

OFFICE OF THE CHIEF ECONOMIST

why

Reshoring trend?
What the evidence shows

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## **Key Findings**

- Reshoring, or the relocation of affiliates to their home country, is not a new business strategy. Businesses may choose to reshore for various reasons including poor production quality or lack of realized profits abroad. The pandemic and geopolitical tensions just highlighted this business strategy.
- Reshoring is often a costly endeavor for businesses. When companies reshore, they
  are no longer benefitting from foreign countries' competitive advantages. Thus,
  reshoring is likely to raise production costs and, ultimately, prices for consumers.
- Reshoring doesn't happen overnight. Prohibitive penalties for breaking existing
  contracts with suppliers, the time horizon required to shift activities to another location
  (e.g. build facilities, hire and train employees, etc.), or the lost profits of forsaken
  activities not fully amortized makes it hard to reshore in the short term.
- To date, research and the limited data available do not suggest significant reshoring to Canada taking place.

#### Introduction

The disruptions to global value chains (GVCs) stemming from the Covid-19 pandemic along with geopolitical tensions led to an upsurge in the debate in favour of reshoring to enhance resiliency. Reshoring, sometimes referred as back-shoring or homeshoring, as well as other offshoring strategies are being proposed as solutions to global supplying issues, further reinforcing a narrative that had already been gaining momentum since the early 2010s.

Traditionally, reshoring refers to the relocation of production that was previously offshored to the business' home country. However, the definition has been expanded and now many refer to reshoring as the growth of domestic manufacturing capacity or reshoring of suppliers. While the concepts are related, the latter does not necessarily imply a movement of facilities from abroad to a multinational enterprise's (MNE) home country. Furthermore, reshoring and relocation are sometimes used as synonyms, without any distinction as to where the business activity is ultimately being moved (i.e. domestically or elsewhere abroad). In this paper, reshoring is considered as the movement of offshored facilities back to the multinational's home country. It includes a partial or full relocation of subsidiaries abroad back to the home country and is a much narrower definition of reshoring than what is typically found in the literature.

Reshoring is commonly associated with the manufacturing sector – i.e. bringing back manufacturing capacities, often in key industries. A few reasons explain this focus on manufacturing. First, industrialized economies originally offshored manufacturing industries much more than services, due to differences in labour costs abroad and at home (De Backer et al., 2016). Thus, the number of reshoring cases is likely to be higher in these heavily offshored industries. Secondly, the disruptions to GVCs and geopolitical tensions have highlighted the need to decrease vulnerabilities and control the production of critical goods. Finally, the availability of international data for the production and trade of manufactured goods has allowed researchers to investigate relocation trends. Nonetheless, a few cases of



reshoring in the services sectors have been recorded, notably the reshoring (and automation) of call centers in developed economies.<sup>1</sup>

Given that the globalization boom started in the late 1980s, reshoring is a relatively recent phenomenon; initial offshoring being the precondition to affiliates reshoring. Adjustments to past offshoring strategies adopted by MNEs are more likely to happen at the end of the offshored investment lifecycle as premature disinvestment is reflective of unrealized profit and potential losses. As such, a growing number of relocation and reshoring cases have been referenced in business journals over the past two decades. Though, it is unclear as to whether recent relocations are part of an overall shift away from globalization to domestic production or isolated cases.

Reshoring is seen as a way to generate growth and create jobs in the manufacturing sector, and help advanced economies regain competitiveness and build skillsets in global manufacturing (De Backer et al., 2016). In the world of policy making, reshoring supports three objectives: enhance resilience with respect to essential supplies, decrease vulnerability against strategic competitors, and bring manufacturing jobs back home (Roberts and Lamp, 2021). Understandably, the pandemic accelerated interest in reshoring, now seen by governments as a way to increase supply chain resiliency.

