

CANADA HAS A HISTORY OF SUCCESS IN
MANUFACTURING AND AN EXCELLENT
BASE FROM WHICH TO GROW AND MEET
THE CHALLENGES THAT COME WITH THE
CHANGING GLOBAL MANUFACTURING
ENVIRONMENT. CLEARLY, THERE IS MUCH
TO DO. EQUALLY CLEAR, THE REWARDS
FOR CANADA OF ENGAGING IN A SUSTAINED
AND EFFECTIVE STRATEGY ARE SUBSTANTIAL.

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Executive Summary

Globally, manufacturing is undergoing massive change driven by rapidly advancing technology, and the growing importance of consumers and producers in emerging markets.

Meanwhile, in Canada, despite being buffeted by the global recession and growing competition from manufacturers in emerging economies, the manufacturing sector continues to make a critical contribution to the Canadian economy. For example, manufacturing makes a major contribution to research and development, trade and wages. Despite the challenges the sector has experienced in recent years, there are reasons for optimism.

This paper offers a framework for discussing strategies for competitive advantage. considering the processes and ingredients associated with earning Foreign Direct Investment. The framework explains economic and political conditions – factors that comprise what the framework refers to as "investment climate". The framework also suggests a second, under-explored aspect, called "personalities". Personalities consist of the individuals promoting inward FDI in their jurisdiction: quite often politicians and other public policy makers, as well as the persons within the companies being courted.

We conclude with a discussion of possible actions for policy makers and others going forward.

Introduction

Manufacturing is undergoing massive change. It is happening up and down the value chain, and it is happening in both developed and developing countries. The processes and infrastructure that take products from ideas to reality are accelerating and changing radically.

Billions of dollars are being expended on markets, products and services that in many cases were not even contemplated earlier in the decade. Indeed, many are referring to the adjustments that are occurring as the "Fourth Industrial Revolution"; an upheaval driven by the Internet of Things. This revolution will change the way we build products, the machinery we use to make them and the sophistication of the people engaged. Importantly for this discussion, it will also affect the places where products are made.

Decisions about what countries earn production mandates are fluid. In another publication in this series, Moloney and Octaviani (2016) demonstrate that global foreign direct investment (FDI) is growing at twice the rate of the economy overall. While Canada has traditionally earned more than its fair share of inward FDI, for the last several years most of that investment was concentrated in the oil and gas sector. Manufacturing, for generations the bedrock of Canada's economy, has experienced more tepid investment growth. Thus, currently depressed commodity prices coupled with languishing manufacturing investment means that the importance of

understanding and influencing the forces that drive inward FDI is greater than ever.

This paper explores key elements of inward FDI decision making. It captures the aggregate of the factors at play and explains the decision-making process for FDI. It does so via a framework that shows general economic and political conditions – factors that comprise what we call "investment climate" - remain essential. However, this study also suggests a second, under-explored aspect. This second part is called "personalities". Personalities consist of the individuals promoting inward FDI in their jurisdiction: quite often politicians and other public policy makers, as well as the persons within the companies being courted. Understanding the interaction and flow between actors - within government, within companies and between government and the investing company is essential to capturing and leveraging the full potential that a jurisdiction holds for earning inward FDI. Indeed, the cases considered by Boothe and Schaan in this series highlight the important role that individuals can play, paying particular regard to the role of corporate champions.

Several questions emerge: How should Canada respond to the scope and pace of change? What must Canadian manufacturers do to compete for their share of inward FDI? How can governments develop and execute policies that facilitate and promote a pro-growth environment? Again, the framework offered here is constructive, not because it provides a definitive roadmap for successful FDI attraction, but rather because it describes the constituent elements. how they interact and how they evolve. In the end, it provides policy makers and those engaged in FDI attraction in Canada and elsewhere the basis for developing their own path forward.

The outline of the paper is as follows. In the next section we lay out some basic facts documenting the changing nature and importance of manufacturing to Canada, providing data that often gets overlooked about the sector. It provides a reminder of why this is important to Canada and reinforces the need for action. From there, we offer the framework referenced above to explain how investment decisions are made. The paper concludes with summary observations.

