PERSPECTIVE

Repatriating Manufacturing: Between Dream and Reality

By Joëlle Noreau, Senior Economist

The COVID-19 pandemic disrupted supply chains and revived many countries' desire to achieve greater autonomy in goods production. The sentiment "never again will we depend on external supply for essential needs" echoed around the world. Should we repatriate the goods production that had been offshored in recent decades? The idea did come up. However, in light of the responses provided by entrepreneurs the world over regarding their intention to bring back the goods production that had been offshored in the past, and given the (technical, recruitment, financial, etc.) challenges that repatriating plants poses, we should not expect a wave of initiatives aimed at bringing all production chains back here.

The Idea of Repatriation Is Not a Remnant of the Pandemic

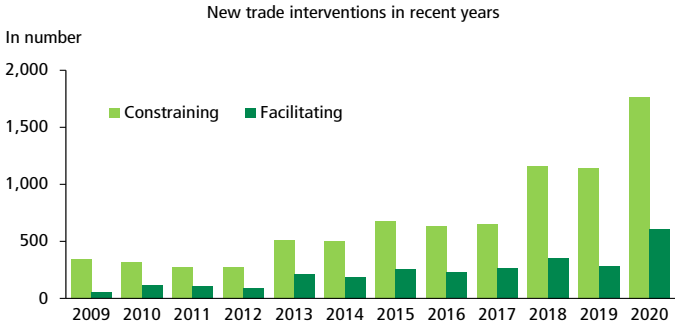
The past few years have not been kind to supply chain managers. Aside from COVID-19, there have been trade tensions between the United States and its various economic partners (China, Mexico, Canada, the eurozone, etc.) as well as Brexit and the increase in trade-restricting measures put in place by a number of countries (graph 1). These many events have brought to the fore the issue of proximity between production and consumers, the goal being to shorten supply chains, inject greater fluidity into business relationships and reduce dependence on distant suppliers.

A study published by The Economist in December 2020 found that the experience over the past decade has been that repatriating manufacturing is more difficult than anyone could have imagined. This raises the following question: given the experience of recent years, will the situation be different in the context of the pandemic?

Our analysis revealed that, in the past, promising studies on repatriation were far too optimistic. Moreover, the effects of introducing new technologies in manufacturing that are likely to bring production closer to where consumption occurs, thereby limiting international trade, might not materialize. Although one would have thought that higher tariffs, such as those imposed by the United States, particularly since 2017, might have made a decisive difference, this has not been the case. Graph 2 shows that, over time, annual growth in goods imports in the

GRAPH 1

Global trade: There has been an increase in legislation aimed at limiting it



Sources: World Bank and Desjardins, Economic Studies

GRAPH 2

United States: Import growth has outpaced domestic production growth in recent years

Sources: Datastream and Desjardins, Economic Studies

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United States has virtually always been higher than growth in the domestic manufacture of goods. For the period from 2011 to 2019, the average annual gap is 1.8% in favour of imports. Looking at a shorter period (2016 to 2019), the difference is smaller. However, import growth is still higher despite the fact that many high tariffs have been imposed, primarily on Chinese products, in the wake of tensions between the United States and China.

The same exercise for the eurozone reveals that, for the period from 2011 to 2019,[1] the average annual increase in production was 2.9%. It is still below that of imports, which was 4.7% (graph 3). For the period from 2016 to 2019, the difference benefits imports and is even wider. Annual production growth was 2.4%, whereas annual import growth was 4.7%.

GRAPH 3
Eurozone: Until recently, import growth had outstripped domestic production growth in the zone

Sources: Datastream and Desjardins, Economic Studies

GRAPH 4
Canada: From 2016 to 2019, Canadian goods production rose somewhat faster than imports

Sources: Statistics Canada and Desjardins, Economic Studies

[1] 2010 was excluded because it was a catch-up year after the 2008 and 2009 recession. 2020 was not considered either because it was an exceptional period.

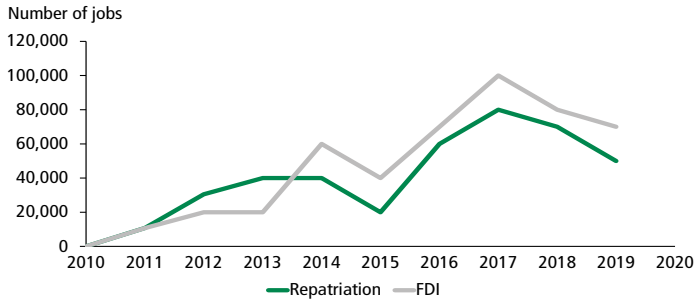
Using the same comparisons for Canada (graph 4), we see that for the period from 2011 to 2019, growth in Canadian production is slower than in the country's imports, as noted in the United States and in the eurozone. For the period from 2016 to 2019, the increase in domestic production was slightly higher than in imports. Was it the rising oil prices during this period (starting in the first quarter of 2016) that affected the value of Canadian manufacturing sales? Possibly, but that alone does not explain this trend.