Independent of governments' policy objectives, it is important to determine whether business strategies and/or future location decisions are changing and if reshoring is one of the outcomes. A change in foreign multinationals' (FMNEs) offshoring strategies could impact Canada's capacity to attract and retain foreign direct investment (FDI), whether FMNEs decide to leave Canada and bring their activities back home, or, on the contrary, decide to increase their investments in Canada given its proximity to the US. In the particular case of American FMNEs, they may consider moving their overseas affiliates to Canada, i.e. nearshoring, as an alternative to reshoring, an opportunity for Canada to seize. Similarly, Canadian multinationals (CMNEs) may decide to bring parts of their offshored activities back to Canada or move them elsewhere.

This paper summarizes recent literature on reshoring and examines whether data do in fact reveal a trend towards reshoring. The first section looks at the theory behind how companies make offshoring and reshoring decisions. The section that follows summarizes methodologies used to assess whether reshoring is taking place, findings from various international studies, and the latest findings with respect to Canada and the United States. An analysis of data on the activity of MNEs at home and abroad provides a sense as to whether firms are reshoring or instead moving their operations elsewhere abroad. Finally, a summary of results from recent business surveys provides insight on intentions going forward.

# Business location decisions: from offshoring to reshoring

Before examining firms' reshoring decisions, it is important to understand the initial decision to offshore. Establishing an affiliate in a foreign country is a strategy over a long time horizon with possibly savings in operation costs but also large set-up costs (or sunk costs) such as obtaining permits, building, and hiring and training workers. The Ownership, Location and Internalization (OLI) framework of production identifies four reasons for MNEs to decide to

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<sup>&</sup>lt;sup>1</sup> https://www.forbes.com/sites/calumchace/2020/08/10/the-impact-of-ai-on-call-centres/?sh=5157239b7ba7



offshore (State of Trade, 2021). First, offshoring can help a firm access a new foreign market (i.e. market-seeking investment). Secondly, as per the Ricardian theory, offshoring may allow firms to lower their production costs by leveraging another country's competitive advantage. Third, through offshoring, firms can gain access to specific resources, such as raw materials. Finally, businesses can gain access to specific strategic assets, notably through the acquisition of foreign businesses.

The initial reason for offshoring impacts the company's decision to either bring activities back home or relocate to another country (Barbieri et al., 2019). There is less potential for market-seeking FDI to be reshored (FeI et al., 2020) or relocated to another country.<sup>2</sup> Similarly, offshored activities to access key strategic resources are typically constrained by site endowment in resources and, thus, are also less likely to be reshored.

Firm production theory differentiates between long-term production and immediate realizable production, or short term, defined as the production realizable with a fixed level of input. With respect to relocation of value chains, short-term stickiness in production may be a result of prohibitive penalties for breaking existing contracts with suppliers, the time necessary to shift activities to another location (e.g. build facilities, hire and train employees, etc.) or the lost profits of forsaken activities not fully amortized. In the long run, however, firms' costs related to relocation are less constraining. They may adjust their production (i.e. through offshoring, outsourcing and finding new suppliers, relocation, etc.) in response to regulations, the geopolitical climate and foreseeable risks.

The time required to restructure businesses activity should not be underestimated. Barbieri et al. (2020) note that the restructuring of a globally integrated supply chain – whether it be through new suppliers, the relocation of affiliates, or both – is a gradual process and that businesses' strategical shifts take time to be observed. Di Stefano et al. (2022) highlight that given the sunk costs associated with offshoring, firms will respond to shocks to demand, trade and/or foreign production costs by relocating production only if the shocks are large and persistent.

Reshoring requires foreign businesses to divest some of their activities from abroad as an initial step. Divestment is not a recent phenomenon; businesses, which are seeking to maximize their profit, have always been adjusting their strategies to changing market conditions. For example, Borga et al. (2020) found that 34% of all total assets of foreignowned multinational enterprises in 2007 (accounting for 17% of their sales and 23% of their employees) had been divested by 2014. Furthermore, in some years, the value of foreign divestments was greater than investments. In the globalized economy, some divestments can lead to multinationals affiliates' relocating or reshoring.