Context: Why Manufacturing is Important

Manufacturing in Canada was hard hit by the deep and prolonged recession that followed the global financial crisis of 2008-09. Manufacturing GDP declined by almost 11 percent over the period from 2000 to 2014 (Statistics Canada. Table 379-0031), while the rest of the economy grew by 57 percent (Statistics Canada. Table 379-0031). Since 2000, manufacturing employment in Canada has declined by almost 500.000 workers (Statistics Canada. Table 282-0088). Meanwhile, growth in total employment over the period was about 3 million (Statistics Canada. Table 282-0088). However, since 2009, manufacturing employment has stabilized at about 1.7 million (Statistics Canada. Table 282-0088).

Should we accept that manufacturing is something "other" countries do? Should Canada even bother competing for manufacturing FDI? The answers are an emphatic no and yes. Manufacturing makes an outsized contribution in several critical areas:

1) The manufacturing industry generates jobs — especially for people who may not otherwise have them. In 2014.

manufacturing represented 10.5 percent of total economic output in Canada (Statistics Canada Table 379-0031), and directly employed 9.6 percent of the Canadian labour force (Statistics Canada Table 281-0023). But manufacturing does not just provide lots of jobs, it provides high wage jobs; and more often than not, it provides those high paying jobs to people who might not otherwise have high wage jobs (Helper, Krueger and Wial, 2012). For example, the average wage for a Canadian employed in manufacturing in April 2015 was \$1.044 (Statistics Canada Table 281-0027) compared to \$935 for full-time employees in Canada overall (Statistics Canada Table 281-0027). Manufacturing is therefore essential to the creation of a large and robust middle class.

2) It pushes innovation:

Sustaining a viable, healthy manufacturing sector in Canada is essential because even though some have declared manufacturing to be out of fashion, the reality is that even though manufacturing accounts for just 10.5 percent of GDP (Statistics Canada Table 379-

- 0031), it is still expected to generate \$6.4 billion in R&D spending in 2015, 41.6 percent of all R&D spending by business in Canada (Statistics Canada Table 358-0024). Therefore, a reduced manufacturing footprint would equate to a dramatic drop in innovation.
- 3) It drives trade: Despite declines over the past 15 years, manufacturing continues to make a critical contribution to the Canadian economy, particularly to the Canadian trade balance, where it plays a disproportionate role relative to that of other industries. In 2014, it accounted for 61 percent of exports (Industry Canada). Obviously, goods produced domestically for either domestic consumption or export create more employment than do goods imported. Over the longer term, if a country allows exports to erode, R&D spending will slow, patents will not get issued and competitiveness will erode.

Due to its rich linkages with other activities, such as R&D, logistics, engineering, and sales and marketing, the manufacturing sector also offers a substantial multiplier effect on the national economy. Therefore, retaining and nurturing manufacturing is important; attracting manufacturing FDI is necessary, and building and maintaining a healthy infrastructure to support manufacturing is imperative.

In recent years, support has increased for bringing production mandates back to North America — mandates that had earlier been assigned to lower-cost jurisdictions like China and India. In 2014, only 14 percent of Canadian manufacturers planned to source from China, compared with 31 percent just one year earlier. Similarly, only three percent of firms held plans to source from India, compared to 12 percent in 2013 (KPMG, 2014).

Not surprisingly, cost is a primary reason for the resurgence. This is somewhat ironic because it was cost – and specifically labour costs – that compelled companies to send production to lower labour cost countries like China and

India originally. However, today the cost advantage is eroding. For example, in 2014, the overall manufacturing cost advantage of China versus the United States was estimated at less than five percent at the factory gate (Sirkin, Zinser & Rose, 2014).

A willingness to reshore production is occurring alongside an emerging recognition by many manufacturers that they should attach greater weight to other, previously underappreciated factors. As described, direct and easier-to-quantify cost-related issues like labour costs are narrowing. However, many manufacturers now also acknowledge that they may have under-estimated other costs; e.g., challenges associated with coordinating the supply chain, the distraction that managing distant supply chains can have on management and the tendency for innovation to slow when members of the value chain are not geographically proximate.

