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Canadian Competitiveness: Nine Years after the Crossroads

Michael Porter
Harvard University

Roger Martin
University of Toronto

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Canadian Competitiveness: Nine Years after the Crossroads

**Roger L. Martin, Dean
Rotman School of Management
University of Toronto**

**Michael E. Porter,
C. Roland Christensen Professor
Harvard Business School**

January, 2000

I. INTRODUCTION¹

At the millennium, Canada enjoys macroeconomic conditions it could have only dreamed of nine years ago. The 1991 federal budget deficit of 6.6% of GDP, widely seen as an insurmountable impediment to growth and private capital formation, has disappeared completely. Politicians now argue about how to 'invest' the large and growing surplus. Inflation, long thought to be a danger to the economy has all but abated. Economists instead worry about deflation. Interest rates have plummeted to lows not seen in decades. This has been a glorious macroeconomic turnaround, indeed!

However in the same nine years as the key macroeconomic indicators turned positive, the relative standard of living of Canadians has declined precipitously. The Canadian dollar, which stood at 87 cents in 1991, fell precipitously to 65 cents by mid-1998 and has stayed at the 65-69 cent range ever since. In international terms, this represents a cut in pay of in excess of 20% for all Canadians. Canada's world standing in GNP per capita, even with favourable adjustment for purchasing power parity (PPP) fell two places in just eight years from 1990 to 1998, passed by Denmark and Norway.²

Canadians, quite reasonably, are asking why, after slaying the deficit dragon and paying a high price in spending cuts, has Canada lost so much ground? Was it really worth it?

The explanation of this apparent paradox was visible in 1991 and even clearer today. We published a study in October 1991, based on a detailed examination of Canadian competitiveness, entitled *Canada at the Crossroads*³. It diagnosed the roots of Canada's competitiveness problems and made recommendations for improvement. The study based on Michael Porter's *Competitive Advantage of Nations*⁴ framework, in many ways predicted the current apparent paradox. Subsequent research on the microeconomic foundations of competitiveness, firm-level competitive strategy, and country innovation further clarifies Canada's current situation.

By 2000 two things have become clear: First, the roots of international competitiveness lie in the microeconomic fundamentals of an economy. Macro-economic factors play a role in creating the environment for competitiveness but are not sufficient to enhance prosperity. Second, international competitiveness results from firm level choices that produce distinctiveness, not from replicating the choices of other firms, regions or nations.

In 1991, we characterized Canada as standing at a crossroads, facing a choice of whether to tackle serious weaknesses in its microeconomic fundamentals of competitiveness or accepting a lower standard of living. The past nine years show that Canada pursued the latter road.

In this paper we argue that it is imperative that Canadian firms and governments turn their backs resolutely on a culture of replication and instead embrace innovation, uniqueness and differentiation. Only by migrating from a replication economy to an innovation-driven economy will Canada prosper in the 21st century.

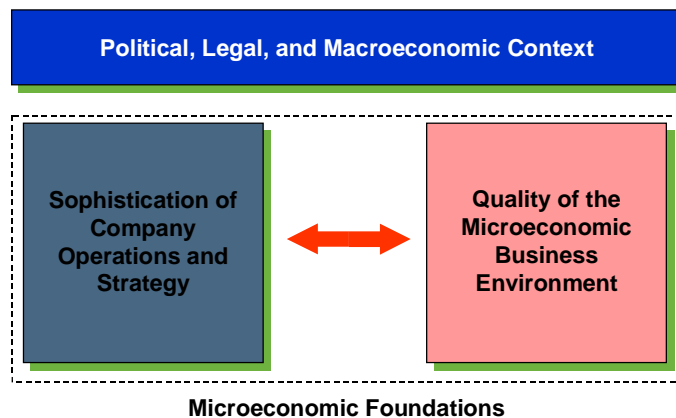
II. CANADA AT THE CROSSROADS, 1991

In 1990, Monitor Company and Michael Porter began a study of the competitiveness of Canada sponsored by the Government of Canada (represented by four ministries: Industry, Science & Technology, Employment & Immigration, Trade, and Consumer & Corporate Affairs) and the Business Council on National Issues. The study culminated in a report, *Canada at the Crossroads* (1991), that expressed concerns and a sense of urgency about Canada's competitive future.

The Theoretical Context

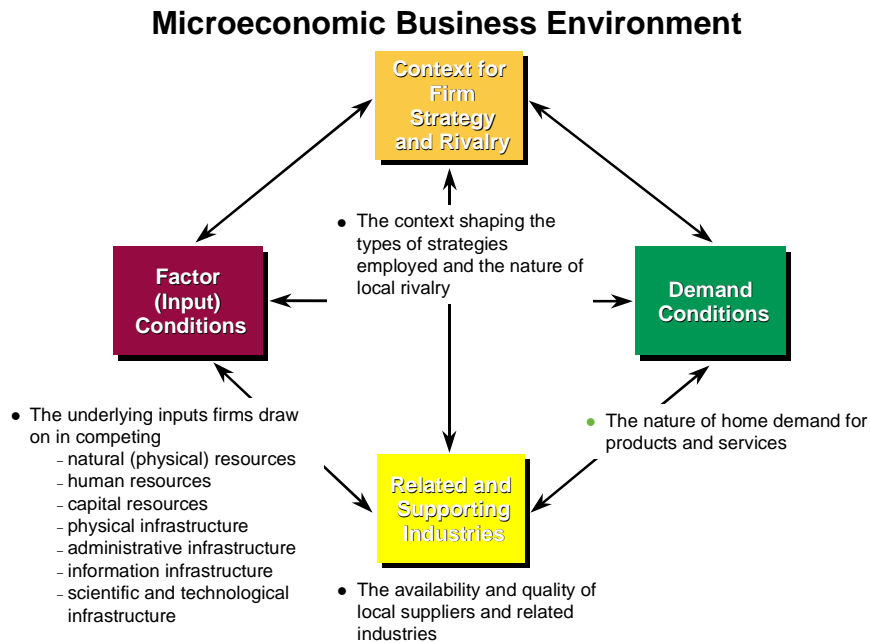
The study was based on a theory of competitiveness developed by Michael Porter⁵. It posited that rising prosperity of a nation depends on the productivity with which it uses its human, capital and natural resources. This is manifested in the way in which a nation's firms compete. Productivity, in turn, is a function of the interplay of three factors: the Political, Legal and Macroeconomic Context; the Quality of the Microeconomic Business Environment; and the Sophistication of Company Operations and Strategy. Together they determine the capacity of a nation to produce internationally competitive firms and support rising prosperity.

The Competitiveness Paradigm



Stable political/legal institutions combined with a sound macroeconomic context featuring low inflation, low and stable interest rates and taxation policy favourable to savings and investment create an environment in which competitiveness is possible. However, a favourable macroeconomic context only creates the potential. Wealth is actually created by the microeconomic foundations of competitiveness: the workers, firms, markets and associated institutions in which competition actually takes place.

The **Quality of the Microeconomic Business Environment** is a function of four interrelated features captured in the ‘Diamond Model’ shown below.



The Diamond theory is fundamentally a model of pressure and upgrading. A context that creates **pressure** for firms continuously to upgrade the source and sophistication of their advantage and at the same time **supports** the upgrading process is a favourable microeconomic context.

Pressure for upgrading is supplied by *demand conditions* featuring sophisticated and demanding customers, whose demands spur the local firms to innovate in order to upgrade their product/service offerings. Particularly valuable is pressure from local customers that anticipates the nature of demand elsewhere in the world. Beneficial pressure is also supplied by a *context for firm strategy and rivalry* that causes local competitors to feel the need to continuously seek unique ways to better meet the needs of customers. Such a context typically requires a number of firms competing in the same jurisdiction.

Support for upgrading is provided by the abundant supply of *factor (input) conditions*, including basic factors such as natural resources and capital resources, as well as advanced and specialized factors such as scientific infrastructure and pools of specialized labour. As countries become more advanced the quality of their microeconomic business environments is increasingly influenced by advanced and specialized (e.g. research universities) rather than basic factors (e.g. raw material supply) because the basic factors can be readily purchased from abroad. Finally, support for upgrading is enhanced by the

presence of high quality *related and supporting industries*. Such industries can help competing firms innovate and create more unique ways of meeting customer needs without needing to make all the investments themselves.