The Pandemic and the Repatriation of Manufacturing

Will the pandemic change the movement? That remains to be seen. In the United States, 2020 data show a 3.3% annual decrease in goods production (from US$9,383.4B to US$9,076.7B) and a 4.2% drop in imports (from US$2,159.6B to US$2,069.1B). It bears remembering that 2020 is an exceptional year and cannot serve as a solid basis for an assessment.

Some organizations in the United States have been promoting the repatriation of manufacturing activities to their country of origin for years. This is particularly the case with the Reshoring Initiative, founded in the United States in 2010, which promotes repatriation by encouraging local production and investment inside U.S. borders. According to their most recent survey, close to 110,000 jobs were returned to the country in 2020. Since 2010, over 900,000 manufacturing positions were attributed to repatriation and foreign direct investment (FDI) in the United States (graph 5). Taking into account the annual US$500B trade deficit, their estimates indicate that between 3 million and 4 million manufacturing jobs continue to be offshored, i.e. the number to be reshored in the coming years. Additional efforts could be made in this respect. The desire to buy more products made in the United States was cranked up a notch when President Biden strengthened the Buy American Act provisions in January. In its election platform, the Biden-Harris team even proposed penalizing companies that wanted to offshore activities.

GRAPH 5
United States: The repatriation of production and FDI reportedly helped create 900,000 jobs



FDI: foreign direct investment
Source: Reshoring Initiative

What Are the Intentions?

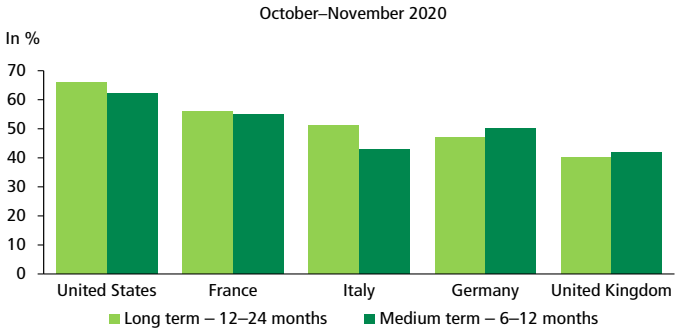
Over the past year, a few consulting firms have sought to determine where entrepreneurs from around the world stand on repatriation. EY, a consulting firm with offices worldwide, notes that multinational managers' intentions to repatriate production or bring it closer fell from 83% in April 2020 to 37% in October of the same year. That is a drop of 46 points in six months.

The firm Euler Hermes, which provides credit insurance, bonding and risk management services, also explored the issue. A survey was conducted of 1,181 companies in five countries (United States, United Kingdom, France, Germany and Italy). Focus was placed on six sectors: information technologies (including telecommunications), machinery and equipment, chemicals, energy and utilities, the auto sector and food.

The survey was conducted between mid-October and early November 2020. The main questions related to disruptions in supply chains in 2020. Interruptions in supply chains were reported by 94% of respondent companies and were attributed to COVID-19. They were described as severe in 26% of cases in the United States, compared to an average of 17% in other countries.

In the United States, 55% of the companies surveyed were considering looking for new suppliers in the next 6 to 12 months. That percentage was 66% beyond 12 months (graph 6). In one-third of these cases, entrepreneurs were already looking in the three main countries where they already had suppliers in order to find new ones. That said, there is no signal that trade with China will end.

GRAPH 6
Share of respondents planning to move their production, by country (without a specific destination)



Source: Euler Hermès

The Euler Hermes survey revealed that repatriating production did not seem to be the most popular option among the five countries considered. Less than 15% of the companies surveyed mentioned this option, whereas sourcing from geographically closer suppliers (nearshoring) was the popular choice among 30% of respondents. In the case in point, countries that are part of the same customs unions or that share trade agreements would be most interested.

Canada's Thoughts on the Matter

The COVID-19 pandemic showed just how dependent Canadian supply chains were on foreign countries, and not just for health-related products. Canada quickly found itself exposed in many spheres of activity in the spring and summer of 2020. This prompted companies to take a second look at what had driven them to favour suppliers outside the country, or even the continent, in the 1990s, 2000s and 2010s. Asian countries and Mexico were appealing in those years because of low taxes and wages. Added to that were inexpensive transportation costs and efficient shipping methods.

