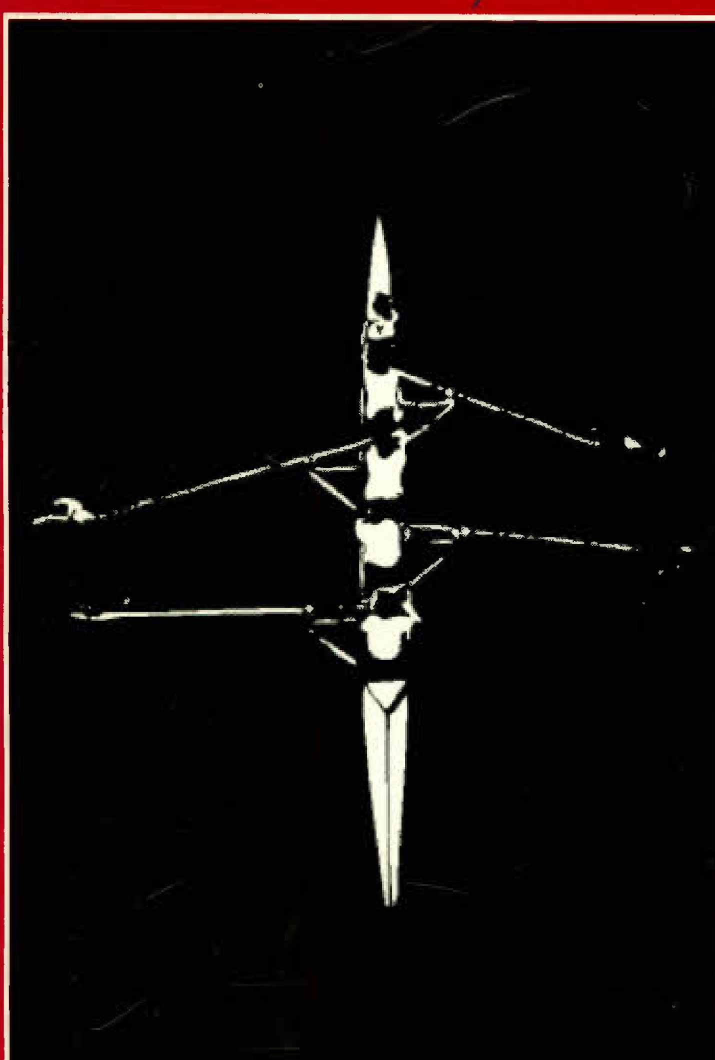
AU COURANT

Economic Council of Canada

Volume 13, No. 1, 1992

Pulling Together



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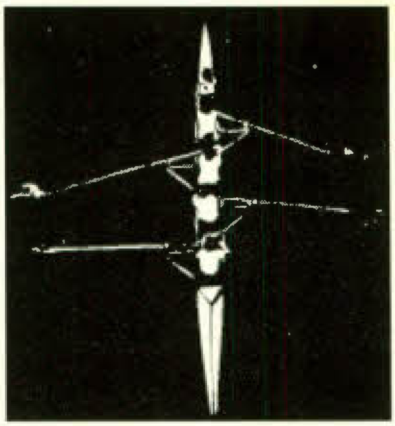

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Economic Council of Canada

Economic Council of Canada
Conseil économique du Canada

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The Economic Council closes

Judith
Maxwell

The federal government announced in its recent budget that the Economic Council of Canada will be closed. That decision was part of a package of budget cuts aimed at reducing federal expenditures.

Once we got over the surprise, we immediately put in place measures to lessen the impact of this decision on the Council's employees by giving them as much help as possible in their search for new jobs. At the same time, we took steps to ensure that certain major research projects will be completed. The consensus statement *Pulling Together*, featured in this issue of *Au Courant*, is therefore not the final Council publication.

Two other documents that were nearly completed at the time the closing was announced, will be published in coming weeks. One is on Education and Training and the other on Poverty Dynamics. Both will provide powerful insights into the issues we face in the difficult environment of the 1990s. Both bear witness to the Council's 28 years of excellence in research, consensus building and communication with Canadians.

The Economic Council of Canada was created in the 1960s because, at that time, the federal government wanted to bring together business, labour, consumers, farmers and others, to give momentum to a new research organization focused on the medium- to long- term issues facing the country.

The *First Annual Review*, published in December 1964 set out economic goals for Canada to 1970. It included a chapter on the significant factors in economic growth and pointed to the importance of resources, technological change, R&D, and skilled manpower – the very themes in *Pulling Together*.

Pulling together

Pulling Together was hailed by Henri-Paul Rousseau of the National Bank as a major contribution to our understanding of the economic developments that have occurred over the past two decades.

The report confirms what many have felt in their pocketbooks – the good old days were very good indeed. In the 1960s, incomes were growing so fast that a typical Canadian could expect his or her real income to double in 18 years. Today it would take 35 years.

The Council explains what went wrong, by comparing Canadian industries to their foreign competitors – looking at productivity, costs, innovation and trade.

We discovered that the problem is us. Canadians tend to resist change. We avoid competition. We try to protect our way of life from what is happening in the global economy. Instead, we need to embrace change, adapt to the new ways of producing, trading, and managing our economy. That will be the best way to protect what is important in the Canadian way of life – a high standard of living, a strong sense of sharing, and tolerance for each other.

We can see some encouraging examples of the new mindset – in management, in labour and in governments. Management and labour are learning to cooperate, governments are finding ways to be more effective and efficient, and there are examples of public-private sector cooperation. But we need more than examples, we need everybody on the new wavelength – pulling together.

Canada faces grave difficulties in both manufacturing and resources. In the natural resource industries, firms face weak prices and relatively slow growing markets. World demand is shifting towards manufactured goods, especially high-tech ones.

In manufacturing, productivity – output per unit of input – has slowed in the 1980s, while it picked up in other countries. Costs of producing an average unit soared in the 1980s, partly because higher rates of inflation have become embedded in our cost structure, and partly because of slower productivity growth in trade-sensitive industries. As Canadian costs soared, customers turned to other suppliers. (Even consumers began to do more shopping across the border.) Sales by Canadian plants slumped, production was cut and workers were laid off. These trends were quite evident before the recession began in early 1990 and they have made that recession particularly painful in Ontario and Quebec.

The Council points out that there is no easy way to overcome this cost disadvantage – just as there is no easy way to shed 40 pounds of excess weight. We need to see changes in the way companies are managed, in labour management relations and in the signals governments give when they intervene in the economy. In general, we have a problem. And, in general, we must pull together to solve that problem.

Over the years, the Council has published pathbreaking research and put forward policy proposals which have helped to shape the public policy debate. That research has in turn been reported in the pages of *Au Courant*.

This will be the last issue. But our work will live on in our books, even as we sadly close the doors. If you would like to receive a free summary of the two forthcoming reports on education and training on poverty dynamics, please write to the Council and we will put you on our last mailing lists.

Good-bye and good wishes from all of us at the Council.

Canadian standards of living

A serious challenge

Rich in both human and natural resources, Canada belongs to a select group of countries whose citizens enjoy the highest standards of living in the world. With its advanced communications and transportation networks, a large and mature education system, a high-quality health care system, a broad social safety net for those in need, and extensive trade linkages with the United States and other industrialized countries, Canada is an economic success story, a country that offers its citizens a quality of life that is the envy of many.

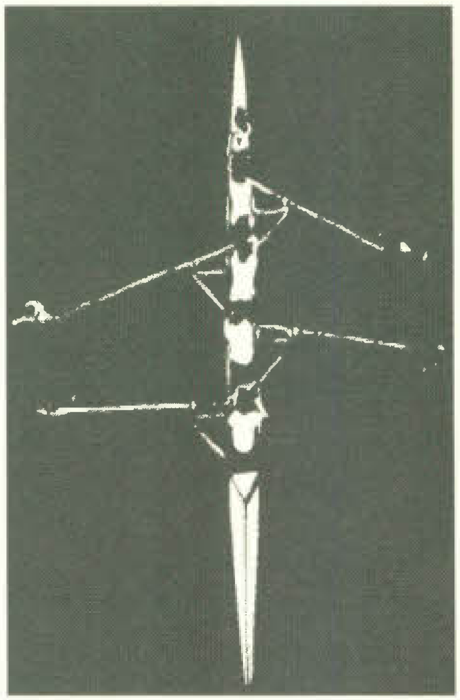
And yet the economic stresses of the 1980s have revealed the fragile nature of past successes. Real wages, which are inextricably linked to productivity growth, have improved little over the past decade or more. Given present productivity growth rates, Canadians will need 35 years to double their real incomes (i.e., after inflation). In the 1960s, they could do it in less than 18 years. Overall, economic prospects are simply less promising than they used to be.

What has happened? Why is the future less certain than it once was? Why is productivity growth slowing down?

In a Statement entitled *Pulling Together*, the Economic Council assesses Canada's ability to maintain and improve the current high standards of living enjoyed by its citizens. It examines the various factors affecting the country's ability to compete and attempts to find solutions to the difficulties threatening Canadians' future improvements in living standards. Why is Canada facing so many problems? What can be done about them?

In trying to answer these questions, the Council examined how the world economy is changing and how Canadians have reacted to these transformations. More specifically, Council researchers evaluated Canada's competitive position and studied the structural changes taking place in the global economy. They tried to find out why Canadian industry has performed so poorly over the past 20 years, and why Canada's performance has deteriorated relative to that of its major trading partners.

The Council's Statement examines Canadian competitiveness from four main points of view: productivity, trade, innovation, and production costs.