The **Sophistication of Company Operations and Strategy** reflects the nature of the response of firms to the microeconomic environment for business. High sophistication is reflected in firms seeking to continuously upgrade their sources of competitive advantage through uniqueness of products and processes. This typically requires firms to invest in research and development, branding, understanding customers, and develop unique configurations of assets and sophisticated distribution strategies. Highly sophisticated firms operating in high-quality microeconomic environments earn the ability to compete successfully internationally against firms operating in lower-quality microeconomic environments with less sophisticated strategies.

The Hollywood movie production industry is an excellent example of a self-reinforcing cluster that is without peer in global competition. The major US movie studios dominate world exports of motion pictures. The US industry features a high-quality microeconomic environment and sophisticated company operations and strategy. Numerous movie studios compete vigorously against one another in southern California creating intense competitive pressures. The US movie customer who watches more movies per capita than in any other market in the world spurs them on to spend ever more in innovative ways to produce more appealing movies.

The studios are supported in their upgrading by the availability of specialized labour including actors, directors and producers, and the proximity of the two leading worldwide film schools (UCLA and USC), which the industry supports generously. The world's greatest concentration of related and supporting motion picture industries, including special effects firms and film camera equipment firms are based in California. Together, the features of the California Diamond produce a microeconomic environment for business that has driven the companies to utilize ever more sophisticated strategies featuring relentless upgrading and global leadership.

Movie producers from other countries face daunting challenges in competing against the Hollywood powerhouse. They have fewer pressures for upgrading and many fewer supportive structures for upgrading. Star actors and directors find the gravitational pull of Hollywood difficult to resist thus weakening the specialized factor assets of firms elsewhere and strengthening the Hollywood cluster.

The central prescription of the competitiveness paradigm for firms is to seek out the pressure, rather than flee from it, and to seek advantage through unique processes and products. If the greatest pressure for upgrading does not come from the home market, firms should seek to both build the effectiveness of the home market diamond and participate in the most sophisticated markets worldwide to take advantage of foreign diamonds.

The central prescription of the competitiveness paradigm for governments is to promote the attractiveness of the microeconomic environment for business through aggressive competition policy, strong consumer and environmental protection and heavy investment in specialized education. These microeconomic features can be reinforced and supported through macroeconomic policies producing low and stable inflation and low taxation of work and investment.

The Study

Canada at the Crossroads studied the three factors governing competitiveness and prosperity including the macroeconomic context and the twin aspects of the microeconomic foundation. The research audited the political, legal and macroeconomic context. It assessed the strengths and weaknesses of essential elements of the microeconomic environment both at the overall Canadian level and in a number of important Canadian clusters. It also assessed the sophistication of operations and strategies at Canadian firms in a number of industries, including newsprint, life insurance, environmental consulting and telecommunications equipment. The study involved extensive consultation with governments, industry associations, and individual firms and was guided by a panel of distinguished Canadian economic experts.

Findings and Recommendations

We found Canada to be at a critical crossroads. Due to Canada's impressive endowment of natural resource, its well-educated population, and its proximity to the US, the nation had enjoyed economic prosperity and a high standard-of-living. However, our prediction was that this favorable situation was likely to erode unless Canada and its firms chose a distinctly different path. With the status quo likely to produce a decline in the standard of living, we outlined an alternative path that could retain and enhance competitiveness.

Political, Legal and Macroeconomic Context

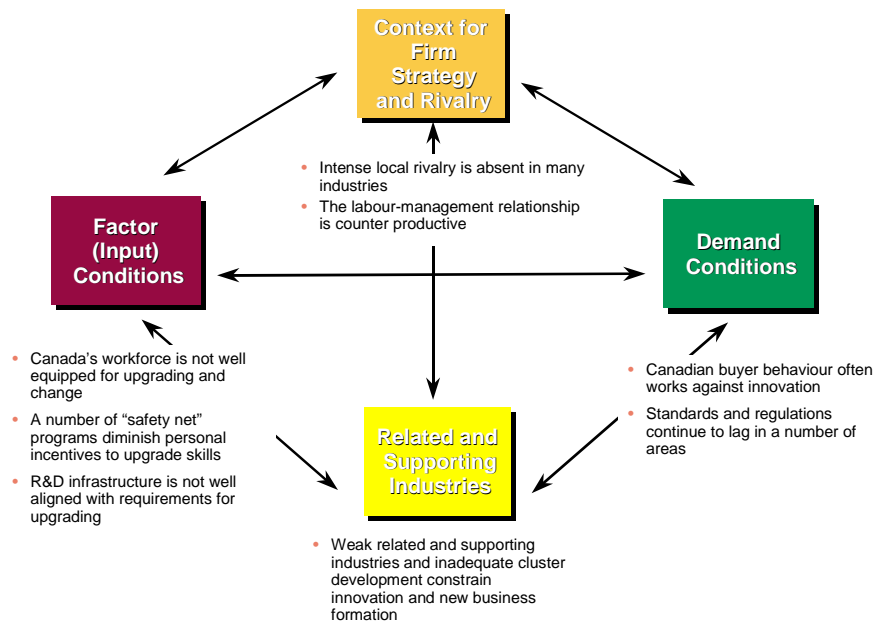
In 1991, there were significant macroeconomic impediments that were holding back public investments as well as firm upgrading. Central among these barriers was the budget deficit, which stood at 6.6% of GNP, over twice as high as in any G-7 country other than Italy. The deficit put upward pressure on real interest rates and created an unfavorable environment for investment and capital formation. High personal and corporate taxation rates further discouraged investment and upgrading. Finally, a highly developed social safety net was designed in a way that created disincentives for personal skill upgrading.

We recommended that governments move aggressively to restore a favorable macroeconomic environment for Canadian business. Tackling the budget deficit and reducing the personal and corporate tax rates that created weak incentives for personal and firm investment and upgrading were essential. We also recommended that governments eliminate the barriers to inter-provincial trade and investment that fractured an already small economy.

The Quality of the Microeconomic Business Environment

Our analysis identified a number of weaknesses in the microeconomic business environment that afflicted much of the economy:

Weaknesses in the Microeconomic Business Environment



The absence of intense local rivalry combined with customers who were not demanding produced weak pressures for upgrading of advantages. Related and supporting industries were either shallow or weak, providing little support for firms that chose to upgrade. In addition, factor conditions, especially with respect to specialized human capital and R&D infrastructure, constrained the movement to more sophisticated ways of competing.

Recommendations we offered in each area of the Canadian Diamond.

With respect to *Context for Firm Strategy and Rivalry*, we recommended that governments pursue policies to enhance the intensity of domestic competition rather than try to produce national champions shielded from competition in the home market. In *Demand Conditions*, we recommended that governments adopt more stringent and forward-looking regulatory standards and restructure government procurement to make the government a more sophisticated and demanding customer.

With respect to *Factor Conditions*, we encouraged governments to invest more heavily in education and specialized skills development and to step up the pace of deregulation in infrastructure sectors. In addition, we encouraged technology development policies more connected to industry clusters and mechanisms for faster adoption of new technology. In

Related and Supporting Industries, we recommended that governments ensure that programs in all policy areas are consistent with the development of clusters rather than spreading similar firms across many parts of the country, as has been the case too often in Canada with its historical policies of regional development.

The Sophistication of Company Operations and Strategy

Finally, our research uncovered key weaknesses in the sophistication of company operations and strategy. We found many firms content to compete in Canada and have little orientation toward global competition. Those firms that did compete internationally were ones which focused on the U.S. and tended to pursue strategies that depended on natural resource advantages or lower labor costs than other G-7 competitors rather than sophisticated products and processes. Rather than seek out the most sophisticated and demanding customers both at home and abroad, Canadian firms were inclined to serve the less demanding segments. Also, Canadian firms failed to invest in upgrading their home country diamond through supporting specialized education or building related and supporting industries, tending instead to believe such investments were the responsibility of government.

