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Dutch Disease, Canadian Cure:

How Manufacturers Adapted to the Higher Dollar

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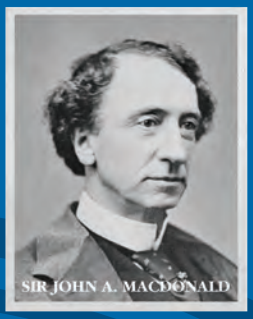
True North in Canadian Public Policy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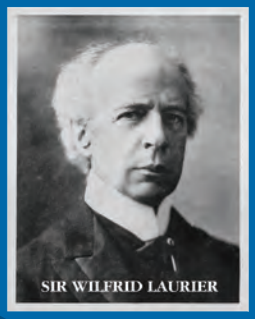
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Dutch Disease, Canadian Cure

Executive Summary

Dutch Disease has been a misnomer from the beginning. It always was mostly a theory that a boom in the resource sector would raise the exchange rate enough to lower a country's manufacturing output. In reality, manufacturing output did not contract in the Netherlands in the 1960s, for which the term was first coined.

Nor does it apply to Canada during the resource boom over the past decade. Over half of our manufacturing sector grew steadily up to 2008, in part fuelled by the resource boom and accompanying surge in business investment. Most of the struggles in manufacturing before the global recession hit in 2008-2009 were concentrated in three sectors—autos, clothing, and forestry-related industries. These industries all contracted in the US at the same time, showing that it was structural changes in these specific markets that lay behind their struggles, not the exchange rate. Overall, Canadian exports over the past decade performed almost exactly as the volume of demand in key export markets would have predicted.

The appreciation of the Canadian dollar in the past decade was not driven solely by commodity prices. There is a growing consensus that the largest part of the stronger dollar was due to the multilateral decline of the US dollar and increased investment inflows into Canada. Higher commodity prices played a secondary role in the appreciation.

Certainly, the stronger Canadian dollar has squeezed profit margins for Canadian manufacturing exports. They have adapted to ten years of a higher exchange rate, and nearly five years of parity with the US greenback, by reducing their dependence on exports and increasing their use of imported inputs. Manufacturers have by far the largest such 'natural hedge' against exchange rate movements of any industry.

The adaptability of manufacturers in Canada is reflected in their place in the vanguard of industry growth since the recovery began in 2009. Manufacturing output growth has been the third fastest of the 18 major industry groups, exceeding even mining and oil and gas. Looking forward, surveys of manufacturers by groups such as the Canadian Manufacturers and Exporters find a sector brimming with optimism for 2013, a far cry from the pessimistic tone of proponents of the Dutch Disease theory.

Le Syndrome Hollandais

Dès son origine, la désignation de syndrome hollandais était contestable. Le syndrome hollandais suppose qu'un boom dans le secteur des ressources d'un pays entraîne généralement une hausse du taux de change suffisamment grande pour réduire sa production manufacturière. Le fait est que la production manufacturière n'a pas reculé aux Pays-Bas dans les années 1960, circonstances au cours desquelles le terme est né.

La désignation ne convient pas non plus au boom des ressources de la dernière décennie au Canada. Plus de la moitié du secteur manufacturier a progressé régulièrement jusqu'en 2008, en partie alimenté par le boom des ressources et l'essor des investissements des entreprises l'ayant accompagné. La plupart des difficultés dans la fabrication avant la récession mondiale de 2008-2009 étaient concentrées dans trois secteurs, soit l'automobile, le vêtement et les industries liées à la foresterie. Ces industries ont toutes enregistré des baisses aux États-Unis durant la même période, ce qui montre que leur mauvaise fortune s'explique plutôt par les changements structurels dans ces marchés précis que par le taux de change. Dans l'ensemble, l'évolution des exportations canadiennes au cours de la dernière décennie a assez fidèlement traduit le volume de la demande dans les principaux marchés d'exportation.

D'ailleurs, l'appréciation du dollar canadien au cours de la dernière décennie n'a pas été motivée uniquement par les prix des marchandises de base. On s'entend de plus en plus sur le fait que la plus grande partie de la hausse du dollar canadien était attribuable à la baisse du dollar américain vis-à-vis du reste du monde et aux flux d'investissements au Canada en provenance de l'étranger. Le renchérissement des marchandises de base a donc joué un rôle secondaire dans l'appréciation du dollar canadien.

Certes, l'appréciation du dollar canadien a réduit les marges bénéficiaires pour les exportations manufacturières canadiennes. En revanche, les fabricants se sont adaptés à dix ans de hausse du taux de change et à près de cinq ans de parité avec le dollar américain en réduisant leur dépendance à l'égard des exportations et en relevant leur utilisation d'intrants importés. De toutes les industries, la fabrication présente donc l'exemple le plus éloquent de « rempart naturel » contre les mouvements du taux de change.

L'adaptabilité de la fabrication au Canada se manifeste par sa position de tête dans la croissance industrielle depuis le début de la reprise en 2009. La progression de la production manufacturière a été troisième parmi 18 grands groupes d'industries, dépassant même celle de l'exploitation minière, pétrolière et gazière. L'avenir est prometteur selon des enquêtes auprès des fabricants menées par des groupes tels que l'Association des manufacturiers et des exportateurs du Canada. Elles révèlent que le secteur est débordant d'optimisme pour 2013, ce qui contraste nettement avec le pessimisme des partisans du syndrome hollandais.

Introduction

The Dutch Disease[1] is a term coined by researchers studying the macroeconomic impact of the discovery of the Netherlands' offshore natural gas fields in 1959. They theorized, rather than observing since the early research ignored data, that the increase in resource revenues would push up the exchange rate, which could then temporarily depress manufacturing activity by raising their prices.[2]

Manufacturers adjusted and adapted to the higher exchange rate.