Globalization and the Canadian economy

Much of the economic uncertainty that Canadians face finds its roots in the speed of change in the global market. Driven by a veritable technological revolution, systems of financing, production, and marketing at the local, regional, and national levels have become more and more closely interlinked in a worldwide network. Nowhere is the changing nature of international trade more evident than in the strong push for trade liberalization, with the expansion of the European Community, the dismantling of trade barriers between the Community and the European Free Trade Area, the Canada-US Free-Trade Agreement, and the current talks between Mexico, the United States and Canada.

These new trends in the global economy are exerting strong pressure on Canada. The effects are evident on jobs, wages, and profits. After rising very rapidly – about 4 per cent a year – during the 1960s and early 1970s, the growth rate of Canadians' real income decreased to about 2 per cent a year in the last decade.

Concern about incomes has surfaced in the national debate on Canada's international competitiveness. Concern about competitiveness has been further magnified by the job losses associated with the recession that began in 1990. The migration of some Canadian firms to the United States has added fuel to the fire.

The problems in the manufacturing sector and the decline in Canadian competitiveness have been attributed by some to the Canada-U.S. free-trade agreement and the introduction of the goods and services tax (GST).

That explanation is not persuasive, however, because it focuses on relatively recent trends. The cost position of Canadian manufacturing has been deteriorating over a period of several years; it did not suddenly appear two or three years ago. In 1980, for example, unit labour costs in manufacturing were virtually the same in Canada as in the United States. By 1990, however, Canadian costs were about 40 per cent higher than U.S. costs. This deteriorating cost performance, coupled with shortcomings in the innovation process, is a clear result of the slowness with which Canadians have reacted to changes in the economic environment over the past decade and a half.

Canadians' aversion to change shows up in all the lines of research pursued by the Council. It is evident in poor productivity growth. It is also evident in the country's export pattern, in its persistent reliance on natural resources an resource-based products, in its lag with respect to the innovation process, and in the apparent inability of business, labour, and government to coordinate their efforts when the need arises.

The Council's work shows conclusively that the problems facing Canadians are systemic: they are rooted in the attitudes of decision makers in all sectors of the economy and at all levels of management and production.

These findings are important, for there is no escaping the fact that the ultimate source of growth in real incomes is increased productivity – that is, the ability to produce more from the same amount of capital, labour, and raw materials. Productivity growth can also generate funds that Canada can use to clean the environment, improve health and education, and provide better economic security for the poor and the unemployed.

A key factor

Productivity growth

The goal of improving Canadians' real incomes (and so their standards of living) depends on a key factor: productivity growth. Unfortunately, over the past 20 years the pace of productivity growth has slowed markedly in Canada. This is cause for great concern.

If productivity growth in Canada in 1974-90 had continued at the same average rate as in the preceding decades, Canadians' incomes would be 24 per cent higher (i.e., by about $6,100 per person) than they are now. Over the past 45 years, the wages of Canadian workers, adjusted for price changes, have generally matched the pace of productivity growth.

The facts speak for themselves. Since the 1973 oil-price shock, aggregate labour productivity in Canada has grown by only 1.2 per cent a year, compared with an annual rate of 2.4 per cent from 1962 to 1973. While these difficulties have been shared by all industrialized countries, most have recorded more rapid productivity growth than Canada over the past decade. The manufacturing sector is a source of particular concern because its relative productivity and cost performance will have the greatest impact on Canada's ability to meet successfully the growing competitive challenge from other nations. In terms of productivity growth, Canada lags behind the other major industrialized countries. Indeed, the gap relative to the United States, Canada's biggest trading partner, widened considerably during the 1980s.

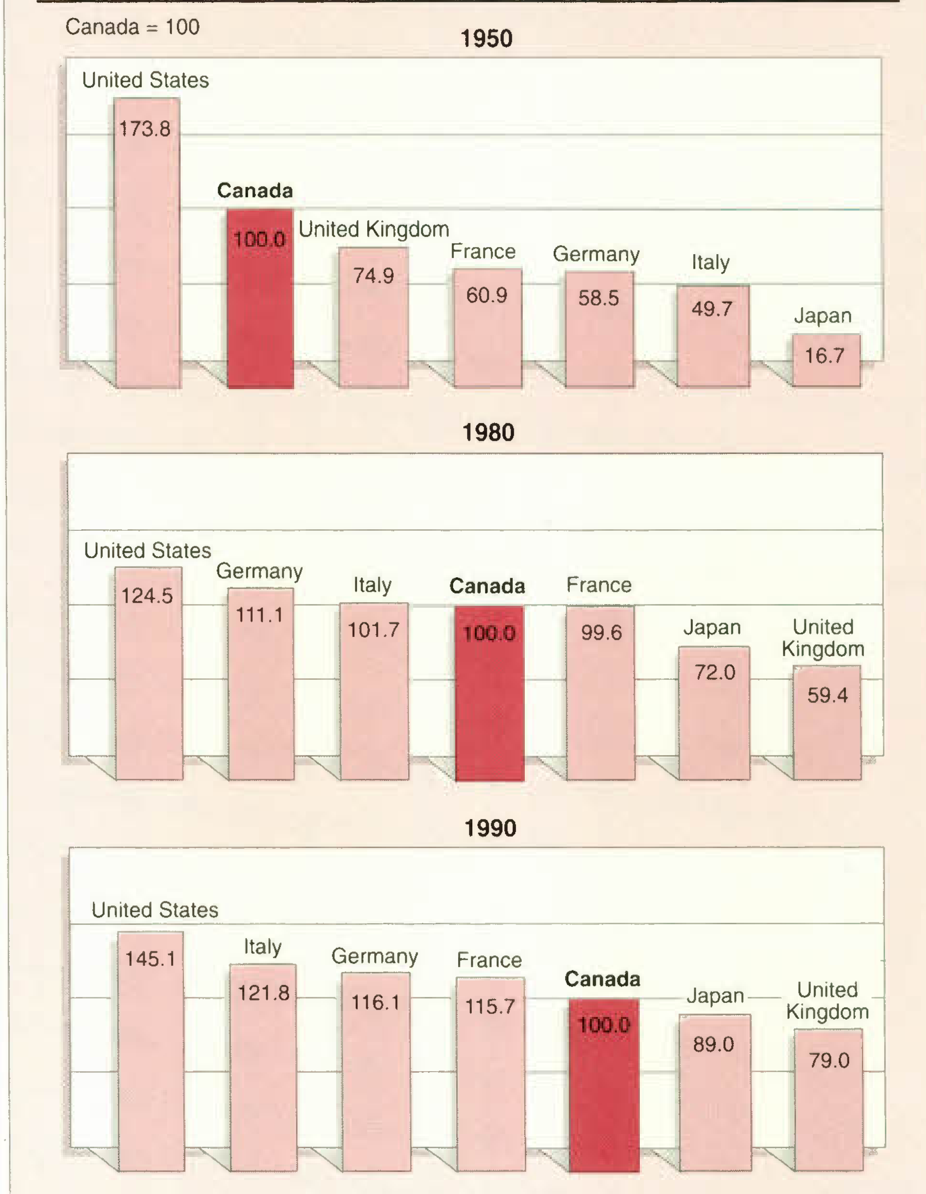
Canada has substantially improved its overall levels of labour productivity (measured as real GDP per worker) and real per-capita income relative to the United States. In 1950, U.S. productivity was 32 per cent greater than Canada's. Today the two countries have virtually identical productivity and income levels.

The picture is less rosy in the manufacturing sector, however. The gap between Canada and the United States, which narrowed substantially during the period 1950-80, grew rapidly in the 1980s. Canada had reduced its productivity gap with the United States to 24 per cent by 1980, but over the next ten years the gap widened again to 45 per cent, roughly where it was in1960.

Canadian manufacturing industries are losing ground not only to their U.S. counterparts, but also to those in the other major industrialized countries. For example, the productivity levels recorded in West Germany, France and Italy had reached or surpassed the Canadian level by 1980. And they have continued to gain ground since then. Manufacturing productivity in Japan now stands at almost 90 per cent of the Canadian level, up from about 53 per cent in 1970. The newly industrialized countries of the Pacific Rim – notably, Hong Kong, Singapore, Taiwan, and South Korea – have also dramatically improved their productivity relative to Canada.

It is interesting to note that foreign-controlled firms account for about 50 per cent of total sales and employment in the Canadian manufacturing sector. The labour productivity level of these firms

Productivity levels in manufacturing, G-7 countries, 1950, 1980, and 1990



was, on average, 20 per cent higher than that of Canadian-controlled establishments during the period 1985-88. The productivity gap between these two types of establishments tends to be largest in industries that are heavily protected by tariff and non-tariff barriers.

Why the slowdown occurred

While the productivity slowdown has been extensively studied, researchers have been unable to agree on its precise causes.