We recommended changes in domestic and global strategies. Global strategy had to develop the capacity to sell in important markets globally and tap into leading-edge research excellence in specialized technologies. Canadian firms needed to move to innovation-driven modes of competing –i.e. sophisticated processes and products- rather than raw materials or labour cost advantages. To do so, it would be necessary to rationalize product lines, reduce levels of diversification and spend more time, attention and resources on upgrading the Canadian home diamond.

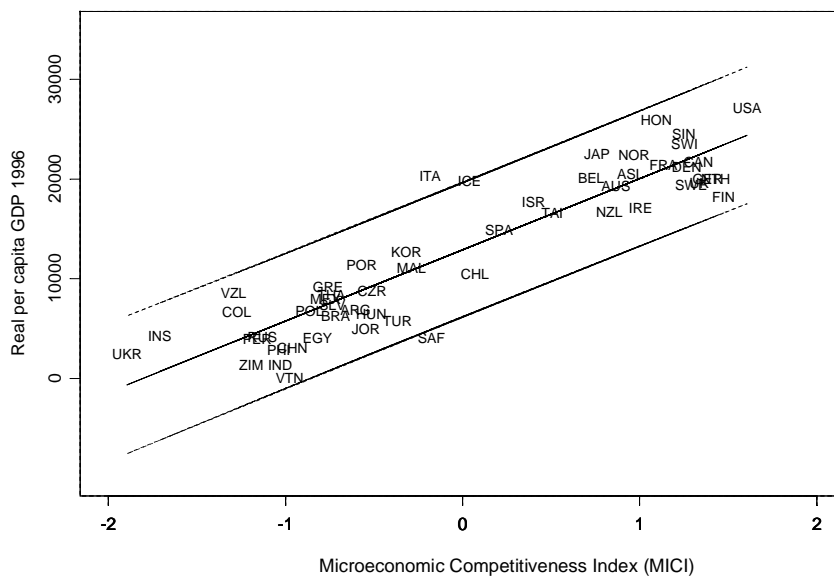
III. ADVANCES IN RESEARCH AND THEORY SINCE 1991

Since 1991 additional empirical and theoretical work has clarified the relationship between quality of the microeconomic foundation of a nation and the prosperity of a nation. In addition, the role of uniqueness and innovation in company strategy has been better understood. Three pieces of research contribute to understanding Canada's competitive position at the millennium.

World Competitiveness Report

In 1998, Porter first tested his model of competitiveness statistically in conjunction with the annual Global Competitiveness Report.⁶ Using survey data across 52 countries, he measured the quality of many aspects of the microeconomic business environment and the sophistication of company operations and strategy. A series of additional questions on company operations and strategy as well as microeconomic business environment were added to the annual survey to complement its previous focus on macroeconomic factors. Utilizing answers to 54 survey questions related to the microeconomic context, Porter used common factor analysis to fashion a Microeconomic Competitiveness Index (MICI). Many elements of the microeconomic environment tended to move together. He explored the relation between a nation's score on MICI and its relative GDP per capita and found a strong correlation. In the 1998 report, MICI explained 82.4% of variance in GDP across the 52-country sample, and in the 1999 report it explained 83.3% of variance.⁷

The Microeconomic Foundations of GDP Per Capita

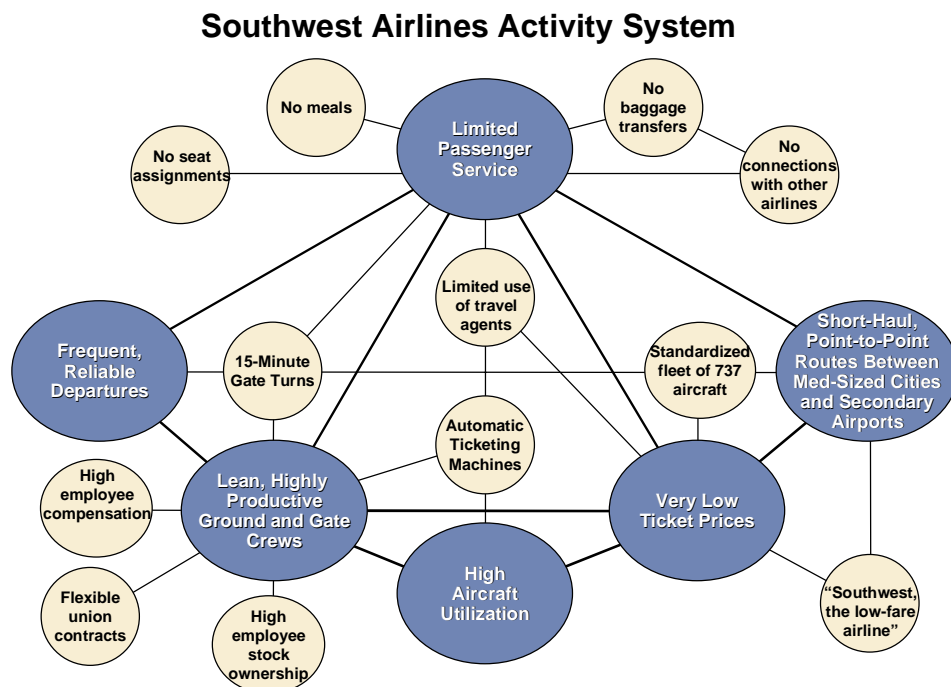


SOURCE: MICHAEL PORTER, MEASURING THE MICROECONOMIC FOUNDATIONS OF ECONOMIC DEVELOPMENT, IN GLOBAL COMPETITIVENESS REPORT, WORLD ECONOMIC FORUM, 1998

These findings confirmed the view that microeconomic foundations have a strong association with prosperity. Testing with macroeconomic variables revealed a far weaker association with the level of GDP per capita. Indeed, one microeconomic survey question, whether “Competitive advantages of your nation’s companies in international markets are based on low cost labour or natural resources (extreme rating of 1) or unique products and processes (extreme rating of 7)?⁸, accounted for 80.6% of the variance in GDP per capita across the 52-country sample. The question on Sophistication of Company Operations and Strategy question asked

What is Strategy?

Results of firm-level competitiveness research by Porter strongly reinforced the importance of uniqueness in company operations and strategy. The research, which culminated in the Harvard Business Review article *What is Strategy?*⁹, found that firm-level competitive advantage rarely results from benchmarking against competitors and replicating their choices, that is, pursuing what Porter refers to as ‘operational effectiveness’. Rather, competitiveness results from creating a distinctive positioning that involves making an inter-related set of choices which creates a tailored web of activities –an activity system– that creates customer value distinct from competitors. Competitive advantage stems not as much the individual activities as from the entire system, such as the activity system of Southwest Airlines shown below:



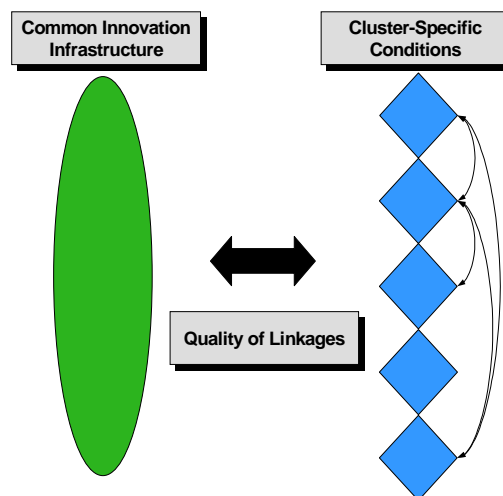
Sustainability of advantage results from the difficulty of any competitor replicating all aspects of the complex activity system. Imitating some aspects of the activity system, but not all, leads to a large gap in performance. By contrast, those firms who seek advantage on a few activities tend to be matched or trumped quickly by competition. For example, a firm seeking advantage by producing a common product using a standard process but with low-cost labor will be easily trumped in the global competitive environment by a competitor producing the same product with the same process in a *lower* labor-cost jurisdiction. A similar story holds for the firm seeking to win on the basis of cheap raw materials or of having the largest plant: they can be readily trumped as well. Finally, firms seeking simply to replicate the strategies of others rather than innovate and create a distinctive activity system will earn lower rewards for replication.