The following are often-cited reasons behind MNEs' decisions to reshore some of their activities:

- Cost: Changes in the relative costs of foreign and domestic locations (Albertoni et al., 2015; Dachs and Zanker, 2014; Martinez-Mora and Merino, 2014; De Backer et al., 2016), and knowledge gained about initial cost-assumptions (Boffelli et al. 2021);
- Quality: Issues with the quality of the inputs received from abroad, either from outsourced or offshored activities (Zhai et al., 2016; A.T. Kearney, 2022);

<sup>&</sup>lt;sup>2</sup> Barbieri et al. (2019) find that when market-seeking FDI is relocated however, it is more likely to be reshored than relocated to another country.



- Risk: A change in the risk, perceived or real, associated with global sourcing and
  offshored activities (e.g. fluctuating transportation costs, increased extreme weather
  events, conflicts, exchange rate fluctuations, threats to intellectual property, difficulty
  securing inputs, supply bottlenecks, etc.);
- Production structural change: A structural change in the inputs required for production, notably through digitalization (De Backer et al. 2016) and process automation;
- Policies and regulations: Government incentives to reshore (Global Affairs Canada, 2020) and restrictions on international sourcing (e.g. trade barriers, tariffs, ban on imports, etc.);
- **Firm values (branding):** Firm values related to economic nationalism (*i.e.* made local), sustainability (Cosimato and Vona, 2021) and carbon footprint reduction (A.T. Kearney, 2022), as well as inclusive sourcing within the domestic economy.

Reducing risk, or de-risking, in response to global uncertainty has been presented as a core reason for relocation. However, predictable risk has already been factored in by any profit-maximizing firm in their affiliate site-selection process. Opportunities to increase profits at a given level of risk have already been considered. Therefore, other location strategies lead to lower profits and would likely not be considered by firms, unless firms reassess risk as being greater. Governments can sway MNEs' affiliate location decisions by compensating lower profits. The prohibitive cost of incentivized relocations makes them less viable when applied to an entire economy, though possible in select industries (e.g. car manufacturing, microchips production, etc.). Governments' choices of industries to support and/or protect continues to evolve in light of technological developments and national interest or public security considerations. However, experts have mixed views as to whether reindustrialization policies are sustainable, and whether the generated local expertise will provide the country a comparative advantage in the long run (Guillou, 2022).

Other shoring alternatives, such as nearshoring—i.e. moving affiliates to nearby countries—are more likely to be favourable business strategies compared to reshoring as firms can still take advantage of other countries' competitive advantages while minimizing offshoring risks. "Friendshoring"—i.e. moving affiliates to ally countries or countries with which the business' home country has little or no geopolitical tensions—is a term that emerged in 2022. The pandemic and shifting geopolitical landscape brought to the forefront economic security and resiliency for policymakers and governments. As noted, businesses take into account governmental policies and regulations when making investment location decisions. Thus, firms may choose to move operations out of a given country in response to a change in government policies provided that the benefits outweigh the costs.

## Empirical evidence of reshoring is scarce

Challenges exist in identifying whether or not reshoring is becoming increasingly prevalent. The biggest challenge is having the right data. At the time of writing, limited data existed to do a rigorous investigation of the question. A longitudinal database of businesses' affiliates with measures of their characteristics at the firm-level, such as employment and capital, would be ideal to track variations over time. In the absence of such data, various methodologies have been used to try to measure reshoring trends.



A drop in imports in an economy is often used as a macro-level measure of reshoring. A decrease of imports may imply a shift from production abroad to increased domestic manufacturing capacity. This shift may reflect the reshoring of foreign affiliates though it could also reflect the switch from foreign to domestic suppliers. De Backer et al. (2016) identify a slowdown in the growth of the ratio of imports to domestic demand in major economies between 2005 and 2014 but no decrease in the ratio that would have suggested reshoring. Alternatively, Krenz and Strulik (2021) estimate the reshoring intensity, defined as the change in the ratio of domestic over foreign inputs, over time. Using the World-Input-Output Table, they show an increase in the ratio of domestic over foreign inputs from 2000 to 2014. The authors interpret the result as an indicator of reshoring. However, the increase in domestic inputs relative to foreign-procured inputs could be due to other factors, such as a growing number of domestic firms sourcing inputs and/or a changing industrial mix. In other words, other underlying drivers may be behind this outcome with no change in the original level of foreign inputs.

