

# A NORTHERN TIGER?

CANADA'S ECONOMIC AND FISCAL RENAISSANCE  
AND ITS IMPLICATIONS FOR THE UNITED STATES

BY JEREMY A. LEONARD

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# FOREWORD

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In recent years, a certain sense of helplessness in the face of difficult and seemingly intractable economic and political problems has taken root in the United States. Whether the malady is called gridlock or some other term with a more malign intent, Americans appear less confident in finding solutions to important political problems than they were just a decade or two ago. This is especially the case when addressing the problems of a growing imbalance at the national level between providing and paying for our national priorities, and, at the same time, in finding ways to revitalize growth.

In circumstances like this, it is almost always useful to step back, consider whether a different perspective is possible, and look elsewhere for ideas to work on the issues. “Hidden in plain sight” as Jeremy Leonard, the author of this new paper puts it, “is an example that ought to be considered more carefully.” In the recent past, Canada faced fiscal problems of a magnitude similar to those now confronting the United States and found a workable solution to them within the limits of their democratic, federal political system. Canada managed to turn an endemic 6 percent or more of GDP federal deficit into a record of 10 years in a row of budget surplus, while at the same time taking measures to strengthen its economy, especially its manufacturing sector. (It is worth noting too that another robust democracy, the United Kingdom, also has taken politically difficult steps to solve a chronic fiscal deficit, although it is too early to assess its long-term impact.)

This paper chronicles the systematic ways Canada in the 1990s and beyond went about solving its deficit problem. It also outlines some of the steps—free trade agreements, replacing a tax on manufactured goods exports, lowering taxes, improving supply chain integration within North America, and improving scientific research—that were concurrently designed to help bolster competitiveness. Not all of these measures were fully successful, and not all of the changes in federal programs can be translated into comparable initiatives in the United States, but both the total package of fiscal reform and the individual components are well worth understanding better South of the 49th parallel. That is the purpose of this paper and it is our hope that it will stimulate both further reflection on how to tackle the major challenges in the United States and provide a glimmer of hope that our robust democracy can succeed in solving what has been viewed as intractable problems.

I wish to thank the Canadian Council of Chief Executives for supporting this project and the author, Jeremy Leonard, for reducing a long and complex story to a succinct and highly readable narrative.



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*President, Andromeda Consulting Economics*

MARCH 28, 2012



### INTRODUCTION

As the United States struggles to find a politically acceptable and economically sensible solution to its severe fiscal crisis, hidden in plain sight just North of the 49th parallel is an example that ought to be considered more carefully. Quietly, but steadily, under governments of all political stripes, Canada has profoundly restructured its economy, gotten its fiscal house in order, created a competitive business tax environment, and come into its own as a strong economic player in North America and beyond.

Canada has come a long way economically since the 1990s. It is hard to understate the duress that reigned at the beginning of that decade. It faced a jobless recovery from a long and deep recession that had left the unemployment rate in double digits, its highest since the 1930s, and job growth was so anemic that the *average* unemployment rate in Canada for the entire 1990s was 9.6 percent, only marginally less than the peak U.S. rate in the Great Recession of 2008-2009. The federal government was saddled with fiscal debts that consumed more than 25 cents of every dollar of its budget, and monetary policy adopted an explicit inflation target, leading to high interest rates that exacerbated debt service costs.

In addition to the particularly difficult economic cycle, the basic structure of the Canadian economy was being reshaped in powerful ways by forces felt around the world, such as trade liberalization, globalization, and rapid technological change.<sup>1</sup> Tariff barriers with the United States came down in 1988, and the entry into force of the North American Free Trade Agreement (NAFTA) in 1994 cemented continental free trade. This ultimately brought tremendous economic benefits to Canada, but they required new ways of thinking about economic policies. The rise of the World Wide Web and associated innovation in communications and distributed data technologies put similar pressure on Canada and other industrialized countries.

The 2000s stand in sharp contrast to Canada's "longest decade." The economy roared back such that output growth exceeded that in the United States and the unemployment rate—which had for decades been significantly higher than its U.S. counterpart, dropped below that of its southern neighbor in early 2008 and has



stayed below it ever since. More importantly, significant fiscal consolidation in the late 1990s created fiscal room for aggressive personal and corporate tax cuts during the 2000s, which spurred investment, profits and job growth. In the last half of the 2000s, exploding demand for the natural resources that Canada is fortunate enough to have in large quantities gave a further boost to economic growth and helped shelter the economy from the worst of the 2008-2009 global recession.

A better understanding of the evolution of Canada's economy is of great importance to U.S. businesses and policy makers along a number of dimensions. Most obvious is that Canada is not only the top U.S. export market, but the segmentation of production has also led to cross-border value chains, and increasing interdependence of the manufacturing sector on either side of the border. Canadian and U.S. manufacturers no longer sell each other finished products, they make things together for consumption in North America and around the world. As businesses take a more continental approach to location decisions, Canada's business environment may present opportunities for U.S. and non-North American firms and vice versa, depending on the specific requirements of the business task in question. More cross-border collaboration and communication at the industry and business level will help to further optimize continental supply chains.

Equally important is the role of government policies in the evolution of the Canadian economy. As we shall see, Canada has had several notable successes on the policy front, particularly with regard to fiscal discipline and the strategic orientation of the tax system. There have been other less successful efforts with respect to promoting innovation and shoring up manufacturing competitiveness. The U.S. has arguably failed at the former and excelled at the latter. With a better understanding of the role of government policy on both sides of the border, lessons for businesses and policy makers can go in both directions.

This report attempts to clarify these issues by taking stock of the reemergence of Canada as a competitive force in the North American and global economies in the 2000s, assessing economic strengths and weaknesses, and the successes and failures of relevant government policies. Particular attention will be paid to the key factors that have contributed to this evolution: strong demand for natural resources, macroeconomic framework policies, and micro policies designed to strengthen competitiveness.

## CANADA'S ECONOMIC PERFORMANCE IN THE 2000S

### *Macroeconomic Strength*

As noted in the introduction, Canadian headline economic performance since the turn of the millennium has been nothing short of stellar. Figure 1 shows the path of real GDP since 1990 normalized to facilitate comparison of the pre- and post-2000 periods. The decline in GDP during 1990-1992 is clearly visible, and even though growth picked up later in the decade, average GDP growth in Canada during the 1990s was 2.6 percent, 0.6 percentage points lower than in the United States. Canada's economy grew faster than its American counterpart starting in the mid-2000s (and indeed substantially faster than the G7 as a whole). This advantage accelerated through the "Great Recession," which is a misnomer in Canada because it started a full 9 months after the U.S. recession and was the shallowest of all G7 nations.