The thinking in *What is Strategy* reinforces ideas in the diamond theory and the Global Competitiveness Report in demonstrating that firm prosperity, which produces national prosperity, results from choices: choices to produce a unique product and/or utilize a unique process in the context of a distinctive activity system.

Innovative Capacity

Porter's research with Professor Scott Stern, initially sponsored by the U.S. Council on Competitiveness¹⁰ further reinforces the important role of innovation in promoting economic prosperity. The research modeled national innovative capacity as resting on three broad areas:

Elements of National Innovative Capacity



The first is the *common innovation infrastructure*; that is the common pool of institutions and resource commitments that support innovation in many fields. These can be seen as the elements of the diamond that are crosscutting and which influence innovation in many if not all industries. For example, the common innovation infrastructure would include investment in basic research, investment in education, the extent of the network of universities conducting research and training scientists and engineers. It also includes the policies that broadly affect the incentives for innovation in any industry such as intellectual property laws.

The second element of innovative capacity is *cluster-specific conditions*. Innovation is also strongly affected by circumstances in particular fields such as specialized inputs, unique demand conditions for particular types of products, and access to specialized suppliers. This is why nations and regions are invariably more innovative in some fields than others.

Innovation tends to be facilitated by the presence of a cluster, particularly where the cluster is concentrated geographically. Firms within a cluster are often able to more clearly and rapidly perceive new buyer needs than can competitors that are isolated. For example, Silicon Valley and Austin-based computer companies plug into customer needs and trends quickly and effectively, with an ease nearly impossible to match elsewhere. Firms within a cluster can also often commercialize innovations more rapidly and efficiently because of their ability to easily source needed components, machinery, and services. Small entrepreneurial firms grow up within clusters to meet newly emerging needs overlooked or too small for established players. Reinforcing these other innovation advantages of clusters is the sheer pressure—competitive pressure, peer pressure, and constant comparison—that arises in geographically concentrated clusters.

The final element of innovative capacity in an economic area is *the quality of linkages*. The strength of the interaction between the common innovation infrastructure and cluster-specific conditions also matters. For example, are there effective institutions in place to migrate basic science into established or nascent clusters? Do the strongest clusters provide sustained support back to the common institutions? While measuring the strength of these interactions is difficult, they represent a key element of the national innovation environment in an economic area.

Statistical analysis in 17 OECD countries between 1973 and 1993 revealed a strong and consistent relationship between measures of the strength of national innovative capacity and per capita international patenting. An international patent is one that is filed in both the home country as well as abroad. The research used the number of patents that were approved in both the country of the inventor as well as by the U.S. Patent and Trademark Office. Patenting is an imperfect measure of innovation. However, obtaining a patent in a foreign country is a costly undertaking, which is only worthwhile where a commercial return is anticipated. Hence, international patenting isolates innovations of commercial significance. Moreover, the fact that all patents were also granted by the U.S. Patent and Trademark Office not only ensures consistency in standards but also controls for “new-to-the-world” technologies. Overall, the measures of the strength of national innovative

capacity explained more than 99% of the variation in international patenting, highlighting the strong relationship between measures of innovative capacity and observed innovative output.

The research produced a measure called the *Innovation Index* that measures a nation's relative capacity for producing and exploiting innovation over time. This body of work served to reinforce both the importance of strong clusters that provide pressures and support for innovation and upgrading as well as the importance of the common innovation structures and linkages in promoting prosperity.

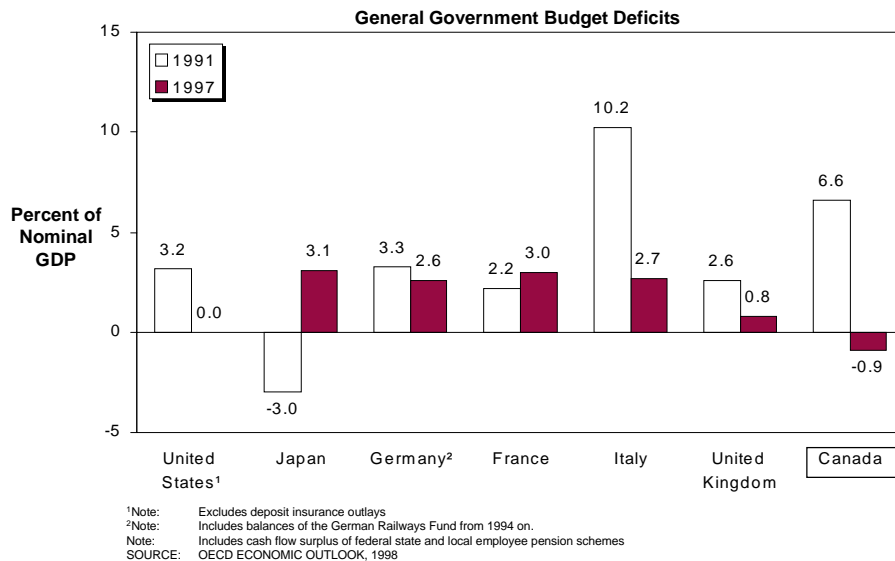
IV. CANADIAN COMPETITIVENESS: PROGRESS SINCE 1991

Since 1991, Canada has registered mixed progress across the three broad causes of national competitiveness. Great progress has been made in macroeconomics, but serious weaknesses remain in the microeconomic foundations.

Political, Legal and Macroeconomic Context

Canada's macro-economic turnaround has been nothing short of miraculous. Between 1991 and 1997, the Canadian government managed to bring the federal budget deficit down from a second worst among G-7 countries level of 6.6% of GNP to a best among G-7 surplus of 0.9%.

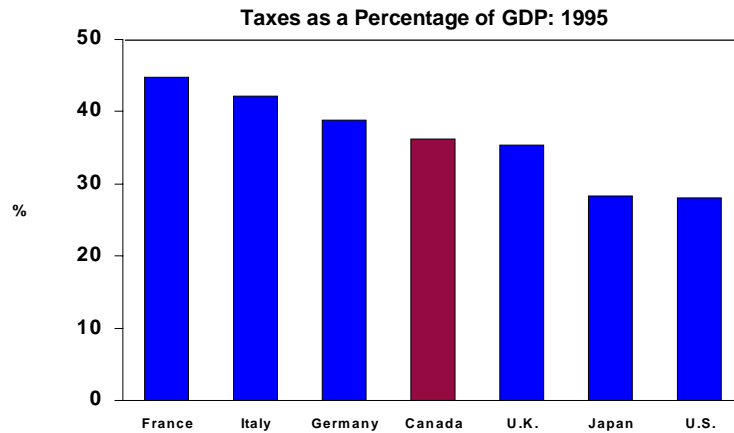
Elimination of the Structural Deficit



Interest rates, using the 3-month Treasury bill rate as a proxy, fell over 60% from an average of 11.55% in the 1988-90 period to 4.44% in the 1997-1999 period, a much more attractive environment for investment¹¹. Inflation has drifted slowly down from 4.6% (1988-1990) to 1.6% (1997-1999), a level not seen in 30 years.¹²

However, high taxation still dulls the incentives for personal and corporate work and investment. Despite tax cutting in two key provinces, Ontario and Alberta, Canada's overall tax burden (36.2%) is much higher than the U.S. (28.0%) and Japan (28.3%), as shown below.¹³

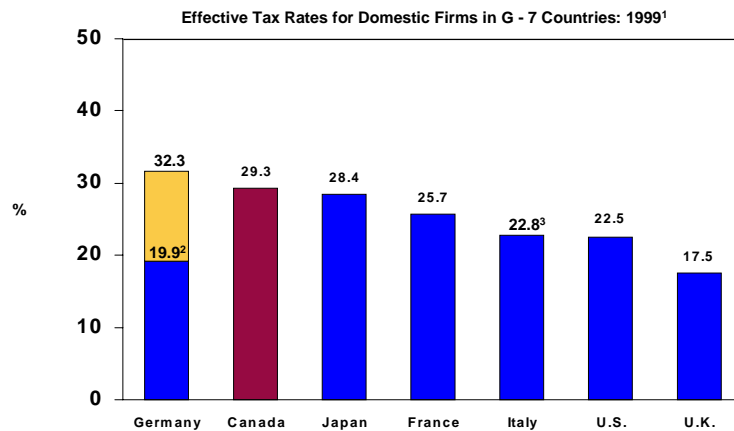
Comparative Tax Burden, G-7 Countries



Source Jack M. Mintz and Finn Poschmann, "Tax Reform, Tax Reduction: The Missing Framework", CD Howe Institute Commentary, February, 1999, Table 4

In particular, the corporate income tax regime in Canada has become seriously out of line with global standards and will become most unfavourable among the G-7 countries in 2000 if the proposed changes in Germany go forward.¹⁴

Corporate Income Tax Rates, G-7 Countries



Note: ¹Simple average of manufacturing and services tax rates

²Proposed 2000 rate

³Simple average of all rates

Source Jack M. Mintz, "Why Canada Must Undertake Business Tax Reform Soon", CD Howe Institute, November 4, 1999, Table 2

Finally, the inability to achieve a positive resolution of the Quebec separation issue has left the political environment in which Canadian business operates to be less secure and favourable than it would otherwise be.