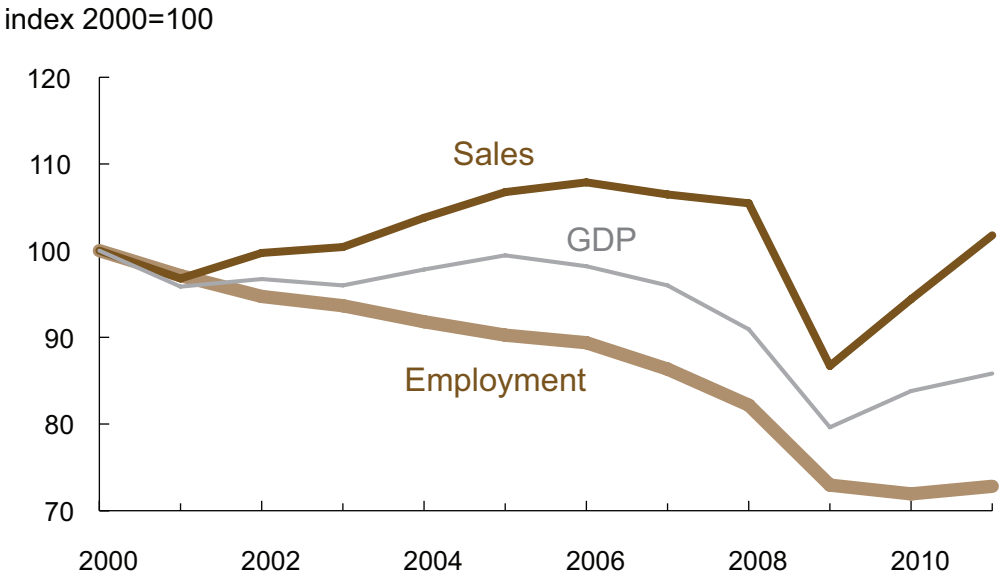
Unfortunately, this simple theory often is all that many commentators remember about Dutch Disease, who draw a straight line from commodity prices to the exchange rate and then to lower manufacturing activity. What has been ignored is that this is a dynamic and not a static process, and that Dutch manufacturers quickly recouped whatever ground was lost after the initial surge in the exchange rate.[3] Simply put, manufacturers adjusted and adapted to the higher exchange rate.

The debate about Dutch Disease and the recent experience of Canadian manufacturers revolves around three key questions. Were the problems in some manufacturing industries related to the exchange rate or to structural shifts in demand, compounded by the 2008-2009 recession? What was the role of the boom in commodity prices in the appreciation of the Canadian dollar over the past decade? Finally, how did Canadian manufacturers adapt to the now 10-year old reality of a higher dollar? This study addresses each of these questions in turn.

The performance of Canadian manufacturing after 2002

The usual approach looks at the trend of total manufacturing sales or output after the exchange rate started to appreciate late in 2002. On the surface, the picture is one of a sector struggling to grow, before turning down decisively in 2008 when the US recession slashed demand for several of our key exports. The image of a lost decade for manufacturers is reinforced by the contrast with their rapid growth during the 1990s, culminating in the ICT bubble late in the decade.

Figure 1: Manufacturing Sales, Output and Jobs



Source: Survey of Earning, Payrolls, and Hours, Monthly Survey of Manufacturing, Industry GDP

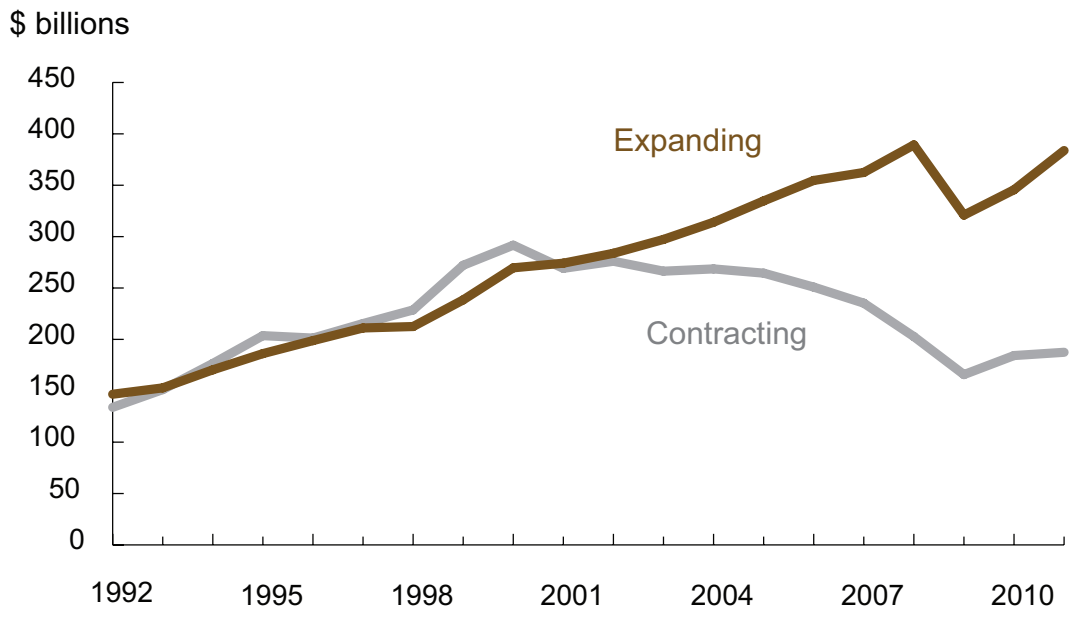
There are at least three different ways of looking at the evolution of total manufacturing activity over the past decade, from examining the trend of nominal sales, real output, and employment (Figure 1). In nominal terms, manufacturing sales edged-up from $561.3 billion in 2000 to $605.5 billion in 2006 and, despite the onset of recession in the US, in 2008 were still larger than in 2002. Constant dollar output in manufacturing rose slowly until 2005, and in 2007 was still within 1% of its level in 2002.[4] Output then plummeted along with sales during the recession. Meanwhile, manufacturing jobs fell steadily throughout the decade, as firms met intensified foreign competition by boosting productivity and cutting payrolls even before the recession resulted in steep job losses.