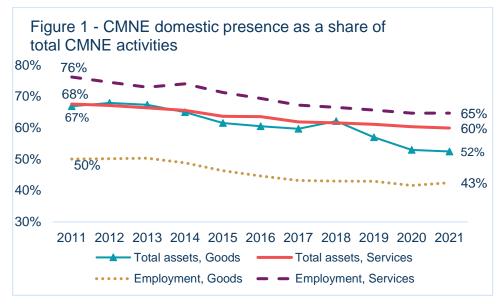
The manufacturing import ratio (MIR), a measure of total manufactured goods imported as a share of domestic output, is a commonly cited measure of reshoring. An increase in domestic manufacturing coupled with a decrease in imports is a sign of potential reshoring because it may signal that inputs are now being produced domestically and are no longer being imported from affiliates with production facilities abroad. However, a change in MIR could reflect other trends such as an increase in domestic production due to technological advancements. For over a decade, Kearney has published its annual US reshoring index. which represents the year over year change in the MIR at aggregated level for the country. In their latest publication (2023), they report a MIR of 14.10 in 2022, representing a decrease of 0.39 from 14.49 in 2021. This result means a year over year smaller dependency on imports, which Kearney interprets as a sign of reshoring. However, the observed decrease follows a sharp increase of the MIR between 2020 and 2021 (+1.54). Thus, this latest drop in the MIR is relatively small in comparison to the overall two-year increase (+1.15). It should be noted that the MIR has been following a decade-long upward trend and that the 2022 index remains above the 10-year average of 12.61, further contradicting the emergence of a reshoring. Global Affairs Canada (2020) enhanced the methodology by looking at the MIR ratio adjusted for inflation and found no sign of manufacturing reshoring in Canada. While there were limited signs of reshoring in the U.S. in some sectors, there was no evidence of widespread manufacturing reshoring in 2018-19.

Deloitte (2021) used the MIR ratio (not inflation-adjusted) and identified reshoring to Canada in three manufacturing industries: beverage and tobacco, machinery, and medical equipment and supplies. Global Affairs Canada updated their analysis in 2022 and found similar results —reshoring is not happening on a macro scale in either Canada or the United States. However, once inflation is accounted for, only the beverage and tobacco manufacturing industry appeared to show signs of reshoring in Canada.

Data on the activities of MNEs over the past decade reveal similar findings. Between 2011 and 2021, CMNEs' share of domestic employment decreased as a result of their much faster growth in employment abroad than domestically, for both the goods and services industries (see Figure 1). Indeed, the data doesn't provide clear indication of large-scale reshoring — the share of domestic employment should increase if CMNEs are shifting production back to Canada. However, it should be noted that a decrease in the share of domestic CMNE employment could also reflect advancements in technology that lead to lower labour requirements (e.g. automation) on top of the faster expansion of activities and employment abroad than in Canada. With respect to CMNE assets, over the decade, they grew faster



abroad than domestically, which resulted in the decline of CMNE domestic share for the goods and services industries. This further demonstrates Canadian businesses' continuing interest in developing their activities abroad.



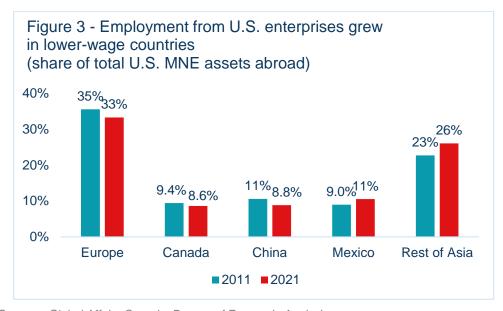
Sources: Global Affairs Canada; Statistics Canada. Tables 36-10-0440-01, 36-10-0604-01.