Quality of the Microeconomic Business Environment

Some progress has been made on the microeconomic conditions for prosperity in keeping with the recommendations of *Canada at the Crossroads*. Progress has been made on increasing rivalry through opening intra-Canadian competition with the passage of the Internal Agreement on Trade and introducing greater competition in government procurement. In addition, deregulation has improved key aspects of the competitive infrastructure such as telecom and transportation, which has spurred the creation of more responsive specialized factors. Governments have widely recognized the need to support clusters that build on regional strengths and have made that a priority instead of creating pockets of unsupported industry across Canada.

Porter and Stern's work on innovative capacity reveals that Canada has improved the context for innovative activity on several dimensions. Canada improved from 12th to 6th in adequacy of intellectual property development between 1990 and 1997¹⁵, and from 6th best to 4th best (with only Netherlands judged to be significantly superior) in exposure to foreign competition in manufactured goods.¹⁶ Finally, Canada exhibits great strength in educational spending. It moved into world leadership in public spending on tertiary education as a percentage of GDP between 1982 and 1995.¹⁷ As well, Canada maintained its lead in secondary education spending over the same period¹⁸, though spending as a percentage of GDP declined.

Some progress on the microeconomic context is validated by Porter's analysis of the comparative microeconomic business context in the Global Competitiveness Report. In his 1999 ranking, Canada placed fourth in quality of business environment among the 52 countries studied, behind the USA, Finland and Netherlands.¹⁹

The good news is that Canada ranks higher on Quality of Business Environment than on GDP per capita. Canadian business enjoys a generally favourable microeconomic environment as well as attractive macroeconomic environment. However, while the microeconomic environment may be improving, Canada's quality ranking fell one place between the third place ranking in 1998 to the fourth place ranking in 1999.

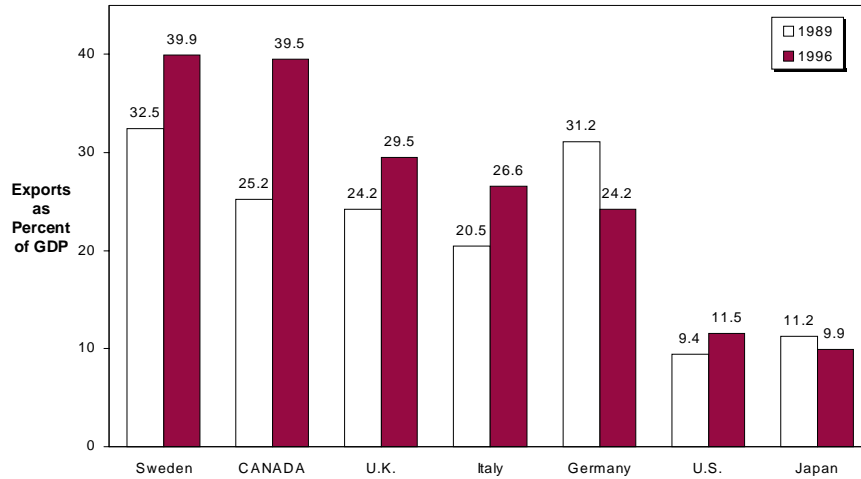
Sophistication of Company Operations and Strategy

In 2000, the greatest challenge lies in Canadian firms themselves. While they have made some progress on improving their operations and strategy with respect to our recommendations, their improvements are overshadowed by the remaining shortcomings.

On a positive note, the FTA and NAFTA led Canadian firms to reduce their levels of diversification and rationalize product lines on order to focus on businesses in which they could compete internationally. Canadian firms have also become more export-focused,

pushing exports as a share of GDP from 25.2% in 1989 to 39.5% in 1996, the highest share among G-7 countries and by far the largest increase over the period.

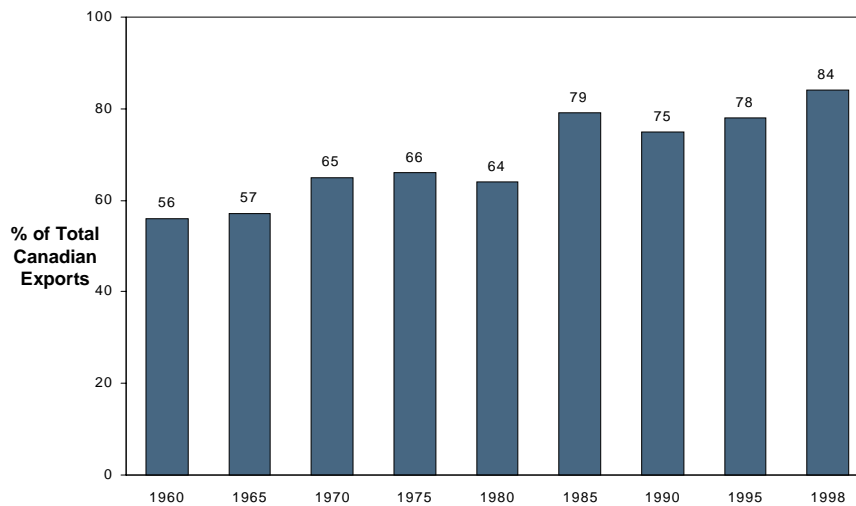
Increased Importance of Exports to GDP



SOURCE: OECD NATIONAL ACCOUNTS

However, while exports increased as a percent of GDP, the proportion of exports to the US has continued to rise from 75% in 1990 to 84% in 1998, raising strong doubts about the robustness of the competitive advantages in Canadian firms as well as their global strategies. Canada ranked 33rd out of 52 countries in Breadth of International Markets in the 1999 Global Competitiveness Report survey.

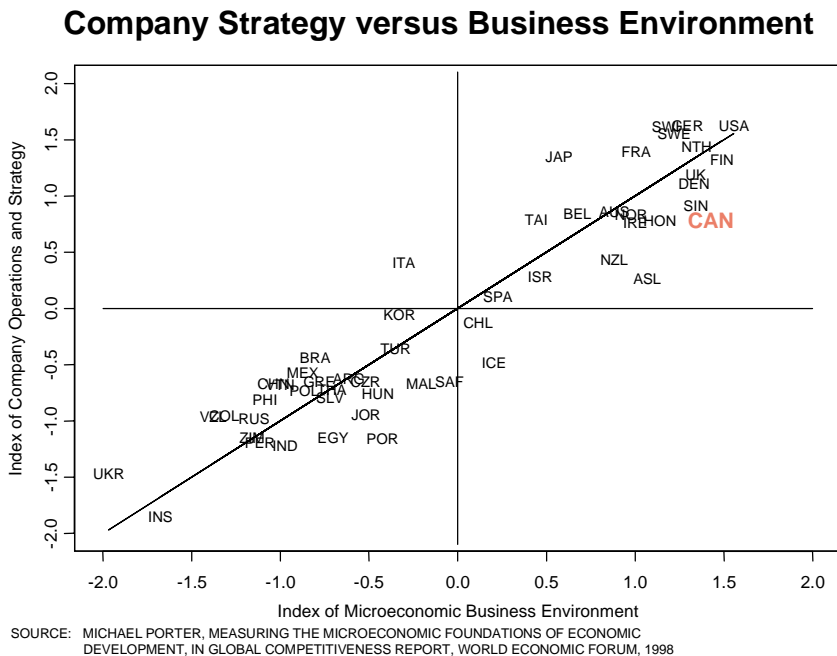
Exports are Increasingly Destined for The US



SOURCE: BANK OF CANADA REVIEW

The other question regarding Canada's export performance is whether the strong increase in exports as a percent of GDP is a function of the precipitous fall of the Canadian dollar over this period. The falling dollar made our exports much less expensive over the period, however selling a nation's good and services at lower prices is not the formula for producing rising prosperity.