However, the situation has gradually changed in recent years. Higher tariffs and increasingly assertive protectionism have begun to weigh in the balance. In addition, the increased significance of environmental and social criteria for consumers and entrepreneurs has forced reflection. People came to the realization that producing and doing business abroad was perhaps no longer as advantageous as it used to be. Many observers found that offshoring part of production has also reduced our capacity to produce a good with all its components, in addition to causing a loss of skills, if not a certain capacity to innovate.

In the middle of the first wave of the pandemic, companies in particular were talking about repatriating some of the production that had been offshored over the years. However, is the desire to be more autonomous, to be able to rely on a more solid and stable supply chain, enough to start a movement once the emergency has passed? The pandemic has affected production in every country in many ways. Public health restrictions have limited the number of workers in the workplace. Supply chains have been broken or have become inconsistent, which has delayed deliveries to customers. Some companies have completely diverted their business lines away from their original purpose to produce sanitary equipment, such as masks, gowns and gel sanitizers. This was enough to revive the conversation around returning manufacturing plants to the country.

However, something like the repatriation of a plant takes a lot of thought and calculation. A serious cost-benefit exercise must be conducted before any such action is taken. Can losses associated with irregular deliveries from plants and suppliers located outside the country be quantified? Do delays in order deliveries from Canadian companies entail penalties that can be put in monetary terms? The question is whether the cost of doing business abroad has been given a second look recently. How have logistics costs, freight, taxes and tariffs changed in recent years? Can doing business with different government systems and trade rules that can change at the drop of a hat be taken into account? These are the variables that factor into the equation.

The other side of the coin must also be considered. To what extent can production be brought back to Canada? Should efforts first be made to find a supplier here before thinking about bringing back operations that had been offshored?

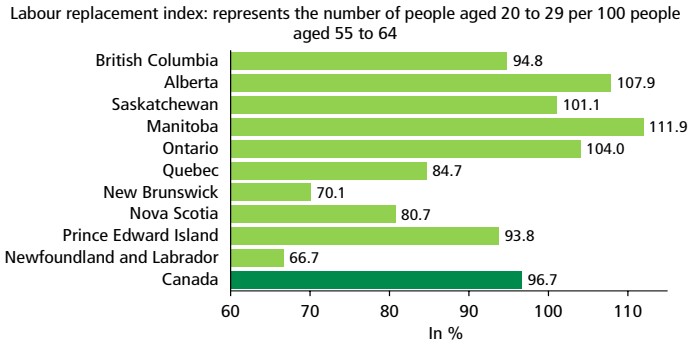
Constraints That Could Limit Repatriation

Some obstacles could complicate a return of previously offshored manufacturing activities. Labour availability is the first that springs to mind at a time when recruitment is already a challenge. In many respects, we are talking about a shortage. The manufacturing sector is already facing many challenges in filling positions at the current activity level. Technical jobs seem to be shunned by young people mainly. In some training programs, filling the cohorts has been a struggle in recent years despite government and manufacturing industry efforts to promote diversity, salaries and the challenges offered by the professions. Corporate and work-study programs have since been implemented to alleviate the labour shortage.

Efforts to promote plant jobs are impressive, but demographics weigh heavily in the balance. One of the ways of looking at the issue is through the replacement index. It is a matter of seeing how many people are aged 20 to 29 (entering the job market) per 100 people aged 55 to 64 (generally retiring). Graph 7 shows the situation in Canada and each province. In 2020, the rate in Canada was 96.7%. Demographically speaking, this means that there were fewer people aged 20 to 29 per segment of people aged 55 to 64. In Quebec, where the population ages faster, the situation was even more critical, with a replacement index of 84.7%. Ontario stood at 104.0%. However, this measure is based on demographics and is not an indicator of the match between the skills and training sought and those offered by newcomers.

GRAPH 7

The labour replacement index was below 100% in Canada and in a number of provinces in 2020



Sources: Statistics Canada and Desjardins, Economic Studies

How can the gap observed in Quebec, British Columbia and the Atlantic provinces be bridged? Many solutions have been offered: automating production, extending the working life of workers 55 years of age and older, working differently, training current plant employees to make them more versatile, hiring foreign workers, recognizing to a greater degree training given elsewhere than in our educational institutions, adapting work conditions to workers' specific needs and increasing remuneration, to name a few. Will this be enough? If not, is it realistic to plan new plants?

