maintain the U.S.' leadership in advanced technologies (Juhász, Lane, & Rodrik, 2023; The White House, 2022b).

In this strategic context, the Creating Helpful Incentives to Produce Semiconductors for America Act (CHIPS Act) of 2022 has emerged as a cornerstone of U.S. industrial policy. This legislation was crafted to invigorate domestic semiconductor production through financial incentives such as subsidies and tax credits, with the dual goals of reducing dependency on foreign manufacturing and strengthening the nation's technological prowess (US Congress, 2022).

The CHIPS Act allocates substantial funding for the construction of semiconductor manufacturing facilities within the U.S., fosters research and development in cutting-edge technologies, and

implements measures to protect intellectual property and national security. Additionally, it seeks to diversify the global semiconductor supply chain by working closely with international allies to build a more resilient and secure production network (The White House, 2022).

This initiative is not only pivotal for safeguarding national security but also serves as a catalyst for job creation and economic growth within high-tech industries that are crucial for the future competitiveness of the U.S. on the global stage. With a strategic location along a 3,000-kilometer border with the U.S., a robust trade framework under the USMCA, and a well-established manufacturing base, Mexico is well-positioned to play a key role in the North American semiconductor supply chain. However, while traditional sectors like automotive and electronics have successfully leveraged these advantages, the semiconductor industry—particularly in assembly, testing, and packaging (ATP)—remains underdeveloped. The ongoing reconfiguration of value chains and the momentum of nearshoring present Mexico with a unique opportunity to attract high-value investments in semiconductors, though considerable challenges remain (Garrido Lastra & Tapia Marchina, 2024).

4.6. China's Strategic Investments in Mexico

The surge of Chinese investments in Latin America and the Caribbean has emerged as a pivotal strategy for capitalizing on the region's export potential. China's focus has been on strategic sectors including automotive, electronics, and energy, where it has channeled substantial investments. These efforts have not only bolstered industrial output but have also spurred the development of crucial infrastructure projects, such as the construction of ports, roads, and technological development initiatives.

A striking example of this trend is found in Nuevo León, which has attracted approximately \$7 billion in FDI since 2021. In that year alone, Chinese firms were responsible for 30% of the FDI in the state, while U.S. companies accounted for 47%. This influx of capital highlights China's increasing significance as an economic force in the region (Secretaría de Economía, 2022).

According to The New York Times, the primary driver of Chinese investments in Mexico is to bypass trade sanctions imposed by the U.S. By establishing operations in Mexico, Chinese companies aim to rebrand their products as "Made in Mexico," thereby gaining access to the U.S. market without incurring the tariff penalties that would apply to goods directly exported from China (Goodman, 2023).

In the long term, the influx of Chinese investments could reshape Mexico's economy and its global relationships. These investments have the potential to strengthen Mexico's industrial infrastructure, enhance the competitiveness of its exports, and diversify its trade connections. However, this growing Chinese influence is not without risks. Key concerns include the potential for trade imbalances, labor issues arising from divergent standards and business practices, and the

increasing dependency of the Mexican economy on the investments and strategic decisions of Chinese firms.

Moreover, the U.S. has expressed deep concern about the implications of Chinese investments in its closest neighbor for both its economy and national security (Forbes, 2023). The relationship between Mexico, the U.S., and China will undoubtedly be a key topic during the renegotiation of United States-Mexico-Canada Agreement (USMCA) in 2026. Pressure to increase North American content in U.S. imports is anticipated, and more aggressive measures—such as restrictions on the origin of capital and demands for traceability of Chinese investments—cannot be ruled out.

Although China's existing interests in Mexico are modest compared to its presence in South America, the growing influence of China presents a double-edged challenge (Ding, et al., 2021). On one hand, Mexico stands to benefit significantly from the capital and technological advancements that Chinese investments bring. On the other hand, it must carefully navigate the economic and political ramifications of this deepening dependency, ensuring it does not pose a threat to the national interests of its main North American trade partners.

5. Critical Research Questions for the Future of Nearshoring

Throughout this article, we have observed that the phenomenon of the reconfiguration of GVC in general and nearshoring in particular leaves numerous questions unanswered regarding its true nature and the expectations it generates for the future. Nonetheless, the trends we have outlined offer a glimpse of what this process might entail. It is imperative to initiate a more formal and structured dialogue on a research agenda that addresses the gaps in our understanding of this phenomenon (Duran-Fernandez, 2023c).