The 1999 Global Competitiveness Report rates Canadian company operations and strategy as 12th in the world, far below Canada's standing in the microeconomic environment for business.



Most notable among the Company Operations and Strategy questions is Canada's 21st ranking on nature of competitive advantage. As was noted above, this question had the most profound relationship with GDP per capita of any question. On the question "Competitive advantages of your nation's companies in international markets: low-cost labor or raw materials; or unique products and processes", the responses of respondents in 20 countries were more weighted towards unique products and processes than for Canada. On this essential summary measure of strategy, Canada is in a pack with Ireland, New Zealand, Norway, and Spain with an average GNP per capita 14% lower than Canada's (in 1998).²⁰

Canadian ratings on Capacity for Innovation (20th), Product Designs (19th), Value Chain Presence (17th), Control of International Distribution (15th) and Extent of Branding (14th) are all similarly disappointing.

Porter and Stern's Innovation Index results reinforce the weaknesses highlighted in the Global Competitiveness Report. Canada ranks 9th in the 1995 innovation index based on weaknesses in percentage of R&D funded by industry, as well as low spending on R&D as a percentage of GDP, and the low proportion of R&D personnel as a percentage of population.

Overall, Canada ranks squarely in the second tier of countries on the Innovation Index along with France, Norway, Netherlands and Australia, rather than in the first tier countries, such as US, Switzerland, Japan, Sweden, Germany, Finland and Denmark. In fact, while Canada's absolute progress on the Innovation Index is mildly positive (0.75% per year rise over the 1975-1995 period), its relative trajectory is distinctly downward. Canada ranked 6th in 1975 only to be passed by Finland, Denmark and France by 1995. It is on the verge of being passed by Norway, which improved its Index at a rate four times faster than Canada over the 1975-1995 period.²¹

Overall Progress since 1991

While Canada has certainly made progress in absolute terms, it is most definitely slipping in competitiveness in relative terms. Great progress in the macroeconomic context has been offset by a mixed record in the quality of the microeconomic business environment combined with a relative decline in the sophistication of company operations and strategy. Moreover, many of the weaknesses relate to innovation in one form or another.

This overall picture is revealed in the broad measures of prosperity. While GDP per capita grew 32% (in US dollars at purchasing power parity) between 1990 and 1998, Canada slipped from 3rd in the world (excluding city-states and tiny countries) to 5th over the period.²² Had Canada maintained 3rd place in the world, the standard of living of every family of four in Canada would have been higher by CDN\$13,000 in 1998, or \$600 to \$700 per month in after-tax family purchasing power – a dramatic difference in standard of living.

The Canadian dollar, which traded at 87 cents US at the release of Canada at the Crossroads, fell by mid-1998 to the 65 cents US range and has hovered in the 65-69 cents US range for the last 18 months of the millennium. The OECD estimate for purchasing power parity remains at 85.5 cents²³, which many economists believe to be too high. If purchasing power parity were considered to be 80 cents US, Canada's 1998 GDP per capita would fall out of the top ten. At 74 cents US, Canada's GDP per capita would rank 18th, trailing Finland. So Canada's top five standing in the world is dependent on the comparative figures considering Canada's dollar to still be worth its circa 1991-level of 85-86 cents US.

V. ROOT CAUSES

The basic explanation of the apparent paradox between the impressive macroeconomic turnaround and the fall in relative prosperity is a weakness in strategy. On the whole, Canada has pursued replication, not distinctiveness. On the Political, Legal and Macroeconomic Context, Canada has pursued policies that have produced an environment nearly as good as, but not quite at the level of the US, its dominant trading partner and key competitor, due to higher personal and corporate tax rates. Canada has followed a set of policy prescriptions (spending cuts, restrained monetary policy and tax cuts) similar to other leading countries and has not innovated in any respect. With respect to the Quality of the Microeconomic Business Environment, Canada has created an environment that is distinctive only in its spending on higher education and places fourth behind the US, Finland and Netherlands. Canada lags in most innovative measures. On neither dimension is Canada distinct nor has it pursued distinctiveness.

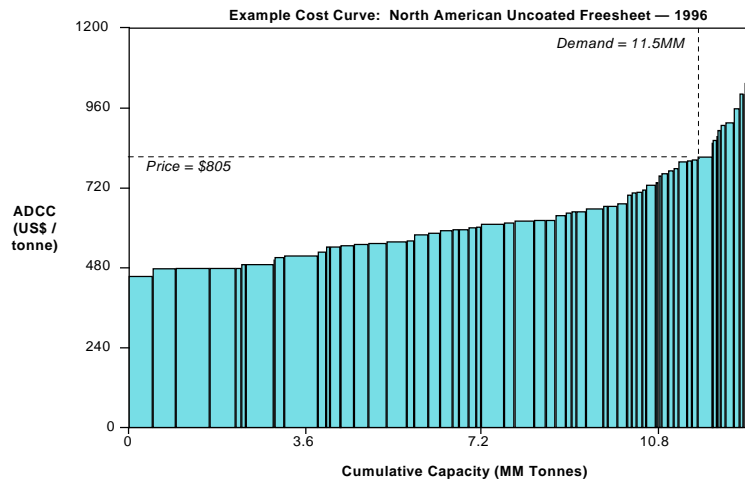
On the third component –Sophistication of Company Operations and Strategy– Canada overall is firmly positioned in the replication camp. While there is great variance in Company Operations and Strategy among Canadian firms, Canada can be certain that its progress will be constrained if on average its firms do not even try to seek advantage on the basis of unique products and processes. Seeking to compete on the basis of producing generic commodities with standard technologies at a lower cost because of factor endowments, or producing generic products/services with lower cost labor will not produce sustainable advantage for Canadian firms. This strategy approach provides no protection from the discovery of lower-cost sources of raw materials and/or the entry of still lower labor-cost countries into the production of generic products/services.

For Canadian firms, natural resources play a large role in our trade. In 1996, 44% of Canada's exports were still resource-based goods and 58% of those goods were unprocessed or semi-processed commodities. While these proportions are down from 48% and 62% since 1991, resources still play a large role in the Canadian economy.²⁴

Commodities have not fared well in the global economy over the long term. Because competitiveness in commodities derives largely from finding lower-cost sources of raw materials and/or using lower cost labor to exploit the raw materials, advantage is fleeting. Firms around the world, especially in the developing countries, have been entering markets with lower-cost raw materials or labor. In the main, they have been successful. In forest products, for example, firms have learned how to utilize low-cost southern-hemisphere eucalyptus hardwood to make pulp and paper instead of higher-cost northern-hemisphere softwood. The resulting substitution has led to long-term downward pressure on pulp and paper prices.