In another vein, where repatriating a company's activities increased the cost to produce a good, to what extent would consumers be willing to pay more for a good produced here? What percentage would be acceptable as a "Canada premium" (or Quebec, Ontario or any other province)? And for how long? If no cost increase can be passed on to consumers, how could it be absorbed by the company? If automation is the solution, will we be further ahead in terms of job creation?

Other questions also emerge and could be viewed as obstacles. What if national production chains have been broken for years? How can they be rebuilt? Should they be rebuilt? Does investing in machinery necessarily mean that operations will only be profitable on the condition that enormous quantities are produced, which presupposes prospecting for international markets where competition is already fierce? How do you consider this issue at a time when there is increasing talk of customizing orders and offering tailor-made solutions? How do you create a difference that makes a product unique, or virtually irreplaceable? Lastly, while the United States is eagerly promoting the repatriation of production, a scarcity of logistics spaces has been noted at the same time in most of that country's markets. The pressure is coming mainly from e-commerce companies competing to reduce delivery delays and optimize services to buyers. This scarcity may potentially affect the search for locations in which to set up new plants.

To Repatriate or Not to Repatriate

What if repatriation is not the only solution? We still need to know what problem we are trying to solve. The pandemic exposed, in particular, the vulnerability in medical equipment of health systems around the world.

More recently, electronic chip stock shortages underscored the dependence of some manufacturers, or even some economies, on a handful of suppliers. In some cases, these are critical sectors. In the longer term, the situation could become strategic.

The shortage of medical equipment last spring was the launching pad for this analysis. Various solutions were developed to fill in gaps. Since there is no such emergency any longer, there is some question as to the benefit of repatriating the manufacture of goods, whatever they may be, knowing that talk of repatriation had begun before the pandemic. Is it a matter of securing supply (timely availability and volume)? Is it a matter of guaranteeing quality and meeting national standards? Is the idea to rebuild production and supply chains as part of a government industrial strategy? Can creating more jobs and expanding the industrial fabric not happen by building more business relationships with

more local suppliers first, in the context of current production, and then developing new products?

Canada has the benefit of having a diverse manufacturing sector (table 1). Data by province are provided in table 2 on page 6 and show that Ontario and Quebec have the most establishments in the country. They are found in large numbers in all industries across the country. There are countless networking opportunities. Will they be successful? That remains to be tested. What must be determined is whether the expertise and the type of production sought are still available in the country. If they are, could this networking replace repatriation in some plants? It is possible that it could; the cost of bringing back a production unit or a process should be calculated in terms of recruitment, workforce training, equipment purchases and space.

For some, the Canadian manufacturing sector must focus on value-added goods. In that sense, it is better to look ahead than to look back, in other words, not try to repatriate something that has been offshored for 30 or so years. The focus should be on distinctive, unique products. Some go further by recommending that products that are Canadian through and through be developed by giving preference to partnerships with local suppliers, thereby gradually rebuilding lost production chains.

For others, the loss of expertise to foreign countries is not as dramatic as one might have thought. With artificial intelligence and automation on the rise, there is an opportunity to beef up Canada's manufacturing sector with a new generation of equipment that is head and shoulders above the machinery of competitors that industrialized in the 2000s and 2010s. This would be a chance to start fresh.

Some believe that we must look beyond the repatriation of production to invigorate the manufacturing sector in Canada. It must be given the capacity to react in an emergency like the one brought about by the COVID-19 pandemic, especially in the case of medical equipment. What is needed is a plan, a government vision to make plants more versatile. To do this, a strategy could be developed in order to provide incentives to change current production chains and create more industrial capacity for crisis situations. With an accelerated certification process for some goods, response to situations such as the one that arose in spring and summer of 2020 could be faster.

In focusing on how Canada's manufacturing sector should respond in an emergency, other solutions should be explored before opting for repatriation, according to them. Building up strategic material and equipment stocks, signing agreements with companies in advance to convert assembly lines according to needs in the event of various crises and aiding international trade could prove more effective and profitable in the long run.

In light of the responses provided by entrepreneurs the world over regarding their intention to bring back the goods production that had been offshored in the past, and given the (technical, recruitment, financial, etc.) challenges that repatriating plants poses, we should not expect a wave of initiatives aimed at bringing all production chains back here.