The advantage is even more pronounced in the 2000s when we look at real gross domestic income—the purchasing power that output generates. When the price of exported goods is very high (as has been the case

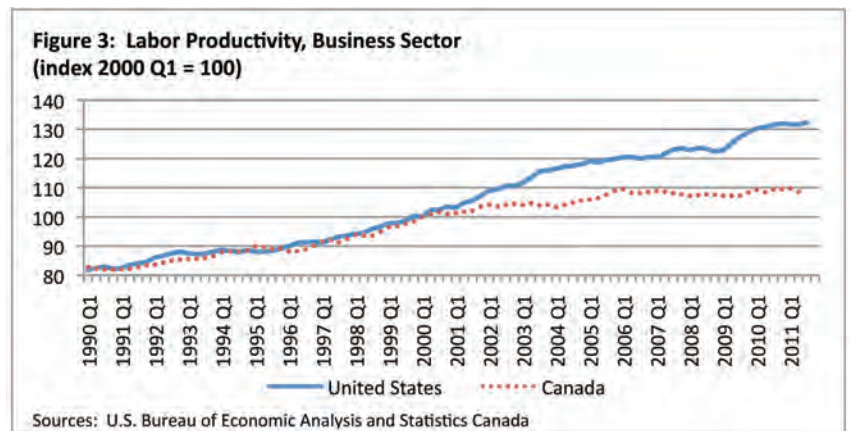
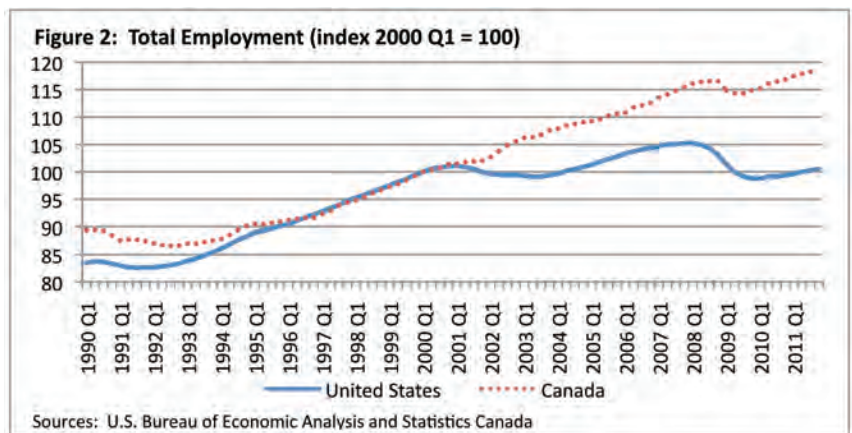
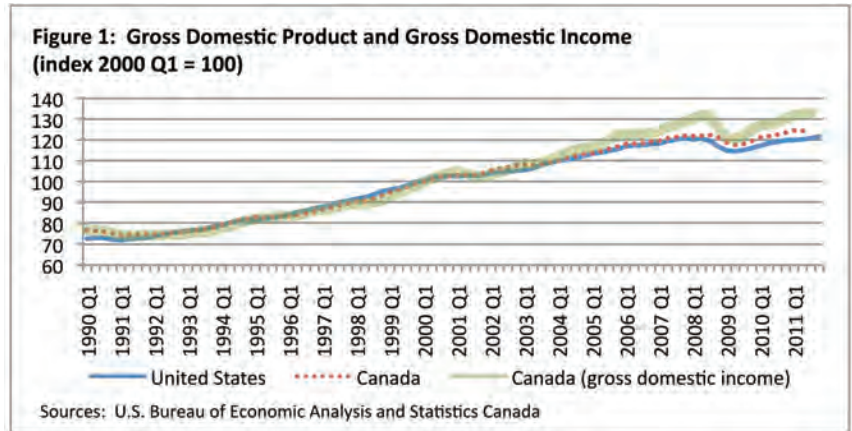


for crude oil, industrial metals, and other resources exported by Canada) relative to imported goods, the concomitant increase in the terms of trade allows the purchasing power of gross national income to increase faster than real GDP, as confirmed by Figure 1. This has transferred hundreds of billions of dollars from resource-consuming nations to Canada since the mid-2000s and is one of the primary reasons why the 2008-2009 recession was so shallow.

Canada's economic advantage in the 2000s is even more lopsided with respect to employment (Figure 2). Astonishingly, total employment in the United States is lower than it was a decade ago: growth from 2000 to 2008 was wiped out by the Great Recession. Canada saw strong employment growth until the recession, and recouped all subsequent net job losses within two years. Currently, employment is 18 percent above 2000 levels.

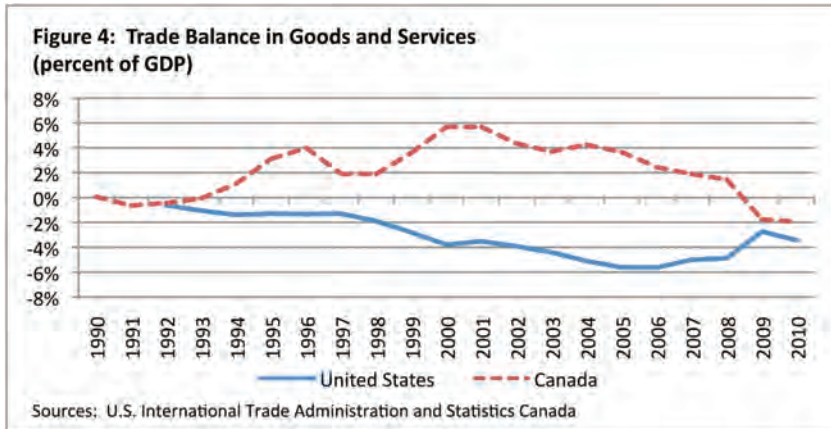
With Canadian employment growing significantly faster than output relative to the United States, it is mathematically certain that the economy-wide productivity of labor must be lagging, and that is confirmed by Figure 3. The U.S. economy is over 30 percent more productive than it was in 2000, compared to a less than 10 percent increase in Canada over the same period. More worrying is the fact that economy-wide productivity has essentially flat lined since 2006.

If Canadian productivity does not accelerate dramatically in the coming years, the "speed limit" of sustainable economic growth will slow. Potential growth is the sum of growth in the labor force and growth in productivity: the economy can grow only as fast as the quantity and quality of work effort it has to offer. For the past 20 years, economic growth in Canada has been shared more or less equally between the two. But as the baby boomers start to retire in larger and larger numbers, labor force growth is projected to drop to essentially zero by 2020, even taking into account the partly offsetting effect of immigration and higher labor force par-



ticipation of older workers. Without a marked acceleration of productivity growth, Canada's economic speed limit could be cut by half or more over the next several decades.

Sluggish productivity growth, which pervades most sectors of the Canadian economy, is also a strong signal of national competitiveness problems that are masked by the strong performance in output and employment.



If we look at the trade balance as a crude metric of national competitiveness (Figure 4), we see that Canada's large trade surplus at the beginning of the 2000s has steadily eroded, and turned to deficit as exports plummeted due to the deep U.S. recession. The United States has had a large trade deficit for the entire decade, but the combination of a plunge in imports during the recession with a weakening dollar has actually improved the trade balance markedly in recent years.

Interestingly, the trade balance data suggest that Canada's competitiveness improved during the 1990s because the trade surplus grew. But as we shall see later, this was more a function of a weak Canadian dollar which allowed exporters to sell products into foreign markets at a considerable cost discount.

#### *"Decoupling" and the Rise of China and Other Emerging Economies*

The apparent decoupling of the Canadian and American economies belies the long-held conventional wisdom that Canada's economic destiny depends entirely on that of the Americans. In one sense, the numbers seem to speak for themselves, and are oft repeated: over three-quarters of Canadian exports are sold in the United States; this percentage rose in the wake of continental free trade; and therefore it is chained to the U.S. business cycle through good times and bad.