In commodity markets, the price-setting mechanism is the marginal cost of production of the highest cost producer in the market. As firms bring new lower-cost sources of raw materials on stream, the highest cost producers drop out and are replaced as the marginal producer by more efficient ones. As a result, the price falls. An illustrative delivered cash cost curve for uncoated freesheet paper (i.e. photocopier paper) is shown below:

Avoidable Delivered Cash Cost Curves Determine Commodity Prices



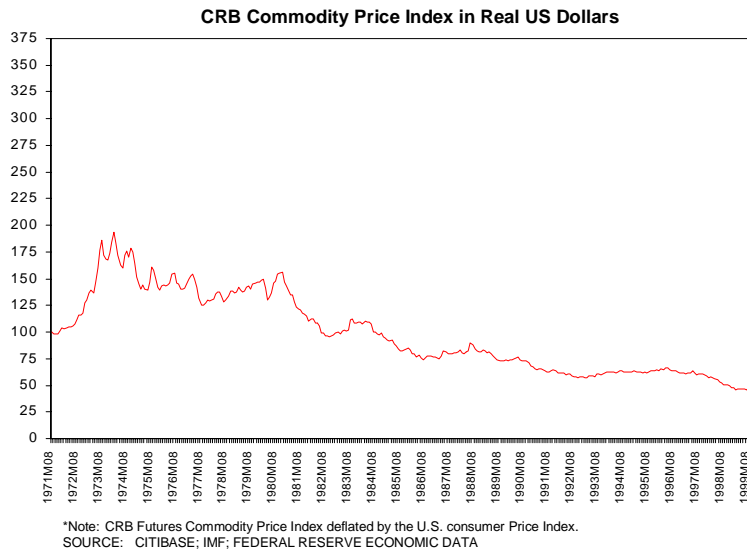
Source: Monitor Company Analysis

The price of uncoated freesheet paper peaked in 1980 at \$1200 US/tonne (in 1999 \$US). In the intervening twenty years come close to that level and in 1999 averaged \$790/tonne, less than two-thirds of the 1980 high.²⁵

This phenomenon of downward price pressure has been clearly evident across commodities overall. Since August 1971, when Nixon “closed the gold window” thereby setting off the most favorable conditions for commodities since the Second World War, worldwide commodity prices have dropped just over 50% in real US\$. Thus, the entire sector, which by definition does not involve the production of unique products and to only a minor extent involves investment in unique processes, has been in secular value decline.

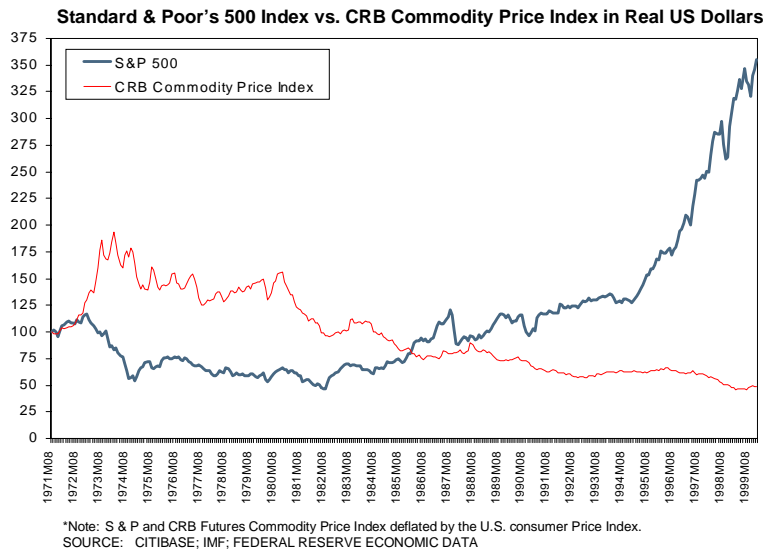
This is clearly bad news for net commodity exporters such as Canada. For Canada, 44% of our export sector is engaged in producing products that are steadily falling in value.

Long-Term Trends in Commodity Prices



In contrast to the Canadian economy, the US, Swiss, Danish and Japanese economies are increasingly weighted towards firms producing unique products using unique processes. If we use the S&P 500 index as a proxy for the returns to investing in firms seeking more sophisticated advantages, value has increased 355% in real terms since August 1971 during the same period that commodity prices dropped over 50%.

Movements of Stock Prices versus Commodity Prices



Canadian performance is, then, not paradoxical at all. Macroeconomic progress has created a better overall context for competitiveness but microeconomic weaknesses have led to a declining relative standard of living. Canadian firms, in particular, are still replicating, rather than innovating, and competing in commodity industries where value is eroding. Firms from other nations seek advantage through unique products and processes. They are rewarded with higher payoffs. Canada's falling currency and declining relative prosperity are not surprising despite the hard work and accomplishments on the macroeconomic front.

In the end, it all comes down to strategy – to a great extent Canada is competing on the basis of operational effectiveness, not unique strategic positioning.

VI. THE WAY FORWARD

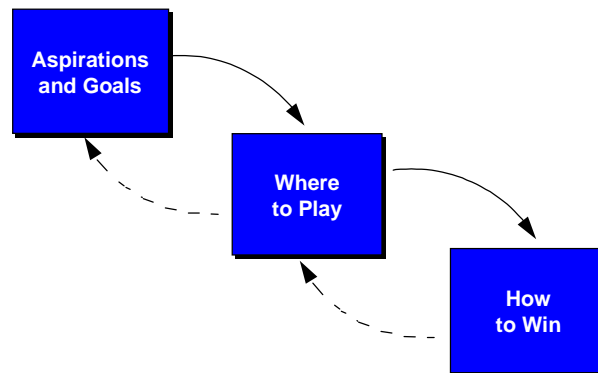
The way forward for Canada to greater competitiveness and greater prosperity is through uniqueness not replication, through bold strategy choice not operational effectiveness. This applies to macroeconomic and microeconomic policy, and most of all to company operations and strategy.

Transforming Company Competition

While the 1991 study demonstrated that Canada does have some firms that compete globally on the basis of unique products and/or processes, there are not enough of them.

Strategy can be seen as three closely interrelated sets of choices. Each firm must make choices as to its Aspirations & Goals, which sets a context for a choice as to Where to Play, which sets a context for a choice as to How to Win:

Competitive Strategy: Key Choices



Source: Roger L. Martin

The choices constrain and reinforce each other. For example if a firm sets its aspiration as dominating its home market, that is likely to constrain its choice playing only in the home market. In turn, if it chooses to play only in its home market, it would be unable to choose to win, for example, on the basis of global scale advantage in research and development. In contrast, if its foreign competitor set its aspiration as gaining leading global market share, that would reinforce its choices of competing in markets across the globe and of winning on the basis of global scale advantage in research and development and/or production.

Firms will be unsuccessful if their choices are inconsistent with one another. For example, an aspiration to be the lowest cost producer in the world will be undermined by a choice of competing only in the home market if there are global scale advantages available in the market in question. For many firms, lack of awareness of the nature of the global market outside their home market causes them to pursue strategies that are eventually overwhelmed by global strategies.

This is true for too many Canadian firms. For Canada to prosper, Canadian firms must migrate their strategic choices from a set incompatible with international competitiveness (the left column below) to a set supportive of international competitiveness (the right column below).

Strategy Choice and International Competitiveness

	Incompatible with Competitiveness	Supportive of Competitiveness
Aspirations & Goals	<ul style="list-style-type: none"> • Attain national competitiveness • Compete in home market • Accept second place behind no firm in the home country • Seek sustainable advantage until faced with a global competitor 	<ul style="list-style-type: none"> • Attain global competitiveness • Compete around the world • Accept second place behind no firm around the world • Seek sustainable advantage against global competition
Where to Play	<ul style="list-style-type: none"> • In home country, typically with broad scope • Serving the most easily satisfied home customers at home 	<ul style="list-style-type: none"> • Globally, even if only competing in a narrow niche • Serving the most demanding and sophisticated home customers abroad and at home
How to Win	<ul style="list-style-type: none"> • Replication with lower cost labor or raw materials • Minimal R&D • National scale • Outside/third-party foreign distribution • Unbranded • Sustainable until out-competed 	<ul style="list-style-type: none"> • Unique activity system/unique products and/or processes • Significant R&D • Global scale economies • Own foreign distribution • Branded • Sustainable

Source: Roger L. Martin

In commodity industries, Canadian firms must increasingly compete on developing unique processes or evolving their positions to differentiated segments of their industries. In addition, they must think of exporting their technological and managerial expertise rather than simply exporting the commodities themselves. Our commodity firms must internalize the reality that they are not going to win on the basis of buying low cost raw material sources and capitalizing all future profits in the purchase price. They cannot count on inexorably rising real commodity prices to skate them on side.

The non-commodity sector, in which firms can leverage uniqueness in both products and processes, must grow in relative size and importance in the Canadian economy. Progress in this sector will be critical to growth in the Canadian standard of living. Progress will

require a changed attitude on the part of many Canadian firms toward their strategies and their business environment.