TABLE 1
Number of establishments in the manufacturing sector in Canada in June 2020

	TOTAL WITH EMPLOYEES
Food manufacturing	5,578
Beverage and tobacco product manufacturing	1,601
Textile mills	253
Textile product mills	617
Clothing manufacturing	1,249
Leather and allied product manufacturing	173
Wood product manufacturing	2,969
Paper manufacturing	380
Printing and related support activities	3,223
Petroleum and coal product manufacturing	194
Chemical manufacturing	1,677
Plastics and rubber products manufacturing	1,814
Non-metallic mineral product manufacturing	1,553
Primary metal manufacturing	476
Fabricated metal product manufacturing	7,309
Machinery manufacturing	4,310
Computer and electronic product manufacturing	1,508
Electrical equipment, appliance and component manufacturing	1,064
Transportation equipment manufacturing	1,733
Furniture and related product manufacturing	3,784
Miscellaneous manufacturing	5,343
Total	**46,808**

Sources: Statistics Canada and Desjardins, Economic Studies

The situation in Canada and the United States differs. Americans have long had an overwhelming capacity to fund their operations. The size of their companies gives them negotiating leverage that few countries have. Issues such as a scarce and ageing workforce seem to be less acute there than on this side of the border. With a presence in a very large number of sectors, they can claim to be rebuilding their production chains, something that might not be so obvious in Canada. However, Canadian manufacturers could benefit from the intentions of their American counterparts to do business with suppliers that are closer to their markets, particularly those on the North American continent.

The pandemic moved the return of production up slightly on manufacturers' agenda and has forced a discussion on the manufacturing sector's role in our economy. It has also brought to the fore the issue of labour scarcity and the upgrade of production processes. Beyond repatriation, which will not be something most entrepreneurs will choose, how deep of an imprint will the pandemic leave on the country's manufacturing sector?

TABLE 2
Number of establishments in the manufacturing sector, by province, in June 2020

TOTAL WITH EMPLOYEES	NEWFOUNDLAND	PRINCE EDWARD ISLAND	NOVA SCOTIA	NEW BRUNSWICK	QUEBEC
Food manufacturing	77	52	205	140	1,455
Beverage and tobacco product manufacturing	29	12	78	40	243
Textile mills	1	1	4	6	79
Textile product mills	6	1	13	15	179
Clothing manufacturing	5	2	8	14	603
Leather and allied product manufacturing	2	0	7	3	65
Wood product manufacturing	41	14	67	95	913
Paper manufacturing	1	1	8	10	124
Printing and related support activities	23	11	53	37	824
Petroleum and coal product manufacturing	1	1	3	8	52
Chemical manufacturing	8	5	27	16	499
Plastics and rubber products manufacturing	4	2	28	23	531
Non-metallic mineral product manufacturing	23	12	29	27	358
Primary metal manufacturing	2	1	2	1	138
Fabricated metal product manufacturing	32	14	118	98	1,892
Machinery manufacturing	11	22	38	42	951
Computer and electronic product manufacturing	7	1	23	10	400
Electrical equipment, appliance and component manufacturing	2	2	16	7	288
Transportation equipment manufacturing	16	15	76	34	410
Furniture and related product manufacturing	23	10	51	60	1,274
Miscellaneous manufacturing	28	18	90	86	1,365
Total	**342**	**197**	**944**	**772**	**12,643**

Sources: Statistics Canada and Desjardins, Economic Studies

TABLE 2 (cont.)
Number of establishments in the manufacturing sector, by province, in June 2020

TOTAL WITH EMPLOYEES	ONTARIO	MANITOBA	SASKATCHEWAN	ALBERTA	BRITISH COLUMBIA
Food manufacturing	1,943	186	126	447	935
Beverage and tobacco product manufacturing	534	33	39	119	470
Textile mills	114	5	4	18	21
Textile product mills	225	18	14	64	80
Clothing manufacturing	380	22	8	39	167
Leather and allied product manufacturing	64	7	1	6	17
Wood product manufacturing	866	56	38	206	671
Paper manufacturing	180	14	2	8	32
Printing and related support activities	1,421	80	66	262	437
Petroleum and coal product manufacturing	66	3	5	37	18
Chemical manufacturing	666	40	30	151	234
Plastics and rubber products manufacturing	815	61	26	125	196
Non-metallic mineral product manufacturing	595	51	49	146	261
Primary metal manufacturing	222	10	10	48	42
Fabricated metal product manufacturing	3,049	200	160	892	853
Machinery manufacturing	2,014	118	116	543	455
Computer and electronic product manufacturing	724	23	11	129	179
Electrical equipment, appliance and component manufacturing	478	16	15	83	157
Transportation equipment manufacturing	738	56	24	95	269
Furniture and related product manufacturing	1,480	70	55	239	519
Miscellaneous manufacturing	2,074	144	100	583	851
Total	**18,648**	**1,213**	**899**	**4,240**	**6,864**

Sources: Statistics Canada and Desjardins, Economic Studies