In sum, the pendulum is shifting. Policy makers are re-awakening to the critical role that manufacturing plays in driving important metrics like research and trade. Meanwhile, those that assumed that manufacturing would inexorably gravitate to lowcost jurisdictions are witnessing the emergence of new trends. For example, Industrial Revolution 4.0, along with narrowing cost gaps compared to certain jurisdictions, is creating the conditions for new manufacturing opportunities in high-skilled, developed economies like Canada. Policy makers that appreciate the trends and recognize the opportunities are best positioned to win inward FDI. The framework that follows provides a basis for understanding the necessary elements and for visualizing the decision-making process.

A Framework for Attracting Foreign Investment

For policy makers and those interested in the future of manufacturing in Canada, a series of questions emerge: What trends are most important? How do we leverage our strengths? What weaknesses should be addressed first? How do we consider all of these factors – the building blocks we have

developed, current opportunities, nagging challenges and future trends – and bring them together in a single, comprehensive strategy?

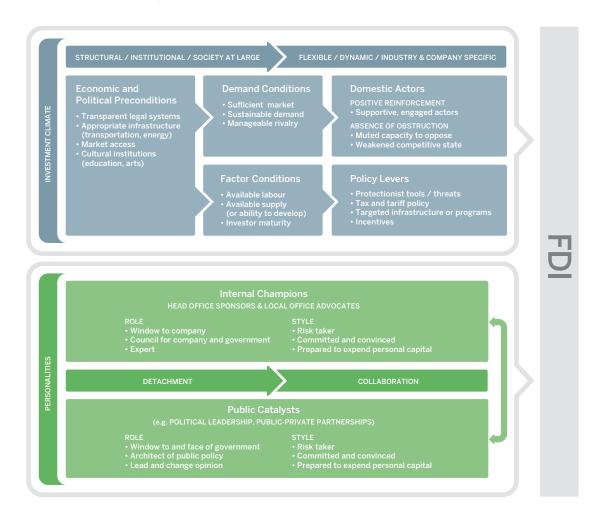
Practically speaking, the answer is quite likely, "we can't." However, it is possible that a framework can guide us, explain how decision

making around manufacturing investment and, more specifically, FDI, unfolds, and provide clues about policy tools going forward.

Figure 1 below suggests that the attraction of inward FDI is comprised of two components:

- a. Investment Climate, and
- b. Personalities

FIGURE 1 - FRAMEWORK FOR FDI ATTRACTION



Investment Climate

The Investment Climate consists of the range of economic, social and political factors that must be developed and understood to a level appropriate to the investment being contemplated. These items may be different for each industry and each company, and the importance that individual companies and industries attach to each may shift over time. They also vary between companies depending on their circumstances. Regardless of each component's relative or singular importance. they are quite easily grasped and are consistent with notions of rational thought and logical, ordered decision making based on quantifiable assessment.

The framework suggests that creating the right investment climate – the top half of the figure - necessarily takes time. Structural and institutional arrangements - the items on the left side of the continuum – can only be put in place incrementally over decades, but they tend to be robust once established. At the other end of the continuum are those factors that are more flexible and dynamic in nature. These are not woven into the prevailing institutional fabric of the country and are susceptible to change and negotiation.

For example, they reflect the interest and ability of existing players to oppose new entrants and the influence of specific policy levers employed by local and national governments to attract inward FDI or encourage re-investment by those companies already in place.

Clearly, for any investment to proceed, the political and economic preconditions must be supportive. Governments, therefore, may play a pivotal role. By way of example, it can be demonstrated that the conditions for Canada establishing itself as a destination for automotive FDI were formed over several decades. Tariff policy supported the establishment of an automotive manufacturing base in the early twentieth century. Later, preferential international relationships were leveraged to open markets for Canadian manufacturers, thereby solidifying the foundation. Subsequent policy initiatives paved the way for the Canada-US Auto Pact. which led to specialization and triggered automakers operating in Canada to focus on final assembly manufacturing. Conditions evolve over generations; they are not manufactured overnight.