Even though it is intuitively attractive, this "joined-at-the-hip" view is not an accurate description of current economic reality. The United States is indeed one pillar of Canada's economic strength (or, as the case may be, weakness).

But, important as they are, U.S. exports represent only about a quarter of Canada's total economic output, and it is too often forgotten that Canada has a domestic market of 33 million people and hundreds of thousands of businesses who collectively spend \$1 trillion annually on goods and services at home. Thanks to the commodities boom, that domestic market has flourished, enriching not only the resource-producing provinces but Canadians across the country. The engines behind this boom are the large resource-hungry emerging market nations—China in particular—and they have become a second important pillar of Canadian economic strength that (as I predicted in early 2009<sup>2</sup>), has kept the recession shorter and shallower in Canada than anywhere else in the G7.

The Great Recession signaled a pivotal turning point in the global and continental balance of economic power. More than anything else, it crystallized the fact that the economic strength of the United States, which was

without rival at the turn of the millennium, is threatened from both within and without. In the past this would justifiably have sent shivers up Canadians' spines, since it would have implied weakness in Canada as well. The rise of China as an important pole of economic power, however, has important positive implications for Canada, both in terms of its role in the global economy and in Canada-U.S. relations.

### *The Energy Sector*

The rise of China and other resource-hungry emerging economies has increased the strategic and economic importance of Canada's energy sector, which, at 7 percent of GDP, is more than half the size of its manufacturing sector. Two important facts that are inadequately understood and appreciated in U.S. debates on energy supply bear emphasis. First, Canada is the number one supplier of imported U.S. oil. The United States imports over two million barrels per day from Canada, 50 percent more than from Saudi Arabia and more than from Venezuela and Iraq combined. Second, the oil sands in Alberta give Canada the second-largest proven reserves after Saudi Arabia.<sup>3</sup>

With security of supply a prime concern of American policy makers and intelligent development of supply and end-user markets the main focus in Canada, there is a natural, mutually beneficial North American energy partnership that should be cultivated and developed more formally.<sup>4</sup> Seen in this context, the U.S. decision to reject the Keystone XL pipeline is a step in the wrong direction in terms of continental energy markets.

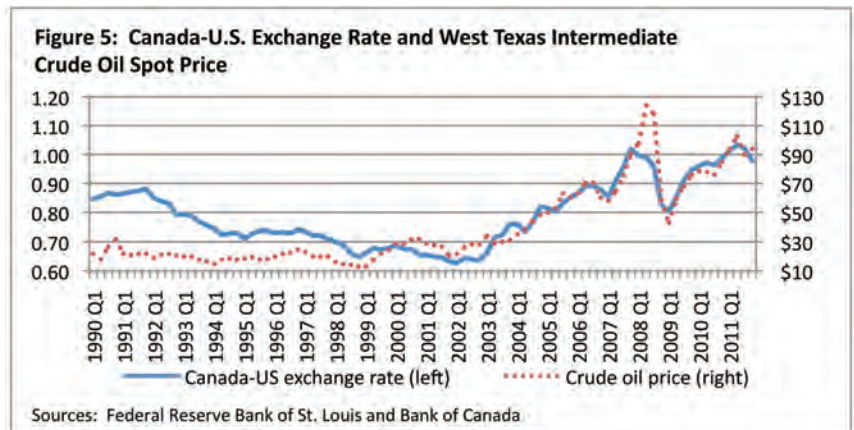
### *Competitive Challenges in Manufacturing*

The dark side of rising demand for natural resources can be found in the Canadian manufacturing sector, which has been in dire straits since the mid-2000s. Output peaked in the first quarter of 2006, well before the overall economy, and had already shrunk by 6 percent before the recent recession began. The decline accelerated with the onset of the recession in 2008, such that the size of the sector in dollar terms is the same now as it was in 1998.

The proximate cause of this structural weakness has been a sharp appreciation of the Canadian dollar relative to its U.S. counterpart, which mirrors the rise in natural resource prices, particularly crude oil (Figure 5). Over a period of just three years (2004-2007), the Canadian dollar appreciated by more than 40

percent to near parity. After considerable gyrations during the recession, it has returned to parity and, given forecasts of crude oil prices, is likely to remain there.

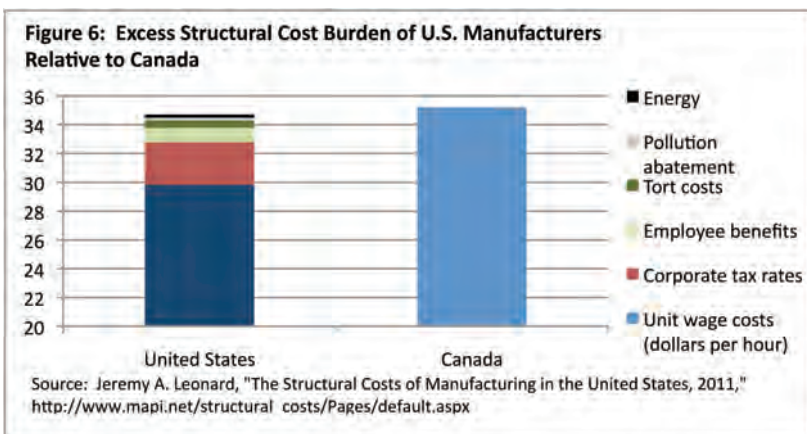
Because the high exchange rate acts as a tariff on production costs for Canadian exports to the United States, it is no wonder that export growth began to slow. Manufacturers have been unable to increase productivity enough to compensate. Productivity growth has increased just 10 percent since 2002. Over the same period, U.S. manufacturing productivity increased by almost 50 percent, demonstrating that big efficiency gains are





possible over relatively short periods of time. If manufacturers north of the border had been able to be as innovative as their U.S. counterparts, they would have solved the competitiveness problems created by the appreciating dollar.

But the long period of dollar weakness, which dates back to the mid-1990s, dulled incentives for improvements in competitiveness, allowing them to export profitably without making capital investments (particularly in the information technologies that enable process improvements and related efficiency gains). With the prospect of a strong Canadian dollar for the foreseeable future, they are paying the price for neglected capital investment (although investment in business equipment has grown by more than 30 percent since the end of 2008-2009 recession, narrowing but not eliminating the gap with the United States).



Even abstracting from exchange rate changes, there has been a steady erosion of the Canadian relative cost advantage in manufacturing industries. Expressed in local currencies, unit labor costs in Canadian manufacturing were only 79 percent of the corresponding U.S. level in 2000. That proportion rose steadily throughout the decade such that by 2010 Canadian costs exceeded those in the United States by 18 percent.

But this direct cost disadvantage to Canada is offset by advantages with regard to structural costs such as taxation, employee benefits, regulation, torts, and energy costs that are a function of the policy environment and cannot be controlled directly by manufacturers.<sup>5</sup> These costs have been higher in the United States throughout the decade relative to its major trading partners, and Canada is no exception. Figure 6 shows how these excess burdens have all but erased the U.S. advantage in direct wage costs. They are in many ways a testament to the efforts on the part of policy makers in Canada to improve the business climate in Canada that will be discussed in more detail later.