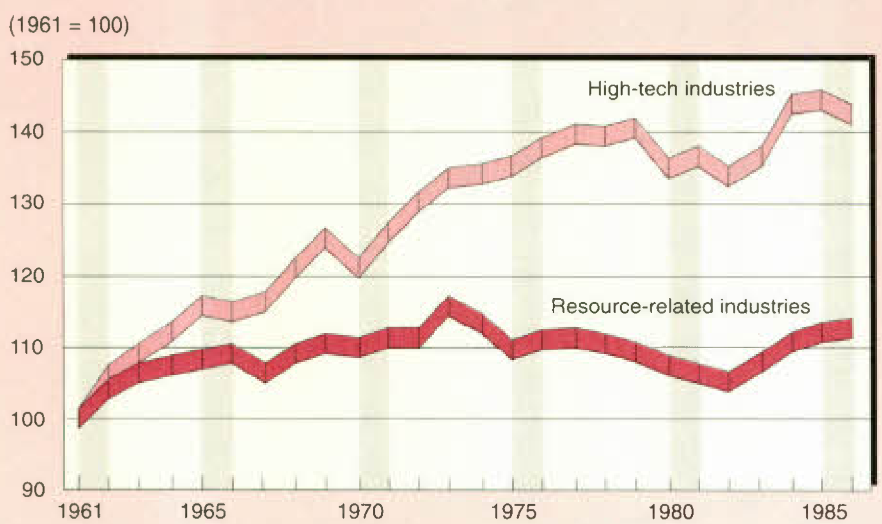
The Council's research suggests four interrelated factors as being among the most likely culprits: weak demand conditions, adverse interindustry shifts, a lower rate of substitution of other inputs for labour and sharp increases in real energy prices. The first three factors are closely related one to another, while the fourth – the energy price shocks – was the trigger that set the slowdown in motion.

Overall, 30 per cent of the slowdown in productivity growth may be attributed to these energy-price shocks. In the manufacturing sector alone, skyrocketing real energy prices were responsible for about 60 per cent of the slowdown in labour productivity growth between 1966-73 and 1974-85.

The impact of these shocks was amplified by a worldwide shift to very tight monetary policies in response to higher rates of inflation. These developments had a negative impact on capacity utilization in Canada and other countries, particularly in sectors such as mining, public utilities, transportation, storage, communications, wholesale and retail sales, and services to business. The decline in capacity utilization, in turn, was a major factor in the productivity slowdown.

During the 1950s and 1960s, capital and labour tended to shift from agriculture to more productive sectors like manufacturing. This contributed to a significant increase in Canada's overall productivity. From 1966 to 1973, transfers of this kind had only a limited impact. In the period 1974-85, however, resources began to move from high-productivity goods-producing industries to service-sector industries where productivity growth rates are generally lower. This development alone can be held responsible for a drop of about 20 per cent in the rate of Canadian productivity growth in both the 1966-73 and 1974-85 periods.

Change in productivity, Canada, 1961-86



The Council's report also notes that policies intended to help Canadians to cope with the oil shock and to shield them from a slowdown in real incomes ended up holding back the process of economic adjustment and the development of conditions for strong, stable, and noninflationary growth.

According to the Council, Canada's inability to close the productivity gap with the United States after 1973 may be largely attributed to five factors: 1) the oil-price shocks had a more severe impact on productivity in Canada than in the United States during the 1980-85 period; 2) the marked appreciation of the U.S. dollar triggered a rationalization effect in manufacturing, which had a positive impact on productivity growth in the United States; 3) U.S. industries invested much more in innovation than did their Canadian counterparts; 4) the rate of substitution of capital and other intermediate inputs for labour was much higher in U.S. industries; and 5) the shift from low-productivity to high-productivity resource-based industries was smaller in Canada than in the United States.

Thus if there is one lesson to be learned from the post-1973 experience, it is that economies must be more flexible in the face of a relative-price shock or of other external developments. Flexibility is the key to improving the inflation/growth trade-off and – ultimately – the necessary conditions for productivity growth.

"Unless adjustment to economic shocks occurs more quickly and more firmly in the future, the prospects for a substantial increase in productivity growth are likely to remain poor," states the report.

However, the Council also notes a number of positive signs that point to eventual improvements in productivity and real incomes. Among them are the fall in real energy prices, the slowdown in the growth of the working-age population (a trend that encourages greater use of capital inputs), and the structural reforms associated with the Canada-U.S. Free-Trade Agreement and the implementation of the goods and services tax.

Trade

The challenge of remaining competitive

Because of its relatively small domestic market, Canada relies heavily on international trade. For instance, it exports around 28 per cent of the goods and services it produces and imports a similar proportion of what it consumes.

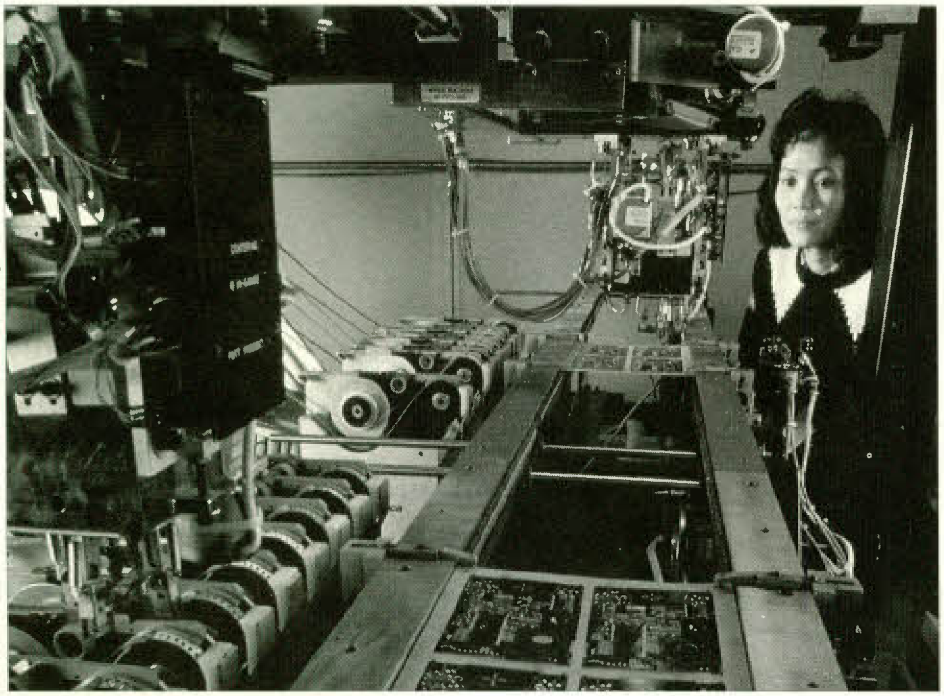
As a result, it is vital for Canada to maintain and expand its access to world markets, as well as its ability to compete in terms of price, quality, service, and new products. Trade and its associated competitive pressures are also important because they encourage businesses to rationalize their operations, to introduce better management practices, and to adopt and promote state-of-the-art technologies. And in the end, trade with other members of the international community helps to boost productivity and increase workers' real incomes.

The rapid growth of international trade is one of the most important economic developments of the past 20 years. A number of trends have emerged during this period. For example, the weight of North America in world markets has declined modestly, from 19 per cent in 1971 to 17 per cent in 1989. This decline does not mean that North American exports have fallen, however; rather, it reflects the meteoric rise of countries in the Asia/Pacific region – Japan, Hong Kong, Singapore, South Korea, Taiwan, Malaysia, Thailand, Indonesia, the Philippines, China, Australia, and New Zealand. These countries saw their share of world exports jump from 13 per cent in 1971 to almost 25 per cent in 1989.

The United States has long been, and remains, by far Canada's most important trading partner. U.S. customers purchase almost 75 per cent of Canadian exports. In recent years, however, Canadian trade with the Asia/Pacific countries has expanded significantly, and collectively these countries now represent a more important export market for Canada than the European Community.

Canada's share of world trade fell from 5.3 per cent in 1971 to 4.0 per cent in 1989. What factors are behind this decline? To answer these questions, Council researchers disaggregated Canada's share of world exports into three components: its product/industry composition, its geographical distribution, and a third factor referred to as "Canada's ability to compete in foreign markets."

A country may gain or lose shares of world exports according to whether its exports are concentrated in products for which world demand is growing relatively quickly or relatively slowly. That could also happen if its exports are destined for markets that are relatively more or less dynamic than the world average. The Council's research in this area indicates that the overall loss in Canada's share can be largely attributed to a deterioration in its "ability to compete." That development was not only the result of the inevitable gains in market share achieved by countries with much lower costs – China and the newly industrialized countries (NICs) of Asia, for example – but also of a number of domestic factors that eroded Canada's cost structure relative to the United States.



Industry, Science and Technology Canada

Canada's comparative advantage

Over the longer term, a nation tends to specialize in products and services that it produces *relatively* more efficiently than its trading partners. In other words, it offers products and services that reflect its "comparative advantage."

The Council's analysis of the composition of Canadian exports in relation to trends in world trade reveals that they are concentrated in resource-based products such as pulp and paper, wood products, nonferrous metals, chemical products, fertilizers, and so on.

A comparison of Canada's position with that of the other large industrialized countries or the Asian NICs shows that these other countries generally have a broader range of comparative advantage in the manufacturing sector than Canada. The contrast is even more striking when the automotive sector is excluded from the data. Canada's concentration on resource exports places it in a group that includes Sweden, Australia, and New Zealand, although Sweden has a more diversified export structure.

What's more, Canada's comparative advantages have changed little over the past 20 years. The other members of the Group of Seven – the United States, Japan, Germany, France, Italy and the United Kingdom – have comparative advantage structures that are more closely aligned with the changing pattern of demand on world markets.

Canadians, the Council stresses, may find it hard to sustain the relatively high living standards to which they are accustomed if they do not free themselves from their current dependence on the natural-resource sector. At the very least, some major improvements in the performance of that sector will be necessary.

At least four factors are behind the problems in the primary sector. First, not only are products in this sector becoming progressively less important in world trade, but the share of resource-processing industries in manufacturing trade is also declining. Second, the relative prices of resource commodities have been falling over the past two decades. Third, productivity in the natural-resource processing industries has grown, on average, at a significantly slower pace than in the other manufacturing industries. Fourth, environmentally conscious consumers are concerned about the pollution caused by industries based on resource extraction and processing.