Allows analysts to cherry-pick the result they want to demonstrate.

Immediately, one can see several problems with this approach. First, depending on which variable you examine, there are three different trends before the recession—slow growth in sales, stable output, and falling employment—which allows analysts to cherry-pick the result they want to demonstrate. Second, they all treat manufacturing as one entity, implying that prior to the recession all manufacturing industries were affected by only one event—the rising exchange rate—and responded in unison. This overlooks how radically divergent growth was in different industries.

It is revealing to sort manufacturing industries into two groups: one whose sales expanded over the decade from 2002 to 2011, and another whose sales contracted over this period[5]. The results in Figure 2 show that the slow growth of total sales before the recession masks a very different story for these two sectors. The expanding sector, which includes 10 of the 19 manufacturing industry groups (accounting for just over half of all sales in 2002), saw its sales rise steadily until 2007, actually improving slightly on its sales growth in the 1990s. The other half of manufacturing industries contracted at an increasingly rapid rate after 2002, especially industries related to autos, forestry and clothing. Both sectors plunged after the global recession hit in 2008, just as they did in previous recessions, and then began to recover[6].

Figure 2: Manufacturing Sales



Source: Statistics Canada, Cansim Table 304-0015

The implication of this dichotomy is clear. The exchange rate cannot be the cause of such disparate outcomes. That the movement of these two sectors nearly offset each other in the years before the recession compounds the confusion in the debate surrounding Dutch Disease.

Some manufacturers clearly were buoyed by the resource boom, irrespective of its impact on the exchange rate. Most of the expanding sector of manufacturing benefited either directly from the resource boom (industries

such as primary metals and petroleum refining) or indirectly from investments triggered by that boom (machinery, metal fabricating, and non-metallic minerals). These two groups contributed 68% of growth in the expanding sector between 2002 and 2011.

The loss of sales in the contracting sector of manufacturing was concentrated in a small number of industries (Table 1). The motor vehicle and wood industries saw sales plunge at least 50% between 2002 and 2009, the result of the severe contraction in the US auto and housing markets. Meanwhile, the paper and printing industries saw sales decline by about one-third, as the rise of paperless Internet communication helped erode their markets. Finally, the clothing industry (broadly defined to include clothing, textiles, textile mills, and leather) posted a devastating 65% drop in sales after 2002, when China joined the WTO and low-cost imports displaced Canadian producers. Altogether, these losses in the auto, forestry-related, and clothing industries totalled $92.1 billion between 2002 and 2009, which accounts for almost all (84%) of the $110 billion drop in sales in the contracting sector of Canadian manufacturing.

Table 1: Manufacturing sales by sector, 2002-2011, billions of dollars

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
CONTRACTING INDUSTRIES										
Beverages and tobacco	12.1	12.2	12.6	12.7	11.3	10.7	10.3	10.5	10.7	10.6
Textiles & clothing	16.2	15.4	13.1	11.5	9.9	8.5	7.1	5.7	5.9	5.9
Wood	32.8	32.4	35.8	34.1	31.0	24.8	21.5	16.7	18.9	18.5
Paper	34.3	33.4	33.7	32.5	30.6	29.4	28.6	24.9	26.5	26.2
Printing	12.2	12.4	11.5	11.9	11.3	10.3	10.3	9.3	8.7	8.4
Computer products	22.7	20.8	20.3	19.4	19.3	18.4	17.3	15.5	15.5	15.8
Rubber and plastics	25.3	26.5	25.6	26.8	27.2	25.7	23.3	19.1	20.9	22.5
Autos	106.8	99.6	102.7	102.1	97.1	94.2	72.0	53.6	66.5	68.6
Furniture	13.9	13.7	13.3	13.4	13.2	13.2	12.3	10.4	10.7	10.6
TOTAL CONTRACTING	**276.1**	**266.4**	**268.6**	**264.5**	**250.9**	**235.2**	**202.7**	**165.7**	**184.3**	**187.1**
EXPANDING INDUSTRIES										
Food	64.1	67.1	67.7	67.2	71.7	71.7	76.6	78.6	80.5	83.7
Petroleum	33.7	37.6	45.7	57.0	61.5	66.9	82.5	59.1	68.1	79.7
Chemical	40.5	43.1	47.1	49.7	49.2	47.7	48.6	41.1	43.9	47.1
Non-metallic minerals	11.6	12.0	12.2	12.7	14.2	14.4	14.1	11.6	13.0	13.2
Primary metals	36.1	36.9	42.5	43.0	49.8	51.3	53.8	33.9	42.0	48.5
Fabricated metals	32.2	33.4	32.8	34.2	34.9	36.1	36.4	29.3	30.6	33.4
Machinery	27.4	28.1	27.7	30.1	31.4	32.1	32.3	27.3	28.9	34.6
Non-auto transportation equipment	19.7	21.0	20.5	22.6	22.3	22.5	24.4	21.0	18.8	22.4
Electrical products	10.1	9.5	9.5	9.8	10.5	10.8	10.5	9.4	9.6	10.1
Miscellaneous	8.4	8.7	8.2	8.4	9.2	9.1	9.9	9.6	10.2	11.4
TOTAL EXPANDING	**283.8**	**297.3**	**314.0**	**334.7**	**354.6**	**362.4**	**389.2**	**320.9**	**345.6**	**384.1**