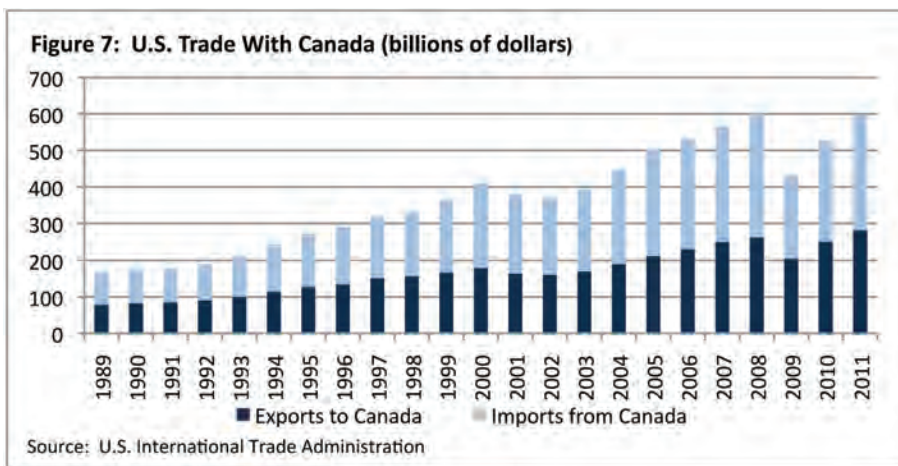
## CANADA-U.S. ECONOMIC INTEGRATION AND THE BORDER

As noted in the introduction, the implementation of the Canada-United States Free Trade Agreement (CUSFTA) in 1989 and NAFTA in 1994 profoundly changed the structure and organization of the North American economy. Prior to free trade, high tariff walls encouraged U.S. firms to set up Canadian production facilities to serve the Canadian market (and vice versa). The hope was that removing those walls would spur firms to rationalize continental production and supply chains, locating production facilities in regions from which they could serve the entire North American market. Older and smaller plants that previously served domestic markets would be replaced by more efficient plants serving continental markets.

Empirical studies largely bear this out. A seminal paper by Daniel Trefler shows very large manufacturing productivity gains (on the order of 15 percent) on both sides of the border following the CUSFTA tariff reduc-

tions after controlling for other important factors.<sup>6</sup> He suggests that the most plausible reason for this is the rationalization of multinational production facilities that generate economies of scale, as plants produce fewer product lines for a larger end-user market.<sup>7</sup>

Canada-U.S. trade flows are and always have been vitally important for Canada, but lesser known is their growing economic importance to the United States. Figure 7 shows imports from and exports to Canada since 1989, the year the Canada-U.S. free trade agreement came into force. It shows that total trade flows (imports and exports) more than tripled from 1989 to 2008, but have since pulled back due to the deep 2008-2009 recession. Direct exports to Canada reached more than \$250 billion in 2008, or 20 percent of total exports. While this is only about 2 percent of U.S. GDP, it understates the importance of trade because it leaves out additional domestic economic activity related to both exporting and importing (such as financial services and wholesaling).



A 2009 study estimated that trade with Canada in both directions generates \$470 billion in U.S. output (3.3 percent of GDP) and supports more than 8 million jobs (4.4 percent of total employment).<sup>8</sup>

But what is left unsaid in the documentation of increasing trade volumes is the depth of economic integration and structural interdependence that market forces have created in the last 15 years. It no longer makes sense to speak of “the Canadian economy” and “the American economy” as separate and independent entities. The cumulative result of cross border trade and investment—especially since the implementation of the Canada-United States FTA and NAFTA—is for most practical purposes a single, integrated economy. Taking automotive manufacturing as an example, Americans do not buy Canadian cars and they do not sell American cars to Canadians. Americans, Canadians, and Mexicans make North American cars together in the same companies, in cross-border continental production networks. They also share increasingly integrated energy markets, service the same customers with an array of financial services, use the same roads and railroads to transport jointly made products to market, fly on the same integrated airline networks, and, increasingly, meet the same or similar standards of professional practice in a variety of professional services.<sup>9</sup>

### *The Post-9/11 Hiccup in North American Integration*

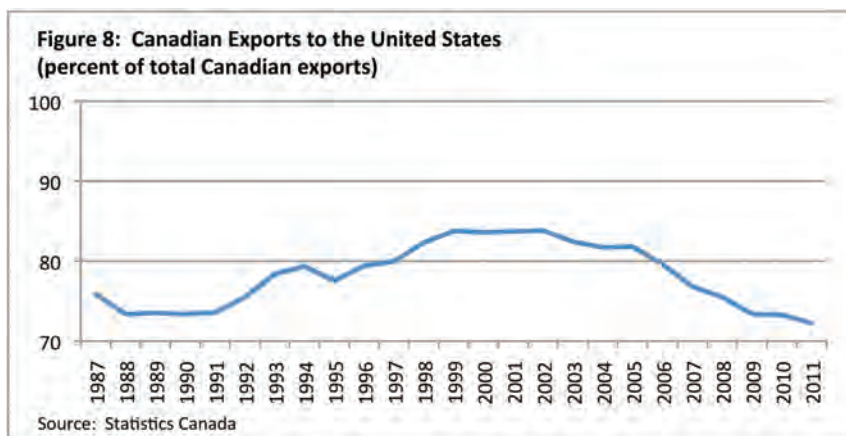
The heightened security concerns in the wake of the September 11, 2001, terrorist attacks slowed trade flows, as well as the pace of continental economic integration. A visual inspection of Figure 7 does not provide an answer to the question of whether growth in Canada-U.S. trade slowed since 2001, but statistical analyses of post-9/11 trends indicate that trade volumes were on the order of 12 percent lower than they otherwise would have been (given trends in economic growth and the exchange rate) by the end of 2007.<sup>10</sup> This “missing

trade” is attributed to the thickening Canada-U.S. border since 9/11 and is corroborated by independent research that the cost of complying with increased border security amounts to as much as 3 percent to 4 percent of the value of total trade flows.<sup>11</sup>

In addition to compliance costs, the unpredictability of border wait times since 9/11 has disrupted the just-in-time supply chains that have helped spur efficiency gains in manufacturing, particularly on the U.S. side. While it is difficult to quantify this effect using large representative data sets, a Conference Board of Canada analysis of detailed discussions with executives at 60 Canadian companies and associations that use the border regularly, or whose members cross regularly, indicate that “just-in-time” inventory has been supplanted by “just-in-case” measures to allow for unpredictability at the border: establishment of warehouses in the United States; inventory stockpiling; rerouting of shipments to more distant and less-frequented crossings; and other actions that raise costs and reduce efficiency.<sup>12</sup> For all these reasons, the Beyond the Border agreement signed by President Obama and Prime Minister Harper in February 2011 (outlined in the text box) is a necessary step for reinvigorating the efficiency of cross-border supply chains.

## TRADE DIVERSIFICATION

Because of history and geography, the United States will always remain an important market for Canadian exporters, and past efforts to diversify trade via brute-force policy measures were abject failures.<sup>13</sup> But today, market forces are accomplishing what policy measures could not: a steady decline of the U.S. share of Canadian exports over the past 10 years. After peaking at 84 percent of total exports in 2000, the share of



U.S.-bound exports fell to 73 percent in 2010, the lowest since implementation of NAFTA (Figure 8). Most of the slack is being absorbed by non-OECD emerging markets.