This situation must be turned around. To do so, says the Council, Canada must commit itself to the following changes:

- a general increase in productivity growth relative to other industrialized countries;
- shifts to higher-productivity activities within the resource sector; and
- the development of new areas of specialization.

Cost performance in manufacturing

In the short to medium term, a change in a country's relative cost position affects the volume of its exports and imports. This inevitably affects output, employment, and capacity utilization in sectors linked to international trade.

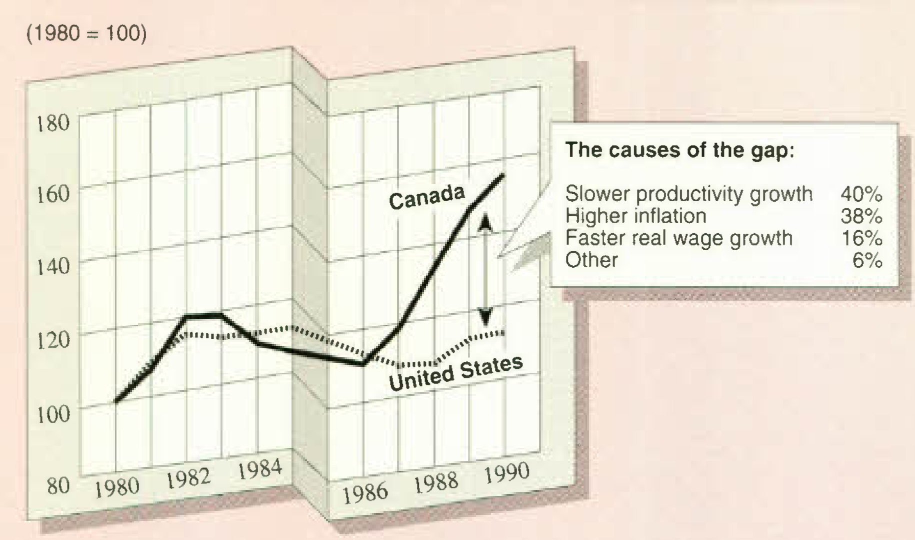
While Canada's cost position vis-à-vis West Germany, Japan, Taiwan, and South Korea improved during the decade, the same cannot be said with respect to the United States. In 1980, the manufacturing costs were only 2 per cent higher than south of the border. By 1990, the gap had widened to 40 per cent. This is serious because, as mentioned earlier, most of Canada's manufactured trade is with the United States.

Slower productivity growth and higher inflation can account for virtually all of the rapidly widening gap between the two countries. During the 1980s, total nominal hourly compensation (including payroll taxes) in Canadian manufacturing increased at an average rate of 6.5 per cent per year, compared with 4.7 per cent in the United States. Yet Canadian productivity growth during this period was slower than in the United States.

It is important to realize that the growth in hourly compensation in manufacturing was not primarily a cause of inflation, but rather a response to it. Still, it did contribute to the deterioration in Canada's unit costs relative to the United States.

In the U.S. manufacturing sector, real wages dropped even though productivity was improving. In Canada, real wages rose even though productivity improvements in this country were more modest than in the United States. The inevitable result was the erosion of Canadian markets and the loss of many jobs in this country.

Unit labour costs in manufacturing, Canada and the United States, 1980-90



Conclusion

The Council's research suggests that the Canadian dollar has been significantly overvalued in recent years. The report points out, however, that an overvalued dollar can have positive effects by spurring improvements in productivity and reducing inflationary pressures. "Although we believe it is highly desirable for the external value of the Canadian dollar to move closer to its underlying economic fundamentals, there is no quick and costless way of achieving that goal," the report states.

While a lower exchange rate for the Canadian dollar would improve the position of Canadian manufacturing in the short run, the Council emphasizes that productivity growth and compensation settlements are the key issues over the medium to long term. Thus improvements in these two areas are "fundamental" to strengthening Canada's position internationally.

This does not mean that wages must be lowered. But wherever Canadian industry is at a cost disadvantage and wishes to retain its markets, it should seek productivity gains large enough to offset any existing wage differentials and any productivity improvements achieved by its competitors. The only alternative is to shift towards products that are not sold mainly on the basis of price on world markets.

Innovation: Canada lags behind

The links between technological innovation and economic performance are strong and complex.

For that reason, it is important to grasp the true dimensions of the innovation process from the outset. Technology is not a machine or an artifact. It is, first and foremost, a body of knowledge derived from many sources. As for the process of technological change, it encompasses a wide range of activities – from the introduction of a new product or a new method of production to the restructuring of a firm or the discovery of a new source of raw materials.

But in the area of innovation, whatever the factor considered, Canada lags behind its principal trading partners.

The use of advanced manufacturing technologies

The use of advanced manufacturing technologies such as computer-aided design and manufacturing through robotic assembly plants to automatic measuring devices, is an important characteristic of firms that emphasize innovation.

A 1989 survey on this subject carried out by Statistics Canada determined that, for all categories of technology, the size of the establishment concerned was the most important determinant of advanced technologies used. It appears that large establishments can more easily cope with the fixed costs, both financial and learning-based, associated with using high-tech equipment.

A Canada/U.S. comparison reveals that the use of these technologies in the five industry groups is greater in the United States than in Canada by some 5.5 percentage points. That is a sizeable gap.

Another finding of the Statistics Canada survey on the use of technologies was that about one half of Canadian establishments had experienced difficulty in finding highly skilled personnel. More than half of the problems in implementing CAD (computer-aided design) systems were linked to human and work organizational factors rather than technological problems.

A country's national commitment to R&D, especially on the part of its business sector, is the criterion most often used to infer its level of innovative activity. Canada has one of the lowest ratios (gross expenditure on research and development as a proportion of gross domestic product) among the 12 leading industrialized countries, being ranked just before Australia and Italy.

Given the importance of the resource-based manufacturing sector to the Canadian economy, one might expect that its industries would be relatively more research-intensive. That does not appear to be the case, however. The R&D propensity of these industries is only about 40 per cent of the average for the manufacturing sector as a whole. This situation contrasts with that in smaller countries like Sweden, which invest heavily in research in their key resource sectors. There is no commitment of this kind in Canada.

The quality and quantity of skilled workers, as well as the way in which they are organized and managed, have become fundamental factors in the process of successful innovation within individual firms. Given the rapid pace of technological change and the changing nature of the tasks required of workers, it is inevitable that the profiles of present-day jobs are substantially different from those of 20 years ago – as will be the jobs available 20 years hence.

The quality of the labour supply is thus of critical importance. Although the average number of years of schooling of the Canadian population is high (over 12 years), the secondary-school drop-out rate – about 33 per cent – reflects the weakness of the Canadian education systems. This situation contrasts sharply with that in Japan, where the drop-out rate is only 2 per cent, and with Germany, where it is under 10 per cent. One third of Canadian high-school graduates (about 1.2 million) cannot perform everyday reading requirements. And no fewer than 36 per cent of them experience difficulty in working with numbers.

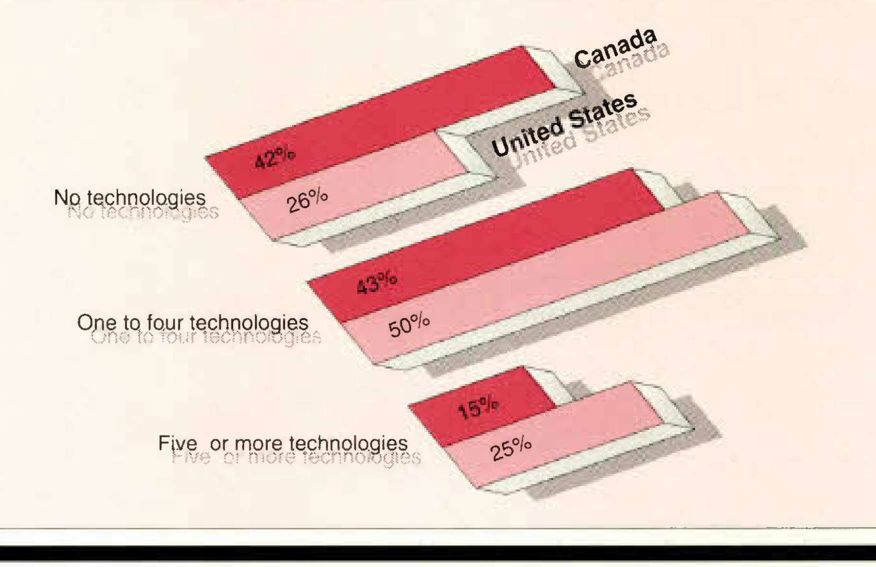
The proportion of scientists, engineers, and technicians in the labour force is also much lower in Canada than in the United States, Japan, and Germany.

Summary

Canada lags behind its major trading partners in the adoption and diffusion of new advanced technologies.

This situation suggests that Canadians – managers, workers, executives and students alike – are simply not reacting swiftly enough to the new demands of world markets. What is required to turn the situation around, therefore, is a change in attitude and behaviour on the part of all Canadians and a commitment to improve productivity.

Proportion of manufacturing plants using advanced technologies, Canada and the United States, 1989



Welcoming change

There is no magic potion that can cure the problem of weak productivity growth in Canada. And yet the problem requires urgent action, because it is the main reason that there has been little improvement in the real incomes of Canadians over the past two decades. Poor productivity also adversely affects the country's ability to successfully contest international markets.