Source: Manufacturing sales by industry, Statistics Canada Cansim Table 304-0015

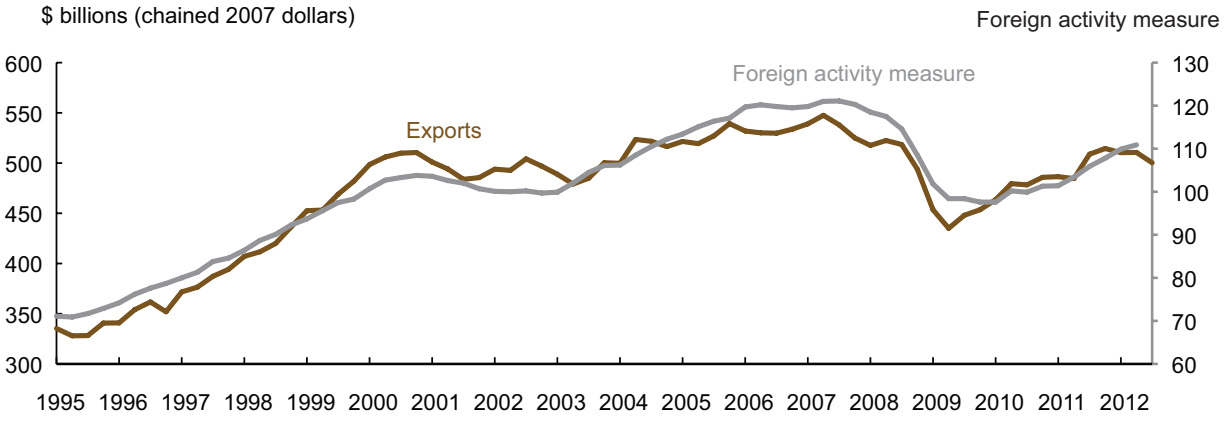
Looked at from this perspective, one has to ask what were the factors that led to the free-fall in demand for these three broad industries—autos, forestry-related and clothing? Were they specific to these industries, or did they reflect more general factors, like the exchange rate? As just outlined, these industries suffered from structural changes that inevitably would have resulted in a sharp drop in sales. Of course, the higher exchange rate squeezed profit margins earned on their sales. But there is no doubt that their sales and output would have fallen rapidly irrespective of the change in the exchange rate.[7]

One proof that exports were dragged down by the collapse of demand in specific markets more than the higher exchange rate is the trend of sales for the same manufacturing industries located in the US. From 2002 to 2009, sales by wood manufacturers located in the US fell 27%, while their auto industry contracted by 35%.[8] Meanwhile, the US clothing industry (broadly defined) shrank by 47%, while their printing industry receded by 13%. These decreases are comparable to the declines experienced by their Canadian counterparts in the US market, even before accounting for the effect on nominal sales of the appreciation of the Canadian dollar over this period (which meant that every US dollar earned by our exports bought fewer Canadian dollars when repatriated to Canada, further dampening nominal sales in Canadian dollars).[9] The loss of sales for these US manufacturing industries after 2002 shows that it was the tailspin in particular markets, not a loss of competitiveness by Canadian producers, that was the fundamental reason for lower sales in the contracting sector in Canada.[10] The paper industry is the only exception, as sales by firms in the US rose 5% while for Canadian firms they fell.

Canadian exports over the last two decades tracked closely what would have been expected.

The Bank of Canada's new Foreign Activity Measure (or FAM)[11] provides a summary measure of what Canadian exports could be expected to do, given the performance of demand in the key markets of our trading partners. Comparing it with the volume of exports shows that Canadian exports over the last two decades tracked closely what would have been expected, given the growth in key markets outside of Canada. From 2005 to 2008, there is a very slight shortfall between actual exports and their potential, as measured by the FAM index, but even this cannot automatically be attributed to a loss of competitiveness from a stronger dollar, since an even larger shortfall can be observed from 1995 to 1998 when the exchange was near record lows The impact of the ICT boom is evident in 2000, when exports slightly exceeded what the FAM index would have predicted.

Figure 3: Volume of Exports and the Foreign Activity Measure



Source: Statistics Canada, Cansim Table 380-0004 and the Bank of Canada

There is a strong regional dimension to the diverging fortunes of manufacturers benefiting from the resource boom and those dependent on markets that were in secular decline. Again, the offsetting results of these gains and losses muddy the debate, allowing pessimists to focus on declines in particular regions, especially Ontario. The manufacturing base of the Atlantic and the prairie provinces saw sustained sales gains of 45% and 9% respectively between 2002 and 2008, and they quickly recouped all of their recession losses. Quebec posted 10% growth from 2002 to 2008, but its recovery from the recession has been hampered by the usual slow recovery in aerospace products. BC was mixed, as growth before 2008 was held to 2% by losses in its forestry sector, which continued to languish in the recovery until very recently. Ontario's manufacturing base unequivocally was the biggest loser, with its sales falling 9.5% from 2002 to 2008, only recently returning to its pre-recession level. This reflects Ontario's greater orientation to US markets, especially the auto industry, rather than the fast-growing resource-based markets for manufacturers in western and Atlantic Canada.