Investors also weigh a spectrum of social and economic factors when assessing the attractiveness of investment locations. These include tangible items like transparent. compatible legal systems as well as infrastructure elements like energy availability and transportation systems. Additionally, those seeking inward FDI or those considering investment should not overlook less tangible aspects such as perceptions of cultural affinity. Investors ask themselves: 'would employees want to live here?' These are implicit criteria for investors and should be explicitly considered by economic development officials. From this, two considerations emerge:

- 1) Conditions evolve over generations. They are not manufactured overnight.
- 2) Because conditions evolve over decades, policy makers must consider what areas they should focus on in the here and now insofar as the development of a manufacturing strategy for Canada is concerned? This is not to suggest that some items are less important, or unworthy of attention. However, it does suggest that it makes less sense for investment attraction policy makers to prioritize broader, long term

societal issues when there are other matters specific to investment attraction that can be attended to – in the here and now.

The framework acknowledges the reality that the process unfolds slowly. Economic and political preconditions are formed cumulatively. It is unlikely that deficient economic and political settings can be remedied by the provision of generous short-term incentives alone. Shorter-term policy levers can help smooth rough edges or make already attractive investment destinations even more appealing. Generally, however, they have limited longterm bearing on the economic fundamentals of the investment in question. Rather, they serve as the "price of admission" for those wishing to be considered as a potential investment location. They put potential investors on notice.

The lesson for those seeking to attract investment is that short-term policy levers may have a role in engendering investor interest and providing internal champions with tangible affirmation or recognition of their support. However, short of exceedingly generous incentives or the promulgation of threats

(e.g., compromising market access), these tools are generally not decisive. A business case must succeed or fail based on its long-term economic merits. For example, in another paper in this series. Boothe and Schaan describe some of the attributes that General Electric (GE) recognized in placing a significant investment in Bromont, Quebec. Those attributes included access to talent and proximity to relevant clusters of related activity: factors that build over generations. Direct federal and provincial government support helped confirm the GE decision. Therefore, incentives (or threats) from government should be considered flexible, dynamic and ultimately shortterm in nature.

Obviously, each investment decision is different and the relative weight of each factor varies. For example, the framework suggests that political and economic stability are fundamental. However, a lack of such does not necessarily preclude a jurisdiction from consideration. For example, investors that do not abandon opportunities in unstable jurisdictions may accept the risk in the face of the potential rewards, taking steps to protect themselves and perhaps accepting additional

incentives to compensate for the increased level of risk. Canada is generally perceived as economically and politically stable — more stable, for example, than certain competitor jurisdictions. Risks notwithstanding, quality of life notwithstanding, some nations continue to earn disproportionate investment. For example, Mexico is currently earning the majority of new final assembly investment in the North American auto industry. Similarly, by most standards Canada is as stable as the United States, but the reality is this: Canada is not the US; it does not wield the same political heft. Therefore, the US is often a more defensible and compelling target for major inward FDI.

It is important to draw attention to the "Factor Conditions" described in the Investment Climate portion of the framework as they have particular relevance in the current context. These include items such as the supply, quality and cost of labour. The framework suggests a temporal component and the suggestion is that factor conditions, like labour, are unlikely to change in a substantive manner over the short term.

The fact that a nation is unable to substantively alter its labour stock over the short term should not lead policy makers to decide to discontinue investing: i.e. stop building education programs or cease investing in young people. However, the framework does suggest that a nation is unable to substantively change the cost of labour over the short term.

All of this background on labour seems to be self-evident, but it does lead to two salient points:

- Canada does have an advantage in labour quality that is unlikely to evaporate over the short term. It is a point of leverage for those engaged in advanced manufacturing.
- Labour and labour cost represents just one component of a complex interplay of factors comprising investment decision making. Therefore, a preoccupation with labour costs alone is irrational. Labour costs are important, but they should not overwhelm broader discussions about investment climate and competitiveness and the other, perhaps overlooked half of the framework:

 Personalities.