As the Council emphasizes in its Statement, however, the picture is not entirely bleak. Canadians have one important advantage: they still command a head start over many industrialized nations. Canada remains near the front of the pack, but its lead is shrinking. Thus it is essential to act now.

Canadians must begin by learning to welcome change. This will require a fundamental shift in attitude and behaviour. It is all too clear that their slow reaction to changing economic conditions over the past several decades and their resistance to change have hampered the critical factor of productivity growth.

Besides learning to embrace change, Canadians must also learn to work together. For governments, that means better coordination of their actions and policy initiatives, which should be aimed at encouraging corporate productivity and innovation rather than bailing out foundering firms at any cost. The business community must show a greater willingness to cooperate and a more open attitude towards innovation, and it must pay more attention to worker training and skill development. Workers and labour unions, too, will have to do their share, particularly by seeking new formulas for job security and by placing greater emphasis on the acquisition of new skills.

Four basic messages

The Council sums up the main results of its research in the form of four closely interrelated messages. They are as follows.

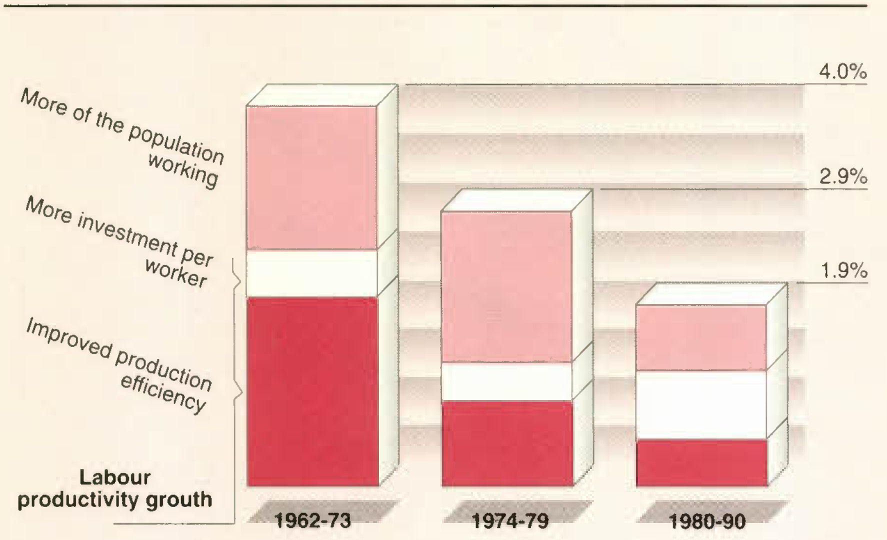
1. Canadians have not responded as quickly and effectively to changes in their economic environment as they need to in order to ensure steady growth in real incomes. From every point of view – productivity, innovation, and trade structure – the Canadian economy appears to be lacking in flexibility. There is considerable evidence of this slowness to adapt. For example, Canadian industries responded less effectively than the industries of many other industrialized nations to the energy price shocks of the 1970s; Canada's industrial structure has not been changing quickly enough; the commitment of Canadian business to training and organizational changes remains tepid; and, at the governmental level, there remain restrictions impeding the free flow of goods, services and labour between provinces.

2. Embracing change requires new attitudes in all segments of society. This means finding new ways of meeting challenges, including a more flexible approach on the part of business and labour to the rapidly changing economic context. According to the Council, an intensified effort is needed to enhance cooperation between all groups in society. And such efforts must be part of an on-going process, not just a surge of cooperation when times are tough. Canada also needs a national commitment to innovation, involving not simply new technology but also adaptations in workplace organization and on-going skill development.

3. Adjusting quickly and effectively to change requires government policies tailored to achieving better productivity performance. While it will not be a simple matter to reshape prevailing attitudes and behaviour, an appropriate public-policy framework can make the task easier. In terms of fiscal policy, the Council supports the federal government's present program of fiscal restraint. It encourages other levels of government to pursue a similar course. In light of the current debate on restructuring the economic union, the Council urges the players to ensure that fiscal decentralization does not compromise the competitiveness of Canadian industry. It also recommends that governments avoid bailing out firms through subsidies or import quotas when they have little prospect for longer-term efficiency.

4. Welcoming change entails a faster pace of adjustment, which will result in severe hardships for some people and some communities. Overcoming these hardships will require substantially increased investments in training, skill development, and mobility. Human-resource development policies must be considered the cornerstone of a strategy of national competitiveness. The Council believes that major changes to the basic structure of Canada's income-security system will be necessary, including a much stronger commitment to the reintegration of workers into productive employment.

Sources of growth in real income per person, Canada, 1962-90



The economic performance of immigrants

During the 1980s, more than a million immigrants reached Canadian soil. A long-standing subject of debate is the extent to which these new arrivals have had an impact on the Canadian economy and Canadian society. Views differ widely on this issue. Opinion is equally divided over the question of the economic performance of immigrants themselves.

Arnold deSilva, a senior economist with the Economic Council, recently attempted to throw some light on this second aspect of the question. In a study entitled *Earnings of Immigrants*, Mr. deSilva probed the economic performance of immigrants in order to determine how well they have adapted to the Canadian environment. On the basis of the latest available data (the 1986 census), the author concludes that the economic success of immigrants generally compares favourably with that of native-born Canadians.

Mr. deSilva's research was carried out as part of the project that produced the Council Statement *New Faces in the Crowd*, released last year by the Economic Council of Canada.

The changing face of immigration

Traditionally, immigrants to Canada tended to be from Europe and the United States. In the 1970s, however, the ethnic composition of the immigrant population began to shift perceptibly. Increasingly, immigrants hailed from other regions of the world – in particular, Asia, Africa, South America, Central America, and the West Indies. At the same time, the number of those coming from the more traditional sources of immigration declined. Thus many of the newest arrivals to Canada belong to "visible minority" groups.

Another important change in immigrant flows emerged in the mid-1970s: a shift from independent immigrants, who earlier constituted the majority, to family-class immigrants and refugees. Also noteworthy is the fact that immigrants, whether belonging to old or new groups, show a clear preference for large urban centres. Ontario receives the largest share of the immigrant population with 53 per cent, followed by British Columbia with

16 per cent, the Prairies with 15 per cent, and Quebec with 14 per cent.

In terms of educational attainment, the study reveals that the proportion of immigrants with university education tends to be higher than among the host population. On the other hand, the proportion of immigrants with only primary-school education is also higher than among the native-born.

Economic activity of immigrants

According to Mr. deSilva, economic statistics show that the labour-force participation rate of immigrants, corrected for age differences, is actually slightly higher than that of native-born Canadians (79.1 vs. 77.8 per cent), regardless of sex. The discrepancy is even greater when women only are considered.

Generally speaking, immigrants who have been established in the country for several years have lower unemployment rates than Canadian-born persons. The rates of new immigrants are however slightly higher than those of both earlier immigrants and the host population. Contrary to popular thinking, the proportion of recent immigrants on welfare assistance is extremely small. In fact, it is roughly similar to that of other Canadians.

The author explains that one would normally expect new immigrants to experience higher unemployment rates than those who have been in the country for some time, since all new arrivals must weather a "settling-in" period. Another reason for the higher unemployment rate of new immigrants may be the severity of the recession that occurred in the mid-1980s. The author suggests that immigrants are likely the first to lose their jobs in an economic slump.

Wage differences

Mr. deSilva also investigated the various factors that influence the wage gap between immigrants and native-born Canadians. Among these factors were the effects of education, proficiency in the country's official languages, and whether work experience was obtained in Canada or abroad.

The main conclusion that emerged from this analysis is that there is no significant discrimination against immigrants in general. More importantly, there is no general trend to discriminate against immigrants from the Third World – i.e., those belonging to visible minorities.

One exception occurs in the question of foreign versus Canadian education and experience. The author found strong indications that degrees earned abroad pay much less, in terms of wages, than those acquired in Canada. Research could not establish whether this phenomenon reflects bias or rather a genuine difference in the value of education and work experience. The end result is that it takes all but the youngest immigrants up to 20 years to catch up to the earnings of Canadians. Those Third-World immigrants who arrive young enough to obtain all of their education and experience in Canada earn the same wages as native-born Canadians.

In conclusion, the author finds that immigrants are adjusting reasonably well to the Canadian labour market.

Strengthening the economic union

A possible compromise

In a recent speech to the Chambre de commerce et d'industrie du Québec métropolitain, Judith Maxwell, the Chairman of the Economic Council, summarized the main points of the Council's most recent Annual Review and put forward some elements of a possible compromise aimed at protecting and strengthening the Canadian economic union. A report on Mrs. Maxwell's address follows.

It is possible to reach a compromise that meets the aspirations of Quebecers while still preserving the Canadian economic union upon which the continued well-being of all Canadians depends.

That was the main message delivered by Mrs. Maxwell who also warned Canadians of the negative economic consequences of disrupting fiscal ties and of an excessive decentralization of powers. The risk is that all Canadians will be left the poorer, especially those in the smaller provinces – and also in Quebec.

She pointed out that decentralization would make it extremely difficult to maintain the free movement of goods and services, people and capital across provinces. Thus decentralization does not diminish the need for federal/provincial coordination; it increases it.

A possible compromise

Expressing her personal views, Mrs. Maxwell sketched out the main points around which a new compromise might be forged that would meet the aspirations of Quebecers without penalizing other regions of the country.