What explains the ongoing strength in the Canadian dollar?

It is erroneous to attribute all of the decade-long strength of the Canadian dollar to higher commodity prices. Certainly, there was a strong correlation between commodity prices and the initial rise of the dollar after 2002. This link has been documented by the Bank of Canada, which attributes just under half of the appreciation of the dollar since 2002 to higher commodity prices[12], notably oil prices—leading some analysts outside the Bank to characterize the dollar during this period as a 'petro-currency'. The Bank of Canada explains the largest part of the dollar's rise mostly by the multilateral decline of the US dollar as well as increased investment flows into Canada. These results are broadly consistent with those from other researchers who found that 42% of the increase of the Canadian dollar between 2002 and 2008 was due to the natural resource boom and the rest to the general devaluation of the US dollar.[13]

The role of investment flows may have increased recently, as prices for Canada's oil exports slumped. Even after oil prices slumped during the recession and stayed below their record highs during the recovery, the Canadian dollar returned to parity and has remained there. It has stayed near parity despite the terms of trade for oil turning against Canada after 2010, a break from the past when the price of imported and exported oil moved in unison.[14] Since the fourth quarter of 2010, the price of crude oil imports has risen 20.2%, nearly triple the 7.9% increase in the price Canada received for its crude oil exports. There are several factors behind this unprecedented gap, mostly related to a lack of pipeline capacity for Canadian exports outside the mid-western US. Whatever the cause, the effect was to depress the price Canada received for exported oil, shaving $2 billion off our export earnings, but this did not lower the exchange rate.

With prices for Canadian oil exports falling behind world prices, capital inflows have gained prominence in sustaining the exchange rate at parity. Since the financial crisis began in 2007, foreign investors increased their holdings of Canadian bonds by $274.4 billion by the end of 2012. This compares with a drop of $65.9 billion in the first five years of the dollars' rise after 2002.[15] Investors were attracted by the stability of Canada's banking system, which was ranked as the safest in the world every year starting in 2008.[16] Foreign interest has been confined to the safe haven of bonds, as foreign direct investment and investment in stocks were unchanged over the same period. This influx of funds helped lower interest rates in Canada.[17] The conclusion is that the recent strength of the exchange rate no longer can be attributed solely to commodity prices, and therefore resource prices cannot be singled-out as the source of problems in Canada's manufacturing sector. Instead of a 'petro-currency', we may now have the 'Bay St Buck'.

The most negative effect of higher commodity prices for manufacturers may have been their direct impact on the cost of raw material inputs rather than their indirect impact on the exchange rate and the ability of manufacturers to compete. Indeed, a recent survey of manufacturers found more citing high energy prices as a barrier to growth than the exchange rate.[18] The paper and auto industries are particularly energy-sensitive. In the case of paper, this is because energy is such a large part of input costs. For autos, demand is adversely affected by the rising cost of gasoline for motorists, especially for the larger vehicles which are made in Canada (smaller vehicles, with their lower profit margins, are made mostly in low-wage jurisdictions like Mexico). This is not to say that all manufacturers could not absorb higher energy prices. Some, like primary metals and petroleum refining, were able to pass on their higher input costs, because demand remained robust until the recession hit in 2008.

The recent strength of the exchange rate no longer can be attributed solely to commodity prices, and therefore resource prices cannot be singled-out as the source of problems in Canada's manufacturing sector.

At an early point in the debate about Dutch Disease, it was important to assess whether the commodity price boom would be short-lived or not. Under a worse case scenario, the resource boom could have been temporary, but the damage to manufacturing from a higher dollar permanent. The projected collapse of resource prices would then compound the difficulties of a manufacturing sector where many plants presumably would have stopped operating. But after more than a decade of higher commodity prices, there is no reason to debate whether the boom was ephemeral.

How manufacturers adapted to the stronger loonie

The Canadian dollar began its historic rise over a decade ago. It has now been over five years since the loonie first reached and occasionally surpassed parity with the US dollar. So the time is long passed for treating the rising exchange rate as a novelty. Instead, analysts should look at how firms have responded. Firms that did not adjust, hoping vainly for a return to the days when they could reap export earnings in high-priced US dollars while paying workers and suppliers with cheaper Canadian dollars, mostly closed their doors a long time ago. What did the survivors do to adapt?

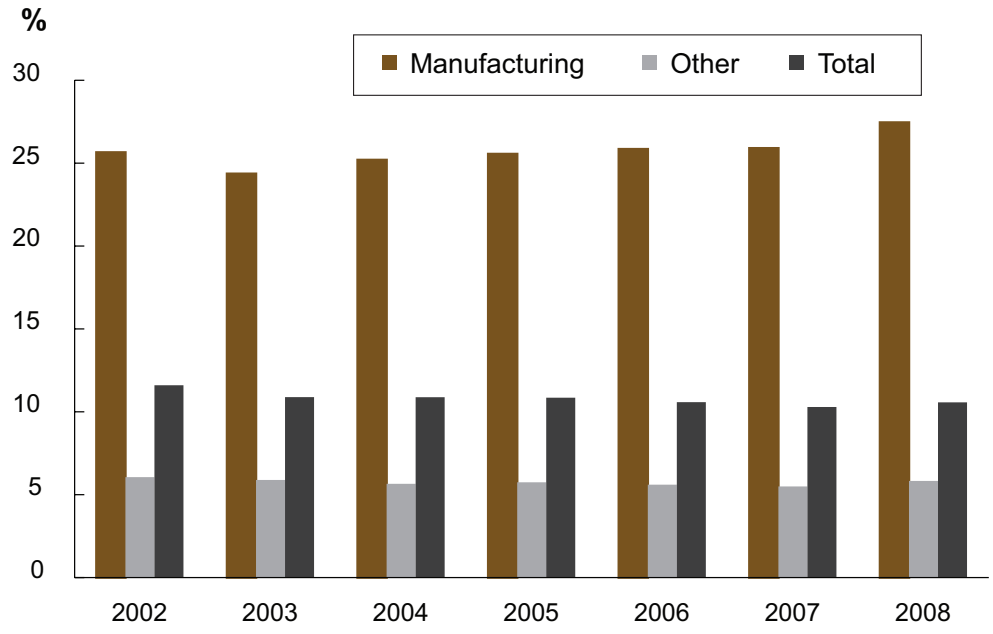
The first adjustment manufacturers made over the past decade was to reduce their reliance on exports.