With respect to strategy, they must relentlessly seek distinctive advantage and continuously upgrade their sources of advantage. They must migrate from a set of choices that are incompatible with competitiveness to one that is supportive of competitiveness. A critical aspect of this will be to compete on a more sophisticated basis of advantage rather than on the basis of low cost raw materials or labour. On this front, Canadian firms must improve dramatically on their 21st rating, which is incompatible with rising prosperity.

In addition, Canadian firms must take greater stewardship for enhancing the diamond in their sector. Greater investment in building networks of related and supporting industries as well as in creating specialized skills, technologies and infrastructure will be required in a number of industries. Such investments will enable Canadian firms to leverage the microeconomic diamond for advantage.

Government's Role

Government at all levels has a critical role to play in creating a better environment for upgrading competitiveness. But to do so, Canadian governments will also have to get out of the mode of imitating other nations and set out in unique directions. In public policy, matching to keep pace with another jurisdiction's tax cuts or road system is relatively easy to justify. Distinctive policies are more difficult but much more rewarding. For example, when Chile privatized its social security system to create the conditions for an efficient capital market to bloom, it broke significantly with the policies of similar developing countries. In doing so created substantial advantage for its firms in raising private capital.

Improving the Microeconomic Environment for Business

Canada's microeconomic environment is relatively advanced, but the nation must become more aggressive.

For example, investments in education, training and specialized skills upgrading have among the highest pay-off of any investment government can make in improving the microeconomic environment for business. This is especially the case if investments create the specialized skills that are relevant to Canada's areas of strength. While there are examples of such investments in Canada, for example the Ontario Access to Opportunities program designed to dramatically increase the province's annual output of engineers and scientists, the Canadian record overall is disappointing.

Over the 1996 to 1999 period, government spending on post-secondary education increased in only four provinces. Spending in Ontario and Quebec, the two largest provinces, fell in excess of ten percent. Overall the spending decreased an average of

3.3%²⁶. Meanwhile, spending increased in 48 of 50 US states, by over 15% in 28, and by over 10% in 37 states. Spending increases averaged 16%.²⁷

Canada has long led the world in spending on higher education as a percentage of GDP, but has been on a long-term path of decline. Denmark is almost certain to have passed Canada since 1995 (the most recent year in which reliable comparative statistics are available) and on the current paths, Sweden, Finland and Norway will also pass Canada in spending on higher education as a percentage of GDP.

Higher spending itself will not ensure greater prosperity unless the spending produces improvements in the microeconomic environment for business. However, it is interesting to note that seven of the top ten countries on the Innovation Index increased their spending on higher education (% of GDP) over the 1975 to 1995 period, while Canada and two others did not. On average, the former seven increased their GDP per capita by 50% over the period and the latter three by only 33%.²⁸

Instead, Canada needs to make an unprecedented level of investment in specialized education to support its industries. One area that requires special attention is managerial education to overcome Canada's weak position on seeking advantage through unique products and processes (21st), capacity for innovation (20th), control of international distribution (15th) and branding (14th).

A second opportunity area is to broaden global strategies. Canadian firms that succeed competing globally should receive enthusiastic public support. Success models should be given high public profile and successful global pioneers recognized conspicuously. For example, most Canadians associate recipients of the Order of Canada with leadership in the arts, education, charity or domestic business rather than with leadership in the field of global business competition. A concerted effort should be made to raise the profile of successful business leaders in the Order of Canada process. Another possibility is to create an award for Canadian quality or competitive success with a prestige equivalent to the Baldrige Award for Quality in the US. The Baldrige Award has catalyzed a huge and beneficial quality movement in the US and been highly beneficial to the economy.

A third area of opportunity is in cluster development. There is room for governments to show greater entrepreneurial acumen and zeal in providing support to clusters, whether in providing specialized training and research institutions, specialized infrastructure, or incentives for related and supporting industries to co-locate. Governments should seek out cluster participants and proactively understand their needs at a time when early action can have a transformative impact.

A fourth opportunity area is in regulation. Canadian governments can become distinctly innovative in regulation. In a world in which much of regulation is heavy-handed and counter-productive to competition, Canada can pursue regulation that encourages upgrading the means of production and the sophistication of products and services.

Building on the Macroeconomic Progress

While Canada's macroeconomic environment has improved dramatically, it still trails that of the US, Canada's most important competitor, especially in the area of taxation. Tax rates both at the individual and corporate level compare unfavorably to those in the US. Given the geographical and cultural proximity of the US and its microeconomic advantages, a tax policy disadvantage is particularly problematic.

High marginal tax rates discourage the very work and investment that Canada needs to create the upgrading necessary to compete globally. Given the proximity to the US and the ease of doing business in the US, individuals and firms have the incentive to invest and work in the US rather than Canada.

Tax policy has been a minefield for government. Tax cuts are difficult because static economic models are used to assess the impact of tax cuts, which grossly underestimate the stimulative effect on the economy. Small tax reductions designed to approach parity with the US are painful for politicians. However, in Canada and elsewhere there is widespread dissatisfaction with the existing tax systems that are incomprehensible to anyone but accountants and tax lawyers.

This situation creates the opportunity for a bold, differentiated move in Canadian tax policy. Ironically, Canada laid the groundwork for global intellectual leadership in tax policy forty years ago with the Carter Royal Commission. Thanks to inaction elsewhere, Canada still has the opportunity to lead in creating a tax system that recognizes the realities of the new global economy. Several design principles apply to such an effort.

First, relentless upgrading is the key to success in the modern global economy. Hence the marginal tax on investment in upgrading should be made as low as possible. Faster depreciation schedules for capital investments would reduce the implicit rate on investment in upgrading. A strong encouragement to investment would be the treatment of capital investments as expenses for tax purposes.

Second, with rapidly increasing globalization, corporations have greater scope to choose where to invest and have more opportunity to determine in what jurisdiction to earn corporate income. In this environment, corporate income taxation is the least effective tool for governments to fund themselves. Corporations simply have too many means at their disposal to avoid high tax jurisdictions. They will avoid locating and creating jobs there. International tax arbitrage is shrinking the share of revenues from corporate income taxation as corporations move ahead of governments in managing their tax exposure. In this environment, Canada should explore the dramatic reduction of corporate income taxation, taking a look, for instance, at the role of corporate tax reduction in the turnaround of the Irish economy in the 1990s.

Third, pursuing strategic uniqueness requires taking risk. The taxation of success reduces the willingness to accept risk. The taxation of capital gains reduces the incentive to take

risk and encourages the safety of replication. Capital gain taxation in Canada is not competitive and should be reduced or eliminated entirely.

Fourth, human capital with specialized skills is increasingly understood to be the most critical input to global competitiveness. The implicit or explicit taxation of specialized skill acquisition by individuals is inconsistent with global competitiveness. Investment in any sort of specialized skill acquisition should be made fully tax deductible for the individual or corporation.

Fundamental tax reform is a daunting task, but at this point Canada is behind its most critical competitor for human and corporate assets –the US– and tinkering has little prospect of even succeeding in achieving rough replication. Canadian governments have a great opportunity to show innovative leadership in taxation policy and inspire Canadian firms to do likewise with their strategies for international competitiveness.

Concluding Thoughts

Relentless innovation and upgrading of productivity are the keys to international competitiveness in the modern economy. While Canada has some firms that belong in the ranks of the world's best, the overall economy is not where it needs to be, or even on the right course. In 1991, Canada chose the familiar and comfortable path of replication, benchmarking and operational improvement. In 2000, the nation must choose the alternative path of innovation and bold strategy.

Canadian firms must understand that competing in Canada alone will eventually destroy them. They must decide to compete globally and compete on the basis of unique products and processes. This road will be profoundly worrisome, even frightening at times, but it is necessary for Canada to prosper and not continue to slowly decline relative to other leading nations.

Canada's governments –federal, provincial, and municipal– cannot the simply follow other countries and states and exhort Canada's firms to engage in challenging new modes of operation. Instead Canada's governments also must get out of their comfort zones in order to pursue innovative and bold strategies to provide a leading macroeconomic context and a uniquely favourable microeconomic environment for business.

Only if both businesses and governments together choose to challenge themselves to new ways of thinking and competing will Canada truly prosper in the new millennium.

Endnotes

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