Data on the activities of U.S. MNEs, show that, from 2011 to 2021, the share of domestic employment remained relatively constant, hovering between 66% in 2011 and 68% in 2021; there is no indication of any notable changes in U.S. business strategies in favor of either domestic or foreign employment. As measured through U.S. MNE's assets abroad, nearshoring, or increasing investment in Mexico and Canada, does not appear to have been happening either over the past decade (see Figure 2). In fact, there has been growth in offshoring to other locations, particularly in Europe, where American firms' share of assets grew much faster than investment in other countries. Employment of U.S. MNEs abroad has grown in lower-cost destinations, however (see Figure 3). Though, a drop in U.S. MNEs employment in China is observed in 2021, the decline had started prior to the pandemic. Furthermore, according to the US-China Business Council, in 2020, 87% percent of U.S. multinationals did not relocate out of China and were not planning to do so, while only 4% planned to move operations back to the United States (Brenton et al., 2022). While U.S. MNEs are not divesting from China, data show that they are less inclined to invest there compared to a decade ago (see Textbox "Decreased investment in China: a different shoring strategy?").





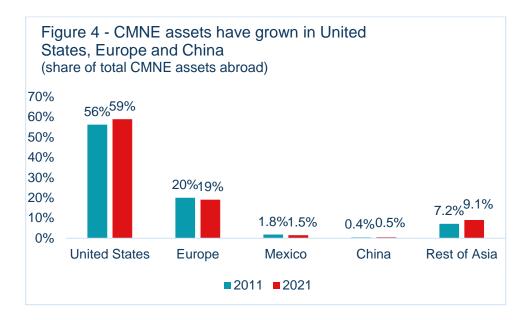
Sources: Global Affairs Canada; Bureau of Economic Analysis.



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We see similar behaviors among Canadian MNEs. While CMNE's assets abroad remain highly concentrated in the United States, there has been growth in assets in China and the other Asian countries (see Figure 4). Note that the shares of total CMNE assets abroad for 2021 are similar to 2019 pre-pandemic figures for the United States, Mexico and China. The share of CMNE assets in Europe, however, was higher in 2019 (23%), while the share in the rest of Asia was lower (7.3%).





Sources: Global Affairs Canada; Statistics Canada. Table 36-10-0470-01 Activities of Canadian multinational enterprises abroad, by countries.

Some proprietary and publicly available databases report reshoring cases in specific regions<sup>3</sup>. Albertoni et al. (2015) examined reshoring trends by using a dataset from the Uni-CLUB More Reshoring project developed by five Italian universities. They found that reshoring happened in just 7% of all offshoring cases tracked. Fel (2022) used data on firms that received incentives through the France Relance recovery plan's reshoring stream and found that of the sample of 317 "reshoring cases", only 7% were strict reshoring projects. The other projects involved the construction of new plants without previous offshoring, the adaptation of an existing French plant to Industry 4.0 (i.e. smart or autonomous production) or just an increase in production capacity (expansion of current activities). Dachs and Zanker (2014) and Dachs et al. (2019) have similar findings. Using surveys of European manufacturing firms, they show that reshoring was relatively rare, happening for less than 4% of the firms sampled. Global Affairs Canada attempted to examine reshoring in Canada and United States using fDi Markets' data on project announcements. However, the numbers of recorded reshoring cases were too low to be considered an accurate portrayal of MNE activity. Alternatively, the low number of reshoring cases recorded by fDi Markets may be reflective of the reality that few MNEs are choosing to reshore affiliates. The low number of reshoring cases reported is in line with results from Statistics Canada's Survey of Innovation

to 2003. The 2020 economic recovery French plan, France Relance, supports reshoring initiatives in key industries. Data on investments supported can be found on the French government website and serve as a reshoring tracker for France.