One answer comes from the Input/Output tables produced by Statistics Canada.[19] This rich database, based on detailed tax records of purchases and sales, allows a precise calculation of where firms buy their inputs in Canada and abroad and where they sell their products. Uniquely among Canada's industries, manufacturers have both a large orientation to exports (only oil and gas extraction and mining export a larger share of their output) and an intense use of imported inputs (no other industry remotely approaches manufacturing in this regard).

The first adjustment manufacturers made over the past decade was to reduce their reliance on exports. Exports peaked at 55% of manufacturing output in 1999, at the height of the ICT boom. By the time the exchange rate began to appreciate, this dependency on export markets already had fallen to 51% in 2003. With the domestic economy accelerating and export earnings dampened by the higher dollar and slowing growth in the US, the reliance on exports fell steadily, to 45% by 2008, as firms shifted their attention to rapidly growing domestic markets, particularly in the resource sector. This 10-point drop in the share of manufacturing output exported over a decade is a significant change, but one that is rarely discussed.

It is striking how much more manufacturers have always used imported intermediate inputs than any other part of the economy. Imports account for just over 25% of all inputs in manufacturing, versus 6% in the rest of the economy. This higher import intensity is evident throughout manufacturing, ranging from almost half of all inputs in transportation equipment, notably the auto industry, to a low of 12% in food processing. The latter is still as high as in construction, the industry that uses the most imported inputs outside of manufacturing. Most services buy less than 5% of their inputs abroad.

Figure 4: Imported Inputs as a Share of Output



Source: Statistics Canada, Input/Output Division

The extensive use of imported inputs gives manufacturers what is called a 'natural' or built-in hedge against a rising exchange rate. A hedge is a strategy designed to minimize risk, that usually involves purchasing a financial instrument such as an option or a derivative. A natural hedge means the firm does not have to purchase a financial instrument, because the structure of its operations automatically reduces risk. Thus, while a rising exchange rate dampens revenues earned from exports, which account for nearly half of manufacturing sales, the higher exchange rate automatically lowers costs for the one-quarter of inputs that are imported. This cuts in half the net exposure of Canadian manufacturers to exchange rate fluctuations, accomplishing the very purpose of a hedge.

Manufacturers increased this 'natural' hedge provided by imported inputs as soon as the upward trend of the exchange rate began in 2003. They boosted their purchases of imported inputs, from 24% of all inputs in 2003 to 27% by 2008[20]. The increased use of imported inputs reflects both their lower price and the growing competitive pressure on manufacturers to reduce costs by any means (including higher productivity) to maintain market share. Heightened competition appears to be the decisive factor for manufacturers, since the rest of the economy did not step up its purchases of imported inputs despite lower prices. The lack of interest of non-manufacturers in buying more imported inputs was evident in all industries, including two (forestry and mining) that recorded significant declines.

Instead of lagging, the volume of manufacturing output rose 12.2% from the second quarter of 2009 to the third quarter of 2012.

Combining the smaller exposure of manufacturers to exports and their increased use of imported inputs shows that their net exposure to fluctuations in the exchange rate fell from a high of 27% of output in 1999 to 18% in 2008.[21] Some of this decrease reflects the reduced importance of industries with large export shares, notably autos and ICT. Focusing on the 6-point drop in their net exposure since 2003, when the dollar began rising, manufacturers accomplished this equally from a 3-point drop in the share of exports in output and a 3-point increase in imported inputs. By focusing more on domestic markets and importing more inputs, manufacturers lowered their vulnerability to changes in the exchange rate.

Their large use of imported inputs gave manufacturers an advantage in adapting to a higher exchange rate not available to other exporters, such as commodity producers. Oil and gas and mining have the lowest natural hedges of any industry, exporting 70% of their output but importing only 5% of their inputs in 2008, for a net exposure of 65%. Of course, no one frets about Dutch Disease in these industries, because the boom in demand and prices for these resources more than offset the impact of a rising dollar on their finances. This underscores the point that sectorial patterns of demand are the key variable in determining industry fortunes, not the exchange rate.

Reports of the death of Canadian manufacturing have been much exaggerated

The strategies of Canadian manufacturers to adapt to the reality of a higher exchange rate have paid off. This is demonstrated by manufacturing's place among the fastest-growing industries in the recovery, the same as after their near death experiences in the recessions in the early 1980s and early 1990s. That manufacturers have been one of the leading sectors in the recovery of GDP since mid-2009 will come as a surprise to many, who mistakenly continue to view our industrial heartland as a bombed-out ruin, the victim of a high dollar and feeble growth in the US.