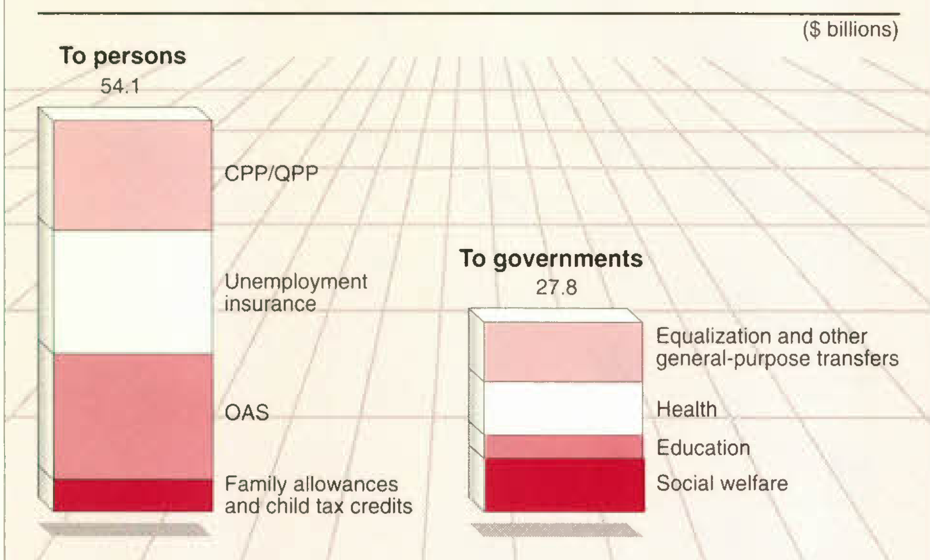
Such a compromise, aimed at protecting and strengthening the economic union, should include the following four elements:

1. Some decentralization of program areas that are most sensibly managed at the provincial level (such as housing and tourism), as well as greater use of concurrent powers in areas where both levels of government have a strong interest, including communications and the environment.
2. Enrichment of the equalization formula in order to minimize disparities in tax rates and services (the extent depending on the degree of decentralization involved).
3. Some increase in the asymmetric arrangements that already exist for Quebec and other provinces. In the case of Quebec, this could be in areas relevant to the province's unique character, including cultural policy and manpower training.
4. A commitment to improve the way the economic union is managed, involving two elements in particular: a) a constitutional commitment to the free movement of goods, services, capital and people across provincial borders; and b) a political commitment to establish a "council of the federation" to monitor moves to reduce and dismantle interprovincial barriers and to harmonize decisions on other policies affecting the economic union.

According to Mrs. Maxwell, the compromise outlined above would have the advantage of protecting the economic union while giving Quebec the room it needs to implement its priorities. She noted some examples of innovative approaches to economic strategy recently proposed by two ministers in the Quebec government – Gérald Tremblay's "industrial clusters" and André Bourbeau's new approach to manpower policy.

These examples show that the current Constitution offers Quebec considerable scope to adopt its own economic strategy without intervention from the outside. But it is important for Quebec to choose policies that are outward looking and compatible with policies being pursued in Ottawa and other provinces because the provincial economies are connected to each other by strong economic and fiscal linkages. What happens in the central provinces – Ontario and Quebec – has a big impact on the others.

Federal risk-sharing transfers, 1990-91



Economic linkages

The commercial ties binding the various regions of the country include trade, investment and migration.

About 58 per cent of Quebec's exports of goods and services are sold to the rest of Canada, including one third to Ontario, 10 per cent to the Atlantic provinces, and 15 per cent to western Canada. Quebec firms earn 22 per cent of their revenues from operations in other provinces. External investors (Canadian and foreign) account for some 31 per cent of all corporate revenues earned in the province.

When it comes to labour mobility, it is interesting to note that francophone Quebecers tend to be less mobile than other Canadians. Fewer than 1 per cent leave the province over a typical five-year period. This compares with an average of 3.6 per cent for the country as a whole.

These statistical differences reflect underlying cultural and linguistic differences and have important economic consequences. They help to explain why asymmetric arrangements have worked satisfactorily in Quebec, as in the case of pensions and tax collection. However, there are limits on Quebec's ability to be different.

The economic linkages in Canada for goods, services, capital, and people are impressive. They are responsible for about 465,000 jobs in Quebec and 2 million in the rest of Canada.

"At a time when we are struggling to create jobs for Canadians in a climate of tough world competition, we certainly cannot afford to disrupt these linkages," Mrs. Maxwell stated.

Risk-sharing

The capacity of the provinces to finance public services varies considerably because of differences in fiscal capacity. For example, the fiscal capacity of Quebec has averaged about 86 per cent of the national average in the past three years. The express purpose of the equalization payments made by the federal government is to help the provinces to provide similar public services at comparable tax rates.

Yet even more sharing is going on between provinces, through the implicit equalization built into federal programs. Not many Canadians understand this sharing. For example, Ontario employers and employees pay $2 billion a year more into the unemployment insurance fund than Ontario workers take out. In effect, they are subsidizing employers and employees in other provinces who take more out of the system than they put in.

What this means, says Mrs. Maxwell, is that any move towards decentralization involving an across-the-board reduction in federal taxes will leave Quebec and the other provinces with low fiscal capacity with the choice between big tax increases or drastic cuts in spending.

Under the decentralization scenario proposed by the Allaire report, the provinces would assume full responsibility for transfers to individuals and business and for health, education, and social welfare. In this case Quebecers would face a tax increase of 1.7 % or about $3.5 billion. The situation would be even more serious for small provinces like Newfoundland, where taxes would rise by the equivalent of 16 per cent of GDP.

Such an extensive decentralization would also have negative repercussions for the economic union. With widely varying tax rates across provinces, investors and social-assistance recipients would tend to move to other provinces, the former to low-tax jurisdictions and the latter to high-benefit jurisdictions. "The net result would be a tendency to impoverish poor provinces and to create congestion in the rich ones."

Mrs. Maxwell concludes that large disparities in tax rates lead to inefficiencies that make all Canadians a little poorer.

Conclusion

While economists can inform the current debate on the future of the federation, the fundamental choices remain political.

"Canada is an economic union – an organic whole. There is no way that a fabric this tightly knit can be ripped apart without a severe economic shock."

No one knows with certainty what the cost of a break-up would be – but it would be high. "We should therefore concentrate our energy on renewing and strengthening what we have – an economic union and a system for sharing

Additional revenues required under extensive decentralization, 1994-95

	Per cent of GDP	$ billions	$ per capita
Newfoundland	*16.2*	*1.7*	*2,984*
Prince Edward Island	*12.4*	*0.3*	*2,266*
Nova Scotia	*3.2*	*0.5*	*702*
New Brunswick	*6.6*	*1.4*	*1,489*
Quebec	*1.7*	*3.4*	*479*
Ontario	*–2.6*	*–9.7*	*–917*
Manitoba	*1.4*	*0.4*	*379*
Saskatchewan	*3.1*	*0.8*	*763*
Alberta	*–0.8*	*–0.7*	*–270*
British Columbia	*1.8*	*1.9*	*–551*

Free trade: Canada, the United States, and Mexico

Mexico!

For many Canadians, the mere mention of that country's name evokes images of sun-splashed beaches, siestas under the palms, and vacation hideaways perfect for melting memories of northern winters.

For many workers and businessmen, however, quite a different image comes to mind. For them, far from a holiday mecca, Mexico is a dark and ominous threat looming on the horizon. They are worried about what will happen should Canada enter into a trilateral free-trade agreement involving Mexico, the United States and Canada.

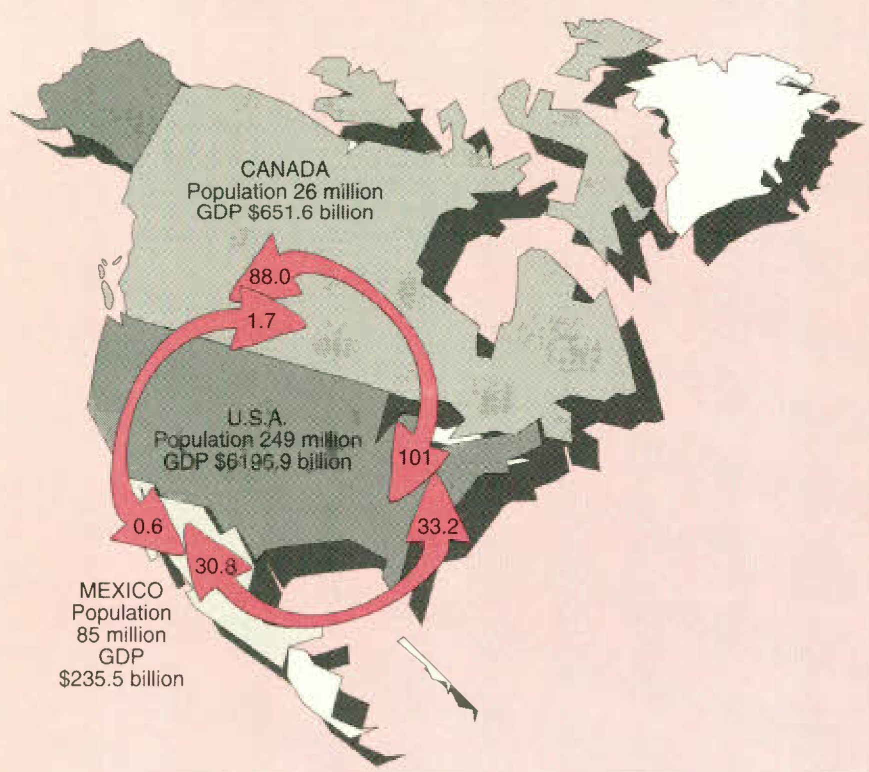
What they fear is that Mexico's vast pool of low-cost labour will provide unfair competition for Canada if Mexico is integrated into the North American economy. The result could be a flow of jobs and capital away from Canada and towards Mexico.