<sup>&</sup>lt;sup>3</sup> The Reshoring Initiative tracks and reports the number of projects, the number of jobs created and capital expenditures happening in the US via reshoring. The European Reshoring Monitor, a project that ran from 2015 to 2018, tracked public announcements of reshoring in Europe over the period. FDI markets, a proprietary database, reports reshoring and relocation cases in a database that dates back



and Business Strategy which reports that between 2017 and 2019 only 1.2% of business activities were moved from outside of Canada to a Canadian location.<sup>4</sup>

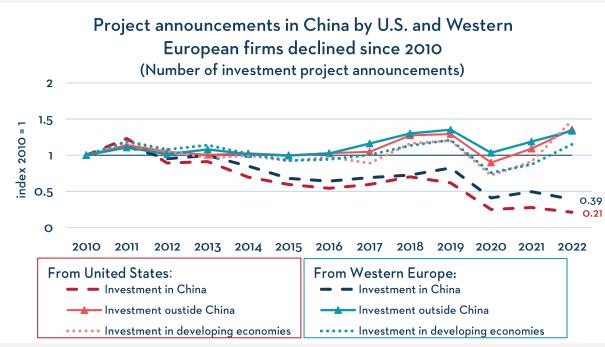
De Backer et al. (2016) used firm-level data to look for evidence of reshoring by MNEs through an econometric analysis of fixed assets and employment growth abroad. Some models tested show evidence of reshoring, though, overall, the authors find it to be less substantial and convincing than what survey results and anecdotal cases seem to suggest. A recent survey of Italian MNEs conducted during the pandemic found no notable increase in reshoring (Di Stefano et al., 2022). Furthermore, the study demonstrates that MNEs have been more resilient than domestic firms and those with more diversified networks of foreign affiliates have seen significantly higher revenue growth than average MNEs during the pandemic. They also note that firms seem to have chosen less expensive strategies than reshoring, such as building up inventories and redundancies in their supply chains. They conclude that trade policy uncertainty and tariffs are more likely to induce reshoring than temporary shocks, like the Covid-19 pandemic. Finally, De Lucio et al. (2023) explore how global Spanish manufacturers responded to the supply chain disruptions induced by the pandemic. Using various measure of import tendencies, such as the MIR, their analysis shows that companies have not implemented any reshoring strategies. They conclude that companies haven't made profound changes to their supplying strategies to prioritize resiliency over efficiency.

<sup>4</sup> Statistics Canada. Table 33-10-0199-01. Businesses that moved activities from outside of Canada into Canada, by industry and enterprise size.



### Decreased investment in China: a different shoring strategy?

Amid geopolitical tensions between the west and China over the last decade, there are signs that Western firms may have changed their business assessment of the benefits, costs, and risks of investing in China. Between 2010 to 2019, the number of investment project announcements in China by American and Western European companies<sup>†</sup> plummeted, down 63% and 76%, respectively. Over the same period, project announcements outside China as well as in other developing economies grew, suggesting that firms from developed economies are shifting their offshoring strategies and investing in countries where the net benefits are higher, possibly due to lower risks. However, this does not mean that firms are divesting their existing assets in China.<sup>‡</sup> In fact, FDI stock in China from American MNEs has been growing since 2012, though the growth rate diminished slightly over the past few years. Whether or not businesses have been reassessing the benefits, costs or the risks of investing in China, the data on new project announcements suggest that firms are finding other destinations for new investments in anticipation of higher gains.



Sources: Global Affairs Canada, fDi markets.

<sup>&</sup>lt;sup>†</sup>There are not enough Canadian project announcements in China in the fDi markets database to observe a trend.

<sup>&</sup>lt;sup>‡</sup> Hejazi and Blum examine the difficulties in decoupling from China. <a href="https://theconversation.com/why-does-so-much-of-the-worlds-manufacturing-still-take-place-in-china-207178">https://theconversation.com/why-does-so-much-of-the-worlds-manufacturing-still-take-place-in-china-207178</a>



### Companies' intentions going forward

Since the start of the pandemic, many business surveys have been conducted to gauge firms' intentions. While some surveys do not refer strictly to the relocation of affiliates, they nonetheless measure businesses' intentions in response to existing challenges and may shed light on future plans to reshore.