Personalities

The second component of the model relates to individual personalities. Large-scale investment decisions are not made based on the data alone, but by individuals with insights and agendas. The framework suggests that there needs to be goal congruence between actors in a visionary long-term sense. Here we are interested less in officials and functionaries and more in leaders: individuals who identify an opportunity and make a point of generating and sustaining interest. They encompass both the public leaders and corporate champions. These are the people who become committed to the process and convinced of its value. They are prepared to expend or risk their personal capital to advance the cause.

Public catalysts and internal champions may be involved for a considerable period of time and must demonstrate energy and commitment at crucial times. Insofar as specific investments are concerned, the influence of personalities increases as the final decision or announcement approaches. The framework suggests a transition from separation and detachment between internal champions and public catalysts in early stages or

phases towards much closer collaboration as final decisions approach.

The tendency is for this half of the model to be unrecognized or at least undervalued, to assume that governments develop government policy, that business people make business decisions, that they do so independently, and that the policies are developed and the decisions are made on the basis of hard data only. Relationships and the role of leadership and advocacy are undervalued because it is not possible to quantify the input. The framework does not attempt to place a tangible, measurable value on the role of personalities, but it does remind us of their importance. and in the process, cause policy makers and others to ask such questions as:

- How do we identify internal champions?
- What do we need to do to engage the internal champions?
- Do we have a public catalyst?
- Are the designated public catalysts prepared to expend their political capital for manufacturing?
- Can they maintain sustained attention?
- How do you bring the internal champions and the public catalysts together?
- How do you bring them together sooner?

The tendency for those engaged in investment attraction within government is to identify the "selling points" and then sell those points to potential investors. A tendency also exists within government to under-estimate the critical role that internal champions play and to bypass even alienate - the potential internal champion by reaching out directly to head offices outside of Canada. The Boothe and Schaan study in this series is unequivocal (2016). They identify the critical role the President of Toyota Motor Manufacturing Canada, Ray Tanguay, played in securing a new assembly plant in Woodstock, Ontario. Similarly, they describe how the CEO of GE Canada. Elyse Allan, was a strong internal advocate for her company's major investment in Bromont, Quebec. Furthermore, Boothe and Schaan highlight the contributions of Robert Hardt, President and CEO of Siemens Canada, in sponsoring his company's partnership with New Brunswick Power in the Fredericton Smart Grid Centre. Each of these examples reinforces the fact that the best system is one where Internal Champions are identified and then engaged: less as targets, more as collaborators. Doing so recognizes and leverages the fact that those Internal Champions are "in" the company every day, betterequipped to understand what messages resonate, who needs to hear those messages and when.

Clearly, the investment environment is dynamic. Options are diverse and competition for attention is intense. If investment decisions were made purely on the basis of dispassionate economic analysis, an understanding of economic and political preconditions along with various demand and factor conditions would suffice. However, such is not the case. The framework offered here suggests that additional factors are at work. An understanding of the role and influence of persuasive personalities and the relationships they forge is necessary to any interpretation of the inward FDI attraction process. Catalyzing personalities must exist within investing organizations as well as the jurisdictions seeking investments. Such persons elevate the discussion, instill urgency to the process, interpret advice. provide feedback to stakeholders, and provide a conduit to decision makers. Identifying these individuals and understanding their influence is critical.

Final Observations

Canadian manufacturing was hit hard by the deep and prolonged recession in the US, its largest customer. Yet even before the major recession of 2008-09. Canadian manufacturing was drifting downward and had been since the turn of the millennium. Since the depths of the recession, however, manufacturing in Canada has edged upward, a fact that is not universally understood. Today, manufacturing remains a critical contributor to the Canadian economy. Therefore, policy makers must continue to nurture the slow path of recovery the sector has been on for the past several years. Manufacturing in Canada is simply too important — too critical to the country's innovation agenda and to its export orientation — for Canadian policy makers to allow its manufacturing base to wither.