In a recent speech to the Canadian Economics Association, Sunder Magun, a senior economist and project director at the Economic Council explored various aspects of this thorny question. While he identified some of the potential trouble spots for Canada, he nevertheless concluded that a positive outcome to these three-way negotiations will mean substantial long-term benefits for Canada.

Addressing the subject of Canadian reluctance to participate in the trilateral free-trade talks, Mr. Magun noted Canada's concern that a bilateral agreement between Mexico and the United States would end up diverting to Mexico some of the U.S. imports that are now purchased from Canada. Furthermore, the expected gains from the free-trade agreement previously concluded between Canada and the United States might not materialize if the United States and Mexico sign a bilateral agreement. Canadian companies that depend on exports to the U.S. market might also be tempted to pack up and move to Mexico in order to benefit from lower wages in that country.

Overall, then, Canada's motivation for participating in trilateral negotiations stems at least partly from a desire on the part of the Canadian authorities to minimize the negative effects of possible export and investment diversion to Mexico.

North American 1989 Trade Flows (in billions of CDN $)



Overview of the situation

Direct trade linkages between Canada and Mexico are very limited, but they are growing.

In 1987, Canada exported $418 million (US) worth of goods to Mexico and imported $882 million (US) from there. Canada's trade with Mexico accounted for 0.4 per cent of total exports while the comparative figure for Mexico was 2.3 and 2.6 per cent.

The United States is the largest trading partner of both Canada and Mexico. And, notes Mr. Magun, the U.S. market is gaining in importance for both of these countries as well: about 75 per cent of Canadian and Mexican exports are now destined for the United States.

The pattern of trade between Canada and Mexico, however, is quite distinctive. In 1987, for example, about two thirds of Canadian exports to Mexico were either agricultural products or resource-intensive commodities. The remaining one third fell into the machinery and transportation equipment group.

The structure of Mexican exports to Canada has changed considerably over the years. Close to 70 per cent now belong to the machinery and transportation equipment group. It is significant, however, that the production of most of these products requires primarily low-skill labour. The same group of products accounts for a large share of Mexico-U.S. trade. This trading pattern results largely from the intra-industry trade of large multinational enterprises.

Areas of specialization

Each country in the North American market has its own set of comparative advantages when it comes to trading with its neighbours.

Generally speaking, Mexico's comparative advantages are significantly different from those of Canada. They lie mainly in industries that require extensive amounts of low-skill labour. Such industries are found mainly in the large assembly complexes commonly referred to as "maquiladoras." Their products include telecommunications equipment, sound-recording equipment, and automotive parts. The sophisticated nature of some of the equipment manufactured can be misleading, however: for the most part, these factories are elementary, in the sense that they are concerned mainly with product assembling. Most of these complexes are located close to the U.S. border in order to benefit from the Mexican economy's lower wage rates.

However, Mexico can be expected to increase its automotive parts production capacity significantly. The Mexican auto industry may eventually pose a sizable challenge to its Canadian counterpart.

According to Mr. Magun, in the event of economic integration, each country will capitalize on its respective comparative advantages. In other words, each will attempt to build its exporting capabilities by doing better what it already does well.

Nevertheless, an analysis of trading patterns in 1987 reveals that almost one third of Canadian exports were matched by equivalent Mexican exports in the same product categories.

In fact, the similarity index between the two countries climbed from 16 per cent to 34 per cent between 1971 and 1987. This indicates, says Mr. Magun, that Mexico's economic structure is becoming more similar to Canada's. Consequently, Canada could face even more competitive pressure following trade liberalization and would probably lose some market share within the United States. Canada would certainly have to adjust to the new trading environment, incurring significant transition costs.

Even in the domestic market, Canadian industries would have to contend with cheaper Mexican imports, particularly in such industries as textiles, rubber and plastic products, and leather products. And this would come on the heals of the stiffer competition that these same industries now face from the newly industrialized countries of Asia and from Third World nations.

Advantages

But freer trade with Mexico does not simply entail disadvantages. According to Mr. Magun, the economic advantages associated with North American economic integration largely outweigh the potential losses.

First and foremost, Canada would enjoy direct export gains.

Canada's exports to Mexico are currently very small. Under a trilateral free-trade agreement, there would be an enormous potential for increasing exports and foreign investment in Mexico. The expanding Mexican economy, coupled with a population expected to climb to 100 million by the end of the decade, will generate a strong demand for imported products and services. This could represent a golden opportunity for Canadian businesses.

Mr. Magun admits that the economic gains flowing from a trilateral free-trade agreement have not yet been quantified. Further research is needed to draw a clearer picture of the situation.

Forthcoming publications of the Economic Council

Annual Report, 1991-92

Statements

A Lot to Learn: Education and Training in Canada

The New Face of Poverty: Income Security Needs of Canadian Families

Studies

Controlling Drug Expenditures in Canada: The Ontario Experience, by Paul K. Gorecki

Regional Welfare Impacts of Some Alternative Fiscal Arrangements, by Andrew Burns

Exchange Rates and the International Competitiveness of the Canadian Economy, by Richard G. Harris

Working papers

"An Assessment of the Properties of the Meidum-Term Forecasting Model of the Conference Board of Canada," by *Richard Roy* and *Gilles Bérubé*

"Tradeable-Rights Approach to Environmental Policy: Some Accounting Problems of Application," by *H. H. Postner*

"An Exploratory Analysis of Canada's International Transactions in Service Commodities," by *James J. McRae*

"Traps and Vicious Circles: A Longitudinal Analysis of Participation in the Canadian Unemployment Insurance Program," by *Miles Corak*

"Issues for Women in Canadian Education," by *J. Gaskell*

"The Funding of Postsecondary Education in Canada," by *Tim Sale*

"The Financing of Elementary and Secondary Education in Canada," by *Tim Sale*

Guaranteed annual income vs. work habit

Fears that are misplaced

Fear that some of Canada's social programs really discourage people from working is actually misplaced.

For some time now, the policy debate about the reform of welfare and poverty-relief programs, particularly income support based on a guaranteed annual income, has focused on a central question: how is the work behaviour of those receiving assistance affected? The political acceptability and economic feasibility of a guaranteed-annual-income scheme have always been extremely controversial subjects. According to conventional economic theory, in fact, giving able-bodied persons a guaranteed annual income without strings attached may prompt them to work less.

A recent study prepared for the Economic Council of Canada disputes these beliefs. Entitled *Income Maintenance, Work Effort, and the Canadian Mincome Experiment*, the study is the work of two researchers from the University of Manitoba, Derek Hum and Wayne Simpson.

The two economists believe that the impact of tax transfers via a guaranteed-annual-income plan (or a negative income tax) on the incentive of recipients to look for work is small enough that it should not be considered the determining factor.

The authors acknowledge that their conclusions are guarded but they view them as reassuring nevertheless, because they support the idea that a guaranteed-income plan can be used as a tool for eliminating poverty.

The Mincome project

Poverty in Canada is an enduring social issue. Back in 1968, the Economic Council of Canada reported that poverty among Canadians was much more widespread than generally believed.

The public's desire to see the income-support system reformed, notably through the introduction of a guaranteed annual income, led to extensive research and social experiments designed to assess the effects of such a program.

It was in this climate that the Mincome project, jointly administered and financed by the federal government and the government of Manitoba, was launched in 1975. One of the main aims of the project was to answer questions about the effects of a guaranteed annual income on the incentive to work. However, the program died in the late 1970s and the data that had been gathered lay untouched by researchers for many years.

This body of data was the focus of researchers Hum and Simpson as they addressed the controversial question of the relationship between income support and work incentive. Another part of their research involved an exhaustive review of the main studies of labour supply carried out in Canada and the United States to date.

The Mincome project has been termed one of the most important social experiments in Canadian history. It cost over $17 million at the time and over a period of three years, made payments to more than a thousand Manitoba families.

Mincome's design involved selecting participants randomly and assigning them to different negative-income-tax programs or to a control group. The participants assigned to the program received monthly income payments tied to their family revenues for three years.

Analysis of the results revealed that hours worked fell between 0.8 and 1.6 per cent among men, between 2.4 and 3 per cent among married women, and between 3.8 and 5.3 per cent among single women.

The two economists also discovered that the existence of preschool children in the home increased labour supply for married men, but reduced it for married women.

The authors acknowledge that precise measurements of the effects of income-support programs on the incentive to work are very difficult and that economists have yet to master this skill. However, they believe that their analysis of the data indicates that changes in the tax-transfer system appear to have little impact on individuals and families.

As for the Mincome experiment, Hum and Simpson argue that it should not be judged on its failure to produce a guaranteed-income plan, but rather on the basis of its legacy of data and research opportunities.

Competitiveness and the public sector

What impact does government activity have on Canadian competitiveness? A complex question, to be sure. Government activity is omnipresent, affecting the lives of all Canadians. In addition to providing a wide range of services, governments establish the regulatory framework for many sectors of the economy and (of course) collect taxes. But how effectively are these tasks accomplished? Could Canada's overall competitiveness be better served? In fact, what does competitiveness really mean in this context? At the express request of the Prime Minister, the Economic Council has begun an ambitious research project to study the impact of the public sector on competitiveness. To find out more on this major undertaking, *Au Courant* interviewed Bryne Purchase, a Senior Research Director at the Economic Council, and the director for this study.

Au Courant: What is the overall mandate of your study?