The relocation of suppliers and affiliates seems to be a consideration by many executives. ABB (2022), a global technology leader, reported strong reshoring and nearshoring intentions in their survey of 1,610 U.S. and European business executives. Results indicate that 37% of U.S. companies are considering moving production back to the U.S. and 33% are considering relocating nearby. Kearney's survey (2023) of U.S. CEOs and business leaders reveals an increasing leaning toward reshoring manufacturing operations. The vast majority of respondents (96%) reported having reshored, planning to reshore or evaluating whether or not to reshore some of their operations. Their definition of reshoring covers the relocation of affiliates and the search for new domestic suppliers.

Statistics Canada's Canadian Survey Businesses Conditions (2023, Q2), however, shows modest willingness for Canadian businesses to reshore. Only 4.4% of respondents have reported that they intend to relocate supply chain activities to Canada; 2.6 percentage points lower than in the last quarter of 2022. Intentions to relocate activities are higher in manufacturing industries (7.5%) and in firms of 1 to 4 employees. These results point to weak intentions of reshoring supply chain activities in Canada.

Other surveys point toward the adoption of alternate business strategies to increase resiliency. In Canadian Manufacturers and Exporters' March 2022 survey of 890 Canadian manufacturers, 23% of respondents indicated that they have begun to or are planning to offshore and expand their supplier base; while 16% plan to source from another region in the next three to five years; and 18% plan to move more sourcing to Canada. However, two thirds of respondents indicated that they want to maintain the current sourcing regions over the next three to five years. Conversely, McKinsey's survey (2022) of 113 global supply chain leaders reveals an interest in sourcing close to home: 81% of respondents indicated that they had begun dual sourcing raw materials over the past year; and 44% had started regionalizing their supply chain. Neither of these surveys mention whether the intended change in sourcing implies the relocation of foreign affiliates.



#### Conclusion

This paper summarizes recent literature on reshoring and empirical evidence examining the existence of reshoring. Economic theory can be used to understand the various factors affecting business location decisions. It suggests that reshoring by a majority of MNEs is unlikely since businesses consider all the risks and costs in their original offshoring decisions. Reshoring literature cites a number of risks and costs that businesses account for related to quality, policies, branding, and regulations. The literature underscores that reshoring tends to be adopted by companies in response to investments abroad failing to yield anticipated gains.

Government policies can influence business location strategies by altering businesses' anticipated advantages, risks and costs. As such, for a government policy to lead to large-scale reshoring (i.e. across multiple industries and a great number of companies), the policy would need to be far-reaching and could prove to be very expensive - costs that are ultimately borne by taxpayers and possibly consumers.

Given the lack of necessary data to analyze reshoring of affiliates, empirical analyses to date have primarily focused on the imports of inputs in the manufacturing sector. Little indication of reshoring has been found for this segment of the economy.

Using data on employment and assets of Canadian and American multinationals, the paper also investigates trends over time that could be signs of relocations. Canadian firms having expanded their activities abroad at a faster rate over time than within the domestic economy. This trend holds for both goods production and services industries. In contrast, employment of U.S. multinationals domestically and abroad appears to have grown at the same rate. In either case, the data do not point to reshoring trends.

Finally, our review of various business surveys tells a mixed story regarding future intentions. Some surveys reveal that a significant share of respondents is considering relocation and reshoring, while others suggest subdued and declining interest in reshoring and relocating over time. Survey responses on business intentions provide interesting insight, however, realized intentions or actions remain the only evidence upon which policies should be based.

In summary, our analysis of the literature, economic theory, data on multinationals' activities, and business surveys indicate that reshoring is not a effective firm strategy and that there have not been signs of either large-scale or any notable increased reshoring by businesses.



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