Instead of lagging, the volume of manufacturing output rose 12.2% from the second quarter of 2009 to the third quarter of 2012.[22] This is the third-fastest increase among the 18 standard major industry groups, behind only construction (up 18%) and wholesale trade (14%) over this period. Despite the well-known boom in the mining industry—which includes oil and gas, the alleged source of Dutch Disease—manufacturing output growth has outstripped mining in the recovery (12.2% versus 11.3%). The expansion of manufacturing in the recovery has easily surpassed industries which many associate with dynamic growth, including finance, business services, retailing, information, health care and education.

Which industries have led the resurgence of manufacturing? Machinery has clearly grown the fastest, with output soaring 44% between the second quarter of 2009 and the third quarter of 2012, led by construction machinery

destined for the energy sector. Also in the vanguard of growth is transportation equipment, up 31%, fuelled by the recovery of the auto industry. Several other industries posting above-average growth benefited from the revival of the auto industry, including primary metals (notably iron and steel), metal fabricating, and plastics and rubber. Elsewhere, the wood and non-metallic minerals industries have ridden the surge of construction in Canada to above-average growth.

The recovery of manufacturing has shown impressive depth. Only food and paper have not contributed higher output since mid-2009. Even the beleaguered clothing industry has found enough niches in the market to post respectable growth of 8%.

People who work closely with manufacturers have noted their surprisingly optimistic tone. A survey by the Canadian Manufacturers and Exporters found "businesses are very optimistic and are anticipating growth in most aspects of their operations."[23] KPMG's Canadian Manufacturing Outlook found 85% of manufacturers in Canada "are optimistic or very optimistic about their business outlook for the next two years" compared to only 75% of manufacturers around the world.[24] A survey of manufacturers by PWC found that "93% of panelists expect their own companies to grow over the next 12 months."[25] These all support the conclusion reached by the Export Development Corporation that "Canadian manufacturers are quite resilient at a parity currency".[26]

Conclusion

If manufacturers in Canada suffered from Dutch Disease after 2002, it was a very mild case affecting only a small number of industries. These findings agree with the observation by Hutchison that "For the economy of the Netherlands, where the term 'Dutch disease' was originally applied, very little systematic and long-term net adverse consequences of natural gas development on the manufacturing sector were found."[27] Six years after the discovery of offshore gas, manufacturing output in the Netherlands was up 30%, a far cry from the apocalyptic scenario most people associate with Dutch Disease.

If manufacturers in Canada suffered from Dutch Disease after 2002, it was a very mild case affecting only a small number of industries.

The initial adjustment in Canada was for specific industries responding to the historic plunge in the US markets for housing, autos and newsprint. Similar declines occurred in these industries in the US and would have occurred here almost irrespective of the exchange rate. Then, all manufacturers had to cope with the severe downturn of the 2008-2009 recession, just as they bore the brunt of previous recessions. Now that the recession is over, and manufacturers have adapted their strategies to cope with the reality of a higher dollar, they have resumed their leadership role in growth during the recovery, and are poised to lead Canada in the years to come as key markets in the US auto and housing sectors return to more normal levels of demand.

About the Author

Philip Cross is the Research Coordinator at the Macdonald-Laurier Institute. He is also a member of the Business Cycle Dating Committee at the CD Howe Institute. Before that, he spent 36 years at Statistics Canada, the last few as its Chief Economic Analyst. He wrote Statistics Canada's monthly assessment of the economy for years, as well as many feature articles for the Canadian Economic Observer.

The author of this document has worked independently and is solely responsible for the views presented here. The opinions are not necessarily those of the Macdonald-Laurier Institute, its directors or supporters.

Endnotes

1 Dutch Disease should not be confused with British Disease, which refers to a loss of competitiveness due to strife with trade unions, which plagued Britain in the 1970s.

2 W. M. Corden, "Booming Sector and Dutch Disease Economics: Survey and Consolidation." Oxford Economic Papers, Vol. 36, No. 3 (November 1984).

3 Historical data show that manufacturing output in the Netherlands never fell on an annual basis.in the early 1960s, posting an overall gain of 41% between 1959 and 1964. One of the first research papers on the subject (Corden, 1984) of Dutch Disease said that "it might be argued that the true Dutch Disease in the Netherlands was not the adverse effects on manufacturing…but rather the use of Booming Sector revenues for social service levels which are not sustainable, but for which it has been politically difficult to reduce."

4 Industry GDP data come from Statistics Canada Cansim Table 379-0027.

5 This classification of expanding and contracting industries was first used in P. Cross, "Recent trends in business investment." Canadian Economic Observer, Statistics Canada Catalogue No 11-010-X, Vol 24, No 3, March 2011.

6 Manufacturing output fell 16.0% between the second quarter of 2008 and the second quarter of 2009, compared with declines of 17.0% during the 1981-1982 and 10.8% in the 1990-1991 recessions.

7 A paper from the IRPP found a similar concentration of exchange rate-related losses in a quarter of manufacturing industries, while it is found about a quarter of manufacturing industries benefitted from the higher exchange rate. See M. Hakeri, R. Gray and J. Leonard, "Dutch Disease or Failure to Compete? A Diagnosis of Canada's Manufacturing Woes". IRPP Study No. 30, May 2012.

8 US manufacturing sales are compiled by the Census Bureau, available at www.census.gov/manufacturing/m3/.

9 The comparable loss of sales on both sides of the border occurred despite US producers having a lower exchange rate from which to export into the Canadian market.

10 The IRPP study found that the clothing industries suffered from the higher exchange rate, but the auto industry actually benefitted from the appreciation, reflecting its very high use of imported inputs.