Purchase: The Prime Minister's letter directs us to study the relationship of government, at all levels, to international competitiveness. That is an enormous mandate, by anyone's standard. Indeed, our major problem has been to develop an organizing framework for such an ambitious project. But we have set three basic objectives.

Our first objective is to study the institution of government. What is its role in modern society? What advantages and disadvantages does it have in carrying out its assigned roles compared with other institutions? Is it efficient, adaptive and innovative? Is it subject to serious diseconomies of scale? Have these changed over time? In short, we are working towards a more formalized micro-economic model of public sector supply.

Secondly, we want to delineate and to examine the relationships of the institutions of government to other institutions in society, for example, the corporation and the household. Our particular purpose is to determine how government impacts on the competitiveness of these other social institutions. Since there are many possible linkages, we want to focus on only those with the greatest effect, or most significance, in the overall activities of government and the economy.

The third objective is not really a research objective, but it is an important program objective. We want to help inform a broader public, through an open research and seminar process, about the issues confronting public sector decisions and the relationship of those choices to the competitiveness of our society.

> ***"Strangely enough most economists are not comfortable with the term competitiveness."***

Au Courant: The word "competitiveness" is used a lot. Does it have a special meaning in your project?

Purchase: Strangely enough, most economists are not comfortable with the term competitiveness. In my view this is because many of the models they use to think about competitiveness are devoid of institutions, other than markets. Yet competitiveness is fundamentally an institutional concept.

But before I turn to that, let me say that we use a now widely accepted measure of competitiveness – one that has been used by a number of projects, including Michael Porter's study and, most recently by the Economic Council in *Pulling Together*. In these studies, a country's international competitiveness is measured by both the level and growth in total factor productivity (TFP) relative to other trading nations. TFP is a measure of the overall efficiency of the economy and the growth in that efficiency over time. It captures the joint productivities of all institutions and all factors, even if the productivities are not accurately assigned in the national accounts ... for example, government is assumed to have zero productivity growth in the national accounts. The key elements in the growth of these national efficiencies are quick imitation of superior technique or technology found elsewhere and the capacity to innovate.

Bryne Purchase

One other thing, TFP growth is linked to growth in real income per capita. Indeed, the Council's research shows that 75 per cent of the decline in the growth of real income per capita since 1973 has been the result of the slowdown in TFP growth.

Au Courant: What have institutions got to do with this measure of national competitiveness?

Purchase: While TFP is an appropriate measure of competitiveness, it is not a description of what is meant by the term "competitiveness." As I said, competitiveness is an institutional concept: an institution is competitive if it is efficient in meeting its goals; if it is adaptive in terms of its quick imitation of superior techniques used elsewhere; and if it is innovative in its own right. It is these three institutional qualities –

efficiency, adaptability and innovativeness – that we use to define the meaning of competitiveness.

Au Courant: How does this relate to the public sector?

Purchase: When competitiveness is defined in those institutional terms, it is equally applicable to both public and private institutions. This is an important point. All institutions are capable of being competitive in the terms described above. The issue then becomes: What induces them to be so? And how does the competitiveness of one set of institutions relate to the competitiveness of others? And what makes the total "cluster" of public and private institutions competitive?

Au Courant: What are the factors that induce competitiveness?

Purchase: The two elements that we are focusing on now are the governance structure of the institution and the degree of external pressure – for example, from direct competition or other demanding external relationships. By governance, we mean the way in which the institution is internally structured to ensure accountability for performance, and the nature of that accountability. Insofar as external pressure is concerned, our focus is on competition. We know that price competition can, under certain conditions, lead to economic efficiency. We presume that competition is equally important to adaptation and innovation.

Au Courant: What are the linkages from government to the private sector?

Purchase: The linkages that we have identified in respect of government, corporations and households, focus on four areas:

The first is in respect of the provision of key public infrastructure to the business community such as the legal framework, capital infrastructure and access to natural resources.

The second area that we have identified is the regulatory activities of government. We break this into two types. Regulation of markets for factors such as labour, environment and finance is one area of study. One might call these social regulations. The second area of study is economic regulation – governing the price of certain goods or services, product standards and the degree of competition in product markets.

The third linkage between the government sector and households is the provision of social infrastructure. This is, by far, the most dominant part of government spending. It accounts for about 60 per cent of all spending, not including costs of debt service, which are about 20 per cent. There are the obvious "public goods" related to the security of persons and properties, such as fire and police protection and defence. However, the disproportionate amount of government spending – about 50 per cent of the total – is on the provision of education; health; insurance (such as unemployment insurance, health insurance, workers' compensation, deposit insurance); the provision of pensions, such as CPP, QPP and OAS; the provision of welfare; and the provision of housing. It is in this area that the most dramatic growth of government has taken place in the postwar era.

"In the final analysis, the competitiveness of a society is doubtless a reflection of the competitiveness of each of the institutions of which it is comprised."

The final link of government to the competitiveness of the economy is through its international negotiations covering such things as trade, investment, product standards, environmental standards, tax and finance.

These are the key linkages and each of them represents some part of the work we will be undertaking.

Au Courant: Have studies of this nature ever been done elsewhere? If so, how do they relate to your particular research?

Purchase: There is a considerable amount of research that has focused recently on the international aspects of competitiveness related to the negotiation of treaties on trade, taxes, investment flows, and increasingly, with respect to environmental agreements.

There is, as well, a very substantial amount of research on the services that government provides to business in the form of protection for intellectual property, bankruptcy laws, and research and development incentives, as well as on the key role that these services can play in corporate competitiveness.

Indeed, because of the amount of research that has been devoted to these areas, we are more focused in our program on the areas that have not received as much emphasis recently, that is to say, social regulation and the efficient provision of both economic and social infrastructures.

Au Courant: What about specific industries? Will you be looking, for example, into the resource industry?

Purchase: Yes, resource industries dominate our export sector. They are the industries in which we are most successful in international markets, as measured by our share of those markets. Obviously, we are interested in their linkages to government. Typically, resource industries are intense users of both environmental and natural resources. In the 1980s, one of the key issues for the resource sector was that of politically secure access to the U.S. market. At the heart of this issue of secure access have been questions with respect to how natural resources are priced by governments. The same type of issues can arise in respect of environmental regulation. Both issues fit into our program in respect of the efficient provision of economic infrastructure.

Au Courant: What other types of economic infrastructure issues are you dealing with?

Purchase: We want to take a close look at the decision processes surrounding capital spending in the public sector. It has been alleged that the public sector underinvests in capital infrastructure. We want to test that proposition theoretically as well as empirically.

Au Courant: You mentioned regulations. How do they fit into your research?

Purchase: There are three basic research questions for us. The first is to investigate the process by which a regulatory standard is chosen. How do we measure costs and benefits? Whose views are considered? Who is accountable for the standard that is chosen? How does one minimize rent seeking? The second set of issues concerns the efficient implementation of a standard, once it has been decided. Do we let individuals and firms make efficient choices, depending on their circumstances? Can we use incentives to achieve social objectives? Or should we direct them centrally as to their actions? The third set encompasses the question of the social efficiency of regulation. Do stringent regulations enhance productivity performance? These are the basic questions, but the answers are not as easy to lay out.

Au Courant: What about social infrastructure? As you note, it accounts for the largest part of government outlays. What are the issues?

Purchase: Similar types of questions arise as in the investigation of economic infrastructure. Do we over or underinvest in these services? If so, why? Are the services delivered efficiently? Are they priced efficiently? What is the governance structure of some of the key public-sector suppliers (for example, hospitals or schools)? Who is accountable to whom and for what? Is there any competition? Is there a role for competition? If so, from whom? How can competition be introduced?

Au Courant: Is public sector wage determination an issue in efficient supply?

Purchase: Yes it is. Wages are the largest component of social infrastructure spending. How these are determined is central to the cost effectiveness of public suppliers. We intend to take a look at these issues. Physicians, on the other hand, are private suppliers with a fee negotiation with government. We want to look at that option as well.

Au Courant: Is there a link between economic infrastructure and social infrastructure?

Purchase: In a budgetary sense there is certainly a trade-off if the total budget is constrained. That is an issue for us. How do governments make the choice? What is the relationship between social infrastructure and the growth of TFP. One important link is the impact of taxes on productivity when the revenue is used for social spending that involves large redistributions of income. We know the tax impact is negative. What we do not know, or have not measured, are the benefits of economic security and redistribution, if any, in terms of TFP growth.

Au Courant: Are there other important aspects of your research agenda?

Purchase: The study of the competitiveness of government, as that term is defined here, requires looking at its governance structure, the policy processes of government – the ways in which it is held accountable and for what it is held accountable. It requires, as well, a review of the mechanisms of competition between governments, either domestic or foreign, and of the propensity for that competition to be positive or negative.

Au Courant: Any final comments?

Purchase: In the final analysis, the competitiveness of a society is doubtless a reflection of the competitiveness of each of the institutions of which it is comprised. But the total is likely to be greater or lesser than the sum of its parts. Michael Porter notes this when he discusses "clusters" of private corporations, with positive feedback mechanisms at work.

What we are looking for is a dynamic positive feedback situation between public and private institution – a situation of increasing returns to scale. This has been studied by Brian Arthur in respect of the social choice between technologies. Richard Lipsey and others are also looking at these issues in the context of private corporations and productivity growth.

That is why the relationships between institutions are important. There can be a partnership, even when the relationship is essentially competitive. The potentially divergent paths of nations forward to ever greater successes, or in the long spiral downward, is one which may be conditioned by these relationships.

"We want to take a close look at the decision processes surrounding capital spending in the public sector."

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