In order to accelerate the natural push of market forces, Canada has been actively seeking bilateral free-trade agreements with key large markets outside North America, motivated both by the longer-term growth potential in emerging markets and concerns about the medium-

term prospects for the United States. The Comprehensive Economic and Trade Agreement with the EU is close to completion, negotiations are well under way with India, and Canada recently announced its intent to join the Trans-Pacific Partnership. There is a growing consensus in trade policy circles that Canada should court such non-North American relationships more aggressively.<sup>14</sup> As a complement to these institutional arrangements, Canada is building the physical infrastructure capacity (in terms of pipelines, goods transport, and port capacity) to move products to and from the Pacific Coast.

## BEYOND THE BORDER INITIATIVE

Agreed to in principle in February 2011 by President Obama and Prime Minister Harper, Beyond the Border's first action plans were unveiled in December 2011.\* A number of initiatives will facilitate cross-border movement of goods. An important innovation is a "single window" for submission of customs and regulatory compliance forms. All relevant agencies will be required to develop consistent data collection and reporting systems by the end of 2013 so that exporters can file information electronically to a single entity. Preclearance of goods will also be expanded, moving many time-consuming verification activities away from the border. Furthermore, enrollment in trusted trader programs will be streamlined and harmonized, and participating companies will automatically be eligible to use the Free and Secure Trade (FAST) lanes at selected border crossings.

Complementing these institutional changes are commitments to enhance physical infrastructure, which will include more primary inspection lanes, new and expanded secondary inspection facilities, and other investments to relieve congestion and expedite cross-border traffic. By June 2012, the United States and Canada, with the input of business and government stakeholders, are committed to agree on a five-year infrastructure investment plan that will be reviewed annually.

On a parallel track, a Regulatory Cooperation Council is tasked with reducing or eliminating the small differences in regulatory standards that raise costs to exporters. The initial priority areas of focus are agriculture, food, transportation, health, and consumer products. The goal is to foster international collaboration, mutual recognition of compliance, and other coordination that reduces the compliance burden to businesses.\*\*

While previous attempts to "thin the border" have failed, they lacked the single most important element of success: committed political leadership on both sides of the border. Such leadership is now in place. In Canada, Prime Minister Harper understands that streamlined trade requires actions on the security front (particularly regarding information sharing) that Canadians have traditionally resisted, and has successfully convinced the electorate that this is in Canada's best interest: just four months after signing the agreement, he was elected to his first majority government. In the United States, President Obama, in his 2010 State of the Union address, publicly committed to doubling exports in five years and understands that facilitating trade with Canada—the top destination of American exports—must be a big part of that. With continued strong political leadership from the top down and constructive input from business leaders from the bottom up, the Beyond the Border initiative may yet recreate the "missing trade flows" lost in the post-9/11 security measures and make the "tradeoff" between security and trade a positive-sum game.

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\*For full details of the Beyond the Border action plan, see [http://photos.state.gov/libraries/canada/303578/pdfs/us-canada-btb\\_action\\_plan.pdf](http://photos.state.gov/libraries/canada/303578/pdfs/us-canada-btb_action_plan.pdf).

\*\*For full details of the Regulatory Cooperation Council action plan, see [http://photos.state.gov/libraries/canada/303578/pdfs/us-canada-rcc\\_joint\\_action\\_plan.pdf](http://photos.state.gov/libraries/canada/303578/pdfs/us-canada-rcc_joint_action_plan.pdf).



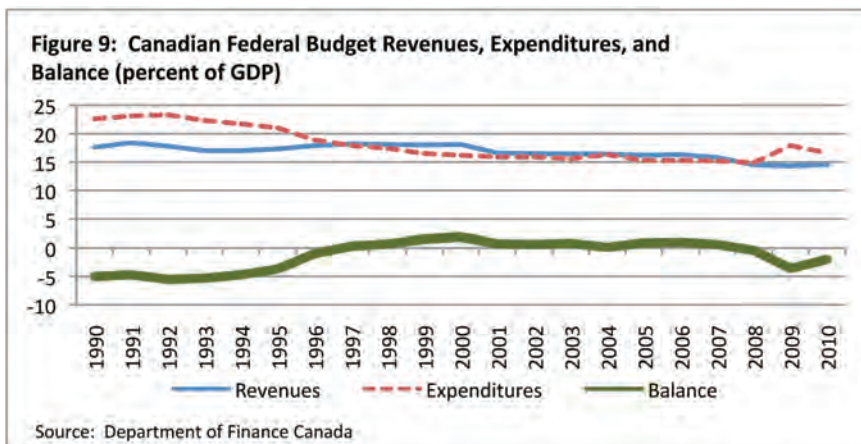
## ENHANCING COMPETITIVENESS—MACRO FRAMEWORK POLICIES

A stable and predictable fiscal and monetary environment is a core necessity for enhanced economic competitiveness, because it allows businesses to make forward-looking decisions on investment and hiring with the confidence that the basic economic rules of the game will not change to their detriment. Canada's efforts on this score arguably were the single most important actions to guarantee the prosperity it enjoyed in the 2000s.

### *Fiscal Consolidation*

As noted in the introduction, Canada was in a fiscal mess in the early 1990s. The federal deficit was 5.6 percent of GDP in 1992. This in and of itself would not have been a problem had it been a transitory shortfall due to the cyclical downturn in 1990-1992, but the federal deficit had averaged 6 percent of GDP for the 10 years prior, driving the cumulative federal debt to 70 percent of GDP. With debts of provincial governments (which unlike most U.S. states are not constitutionally required to run a balanced budget) added to that total, total government debt in Canada exceeded 100 percent of GDP by 1994.

Because the Bank of Canada had committed to an explicit inflation target in the late 1980s, interest rates on government bonds climbed into the double digits from 1989 to 1991 before easing somewhat. This created crushing debt service costs, such that one in every four federal dollars was spent on debt service. It was this vicious cycle that motivated Moody's to put the Canadian federal government on a credit watch and The



Wall Street Journal to muse openly that Canada might follow Mexico into a debt and currency crisis. That development crystallized the economic and political risks of large deficits and, more importantly, helped build public support for deficit reduction.

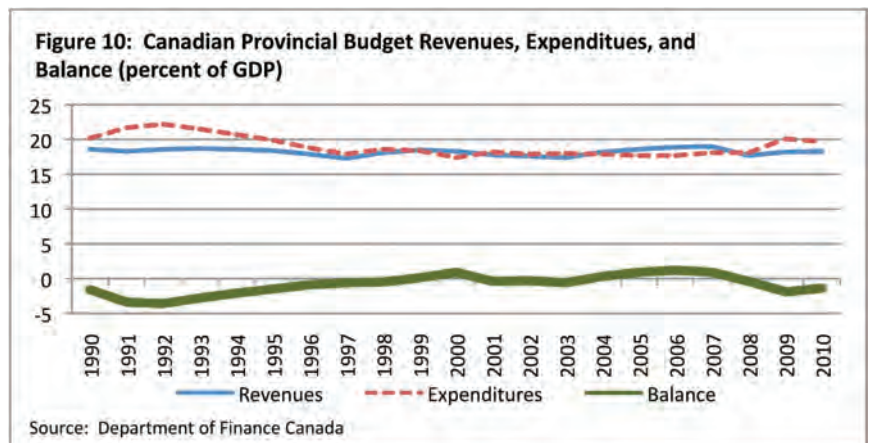
Pressure for fiscal austerity was greater in Canada than in the United States now, due to the latter's privileged position as the issuer of a global currency. Because international mar-

kets for American dollars are so broad and deep, the United States government essentially faces an unlimited budget constraint, and so long as foreigners desire to hold U.S. federal debt, interest rates can be low even in the context of large fiscal deficits, as is the case today. This is one of the main reasons why U.S. policy makers can avoid tough fiscal choices without being punished by financial markets.<sup>15</sup>

In response, then-finance minister Paul Martin vowed to eliminate the deficit “come hell or high water” and tabled a landmark budget in 1995 that included a cut of one-third in transfers to provinces, a 25 percent cut in public service employment, and a 10 percent across-the-board spending cut in government programs and departments over five years. Significantly, the deficit reduction measures did not include any income tax increases, although there were some small changes to the tax code that increased revenues somewhat. On an aggregate basis, there was \$7 of spending cuts for every dollar of revenue increases.