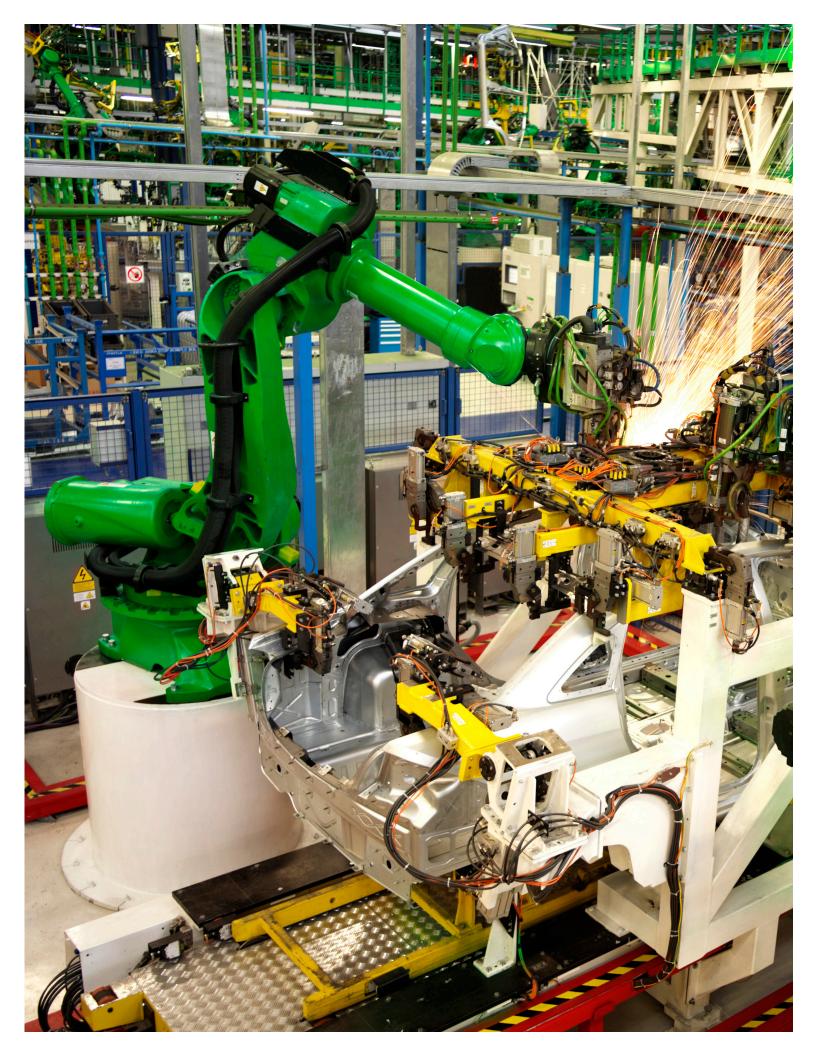
To compete successfully in the future, Canadian manufacturers must embrace advances in technology and software, and improve quality and customer choice. That means embracing emerging trends related to the Fourth Industrial Revolution and the Internet of Things. This represents a significant

opportunity for Canada and its manufacturing firms to reassert global competitiveness. To realize the potential, individual firms, educational institutions and governments will need to collaborate to ensure the next generation of workers has the skills that it requires.

The framework described in this paper provides a means by which to consider and prioritize actions. Short term policy levers, for example, will continue to be necessary, including the provision of incentives. But beyond short term boosts that such instruments represent, the framework suggests that policy makers must also consider less tangible aspects of the investment decision making process. The framework guides policy makers to identify and leverage personalities and leaders in both government and business. It suggests that Internal Champions and public policy practitioners integrate their work to support the attraction of new or renewed mandates for Canada.

While many challenges lie ahead, they are matched

by opportunities that await Canadian firms that develop winning strategies for competitive advantage. Canada has a history of success in manufacturing and an excellent base from which to grow and meet the challenges that come with the changing global manufacturing environment. Clearly, there is much to do. Equally clearly, the rewards for Canada of engaging in a sustained and effective strategy are substantial.



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