Firstly, it is essential to develop studies that provide a more objective and precise measurement of the scope of nearshoring. At present, it is too early to draw definitive conclusions about whether the influx of investments and the increase in market share represent sustainable trends or merely temporary shifts. There has not yet been sufficient effort to dissect the fundamentals of relocation. For instance, is it more profitable to establish a plant in Mexico than in China or Southeast Asia? Which sectors in Mexico are most attractive to investors? If companies are leaving China due to the fragility of GVC, how is this reflected in country risk premiums, and what impact does this have on profitability? Moreover, beyond economic profitability, does environmental impact play a role that could sway decisions in Mexico's favor?

Another critical area for exploration is Mexico's capabilities and gaps in capitalizing on the nearshoring trend. What type of infrastructure is needed? What investments in human capital, training, and skills development are required? In this regard, some studies, such as those by Payan et al. (2024), Fuentes, Duran-Fernandez, & Montoya (2024), and Escribano & Duran-Fernandez

(2024), have begun to address strategies in specific sectors that nearshoring will likely demand in the coming years and potential approaches to meet these needs.

Moreover, there has been scant discussion about how to finance the requirements posed by nearshoring. It is well known that a country the size of Mexico cannot rely solely on FDI to finance its entire development strategy; there is a pressing need to create investment vehicles that channel domestic savings into productive projects. Retirement savings managed by pension funds (AFORES) represent the largest source of capital, but these will only be viable if structured vehicles are in place that offer attractive returns and manageable risks. Understanding the potential role of development banks, both national and multilateral, represents a significant opportunity. Additionally, it is crucial to bolster innovation as a key driver for increasing the added value of Mexican industry.

Finally, there is a pressing need to articulate an industrial policy that can harness the nearshoring phenomenon to foster more balanced and inclusive growth. This policy must extend beyond the immediate opportunities presented by nearshoring, such as the substitution of Chinese imports in the North American market, and focus on the sustainable and long-term development of the Mexican economy.

6. Opportunities, Challenges, and Strategic Implications for Mexico

Like any phenomenon that dominates the public agenda and generates high expectations, the reconfiguration of GVC has sparked intense debate about its true implications and the opportunities it presents for Mexico. It is crucial to consider what this process could tangibly mean for the country.

First, the relocation of value chains offers companies the chance to diversify their geographic exposure and mitigate risks by investing in assets like factories and production lines closer to consumer markets. This diversification should not be misconstrued as a call to revive outdated protectionist practices and import substitution strategies—approaches that have failed in the past, particularly in developing nations. Despite some developed countries advocating for such initiatives, the fundamental economic principle that free trade and openness maximize welfare remains valid, even in today's shifting global landscape.

Moreover, the relocation of GVCs presents a significant opportunity to attract investment and boost exports, potentially spurring growth, and job creation in Mexico. In this context, relocation appears as a growth avenue, particularly as global conditions have rendered the business environment in certain countries more favorable. However, it is essential to recognize that these opportunities are specific and stem not from institutional strengthening or strategic investments in human capital but from Mexico's advantageous geographic positioning in the current global context.

The benefits Mexico is currently witnessing are concentrated in specific sectors and regions. Yet, these potential advantages could be stymied by bottlenecks that require targeted public policy interventions in partnership with the private sector. It is also important to clarify what the relocation of value chains is not: it is not a widespread movement of factories shutting down in China and relocating to Latin America or Mexico. Nor is it a public policy of the U.S. aimed at fostering investment in Latin America. While the U.S. has adjusted its industrial policy, the focus remains on reshoring—repatriating investments back to the U.S.—rather than encouraging investment in the Western Hemisphere.

Finally, it is vital to understand that the relocation of value chains should not be viewed as a substitute for a comprehensive development strategy. It is not a panacea that guarantees sustainable development or automatically stimulates the emergence of new sectors in new geographies without the support of robust economic policies.

In summary, while the phenomenon of relocation presents a significant opportunity for Mexico and Latin America, its impact has thus far been limited. The potential for this phenomenon to scale and broaden its reach will hinge on the public policies adopted in the future and the evolution of the external environment.

The nearshoring phenomenon indeed represents a critical opportunity for Mexico and Latin America in the ongoing reconfiguration of GVCs, especially in an increasingly uncertain world. However, it is essential to resist simplistic narratives that portray it as a cure-all for the country's development challenges. While nearshoring has brought tangible benefits to specific sectors and regions, its broader impact remains constrained and will depend on Mexico's ability to implement effective public policies that amplify this process. Crafting a comprehensive strategy that includes strengthening infrastructure, developing human capital, fostering innovation, and creating suitable financial vehicles is crucial to maximizing the potential of nearshoring. Only through a strategic and coordinated approach can this phenomenon contribute sustainably to the country's economic growth and inclusive development.

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