The effect of the 1995 budget on public finances was rapid and dramatic (Figure 9). Federal spending's share of

GDP dropped from 22 percent in 1994 to 16 percent in 2000, and the budget was balanced in 1997, two years ahead of schedule. Canada’s federal government ran 11 consecutive yearly surpluses. But more important than the numbers is the political transformation: Both major political parties (as well as the majority of the electorate) are now true deficit hawks, in that they are prepared to make sacrifices to assure that fiscal balance is maintained over the business cycle. Balanced budgets have become, in the words of one of Canada’s foremost policy experts, a “Canadian fiscal value.”<sup>16</sup> This is evidenced by strong public support for the federal government’s commitment in its 2011 budget to eliminate the current recession-induced deficit by no later than fiscal year 2015.



As noted above, while some of the fiscal consolidation was due to reductions in the federal civil service and program spending, a large portion resulted from deep cuts to provincial transfers. In this sense, the federal government “offloaded” some of its deficit cutting to the provinces. But as Figure 10 shows, the cuts in transfers had no lasting effect on provincial fiscal fortunes. In aggregate, the provinces also reduced spending’s share of GDP after 1995 (continuing a previous trend), and budgets remained close to balance until the recent recession.<sup>17</sup> It is worth emphasizing that provincial transfers did not grow as a percent of GDP, hence the total share of government expenditures in Canada is reduced as federal outlays diminished.

Three years later, Canada managed a major reform of the Canada Pension Plan, which is the analogue of U.S. Social Security retirement benefits. In order to assure its solvency, contribution rates were doubled for both employers and employees over a period of just five years, and the fund was authorized to invest in private securities overseen by an arms-length investment board. While the increase in contribution rates was politically unpopular, this was more than outweighed by putting the program on a sustainable long-term path.

### *A More Competitive Tax System*

Canada has also taken steps to make its tax system more competitive. In the late 1980s, there were concerns that a 13.5 percent wholesale Manufacturers’ Sales Tax (MST) was hindering international competitiveness, since the tax was embedded in the price of goods for export. In 1991, the government of then-Prime Minister Brian Mulroney replaced it with the Goods and Services Tax (GST), a value-added tax on most items purchased in Canada. As the GST is a value-added indirect tax rather than a direct sales tax, the World Trade Organization permits it to be rebated on all exports of goods and services. In contrast, WTO rules prohibit such “rebating” of imputed corporate income taxes or, in the case of Canada, the MST.

The GST rapidly became a significant source of federal revenue in Canada, although it never became the “cash cow” that would fuel bigger government, as many tax policy observers in the United States feared.<sup>18</sup> The initial GST rate of 7 percent was unchanged through the 1990s and most of the 2000s, and has since been lowered to 5 percent by the Conservative government under Stephen Harper. One of the reasons for this aversion to raising the GST is that, unlike for most European VATs, it (as well as provincial sales taxes) is added

to the posted price in the store rather than being hidden in the “tax-included” price. It is thus highly visible to consumers, and any change in the rate is immediately seen and felt in the pocketbook of the electorate.

By the late 1990s, the Canadian economy was in a broad-based boom (including both natural resources and manufacturing), which caused revenues to grow rapidly. In 2000, the federal surplus was 1.8 percent of GDP. This created fiscal room for the largest tax cuts in Canadian history. Personal income taxes were reduced by \$58 billion over five years—larger in relative terms than the 2001 Bush income tax cuts.

But the more important tax cuts with regard to competitive stance were on the corporate side. Since 2000, Canada has slashed its federal statutory rate nearly in half. The Liberals under Jean Chrétien reduced it from 28 percent to 21 percent over a period of four years beginning in 2001, and the Conservative government

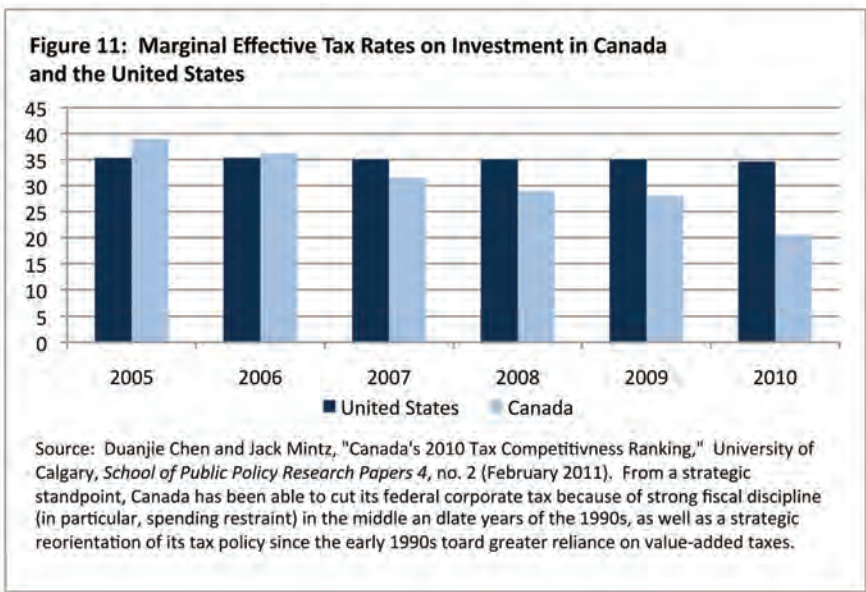
continued this trend by cutting it further to 15 percent by 2012. When average provincial corporate tax rates of just over 10 percent are factored in, the combined federal-provincial rate is closing in on 25 percent, more than 15 percentage points lower than the equivalent federal-state rate in the United States.

Significantly, this rate cutting occurred without any considerable base broadening, meaning that effective tax rates also declined significantly. Research by Jack Mintz and Duanjie Chen provides annual estimates of the marginal effective tax rate (METR) on capital since 2005, which includes the effects of statutory

rates, depreciation allowances, inventory cost deductions, sales taxes on capital inputs, and capital-related taxes (such as financial transaction taxes, equity contribution taxes, and asset-based taxes).<sup>19</sup> Figure 11 shows the METR for Canada and the United States since 2005; a large gap has opened up since then to Canada’s advantage.<sup>20</sup> Interestingly, the difference in marginal effective rates is much larger than it is for statutory rates. This is because many provinces have eliminated direct taxes on capital equipment in recent years. Ontario, Canada’s largest province in terms of economic activity, eliminated its provincial sales tax on capital equipment inputs in 2010. There are also indications that depreciation schedules for information and technology equipment in particular are not rapid enough to reflect true economic depreciation, and efforts to rectify this would decrease effective marginal rates in Canada even further.