11 See Louis Morel, "A Foreign Activity Measure for Predicting Canadian Exports". Discussion Paper 2012-1, Bank of Canada.

12 "Dutch Disease", Remarks by Bank of Canada Governor Mark Carney, September 7, 2012, page 8.

13 "The Dutch disease and the Canadian Economy: Challenges for Policy-Makers" by R. Boadway, S. Coulombe and J.-F. Tremblay, prepared for the Thinking Outside the Box Conference at Queen's University, Oct 26-27, 2012. All researchers find a sharp break in the role commodity prices play in the exchange rate after 2002. Whether there was a similar break after the 2008 financial crisis has not been addressed yet due to the small sample.

14 The price data in this paragraph are from the implicit price indexes for GDP, Statistics Canada Cansim Table 380-0066.

15 These data are from Canada's International Investment Position, Statistics Canada Cansim Table 376-0146.

16 World Economic Forum, Global Competitiveness Report.

17 One estimate is that each $1 billion of inward investment lowers the yield on 10-year bonds by 3.5 basis points, according to "Ottawa Caps it's Triple A Status", The Globe and Mail, Sept 28, 2012.

18 Canadian Manufacturing Barometer July 2012, by PWC, page 6. Over half (54%) cited higher energy prices as their largest problem, versus 37% for the exchange rate. Interestingly, the latter percentage was almost the same as US manufacturers (35%), suggesting it may be the exchange rate with the Chinese yuan and not with the US dollar that most concerns manufacturers in Canada.

19 All of the data on inputs and output in this section were compiled for the author by the Input/Output Division at Statistics Canada. For more on how imported inputs are calculated, see P. Cross and Z. Ghanem, "Cyclical implications of the rising import content in exports." Canadian Economic Observer, Statistics Canada Catalogue No 11-010-X, Vol 15 No 12, December 2002.

20 This does not include their outlays for lower-priced imports of machinery and equipment used in their capital stock.

21 This net exposure of 18% in 2008 is calculated as the share of exports in output (45%) minus the share of imports in output (27%).

22 All the GDP data in this section come from GDP by industry at basic prices, Statistics Canada Cansim Table 379-0027.

23 Canadian Manufacturers Issues Survey, 2012-13, Initial Analysis of Results by Jayson Myers, p 1.

24 Canadian Manufacturing Outlook 2012: Push and Pull-Reducing Costs and Investing in Innovation, by KPMG LLP.

25 Canadian Manufacturing Barometer, July 2012. Retrieved from 222.pwc.com/ca/industrial-manufacturing on December 13, 2012.

26 Quoted in "Falling oil puts pinch on economy" by Ora Morison, Globe and Mail, July 15, 2012.

27 M. Hutchison (1994), "Manufacturing Sector Resiliency to Energy Booms: Empirical Evidence from Norway, the Netherlands and the United Kingdom". Oxford Economic Papers, 46, 2.

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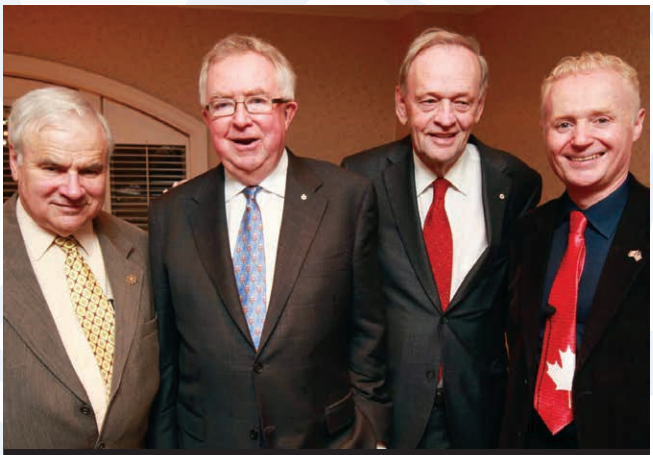

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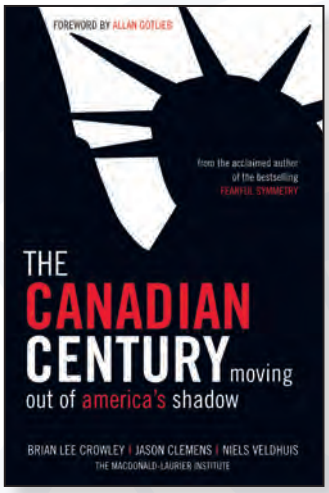

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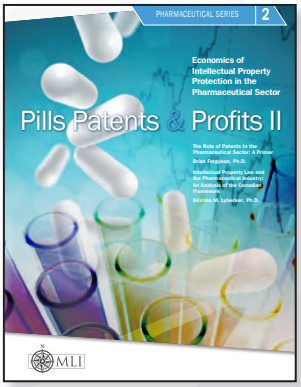

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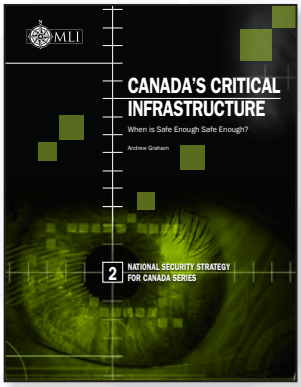

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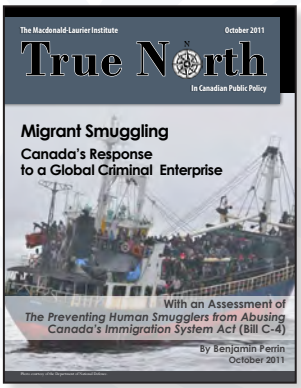

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