The combination of the creation of the Goods and Services Tax in the early 1990s and fiscal discipline later in the decade created the fiscal room for corporate income tax cuts, giving Canadian firms a double competitive edge: falling corporate tax rates that reduce obstacles to investment and the existence of a value-added tax (the GST) that is rebatable on exports.

Moreover, the relationship between corporate tax rates and their resulting revenues is ambiguous, and it should be clear from intuition that there is a nonlinear relationship between the two figures. If the tax rate is



zero, then revenues are by definition zero as well. But if the tax rate approaches 100 percent, revenues will also likely be zero, because the after-tax income of companies doing business would be zero (it is hard to imagine engaging in business activities under such conditions in a free society). This opens the possibility that decreasing tax rates may increase revenues, because the revenue loss associated with the rate reduction may be offset by the increase in the base of taxable income, and empirical research strongly indicates that this was the case for Canada.<sup>21</sup>

### *Monetary and Financial Stability*

I noted at the outset that the adoption of inflation targets as an explicit and formal policy goal of the Bank of Canada exacerbated the fiscal crisis of the 1990s by raising interest rates, but over time proved to be an important factor in the predictability of interest rates and credit conditions. This, combined with a history of conservatism with regard to reserve requirements of financial institutions, a deliberate effort to separate investment activities from traditional banking, and a strong regulatory apparatus, provided the ramparts that would protect Canada from the worst of the global financial crisis. While some Canadian banks were sideswiped by the crisis because they had purchased mortgage-backed securities of dubious fundamental value, the financial system as a whole emerged essentially unharmed by the crisis. Credit conditions loosened up rapidly following the bankruptcy of Lehman Brothers in October 2008, and the Bank of Canada's asset-purchase programs to backstop illiquid assets were lightly used and have long since been terminated. Finally, because Canada relies on bigger down payments and hence less leverage for residential housing, it did not experience the housing boom and bust that reached the United States, Britain, Ireland, Spain, and others in the Great Recession.

## ENHANCING COMPETITIVENESS—MICRO POLICIES

In terms of microeconomic policies to spur competitiveness (particularly in manufacturing), Canada has been less successful in enhancing the bottom line, which is ultimately business innovation and the productivity gains that it generates.

The fundamental problem is that discussions of innovation in Canada inevitably fall into the trap of equating it with research and development, science and technology, based on the following line of reasoning:<sup>22</sup>

- Investments in science and R&D are key ingredients to innovation.
- Innovation leads to higher productivity (either by reducing the cost of producing existing goods and services or creating new higher-value-added products and services, or both).
- Therefore, Canada must invest more in R&D to improve innovation and productivity.

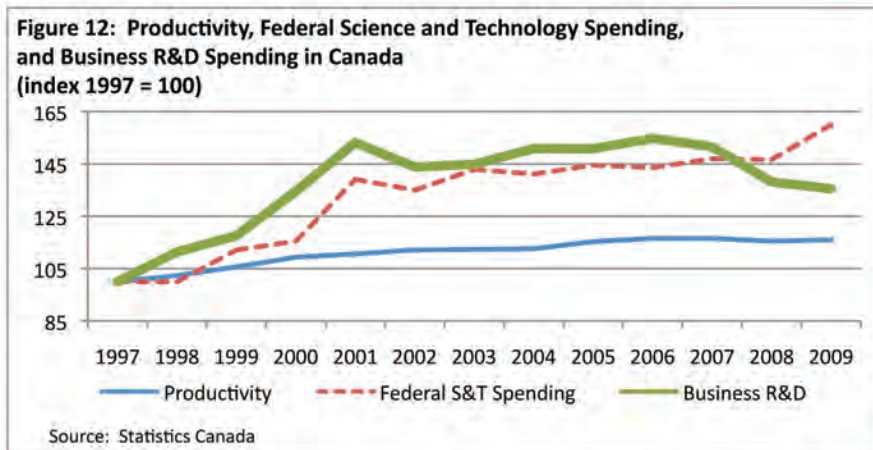
As with most logical fallacies, the premises are indeed true, but the conclusion depends on an unstated assumption that the supply of science and R&D creates its own demand for innovation: create the knowledge and the innovators will come. But this unstated assumption, which has formed the basis for the “science-push” innovation policy in Canada for at least the past 40 years, is simply not true. For Canada has significantly boosted direct funding for university R&D in the natural and social sciences, has one of the most generous tax subsidies for business R&D and is generally not lacking in knowledge and scientific know-how.



Figure 12 demonstrates the failure of science-push innovation policy by plotting key measures of R&D and science funding against productivity since 1997. What is most striking about the figure is that federal investment in science and technology (S&T)—the backbone of direct government support for innovation—rose by 60 percent from 1997 to 2009, while business productivity grew by a paltry 16 percent.

In addition to this large gap, the timing in terms of productivity dynamics is the opposite of what a believer in science-push policy would expect. The bulk of the increase in S&T investment occurred between 1997 and

2001, and since the fruits of the new knowledge those investments created would have taken some time to cultivate and harvest, one would have expected an uptick in productivity starting in the 2000s. But the uptick, small though it was, occurred contemporaneously and was, as verified by empirical research, due mainly to the impact of the rise of the World Wide Web and the opportunities it provided for offering new services and cutting costs. Indeed, the rise in



business R&D during the 1997-2001 period (which was stimulated in part by such Web opportunities) was the more important factor. Since 2000, productivity has essentially flat lined.

### *Government Support for R&D and Innovation*

Since 1997, Canada has focused its R&D policy efforts on strengthening university R&D. Well-funded university research chairs were established to attract top-tier researchers from Canada and around the world, research institutes were established within universities, and funds for university research granting councils in natural sciences and engineering have more than doubled. As a result, Canada is now a leader among OECD nations in terms of university-funded research as a share of GDP.

With regard to university-industry technology transfer, however, studies have demonstrated two fundamental policy shortcomings: businesses are insufficiently involved in determining the recipients of government support for university research, and small businesses do not have the resources or knowledge to form partnerships with post-secondary institutions.<sup>23</sup> As a result, relatively few firms (less than 5 percent by most accounts) use universities as major sources of innovation, and those that try often find that the research is of limited relevance to their business activities. This is a market failure that warrants active government policies.

A more effective way of harnessing the potential business value of university research is to turn the existing science-push model on its head. Businesses are much better equipped to judge the commercial benefits of university research, and they should thus be more present in the administration of government programs to promote technology transfer.

The United States provides a good blueprint with its Small Business Technology Transfer (STTR) program, which for almost 20 years has provided grants for partnerships between universities and small businesses. But

the grants are firm-driven: the business seeks out university researchers doing promising work and communicates clearly the lines of investigation that have the most commercial potential. There is even a legislative requirement that the researcher work at least half time at the sponsoring firm. When more decision making power is put in the hands of business, the innovation payoff from the research is much larger. Business involvement in university research, long considered taboo, must be increased in the context of clearly circumscribed programs if Canada is to reap the benefits of being a leader in higher education R&D.

With regard to supporting business R&D, the Industrial Research Assistance Program (IRAP) in Canada is a well-regarded and effective program that provides direct R&D grants to small-and medium-sized enterprises (fewer than 500 employees) as well as technical and business advisory services. However, it is underfunded; high demand for grants typically results in budget exhaustion well before the end of the fiscal year.

At an estimated \$3.7 billion in 2011, the largest single program in support of business R&D is the Scientific Research and Experimental Development (SR&ED) tax credit, analogous to the Research and Experimentation tax credit in the United States. While the two share a common goal of stimulating business R&D, the Canadian variant is permanent and much more generous, offering a 20 percent tax deduction (35 percent for small businesses) on every dollar of qualifying expenditure. The U.S. version (which expired at the end of 2011) is an incremental credit of 20 percent that only applies to R&D over and above a threshold determined by the firm's past history of R&D spending. The generosity of the SR&ED credit, as well as strong support of university R&D and a well-educated labor force, has been a strong attraction for U.S. and other foreign firms to establish research facilities in Canada.

A recent expert panel on federal policies supporting R&D has strongly recommended, however, that this support be rebalanced toward direct grants for business R&D (as well as simplification of the more than 60 existing programs, many of which are little-known and little-used) and away from indirect tax expenditures,<sup>24</sup> and it appears that the government is likely to heed that advice. Nonetheless, the panel recommended a modest scaling back of the SR&ED tax credit for SMEs, but it would remain unchanged for larger firms, thus retaining the tax benefits of moving R&D facilities to Canada.

### *Invigorating the Demand Side of Innovation*

Much as policymakers are tempted to support R&D on the supply side as a path of least resistance, we have to remember that innovation is much more (or, to speak more accurately, much less) than science and has more to do with competitive pressures in the marketplace. Consider Federal Express, which redefined the pace of business activity with the insight that there was a latent demand for next-day-guaranteed delivery of letters and packages. This idea did not require massive amounts of cutting-edge academic research, but was instead a textbook example of how competitive marketplace pressures (in this case, driven by customers) can lead to non-science-based innovation. To paraphrase a timeless adage, necessity is the mother of innovation.

The Canadian experience over the past 15 years shows that supply-push support for innovation is necessary but not sufficient for productivity growth. Policymakers must also ensure that competitive pressures on industry are robust, so that companies have incentives to innovate. Policies to liberalize trade and investment in fast-growing emerging markets and reduce the barriers to Canada-U.S. trade, as well as entry in protected industries are equally important for boosting productivity.

## *Human Capital*

Although the skill level of the labor force is affected by policies that are too numerous to be assessed in this report, its importance to future economic growth and productivity in both Canada and the United States is so important as to warrant mention.<sup>25</sup> The Canadian education system is generally recognized to be of high quality when compared to other OECD nations: scores on standardized international tests of math, science and reading are routinely in the top five or 10 and average years of schooling is above the OECD average (although below that of the United States). If there are any weaknesses, they can be found in the bottom of the distribution (a higher proportion of high school dropouts). In Canada, a full 47 percent of persons aged 25-64 have a post-secondary degree, higher than any other OECD nation. However, a large proportion of these degrees are from two-year colleges, technical schools and other non-university institutions, which likely overstates the true degree of human capital in the labor force.

In addition, Canada's immigrant selection process is squarely focused on skills. More than two-thirds of accepted immigrants are in the "economic" class, for which educational attainment and work experience are given a high weight in the selection process. Because of this, recent immigrants are on average better educated than native-born Canadians. Notwithstanding issues of accurately assessing the value of foreign education and work credentials, immigrants add considerably to the pool of human capital in Canada.

Despite this pool of comparatively well-educated workers in Canada, the manufacturing sector suffers from acute shortages of specific types of skills. This mirrors the situation in the United States, where over 80 percent of manufacturers reported shortages of skilled production workers such as machinists, machine operators, and craft workers,<sup>26</sup> even as more than 15 million unemployed or underemployed Americans are seeking work. Skills are critically important across all sectors of the economy, but given the especially strong competitive pressures faced by manufacturers, it is doubly important to develop the specific skills that are need now and in the future. Skills of the manufacturing labor force are the bedrock of the German manufacturing sector, and many have held up the "German model" of manufacturing which has remained relatively healthy through the Great Recession and ensuing recovery—as a source of lessons for North America with regard to human capital development.

## CONCLUSION

Despite its challenges, the stars are aligned for a bright economic future in Canada. Part of this is good fortune, being endowed with the oil, industrial metals, and other commodities that the rest of the world needs, and being the neighbor and privileged trading partner of what is still the largest and most dynamic economy in the world.

But Canada's economic strength is also due to deliberate policy decisions that have created a more welcoming business climate and laid the groundwork for better manufacturing competitiveness. Most important among these is the remarkable fiscal turnaround starting in 1995, which rapidly transformed large structural deficits into surpluses, which in turn permitted significant corporate tax cuts as well as debt reduction. The net result of this is an economy with the lowest corporate tax burden in the G7 with a modest value added



tax that has not fueled growth in government spending—exactly the kind of system that tax economists in the United States have been advocating for years. While the political and economic contexts were different in the 1990s than they are now (most notably the fact that a strong economy made Canada’s job easier than it would be today), the more important lesson is the ability to educate the citizenry about the importance of fiscal discipline, what steps (often painful) are necessary to achieve it, and build public support for what once seemed like “radical” changes in federal tax and spending policies. It is a question of political will rather than mathematical possibility.

Despite these strong framework conditions for competitiveness, the manufacturing sector—which is most exposed to global competition—has not succeeded in improving or maintaining its competitive position. The main reason is a lack of innovation, both because government policies in support of innovation are not well aligned with business needs and businesses themselves have insufficient incentive or risk appetite to innovate. Here Canada could usefully draw lessons from the United States, where innovation policies seem to have a stronger impact on the bottom line of productivity growth, and direct competitive pressures from China and other countries with lower manufacturing costs (and currency advantages) have stimulated a manufacturing renaissance. The United States’ 50 percent improvement in manufacturing productivity in the 2000s can serve the same lesson for Canada as Canada’s fiscal discipline in the 1990s did for the United States: it can be done.

Beyond cross-border lessons learned from the economic experiences over the past 15 years, the more important observation is that Canada and the United States have become for all intents and purposes an integrated economic space, making things together rather than selling finished goods to one another. Firms on either side of the border are thus partners more than they are competitors. In this sense, Canada and the United States have “outgrown” NAFTA and require complementary sets of agreements with regard to energy supply, security and a whole host of other issues. The Beyond the Border initiative addresses many of them and for that reason must move forward successfully. But energy remains an area where discussions need to take place in order to avoid trade “irritants” such as the rejection of the Keystone XL pipeline. Canada has a strong hand in terms of supply, and the United States certainly has the demand.

Finally, adopting a continental perspective on economic production and value chains underscores the need for cross-border discussion and collaboration at the business level. This has already begun to happen: for example, the Canada-U.S. manufacturing summit co-organized by the U.S. National Association of Manufacturers and the Canadian Manufacturers and Exporters in August 2011 was the first of its kind to bring together manufacturing firms and associations on both sides of the border to discuss common policy challenges. Given the lack of innovation in Canadian manufacturing firms, those conversations and connections need to be broadened and deepened to facilitate sharing of best practices, from which the entire North American economy will benefit.

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